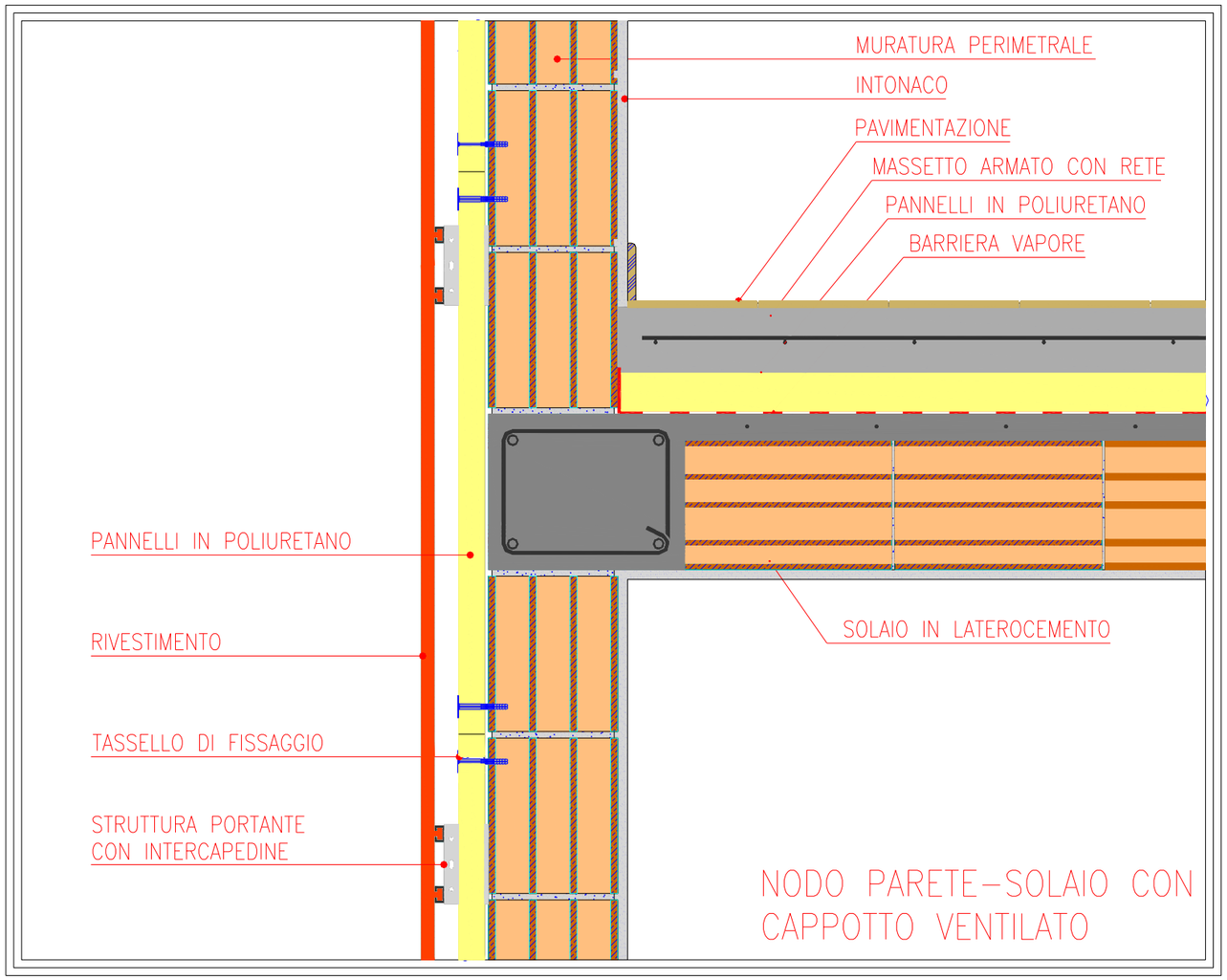
Definizione di facciata ventilata

- Si tratta di un particolare sistema di chiusura verticale opaca, nella quale uno strato coibente ed una lama d'aria interrompono la continuità fisica tra il rivestimento e la parete dell'edificio.
- Interamente montato a secco, il sistema costituisce il rivestimento dell'edificio, formato da elementi in cotto, pietra, marmo, calcestruzzo, vetro, il tutto messo in opera tramite dispositivi di sospensione e fissaggio meccanico, e dotato di qualità estetiche, acustiche e termiche.

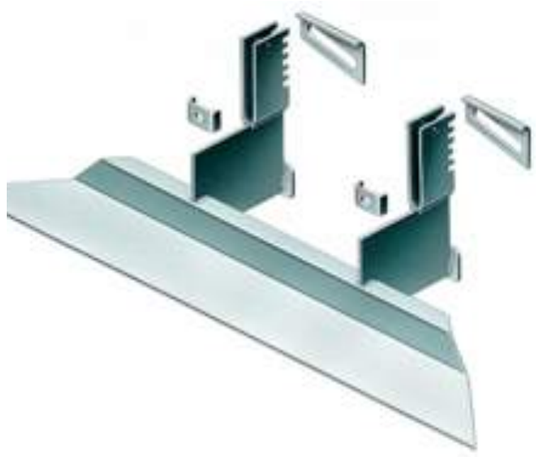
Perché utilizzare una facciata ventilata?

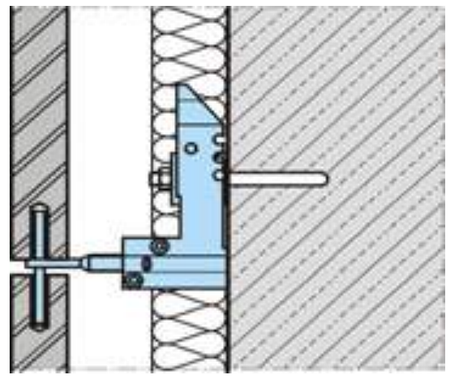
- perché protegge efficacemente dall'acqua
- perché ha un ottimo comportamento termo – igrometrico ed energetico
- perché favorisce l'isolamento acustico dei locali interni
- perché migliora l'aspetto estetico della facciata
- Perché elimina i ponti termici
- Migliora il benessere ambientale
- Riduce la manutenzione della facciata.


MURATURA PERIMETRALE
INTONACO
PAVIMENTAZIONE
MASSETTO ARMATO CON RETE
PANNELLI IN POLIURETANO
BARRIERA VAPORE
PANNELLI IN POLIURETANO
RIVESTIMENTO
TASSELLO DI FISSAGGIO
STRUTTURA PORTANTE
CON INTERCAPEDINE
SOLAIO IN LATEROCEMENTO
NODO PARETE-SOLAIO CON
CAPPOTTO VENTILATO

Sistemi Halfen di supporto e ritenuta per facciate ventilate in mattoni e marmo

Supporti per facciate in mattoni:
mensole Halfen fissate a profili HTA.





SISTEMI PER FACCIATE IN MARMO

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HALFEN

YOUR BEST CON

SISTEMI PER FACCIATE IN MARMO

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SISTEMI PER FACCIATE IN MARMO

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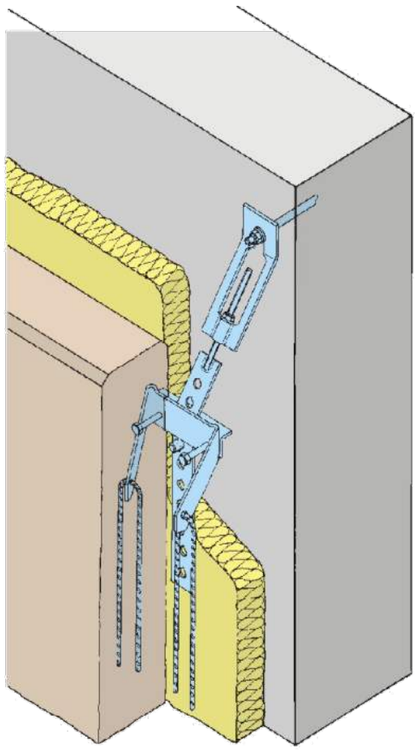
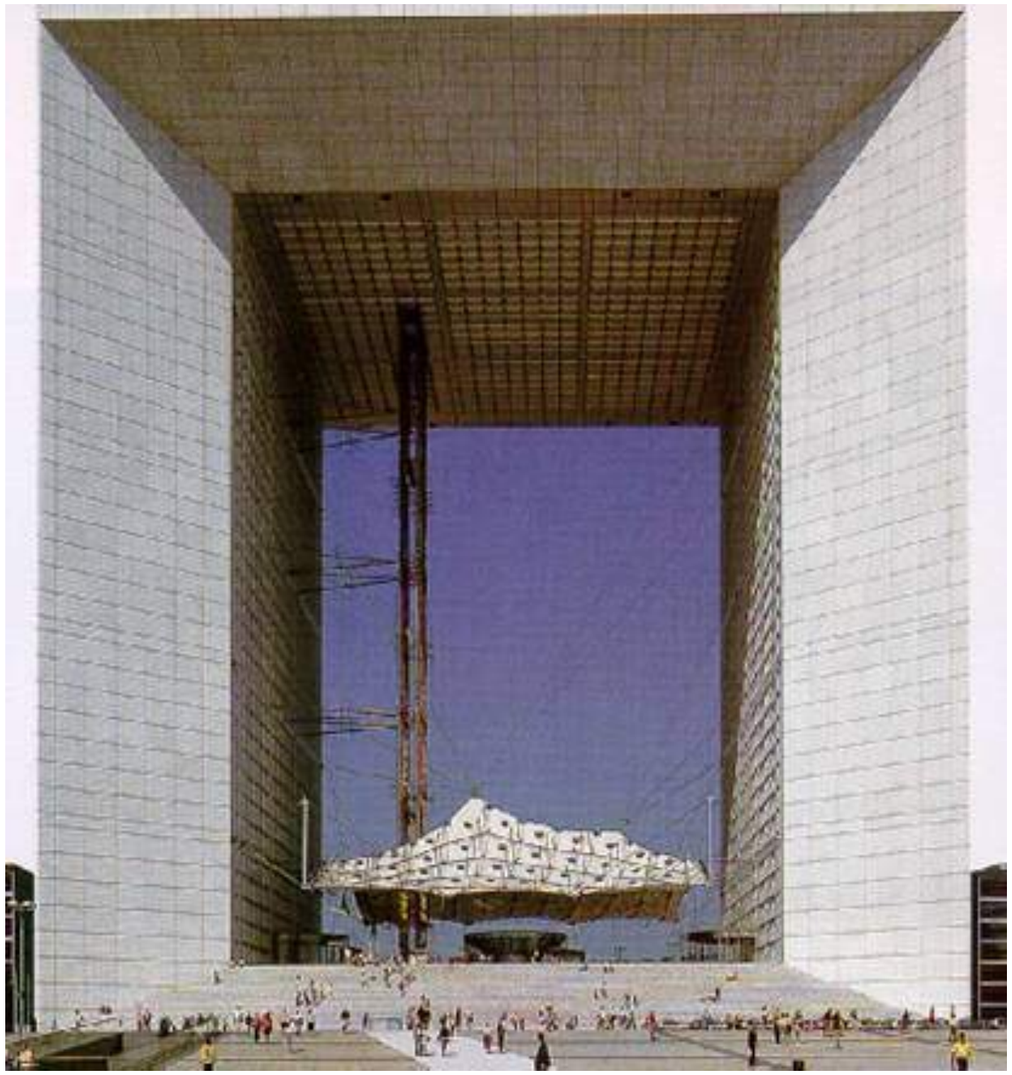
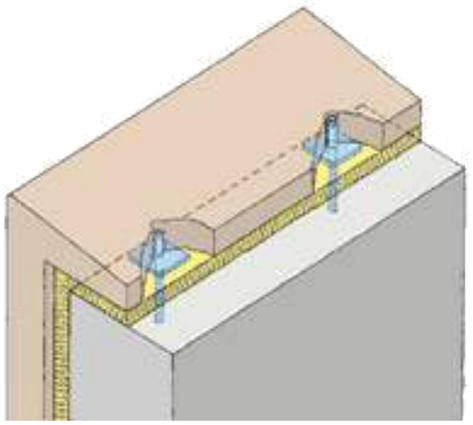
„Grande Arche“ a Parigi







Fissaggio sicuro e veloce dei pannelli prefabbricati

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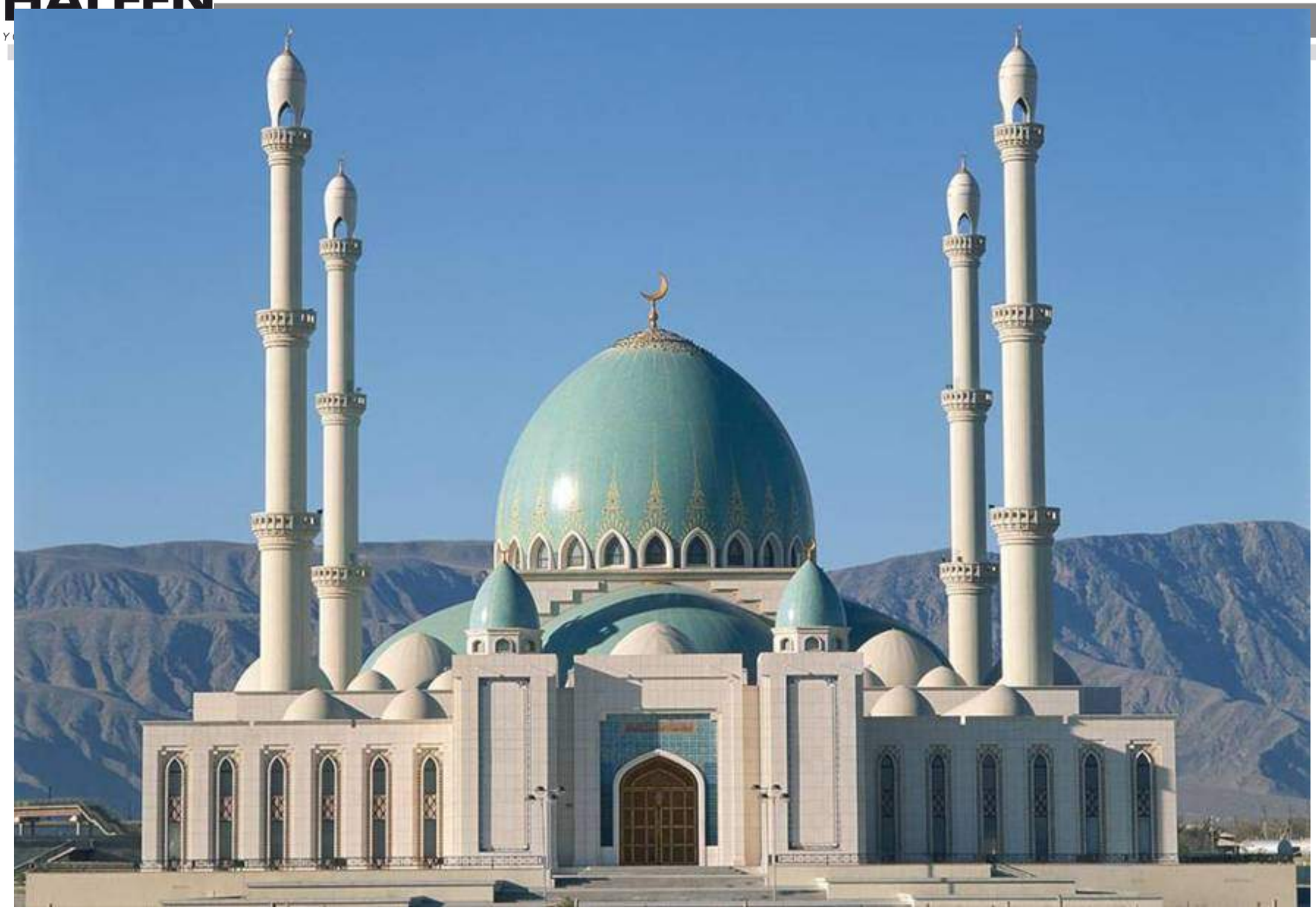

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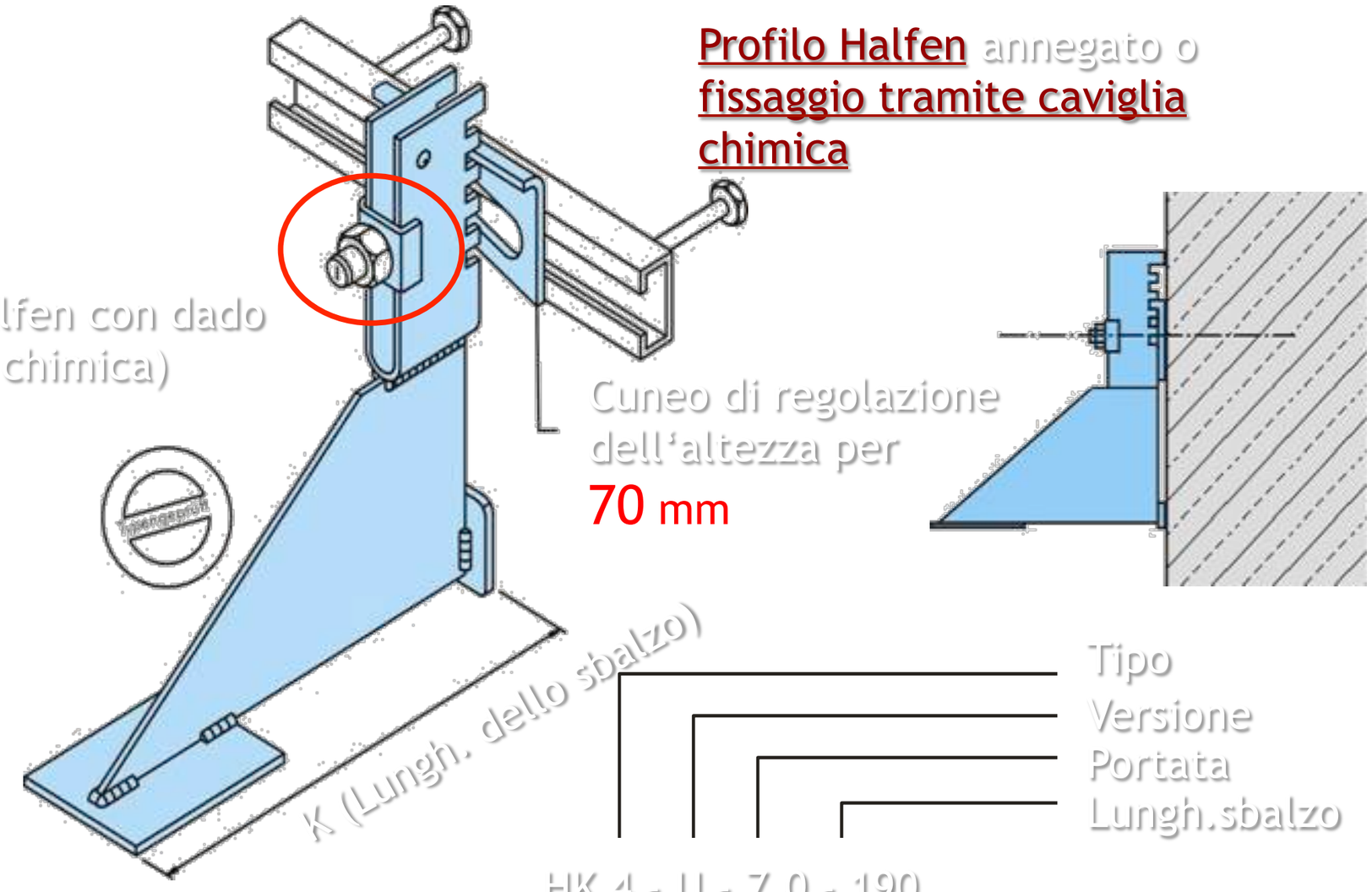
Facciata ventilata in marmo/mattoni

Collegio Pontificio Nord Americano in Roma

Sostegno della facciata ventilata in mattoni con HK4-U

HK4 - U - Portata - Lunghezza dello sbalzo



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SISTEMI PER FACCIATE IN MATTONI

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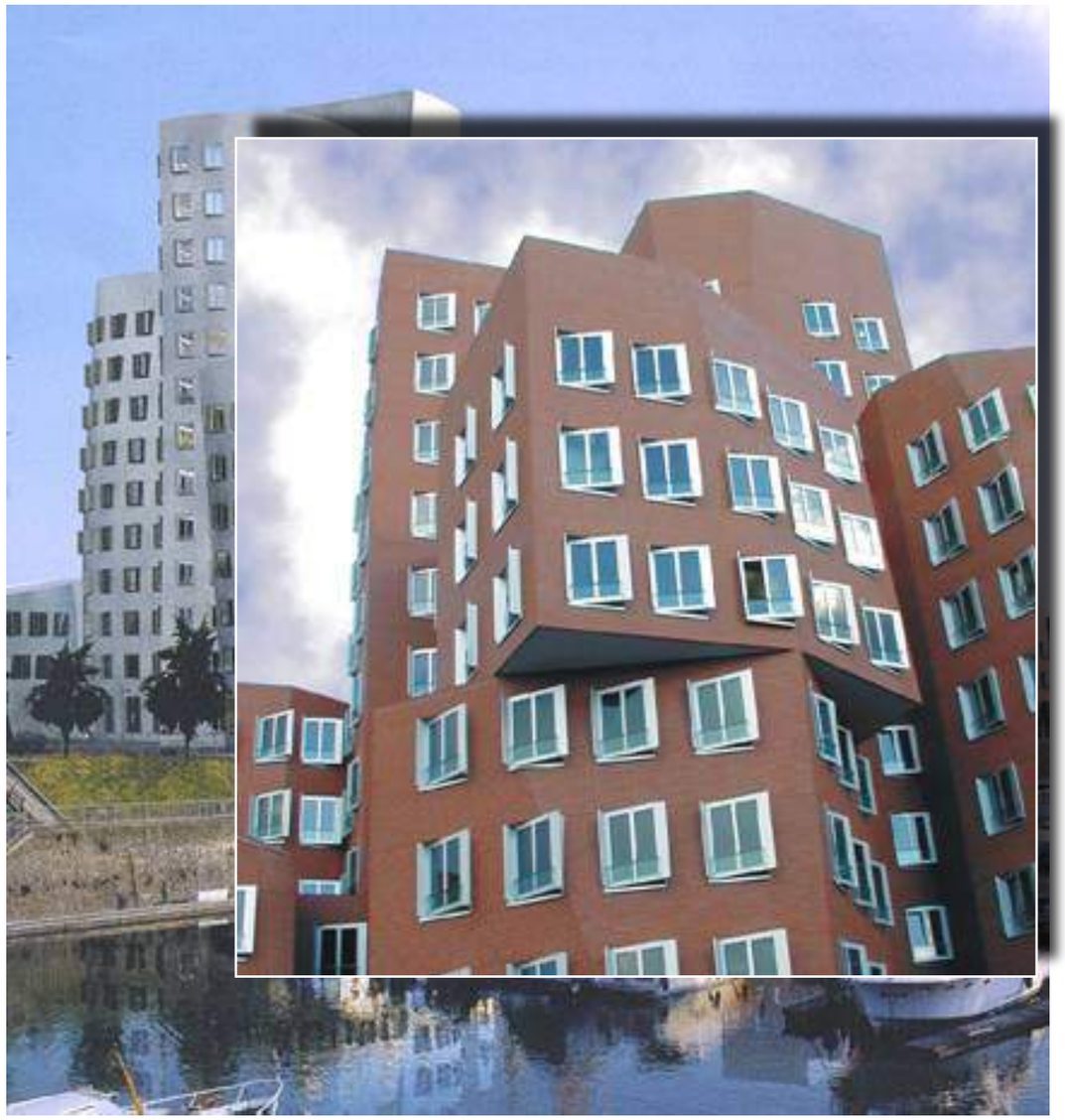

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Finiture esterne di facciata

Per garantire la massima flessibilità alle esigenze estetiche dei progettisti, il sistema Easy Home di HCS, mette a disposizione tutte le possibili finiture:

_ Rasatura per cappotti;
_ Paramano in laterizio;
_ Facciate ventilate;
_ Graniglia lavata;
_ Utilizzo di matrici;
_ Intonacatura.

PROGETTO EASEE

Vertical loads:

Vertical loads are represented mainly by the panel's weight. Of course, smaller the panel smaller the weight and the related vertical load to be sustained by the anchors.

The panel is thought to have an height equal to the height of a storey (3.200 mm) and a variable width but with a maximum dimension of 1.500 mm.

In the case of the test façade in Milan, sample calculation, considering the maximum width and thus the worst situation, has been performed.

Panel’s height = h = 3.200 mm

Panel’s width = b = 1.500 mm

Panel’s weight (TRM layers plus EPS insulation) = 0,54 kN/m2

By taking into account the anchors load area represented in Figure 14, the total panel weight to be sustained by anchors is:

3,20 m x 1,50 m x 0,54 kN/mq = 2,6 kN/each panel

Since, in general, two different anchors for the vertical loads shall be considered, two anchors at the bottom of the panel will be foreseen, able to carry 1,3 kN/each anchor.

Horizontal loads:

The horizontal loads to be considered for the anchors' design shall be mainly two:

Wind loads

The wind pressure depends on a lot of parameters (shape, altitude, orientation and location of the building, wind velocity (in EASEE project it has been assumed of 30 m/sec)), etc. In general, the technical regulations related to wind loads in each country and the nominal values identified within them shall be adopted in order to design the anchors properly.

In the case of the test façade, two different situations has been considered, taking into account values and formulas taken from DM 01/08 "Norme tecniche per le costruzioni":

Milan location, wind pressure of 0,8 kN/mq:

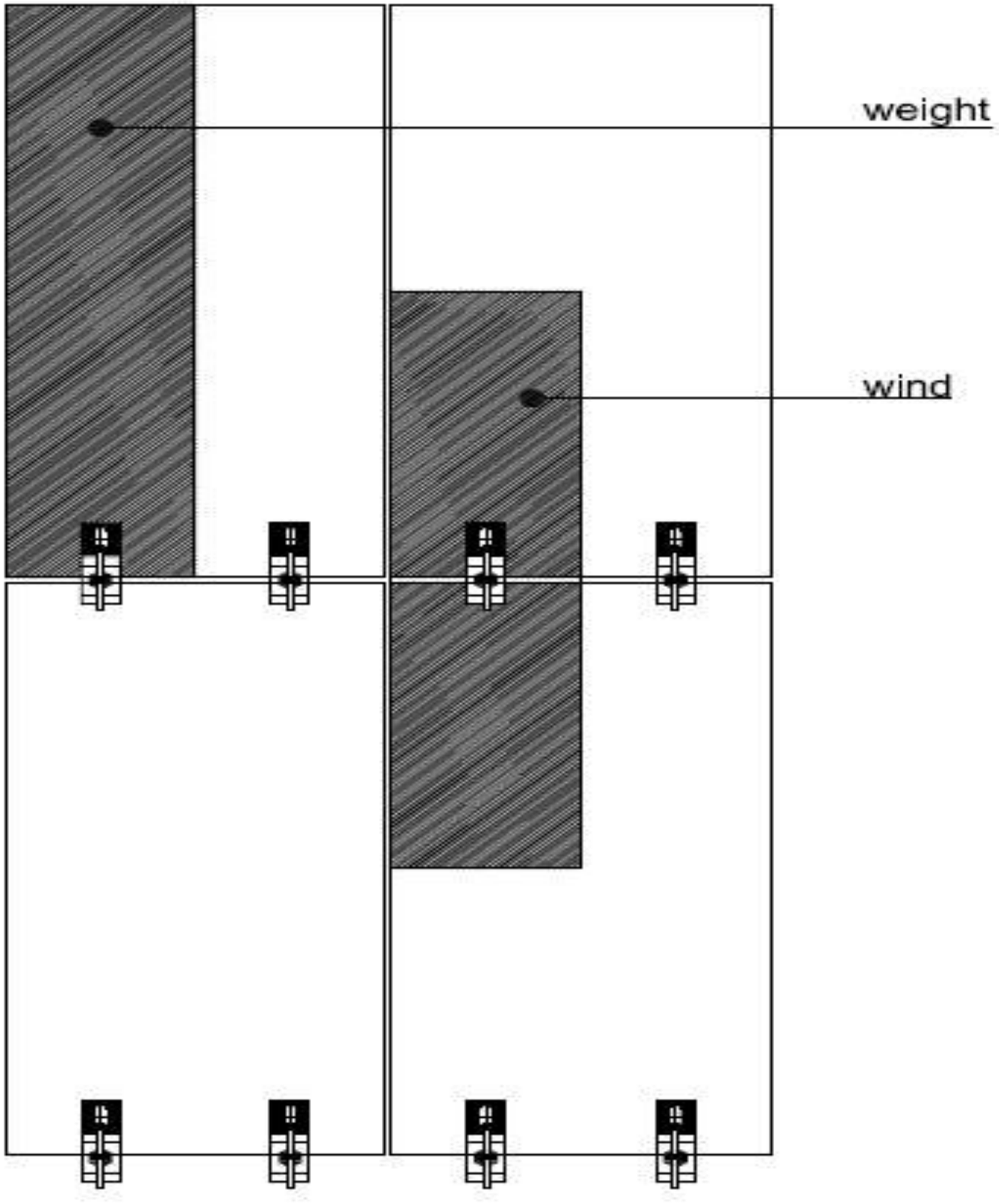
Wind pressure: Wp = 3,2 x 1,5 x 0,8 kN/mq (not factorized) = 3,84 kN/each panel

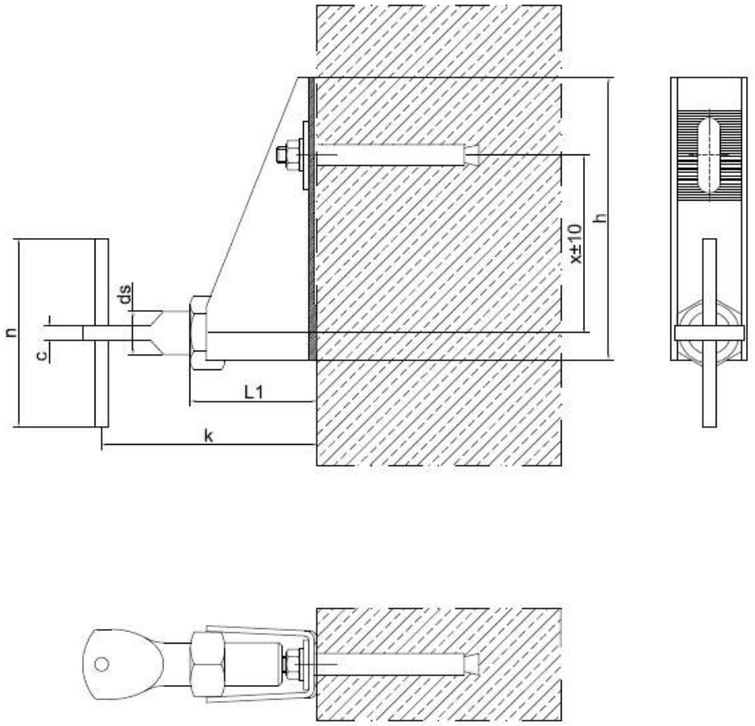
Wind suction: Ws = 0,4 x Wp = 1,54 kN/each panel.

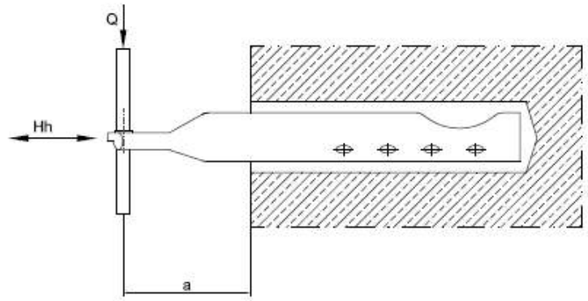
Worst situation, wind pressure of 1,5 kN/mq:

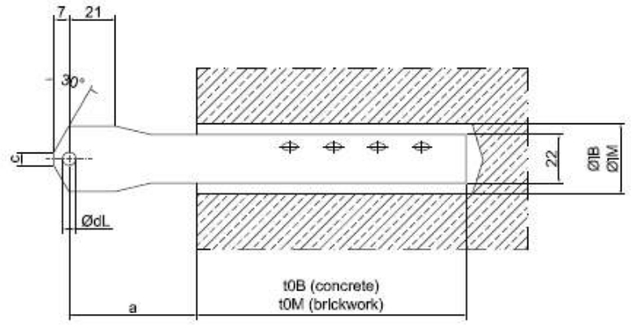
Wind pressure: Wp = 7,2 Kn/panel Wind suction: Ws = 0 2,88 kN/panel.

Seismic loads shall be considered relevant in particular regions by considering the related loads combinations that maximize their effect.

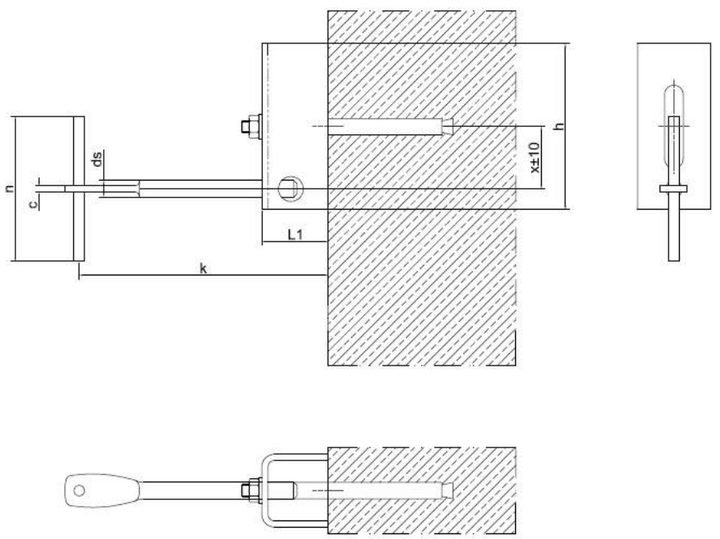

weight
wind

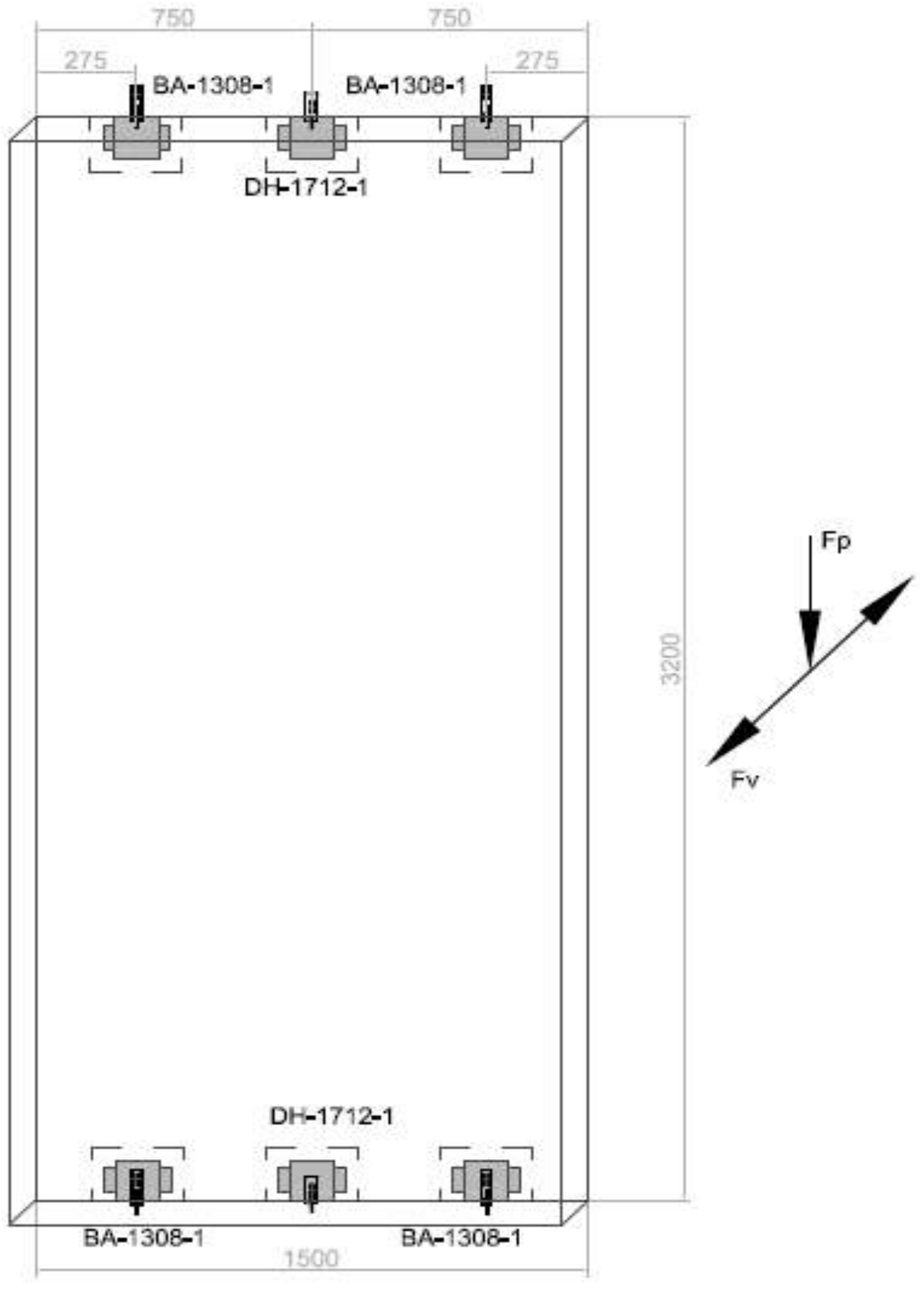

n
c
ds
L1
k
h
x±10

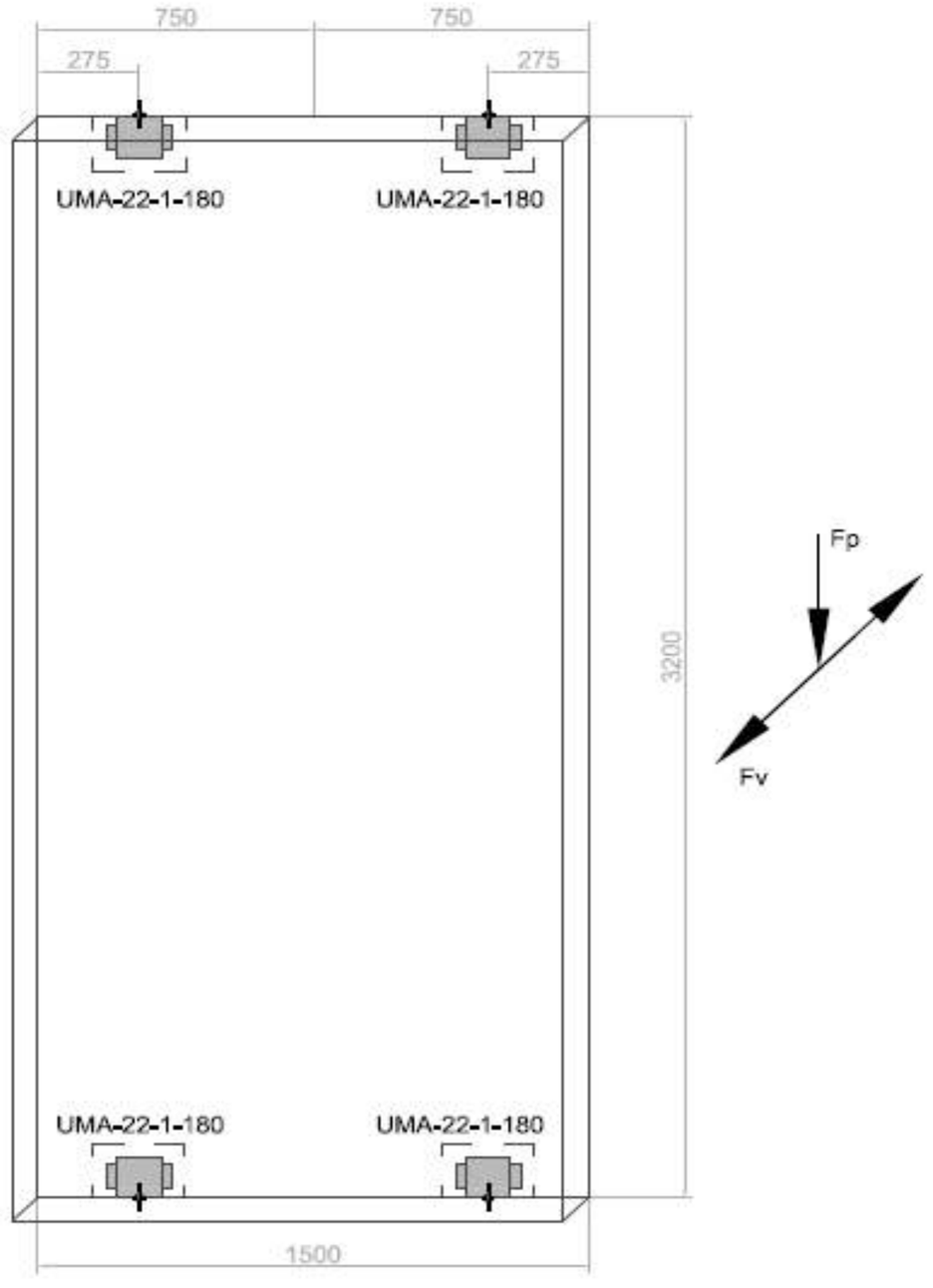

Q
Hh
a


7
21
30°
c
ØdL
22
ØtB
ØtM
a
t0B (concrete)
t0M (brickwork)

DH 1712-1


n
c
ds
L1
k
h
x±10


750
750
275
275
BA-1308-1
BA-1308-1
DH-1712-1
3200
Fp
Fv
DH-1712-1
BA-1308-1
BA-1308-1
1500


750
750
275
275
UMA-22-1-180
UMA-22-1-180
3200
Fp
Fv
UMA-22-1-180
UMA-22-1-180
1500

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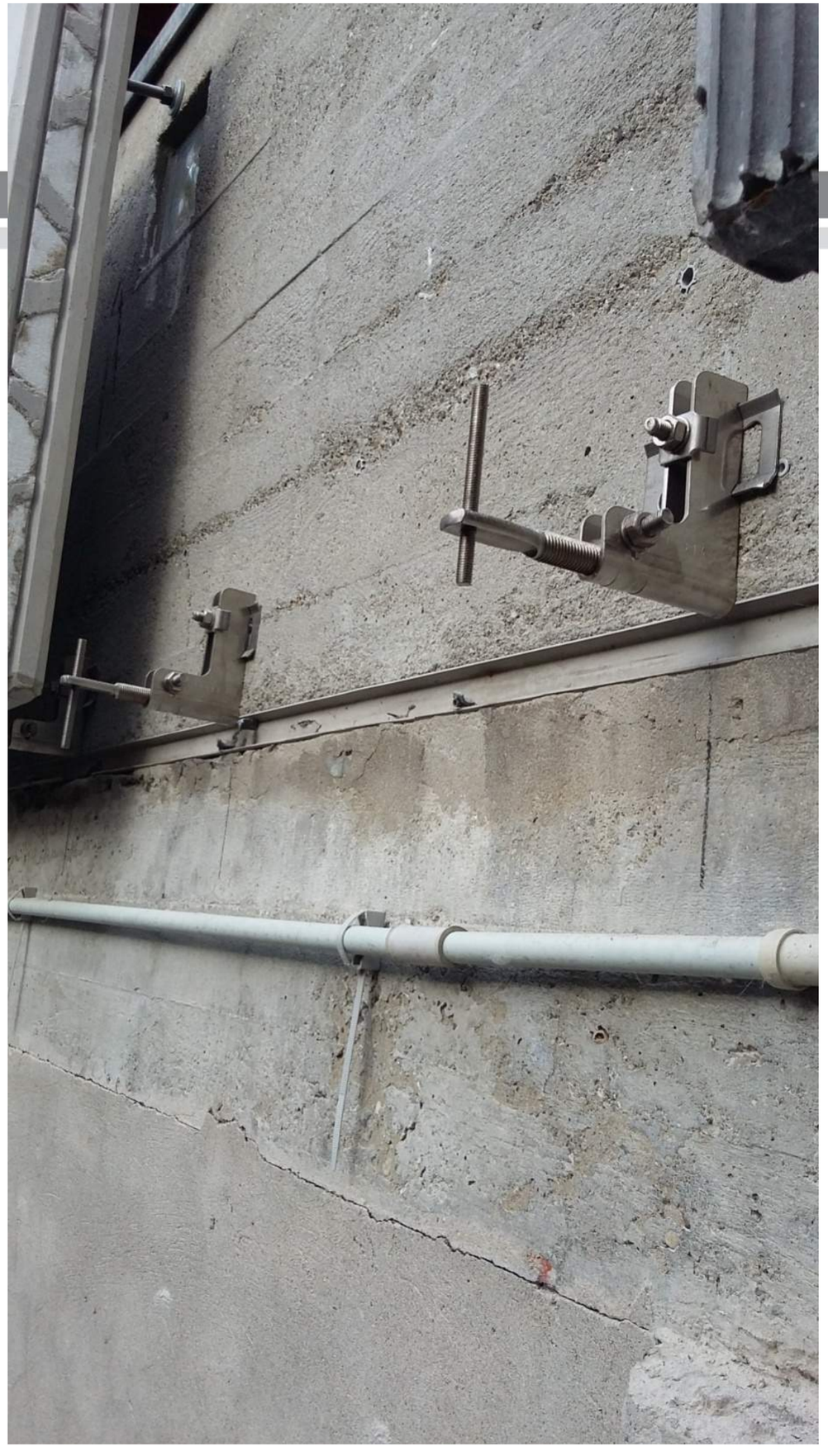

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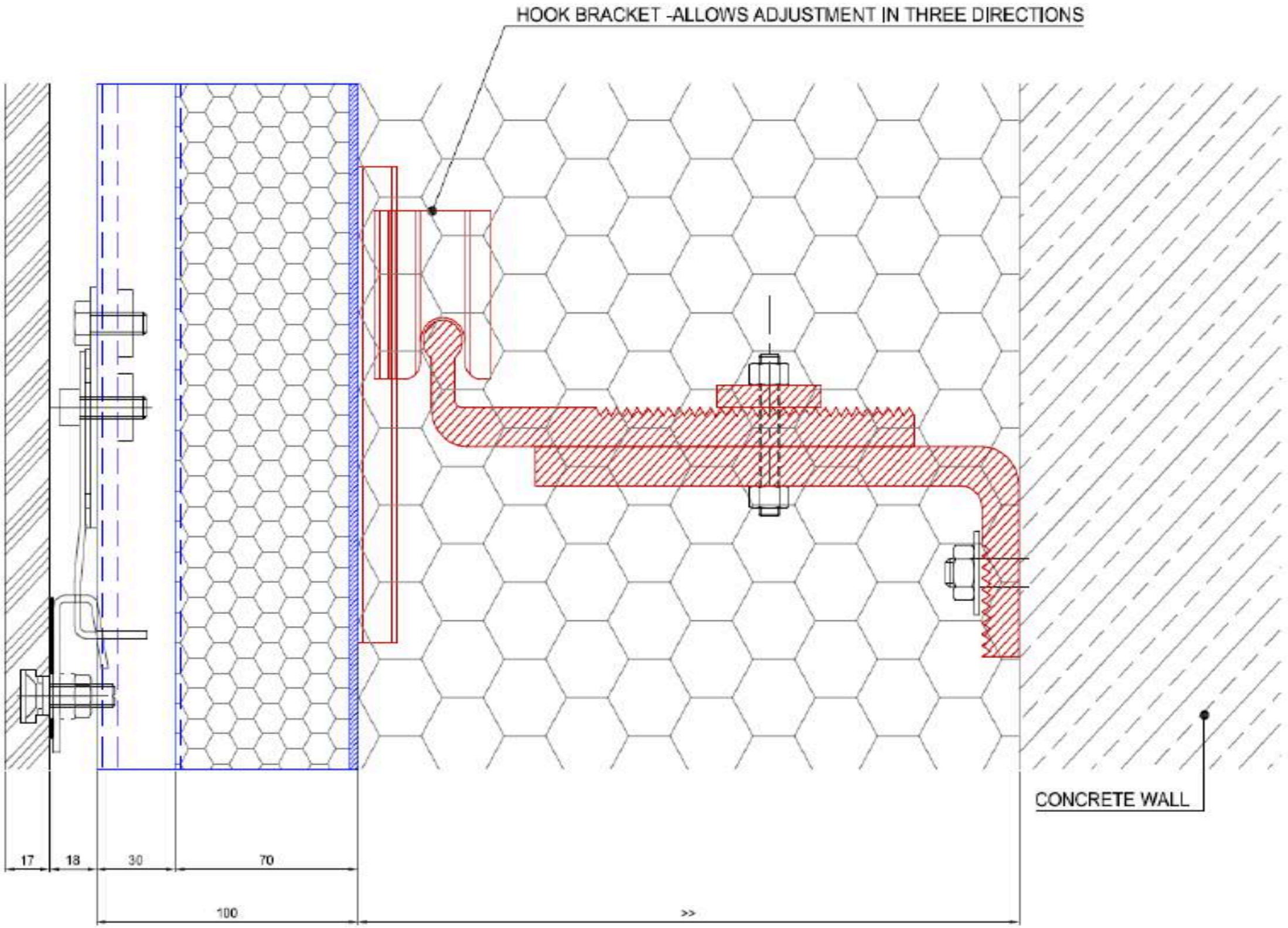
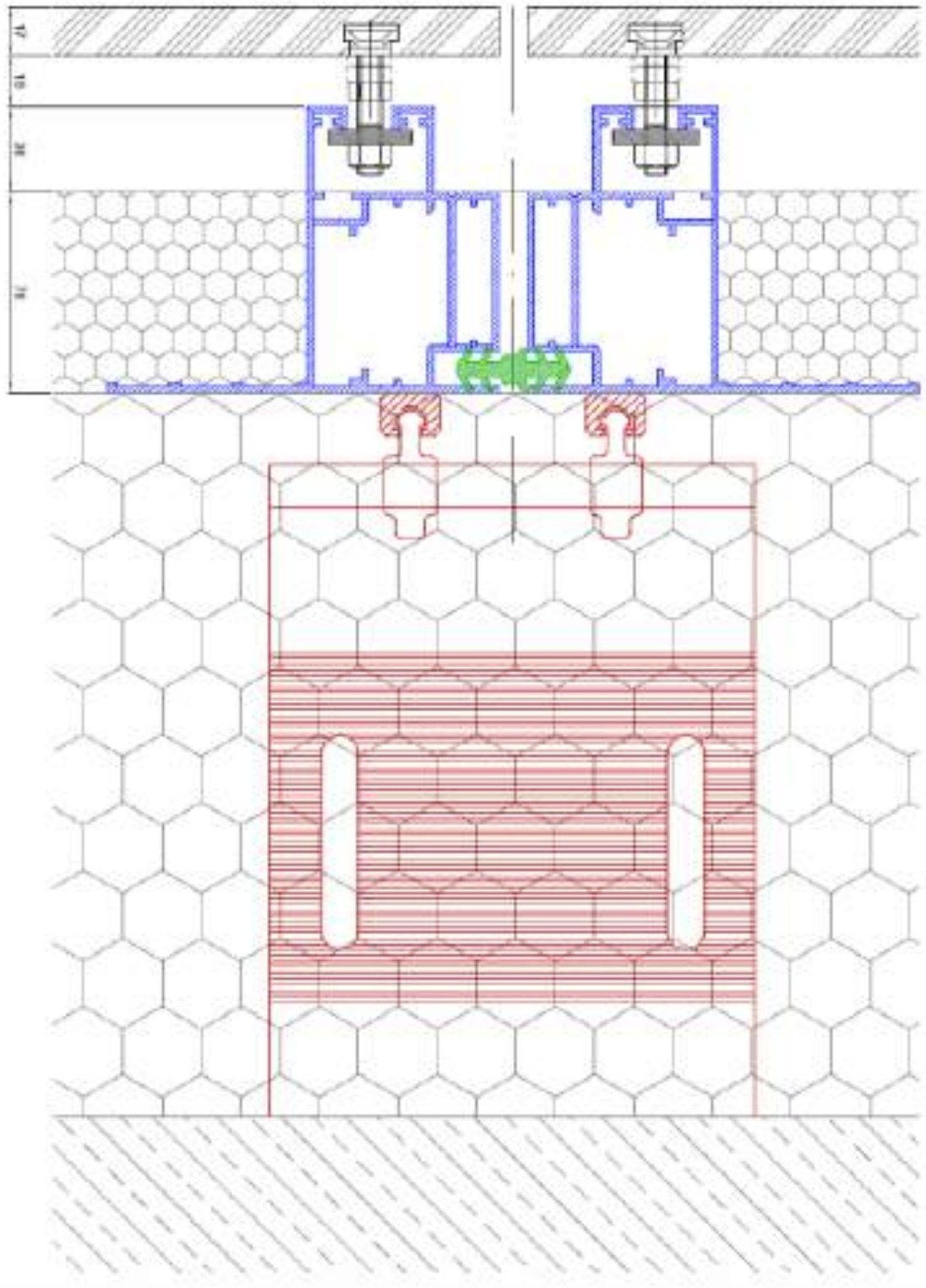
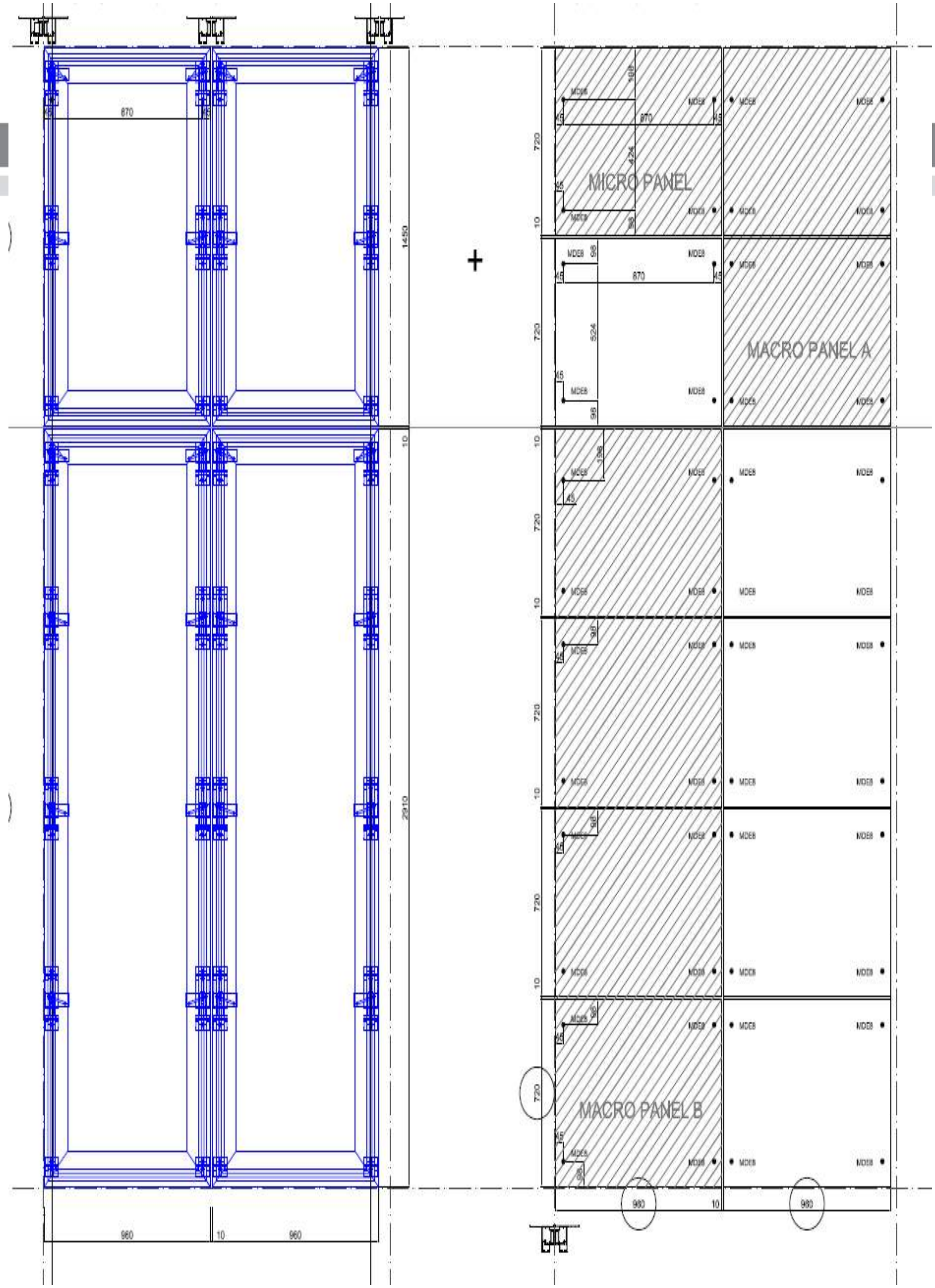
PROGETTO BUILDHEAT – MOCK UP


HOOK BRACKET -ALLOWS ADJUSTMENT IN THREE DIRECTIONS
CONCRETE WALL
17
18
30
70
100
>>




870
1450
10
2910
960
10
960
MICRO PANEL
MACRO PANEL A
MACRO PANEL B
720
720
720
720
720
720
960
960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