

PROJECT SAMPLE PROJECT IN LONDON	ENGINEER
DOCUMENT No. CALC-002	REVISION 0
TITLE REVIEW OF MOVEMENT & TOLERANCE REPORT	Pages 5

SAMPLE

PROJECT SAMPLE PROJECT IN LONDON	NAME	DATE
TITLE REVIEW OF MOVEMENT & TOLERANCE REPORT	REVISION	PAGES 2 of 5

Table of contents

1	Pre cladding movement and tolerance	3
1.1	Structure tolerance.....	3
1.2	Inserts	4
2	Post cladding movement.....	5
2.1	Cladding response to structure movement.....	5

SAMPLE

PROJECT SAMPLE PROJECT IN LONDON	NAME	DATE
TITLE REVIEW OF MOVEMENT & TOLERANCE REPORT	REVISION	PAGES 3 of 5

1 Pre cladding movement and tolerance

Cladding brackets are designed to accommodate structure movements and tolerances prior to cladding installation including but not limited to the following:

- initial tolerances
- instantaneous self weight deflection
- construction live loads
- short-term creep and shrinkage
- surface and edge flatness

1.1 Structure tolerance

1.1.1 Edges of slab, walls and upstands or perimeter beam (if any)

Deviation of edges of slab, walls upstand or beam from the intended design location for both the tower and the podium is limited to the following:

Level 0 to 1: +/- 12mm parallel and/or perpendicular to the edge

Level 2 to Roof: +/- 25mm parallel and/or perpendicular to the edge

1.1.2 Level of slab at building edges and upstands or perimeter beam (if any)

Deviation of either the top or bottom surface of slab, upstand or beam from the intended design location is limited to the following:

i Tower

Level 0 to 1: +/- 12mm

Level 2 to 26: +/- 25mm

Level 27 to Roof: +/- 35mm

ii Podium

Level 0 to 1: +/- 12mm

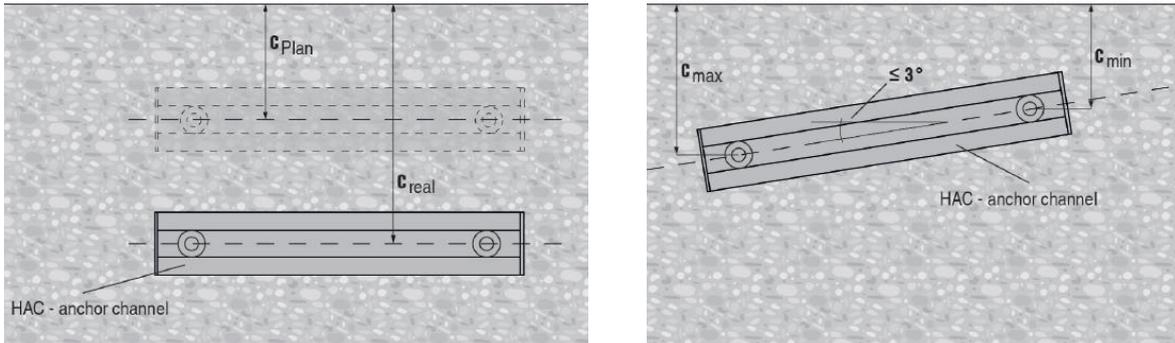
Level 2 to Roof: +/- 25mm

PROJECT SAMPLE PROJECT IN LONDON	NAME	DATE
TITLE REVIEW OF MOVEMENT & TOLERANCE REPORT	REVISION	PAGES 4 of 5

1.2 Insert channels

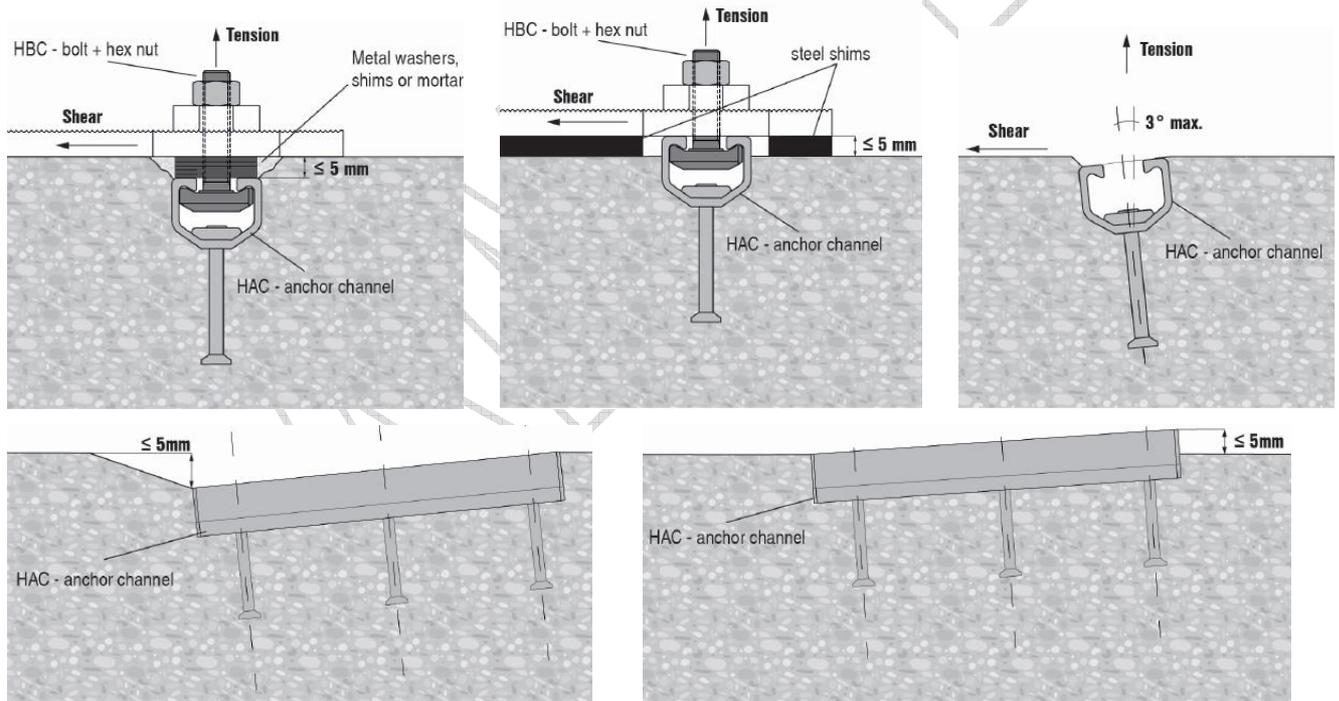
1.2.1 Insert location on plan

It is assumed that the location of inserts (e.g., cast-in channel) will not cause additional deviation to the structure tolerance stated above. The insert shall be located such that it should rather correct or reduce the structure tolerance rather than give a cumulative effect.



1.2.2 Insert location relative to concrete surface

Cast-in channels shall have the following tolerances as limits.



PROJECT SAMPLE PROJECT IN LONDON	NAME	DATE
TITLE REVIEW OF MOVEMENT & TOLERANCE REPORT	REVISION	PAGES 5 of 5

2 Post cladding movement

The cladding system is to be designed to accommodate relative movements of the structure after cladding installation including but not limited to the following:

- imposed dead load deflection
- imposed live load deflection
- column axial shortening
- long-term creep and shrinkage
- sway (storey drift) due to wind or seismic load

2.1 Cladding response to structure movement

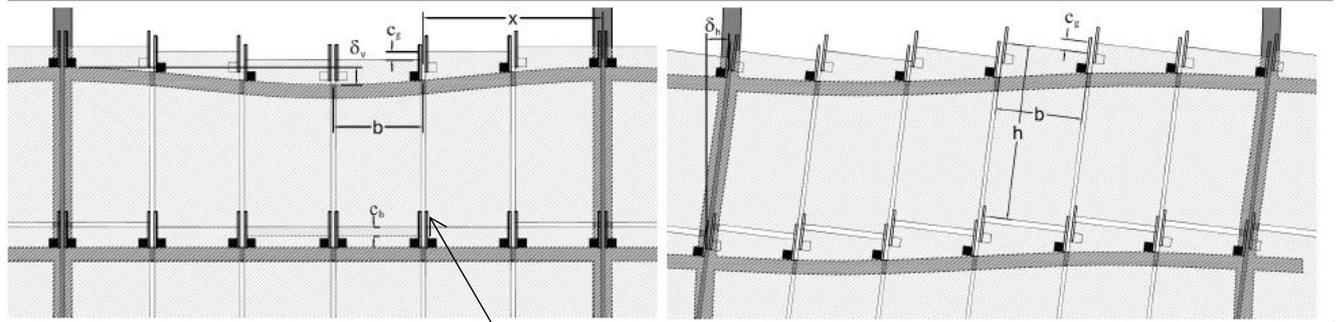
The cladding is designed to have spigot (or sword) fixing between two adjacent vertical elements. This will prevent racking of cladding elements under vertical deflection of slab edges or perimeter beams, thereby eliminating additional contraction of horizontal joints associated with the supposed element racking.

Under lateral sway, cladding elements will rotate in a maintained parallel position.

Racking of unitted system with spigot fixing

Under differential live load deflection

Under lateral sway (storey drift)



SPIGOT / SWORD FIXING
BETWEEN CLADDING ELEMENTS

2.1.1 Vertical differential movement

It is assumed that structural movement due to dead load and long-term creep do not vary greatly between floors. However, the small difference when combined with live load differential deflection, i.e., assuming one floor being fully occupied and the upper or lower floor empty, the maximum differential movement between floors shall be limited to:

- + 10 mm expansion with the next floor above or below
- - 10 mm contraction with the next floor above or below

2.1.2 Lateral movement

The cladding is designed to accommodate storey drift of not more than $H/500$.

