

ALU START



ALUMINIUM SYSTEM FOR THE CONNECTION OF BUILDINGS TO THE GROUND

CE MARK ACCORDING TO ETA

The profile is capable of transferring shear, tensile and compressive forces into the foundation. The strengths are tested, calculated and certified according to specific ETA.

RISE FROM THE FOUNDATION

The profile allows to eliminate contact between the timber panels (CLT or TIMBER FRAME) and the concrete substructure. Excellent durability of the building connection to the ground.

SUPPORT SURFACE LEVELLING

Thanks to the special assembly templates, the supporting surface level is easy to adjust. The "levelling" of the entire building is simple, precise and fast.

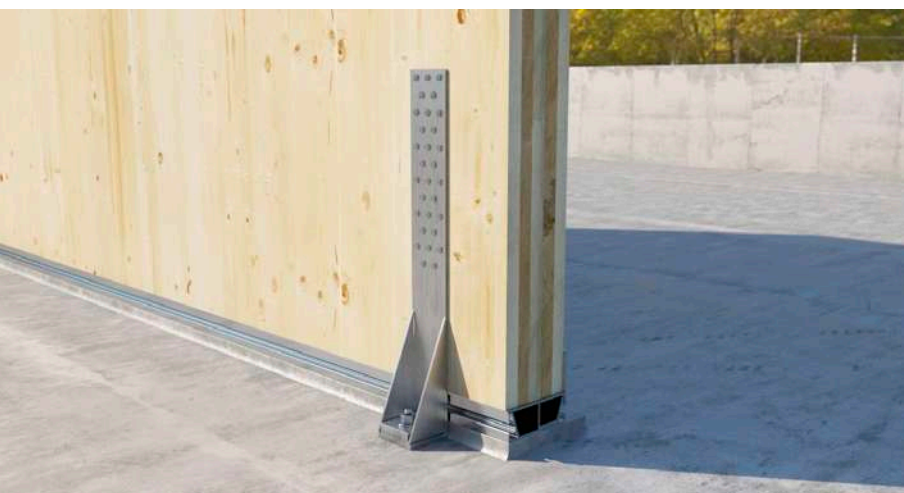


CHARACTERISTICS

FOCUS	raising and levelling of CLT and TIMBER FRAME panels
WIDTH	from 100 to 160 mm
STRENGTH	in all stress directions
FASTENERS	LBA, LBS, SKR-E, AB1, VIN-FIX PRO, EPO-FIX PLUS

VIDEO

Scan the QR Code and watch the video on our YouTube channel



MATERIAL

Aluminium alloy three dimensional perforated plate.

FIELDS OF USE

Connection to the ground of timber buildings with riser from the foundation and levelling of the supporting surface

- CLT walls
- TIMBER FRAME walls



DURABILITY

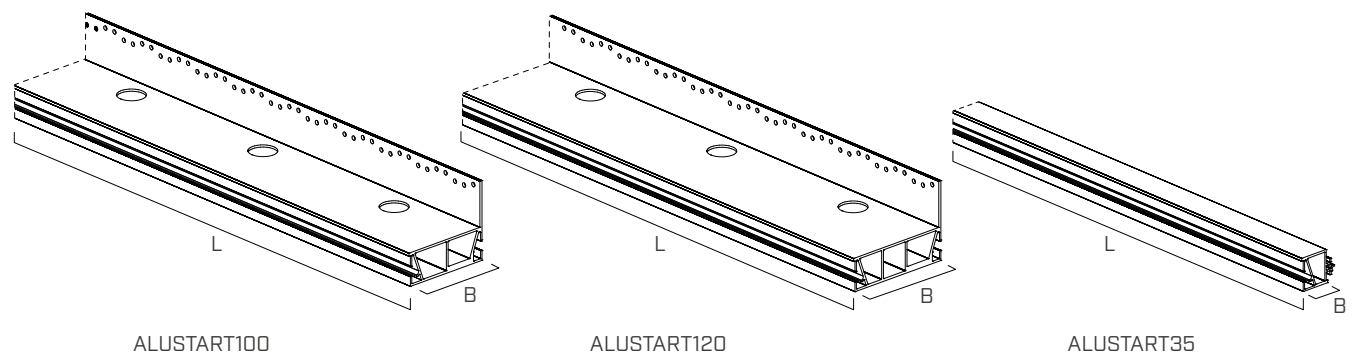
Thanks to the rise from the foundation and the aluminium material, the building base is protected against capillary rising. The ground connection provides durability and health to the structure.

SHEAR STRENGTH ACCORDING TO AGE

Thanks to the side flange, the profile can be fastened to the timber wall by means of nails or screws which guarantee excellent shear strength certified by CE marking according to ETA.

CODES AND DIMENSIONS

ALU START



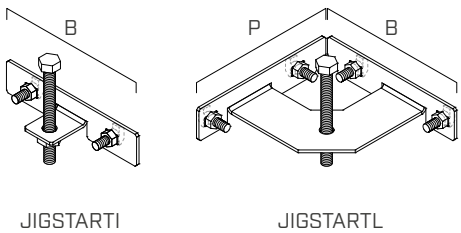
CODE	B [mm]	L [mm]		pcs
ALUSTART100	100	2400	●	1
ALUSTART120	120	2400	●	1
ALUSTART35 *	35	2400	●	1

* side extension for ALUSTART100 and ALUSTART120.

ASSEMBLY ACCESSORIES - JIG START TEMPLATES

CODE	description	B [mm]	P [mm]	pcs
JIGSTARTI	levelling template for linear joint	160	-	25
JIGSTARTL	levelling template for angle joint	160	160	10

The templates are supplied complete with M12 bolt for height adjustment, ALUSBOLT bolts and ALUSMUT nuts.



COMPLEMENTARY PRODUCTS

CODE	description	pcs
ALUSBOLT	hammer head bolt for template fastening	100
ALUSMUT	hammer bolt nut	100
ALUSPIN	ISO 8752 spring pins for ALUSTART35 assembly	50



ALUSBOLT and ALUSPIN can be ordered separately from the templates as spare parts.

MATERIAL AND DURABILITY

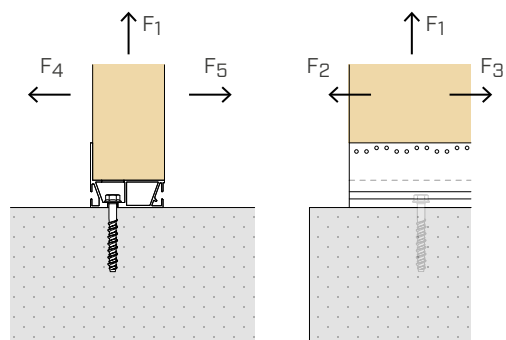
ALU START: EN AW-6060 aluminium alloy.

To be used in service classes 1 and 2 (EN 1995-1-1).

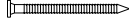
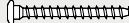
FIELD OF USE

- CLT/TIMBER FRAME wall joints - foundation

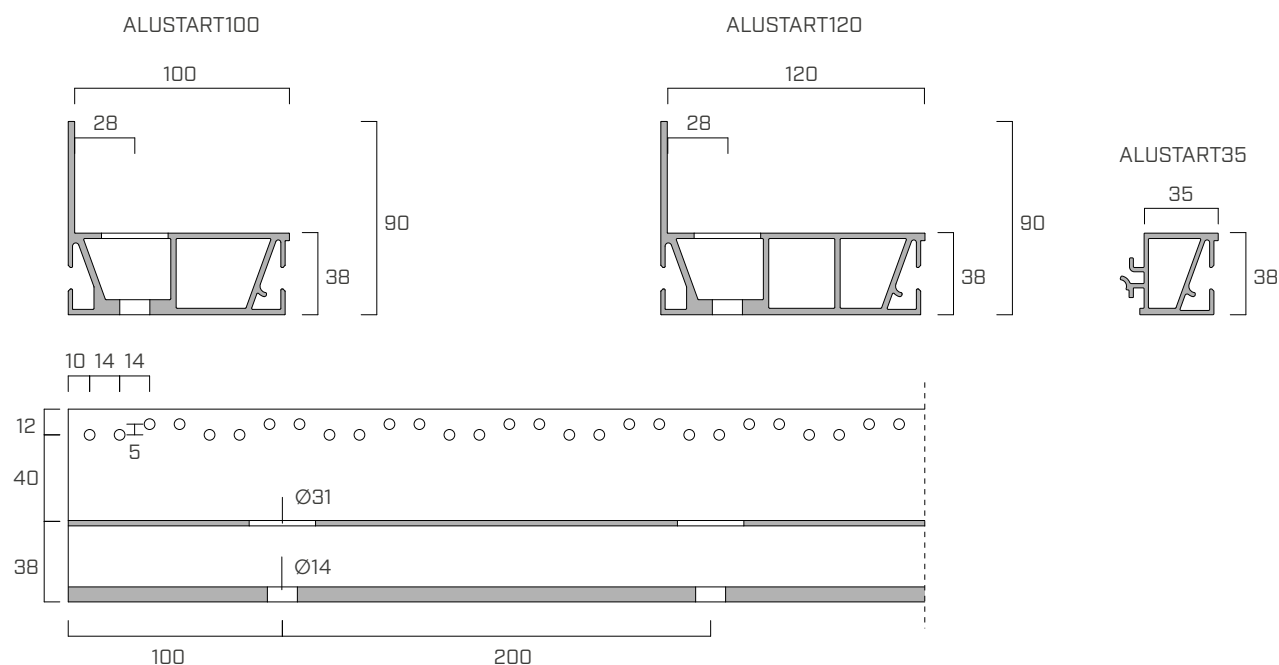
EXTERNAL LOADS



ADDITIONAL PRODUCTS - FASTENING

type	description		d [mm]	support	page
LBA	Anker nail		4		548
LBS	screw		5		552
SKR-E	screw mechanical anchor		12		491
AB1	expansion mechanical anchor		M12		496
VIN-FIX PRO	chemical anchor		M12		511
EPO-FIX PLUS	chemical anchor		M12		517

GEOMETRY



CODE	B [mm]	H [mm]	L [mm]	n _v Ø5 [pcs]	n _H Ø14 [pcs]
ALU START 100	100	90	2400	171	12
ALU START 120	120	90	2400	171	12
ALU START 35	35	38	2400	-	-

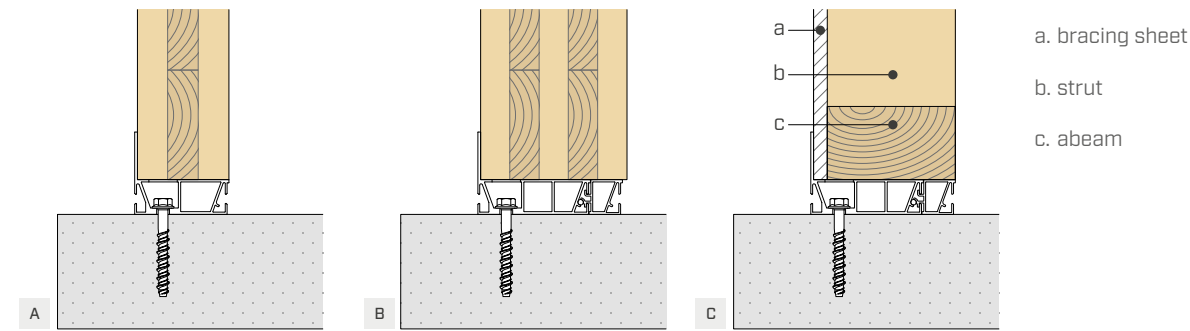
■ INSTALLATION | TIMBER

ALU START is an extruded aluminium profile designed to house the walls and to solve the foundation-wall node in timber.

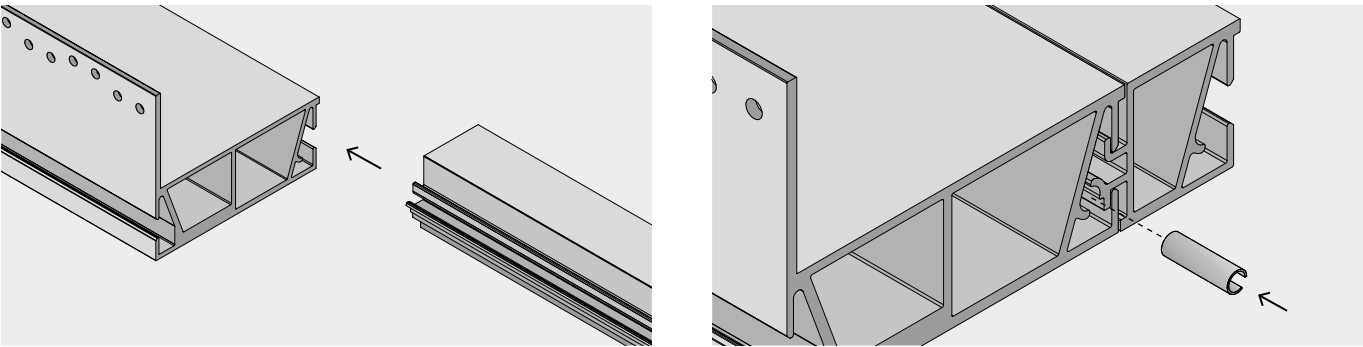
The profile is certified to withstand all the stresses typical for a timber wall, i.e. F₁, F_{2/3}, F₄ and F₅.

ALU START profiles, in their two sizes, are designed to fit CLT walls of 100 and 120 mm (**A**) thickness.

The use of the lateral extension ALU START35 allows its use with CLT (**B**) and TIMBER FRAME (**C**) walls having greater thickness.



The ALU START35 side extension is easily inserted into the ALU START100 and ALU START120 profiles. The compound profile is then stopped in position by two ALUSPIN pins to be inserted at the ends.



PROFILE SELECTION

profile	profile bottom [mm]	wall minimum thickness	
		CLT	TIMBER FRAME
ALU START100	100	100 mm	-
ALU START120	120	120 mm	strut 100 mm + sheet ≥ 20 mm
ALU START100 + ALU START35	135	140 mm	strut 120 mm + sheet ≥ 15 mm
ALU START120 + ALU START35	155	160 mm	strut ≥ 140 mm + sheet ≥ 15 mm

■ INSTALLATION | TIMBER

NAILING

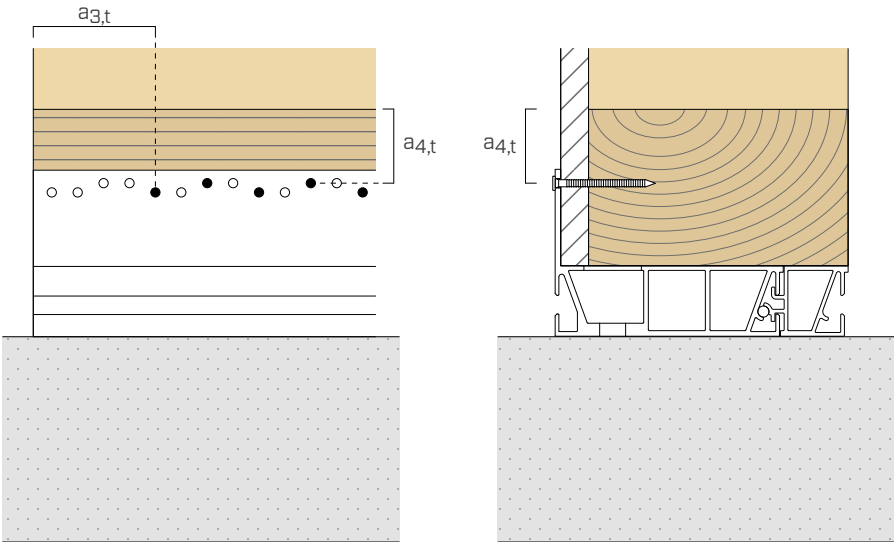
ALU START profiles can be used for different building systems (CLT / TIMBER FRAME). Depending on the construction technology, different nailings can be used in accordance with the minimum distances.

MINIMUM DISTANCES

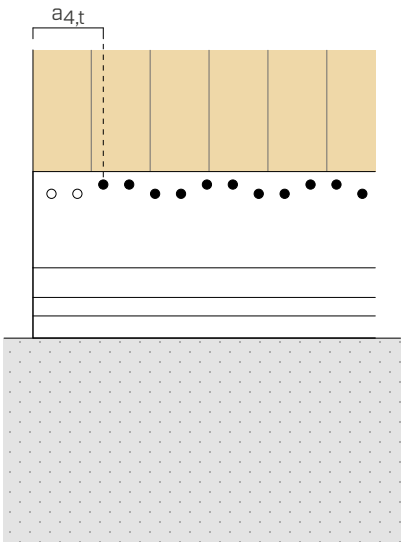
TIMBER minimum distances		nails LBA Ø4	screws LBS Ø5
C/GL	a _{4,t} [mm]	≥ 28	-
	a _{3,t} [mm]	≥ 60	-
CLT	a _{4,t} [mm]	≥ 28	≥ 30

- C/GL: minimum distances for solid timber or glulam consistent with EN 1995-1-1 according to ETA considering a timber density $\rho_k \leq 420 \text{ kg/m}^3$.
- CLT minimum distances for Cross Laminated Timber according to ÖNORM EN 1995-1-1 (Annex K) for nails and ETA 11/0030 for screws.

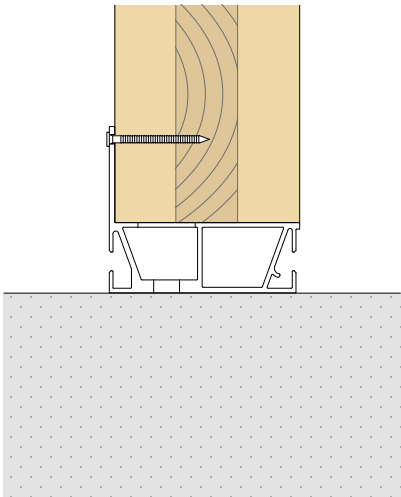
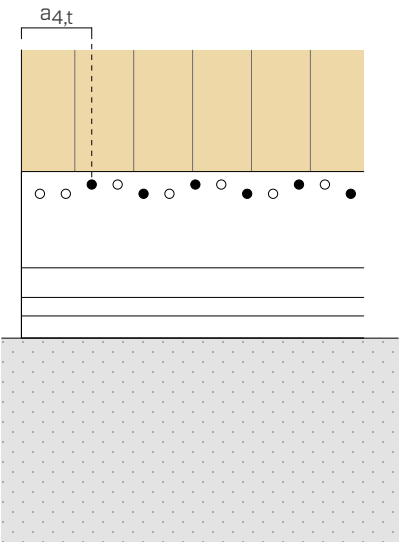
PARTIAL NAILING FOR NAILS ON SOLID TIMBER (C) OR GLULAM (GL)



FULL NAILING ON CLT

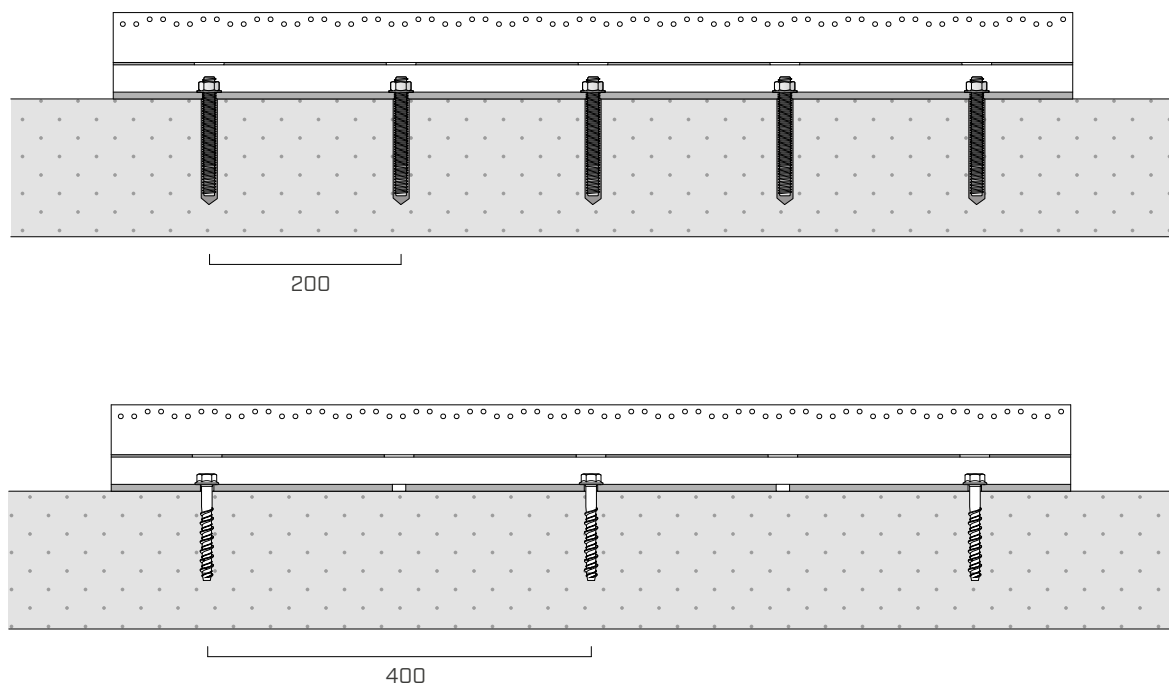


PARTIAL NAILING ON CLT



■ INSTALLATION | CONCRETE

The ALU START profiles must be fastened on concrete with a number of anchors suitable for the design loads. It is possible to arrange the anchors in all the holes, or choose larger installation spacing.



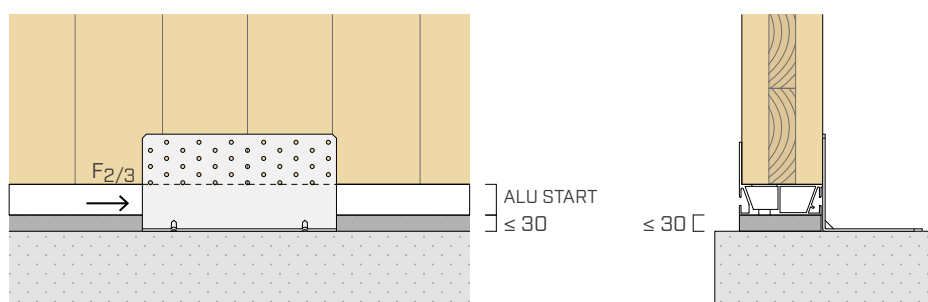
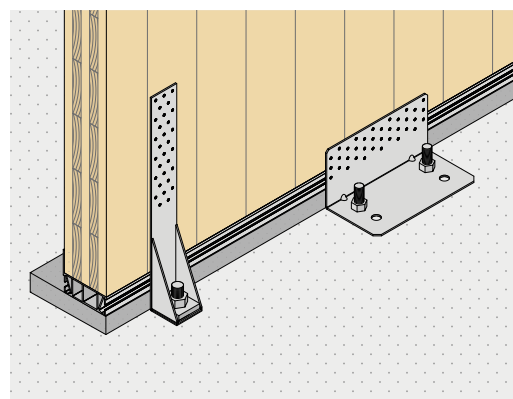
Details of the assembly phase in the "POSITIONING" section.

■ ADDITIONAL CONNECTION SYSTEMS

The ALU START geometry allows using additional connection systems such as TITAN TCN and WHT, even with a levelling layer between the profile and the foundation.

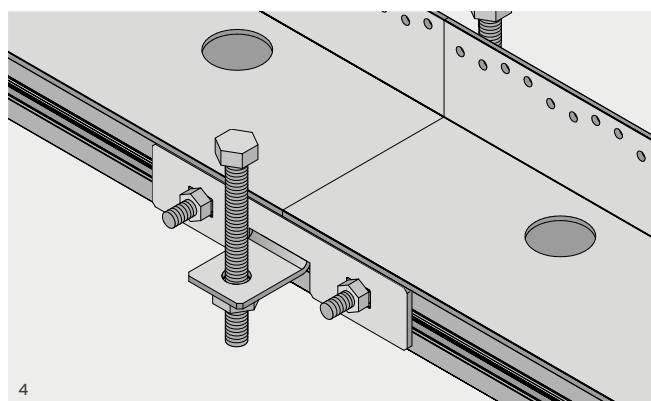
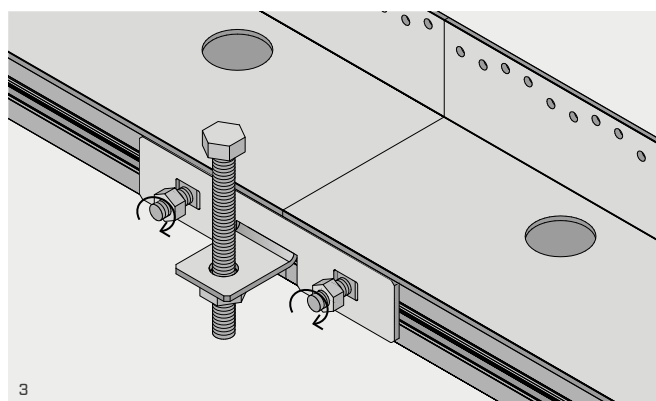
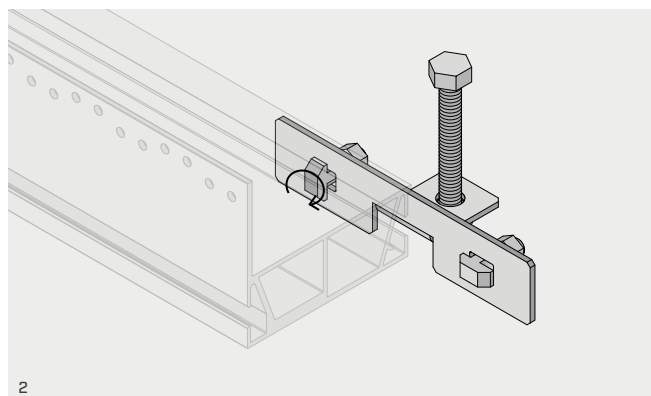
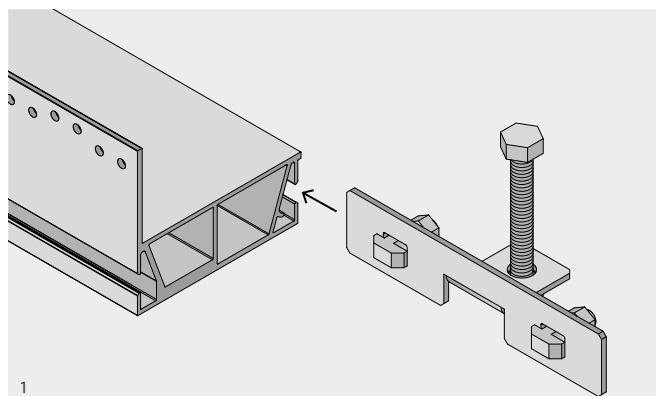
Certified partial nailings are available for TITAN TCN installation which allow laying bedding mortar with a thickness up to 30 mm.

For the static values and nailings of the TITAN TCN angle brackets and the WHT hold downs, see the respective pages of this catalogue.



POSITIONING

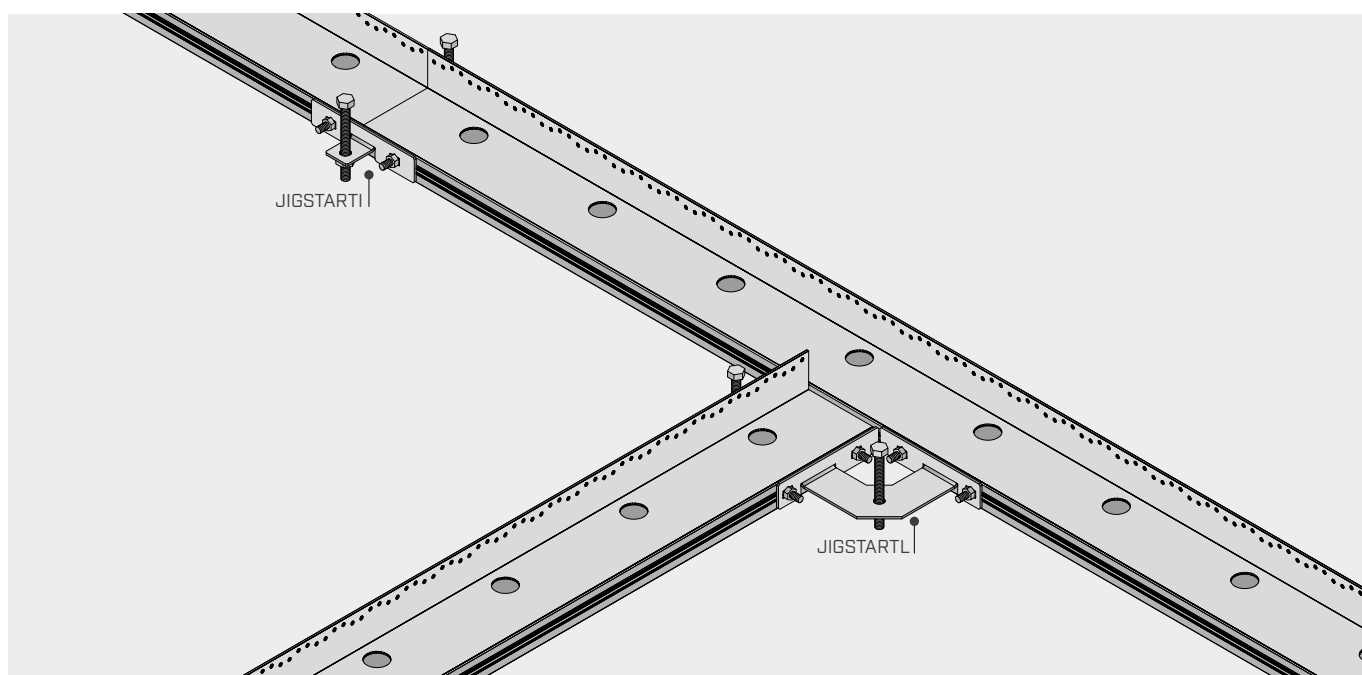
Assembly includes the use of special JIG START templates for the height levelling of the profiles, for the linear joint and for creating 90° angles.

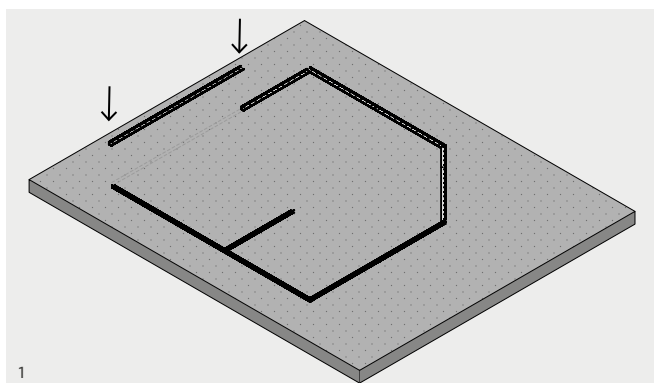


JIGSTARTI templates can connect two consecutive profiles and must be positioned on both sides of ALU START, without positioning constraints along the development.

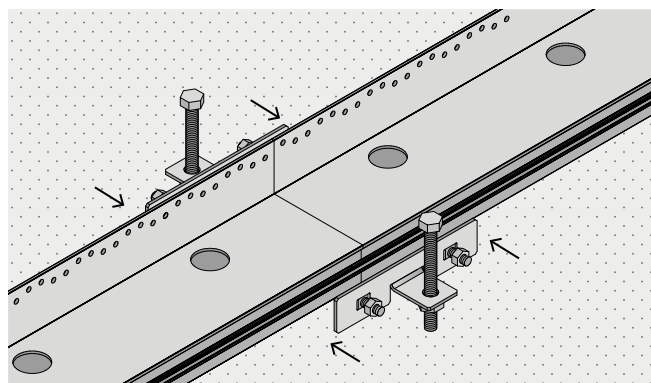
JIGSTARTL templates can be used for 90° angle connection.

On each template there is a hexagonal head bolt, which allows the height adjustment of the aluminium profiles.

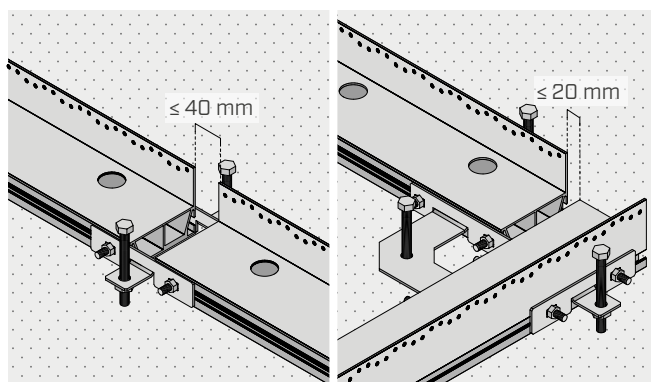




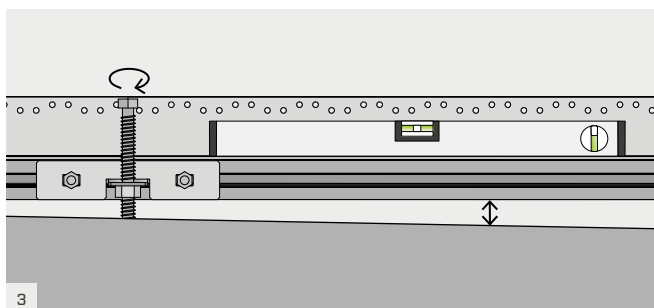
Preliminary positioning of the profiles on the laying surface using the templates and cutting the elements to size, if necessary.



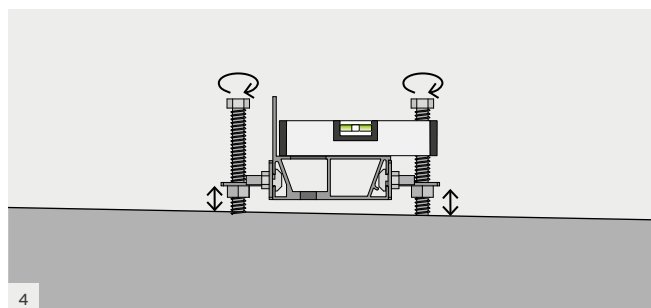
Definitive planimetric drawing with verification of lengths and diagonals.



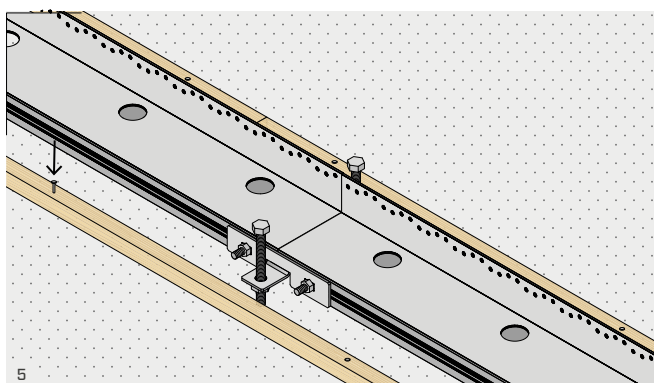
Fine adjustment with JIG START templates of the total length of the wall, compensating the tolerances of the profiles cut to size.



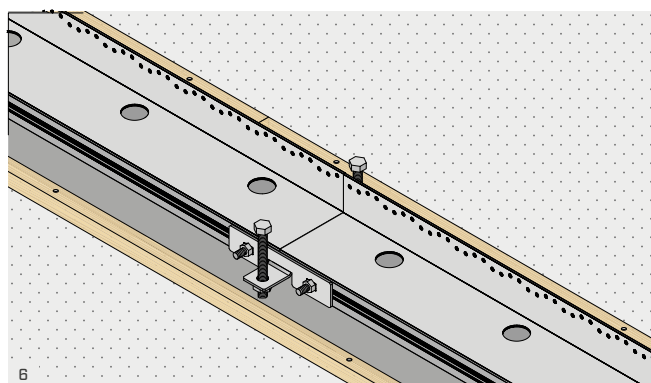
Longitudinal levelling of ALU START rods.



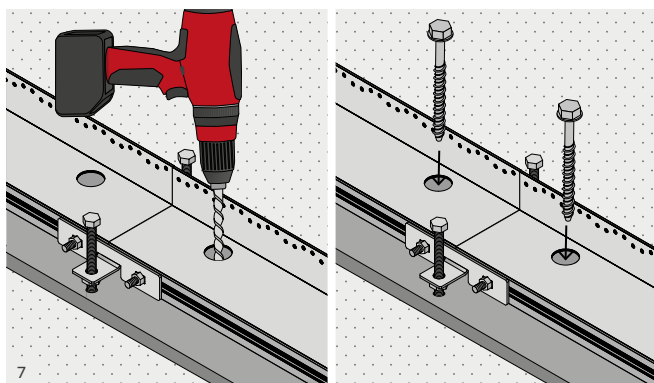
Lateral levelling of the rods.



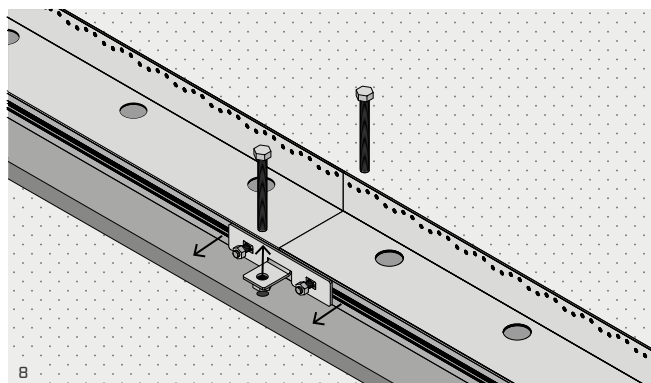
Construction of formwork with timber battens.



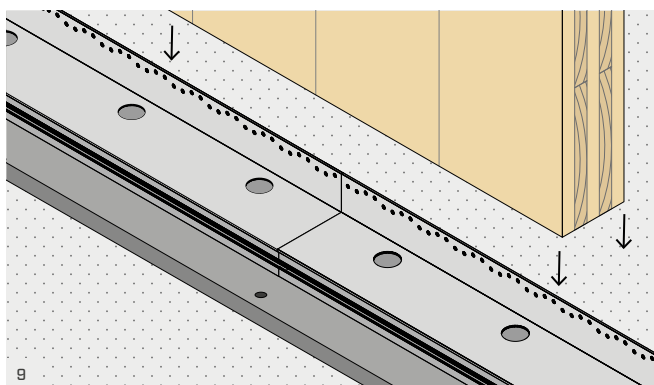
Creation of the bedding layer between the profile and the concrete support.



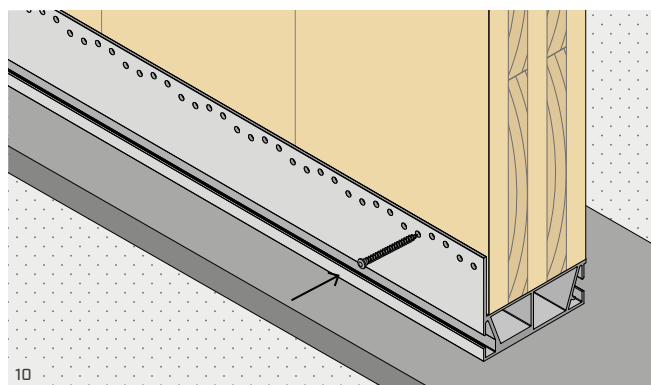
Insert the concrete anchors following the anchor installation instructions.



Removal of JIG START templates, which can be reused.



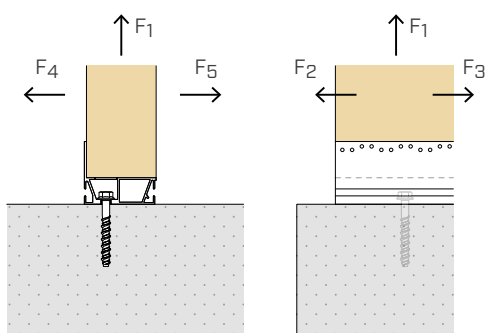
Timber walls positioning.



Profiles fastening with nails or screws.

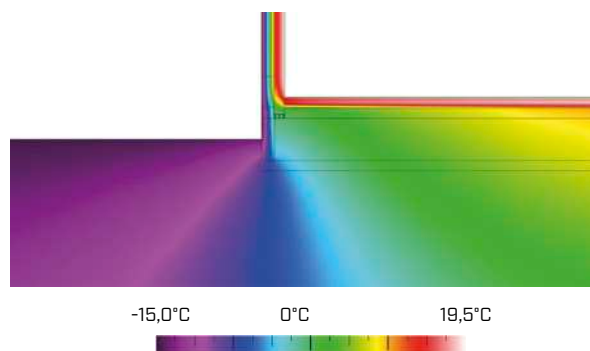
■ WANT TO KNOW MORE?

For further technical information on the ALU START product, see the technical data sheet at www.rothoblaas.com.



STATIC PERFORMANCE

Timber and concrete static values certified according to ETA.



THERMO-HYGROMETRIC PERFORMANCE

Linear thermal bridge modelling and calculation with FEM software.