

TECNODECK PLUS WALL

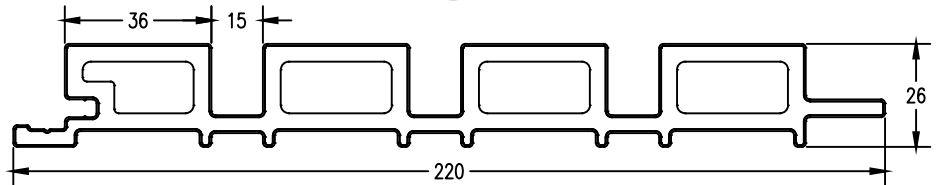
 **Technodeck**®
THE HIGH TECH WOOD COMPOSITE
www.technodeck.net

THE WORLD'S NOT ALWAYS FLAT



TECHNICAL FEATURES

TECNODECK® PLUS WALL



TECNODECK® PLUS WALL 36x15x220

DENSITY EN ISO 1183-1 (g/cm³)

1,41

WEIGHT (Kg/ml)

2,94 (+/- 5%)

APPEARANCE

CLAUSE 6.1 of EN 15534-1:2014
Legth of specimen: 1000mm

No visible colour difference

PENDULUM TEST

CLAUSE 6.4.2 of EN 15534-1:2014 and
CEN/TS 15676:2007
Requirements of EN 15534-4:2014
Pendulum value \geq 36

Pendulum value of face surface:

Length direction: 62
Width direction: 72

FALLING MASS IMPACT RESISTANCE

CLAUSE 7.1.2.1 of EN 15534-1:2014
and
CEN/TS 15676:2007

Requirements of EN 15534-4:2014

Hollow profiles:

None of 10 test specimens shall show a failure with a crack length \geq 10mm or a depth of residual indentation \geq 0,5mm.

In case of failure, 10 additional test specimens shall be tested and no failure with a crack length \geq 10mm or a depth of residual indentantion \geq 0,5mm shall occur.

None of 10 test

specimens showed a crack on face surface.
Maximum depth of residual indentation: 0.13mm

FIRE BEHAVIOR

Not tested

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FLEXURAL PROPERTIES

CLAUSE 7.3.2 of EN 15534-1:2014
Requirements of EN 15534-4:2014
 $F_{max} \geq 3300$ N
(arithmetic mean value)
 $F_{max} \geq 3000$ N
(individual values)
Deflection under a load of 500 N \leq
2,0mm (arithmetic mean value)
Deflection under a load of 500 N \leq
2,5mm (individual values)
Span: 300mm

Average F_{max} : 4177N
Minimum F_{max} : 4013N
Average deflection under 500N: 0.52mm
Maximum deflection under 500N: 0.62mm
Average bending strength: 28.9MPa
Average modulus of elasticity: 4120MPa

RESISTANCE TO INDENTATION

CLAUSE 7.5 of EN 15534-1:2014
Requirements of EN 15534-4:2014
Load rate: 66 N/S
Final Load: 2000N

Brinell hardness: 54N/mm²
Rate of elastic recovery: 75%

CREEP BEHAVIOR (KNOWN SPAN IN USE)

CLAUSE 7.4.1 of EN 15534-1:2014
Requirements of EN 15534-4:2014
Testing atmosphere: 24+2 °C, 50+5% RH
Span: 300mm (Manufacture declare)
Load: 1000 N
Loading duration: 504h
Recovering duration: 24h
Requirements of
EN 15534-4:2014:
 $\Delta S \leq 10$ mm for arithmetic mean value
 $\Delta S \leq 13$ mm for individual values
 $\Delta S_r \leq 5$ mm for arithmetic mean values

ΔS (arithmetic mean value): 1.24mm
 ΔS (Maximum individual value): 1.37mm
 ΔS_r (arithmetic mean value): 0.86mm

RESISTANCE TO ARTIFICIAL WEATHERING

CLAUSE 8.1 of EN 15534-1:2014 ,
Cycle 1 of EN ISO 4892-2:2013
Duration: 2000h
Requirements of EN 15534-4:2014:
 ΔL^* , Δa^* , Δb^* shall be declared.

ΔE^* : 0.99
Grey scale: 4-5
(No declared value)

TENSILE STRENGTH PERPENDICULAR TO THE PANEL AFTER ARTIFICIAL WEATHERING

EN 319:1993 and Cycle 1 of EN ISO 4892-
-2:2013 and client's requirements
Duration: 2000h
Test speed: 0.5mm/min

Average value: 1.63MPa
Failure mode: Adhesive failure
(See note)

MOISTURE RESISTANCE - BOILING TEST

Clause 8.3.3 of EN 15534-1:2014, EN 319:1993
and client's requirements
Requirements of EN 15534-4:2014
Mean water absorption $\leq 7\%$
Individual water absorption $\leq 9\%$

Water absorption:
Average value: 0.67%
Maximum value: 1.03%
Length change: 0.22%
Width change: 0.16%
Thickness change: 1.60%

TENSILE STRENGTH PERPENDICULAR TO THE PANEL AFTER BOILING TEST

EN 319:1993, clause 8.3.3 of
EN 15534-1:2014
and client's requirements
Test speed: 0.5mm/min

Average value: 1.54MPa
Failure mode: Adhesive failure
(See note)

MOISTURE RESISTANCE**- UNDER CYCLIC CONDITIONS**

Clause 8.3.2 of EN 15534-1:2014
Requirements of EN 15534-4:2014
Mean of decrease of bending strength \leq 20%
Individual decrease of bending strength \leq 30%

Average bending strength:
25.6MPa
Average modulus of elasticity: 3293MPa
Mean of decrease of bending strength: 11.4%
Maximum individual decrease of bending: 15.3%

Average value:
Water absorption: 0.19%
Length change: 0.01%
Width change: 0.11%
Thickness change: 0.22%

TENSILE STRENGTH PERPENDICULAR TO THE PANEL UNDER CYCLIC CONDITIONS

EN 319:1993, clause 8.3.2 of EN 15534-1:2014 and client's requirements
Test speed: 0.5mm/min

Average value: 0.69MPa
Failure mode: Core material

***LINEAR THERMAL EXPANSION**

Clause 9.2 of EN 15534-1:2014
Temperature range: -20°C to 80°C
Requirements of EN 15534-4:2014:
Linear thermal expansion coefficient $\leq 50 \times 10^{-6} K^{-1}$

Average value of the coefficient of linear thermal expansion: $36 \times 10^{-6} K^{-1}$
(length direction)

HEAT REVERSION

Clause 9.3 of EN 15534-1:2014
Specimen: 250x137x22mm
Heating: 100°C, 60min

Average length change: 0.20%

***RESISTANCE AGAINST DISCOLOURING MICRO-FUNGI**

Clause 9.3 of EN 15534-1:2014
Specimen: 250x137x22mm
Heating: 100°C, 60min

Rate: 0
No covering or discoloration visible

DEGREE OF CHALKING (APPLICABLE TO COATED PRODUCTS, ONLY)

Clause 10.1 of EN 15534-1:2014 and ISO 16869:2008(E)

The product is uncoated

TENSILE STRENGTH PERPENDICULAR TO THE PANEL

Clause 10.1 of EN 15534-1:2014 EN 319:1993
Test speed: 0.5mm/min

Average value: 1.59MPa
Failure mode: Adhesive failure
(See note)

ABRAISON RESISTANCE

ASTM D4060-14
Wheel; CS-17
Load: 1Kg/wheel
Revolution: 1000r

Wear Index: 31mg/1000r

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NOTE:

The Tecnodeck® profiles dimensions have a tolerance of ± 1 mm. These features are only for information purposes, and the manufacturer may change them without previous notice.

COMPONENTS

TECNODECK® PLUS WALL



Tecnodeck PLUS WALL Profile 220x26



Tecnodeck Rect Washer 20x9x2.5



Screw A2 Ø3.5x19



Tecnodeck Alu-L 49x53



Screw A2 Ø4.8x19



Screw A2 Ø4.8x38



Nylon Cap



Tecnodeck Alu 38x20



Tecnodeck Spacer 25x3



Nylon Anchor Fastener 8x60

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POSSIBLE INSTALLATIONS

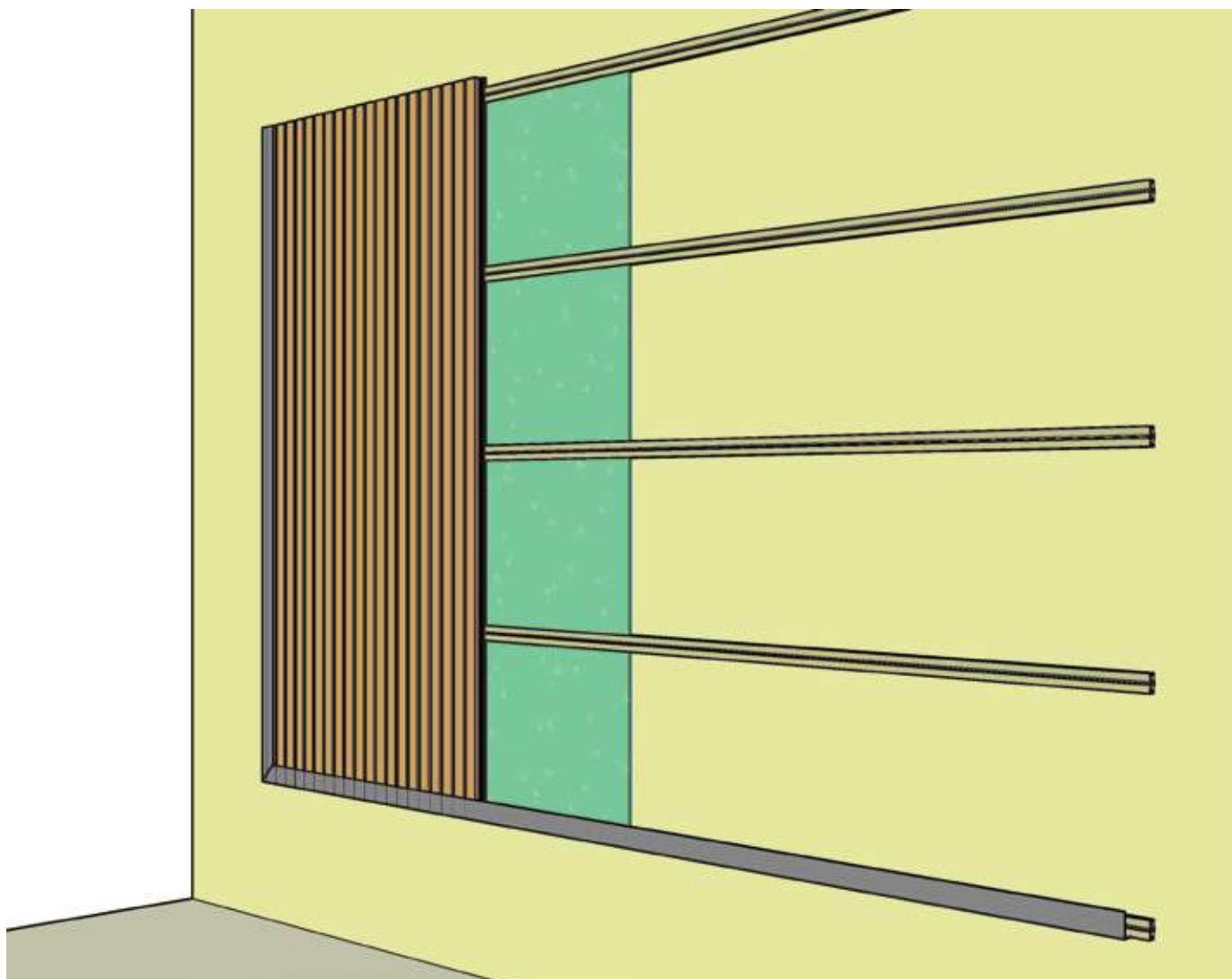
TECNODECK® PLUS WALL

HORIZONTAL



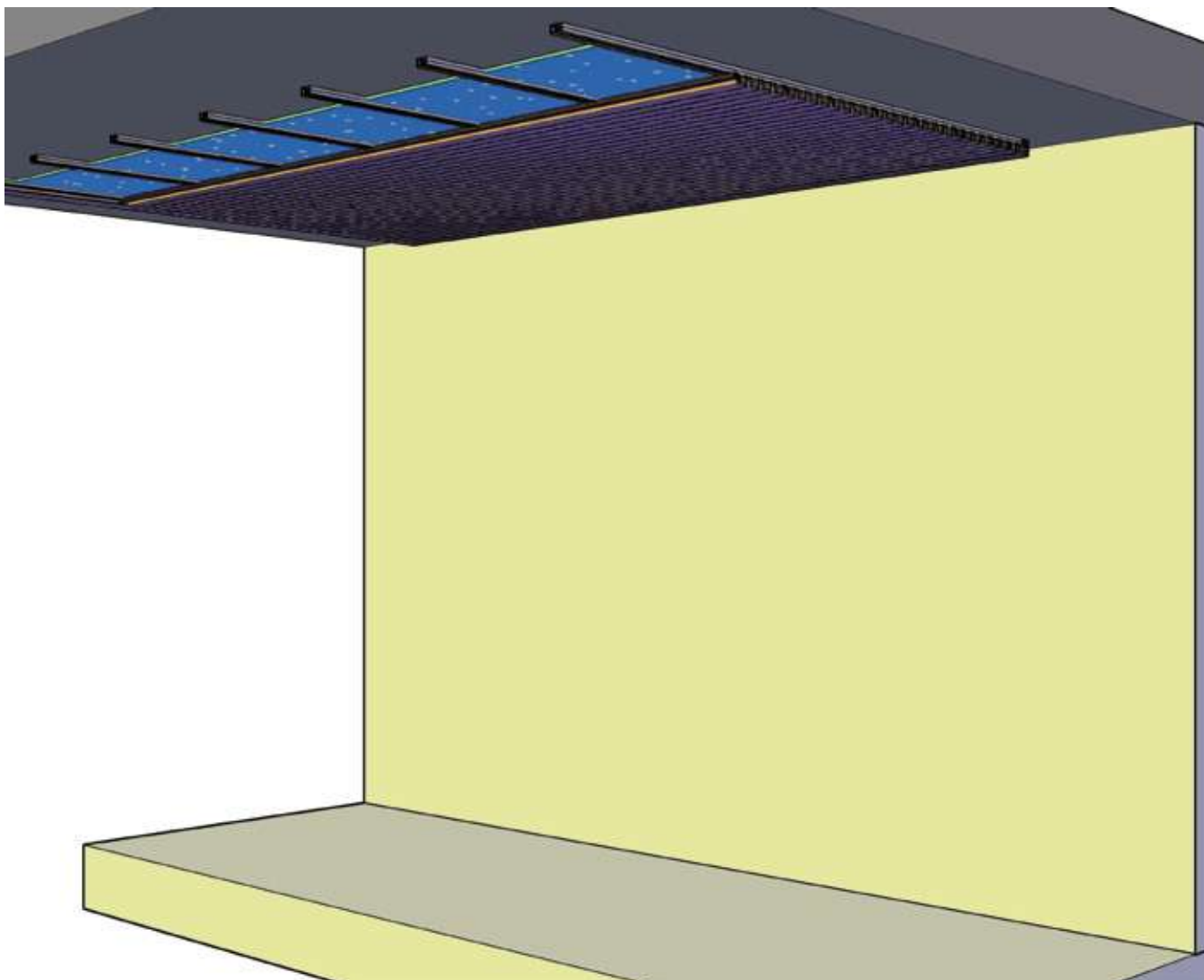
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VERTICAL



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CEILING

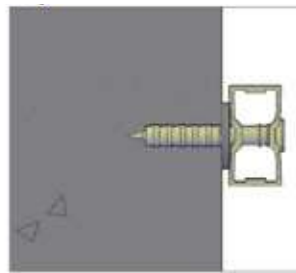
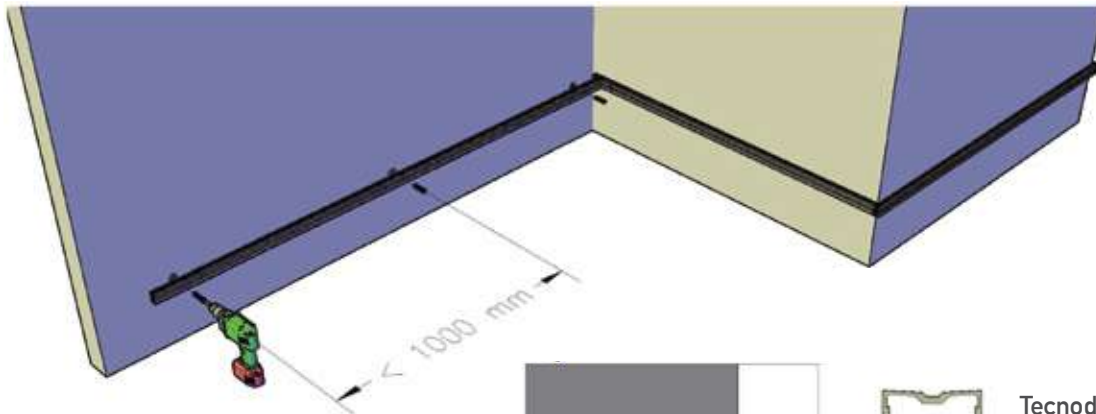


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INSTALLATION

TECNODECK® PLUS WALL

STEP 1 - L-Alu Profile Joist Support, Placing and Fixing



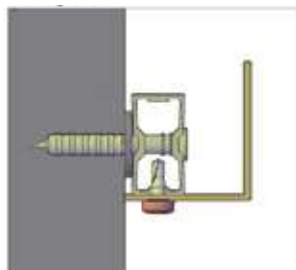
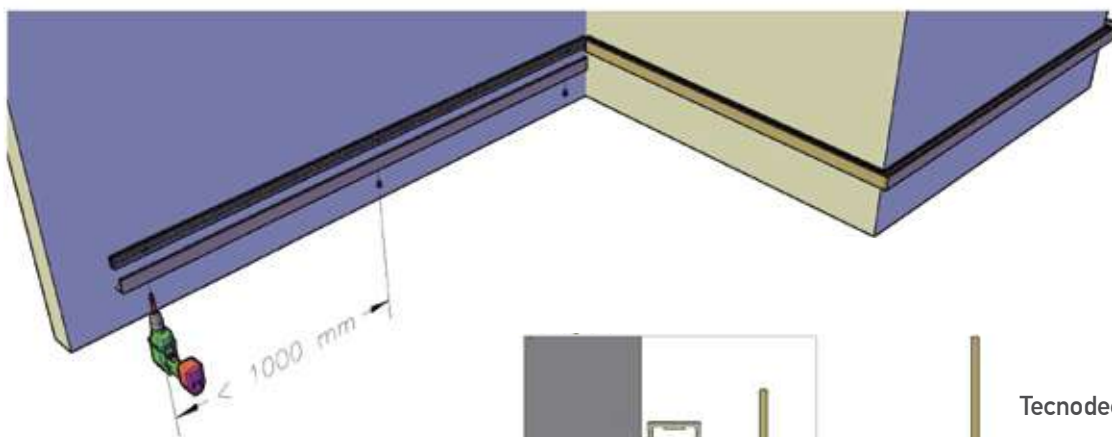
Tecnodeck Alu 38x20



Tecnodeck Spacer 25x3



Nylon Anchor Fastener 8x60



Tecnodeck Alu-L 49x53



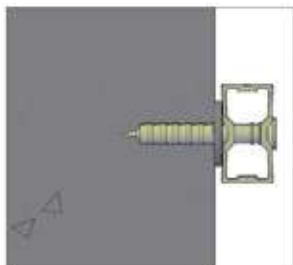
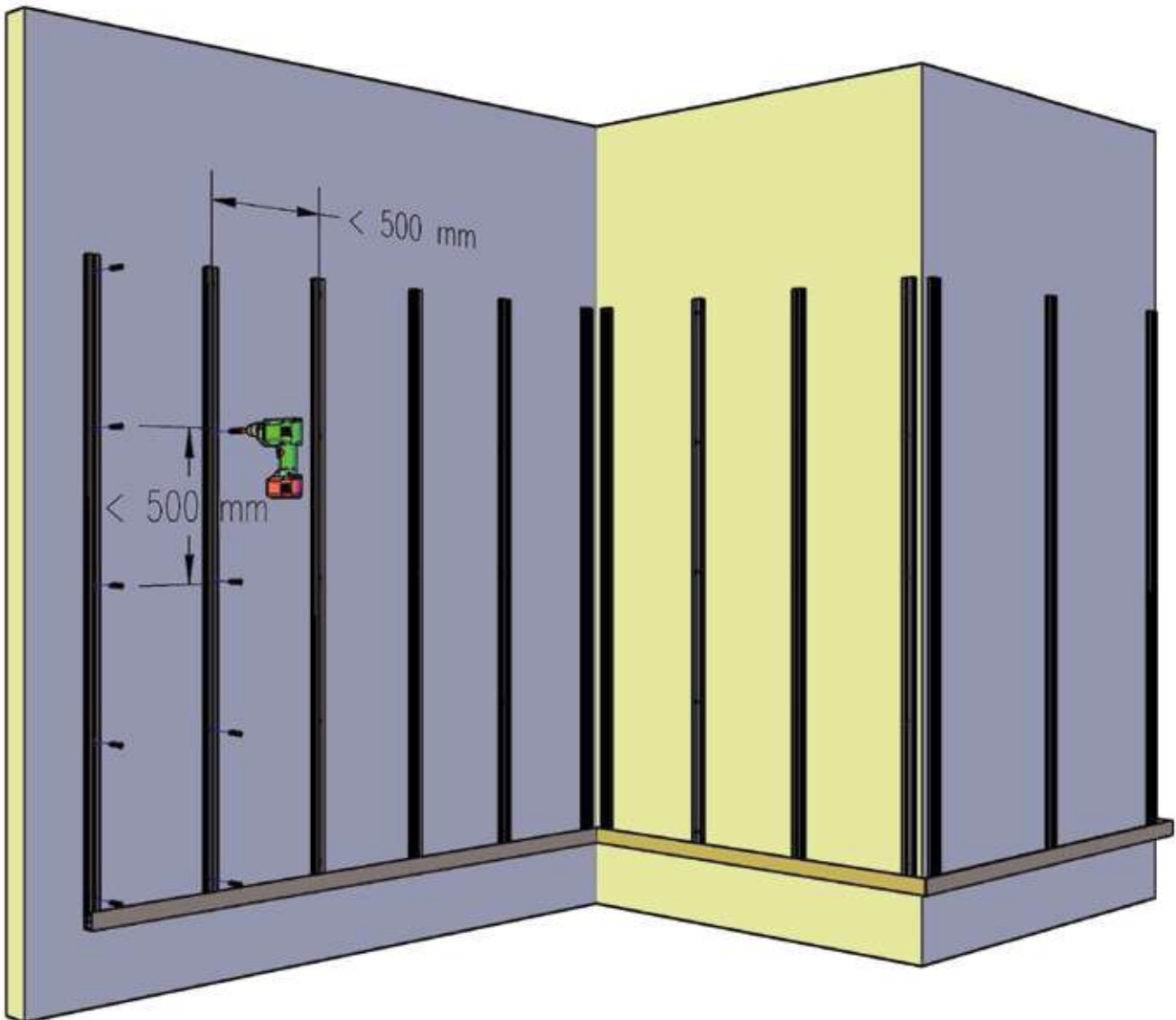
Screw A2 Ø4.8x19



Nylon Cap

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STEP 2 - Joist Placing and Fixing.



Tecnodeck Alu 38x20

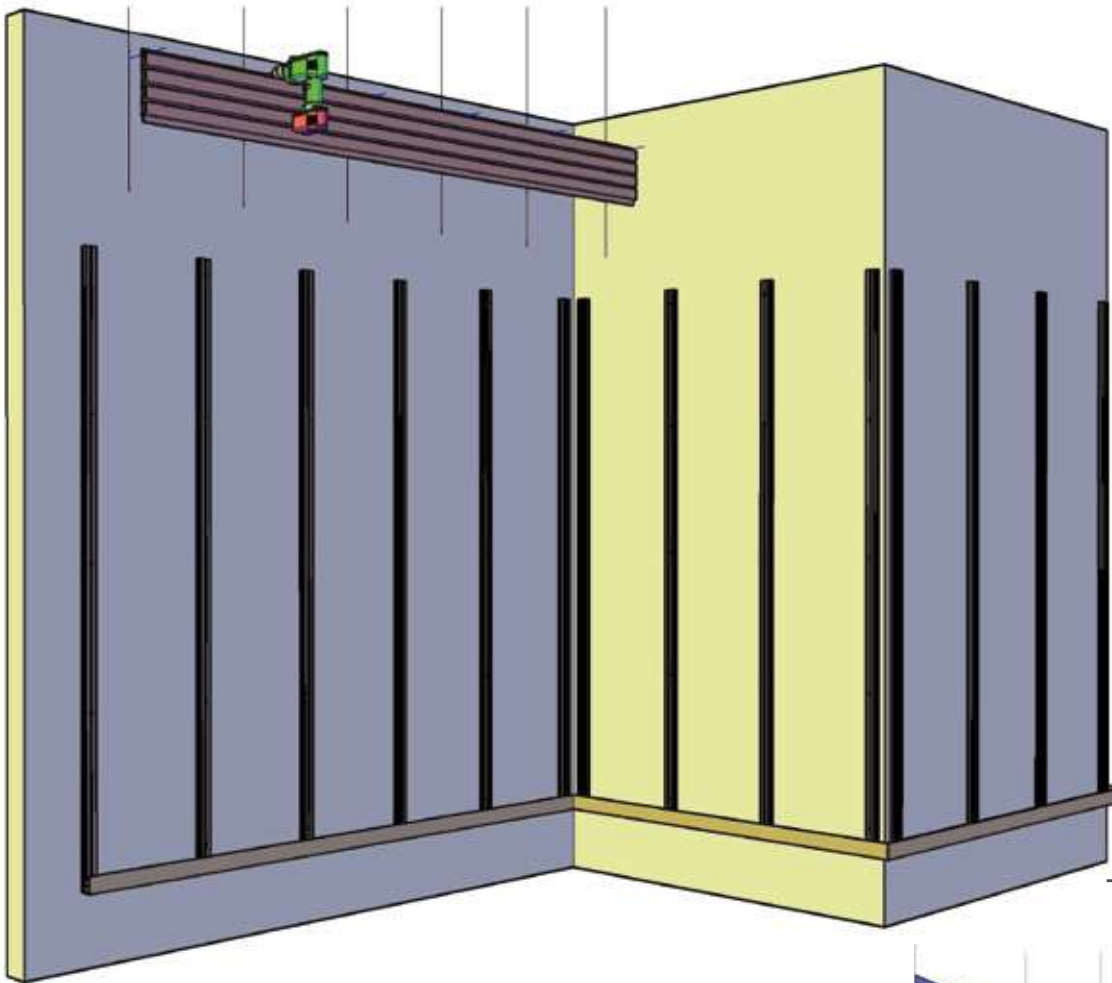


Tecnodeck Spacer 25x3



Nylon Anchor Fastener 8x60

STEP 3 - Board Cutting and Drilling



- Pré-drill the board with Ø8mm drill or bigger.

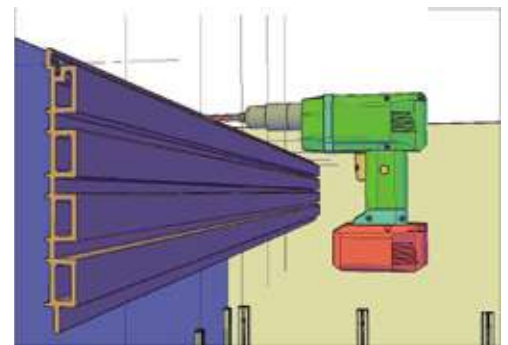
- Before screw PLUS WALL Profile, align Profile with 15mm spacers.

- Repeat this procedure and verify alignments in all profiles to guarantee the profiles and panels alignment.

- Attention

- A peripheral space of 10 mm must be kept around the installed set of panels, allowing the normal expansion movement. Use profiles to cover these spaces without blocking the material movement.

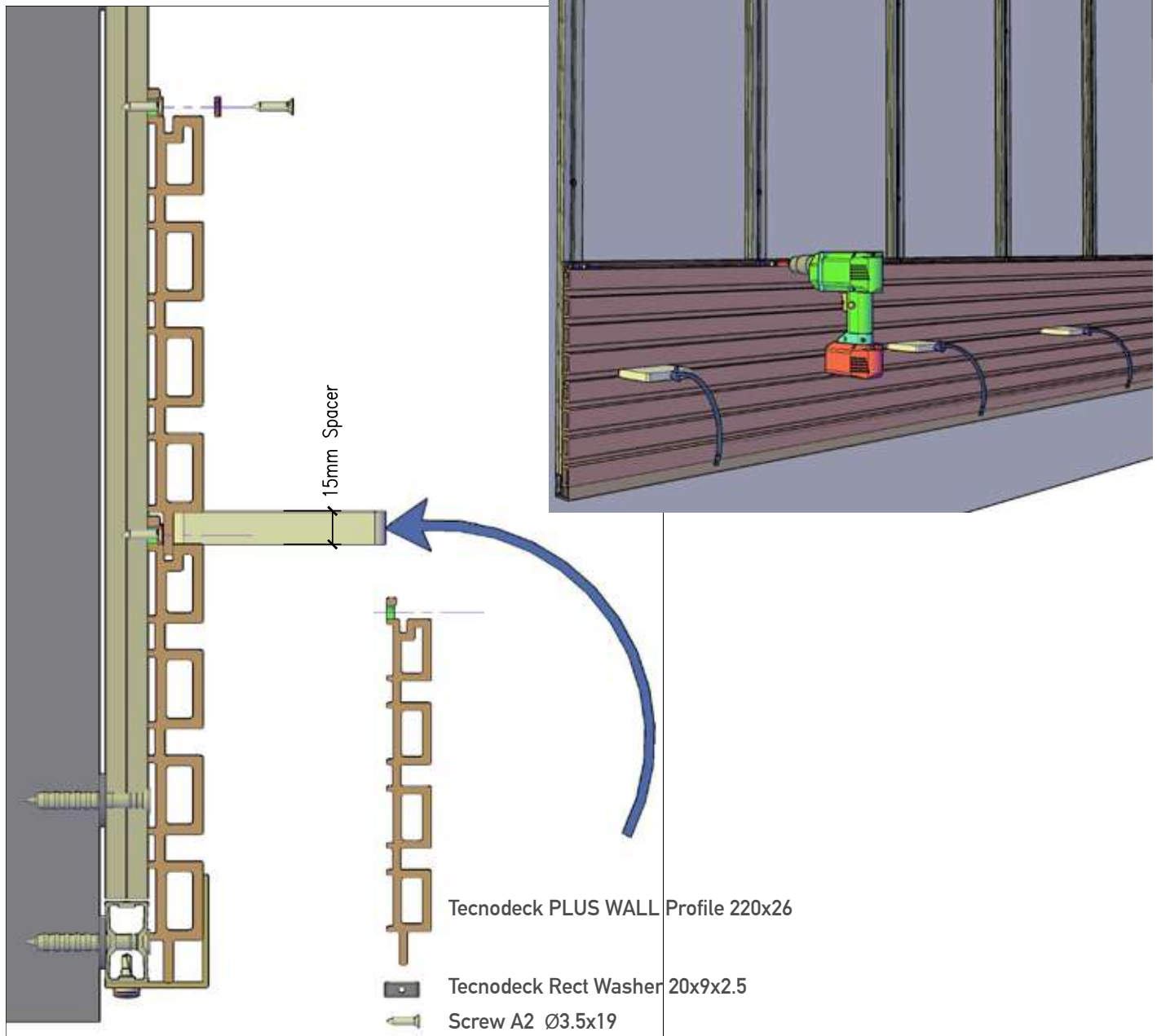
- Please do not overtighten the fixation screws. Overtightening the fixations screws, can damage the boards and/or the rectangular washer and does not allow for the natural free movement of the boards due to temperature changes. Use the screwdriver torque control.



Tecnodeck PLUS WALL
Profile 220x26

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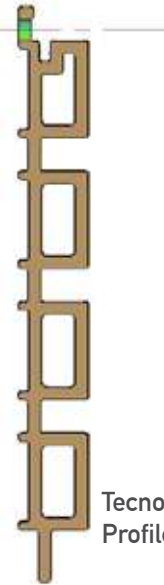
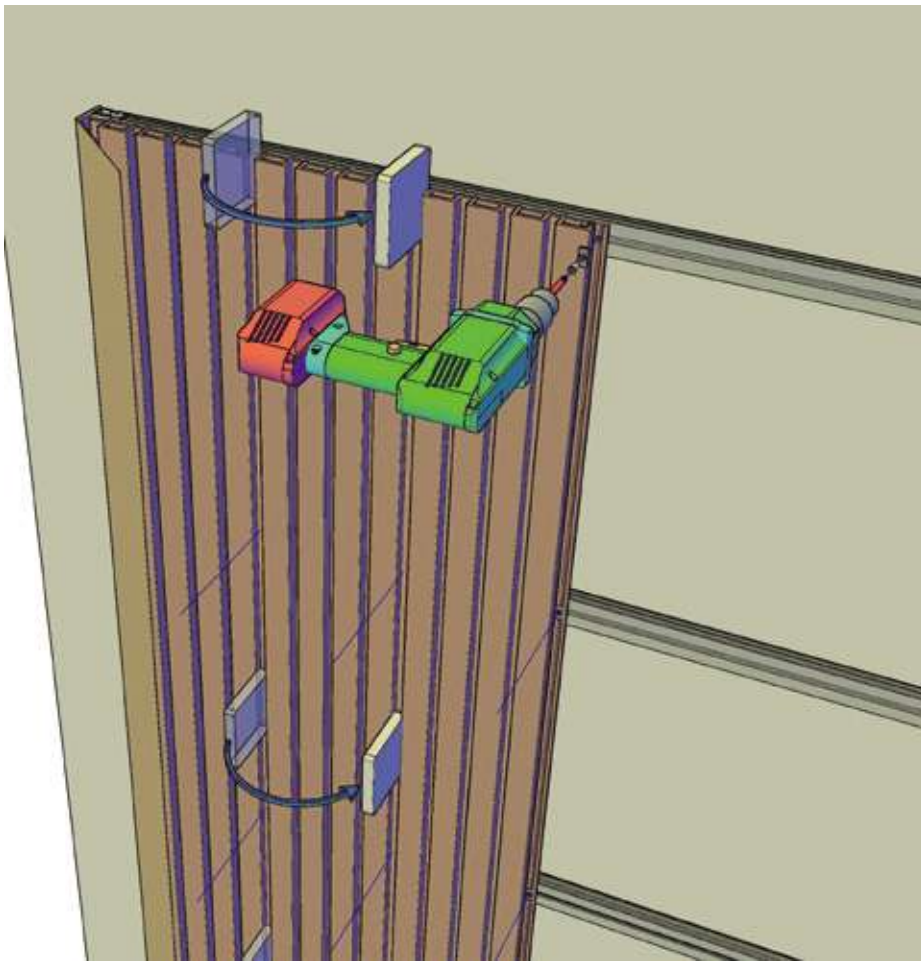
STEP 4 - Board Placing and Fixing



- Before screw PLUS WALL Profile, align Profile with 15mm spacers.
- Repeat this procedure and verify alignments in all profiles to guarantee the profiles and panels alignment.
- **Attention**
- **A peripheral space of 10 mm must be kept around the installed set of panels, allowing the normal expansion movement. Use profiles to cover these spaces without blocking the material movement.**
- **Please do not overtighten the fixation screws. Overtightening the fixations screws, can damage the boards and/or the rectangular washer and does not allow for the natural free movement of the boards due to temperature changes. Use the screwdriver torque control.**

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STEP 4 - Board Placing and Fixing



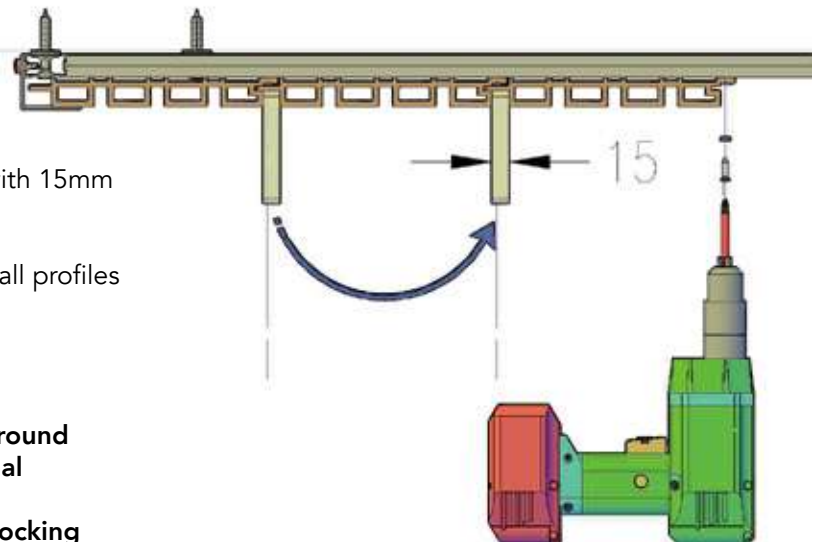
Tecnodeck PLUS WALL
Profile 220x26



Tecnodeck Rect Washer 20x9x2.5



Screw A2 Ø3.5x19



- Before screw PLUS WALL Profile, align Profile with 15mm spacers.

- Repeat this procedure and verify alignments in all profiles to guarantee the profiles and panels alignment.

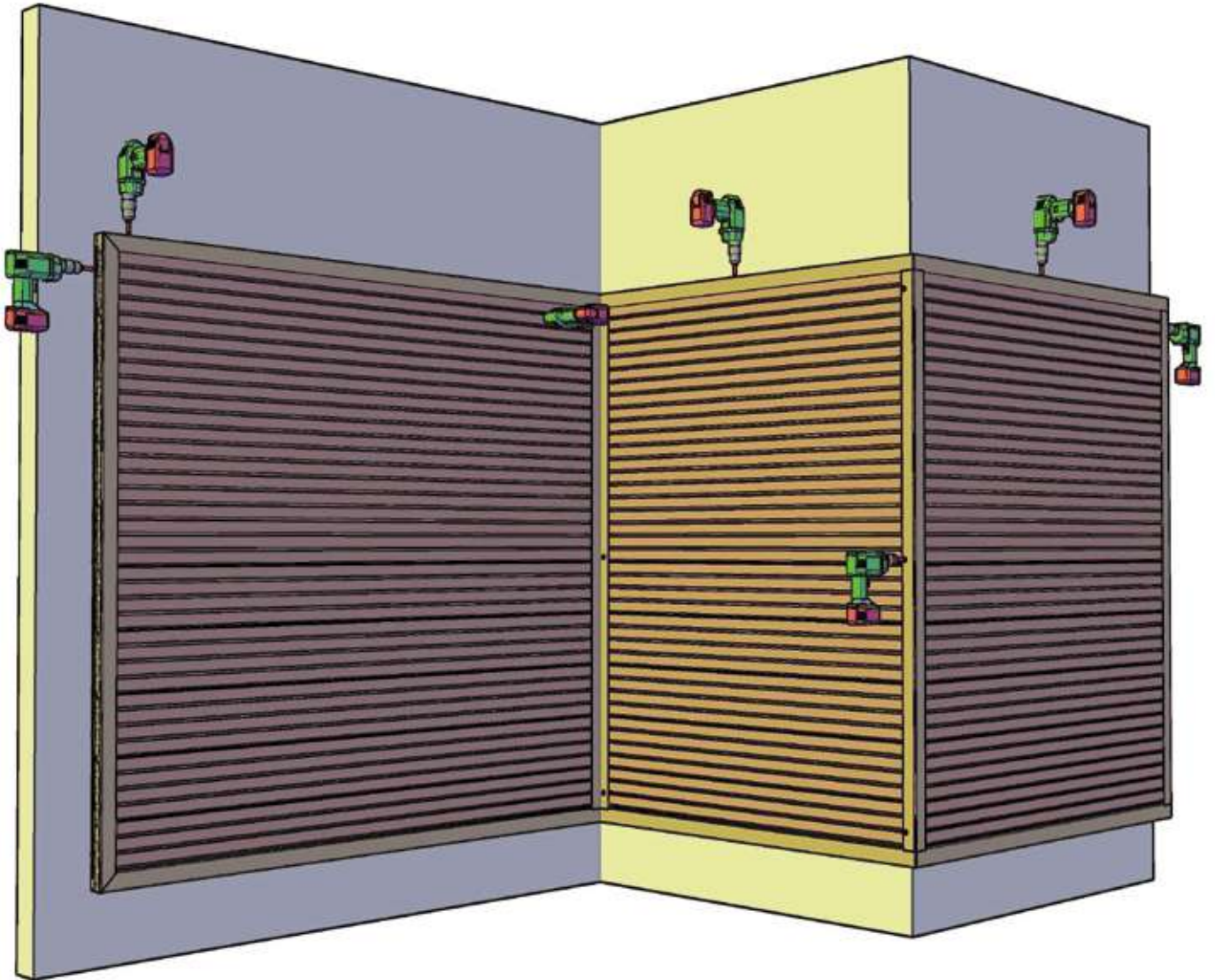
- Attention

- A peripheral space of 10 mm must be kept around the installed set of panels, allowing the normal expansion movement.
Use profiles to cover these spaces without blocking the material movement.

- Please do not overtighten the fixation screws.
Overtightening the fixations screws, can damage the boards and/or the rectangular washer and does not allow for the natural free movement of the boards due to temperature changes.
Use the screwdriver torque control.

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STEP 5 - Finishing Profile Placing and Fixing



Tecnodeck Alu-L 49x53



Screw A2 Ø4.8x19



Screw A2 Ø4.8x38



Nylon Cap

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