

Fibre reinforced composite profiles for windows and doors



MANUFACTURER OF PULTRUDED COMPOSITES



Why fibre reinforced composite profiles for windows and doors

High dimensional stability

The coefficient of expansion of glass fibre reinforced polyester profiles is very low and almost identical to that of float glass. Expansion and contraction with changing temperatures is minimal and the profiles retain their stiffness at high temperatures.

Low thermal conductivity

The thermal conductivity of the material is very low and GRP insulates better than any of the more traditional window and door materials.

High strength to weight ratio

GRP is used to replace steel in many applications due to its high strength to weight ratio. Due to its high strength further profile reinforcement is unnecessary.

High corrosion resistance

GRP fibre profiles are not only maintenance free, they are also well suited for use in corrosive industrial environment, being resistant to most corrosive liquids and gases.



Composites

By using glass reinforced plastic (GRP) it is possible to create a composite material with high strength and low weight. The material is corrosion resistant, maintenance free and has excellent dimensional stability.

Pultrusion is a continuous production process for manufacturing fibre reinforced composite profiles. The reinforcement, consisting of «roving» and «mats», are pulled through a die where the fibres are impregnated by resin, heated and cured in the required shape. The profile is structurally stable and ready for further processing immediately after leaving the die.

New technology

By employing state of the art proprietary pultrusion technology, VELLO is capable of pultruding thin walled profiles with complex shapes at high speed. As a result GRP profiles have now become a competitive alternative to traditional materials in the door and window industry.

Compatible with other materials

You can make the entire window from GRP profiles or you can combine the profiles with traditional window and door materials such as wood or aluminium to achieve maximum user benefits.

Easy to machine

By using diamond edged cutting blades GRP profiles can be processed in much the same way as the window and door materials you are used to.



Properties

- High mechanical strength
- Low weight
- High thermal insulation
- High electrical insulation
- High corrosion resistance
- High chemical resistance
- Fire retardant

A rainbow of colours

The profiles can be painted in a wide range of colours offering almost unlimited options.

Energy efficiency, environmental considerations and life cycle cost have become key elements to the building industry and have led to increased demand for composite products.



The industry demands new solutions.

The correct choice of materials gives our profiles the competitive edge



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VELLO NORDIC AS

Vello Nordic AS is a leading company in pultrusion technology. Since 1970 the company has participated in a number of development projects and thereby extended the use of fibre-reinforced composite materials into new areas.

One of the most important properties of Vello's pultrusion technology is the opportunity to tailor material combinations to meet the requirements and specifications for the final product.

Vello Nordic AS is a part of the Spilka Group, and has collaborated with other companies in the group to develop door and window systems in composite material. The company also produces profiles and products for other industries and markets and many of the products are the result of close co-operation between the producer and the user.

The use of fibre-reinforced composite profiles is rapidly increasing in several areas and the demand for new optimised properties requires a high level of expertise. Vello co-operates closely with the leading producers of raw materials and, based on its know-how and experience, the company is a preferred partner in the development of new products.

VELLO NORDIC AS – your profile partner



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