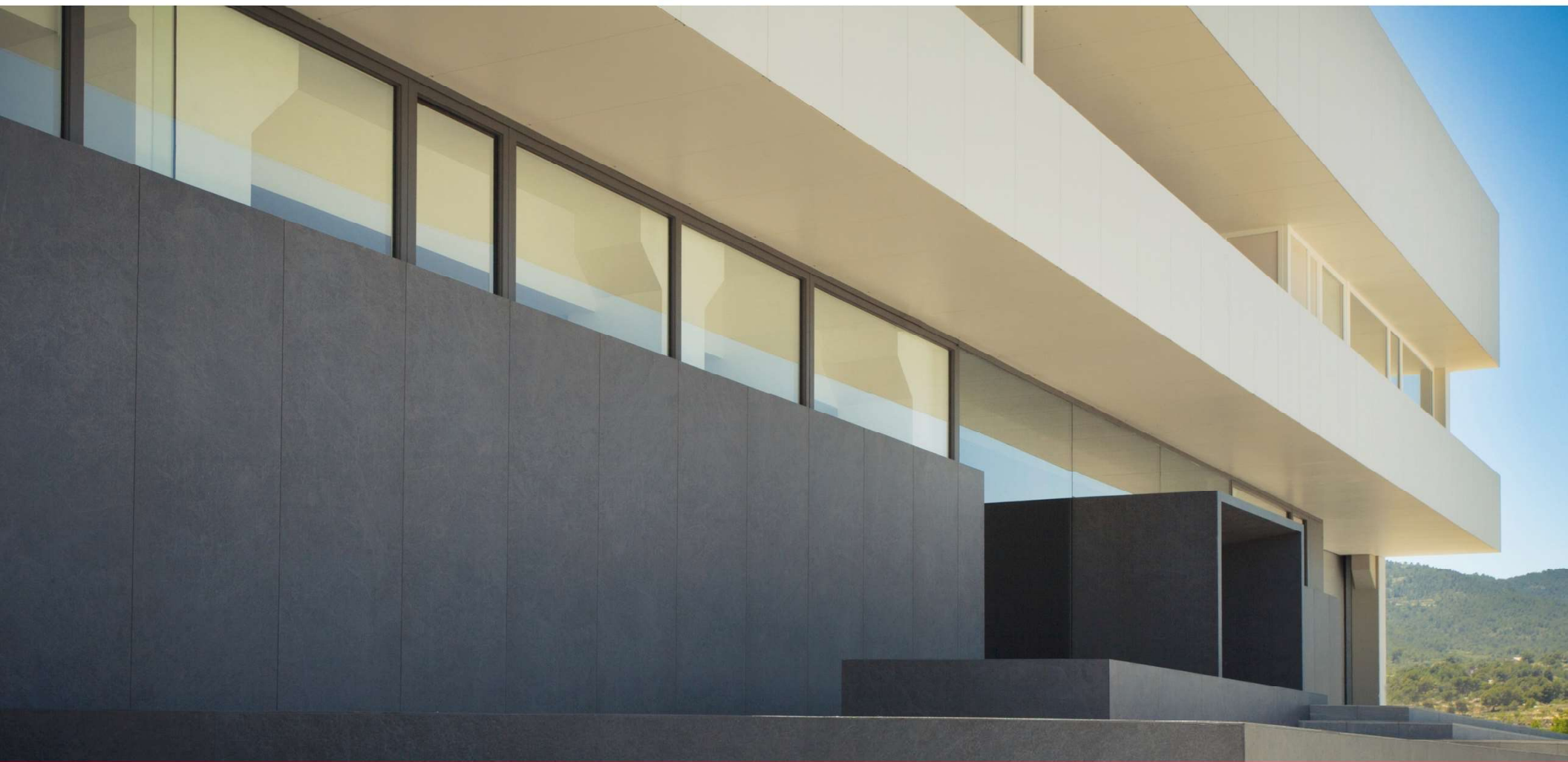


VENTILATED FAÇADES BY GRESPANIA



www.grespania.com

GRESPANIA
CERAMICA

GRESPANIA VENTILATED FAÇADES: SYSTEMS

- 
1. EXPOSED CLIPS SYSTEM
 2. CONCEALED CLIPS SYSTEM
 3. CHEMICAL SYSTEM
 4. SLIM XL 45[®] SYSTEM
 5. RIVET SYSTEM
 6. ANCHORING SYSTEM

VENTILATED FAÇADES BY GRESPANIA



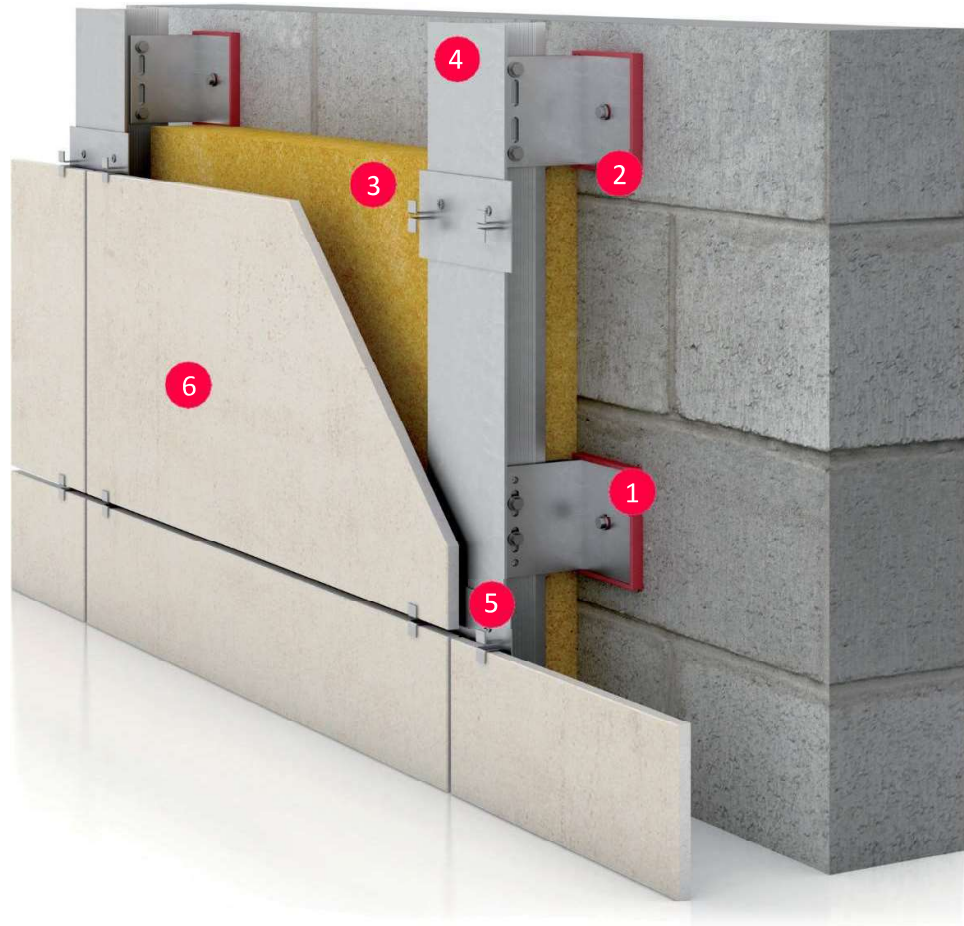
1. EXPOSED CLIPS SYSTEM

1. EXPOSED CLIPS SYSTEM

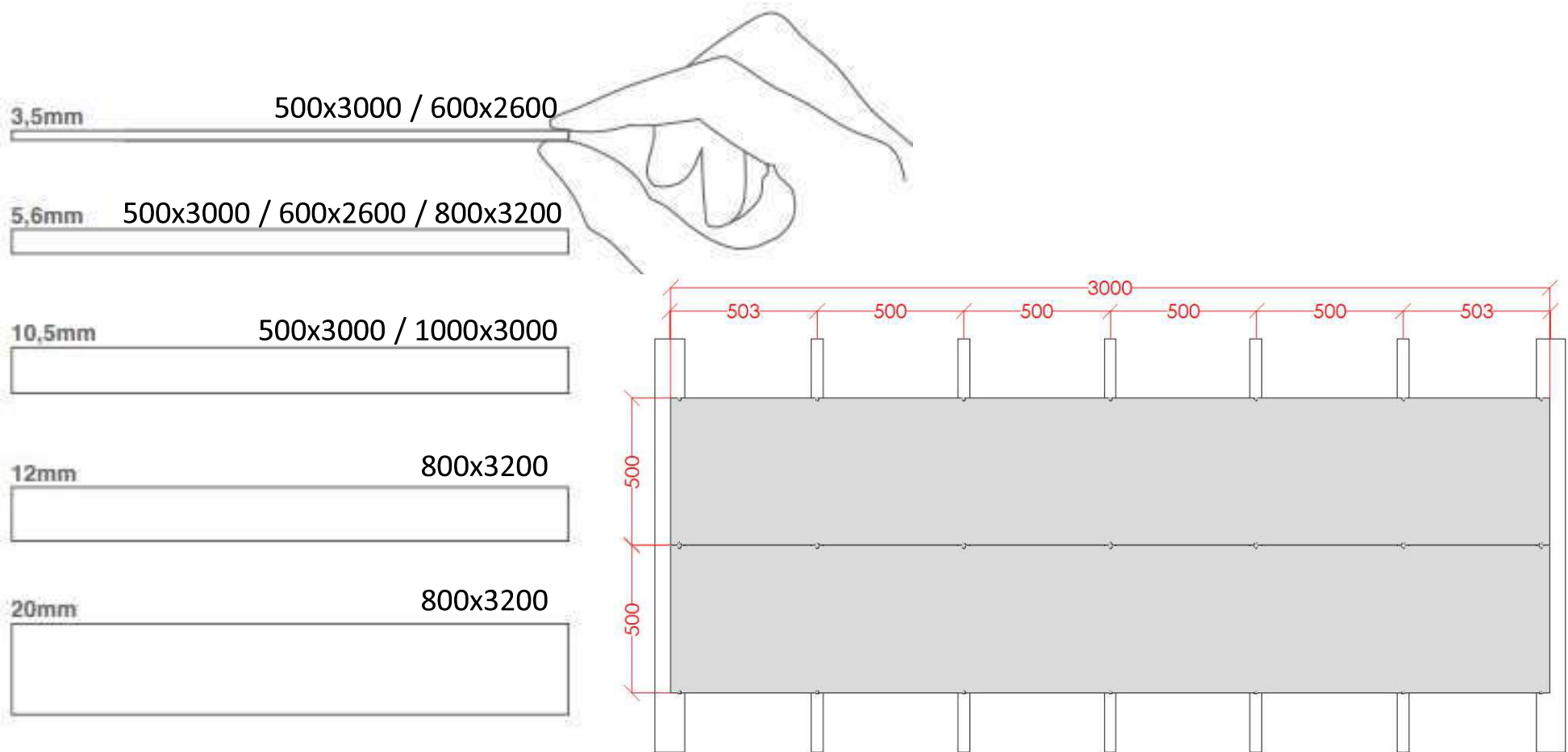
- 1 ANCHORAGE
- 2 BRACKET
- 3 INSULATION
- 4 "T" PROFILE
- 5 FIXING CLIP (EXPOSED)
- 6 PORCELAIN TILE

FORMATS

- 3,5 mm
- 5,6 mm
- 8 mm
- 9mm
- 10 mm
- 12 mm



1. EXPOSED CLIPS SYSTEM



Metal substructure and number and position of anchors must be evaluated by competent designer, considering wind and another loads, thermal expansion requests and any local regulation.

VENTILATED FAÇADES BY GRESPANIA

The image shows a close-up, low-angle view of a building's exterior. In the foreground, a large, smooth, grey metal panel runs horizontally across the frame. Behind this panel, a brick wall is visible, featuring a series of vertical metal fins or louvers that create a ventilated facade system. The sky is overcast and grey.

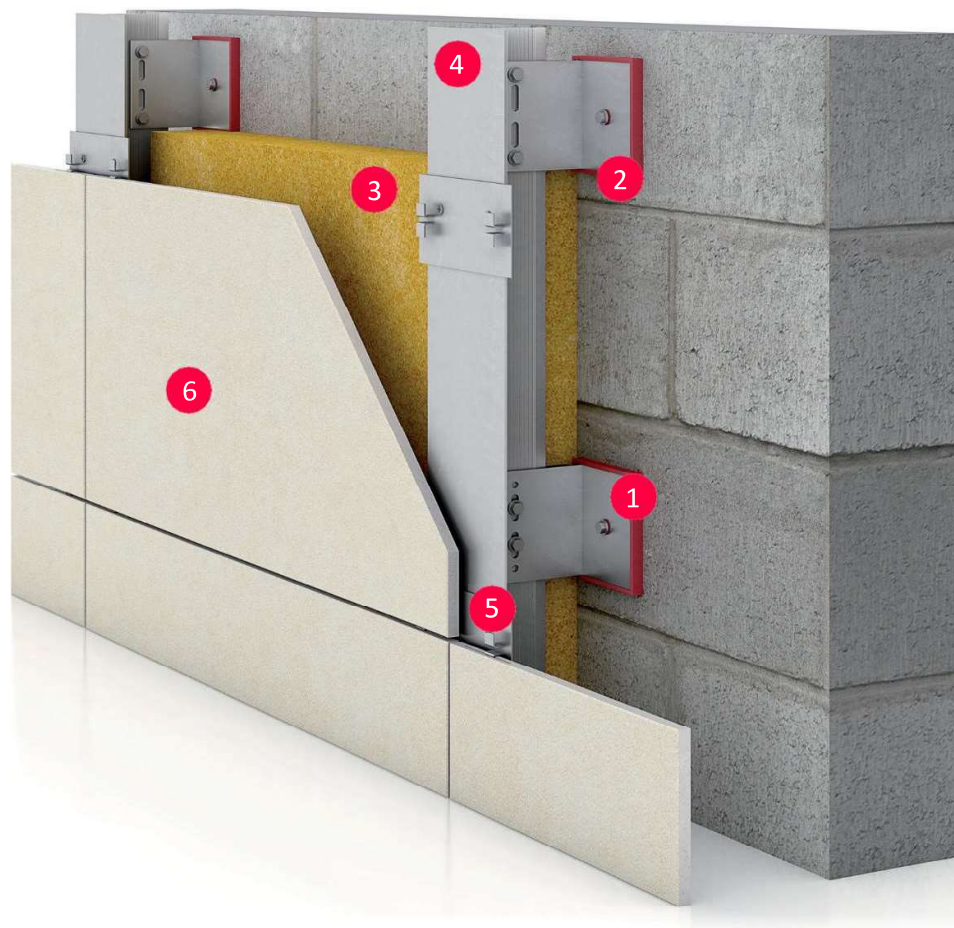
2. CONCEALED CLIPS SYSTEM

2. CONCEALED CLIPS SYSTEM

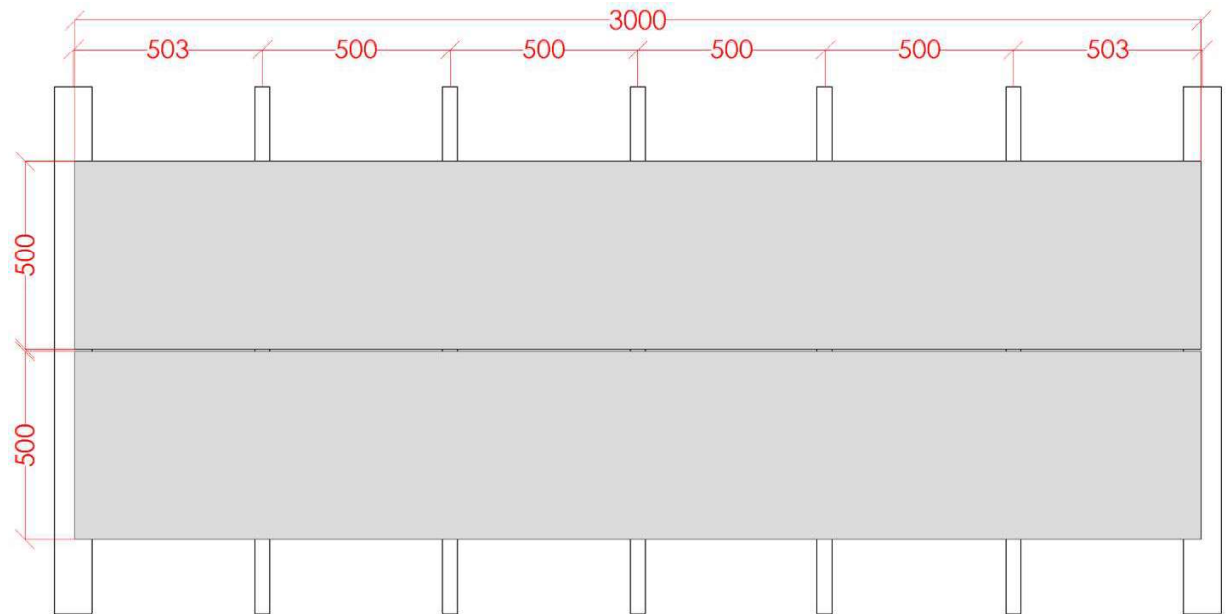
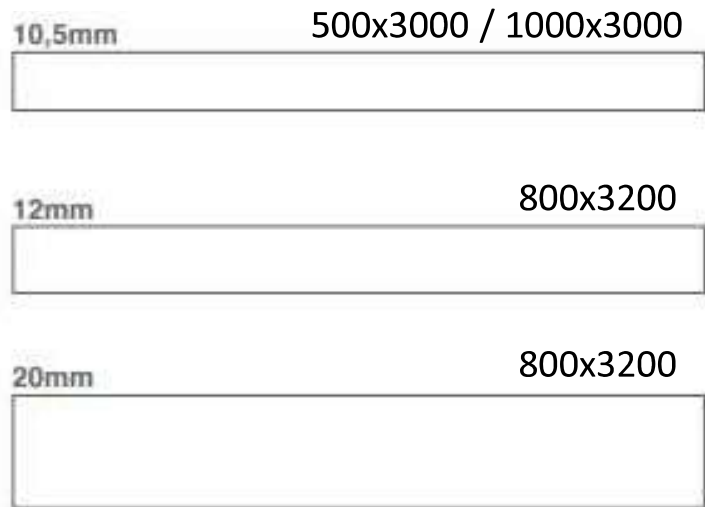
- 1 ANCHORAGE
- 2 BRACKET
- 3 INSULATION
- 4 "T" PROFILE
- 5 FIXING CLIP (CONCEALED)
- 6 PORCELAIN TILE

FORMATS

- 10 mm
- 12 mm
- 20 mm



2. CONCEALED CLIPS SYSTEM



Metal substructure and number and position of anchors must be evaluated by competent designer, considering wind and another loads, thermal expansion requests and any local regulation.

VENTILATED FAÇADES BY GRESPANIA



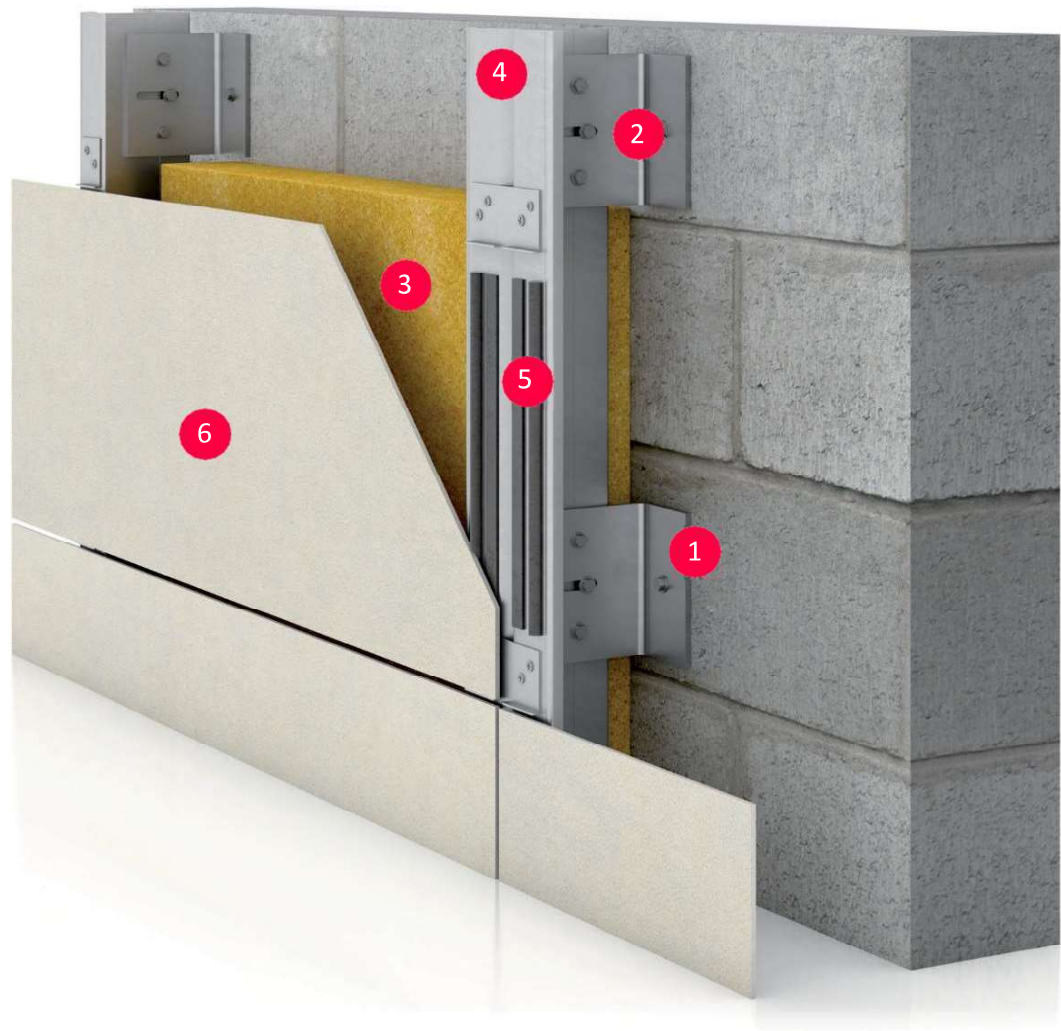
3. CHEMICAL SYSTEM

3. CHEMICAL SYSTEM

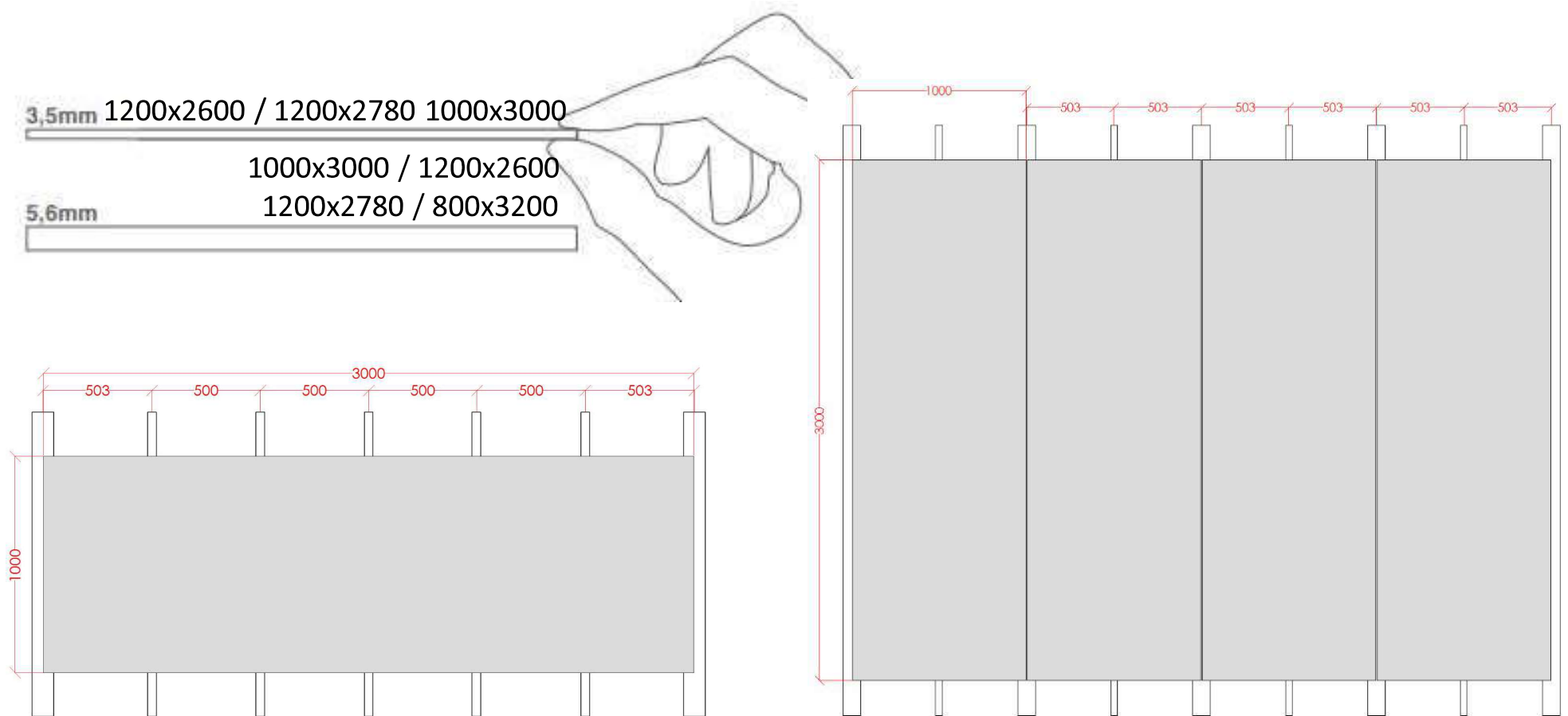
- 1 ANCHORAGE
- 2 BRACKET
- 3 INSULATION
- 4 "T" PROFILE
- 5 ADHESIVE
- 6 COVERLAM

FORMATS

- 3,5 mm
- 5,6 mm



3. CHEMICAL SYSTEM: FORMATS



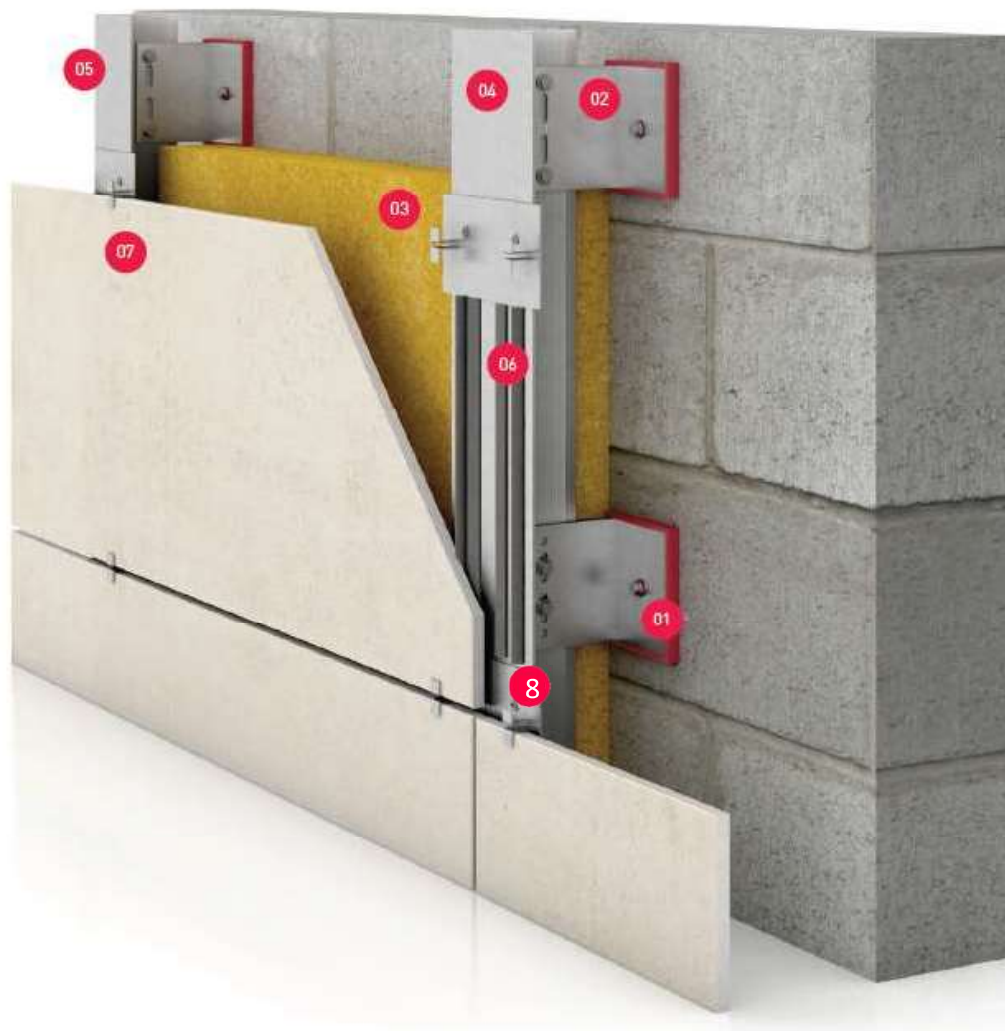
Metal substructure and number and position of anchors must be evaluated by competent designer, considering wind and another loads, thermal expansion requests and any local regulation.

3. COMBINATED SYSTEM

- 1 ANCHORAGE
- 2 BRACKET
- 3 INSULATION
- 4 T PROFILE
- 5 L PROFILE
- 6 ADHESIVE
- 7 COVERLAM TILE
- 8 CLIP

FORMATS

- 3,5 mm
- 5,6 mm
- 8 mm
- 9mm
- 10 mm
- 12 mm



VENTILATED FAÇADES BY GRESPANIA



4. SLIM XL 45[®] SYSTEM

4. SLIM XL 45[®] SYSTEM

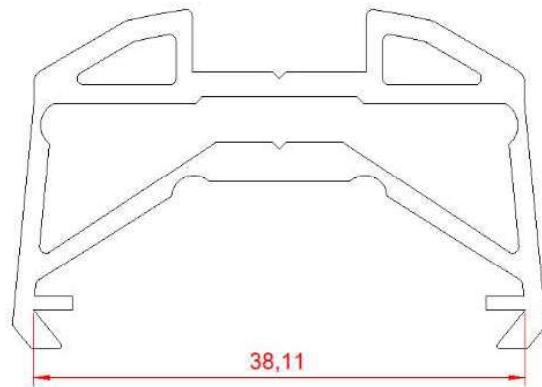


FORMATS

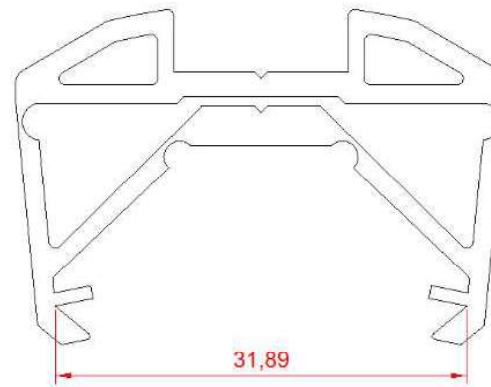
- 5,6 mm
- 10,5 mm
- 12 mm
- 20 mm

4. SLIM XL 45[®] SYSTEM

RESTING CLIP

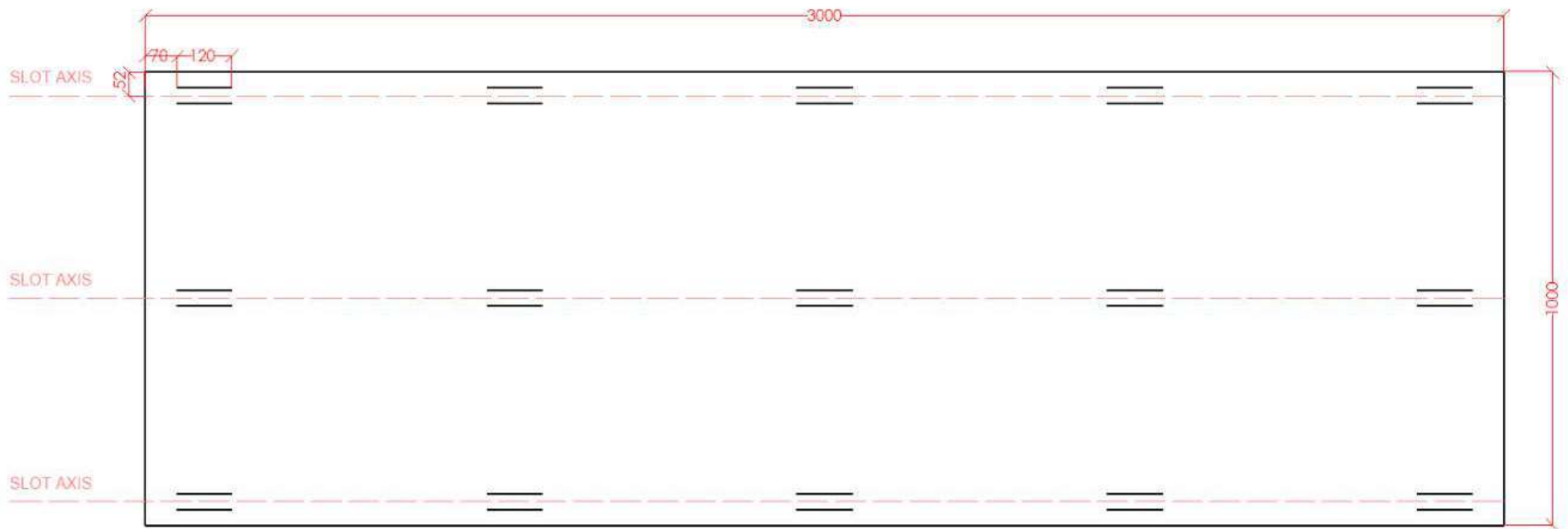


CLOSING LIMIT



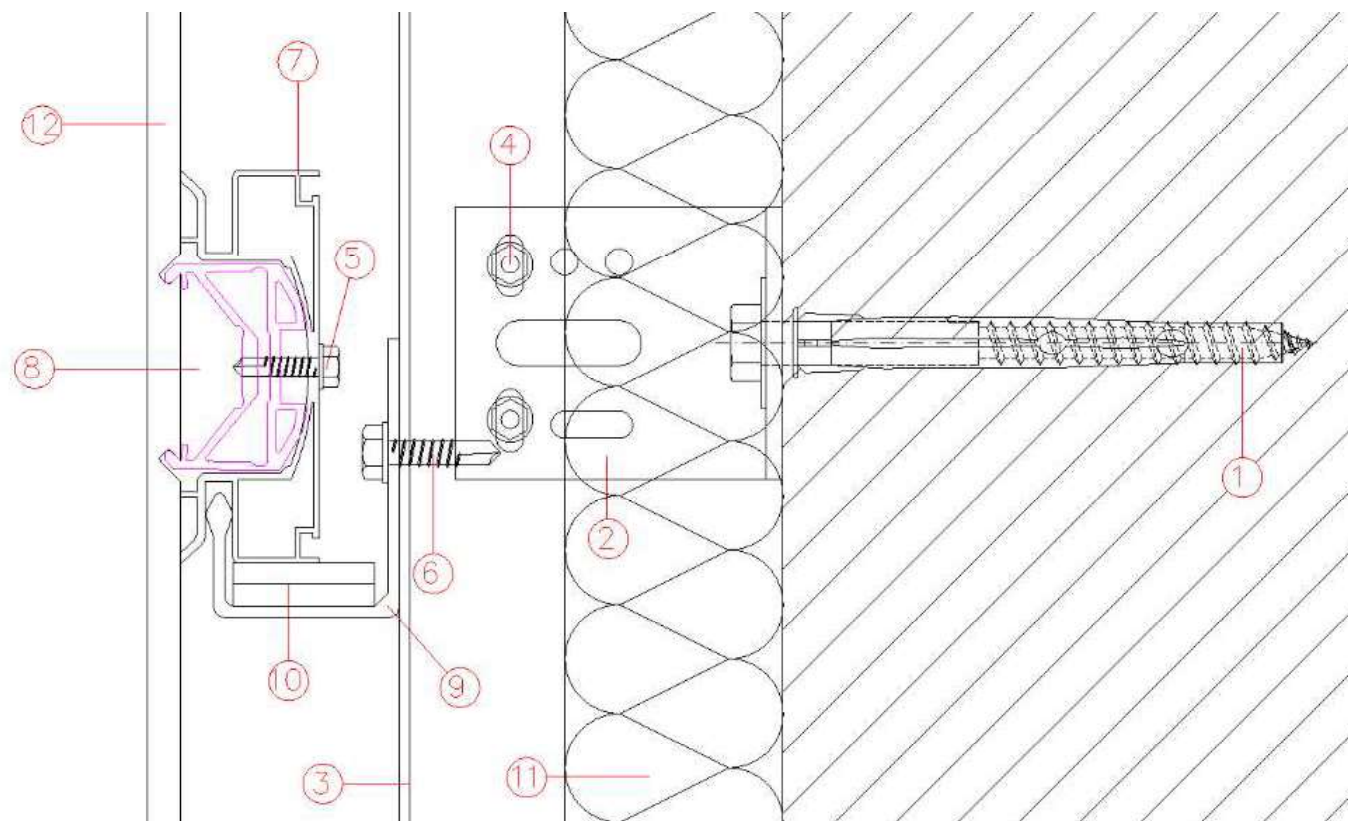
FORMATS

- 5,6 mm
- 10,5 mm
- 12 mm
- 20 mm



4. SLIM XL 45[®] SYSTEM

1. ANCHORING SET TACO-NYLON
2. ALUMINUM BRACKET
3. VERTICAL T PROFILE
4. DIN 7504 4.8x25 INOX SCREW
5. DIN 7504 4.8x16 INOX SCREW
6. DIN 7504 6.3x25 INOX SCREW
7. XL 45 EXTERIOR HORIZONTAL PROFILE
8. XL 45 INTERIOR CLIP
9. XL 45 SIMPLE CONTINUOUS PROFILE
10. LOAD COMENSATING SPRING
11. ISOLATION
12. 5,6 mm COVERLAM SLAB



4. SLIM XL 45[®] SYSTEM



Sistema Slim XL 45 Façade

4. SLIM XL 45[®] SYSTEM: FORMATS

1000x3000 / 1200x2780
1200x2600 / 1200x3600 /
1600x1600

5,6mm



10,5mm

1000x3000



12mm

800x3200 / 1600x3200

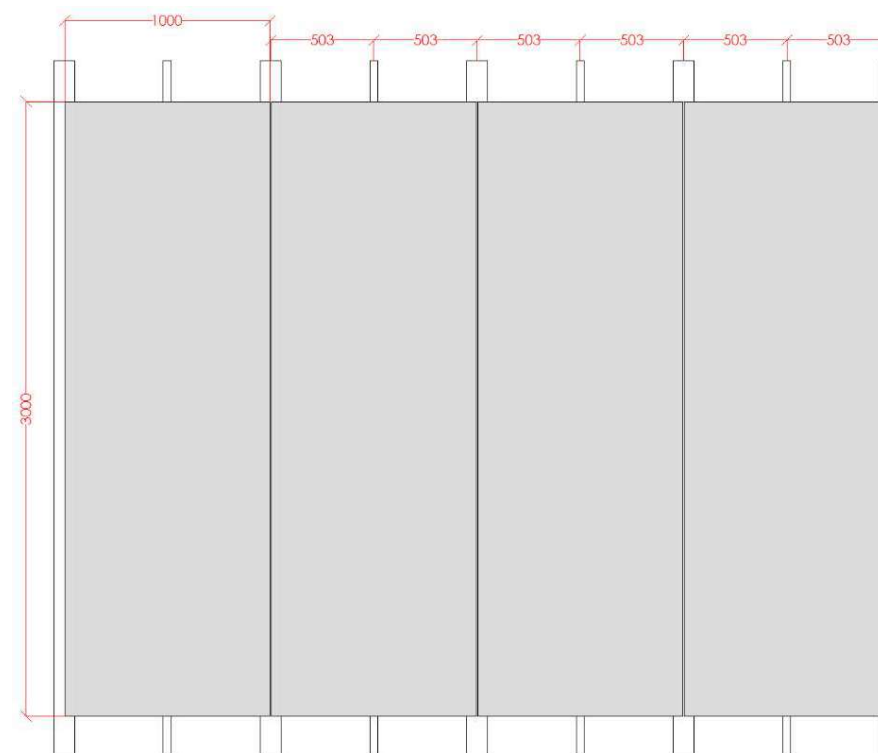
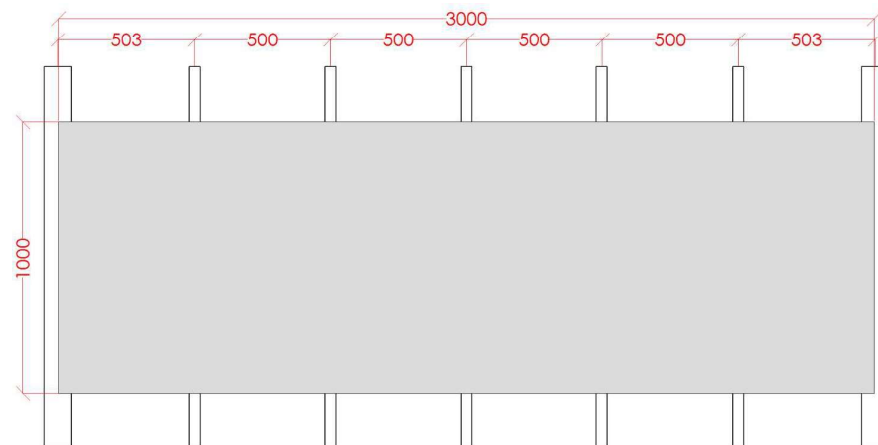


20mm

800x3200 / 1600x3200



Metal substructure and number and position of anchors must be evaluated by competent designer, considering wind and another loads, thermal expansion requests and any local regulation.



VENTILATED FAÇADES BY GRESPANIA

The image shows a building's exterior with a ventilated facade system. In the foreground, there is a grey, textured panel system. Behind it, a brick wall is visible, with vertical metal fins or louvers attached to it. The sky is overcast, and some trees are visible in the background.

5. RIVET SYSTEM

5. RIVET SYSTEM

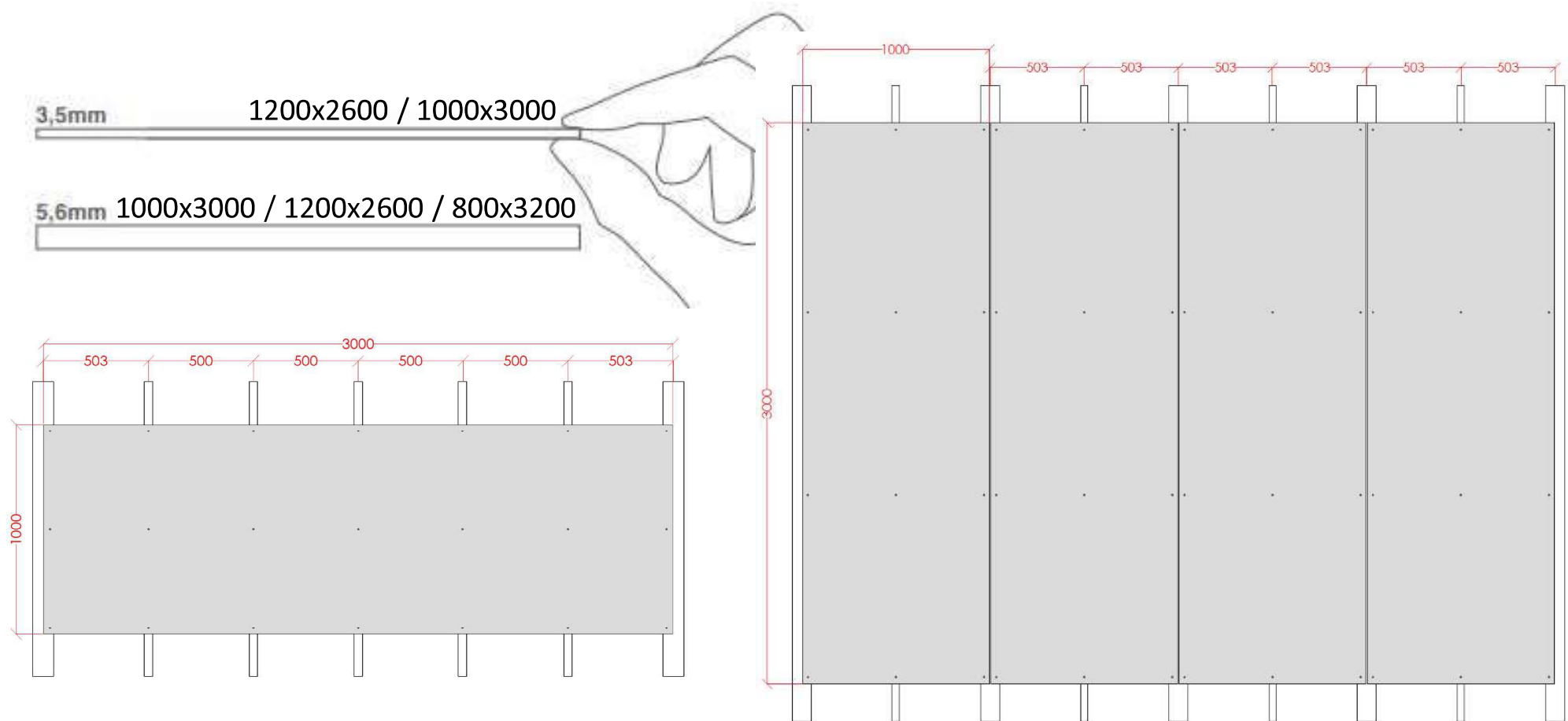


FORMATS

- 3,5 mm
- 5,6 mm

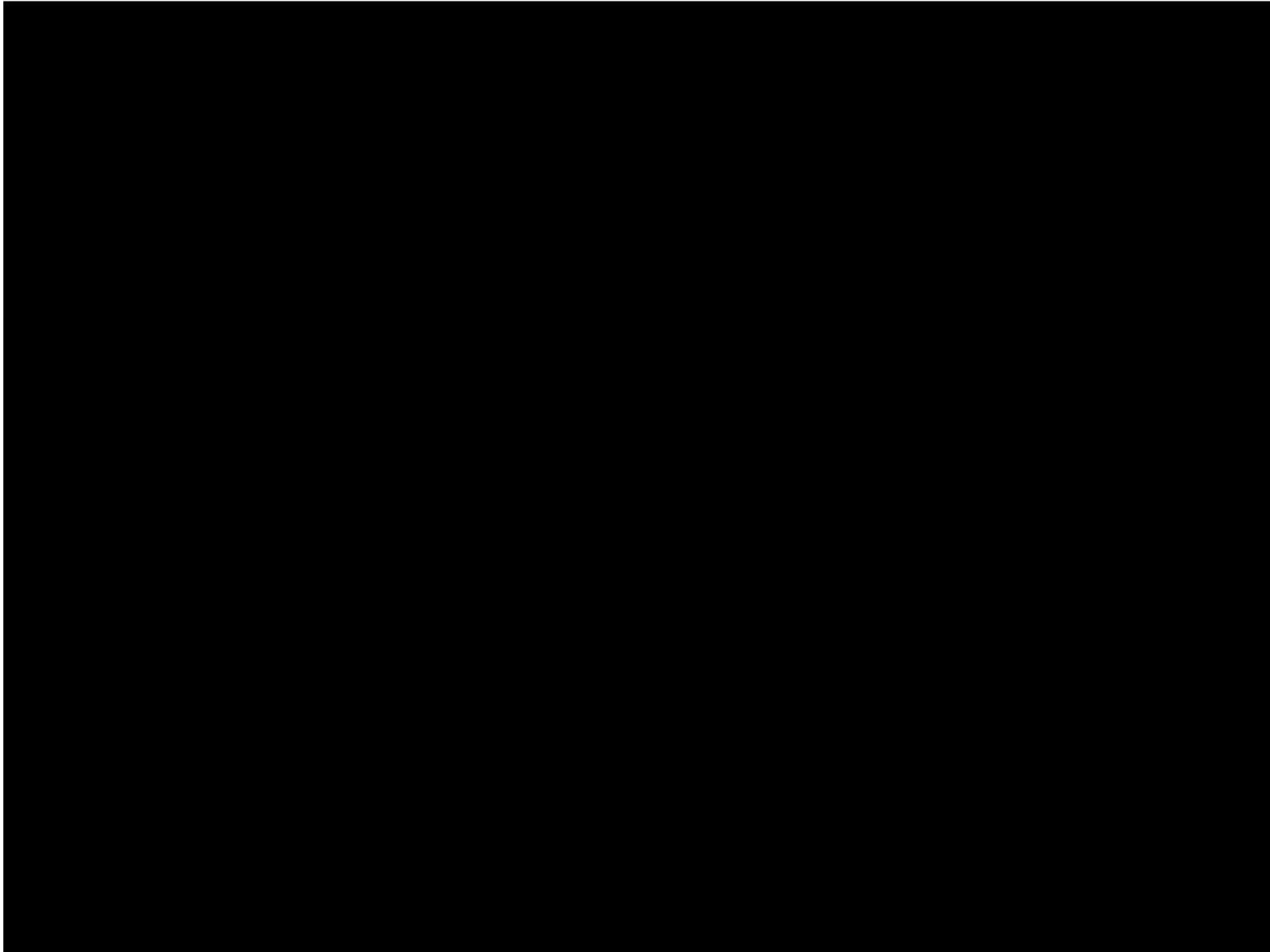
Metal substructure and number and position of anchors must be evaluated by competent designer, considering wind and another loads, thermal expansion requests and any local regulation.

5. RIVET SYSTEM



Metal substructure and number and position of anchors must be evaluated by competent designer, considering wind and another loads, thermal expansion requests and any local regulation.

5. RIVET SYSTEM

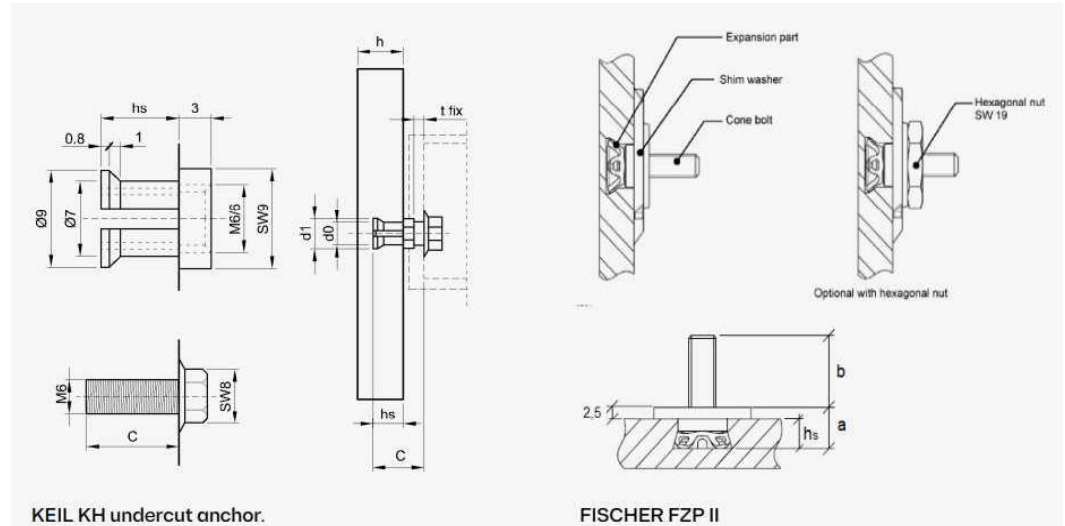
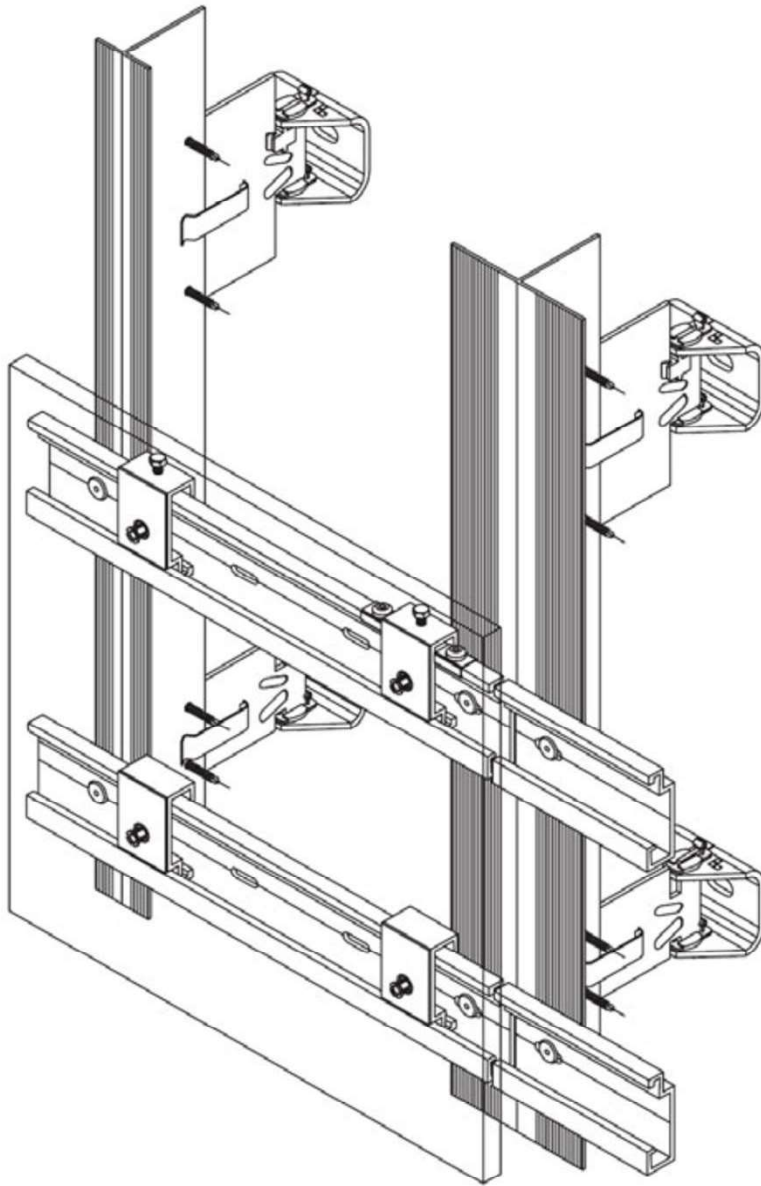


VENTILATED FAÇADES BY GRESPANIA

The image shows a building's exterior with a ventilated facade system. In the foreground, there is a grey, textured paneling system. Behind it, a brick wall is visible, featuring vertical metal fins and small, rectangular ventilation openings. The sky is overcast, and some trees are visible in the background.

6. ANCHORING SYSTEM

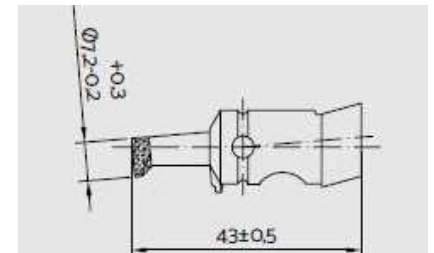
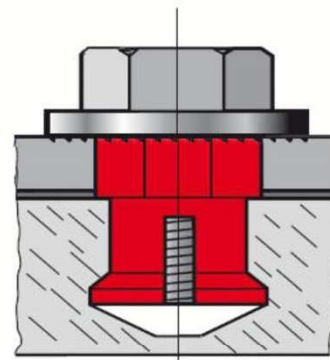
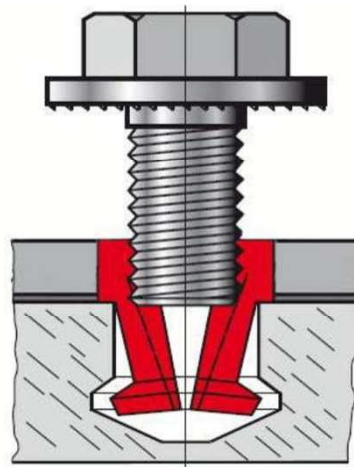
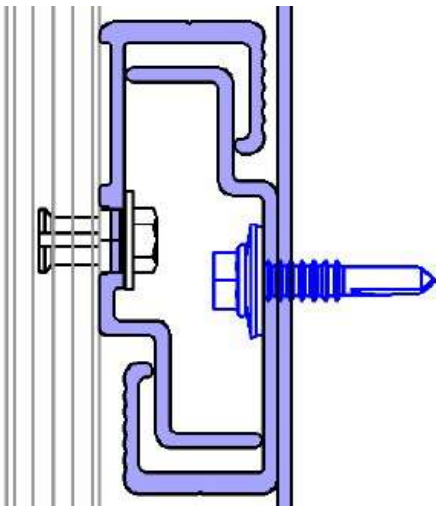
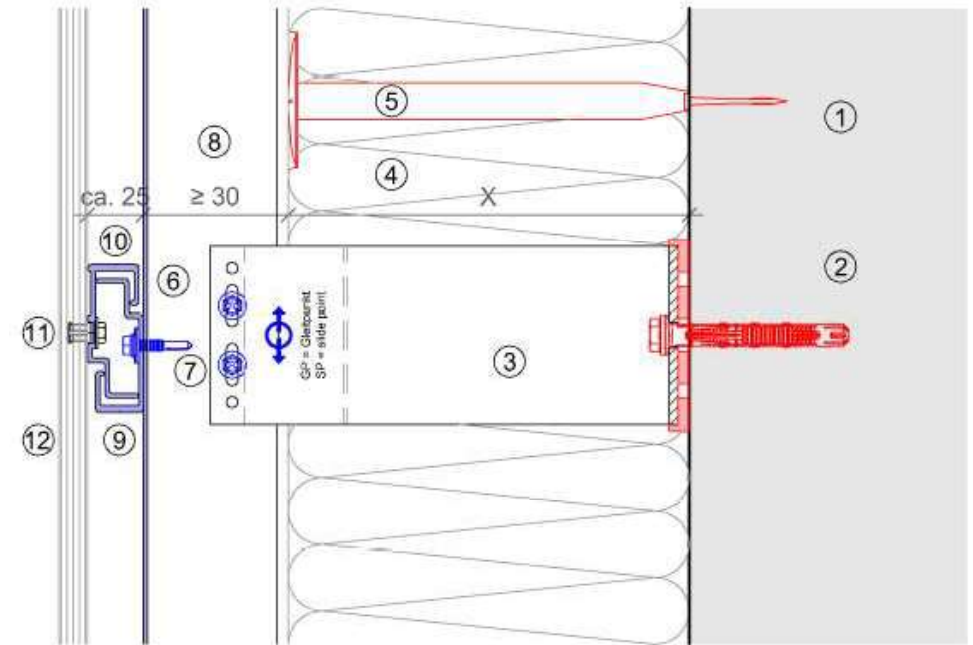
6. ANCHORING SYSTEM



FORMATS

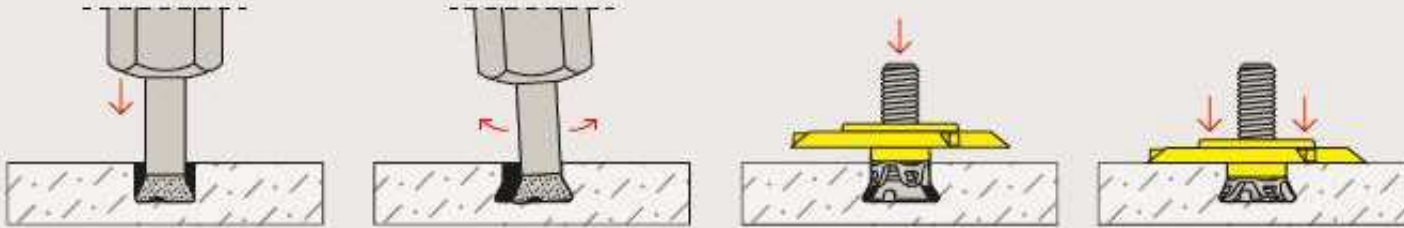
- 10,5 mm
- 12 mm
- 20 mm

6. KEIL® ANCHORING SYSTEM



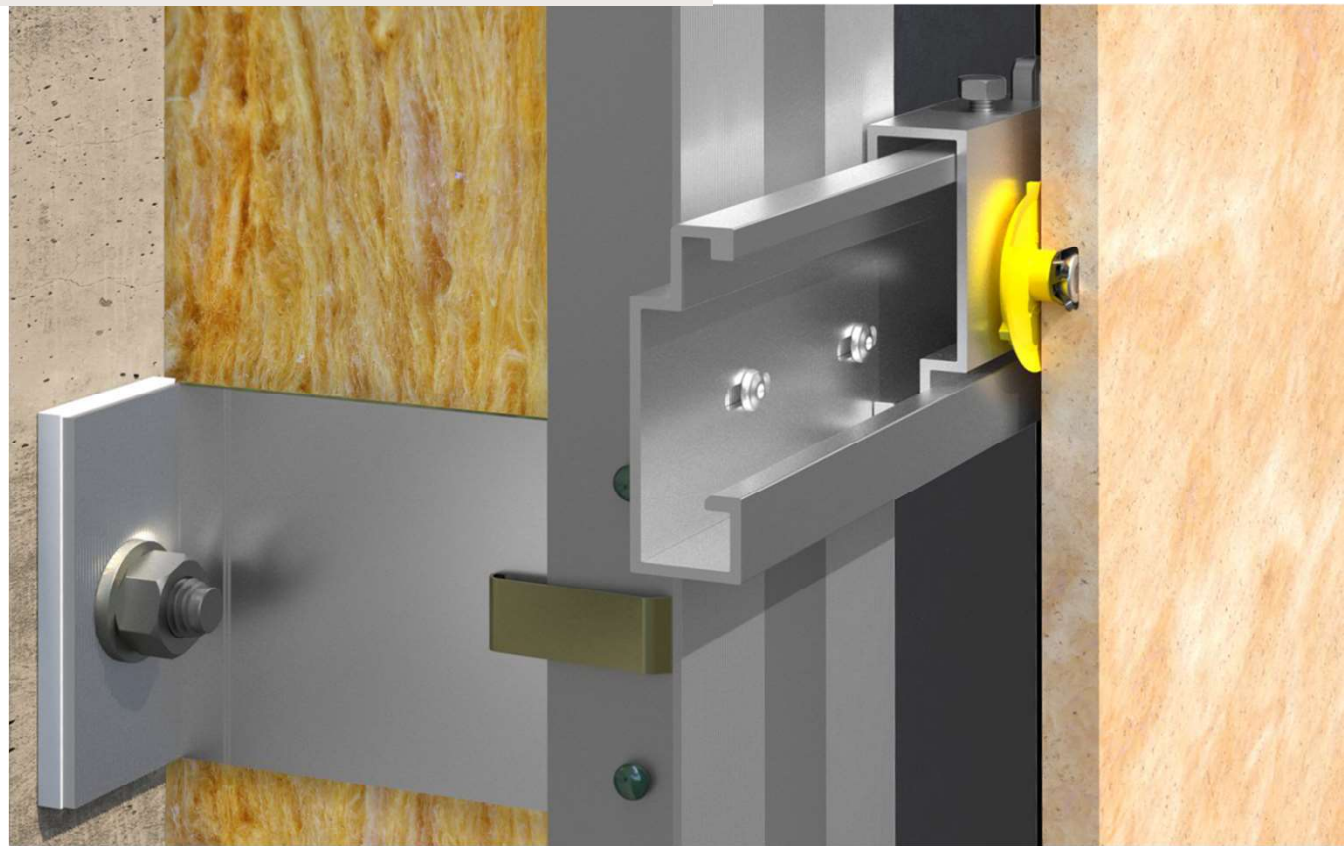
6. FISCHER® ANCHORING SYSTEM

Installation



FORMATS

- 10,5 mm
- 12 mm
- 20 mm



6. ANCHORING SYSTEM

TEST REPORT KEIL Undercut Fixing



Material

Description : Coverlam Top 12mm
Size of panel : 200 mm x 200 mm x 12,2 – 12,5 mm
Manufacturer / supplier : Grespania S.A.
Date of order : 26.05.2023

Test Description

Anchor : KEIL Undercut Anchor KH
Insertion depth : $h_s = 7$ mm
Drill hole size : cylindrical $\varnothing 7$ mm
undercut $\varnothing 9$ mm
Tested minimum edge distance : 100 mm
Type of drill : KEIL Diamond Facade Drill Bit
Type of load : central pull
Support : $\varnothing 70$ mm

Test Results

sample no.	fracture load [kN]	type of rupture	
		excavation cone [mm]	breakage of sheet
1	3,58	$\varnothing 55$	
2	3,48	$\varnothing 60$	
3	3,44	$\varnothing 65$	
4	3,96	$\varnothing 60$	
5	3,64	$\varnothing 60$	
6	3,88	60 x 50	
7	3,45	$\varnothing 50$	
8	3,48	65 x 60	
9	3,46	70 x 60	
10	3,34	$\varnothing 50$	

Arithmetic average : 3,57 kN
Coefficient of variation : 5,64 %
5 % quantile (75%) : 3,18 kN

TEST REPORT KEIL Undercut Fixing



Material

Description : Coverlam Top 12mm
Size of panel : 400 mm x 200 mm x 12,2 – 12,5 mm
Manufacturer / supplier : Grespania S.A.
Date of order : 26.05.2023

Test Description

Anchor : KEIL Undercut Anchor KH
Insertion depth : $h_s = 7$ mm
Drill hole size : cylindrical $\varnothing 7$ mm
undercut $\varnothing 9$ mm
Tested minimum edge distance : 100 mm
Type of drill : KEIL Diamond Facade Drill Bit
Type of load : shear load

Test Results

sample no.	fracture load [kN]	type of rupture	
		excavation cone [mm]	breakage of sheet
1	6,34		X
2	6,19		X
3	6,15		X
4	6,33		X
5	6,55		X
6	6,34		X
7	6,38		X
8	6,39		X
9	6,65		X
10	6,27		X

Arithmetic average : 6,36 kN
Coefficient of variation : 2,37 %
5 % quantile (75%) : 6,05 kN

6. ANCHORING SYSTEM

10,5mm

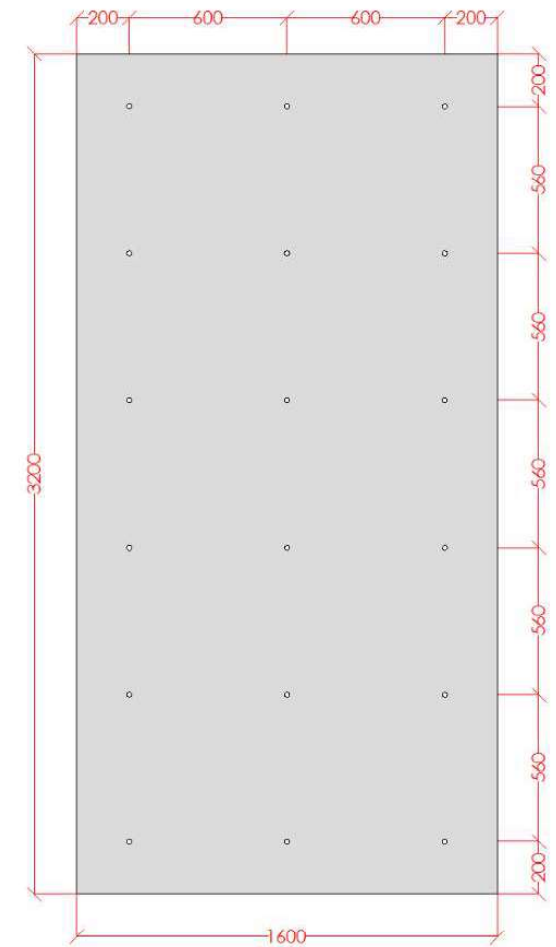
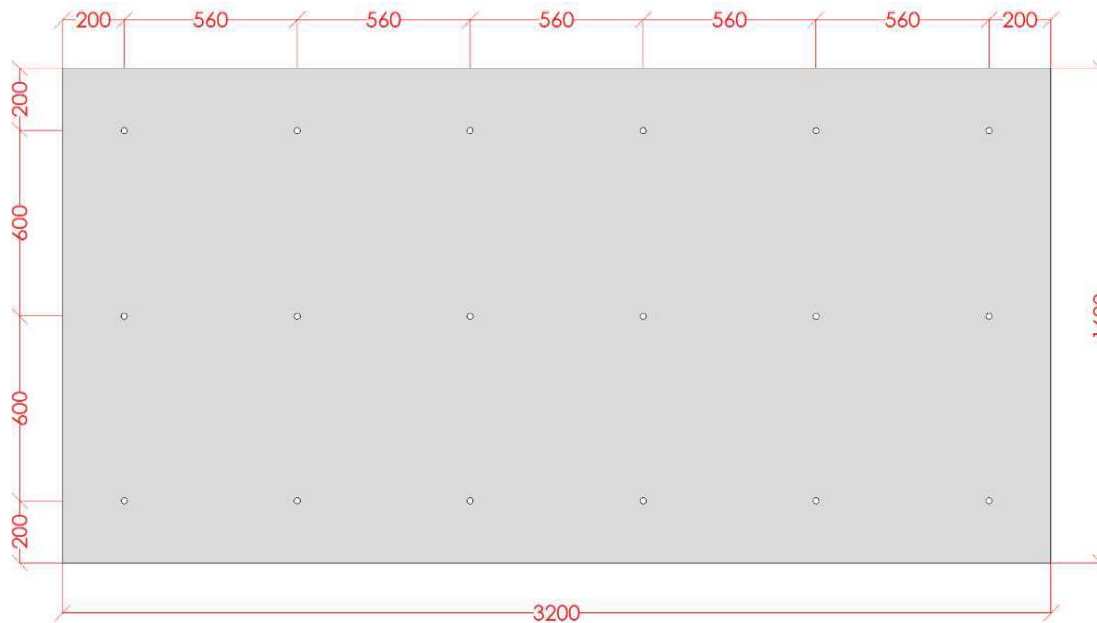
1000x3000

12mm

1600x3200

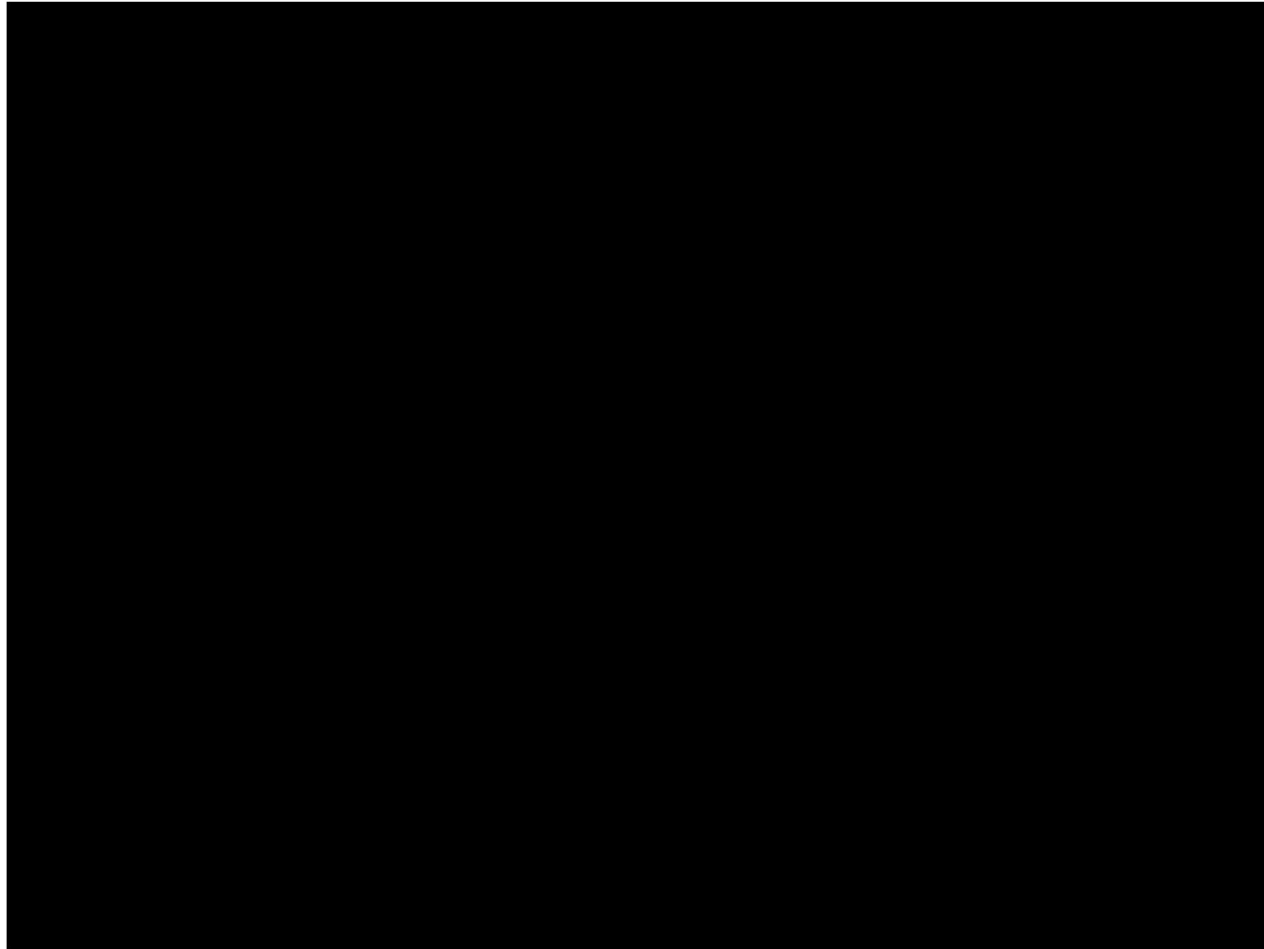
20mm

1600x3200



Metal substructure and number and position of anchors must be evaluated by competent designer, considering wind and another loads, thermal expansion requests and any local regulation.

6. ANCHORING SYSTEM



VENTILATED FAÇADES BY GRESPANIA



ESTIMATED COSTS

VENTILATED FAÇADE: ESTIMATED COSTS

Estimated prices considering minimum of 500m² Facade and basic metal frame structure. The system 6. *Anchoring* has been estimated with 6 anchorages.

	1. EXPOSED CLIPS	2. CONCEALED CLIPS	3. CHEMICAL	4. SLIM XL 45®	5. RIVET	6. ANCHORING	
						KEIL	FISCHER
PROFILES	60 €/m ²	60 €/m ²	60 €/m ²	60 €/m ²	45 – 60 €/m ²	70 €/m ²	60 €/m ²
FIXATION	12 €/m ²	12 €/m ²	25 €/m ²	-	AS PER MANUFACTURE R	5 €/m ²	5 €/m ²
*FIBER MESH	12 €/m ²	12 €/m ²	12 €/m ²	12 €/m ²	12 €/m ²	12 €/m ²	12 €/m ²
MACHINING	-	8 €/m ²	-	15€/m ²	AS PER MANUFACTURE R	15€/m ²	15 €/m ²
TOTAL	72 – 84 €/m ²	80 – 92 €/m ²	85 - 97 €/m ²	75 - 87 €/m ²	AS PER MANUFACTU RER	90 – 102 €/m ²	80 - 92 €/m ²

Metal substructure and number and position of anchors must be evaluated by competent designer, considering wind and another loads, thermal expansion requests and any local regulation. *Fiber mesh included on Price in Coverlam 3.5mm & severa 5.6 ranges.