



Business Line  
Sandwichpanelen  
*by Cladding Point*

# BETA-PR (KV) FX

PIR hard foam (visible mounting)



Fire-resistant sandwich panels  
for facade and partition wall  
applications

Technical Information

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## DISCOVER AND EXPERIENCE

BETA-PR (KV) FX is a visibly attached fire-resistant hard foam sandwich panel from our Business Line range with a standard working width of 1150mm. The sandwich panel is available in 4 different (exterior) profiles and 2 (interior) profiles and can be applied both vertically and horizontally. The abbreviation KV stands for Refrigerated application (see labyrinth connection thickness 120-220mm). Discover the possibilities in simplicity and security.



For the climate



Responsible business



Circular Construction Economy



Building together

At Cladding Point we take responsibility, that's why we work hard on things that really matter. By using responsible materials in our sandwich panels, we strive for a Circular Construction Economy. And how we work with our suppliers? We ensure that we have a positive impact on everyone we do business with, based on fairness and equality. We realize that it will not be easy, but waiting is not an option. Together we build a better future.

## Working width

This product is available as standard in a working width of 1150mm and on request in 1000mm.

## Thermal efficiency

BETA-PR (KV) FX has a fire-resistant hard foam core with PIR technology. This with a density of 40kg/m<sup>3</sup> (±3), completely HCFC-free. The insulation values of the sandwich panels have been calculated in accordance with NEN-EN 10211-1, NTA 8800 and EN 14509 (including fasteners, transition resistors and construction quality correction factor).

## Fire class

BETA-PR (KV) FX complies with the European fire classification B-s1-d0 (100-220mm) in accordance with EN 13501-1. This product is equipped with an FM approval hard foam core.

## Fire resistance

For more information about the fire performance of the BETA-PR (KV) FX sandwich panel; see conditions table on page 4.

## Air permeability

The air permeability with regard to the seam connection in accordance with EN 12114.

Positive (+)		Negative(-)	
C	0,072	C	0,0028
n	0,6724	n	1,2407

C = Air flow coefficient  
n = Air flow exponent

A.d.h.v. the above assessment we can conclude that the contribution of the sandwich panels, i.e. the mutual seam connection, the total air permeability of a building is limited. To meet the requirements, it is particularly important that extra attention is paid to finishing the connecting joints with other materials. This includes window and door frames, penetrations and other facades day openings, floor and roof connections and the like. The building decree only sets requirements at building level. This concerns the so-called qv10 value. I.e. the leakage loss through the complete building envelope in dm<sup>3</sup>/s per m<sup>2</sup> of usable area.

There are therefore no specific requirements for the facade panels (individual materials). This product meets the requirements in accordance with the Building Decree.

## Water

Water vapor permeability is impermeable. Water permeability Class A-1200 Pa.

## Statics

To correctly determine the static capabilities of this product, please contact our technology department.

## Management systems

The BETA-PR (KV) FX sandwich panels are produced under the following management system; EN ISO 9001.

## General certifications

BETA-PR (KV) FX is manufactured from the highest quality materials and meets the strictest standards and quality controls. This product is CE and Dibt (zulassung) certified.

## Lengths

Production lengths	Possible until 16.000mm
Lengths (standard)	2.000mm – 13.500mm
Lengths* (non standard)	400mm – 2.000mm 13.500mm – 16.000mm

\* Additional costs and transport surcharges may apply. Ask about the options and conditions.

## Tolerances

Joint connection (2mm)	+2mm	-2mm
Lengths >3000mm	+5mm	-5mm
>3000mm	+10mm	-10mm
<b>Working width</b>	+2mm	-2mm
Thickness (d) ≤ 100mm	+2mm	-2mm
(d) > 100mm	+2%	-2%
Squareness (s)	<0,6%	

Tolerances are compliant with EN 14509

## Standard exterior coatings

The base coating is polyester 25µm and suitable for standard indoor environments. This interior coating made of polyester (PE) can be used on facades, roofs and ceilings, related parts and accessories. The interior coating can also be carried out on request in a suitable coating for the food sector, agricultural sector, wet areas and an aggressive environment. On request, this product is also available in stainless steel 304/316. Terracoat 27µm is a durable and aesthetically pleasing product and delivers good performance. The UV resistance (RUV3) and increased corrosion protection (RC3) ensure good colour retention. Granite® HDX (type G) 55µm is a technical, durable and aesthetically high-quality product and delivers very good performance. Excellent UV resistance (RUV4) and increased corrosion protection (RC5) ensure excellent colour retention.

## Standard interior coatings

The base coating is polyester 25µm and suitable for standard indoor environments. This interior coating made of polyester (PE) can be used on facades, roofs and ceilings, related parts and accessories. The interior coating can also be carried out on request in a suitable coating for the food sector, agricultural sector, wet areas and an aggressive environment. On request, this product is also available in stainless steel 304/316.

## Complete overview of coatings/colours

View all coatings and colour options in our colour palette.

## Guarantee

Standard 10 year manufacturer's warranty on structural and thermal performance. Coating warranty with a possibility of up to 40 years (depending on the type of coating and project-specific information). Project-specific guarantees are possible and upon request.

## Deliveries

Our deliveries from the Business Line are unloaded free of charge and are largely transported by road and are based on Lean and Green and Euro 6-7.

## Assembly instructions

Our installation instructions can be downloaded from our website or available from Cladding Point Technical Services. The 3-D models are included in the Tekla library: [www.tekla.com](http://www.tekla.com)

## Product name

Product name of our manufacturer Pruszyński for this product is PWS PIR ST (100mm) and PWS PIR CH (120-220mm) is stated as such on the relevant certificates. Ask about the conditions and possible additional costs for the above-mentioned certifications.

## General



Cladding Point believes it is important that the Circular Construction Economy is also measurable. That is why we have chosen to draw up an EPD for a large portion of our products. An EPD (Environmental Product Declaration) gives the customer insight into how sustainable our sandwich panels are. In the Netherlands we also use the EPDs to calculate how much environmental damage a building causes compared to its surroundings. This is done in the environmental performance for buildings calculation, also known as the MPG.

The Business Line PR sandwich panels are not included in our Circular Construction Economy concept.

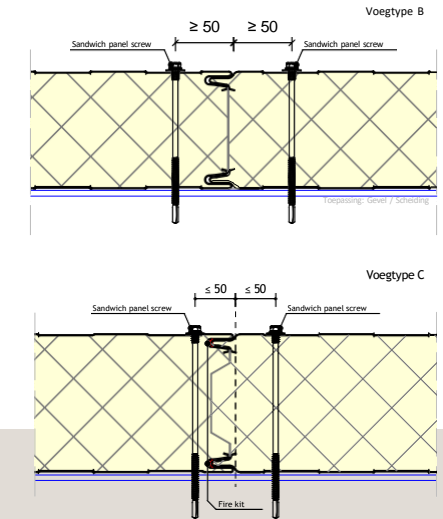
The sandwich panels from Business Line AR panel and Brucha can provide the desired solution for reducing the environmental damage of your building. What is special is that these products have an EPD with a category 1 card that meets the requirements regulations from the RVO. This is the highest achievable level. If you apply this in a circular building you can achieve substantial tax benefits. You should always contact Cladding Point for advice on this.

## Fire resistant properties

Type panel	Thickness [mm]	Fire resistance (EN 13501-2)			Max.span [mm.]* [EN 14509]		Mutual Joint Connection				
		Facade	Partition Wall	Ceiling	Horizontal	Vertical	Ceiling	Horizontal	Vertical	Ceiling	
<b>BETA-PR (KV) FX</b> EN 13501-1 Brandklasse B-s1-d0, PIR	≥ 100	Verhittingsrichting vanuit beide zijden (i ↔ o)									
		EI 15	EI 15	-	7.500	-	-	Joint type B	-	-	-
		EW 20	EW 20	-	7.500	-	-	-	-	-	-
		-	EI 20	-	7.500	-	-	Joint type B	-	-	-
		EW 30	EW 30	-	7.500	-	-	Joint type B	-	-	-
	EI 30	EI 30	-	7.500	-	-	Joint type B	-	-	-	
	≥ 120	EI 15	EI 15	-	7.500	7.500	-	Joint type C	Joint type C	-	-
		EW 20	EW 20	-	7.500	7.500	-	Joint type C	Joint type C	-	-
		-	EI 20	-	7.500	7.500	-	Joint type C	Joint type C	-	-
		EW 30	EW 30	-	4.000	7.500	-	Joint type C	Joint type C	-	-
		EI 30	EI 30	-	4.000	7.500	-	Joint type C	Joint type C	-	-
	≥ 200	EW 30	EW 30	-	7.500	7.500	-	Joint type C	Joint type C	-	-
		EI 30	EI 30	-	7.500	7.500	-	Joint type C	Joint type C	-	-
		-	EI 45	-	7.500	7.500	-	Joint type C	Joint type C	-	-
		EW 60	EW 60	-	4.000	4.000	-	Joint type C	Joint type C	-	-
	EI 60	EI 60	-	4.000	4.000	-	Joint type C	Joint type C	-	-	

\*Concerns max. fire-resistant spans. Static overvoltage's must be tested separately \*

## Mutual joint connection





Technical Properties

BETA-PR <b>FX</b>	KV ❄️					
Thickness (mm)	100	120	160	180	200	220
Total panel weight (kg/m <sup>2</sup> )						
Outer plate thickness 0.5 mm	11,80	12,60	14,20	15,00	15,80	16,60
Inner plate thickness 0.5 mm						
Noise Reduction (Rw (C,Ctr) dB)	~25 (-3;-5)	~25 (-3;-5)	~25 (-3;-5)	~25 (-3;-5)	~25 (-3;-5)	~26 (-3;-5)
Rc-value (m <sup>2</sup> .K/W), NTA 8800	4,88	5,92	7,95	8,96	9,97	10,99

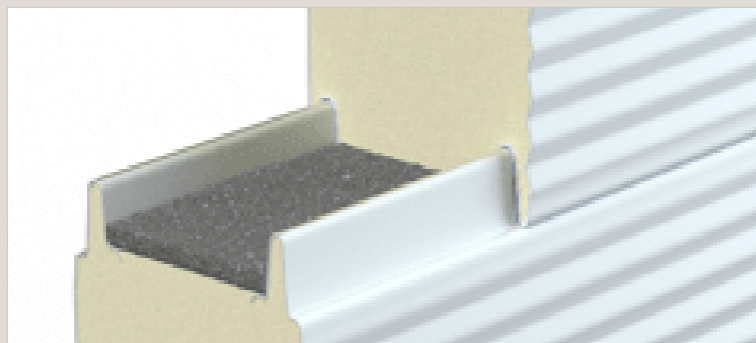
Cross-section panel (thickness 100mm)



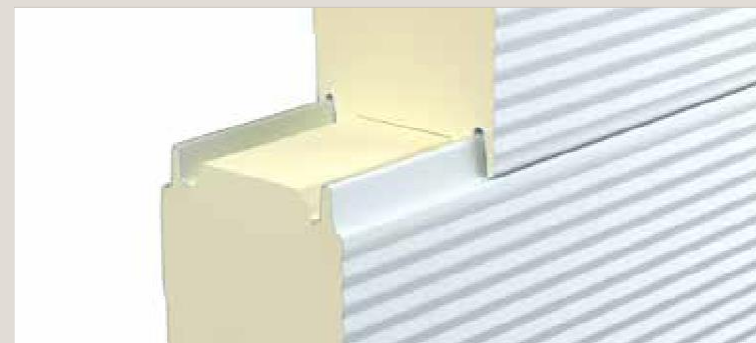
Cross-section panel (thickness 120 - 220mm)



Connection (visible confirmation, thickness 100mm)

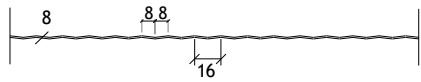


Connection (visible confirmation, thickness 120 - 220mm)

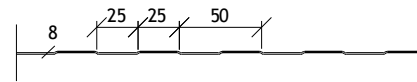
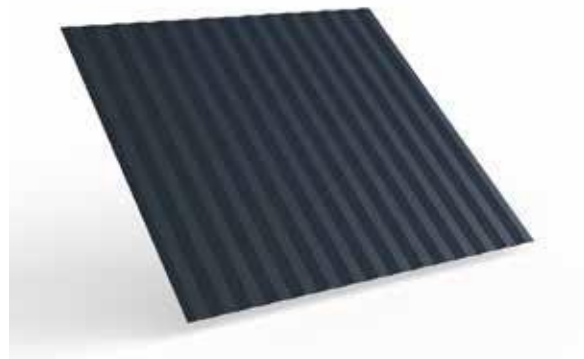


# Profiling

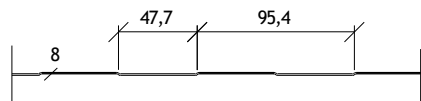
**BETA-PR (KV) FX** PIR hard foam (visible mounting)



RIB 16



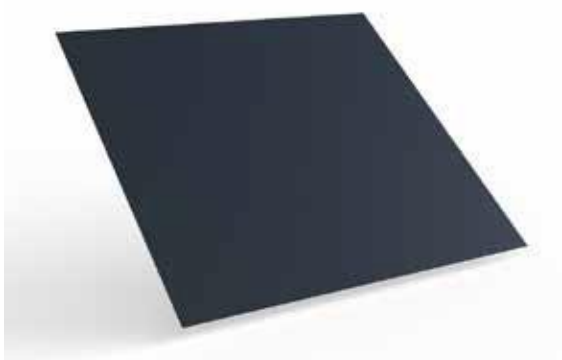
MINIBOX



BOX



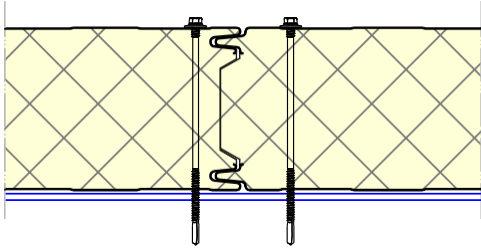
ONGEPROFILEERD



PROFILING	EXTERIOR A-SIDE	INTERIOR B-SIDE
Rib 16	Yes	No
Minibox	Yes (100mm)	No (120-220mm)
Box	Yes	Yes
Ongeprofileerd	Yes*	Yes*

\* On request.

Confirmation (visible confirmation)

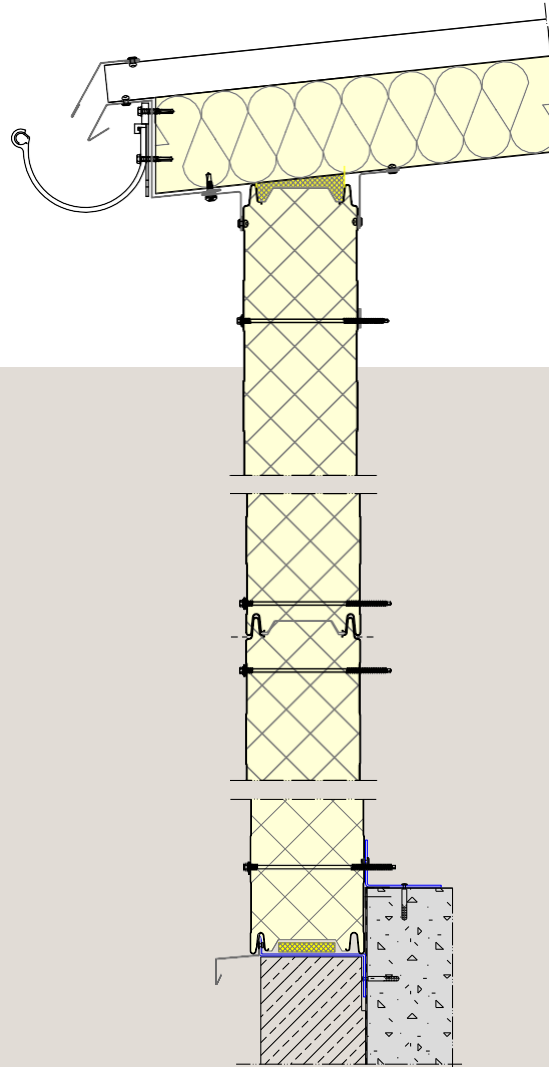


BETA-PR (KV) FX PIR hard foam (visible mounting)

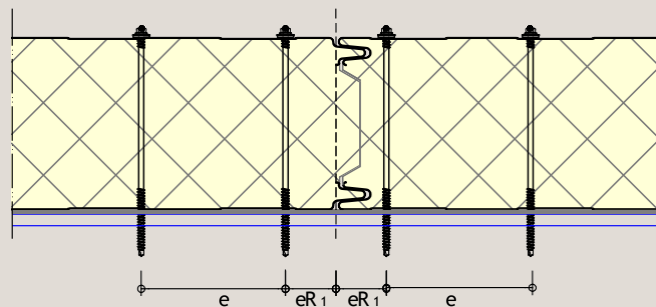
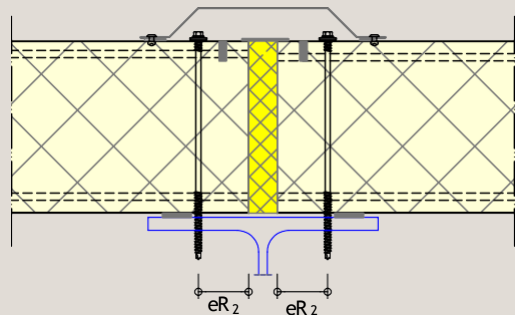
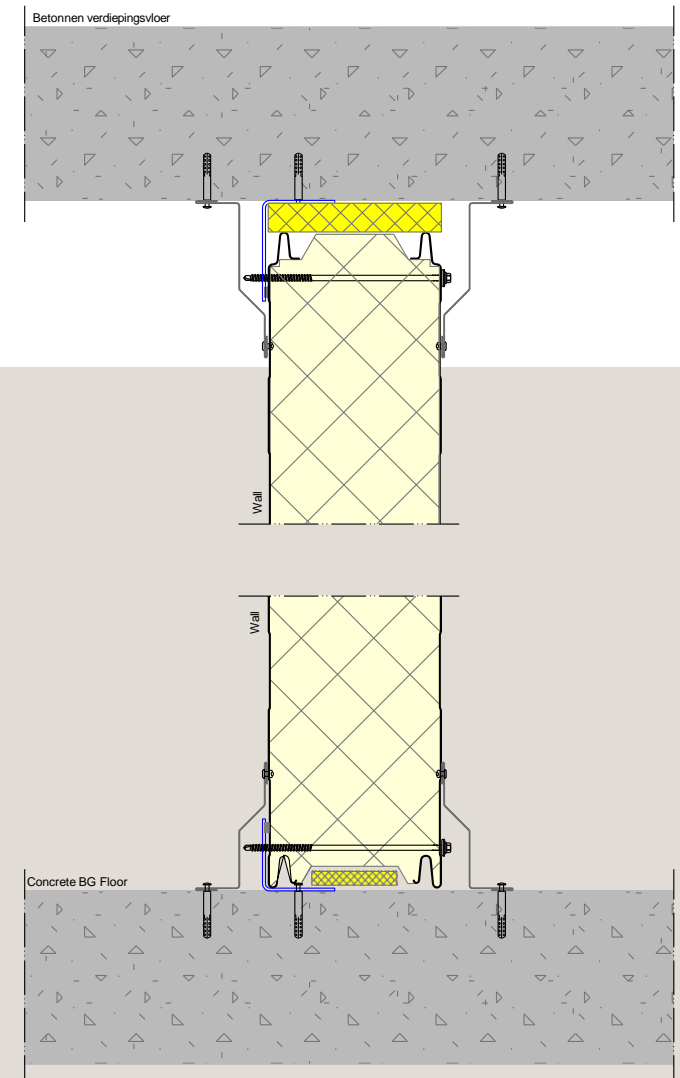
Attachment method

Screw spacing	Spacing(e)	From panel edge(eR)
Perpendicular to mounting direction (see image)	$\geq 100\text{mm}$	$\geq 50\text{mm}$ (eR <sub>1</sub> )
Parallel to mounting direction d:Screw diameter	C.o.h. distance support	$\geq 20\text{ mm} \ \& \ \geq 3d$ (eR <sub>2</sub> )

Principle detail of facade



Principle detail of partition wall









**Want to know more?**

Cladding Point is continuously improving and testing its products. New test results are added on a regular basis. Should the desired fire resistance and any associated conditions apply to your project applies, are not included in the manual, please contact the technical department for the options and/or the latest status. In many cases we can offer you a suitable solution.

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Platinum Panel Systems LTD

T: [+44 \(0\) 1744 747580](tel:+44201744747580)

E: [Info@platinumpanelsystems.com](mailto:Info@platinumpanelsystems.com)

