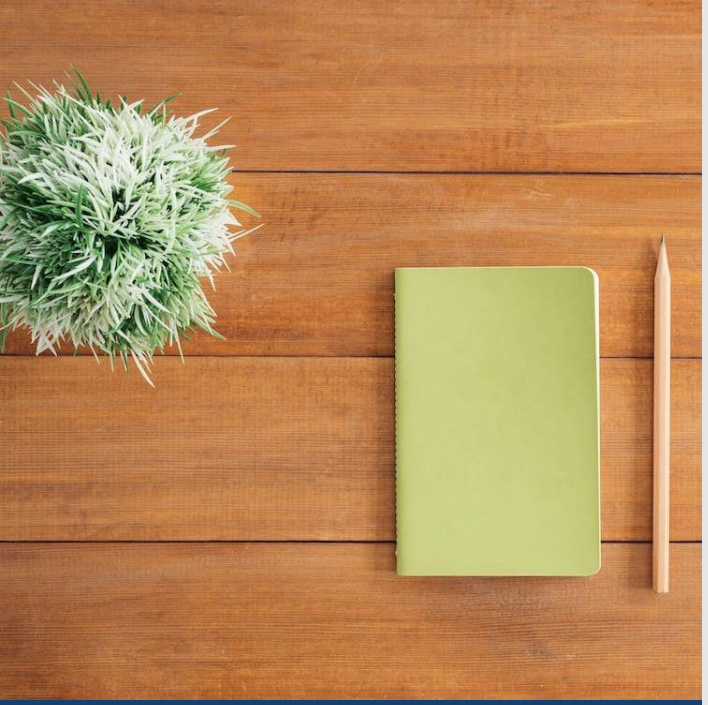
Live in a safe and durable timber house

ALUFOOT®

ALUMINIUM INNOVATIONS FOR TIMBER BUILDINGS

ALUMINUM FOUNDATION SYSTEM FOR LIGHTWEIGHT AND TIMBER BUILDINGS



Our team

Our team of experts is available to provide technical support assistance for new installation designs of our aluminum system, as well as for repair of wooden buildings with a damaged base.

Our services

- Project evaluation
- Technical-economic offer
- Cutting list development
- Construction project development

Our mission

WAT srl provides solution and support directly for primary sector or professional customers.

ALUFOOT®

System patented by University of Padua (PCT/ IB2012/056544) - Trademark registered.

Experts are aware that the critical and until now unsolved problem of timber buildings lies in proper anchoring of the structure to its foundations. Traditional techniques - reinforced concrete curbs and/or larch base beams - have several disadvantages, examples being excessive geometric inaccuracies, difficulty in achieving efficient and long-lasting fixings, compression orthogonal to the wood grain, reduced durability due to rising damp, problems with proper waterproofing and thermal insulation of foundations, etc. Inadequate solutions for the foundation node lead to a shorter lifespan and reduced structural performance of the entire building. Difficulties and delays during the installation of timber buildings, due to geometric errors in the foundations, are commonplace.

ALUFOOT® is an innovative foundation system for lightweight timber buildings, constructed with Cross-Lam or light timber frame technologies, solving all the above problems.

The ALUFOOT® base beams are made of an extruded aluminum profile. Shape and size are optimized for maximum bearing capacity. Special grooves on the sides of the profile allow fast, efficient anchoring of timber walls by means of special plates and hold-downs.

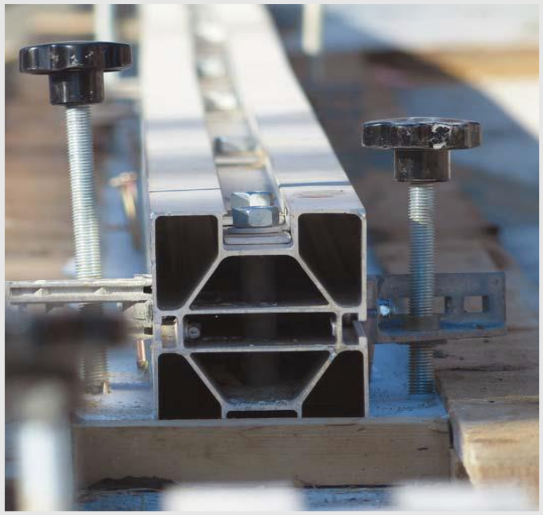
The ease of installation of ALUFOOT® profiles ensures worksite efficiency and cleanliness. Accessories are designed for extremely accurate leveling of base beams, both in plan and in elevation. This means that the assembly is easier and faster, greatly reducing costs and time.

The ALUFOOT® base beams prevent damp rising to the timber walls. Special rubber bands ensure proper contact between walls and profiles, providing the required airtightness. The thermal conductivity of the profiles is comparable to that of concrete curbs.

The ALUFOOT® beam system can provide a safe and durable wooden house lasting forever and saving costs and time of installation!

ALUFOOT® SYSTEM FEATURES

- ✓ Aluminum foundation beams, lightweight and infinitely durable
- ✓ Beams substitute r.c. curbs and larch base beams
- ✓ Beams allow perfect horizontal and vertical alignment of foundation plan
- ✓ Easy, efficient fastening of timber walls
- ✓ No drilling or fastening to r.c. base beams
- ✓ Adjustable fixing plates and hold-downs, fastened to aluminum base beams with special self-tapering bolts
- ✓ Certified load capacity of aluminum base beams
- ✓ Certified load capacity anchoring plates and holddowns
- ✓ Thermal bridging reduced at wall bases
- ✓ No rising damp from wall bases
- ✓ Easy waterproofing and thermal insulation of foundations
- ✓ Durability and natural healthiness of timber construction
- ✓ Savings in costs, due to speed of construction



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LA POSA IN OPERA DEL SISTEMA ALUFOOT®

1

ALUFOOT® beams are delivered, packaged and numbered, and already cut and drilled according to design.

2

Beams are set in place on foundation plan, aligned to grid lines and perfectly leveled with specific accessories.

3

Height is checked by a laser level and horizontality with a spirit level.

4

Preparation of side boarding and cast of self-leveling mortar bed or resin bed. Side boarding can be removed after mortar has hardened.

5

Drillling into the foundation is easy. Correct points are already indicated on the aluminum beams.

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6

Holes are brushed and resin injected to anchor threaded bars.

7

Installation of threaded bars; the tightening will be completed after the hardening of mortar bed.

8

Rubber bands are laid, ensuring distribution of contact force and airtightness between ALUFOOT® beams and walls.

9

Installation of anchoring plates with self-tapering bolts on one side of the profile, speeding up wall assembly.

10

Wall installation proceeds and anchoring plates are also installed on the other sides of the ALUFOOT® beams.

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Installation of the ALUBEAM 120 foundation system for the construction of single-family residential home

ALUFOOT® APPLICATION

HIGT series – Classic Line

ALUBEAM 100

ALUBEAM 120

- XLam
- Platform Frame
- Blockbau
- Consolidation of existing wall degraded at the base

LOW series – L Line

ALUBEAM 100L

ALUBEAM 120L

ALUBEAM 160L

- Platform Frame
- Xlam
- Blockbau
- Recovery of exsisting buildings

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ALUFOOT® PRODUCTS

HIGH series – Classic Line

ALUBEAM 100

Extruded aluminum beam 100x150 mm

ALUBEAM 120

Extruded aluminum beam 120x150 mm

ALU SH-18

Aluminum bracket for shear force, with aluminum strip and bolts. Design shear resistance VRd=18 kN

ALU HD-28

Aluminum hold-down bracket, with aluminum strip and bolts. Design tensile resistance NRd=28 kN

ALU HD-56

Aluminum hold-down bracket, with aluminum strip and bolts. Design tensile resistance NRd=56 kN

ALU HD40/SH18

Aluminum bracket for shear/axial forces, with aluminum strip and bolts. Design tensile resistance NRd=40 kN; design shear resistance VRd=18 kN.

ALU HD23/SH18

Aluminum bracket for shear/axial forces, with aluminum strip and bolts. Design tensile resistance NRd=23 kN; design shear resistance VRd=18 kN.

Accessories – Classic Line

ALU FIX100-HD
ALU FIX120-HD

Galvanized steel threaded rod d=16mm L=400 mm, with heat-shrink tube.

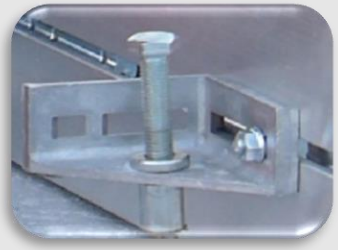
ALU FIX100-SH
ALU FIX120-SH

Mechanical anchoring in galvanized steel M16x285 mm

ALU CORNER

Reusable 90° corner for temporary assembly

ALU CORNER +



Reusable 90° corner for temporary assembly with micro-adjustment in height

ALU JOINT

Liner joint in 4 hole Alloy 6082 aluminum and M8 bolts for in line joining of the AluBeam profile

LOW series – L Line

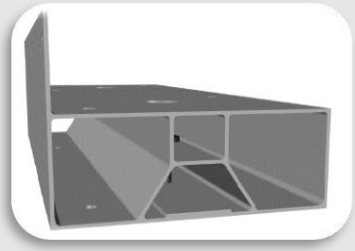
ALUBEAM 100L

Extruded aluminum beam
100x60 mm

ALUBEAM 120L

Extruded aluminum beam
120x60 mm

ALUBEAM 160L



Extruded aluminum beam
160x60 mm

Accessories – L Line

ALU L FIX-HD

Galvanized steel threaded rod d=12mm L=330 mm, with heat-shrink tube.

ALU L FIX-SH

Mechanical anchoring in galvanized steel M12x285 mm

RUBBER 100

95 mm adhesive EPDM rubber

RUBBER 120

115 mm adhesive EPDM rubber

RUBBER 160

160 mm adhesive EPDM rubber

BOCCOLA

Nylon bushing for housing in the holes provided for the Alubeam L series profile

ALU JOINT L

PVC linear joint L=200 mm



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