

flexible building.
sustainable thinking.





ALUFORM goes green: Invest and build with a Sense of Responsibility for the Future

Sustainability, credibility and honesty at companies affect people and the natural world, more than ever now. So protecting the environment is part of our corporate philosophy. We can only maintain a world where life is worth living for the generations of tomorrow if we act responsibly now. ALUFORM is committed to this long-term perspective.

Green thinking and a pro-active approach - ALUFORM invests in the future

1. ALUFORM manufactures its products by paying the greatest possible attention to the environment and is constantly working on improving its manufacturing technologies.

2. The facade covering for a new production facility at the Bernsdorf business site consists of aluminium sandwich elements and meets all the requirements laid down in the German Energy Conservation Regulations for Buildings 2009.

3. The use of standing seam systems with unformed silicon thin-layer laminates on a roof measuring 3,200 m² means that solar energy is used efficiently.

4. The installed ALU SOLAR photovoltaic panel roof system feeds energy into the grid and saves the company 100,000 kWh per annum.

5. Approx. 85 % of the heat required by the factory is produced by a newly constructed biogas combined heat and power plant. This enables ALUFORM to reduce its CO₂ emissions by 500 tonnes per annum.

Ecological building plus generating renewable energy

6. ALUFORM products are environmentally-friendly and are 100 % recyclable at the end of their useful life.

7. Approx. 95 % of energy is saved by recycling aluminium.

8. ALUFORM products and their long serviceable life support sustainable building for industry, offices and residential property.

9. ALUFORM products, like roof-integrated solar power solutions, are an ingenious combination for building in an environmentally-friendly way and saving resources.

10. As a responsible partner for architects, planners and installation companies, ALUFORM represents forward-looking building.

“Building for the future” - creatively and sustainably with ALUFORM products

Sustainable thinking in architecture and the building industry is a milestone towards acting in a responsible manner. ALUFORM products provide architects and planners with creative space for modern architecture design and environmentally-friendly, energy solutions.



Applications

Profiled Aluform siding panels are used for covering walls and may be dimensioned according to conventional specifications. For this reason, an approval by the construction authority is not necessary. The data given below were calculated in accordance with the applicable regulations or verified by experiments.

Material

Whereas pure aluminium was used in the early times, it is alloy AlMn 1 Mg 0.5 according to EN DIN 485 that is employed for Aluform systems today. This material has proven its optimum suitability for the purpose with respect to strength, resistance to ageing and appearance. Moreover, aluminium has a low weight, is resistant to corrosion and the effects of weather, has a high heat reflection capacity, requires no maintenance and has a long service life.

The long-standing success of the tried and tested Aluform systems is based on these favourable material characteristics.

Panel length

Profiled Aluform siding panels are continuously manufactured and cut to length after the roll forming process according to customer specifications. For structural reasons, panels should not be longer than 6,000 mm.

Temperature-dependent length variations

Thermal expansion due to weather-caused temperature changes may affect the aesthetics of a wall. For this reason, precautions need to be taken to accommodate thermal expansion. In most cases, this can be done by either using a relatively flexible supporting structure or by enlarged boreholes that take up the expansion and so prevent thermal stresses.

Aluform siding

The material used for manufacturing Aluform siding panels is kept on stock in sheet thicknesses 1.2 mm and 1.0 mm. The panels are available with the outer (visible) side provided either with a two-layer polyester coat (total thickness: approx. 25 µm) or a two-layer PVDF coat (total thickness: approx. 22 µm). For the available coating colours contact the manufacturer. A protective film on the visible side prevents damage to the coating.

For colours or coating systems other than the standard colours/systems, the minimum quantity that can be ordered is 500 m² per colour. As the coils need to be separately coated for the purpose, longer delivery times must be taken into account. The rear side of the siding panels is provided with a 3 µm thick protective paint coat.

Use on exterior walls

Aluform siding panels are preferably used for cladding walls. They can be installed both vertically and horizontally. Possible applications:

- exterior shell of a multi-layer wall with an interior shell of a profiled component and a spacer construction
- exterior shell of a multi-layer wall in conjunction with steel cassettes as interior shell
- curtain façade in front of concrete or brickwork walls with a suitable intermediate structure, with or without insulation.

Supporting/spacing structure

A supporting structure made of steel or aluminium sections can be used. To avoid uneven areas in the wall surface, a two-part, adjustable supporting structure is to be preferred. Various manufacturers offer complete systems, mostly of aluminium, which comprise wall brackets and support angles.

Supporting structures made of timber shall be sufficiently dry as well as free from torsion and warping.

The profile thickness of the supporting structure and the spacing of the fastening points shall be determined and dimensioned according to the static requirements. The minimum bearing width for the Aluform siding panels is 40 mm.

The supporting structure must be carefully aligned before starting the installation of the panels.

Ventilation

Walls covered with Aluform siding panels should be designed as "ventilated façades". The ventilation is necessary for reducing the air humidity and for discharging rain-water that may have entered the space behind the façade and condensate that may have accumulated on the inside surface of the panelling.

According to DIN 18516, Part 1, there should be a clearance of at least 20 mm between the exterior wall panelling and the insulation or, in non-insulated walls, the interior shell. While in vertically installed panels the cross-section of the Aluform siding profile (25 mm profile height) may be considered to be sufficient for back ventilation, a distance of 20 mm should be kept to the next layer (e.g. the thermal insulation) in case of horizontally installed panels. Ventilation openings of a minimum cross-section of 50 cm² should be provided per 1 m wall length along the base and upper edge of the wall.

Tolerances

A works standard has been worked out that specifies the permissible manufacturing tolerances for profiled siding panels. The standard can be viewed at the factory or the manufacturer's website (www.aluform.com).

In case a specific application requires different tolerances, these need to be separately agreed in an order.

Profile joints/lengths

Aluform siding panels are installed by pushing their longitudinal edges into one another in the joint area.

Cross joints (joints across the longitudinal direction of the panels) are normally provided by:

- storey partition in case of vertical panel installation
- arrangement between vertical pilaster strips in case of horizontal panel installation (joint exposed or concealed).

Permissible spans

The load-bearing capacity of the profiled siding panels is dependent on the thickness of the panel sheet and the cover width. The possible spans are to be calculated by applying the design loads specified in DIN 1055.

For span tables see the website www.aluform.com or ask the manufacturer.

Connecting elements

The panels are connected to the supporting structure by means of self-tapping screws, drilling screws or dummy rivets. The connecting elements should meet the corrosion protection requirements as defined in DIN 18807, Part 9. The span tables for the profiled siding panels also include the load-bearing capacities of joined elements with deformations of the panel at the screw heads taken into account. The tearing out from the supporting structure is to be separately checked.

Profile shapes/design/accessories

Profiled Aluform siding panels are manufactured in standard cover widths of 200 mm, 250 mm and 300 mm. They are available with a "normal" gap or with a 15 mm wide shadow gap.

Special profiles are offered in cover widths of 325 mm, 336 mm, 340 mm, 350 mm and 375 mm (some of them in shadow gap design). Also available are sidings with perforations Rv 2/3.5 or Rv 3/5 on the visible surface.

All panels can be supplied either with a normal cut edge (standard) or with an additional bent-down end on one or both sides. The height of the bent-down end at the leading edge is approx. 10 mm. Such edges reduce the possibility to look into the front ends of the siding panels, and prevent any cross curvature in the leading edge zone.

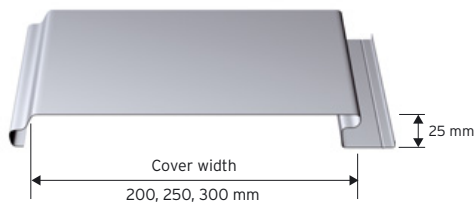
The sidings can be factory-coated with an anti-condensation or anti-drumming agent layer. Perforated sidings also permit an acoustic fleece layer to be applied. The sides of the panels are shaped in a way that they can be fitted and hooked into one another during installation. The panels are fixed to the support on one side only. The other side is provided with a bead (lock) that prevents the panel from being unhooked in case of a suction load.

If a further structural division of the panel surface is desired, there are another two versions available in addition to the standard shape:

- standard profile with a smooth surface
- profile with macro lining
- profile with micro lining

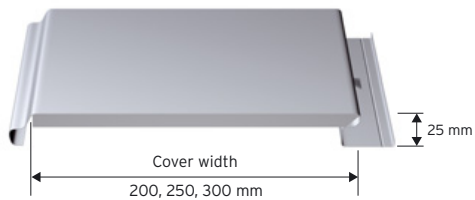
Since the siding panels are not manufactured in all of the above-mentioned combinations of sheet thickness, cover width, gap geometry and surface design, details should be individually agreed with the manufacturer.

Aluform Siding 25/200, 250, 300, smooth surface

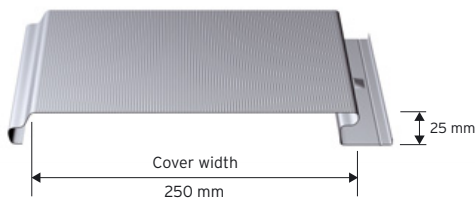


Profile height (mm)	Cover width (mm)	Sheet thickness t_N (mm)	Weight (kg/m ²)
25	200	1.00	4.40
		1.20	5.28
25	250	1.00	4.07
		1.20	4.88
25	300	1.20	4.61

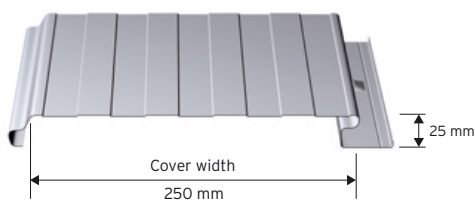
Aluform Siding 25/200, 250, 300 with bent-down edge, smooth surface



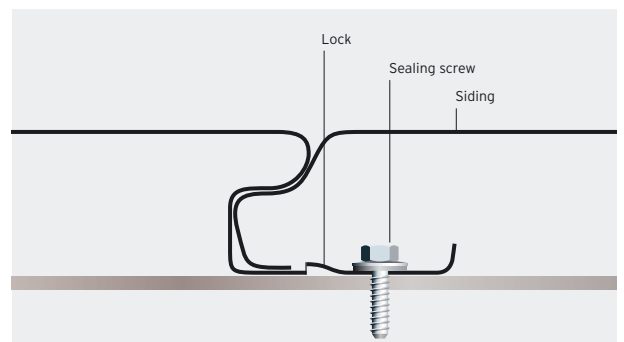
Aluform Siding 25/250, micro lined surface



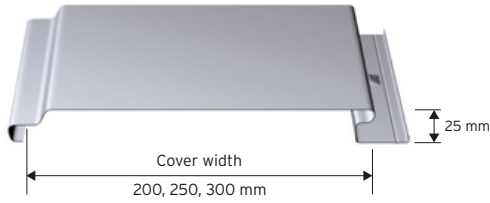
Aluform Siding 25/250, macro lined surface



Gap shape

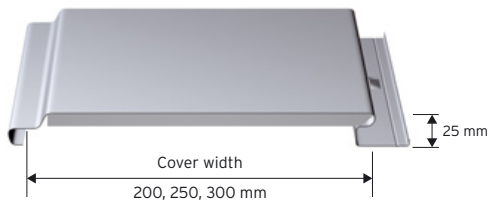


Aluform Siding 25/200, 250, 300, shadow gap design, smooth surface

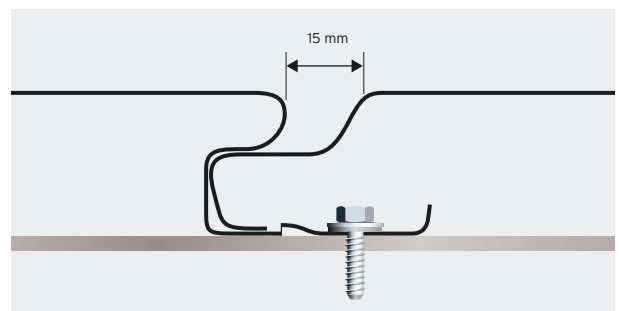


Profile height (mm)	Cover width (mm)	Sheet thickness t_N (mm)	Weight (kg/m ²)
25	200	1.00	4.40
		1.20	5.28
25	250	1.00	4.07
		1.20	4.88
25	300	1.20	4.61

Aluform Siding 25/200, 250, 300, shadow gap design and bent-down edge, smooth surface



Joint with shadow gap



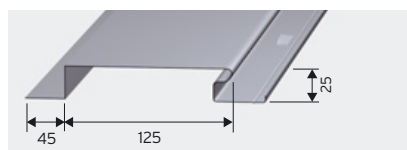
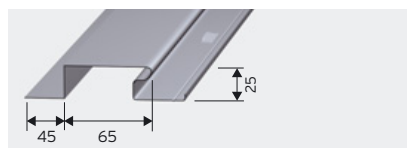
Available for connections and corners are

- start profiles
- end profiles
- exterior corner elements
- interior corner elements and
- storey partitions

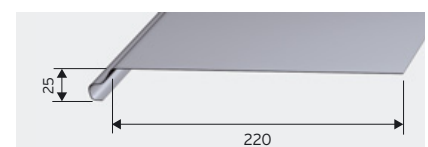
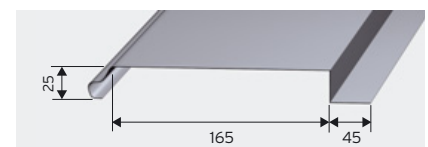
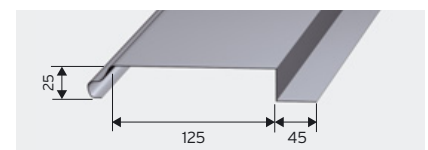
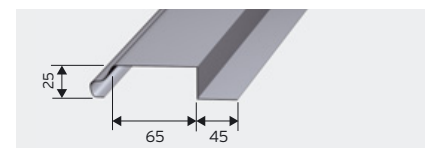
in lengths up to 6,000 mm.

In order to cover a possible slight cross curvature of the siding panels, corner profiles or pilaster strips with a profile depth of 35 mm are recommended to be used in case of a horizontal installation.

Start profiles



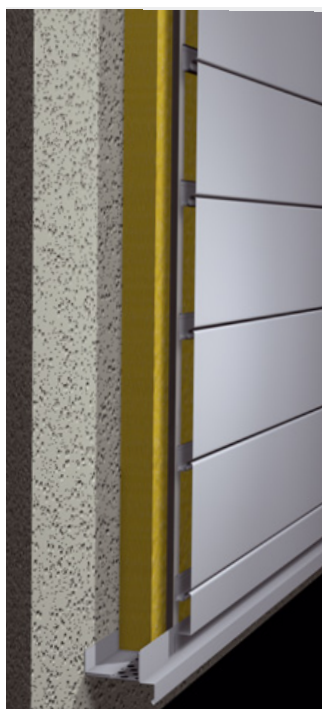
End profiles



Horizontal installation
on steel cassette



Horizontal installation
on concrete



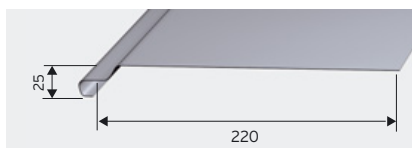
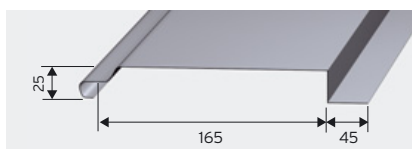
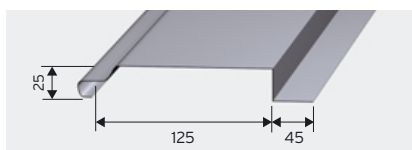
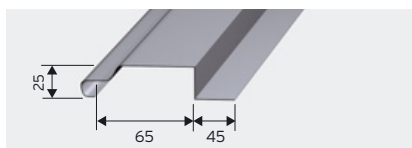
Vertical installation
on concrete



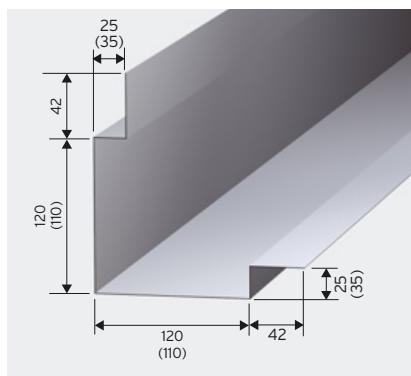
Corner with siding,
horizontal installation



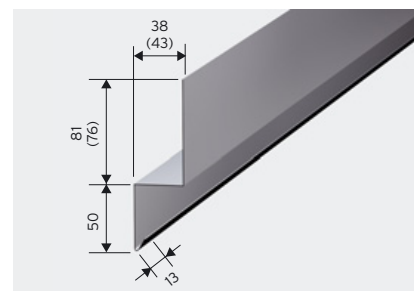
End profiles with shadow gap



Exterior corner



Fastening of aluminium sidings to
a SysteaALWI supporting structure



Start and end profiles of the above-mentioned dimensions can be manufactured for siding panels with a minimum cover width of 250 mm; for a cover width of 200 mm please contact the manufacturer.

