J&P BALCON®
INSTALLATION INSTRUCTIONS

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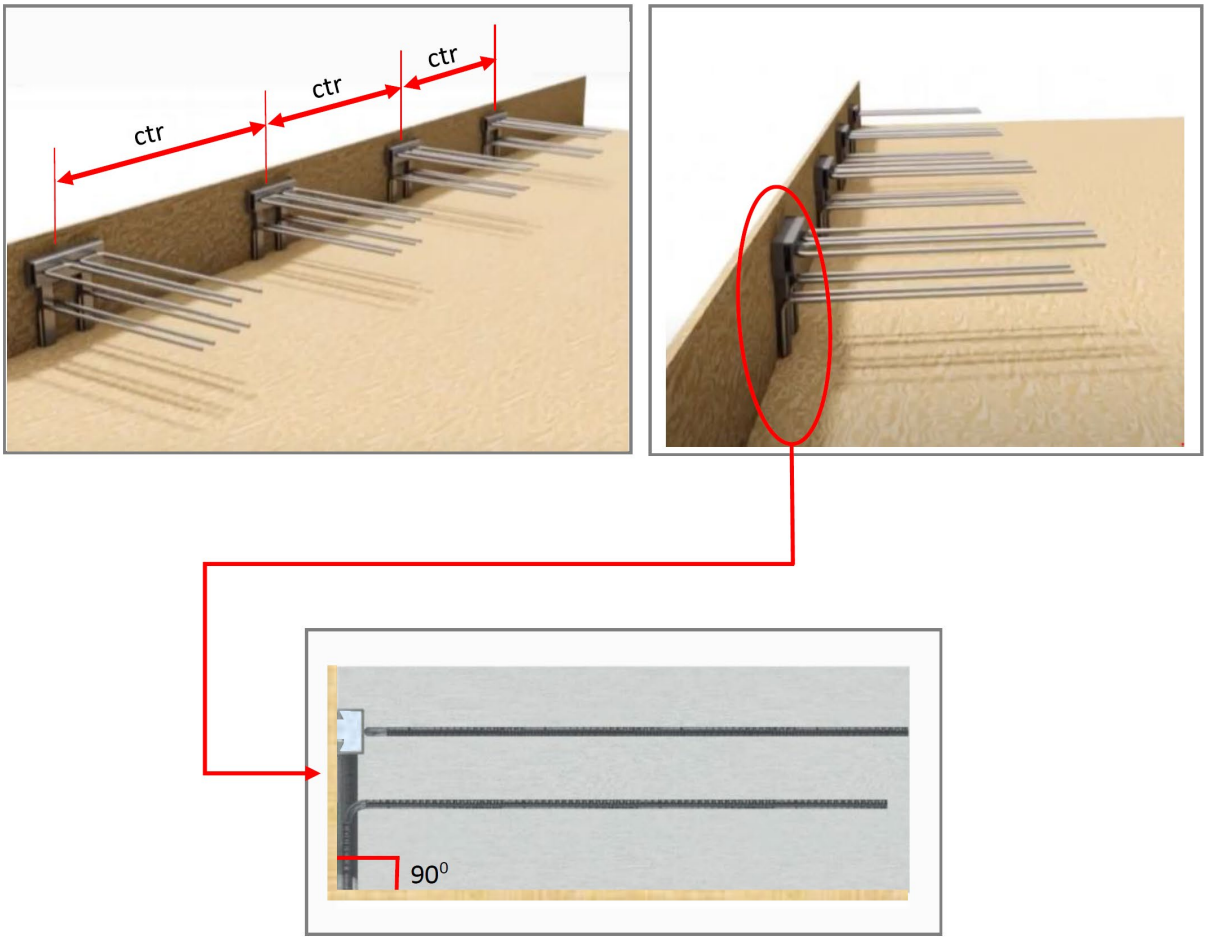
A. Positioning J&P Balcon® in the Concrete Structure

1. J&P Balcon® is manufactured to suit varying design conditions so several versions may be delivered. Please check the construction drawings carefully to ensure that the correct J&P Balcon® version is selected for each location.
2. J&P Balcon® installed against the face and bottom formwork of the floor slab. Consult the construction drawings and mark the centres for placement of each J&P Balcon® on the face formwork.
3. Please check the face formwork is vertical and correctly aligned before starting installation.
4. Position the J&P Balcon® unit against the face formwork according to the centres required and place both ends of the vertical channels on the slab bottom formwork. There is no need to lap the long anchors with the slab reinforcement.
5. Position nails through the nail holes provided in the J&P Balcon® and hammer them into the face formwork. Check that the J&P Balcon® is vertical, square and held securely and tightly to the formwork.
6. Before pouring concrete re-check that the face formwork is vertical and that the J&P Balcon® is square and held tightly to the back of the formwork without any gaps.
7. During the concreting process be careful to fully vibrate the concrete and avoid displacing or misaligning the J&P Balcon® units.



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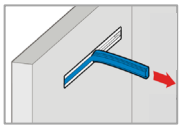
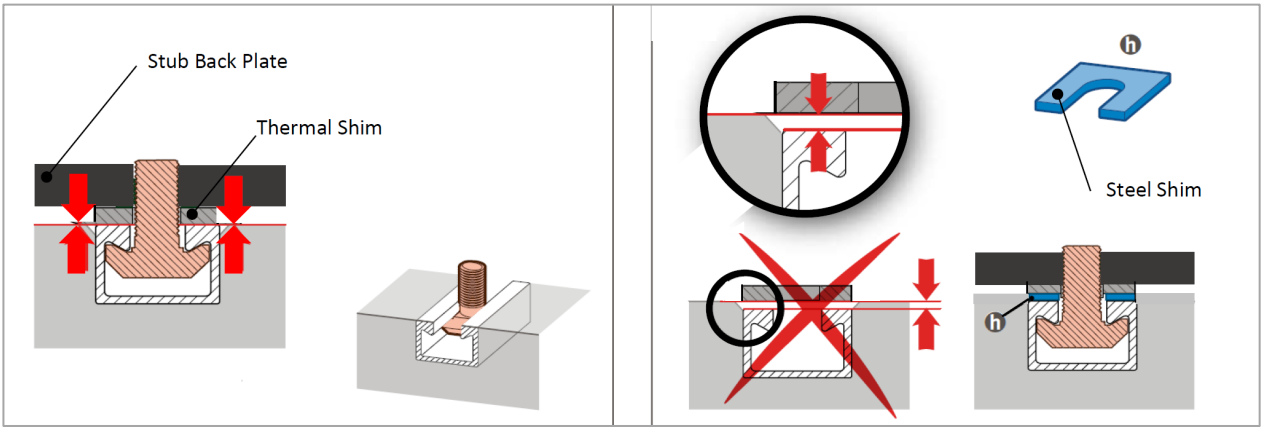
B. Connecting to the J&P Balcon®

1. After the concrete formwork is removed the face of the cast-in J&P Balcon® is revealed.
2. Before installing T-bolts, mechanically remove any concrete residue and the channel foam filler.



Do not remove chemically or with fire, as this risks damaging the product, the environment and your health due to the fumes and residues. Carefully knock off the projecting nails with a cold chisel.

3. Check that the face of the concrete is flat and that the J&P Balcon® is flush with the surface. Remove any concrete residue from the face of the channels. If the J&P Balcon® has sunk below the surface, steel shims must be used to fill the height of the recess at the T-bolt positions. Steel shims must bear on the channel face and be made of galvanised 8.8 grade steel. They must be sized to fully support the width and length of the thermal shims and flush with the concrete surface. Any recesses greater than 10mm should be discussed with J&P Buildings Systems. Any other shimming to remediate concrete tolerances should be positioned between the balcony support arm and the stub.



4. Check the drawings to ensure that you have the correct T-bolts according to the channels used in the J&P Balcon® assembly:

Channel Type	Channel Profile	T-Bolt Type	
JM (plain lips)	W 40/22	JC, JKC	
	W 50/30, W 53/34	JB, JKB	
	W 55/42	JB, JE, JKB	
	W 72/48	JA	
JXM (toothed lips)	W 29/20	JXD	
	W 38/23, W 41/27	JXH	
	W 53/34	JXB	
	W 64/44	JXE	

Normally JM channels are used for the top horizontal channels (requiring hook headed T-bolts) and toothed JXM channels are used for the bottom vertical channels (requiring toothed headed T-bolts), but check the drawing.

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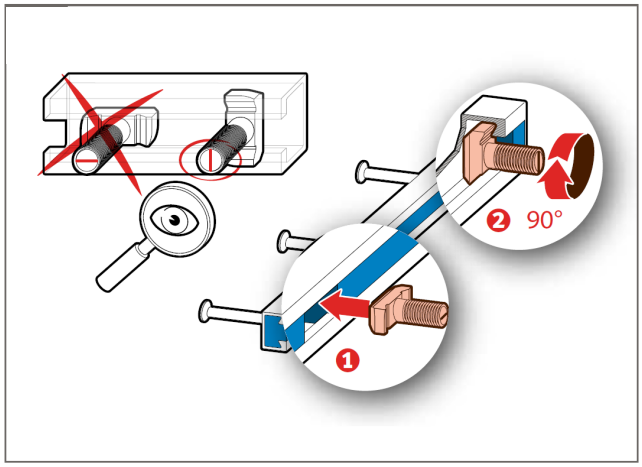
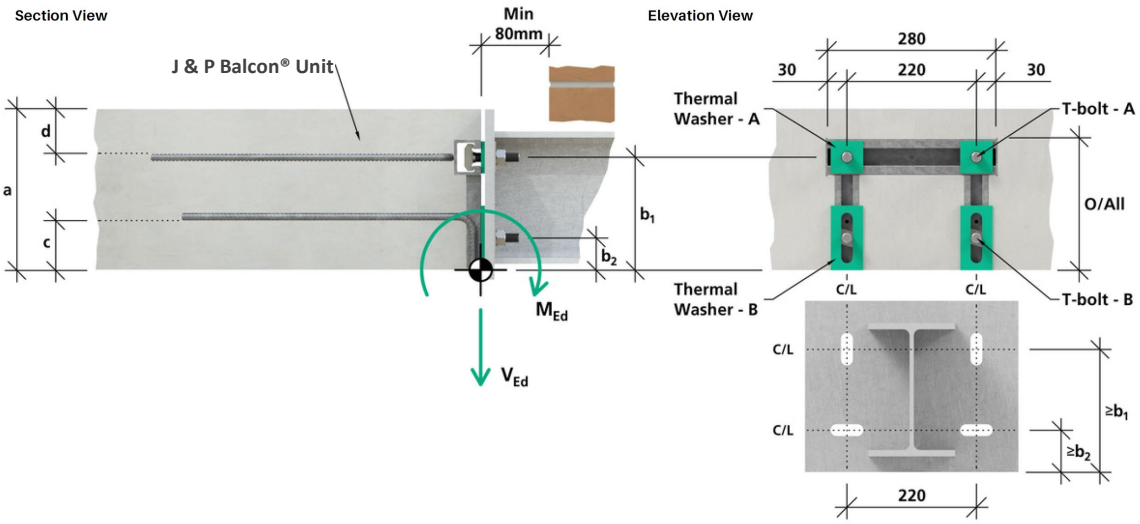
5. Check that you have the correct thermal shims specified in the drawings and note both their location and orientation relative to the J&P Balcon® and the connected stub. Thermal shims bear on the face of the steel channels. The face of the channels must be clean and free of concrete.

6. * T-bolts are inserting into the channel openings of the J&P Balcon® and turned 90^0 so that the lines on the ends of the bolts are at 90^0 to the length of the channel. Check that you have the right T-bolt type in each channel at the locations required as dimensions and positions vary. Typically, there are two T-bolts in the top horizontal channel and one toothed T-bolt in each of the two vertically orientated toothed channels. However, there are common variants where more T-bolts may be required according to design requirements. The type and colour of thermal shims may also vary. Project drawings should be checked to verify the types, quantities and positions of components required. Typical dimensions and T-bolt configurations are shown in the illustrations below.



Typical 4-bolt Connection



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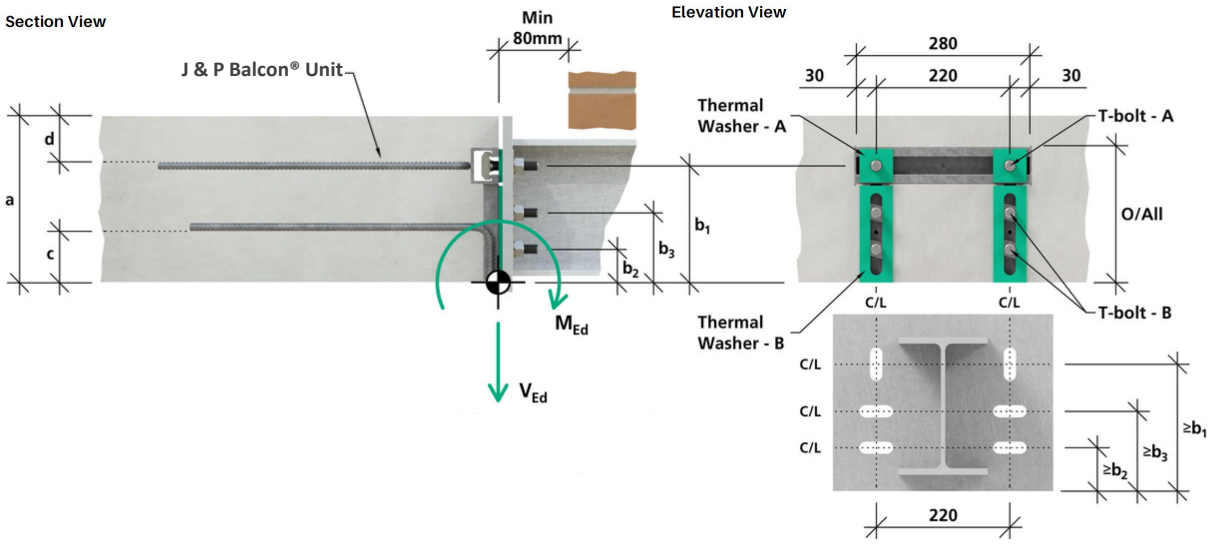
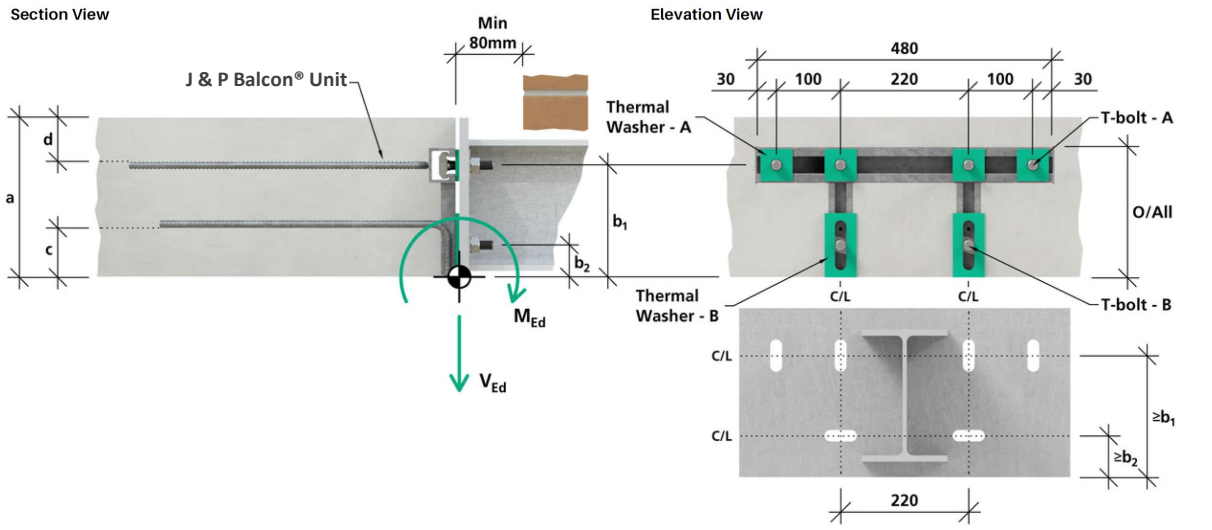
Typical 6-bolt Connection



Typical 6-bolt Connection



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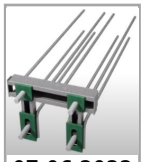
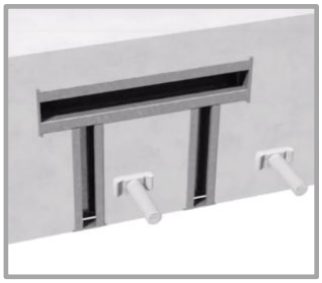
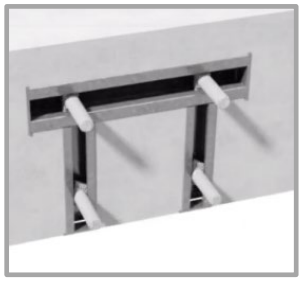
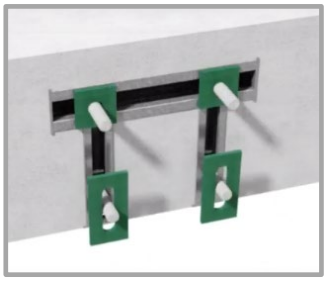
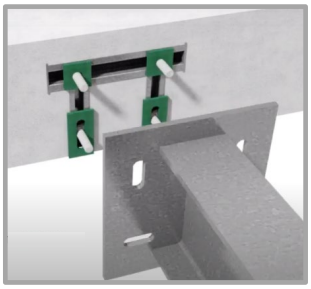
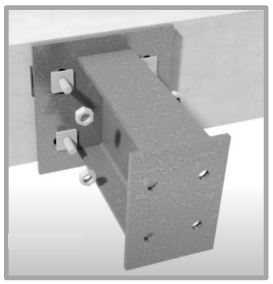
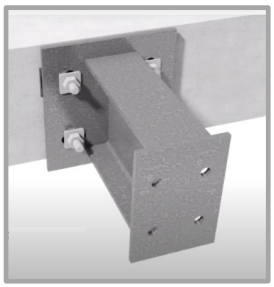


7. * T-bolts can be adjusted for position by moving them along the lengths of the channels. The thermal washers are positioned on the T-bolts between the connected stub and the J&P Balcon® face.

8. * Pass the threaded shafts of the T-bolts through the stub's slotted connecting plate. The steel washers are positioned and nuts loosely tightened to hold the stub to the face of the slab. The slots in the stub plate and the adjustment offered by the J&P Balcon® allow exact positioning of the stub.

* If preferred, steps 6 – 8 can be substituted by pre-installing the thermal shims on the T-bolts and installing the T-bolts through the slots in the stub plate before adding the washers and nuts (just a couple of turns on the thread). The whole stub assembly (with T-bolts, shims, washers and nuts) may then be offered up to the J&P Balcon® and the T-bolts turned into position in the channels before final adjustment of position and loosely tightening the nuts.

9. Check that the lines on the ends of the bolts are at 90^0 to the length of the channel. The lower thermal shims must bear fully on the face of the vertical channels and not overhang the bottom of the J&P Balcon® unit. Check that the thermal shims are seating tightly and squarely on the face of the channels before fully tightening the nuts. Tighten the nuts according to the torque values below:

M16 – 130 Nm

M20 – 130 Nm

M24 - 180 Nm

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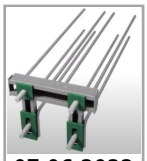

10. After 3 - 7 days and also at hand-over please re-check nut torques to following values:

    M16 – 100 Nm

    M20 – 100 Nm

    M24 - 150 Nm

    Do not exceed these values and do not re-check T-bolt torque more than twice.

11. Fire stopping and cavity insulation according to the requirements of the design consultants can be installed in the vicinity of the J&P Balcon® units after installation of the stub.

Please consult J & P for technical advice in case of any questions or concerns concerning the installation.

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