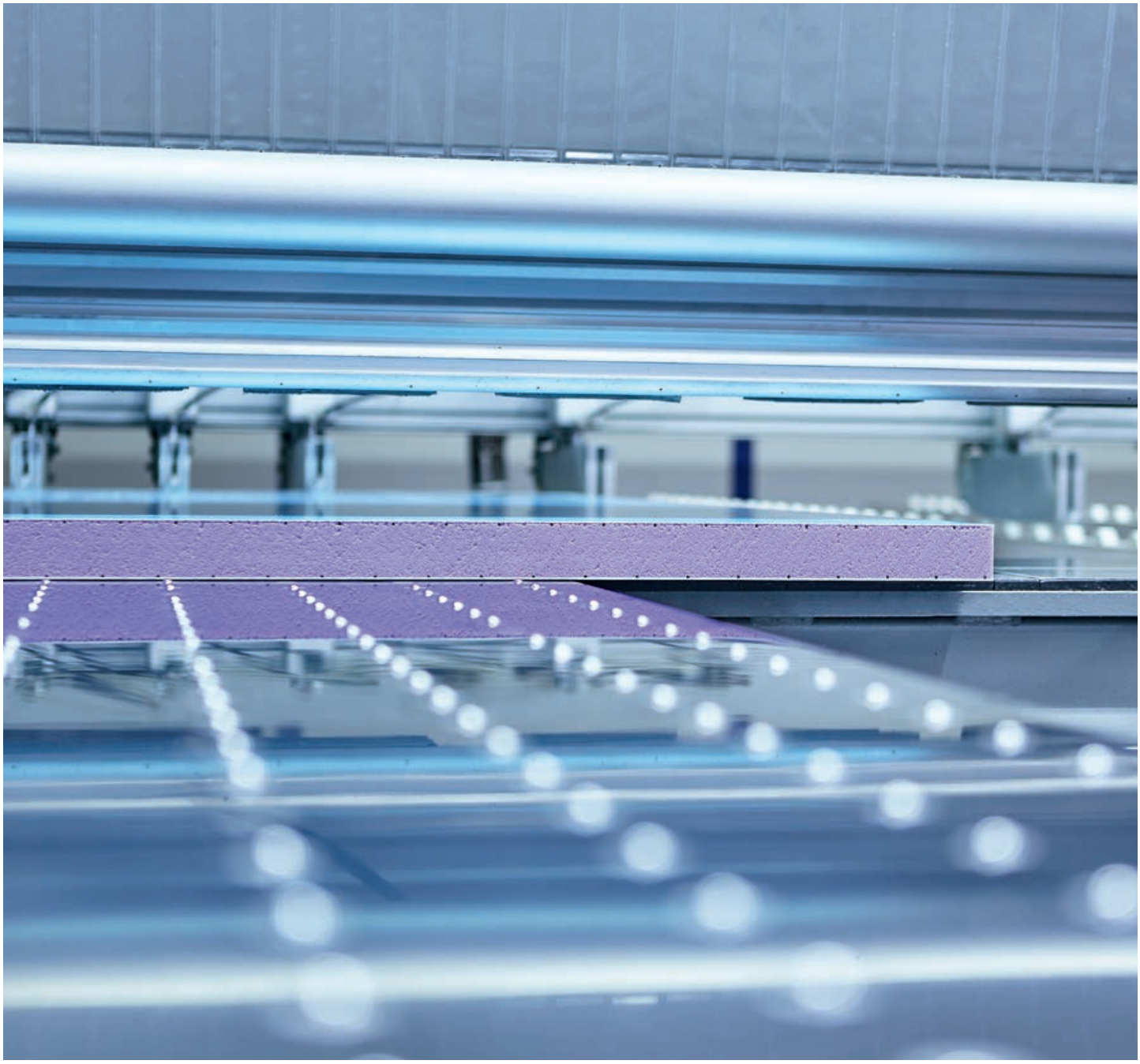
JACKODUR®

XPS for industrial applications.



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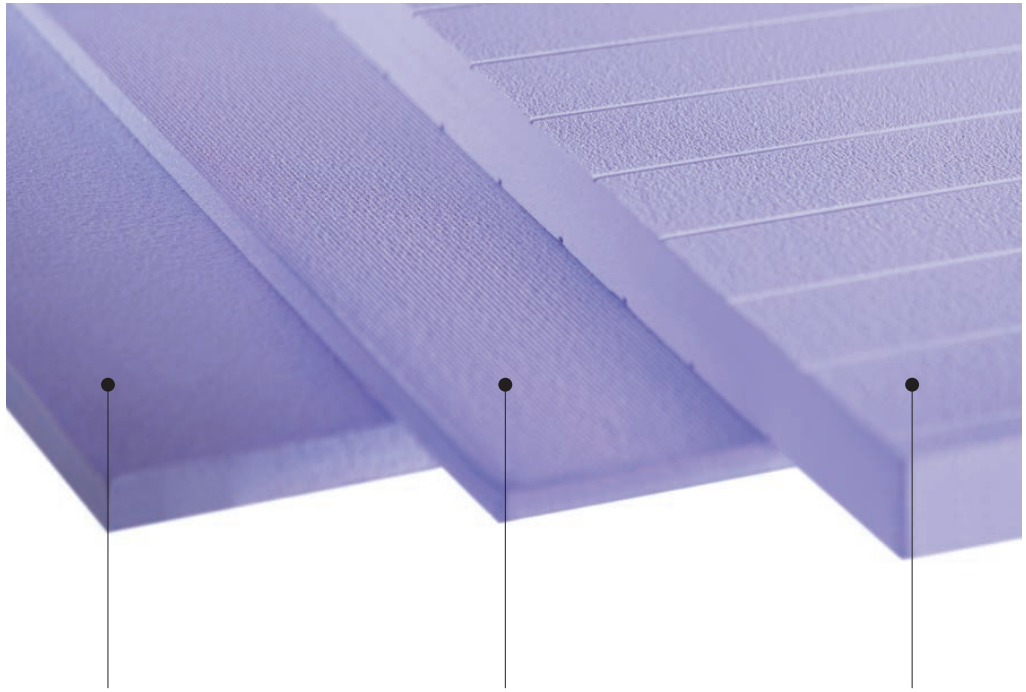
JACKON INSULATION



JACKODUR® FT JACKODUR® FTD JACKODUR® FTR

- Low tolerances
- Easy to work with
- Customised formats
- Low weight
- Water repellent
- Good thermal insulation properties
- First-class mechanical properties
- 100 % recyclable material

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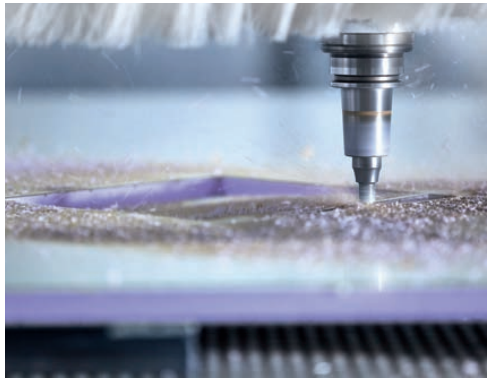

JACKON Insulation GmbH

Solutions for industry. Customised and safe.

JACKON Insulation GmbH has been successfully operating across Europe as a manufacturer of top quality insulation materials and construction boards made of extruded polystyrene foam (XPS) for more than 25 years. Innovations – such as JACKODUR® insulation materials, JACKOBOARD® construction boards and JACKOCARE® interior insulation – have secured JACKON Insulation GmbH a strong position for the future in a fiercely competitive market.
Continuous product improvements and the consistent development of innovative solutions have created a solid basis of trust between JACKON Insulation GmbH and its customers.
Nowadays, JACKON ranks among the most innovative companies in the industry.

JACKON Insulation is synonymous with:
- High-quality and sustainable products - from the careful selection of raw materials and suppliers to the development of energy-efficient solutions.
- Comprehensive consultation and customer support provided by Sales and Application Technology experts.

JACKODUR® for industrial applications is a business unit tailored specifically to the needs of the processing industry. JACKON Insulation develops customised solutions for its customers, designing composite elements for use in the building industry, vehicle manufacturing, or for furniture and exhibition booth design.

JACKODUR® products are synonymous with quality. They are water repellent, thermally insulating, compression proof, dimensionally stable and enable minute-tolerance construction. So the material is ideal for numerous applications in the widest range of industries.

Please do not hesitate to call us for more information:

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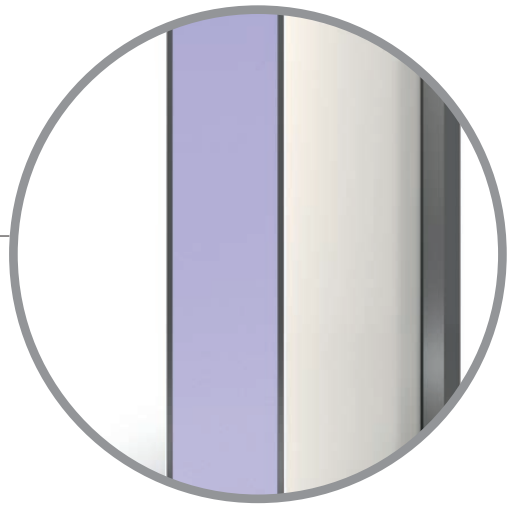
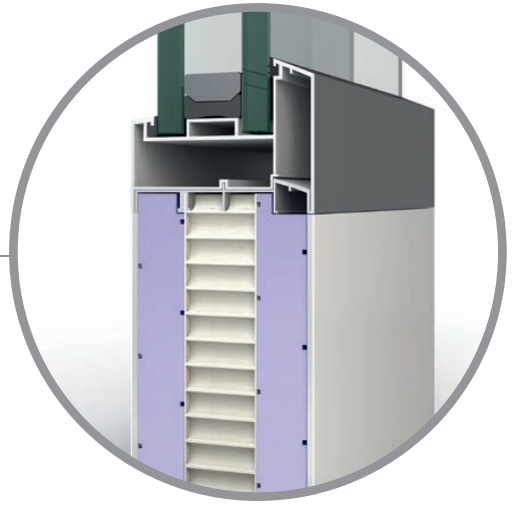


The superior U values of JACKODUR® enable slimline element design

From 8 mm board thickness with milled surface, depending on the product



Superb tensile strength, up to 1000 kPa

For avoiding thermal bridges between floor plate and ground

Sandwich elements

A lasting connection.

Sandwich elements comprise a functional core and two outer layers made, for example, of metal, plastic or wood. With its outstanding mechanical properties, JACKODUR® forms the perfect core, while the specially grooved surface offers the best possible base for bonding with different materials.
The fine groove pattern enables adhesive to spread evenly over the bonding surfaces. Excess adhesive runs into the grooves. Bubbles caused by trapped air are prevented. The grooves are spaced 40 mm apart on both sides of the board, with an optimised depth and breadth of 2 mm. The resulting element is stable in all planes, while the superb insulation properties of JACKODUR® enhance the energy footprint of a building.

- Various surface finishes (with/without grooves)
- Superb thermal insulation
- Outstanding bonding properties
- Can be cut to size
- Dimensionally stable

Door panels

Hard wearing

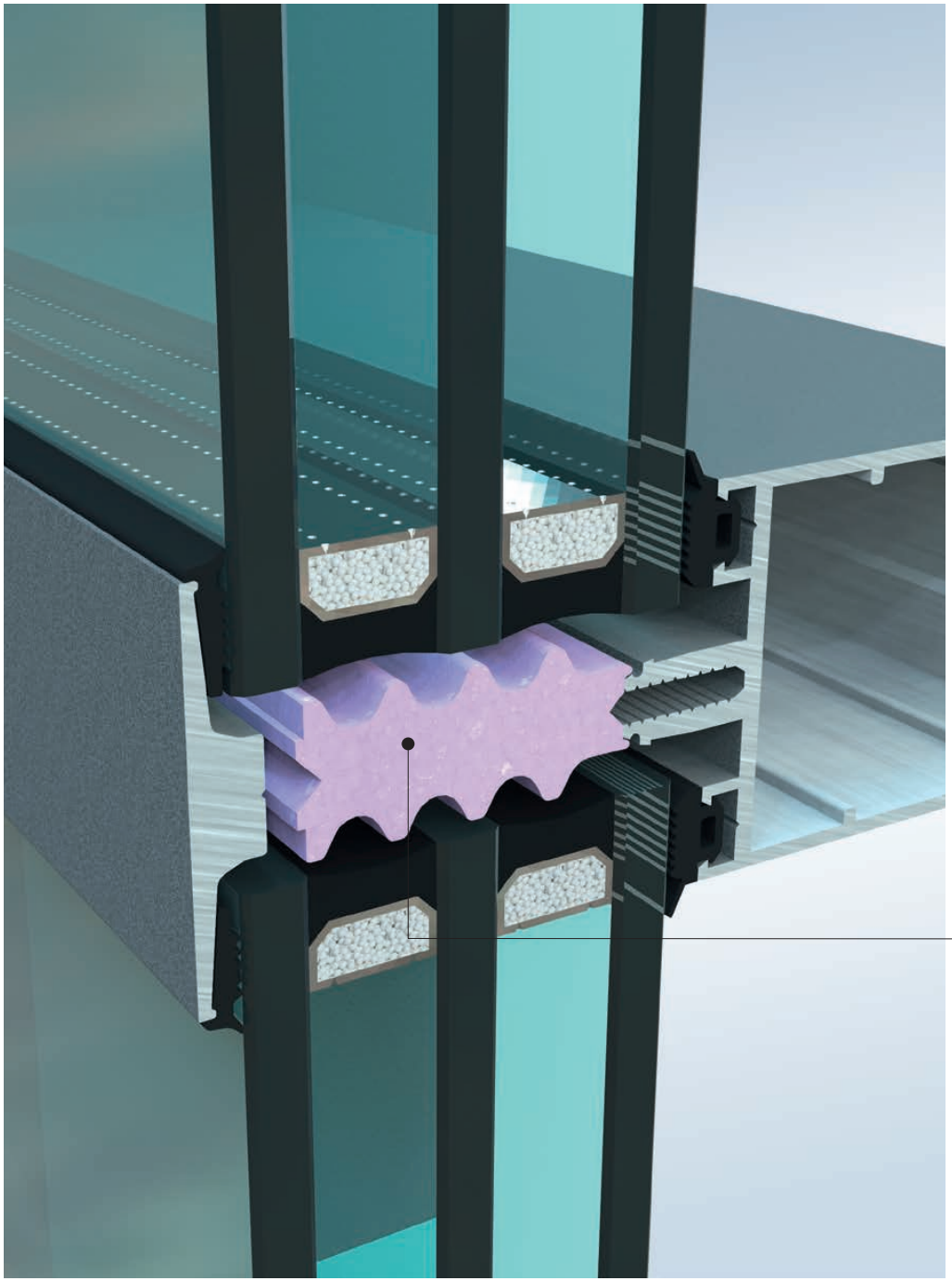
Front doors not only have to look inviting; they also need to be safe, energy efficient and durable.
All of which can be assured by choosing the right core material.

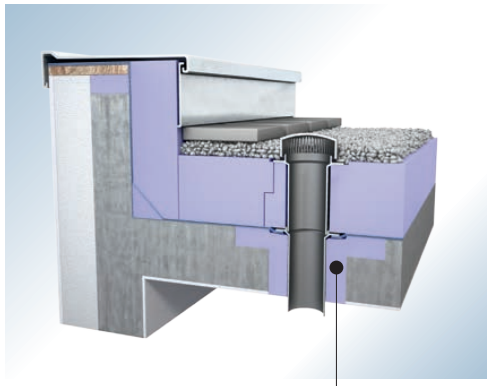
JACKODUR® XPS is an outstanding core material, combining moisture resistance with dimensional stability and thermal insulation.

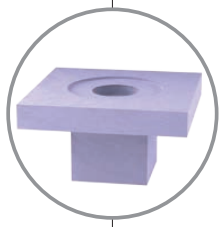
JACKODUR® Plus with special insulating gas is enhanced with gas-tight lamination on both sides and even achieves the passive house standard of λ= 0.025 W/(m·K).

For particularly thin core or carrier layers, boards as thin as 2.8 mm can be cut with hot wire from blocks. All products are available in customised formats. The core can be adapted to suit all processing steps, from window cutouts to portholes. Only the same standard tools used for working with wood are needed.

- Superb thermal insulation, optimum U value thanks to JACKODUR® Plus
- Homogeneous structure for stability
- Weatherproof
- Dust-free installation
- Passive house standard







Dual purpose JACKODUR®
Insulation and formwork in one. The insulating element for drainage lines not only prevents thermal bridges; its superb compressive strength makes it equally ideal as a formwork element for ensuring the perfect fit of the drain.

JACKODUR® for freedom from thermal bridges
Facade profiles with JACKODUR® prevents thermal bridges on transom/mullion designs: The JACKODUR® moulded element is cut to size and accommodates the screw for the top section while at the same time reducing thermal flow from inside to outside through the section area.

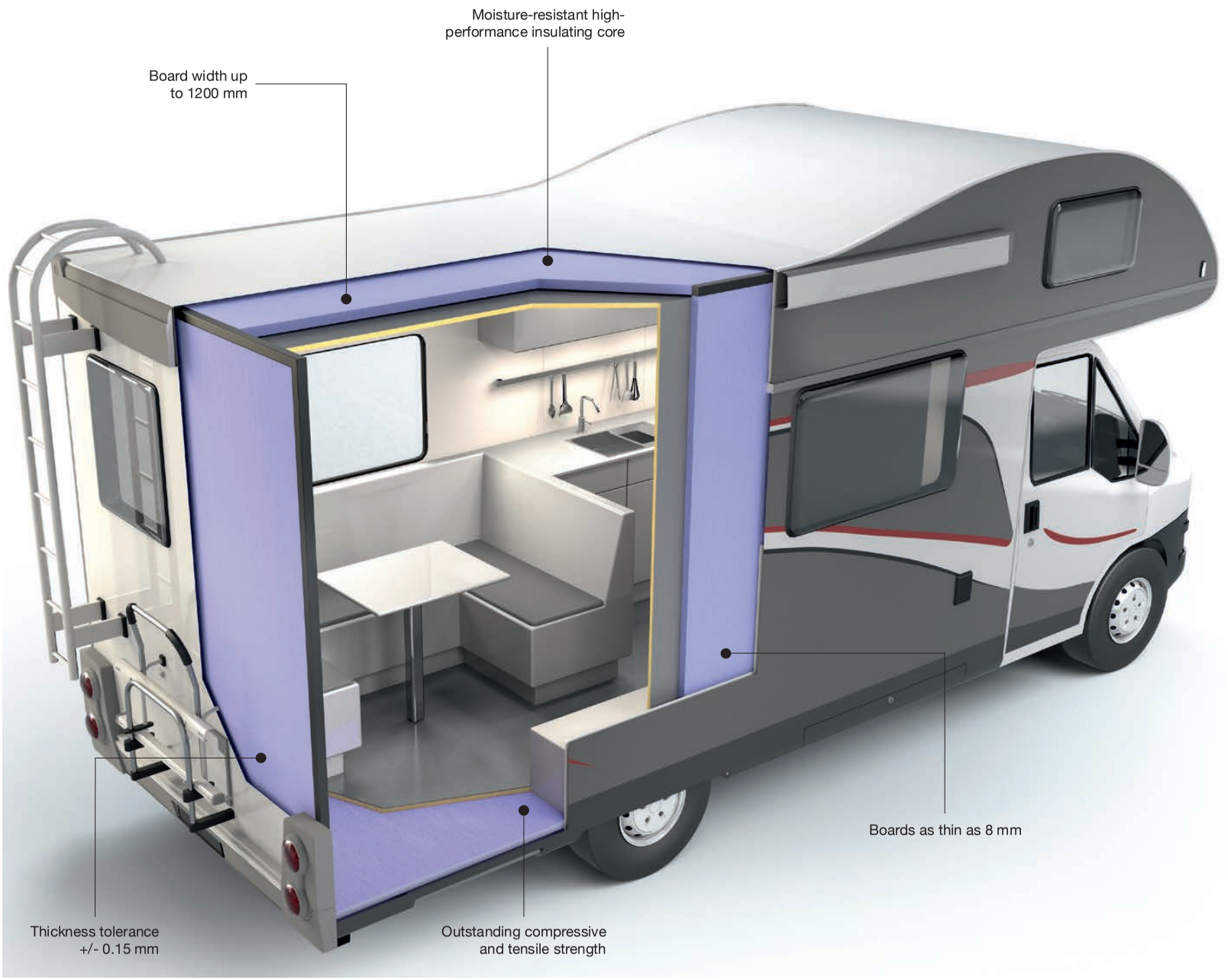
XPS cut to size

Impressive inner values.

Its mechanical properties and extremely easy handling make JACKODUR® the material of choice for installation tasks. Diverse solutions are possible: from boards with decorative promotional texts to complex construction elements.

Product improvement is a guaranteed continuous process, driven by the trust between JACKON Insulation GmbH, and its customers and the use of cutting-edge application technology and development expertise. Some customers have even obtained patent protection for their solutions with JACKODUR® core.

- Consulting and development expertise
- Extremely easy to handle with standard wood tools
- Customised shapes are possible
- Board thickness ranges from 2.8 mm up to 320 mm
- Sale possible in small quantities



Motorhomes

A perfect fit.
On any continent.

JACKODUR® really demonstrates its strengths in motor-home and caravan construction where tolerance, stability and weight are key factors.
JACKODUR® can be cut to the size of the stud frame with a tenth of a millimetre accuracy. Even boards as thin as 8 mm create a stable core for a flat wall – with a bulk density of just 30 kg/m³.
JACKODUR® has a closed-cell structure. Which means: Moisture ingress is prevented and dimensional stability assured.
Added to which, the superb insulating values of JACKODUR® guarantee a cosy atmosphere.

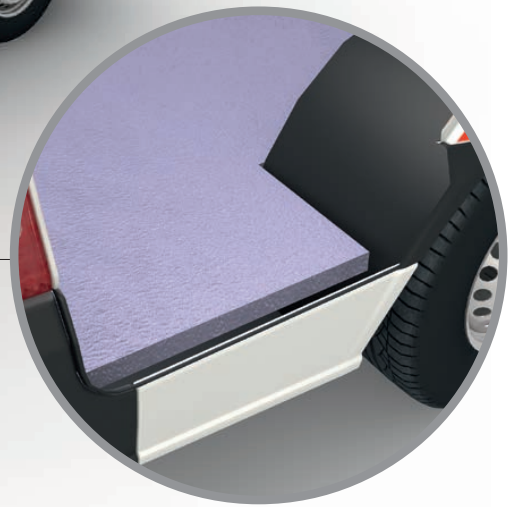
- Superb mechanical properties
- Weatherproof
- Pressure resistant
- Extremely light
- Can be cut to exact size

Refrigerated vehicles

Nice and cool all the way across Europe.

Transporting food and other temperature-sensitive merchandise is subject to the strictest requirements to ensure the cold chain is not broken.
JACKODUR® guarantees compressive strengths of 300 – 700 kPa at low bulk density, creating a sturdy core with optimum thermal insulation performance. JACKODUR® Plus with special insulating gas is enhanced with gas-tight lamination on both sides and even achieves λ= 0.025 W/(m·K).
Moisture resistant JACKODUR® boards withstand water ingress, ensuring durability and optimum quality.

- Low thermal conductivity
- No moisture absorption
- Low weight
- Superb mechanical resistance
- Clean, dust-free handling



Minimum order size: starting from 10 m³, depending on the product

E modulus for tensile strength 10 – 45 N/mm² for optimum mechanical properties of the entire configuration

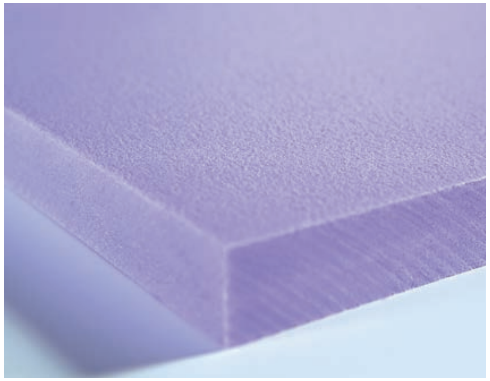
Bulk densities available from 30 – 50 kg/m³

Special-purpose vehicles

As individual as the demands made of it.

JACKODUR® products for industrial applications are manufactured in a process that has been optimised to ensure the company's ability to supply even the smallest quantities cut to individual size requirements. Particularly compression proof boards for flooring – in an ambulance, for example – or customised shapes for use in a promotional vehicle, or integrated refrigeration areas for selling or storing food:
JACKODUR® ensures first-rate functional performance for diverse applications.

- Small batches
- Customised formats
- Moisture resistant
- Superb insulating properties
- Dimensionally stable
- Superb mechanical properties



JACKODUR® FT
JACKODUR® close-tolerance boards (FT) are manufactured in a special production process with precise, variable tolerances in the width, length, and above all thickness of the boards, depending on the application's requirements. Following manufacture, the surface is milled to create a flat surface, which is key in motorhome and caravan construction.

JACKODUR® FTR
JACKODUR® close-tolerance boards with grooves (FTR) were developed to further improve the mechanical properties. The surface of the material is milled and grooves cut into it. The grooves are spaced 40 mm apart on both sides of the board and have an optimised depth and breadth of 2 mm. Groove depths customised to user requirements are possible. The adhesive spreads more evenly over the bonding surfaces. Additionally, bubbles in the sandwich element caused by trapped air are prevented.

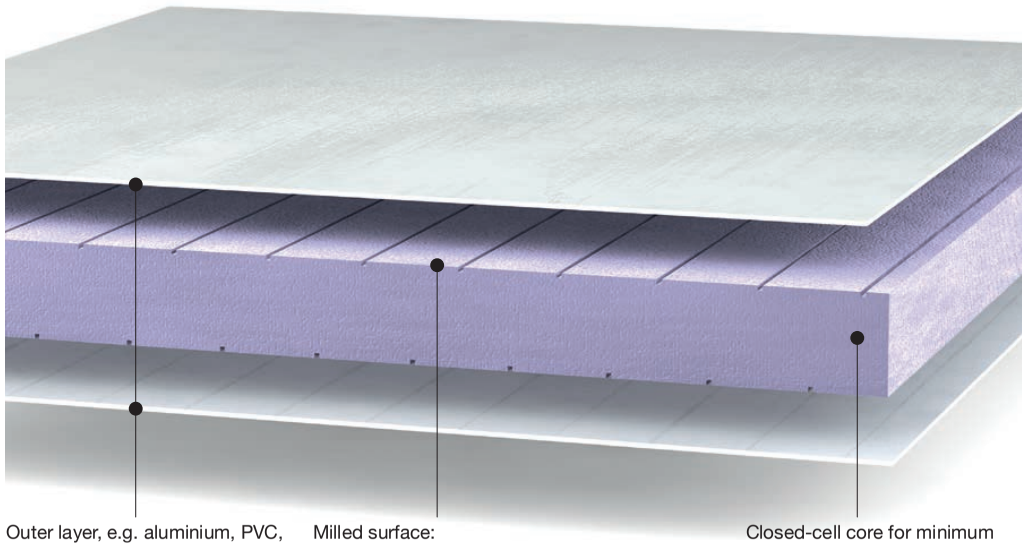
JACKODUR® FTD
JACKODUR® FTD is particularly well suited for thin core or carrier layers. Customised boards as thin as 2.8 mm can be cut with hot wire from blocks and used, for instance, in door manufacturing.

JACKODUR® industrial applications

A strong core. Made in Germany.

JACKODUR® for industrial applications meets all the requirements for high-quality core material. The extrusion process gives the XPS a fine, closed cell structure, which forms the basis, not just for outstanding insulation performance, but also for other properties, such as compression strength and moisture resistance.
JACKODUR® is available in a choice of variants and compressive strengths ranging from 200–700 kPa, with a bulk density of 30– 50 kg/m³.

Intelligent handling and thicknesses ranging from 2.8 mm to 120 mm, board lengths of 1000 – 3050 mm and widths of 460 – 1200 mm enables realisation of specific customer tolerances.
JACKODUR® for industrial applications is manufactured at the German factory in Mechau in a production process monitored by consistent quality tests.



Outer layer, e.g. aluminium, PVC, HPL, wood, GRP, epoxy

Milled surface:
Outstanding bonding performance (≥ 600kPa)
minute thickness tolerances (+/-0.15mm)

Closed-cell core for minimum water absorption

Technical specifications

	Properties	Unit	Standard		JACKODUR® CFR 300 FT/FTR	JACKODUR® CFR 500 FT/FTR	JACKODUR® CFR 700 FT/FTR	JACKODUR® KF 300 /500/700 FTD	JACKODUR® Plus 300 FT/FTR
					Value	Value	Value	Value	Value
Dimensions	Thickness	mm	EN 823		8 – 120	40 – 120	50 – 100	2,8 – 45	15 – 80
	Length	mm	EN 822		1000 – 3050	1000 – 3050	1000 – 3050	1000 – 3010	1000 – 3050
	Width	mm	EN 822		460 – 1200 ①	460 – 900 ①	500 – 800 ①	460 – 900 ①③	460 – 1000 ①
Tolerances	Thickness	mm	EN 823		± 0,15 ④	± 0,15 ④	± 0,15 ④	± 0,5	± 0,15 ④
	Length	mm	EN 822		± 5 ④	± 5 ④	± 5 ④	± 5	± 5 ④
	Width	mm	EN 822		< 1000 mm ± 1 ④ ≥ 1000 mm ± 2,5 ④	± 1 ④	± 1 ④	± 1	± 1 ④
	Rectangularity	mm/m	EN 824		≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
Mechanical properties	Compressive strength or compressive stress at 10 % deformation	kPa ②	EN 826		≥ 200 (d ≤ 29 mm) ≥ 300 (d > 29 mm)	≥ 500	≥ 700	≥ 300 – ≥ 700 ①	≥ 200 (d ≤ 29 mm) ≥ 300 (d > 29 mm)
	E modulus	N/mm²	EN 826		10 – 45 ①③	10 – 45 ①	10 – 45 ①	10 – 45 ①③	10 – 45 ①③
	Tensile strength	kPa ②	EN 1607		≥ 600	≥ 700	≥ 1000	≥ 600	≥ 600
	Bulk density	kg/m³	EN 1602		> 30	> 30	> 35	> 30	> 30
Characteristic values	Nominal thermal conductivity λ_D	W/(m·K)	EN 13164		0,034 (d ≤ 60 mm) 0,036 (d ≤ 80 mm) 0,037 (d ≤ 120 mm)	0,034 (d ≤ 60 mm) 0,036 (d ≤ 80 mm) 0,037 (d ≤ 120 mm)	0,034 (d ≤ 60 mm) 0,036 (d ≤ 80 mm) 0,037 (d ≤ 100 mm)	0,035 – 0,037 ③	0,027
	Thermal conductivity λ with gas-tight lamination on both sides	W/(m·K)	EN 13164		-	-	-	-	0,025
	Application temperature	°C	-		-50 / +75	-50 / +75	-50 / +75	-50 / +75	-50 / +75
	Fire behaviour	-	DIN 4102-1		B1	B1	B1	B1	B1
		-	EN 13501-1		Euroclass E	Euroclass E	Euroclass E	Euroclass E	Euroclass E
	Water absorption on long-term immersion	Vol-%	EN 12087		≤ 1,0	≤ 1,0	≤ 1,0	≤ 1,0	≤ 1,0
	Vapour diffusion-equivalent air layer thickness	m	EN 12086		3 – 16 ①	3 – 16 ①	3 – 16 ①	3 – 16 ①	3 – 16 ①
	Thermal expansion coefficient	mm/(m·K)	-		0,07	0,07	0,07	0,07	0,07
	Dimensional stability at 70 °C and 90 % relative humidity	%	EN 1604		≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
	Deformation at 70 °C under 40 kPa pressure	%	EN 1605		≤ 5	≤ 5	≤ 5	≤ 5	≤ 5

	Valid for: JACKODUR® CFR or KF 300 / 500 / 700 FT/FTR/FTD and JACKODUR® Plus 300 FT/FTR
Chemical resistance	Water / seawater / saline solutions / alcohols / liquefied inorganic gases / bases / weak and diluted acids / bitumen / water-based cold bitumen / lime / cement / gypsum / sand
Properties of XPS	Homogenous, closed cell, highly compression proof, elastic, water repellent, resistant to environmental degradation, non-ageing, non-UV resistant
Bonding technique	e.g. adhesion with solvent-free hot-melt, epoxy and polyurethane adhesives
Cutting technique	XPS can be worked with milling cutters, saws, hot wires, blades and cutters

	Also valid for:: JACKODUR® KF 300/500/700 FTD					
	Length (mm)	Thickness (mm)	Min. and max. widths (mm)	Compressive strength (kPa)	Tensile strength (kPa)	Nominal thermal conductivity W/(m·K)
Product range	3.010	2,8 – 45	460 – 900	≥ 300	≥ 600	0,035
		2,8 – 45	460 – 600	≥ 500	≥ 600	0,037
		2,8 – 45	500 – 600	≥ 700	≥ 600	0,037
	Widths can be varied in 5-mm increments (e.g. 600, 605, 610 mm, etc.). Lengths can be varied in 10-mm increments (e.g. 2090, 3000, 3010 mm, etc.). Board thicknesses of 1/10 mm are also available by arrangement.					

① Depending on thickness
② 100 kPa = 100 kN/m² = 0,1 N/mm²
③ Depending on compressive strength
④ The indicated tolerances can be specified as plus or minus values or as an individual combination

We would like to point out that the data, images, technical information and drawings provided in the brochure are general details and only constitute suggestions. The illustrations are schematic and demonstrate the basic functional principle. Exact dimensions are not specified. Fitters/customers are responsible for verifying applicability. All specifications and data must be adapted to local conditions and do not constitute construction, detail or installation documentation. The technical specifications and data for the products in the installation Instructions, technical data sheets and system descriptions/approvals must be observed.

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