

COMPACFOAM

THE LIGHTWEIGHT MATERIAL FOR CONSTRUCTION AND INSULATION.

EXTREMELY HIGH QUALITY.

EXTREMELY ECONOMICAL.



www.compacfoam.com

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THE COMPANY.

It all started with the development and successful international patenting of a process: the production of an innovative high-pressure resistant plastic foam on an EPS basis for thermal insulation, in order to avoid thermal bridges in façade construction.



We founded **COMPACFOAM** in 2005.

We were nominated for the Austrian National Award for Innovation in 2012.

The demand for **COMPACFOAM** with its innovative technical properties increased very quickly, even for use in other areas. We therefore developed additional business areas in industry and construction.

COMPACFOAM is a vigorously growing medium-sized company with a production area of 11,000m² and an export ratio of more than 95 percent. We develop and produce exclusively at our location in Wolkersdorf, Austria.

Our in-house laboratories and testing facilities enable us to provide our customers with prompt and non-bureaucratic support in the use of **COMPACFOAM**, even in new and difficult applications. We attach great importance to quality assurance and product safety in this respect.

COMPACFOAM GmbH defines itself as a resourceful partner from product development to implementation in the application. Our team of qualified engineers will be pleased to support you in the assessment and mechanical analysis of possible areas of application.



THE MATERIAL.

A modern material which consists of pure EPS.



It combines strength with outstanding thermal insulation and a very low weight. It is both a flexibly usable construction element and a high-grade insulation material. This combination means that **COMPACFOAM** is extremely versatile.



Our panels, bars, profile bars, cubes and blockware have a comparatively low weight. This facilitates handling. They can also be easily screwed, drilled, sawn, calibrated and milled with conventional woodworking machines.

The ductile property enables the material to compensate for unevenness of the contact surface without any damage. **COMPACFOAM** is resistant to frost and moisture. This prevents swelling and shrinkage and makes the material rot-proof, resistant to ageing and non-degradable.

The product range extends from standard panels to parts fabricated to customer specification.

COMPACFOAM is recyclable, non-mixed and meets all the requirements for sustainable, environmentally friendly construction. Our products are listed at the German Sustainable Building Council (DGNB). **COMPACFOAM** opens up new approaches to solutions in modern construction as a result of its properties.

OUTSTANDING PROPERTIES OF COMPACFOAM SPEAK FOR THEMSELVES.



SCREWABLE



OUTSTANDING
THERMAL
INSULATION



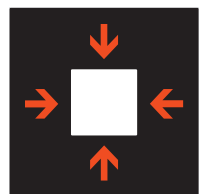
STABLE AGAINST
CLIMATE CHANGE



LONG-TERM
STABLE



FROST RESISTANT



ISOTROPIC

THE RECYCLED MATERIAL.

COMPACFOAM becomes COMPACFOAM **eco**.



We can recycle 100 percent of COMPACFOAM waste by means of a newly developed process called particle technology. **CF eco**, the result of this process, offers the same excellent properties as COMPACFOAM: high strength with outstanding thermal insulation.

Customers can return non-mixed waste to the manufacturer.
This makes COMPACFOAM **eco** an extremely sustainable product.
In addition, the customer incurs none of the usual disposal costs.



COMPACFOAM and
COMPACFOAM **eco**
are DGNB-listed.



DUCTILE



OPEN TO
DIFFUSION



HIGH
COMPRESSIVE
STRENGTH



LOW WEIGHT



BIOCIDE-FREE



RECYCLEABLE

COMPACFOAM is available in various material classes.

The CF material classes mainly differ in compressive strength, thermal conductivity and screw retention. Please use the following table below to determine the optimum material class for your application.

	A	A	B	C	D	E	F	G	H	I
Material classes	$f_c(\epsilon=5,0\%)$ [N/mm ²]	$f_c(\epsilon=2,0\%)$ [N/mm ²]	E-Module [N/mm ²]	σ_{zul} [N/mm ²]	λ [W/mK]	μ [-]	max. H ₂ O absorption [Vol%]	Fire classification	Elongation at max. force [%]	Final creep rate [%]
CF 100	1,4	0,8	40	0,56	0,0387				> 10	
CF 125	1,65	1,1	55	0,78	0,0405				> 10	
CF 150	1,9	1,32	65	0,83	0,0423				> 10	
CF 200	3,5	1,48	74	1,01	0,0459	25	~5	E (B1)	> 10	<3,0
CF 300	6,4	3,21	162	2,39	0,0531				> 8	
CF 400	9,7	4	200	4,18	0,0650				> 5	
CF eco	1,75	0,95	46	0,58	0,0450				> 10	

- A Average stress at 5,0 % / 2,0 % deformation
- B Modulus of elasticity in linear-elastic range
- C Recommended stress level (under service load)
- D Coefficient of thermal conductivity
- E Water vapor diffusion resistance factor
- F Max. water absorptive capacity during complete submersion
- G Material behaviour in response to fire according to DIN 4102-1 / EN 13501-1
- H Elongation at maximum force = maximum strain at failure load
- I Final creep rate = anticipated long-term deformation at serviceability limit state

All COMPACFOAM material classes are DGNB-listed.



ENVIRONMENTAL PROTECTION & SAFETY

COMPACFOAM is 100 percent pure and does not emit any physiologically relevant quantities of chemical substances. As a rule, no harmful dusts or vapours form during processing. COMPACFOAM is listed at the German Sustainable Building Council (DGNB).

STORAGE & TRANSPORT

The product is not subject to the German Ordinance on Hazardous Substances (GefStoffV) or any other storage and transport regulations.

COMPACFOAM is available in the shape and size you require.

You will always find up-to-date information about standard bar lengths and standard panel dimensions for each material class, tolerances or maximum and minimum production dimensions at www.wiki-compacfoam.info, as well as detailed information about complementary products and tool requirements, e.g. for saw blades.

FORMS OF DELIVERY

COMPACFOAM is available in panel, bar, profiled bar or blockware. Standard formats in all the required thicknesses (see table) and precision-fit special cuts to customer specifications are generally possible. We have a large number of options for preparing the panels to your requirements.

STANDARD PANEL FORMATS: All standard panels can also be supplied in half-lengths. The thickness of panels can be freely chosen.

Material classes	Length in mm	Width in mm
CF 100	2350	780 520
CF 125	2250	760 510
CF 150	2150	680 480
CF 200	1980	660 440
CF 300	1700	600 400
CF 400	1600	450 380
CF eco	2350	1160 580
	1160	780

PROCESSING

COMPACFOAM can be processed easily and economically with conventional woodworking machines. No carbide tools are required. The standard processes include sawing, planing, milling and drilling. **COMPACFOAM** only causes very low tool wear.

SCREWING: Conventional wood screws are used for screwing. No pre-drilling is required.

BONDING: **COMPACFOAM** can be easily bonded to other materials with e.g. 1-component polyurethane or MS polymer adhesives.

SEALING: Sealing can be carried out using conventional foils, bitumen waterproofing by flaming or liquid sealing systems (solvent-free).

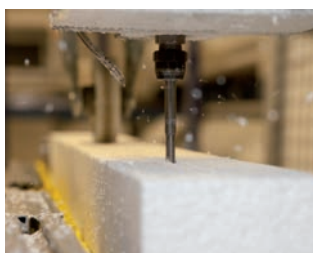
You will find further information at www.wiki-compacfoam.info



Cutting



Milling



Drilling



Printing

KLIMA KONFORM SYSTEM 2.0 (VORWANDMONTAGE)



In the last few years Energy Conservation Regulations were tightened up all around Europe in order to further optimise energy efficiency in all areas of the building. Unfortunately this also confronted planners, architects and contractors with great challenges.

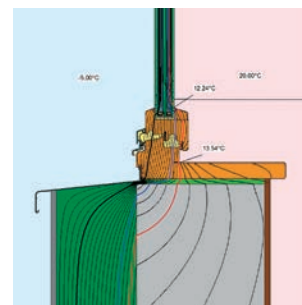
For example, installation experts are required to offer optimised assembly options with innovative solutions which not only comply with all regulations but also work well in practice.

Three attractive options in the sphere of front-wall assembly (standard assembly, assembly from the outside and sub-frame assembly) are available to you as an installation expert which are not only versatile enough to allow individual solutions but are also quick and easy to install.

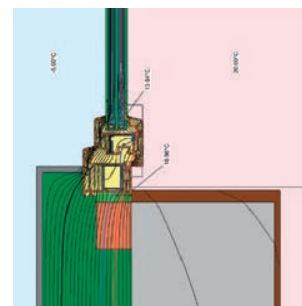
Anti-fall fastening according to the ETB 2,8 kN	up to RC2 break-in resistance	up to 64 dB joint noise	Suitable for Installation without thermal bridges
B1 fire class	W/mK 0,04 thermal conductivity	Class 4 pendulum impact test	up to 3.000 Pa pressure and suction



The KLIMA KONFORM SYSTEM 2.0 consists of just 4 components, is designed for universal use and has passed an ift Rosenheim test.



Previous standard window installation



KLIMA KONFORM SYSTEM 2.0
Assembly of windows
in the insulation layer
(PVC window)

KLIMA KONFORM SYSTEM 2.0 (VORWANDMONTAGE)

THE OPTIMUM WINDOW INSTALLATION

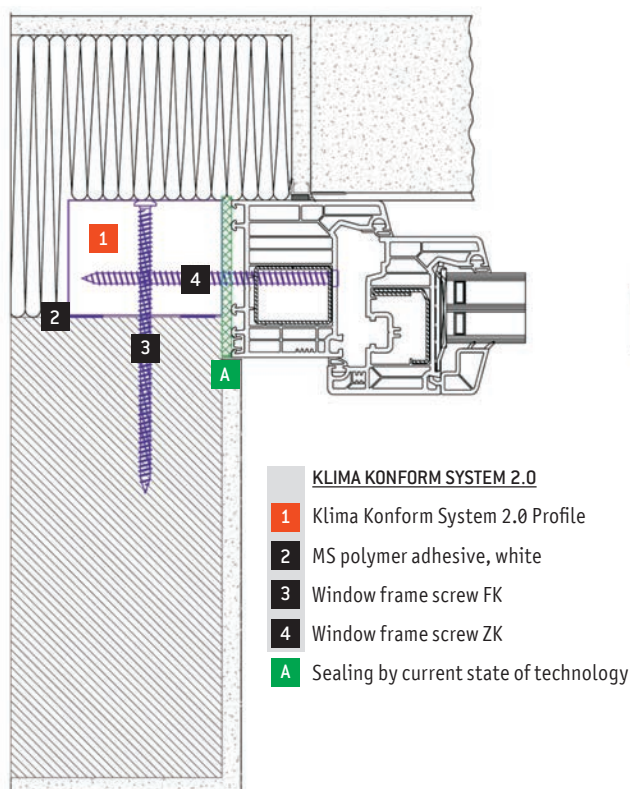


The Klima Konform System 2.0 enables the window units to be installed directly in the insulation layer. Fixings without thermal bridges wall are therefore possible.

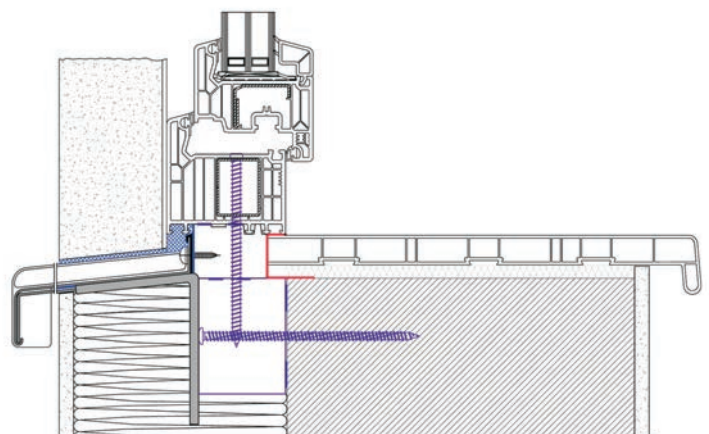
System features

- Easy assembly
- Easy cutting of the profiles
- Only a few components
- 3 options with different sealing options
- Assembly at the choice of or requirement of the planner/installer (standard, from the outside and sub-frame)
- Lightweight materials
- Prefabrication as a frame possible
- Quick window installation, since no pre-drilling necessary
- Subsequent window replacement without plastering possible (sub-frame assembly)
- Wide overhangs possible
- Suitable for fastening anti-fall elements (ETB)

lateral section



bottom section



KLIMA KONFORM SYSTEM 2.0 (VORWANDMONTAGE)

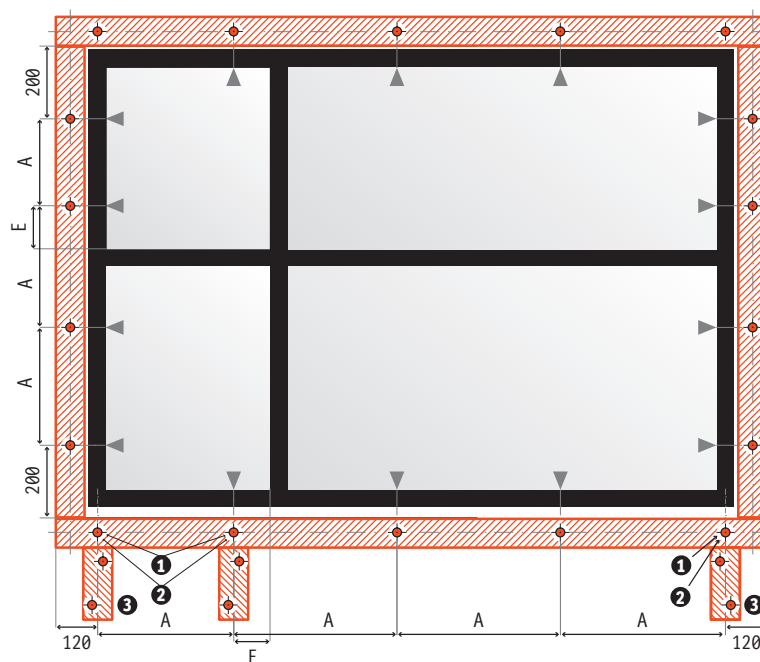
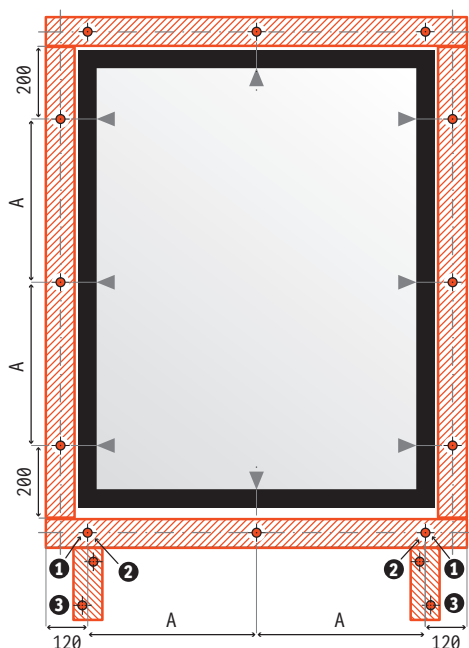
PROCESSING GUIDELINES

Attachment of Klima Konform System 2.0

MS polymer adhesive is applied to the complete length of the Klima Konform 2.0 profiles.

They are then stuck on the wall and screwed in place with 7.5 mm flat head window frame screws.

The length of the screws depends on the min. screw-in depth in the wall.



Fixing point

→ Fixing of window frame in Klima Konform 2.0 profile with 7.5 mm window frame screw

• Fixing of Klima Konform 2.0 profile in wall with 7-5 mm flat head window frame screw

Both window frame screws are placed at the same level (+/- 50 mm).

Fixing distances

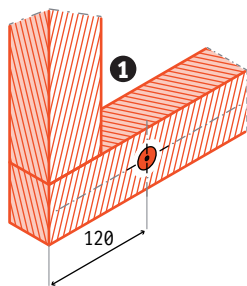
A: Anchor spacing
Plastic window, max. 700 mm
Wooden, wood/aluminum and aluminium windows, max. 700 mm

E: Distance from the inner corner of the frame and for posts and bolts from the inside of the profile; 100 to 150 mm

The following executions depend on the element weight and the Klima Konform System 2.0 profile:

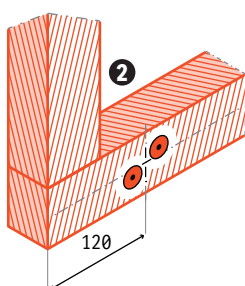
Execution 1

Element weight < 87,7 kg
Load per fixing point < 0,43 kN



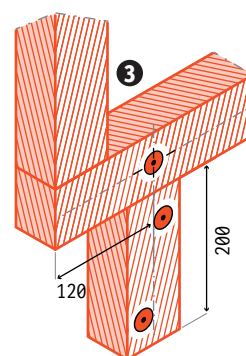
Execution 2

1 additional fixing point
Element weight < 175,4 kg
Load per fixing point < 0,86 kN



Execution 3

2 additional fixing points
Element weight < 263,1 kg
Load per fixing point < 1,23 kN



The bracket (Execution 3) must be set from an overhang of the Klima Konform 2.0 profile > 100 mm (System ZM). The individual bearing loads at the fixing points can be calculated with the COMPACFOAM fixing calculator. Information at www.compacfoam.com

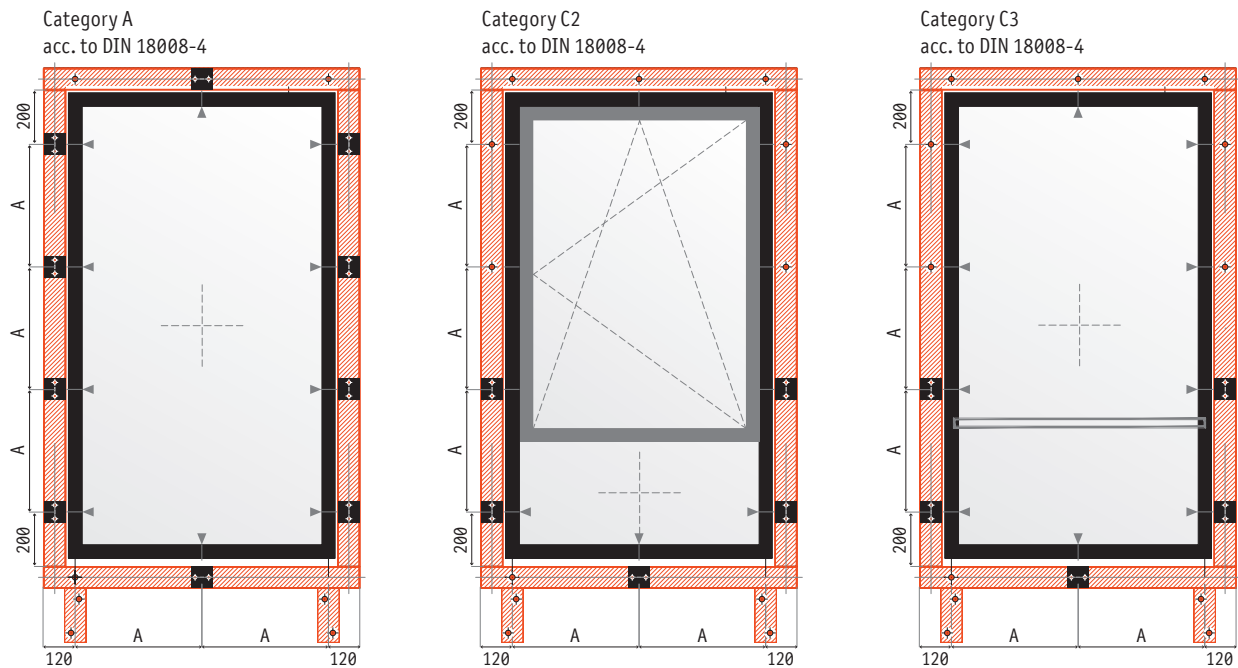
KLIMA KONFORM SYSTEM 2.0 (VORWANDMONTAGE)


PROCESSING GUIDELINES


Fixing of elements with antifall properties (ETB)

Depending on the category (A/C2/C3), a Klima Konform system ETB plate must also be fixed in the base surface (wall construction) with an additional screw of the Klima Konform profile for elements with anti-fall properties (ETB).

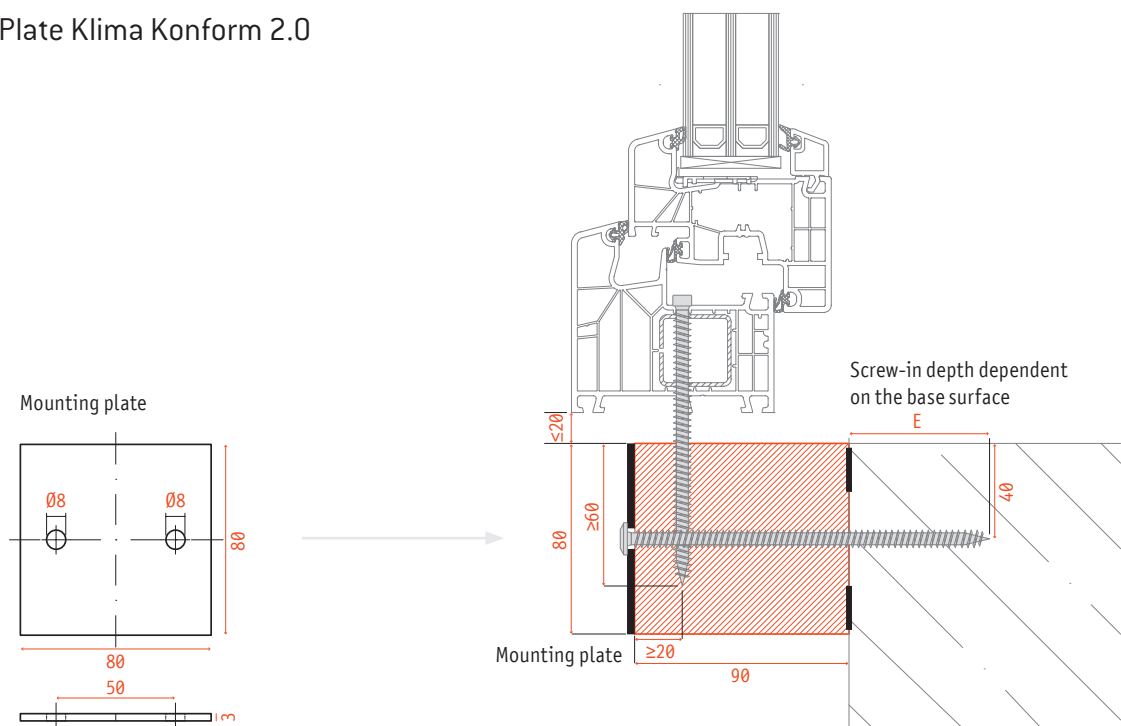
Fixing distance A: Plastic window, max. 700 mm, wooden, wood/aluminum and aluminium windows, max. 700 mm.



 Fixing with requirement according to ETB Guideline

 Fixing without requirement according to ETB Guideline

System ETB Plate Klima Konform 2.0

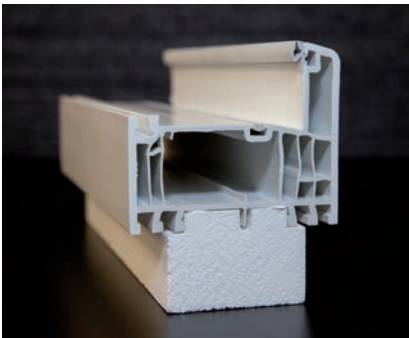


CF FBA WINDOWSILL CONNECTION INSULATION PROFILE



COMPACFOAM FBA profiles replace conventional PVC windowsill connection insulation profiles. The optimum lambda value of COMPACFOAM results in windows with a lower U-value without thermal bridges.

The high strength of the CF FBA means that assembly can be carried out with conventional windowsill screws without any problems. The CF FBA can be supplied in customised crosssections and contours.

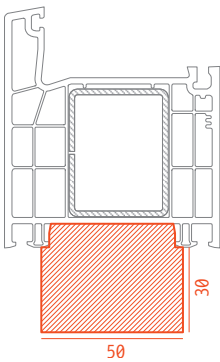


CF 100

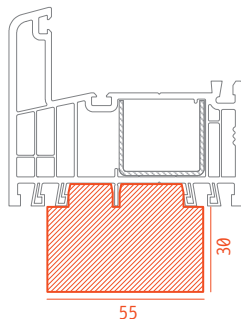
FBA

Standard length: 2.350 mm

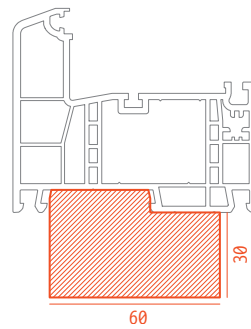
vertical cross-section



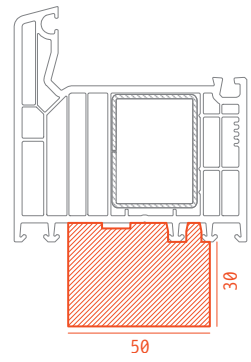
$U=0,77 \text{ W/m}^2\text{K}$
Profine 76, 88



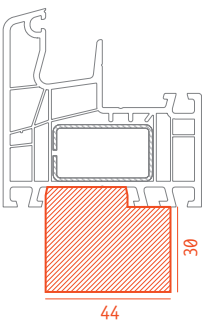
$U=0,70 \text{ W/m}^2\text{K}$
Gealan S8000 iQ, S9000 iQ



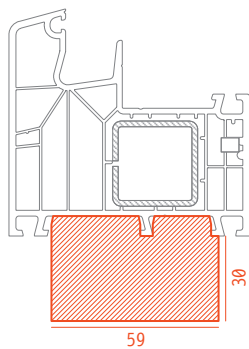
$U=0,65 \text{ W/m}^2\text{K}$
Rehau Geneo



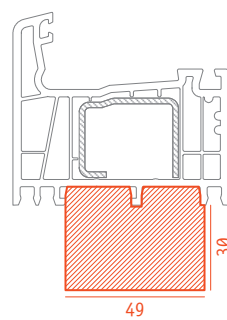
$U=0,77 \text{ W/m}^2\text{K}$
VEKA SL70, SL82



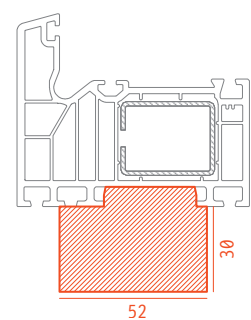
$U=0,88 \text{ W/m}^2\text{K}$
Aluplast Ideal 5000, Ideal 4000



$U=0,66 \text{ W/m}^2\text{K}$
Aluplast Ideal 8000, Ideal 7000



$U=0,79 \text{ W/m}^2\text{K}$
Salamander Streamline, SL76, 3D



$U=0,74 \text{ W/m}^2\text{K}$
Schüco SI 82, Alu Inside

CF eco UDP SUBSTRUCTURE INSULATING PROFILE



Floor recesses for doors and floor-to-ceiling elements make high demands on substructure insulating profiles. These are met with CF eco.

The trend towards ever larger doors and sliding door systems results in higher weights which have to be transferred to the UDP. The high strength of CF eco UDPs means that the forces are transmitted without any problems. UDPs made of CF eco also weigh approx. 1/3 less than conventional UDPs.



Apart from the weight, a high thermal insulation value is a critical feature of modern UDPs. With a lambda value of 0.045 W/mK, CF eco UDPs also provide an optimum result here.

The stacking contour provides flexibility, in order to implement different mounting depths. Thanks to the high compressive strength, screw-through assembly can be carried out in the unfinished floor. The assembly of support brackets also presents no problems.

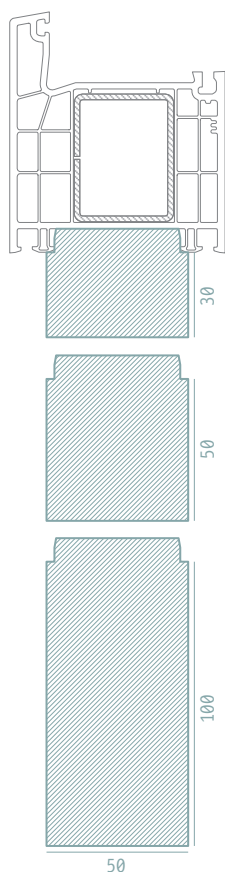
CF eco UDPs are supplied as standard panels, bars and also pre-cut if desired.

CF eco

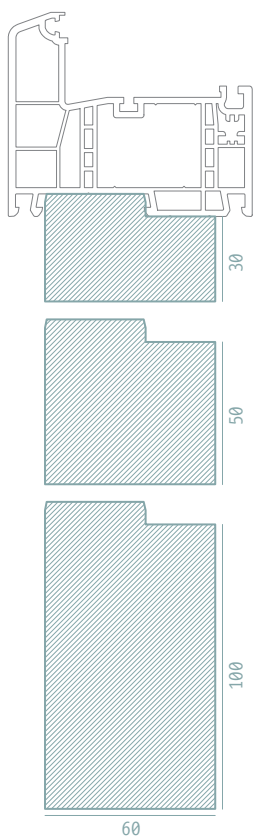
UDP

Standard length: 2.350 mm

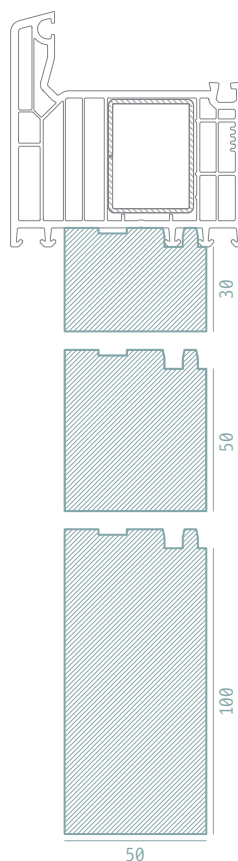
vertical cross-section



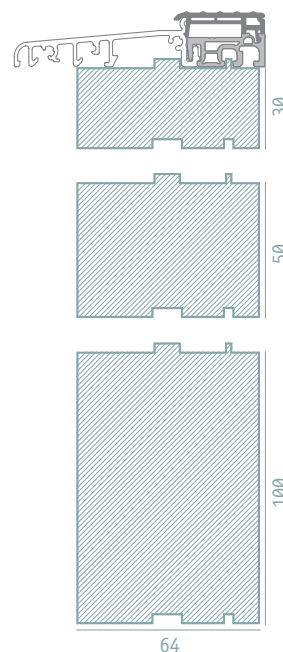
$U=0,9 \text{ W/m}^2\text{K}$
Profine 76, 88



$U=0,75 \text{ W/m}^2\text{K}$
Rehau Geneo

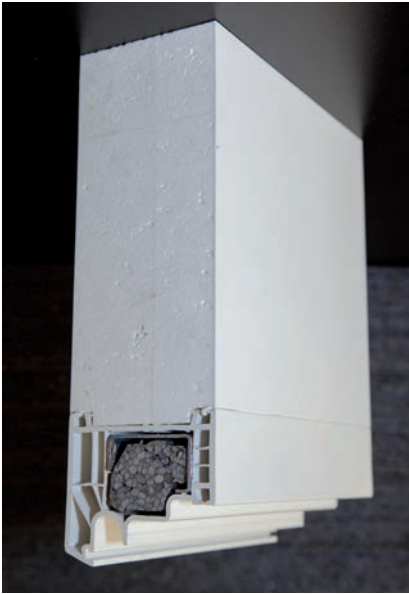


$U=0,9 \text{ W/m}^2\text{K}$
VEKA SL70, SL82



$U=0,7 \text{ W/m}^2\text{K}$
greenteQ, Roto

CF eco PVC FRAME EXTENSION



The frame extensions of CF eco PVC for windows reduce the heat loss caused by local thermal bridges. They are also easy to install and extremely watertight under driving rain. They markedly improve air and watertightness through counter-profiling at critical spots.

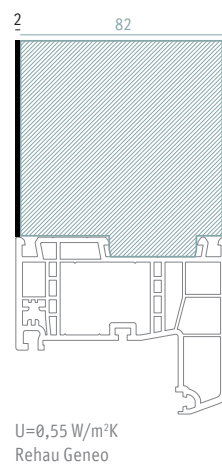
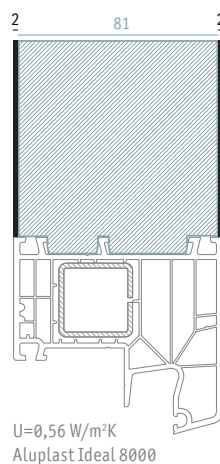
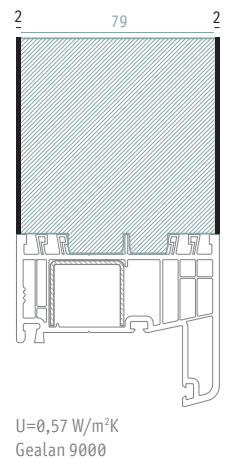
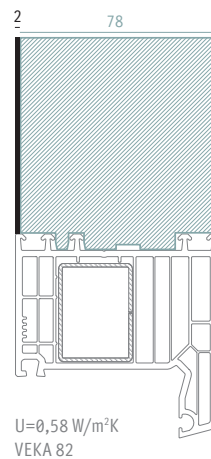
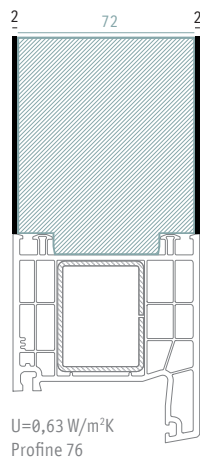
Additional milled areas increase the sealing values at the corner joints.

CF eco PVC frame extensions are supplied as standard panels, bars and also pre-assembled if desired.

CF eco

Standard length: 2.350 mm

vertical cross-section

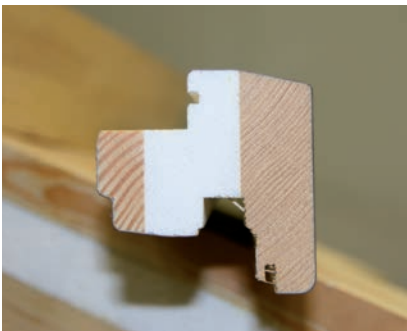




CF Insulating core for slim construction of doors with optimum insulation values.

Its properties make **COMPACFOAM** the optimum choice for insulating core for door fillings. The CF Insulating core prevents warping and its high strength means that the screw connection can be implemented without any additional tools and without pre-drilling. The optimum insulation values enable slim construction and result in a low weight.

CF Insulating core for fillings is compatible with conventional surface and functional layers.



Energy-optimised scantlings with maximum thermal insulation can be fabricated with CF Insulating core.

The CF Insulating core is distinguished by its high form-stability and pressure stability. Furthermore, it can be supplied in any cross-section. Scantlings with the CF Insulating core can be further processed with standard woodworking machines.



GENERAL INSTALLATION IN EXTERNAL WALL INSULATION SYSTEMS (EIFS)



COMPACFOAM enables installation in the insulation layer without thermal bridges.

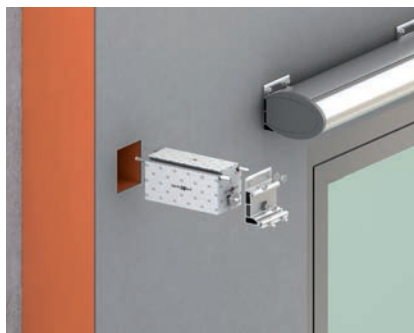
Our construction material is installed as part of the insulation layer. You can therefore directly attach outdoor lighting, satellite dishes and other elements with screws without predrilling. We supply a ready-made fixing element with an appropriate cut-out for the installation of external sockets.



The basis of **COMPACFOAM** is polystyrene, which is the main component of the External Wall Installation Systems. The insulation layer is therefore not disrupted and thermal bridges are excluded.

CF 200

AWNING ASSEMBLY WITHOUT THERMAL BRIDGES



Increasing façade insulation thicknesses require new solutions for the attachment of awnings, since existing fixing systems usually function only up to an insulation thickness of 160 mm. At the same time, assembly must be simple and without thermal bridges. The innovative assembly block **CF 200** meets these high demands.

The CF assembly block is attached directly to the wall with adhesive. Bolt anchors or a threaded bar are anchored through the assembly block in the loadbearing wall, in order to fix the awning console.

The CF assembly block can be supplied as a bar in standard length or cut for the required insulation thickness. The hole pattern can be customised to the geometry of the awning console if desired. The bars can also be cut to length at the jobsite with wood saws.

Suitable for all generally used awning systems and for insulation thicknesses up to 300 mm.



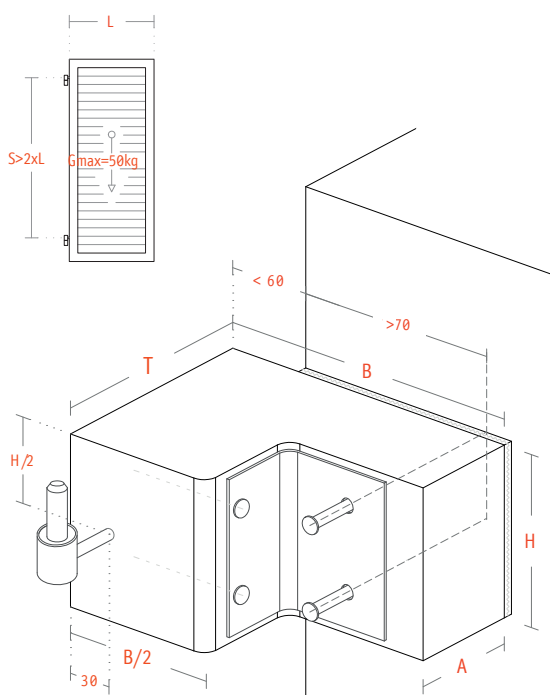
Folding and sliding shutters can be fixed to an outside wall or soffit with the assembly block **CF 200** – even with substantial insulation layers. The block can be incorporated in the EIFS system and rendered over without any problems.

Our highly heat-insulating assembly block is attached directly to the wall as a full heat insulation element. After you have completed the EIFS system, the folding or sliding shutters can be fixed simply by screwing them in. This is possible without pre-drilling.

We supply the **COMPACFOAM** assembly block as bars or prepared in blocks. The bars can also be cut to length on site with wood saws. The CF fixing angle which is supplied in the exact insulation thickness is extremely practical. The innovative L form means that only shortened fixing screws are required in spite of higher insulation thicknesses.

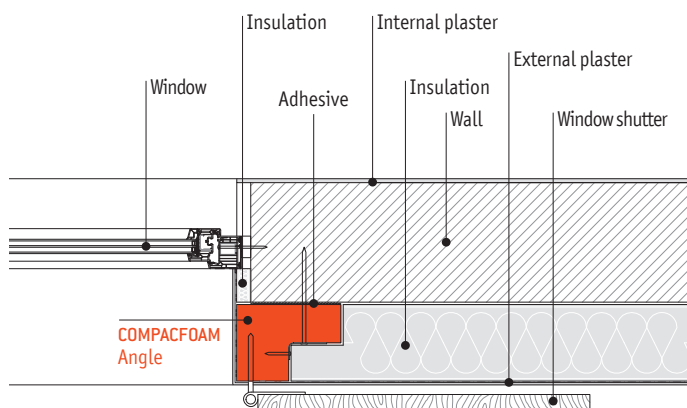
Window shutter as an example

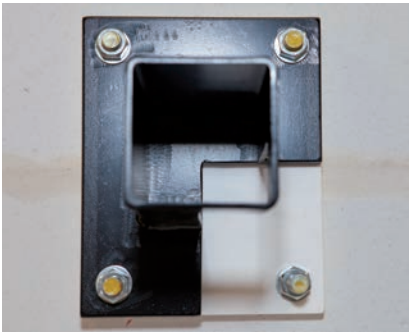
The maximum load capacity of the angle is 50kg.
(Prerequisite: distance between the fixing screws to which the window shutter is attached is more than twice the shutter depth)



DIMENSIONS OF THE ANGLE

TYP (mm)	B	T	A	H
CF Angle 80	220	80	70	120
CF Angle 100	220	100	60	120
CF Angle 120	220	120	60	120
CF Angle 140	220	140	60	120
CF Angle 150	220	150	80	120
CF Angle 200	280	200	100	140
CF Angle 250	280	250	100	200





Bearings made of **COMPACFOAM** are used for thermal separation between continuously highly stressed elements.

Separation layers of 10-200 mm under brackets and mounting points improve insulation at local thermal bridges. The **COMPACFOAM** elements can be supplied preassembled or cut on site out of plates. Furthermore, drill holes and elongated holes are possible.



They are mostly applied beneath consoles in steel constructions or for the support of concrete components. Its ductile material properties absorb nearly all irregularities of the surface.

CF THERMOSTOP – THERMAL SEPARATION OF FAÇADE SYSTEMS

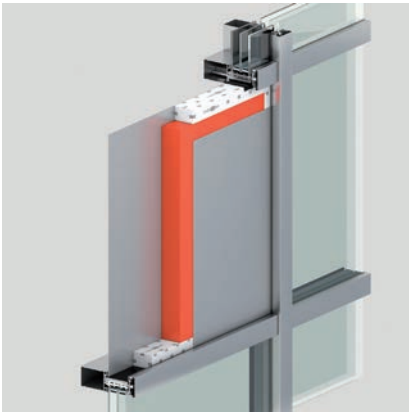


COMPACFOAM is used for the thermally separated installation of façade systems.

Heat loss through local thermal bridges can be considerably reduced by separation layers of 10-30 mm under brackets and mounting points. The wall bracket and wall base surface can therefore be connected without thermal bridges with the **CF THERMOSTOP**.



The **CF THERMOSTOP** is supplied preassembled in individual dimensions and with the appropriate hole pattern.



The dimensionally stable and pressure-resistant panel edge reinforcement of **COMPACFOAM** is the ideal insulating material for the high loads at the edge of sandwich elements.

Sandwich panels in highly thermally insulated window and façade constructions as well as frame constructions with glazing beads require appropriate thermal insulation values and a high compressive strength in the insulation layer.

The bars are individually cut to size for you on the basis of your requirements for panel thickness and edge width. The thickness tolerance is ± 0.3 mm in this respect.

The low water absorption capacity of approx. 5 percent guarantees the requisite dimensional stability and frost resistance. The „warm edge“ also offers optimum U-values in sandwich elements. **COMPACFOAM** is extremely dimensionally stable even under extreme humidity and temperature conditions.

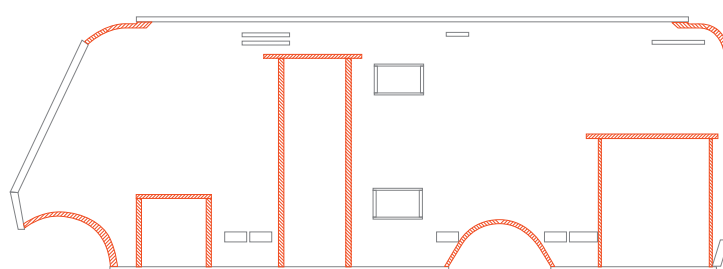
AUTOMOTIVE ENGINEERING



Low weight of the construction materials plays an important role in automotive engineering. However, **COMPACFOAM** is not only light but also dimensionally stable and pressure-resistant. Prominent vehicle manufacturers are therefore increasingly putting their faith in **COMPACFOAM**.

The inorganic constituents ensure that **COMPACFOAM** is 100 % insensitive to moisture. The high strength means that standard screws can be used for screwing.

We supply **COMPACFOAM** in rectangular bars and panels as standard. Free forms are also possible, even in small quantities on account of innovative processing methods with low production costs.



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WIKI

On our WIKI-website you can find everything you need to know about the COMPACFOAM material, like technical facts, possible uses, processing and production. Always updated.

www.compacfoam.com



www.wiki-compacfoam.info



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