



COSENTINO[®]
imagine & anticipate

DECLARATION OF PERFORMANCE
Nº 122014DKFV

Name and identification code:

Product: Dekton[®]

Name and address of manufacturer:

Company: Cosentino S.A

Address: Carretera A-334, km 59, post code 04850 Cantoria (Almería) - Spain

ETAG 034

1. Product:

Dekton® Ventilated Façade

2. Prior Use:

External wall claddings in ventilated façade

3. Manufacturer:

Cosentino S.A.

Carretera A-334 km 59, ES-04850 Cantoria (Almería) - Spain

4. Assessment and verification system of the constancy of performance: System 2+

5. European Assessment Document: ETAG 034 used as EAD in accordance with Art. 66.3

European Technical Assessment: ETA 14/0413 of 20-11-2014

Technical Assessment Bodies: ITeC – The Catalonia Institute of Construction Technology

Notified Body: 1220

6. Performance declared

Basic Works Requirement	Essential characteristic		Performance		
Safety in case of fire	Reaction to fire		A1		
Hygiene, health and the environment	Watertightness of joints		Not watertight (open joints)		
	Drainability		See Annex 1		
	Content and/or release of dangerous substances		NPD		
Safety and accessibility in use	Wind load resistance	with cladding fixing type 1	DEKTON® ≥ 12 mm	3000 Pa	
		with cladding fixing type 2	DEKTON® ≥ 12 mm	2000 Pa	
		with cladding fixing type 3	DEKTON® ≥ 12 mm	1400 Pa	
			DEKTON® ≥ 20 mm	2000 Pa	
	Bending strength of DEKTON®			≥ 50 N/mm ²	
	Resistance to axial tension	with cladding fixing type 1	Centre		≥ 900 N
			Border		≥ 650 N
	Corner			≥ 2500 N	
	Resistance to shear load			≥ 1400 N	
	Resistance to combined tension and shear load			≥ 670 N	
	Resistance of the DEKTON® grooves	with cladding fixing type 2 y 3		< 0,15 mm tras 4 h	
	Resistance to vertical load	with cladding fixing type 2 y 3		≥ 4500 N	
	Resistance of cladding fixing	with cladding fixing type 1		≥ 3500 N	
		with cladding fixing type 2		See Annex 2	
Impact resistance			See Annex 3		
Resistance to horizontal point load			NPD		
Resistance to seismic actions			NPD		
General aspects relating to the performance of the product	Fatigue (pulsating load)	with cladding fixing type 1		NPD	
	Dimensional stability of DEKTON®	by humidity		0,05 mm/m	
		by temperature		0,007 mm/m.°C	
	Water absorption of DEKTON®			< 0,5% (Grupo Bla)	
	Freeze-thaw of DEKTON®			No defects	
Corrosion of DEKTON®			See Annex 4		

The performance of the product before identified are in accordance with the declared properties.

This declaration of performance is issued in accordance with Regulation (EU) 305/2011 and under the sole responsibility of the manufacturer.

Signed by and in representation of the manufacturer by:

Miguel Segovia

PLACE AND DATE OF ISSUE:

Cantoria, 01/2015



ANNEX 1.

Drainability

On the basis of the construction details, the available technical knowledge and experience and the installation criteria, it is considered that the water which penetrates into the air space or the condensation water can be drained out from the cladding without accumulation or moisture damage or leakage into the substrate.

A.1. Construction details with cladding fixings type 1

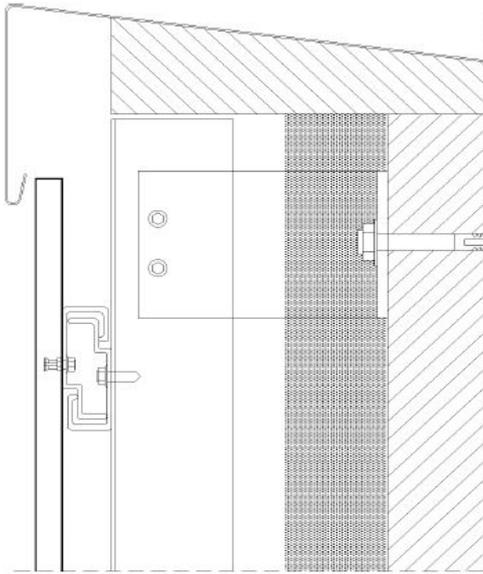


Figure A1.1a: Roof edge

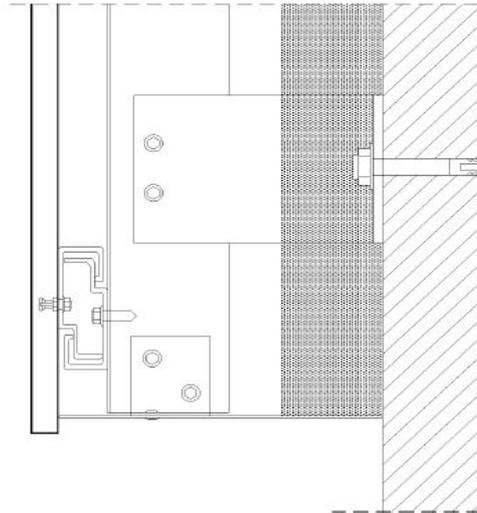


Figure A1.1b: Base edge

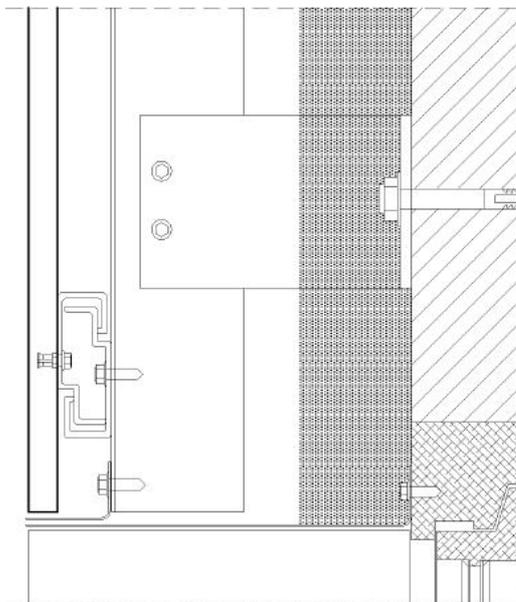


Figure A1.1c: Lintel

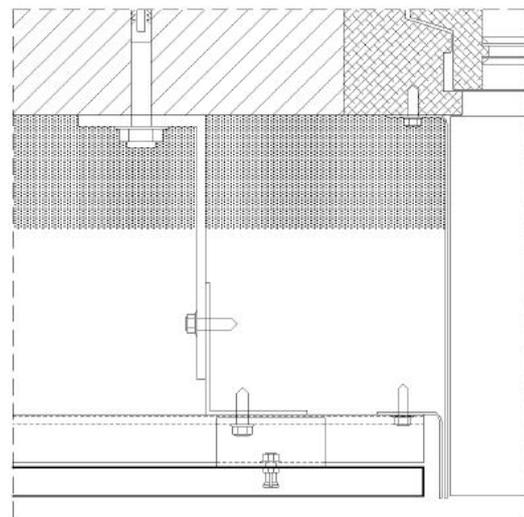


Figure A1.1d: Jamb

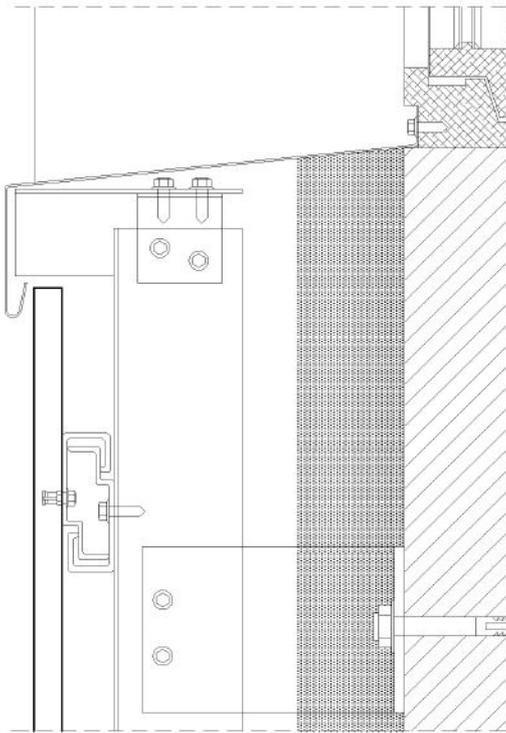


Figure A1.1e: Sill

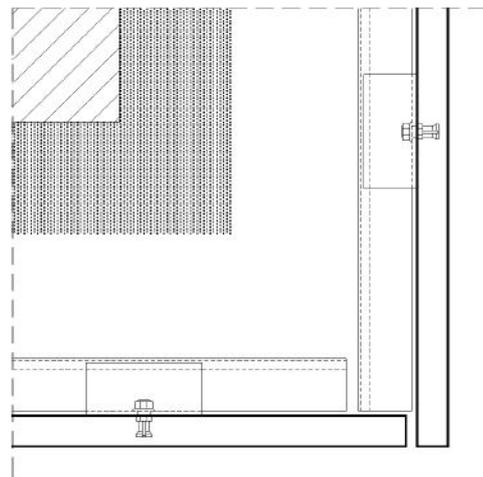


Figure A1.1f: External corner

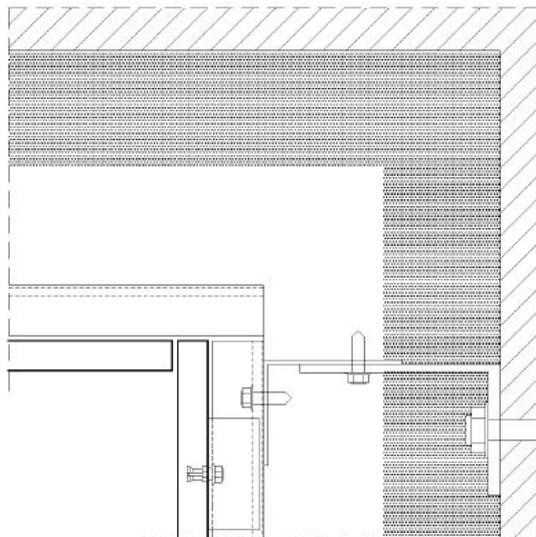


Figure A1.1g: Internal corner

A1.2 Construction details with cladding fixings type 2

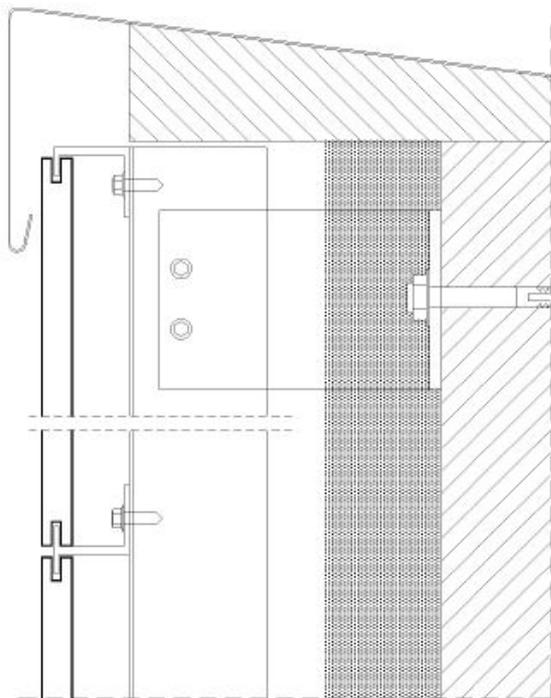


Figure A1.2a: Roof edge

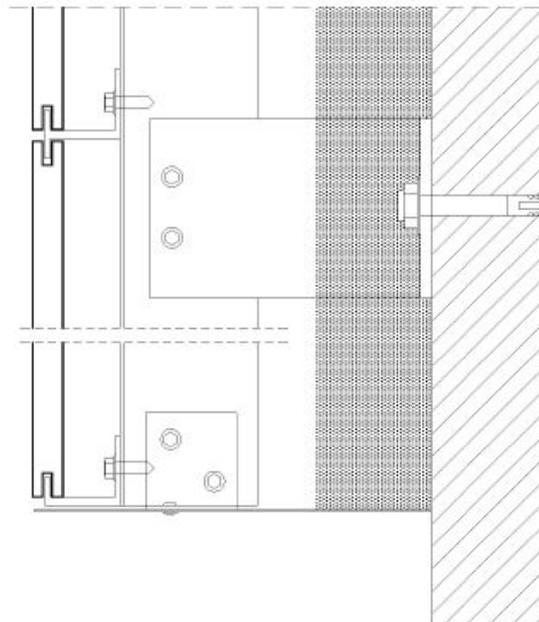


Figure A1.2b: Base edge

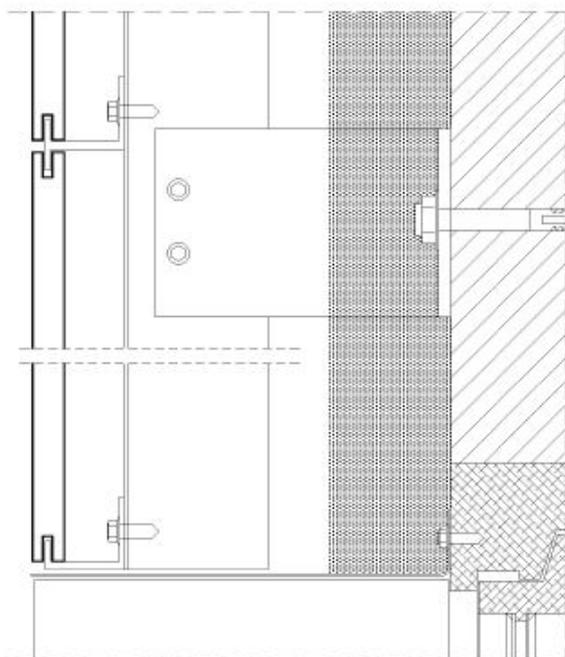


Figure A1.2c: Lintel

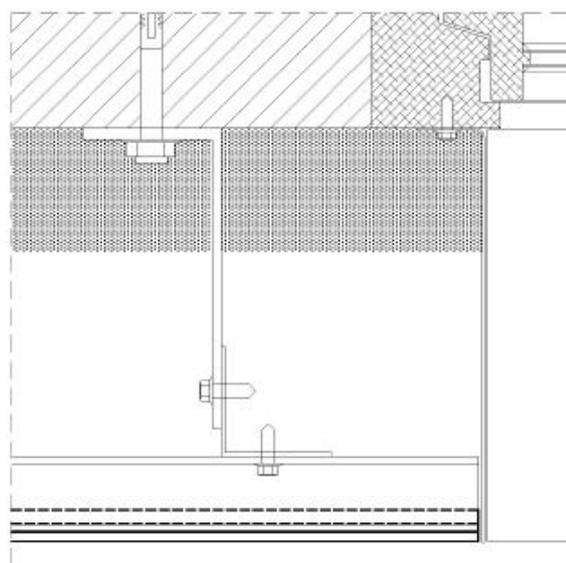


Figure A1.2d: Jamb

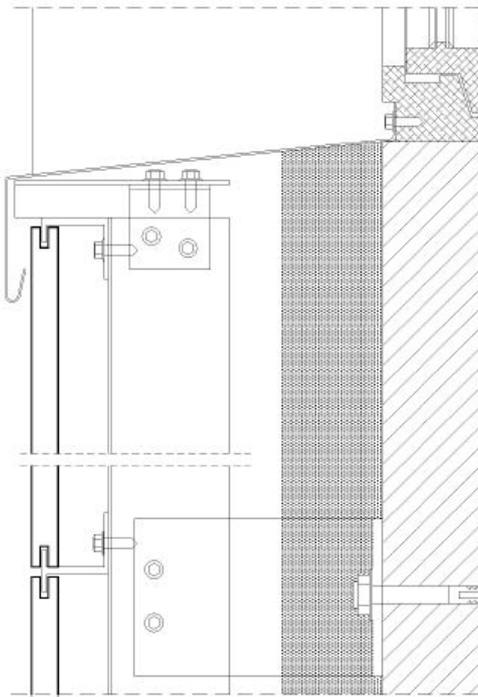


Figure A1.2e: Sill

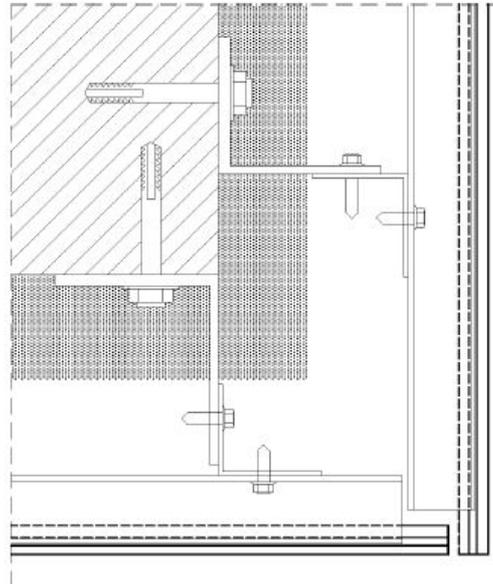


Figure A1.2f: Corners

A1.3 Construction details with cladding fixings type 3

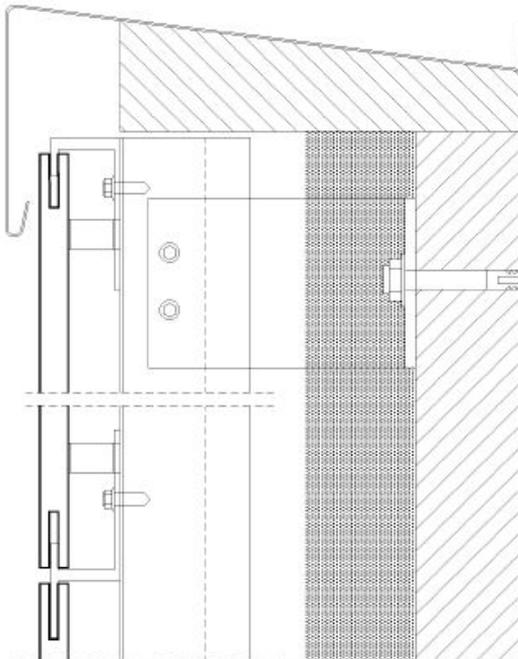


Figure A1.3a: Roof edge

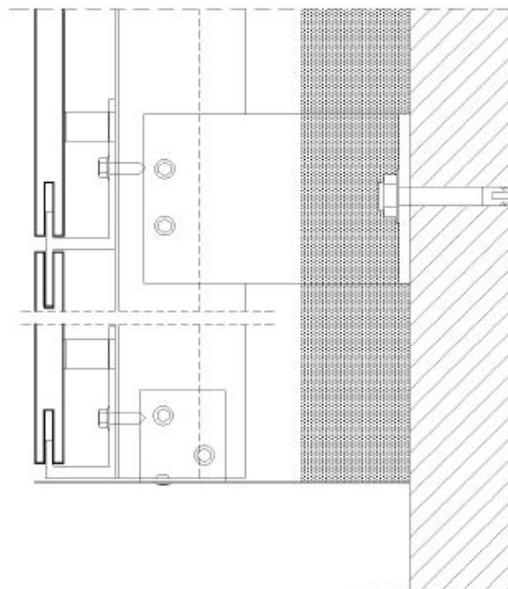


Figure A1.3b: Base edge

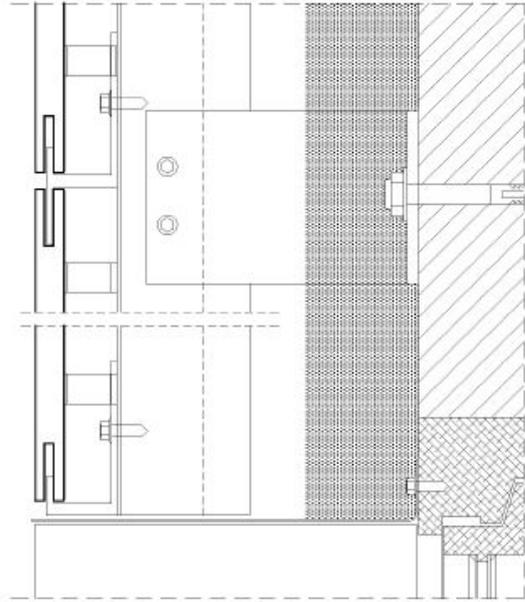


Figure A1.3c: Lintel

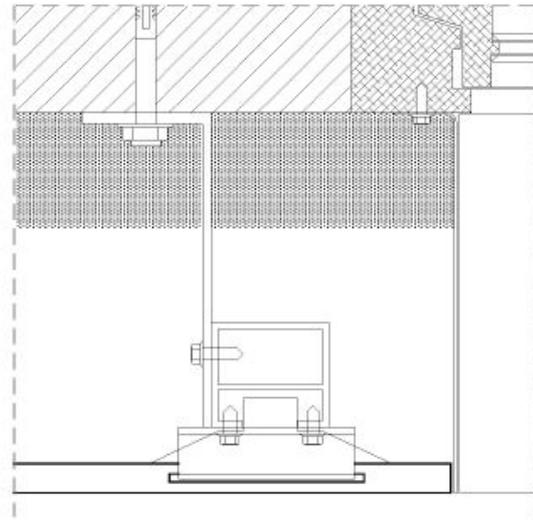


Figure A1.3d: Jamb

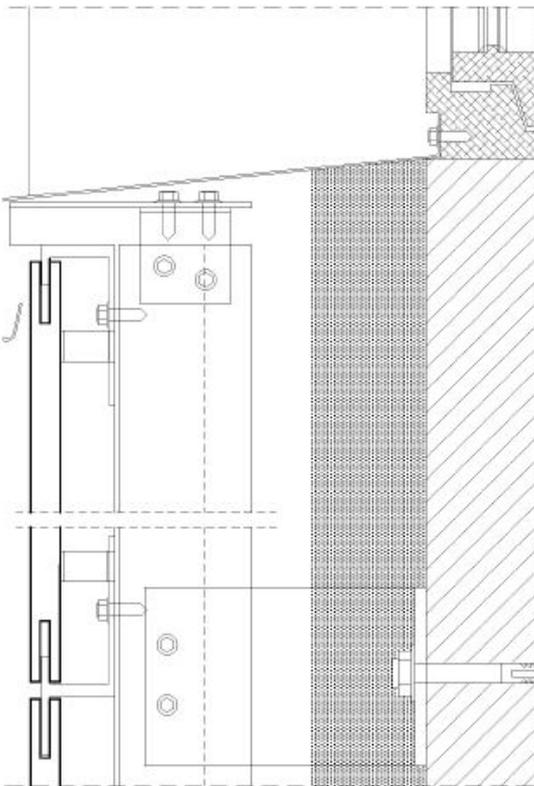


Figure A1.3e: Sill

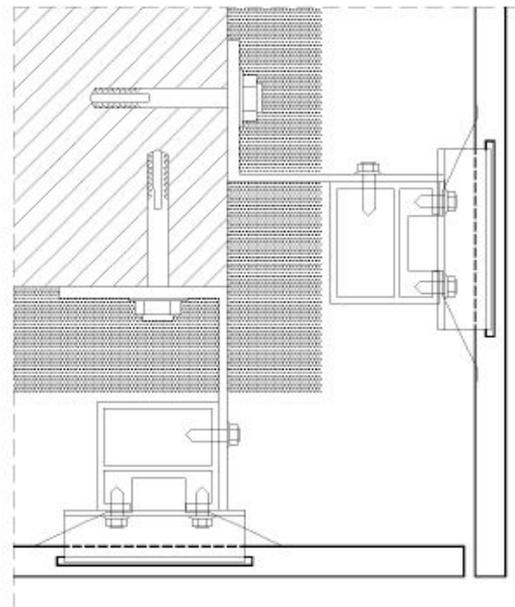


Figure A1.3f: Corners

ANNEX 2.

Impact resistance

Test specimen			Impact resistance	Degree of exposure in use (*)
Family	Cladding element	Cladding fixing		
Family B	DEKTON® 12 mm	Type 1	<ul style="list-style-type: none"> ▪ Hard body (0,5 kg) impacts of 1 joule ▪ Soft body (3,0 kg) impacts of 10 joules 	Category IV
		Type 2		
		Type 3		
Family C	DEKTON® 20 mm	Type 3	<ul style="list-style-type: none"> ▪ Hard body (0,5 kg) impacts of 3 joules ▪ Soft body (3,0 kg) impacts of 10 joules ▪ Soft body (3,0 kg) impacts of 60 joules ▪ Soft body (50,0 kg) impact of 400 joules 	Category III
(*)	Category III:	This category means that the degree of exposure in use should be a zone not likely to be damaged by normal impacts caused by people or by thrown or kicked objects.		
	Category IV:	This category means that the degree of exposure in use should be a zone out of reach from ground level.		

Table 2.1. Impact resistance

ANNEX 3.

Resistance to horizontal point loads

According to the bending strength tests, the cladding elements can support the horizontal static load (500 N) applied through two squares of 25x25x5mm spaced apart 440mm (ladder bearing against the surface of the cladding), without any damage or deformation.

ANNEX 4.

CLADDING FIXINGS

Cladding fixings type 1: Specific anchor made of stainless Steel to be placed in an undercut drill hole

Characteristic		Reference	Value
Geometric characteristics	Type of specific anchor		KEIL KH 7,0 undercut anchor
	Form and dimensions		See figure
Anchor installation	Anchorage depth, h_s	ETA 03/0055	7,0 mm
	Panel thickness, h		$\geq 9,5$ mm
	Diameter of drill hole, d_0		7,0 mm
	Diameter of undercut, d_1		9,0 mm
	Screw length, c		$h_s + 3 \text{ mm} + t_{\text{fix}}$
	Installation torque moment, T_{inst}		$2,5 \text{ N}\cdot\text{m} \leq T_{\text{inst}} \leq 4,0 \text{ N}\cdot\text{m}$
Material properties	Anchor sleeve	EN 10088-1 EN 10088-2	Stainless steel 1.4404 (X2CrNiMo17-12-2)
	Screw	EN 10088-1 EN 10088-2 EN 10088-3	Stainless steel: 1.4401 (X5CrNiMo17-12-2), 1.4404 (X2CrNiMo17-12-2) or 1.4578 (X3CrNiCuMo 17-11-3-2)

Table 4.1. Characteristics of cladding fixings type 1

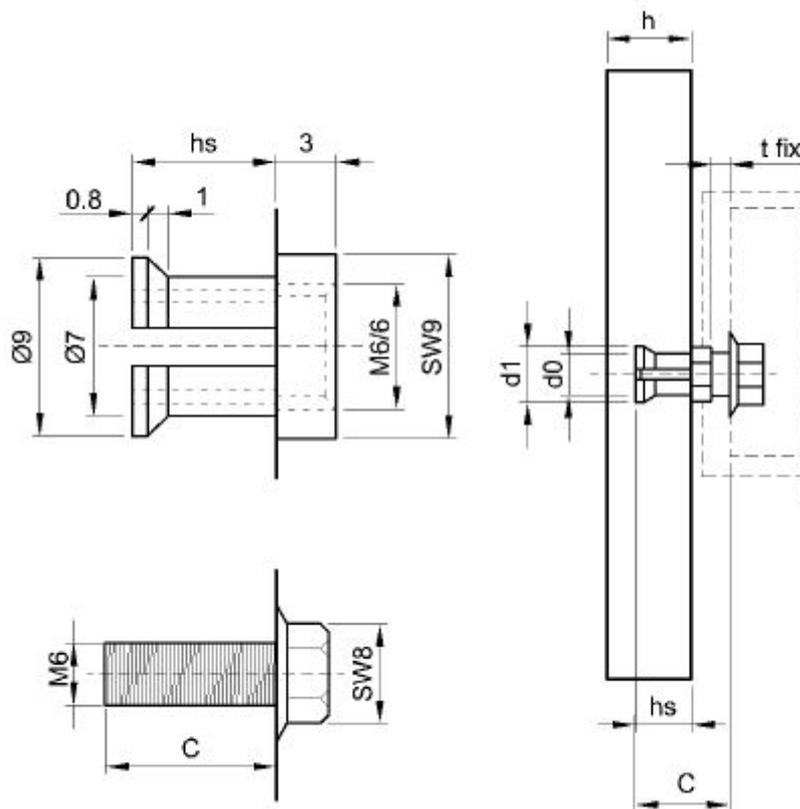


Figure 4.1. KEIL KH undercut anchor. Anchor sleeve and hexagonal screw

Cladding fixings type 2: Horizontal profiles made of aluminium alloy

	Characteristic	Reference	Value	
			Intermediate profile	Edge profile
Geometric characteristics	Type of profile			
	Form and dimensions		See figure 4.2.a	See figure 4.2.b
	Weight per linear metre		0,725 kg/m	0,678 kg/m
	Standard length	---	6,0 m	
	Cross section		268,0 mm ²	250,9 mm ²
	Inertia of profile section	I_{xx} I_{yy}	2,03 cm ⁴ 2,89 cm ⁴	1,78 cm ⁴ 2,49 cm ⁴
Material properties	Type of material		Aluminium alloy AW 6063 T5	
	Durability class		B	
	Specific gravity (unit mass)		2700 kg/m ³	
	Elastic limit Rp0,2		≥ 130 N/mm ²	
	Elongation	EN 1999-1-1	≥ 8%	
	Tensile strength R _m	EN 755-2	≥ 175 N/mm ²	
	Modulus of elasticity (at 20 °C)		70000 N/mm ²	
	Poisson coefficient		0,3	
Thermal expansion coefficient between 50 °C and 100 °C		23,0 µm/m·°C		

Table 4.2. Characteristics of cladding fixings type 2

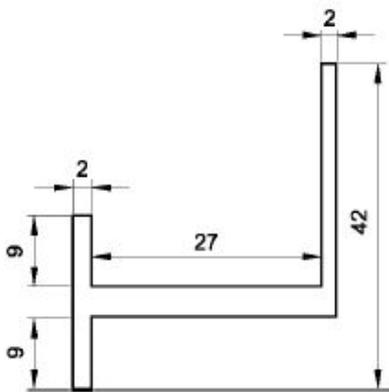


Figure 4.2.a. Intermediate profile

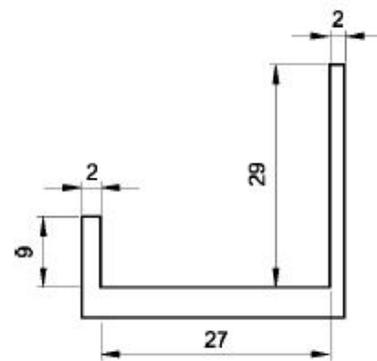


Figure 4.2.b. Edge profile

Cladding fixings type 3: Horizontal rails made of stainless steel

Geometric characteristics	Characteristic	Reference	Value	
	Type of profile		Intermediate horizontal rail	Edge horizontal rail
Material properties	Form and dimensions	---	See figure 4.3a	See figure 4.3b
	Type of material		Stainless steel 1.4301 (X5CrNi18-10)	
	Intergranular corrosion resistance at delivery conditions		Yes	
	Specific gravity (unit mass)		7900 kg/m ³	
	Elastic limit Rp0,2	EN 10088-1	≥ 210 N/mm ²	
	Elongation	EN 10088-2	≥ 45%	
	Tensile strength R _m		520 – 720 N/mm ²	
	Modulus of elasticity (at 20 °C)		200000 N/mm ²	
	Poisson coefficient		0,3	
	Thermal expansion coefficient between 50 °C and 100 °C		12,0 μm/m·°C	

Tabla 4.3. Characteristics of cladding fixings type 3

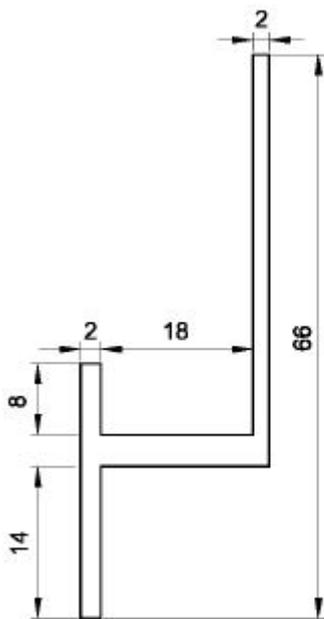


Figure 4.3a. Intermediate horizontal rail. Lateral view

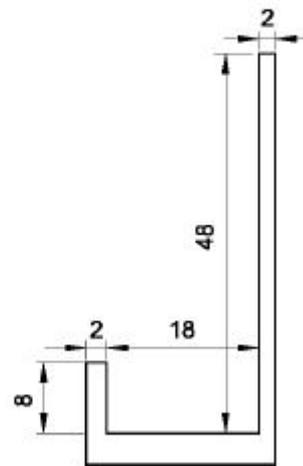


Figure 4.3b. Edge horizontal rail. Lateral view

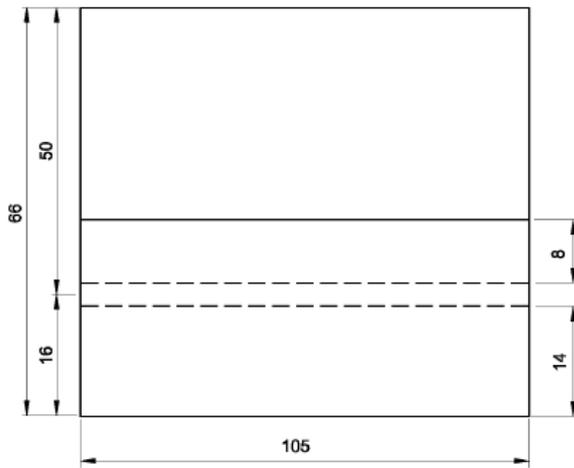


Figure 4.3c. Intermediate horizontal rail. Front view

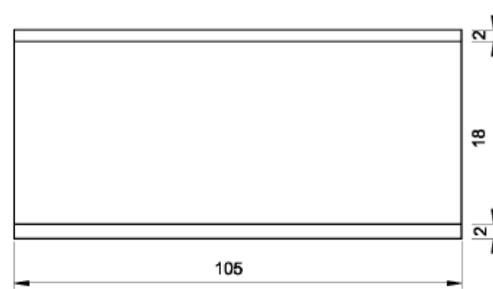


Figure 4.3d. Intermediate horizontal rail. Top view

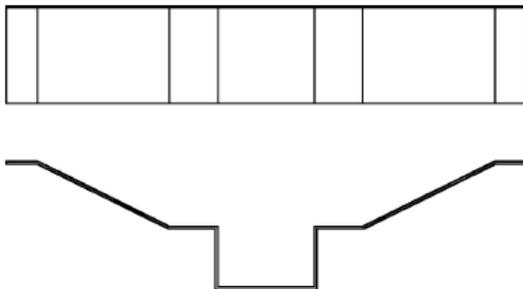


Figure 4.3e. Ancillary component. Metallic spring

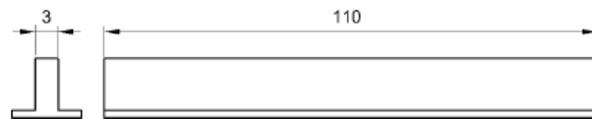


Figure 4.3f. Ancillary component. Rail protector