

Informationen zu



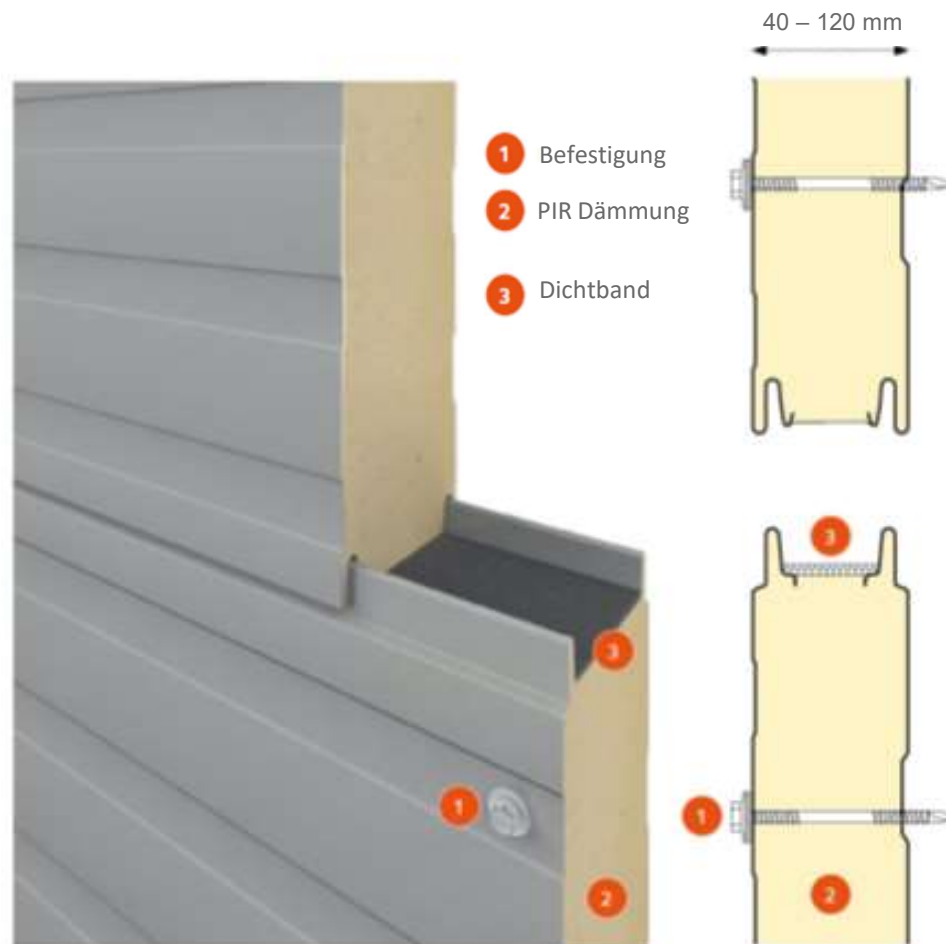
ONDATHERM 1003 und ONDATHERM 2003



ONDATHERM 1003 Paneele

sind durch FM –Approval getestet und zertifiziert für folgende Anwendung:

- Wände und abgehängte Decken zur Innenanwendung gemäß Standard 4880
- Wände zur Außenanwendung gemäß Standard 4881



FM Approval Klassifizierungen:

Brandschutzklasse:	Klasse 1, Außenwand
Maximale Höhe:	nicht begrenzt
Hagelwiderstand:	schwer (Klasse SH)
Windbelastung:	siehe Tabelle



Certificate of Compliance

This certificate is issued for the following:

Ondatherm 1003, Ondatherm 2003

Prepared for:

ArcelorMittal Construction Deutschland GmbH
Münchener Straße 2
Sandersdorf-Brehna, 06796
Germany

FM Approvals Class: 4880, 4881

Approval Identification: PR465193 Approval Granted: 04 April 2023

To verify the availability of the Approved product, please refer to www.approvalguide.com or www.roofnav.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

Phillip J. Smith
VP - Manager of Materials
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062



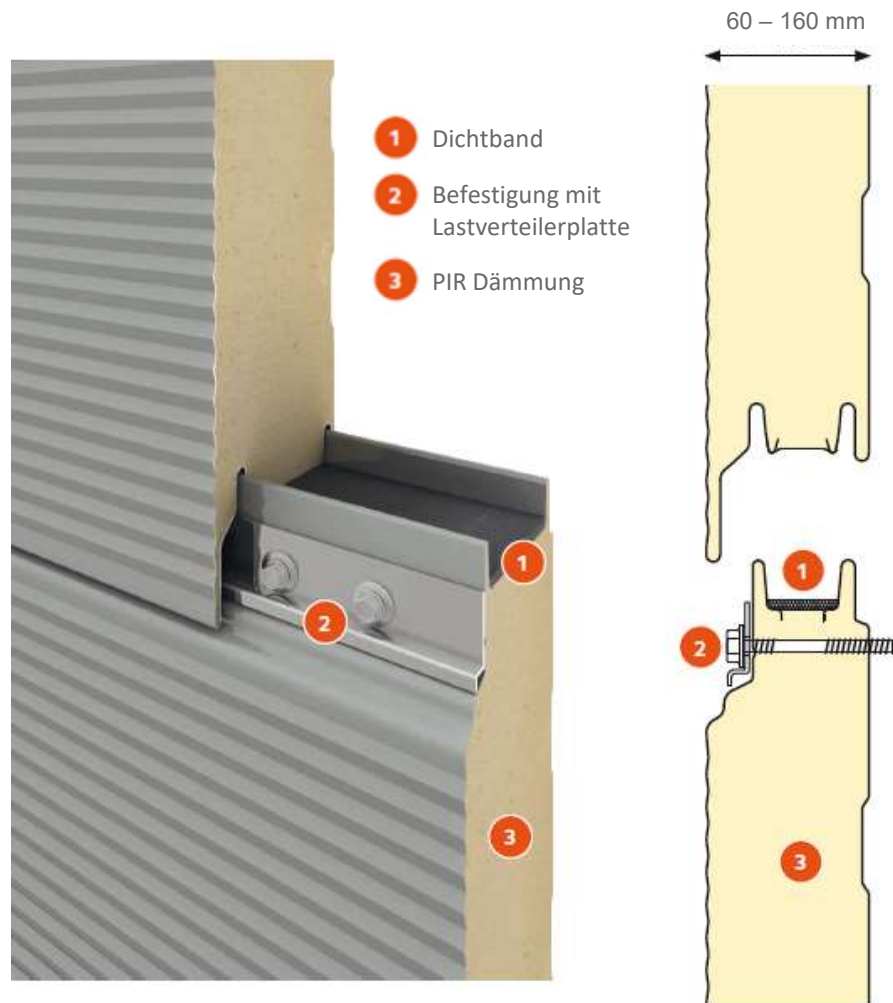
Member of the FM Global Group



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- Wände und abgehängte Decken zur Innenanwendung gemäß Standard 4880
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Zertifizierte Stahldeckschichten - Außenseite:

- Stahl: Dehngrenze $\geq 320\text{MPa}$
- Minstdicke Außenblech: $t_{\text{nom1}} = 0,50\text{mm}$

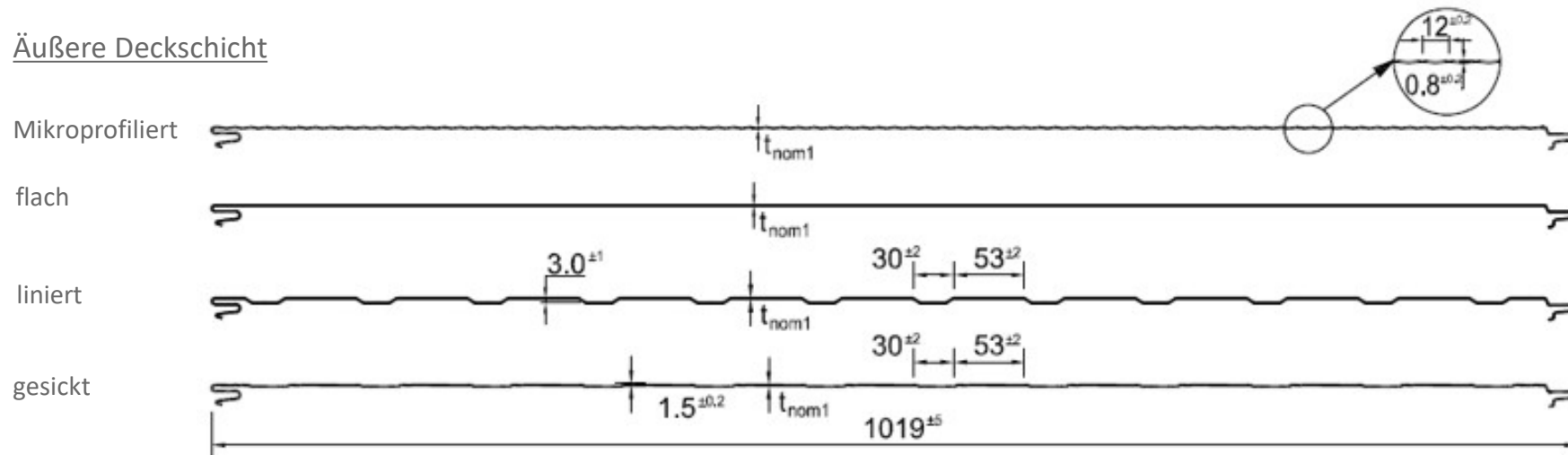


Ondatherm 1003



Ondatherm 2003

Äußere Deckschicht





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Zertifizierte Stahldeckschichten - Innenseite :

- Stahl: Dehngrenze $\geq 320\text{MPa}$
- Minstdicke Innenblech $t_{\text{nom}2} = 0,50\text{mm}$

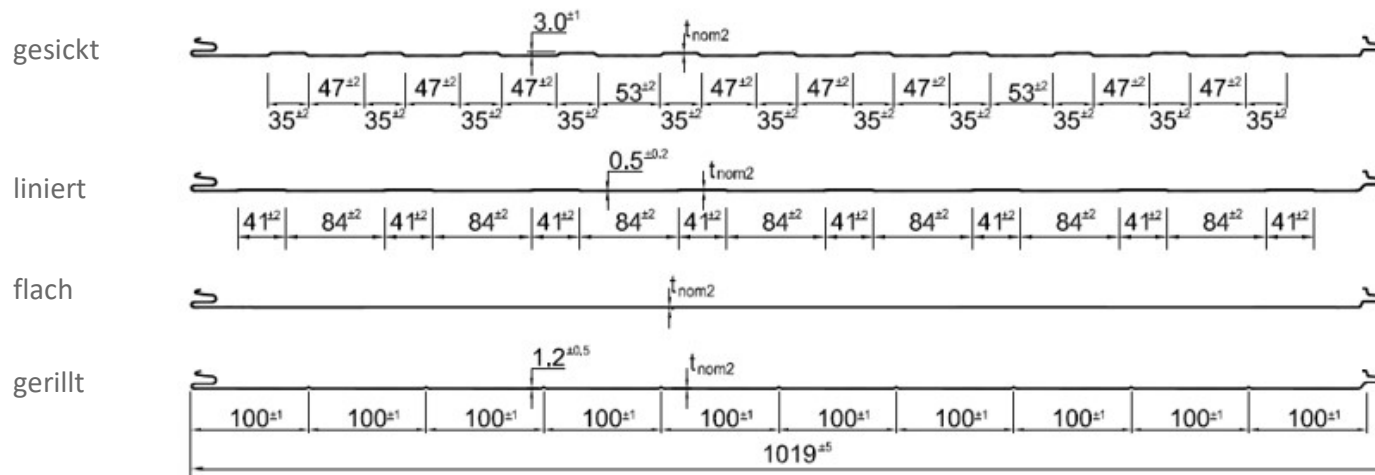


Ondatherm 1003



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Innere Deckschicht





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Deckschichtkombinationen

Ondatherm 1003:

Deckschichtkombinationen		
	Außen	Innen
1003 GG	gesickt	gesickt
1003 GF	gesickt	eben
1003 GL	gesickt	liniert
1003 GR	gesickt	gerillt
1003 MG	microprofiliert	gesickt
1003 MF	microprofiliert	eben
1003 ML	microprofiliert	liniert
1003 MR	microprofiliert	gerillt

t_{nom1} : Nennblechdicke, äußere Deckschicht

t_{nom2} : Nennblechdicke, innere Deckschicht

D: durchgehende Elementdicke (Außenmaß)

Deckschichtkombinationen		
	Außen	Innen
1003 FG	eben	gesickt
1003 FF	eben	eben
1003 FL	eben	liniert
1003 FR	eben	gerillt
1003 LG	liniert	gesickt
1003 LF	liniert	eben
1003 LL	liniert	liniert
1003 LR	liniert	gerillt

t_{nom1} : 0,50 ; 0,63 ; 0,75 ; 0,88 ; 1,00 mm

t_{nom2} : 0,40 ; 0,50 ; 0,63 ; 0,75 ; 0,88 ; 1,00 mm

D: 60, 80, 100, 120 mm

Ondatherm 2003:

Deckschichtkombinationen		
	Außen	Innen
2003 GG	gesickt	gesickt
2003 GF	gesickt	eben
2003 GL	gesickt	liniert
2003 GR	gesickt	gerillt
2003 MG	microprofiliert	gesickt
2003 MF	microprofiliert	eben
2003 ML	microprofiliert	liniert
2003 MR	microprofiliert	gerillt

Deckschichtkombinationen		
	Außen	Innen
2003 FG	eben	gesickt
2003 FF	eben	eben
2003 FL	eben	liniert
2003 FR	eben	gerillt

D: durchgehende Elementdicke (Außenmaß)

D: 60, 80, 100, 120, 140, 160 mm

t_{nom1} : Nennblechdicke, äußere Deckschicht

t_{nom1} : 0,50 ; 0,63 ; 0,75 ; 0,88 ; 1,00 mm

t_{nom2} : Nennblechdicke, innere Deckschicht

t_{nom2} : 0,40 ; 0,50 ; 0,63 ; 0,75 ; 0,88 ; 1,00 mm



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Befestigung Ondatherm 1003

Sichtbare Befestigung mit SFS Intec. SXC5-S19-5,5xL Schrauben

Stützabstand:

Getestet und zertifizierte Paneele:

- Minstdicke der Paneele: 60mm
- Minstdicke der Deckschalen (außen/innen = 0,50/0,50mm)
- Maximaler Stützabstand: siehe Tabelle
- Installation sowohl vertikal als auch horizontal möglich

Windbelastung:

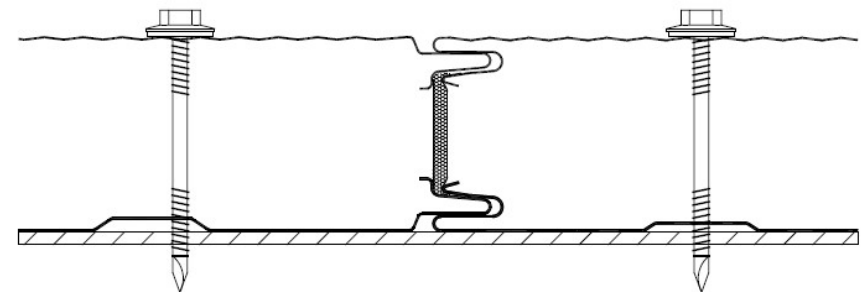
	Paneeldicke	Max. Spannweite [mm]	Windbelastung [psf]	Windbelastung [KN/m ²]
Einfeldsystem	60 - 120	4877	+50 / -50 Zone TC	+2,39 / -2,39
Mehrfeldsystem	60 - 120	4572	+40 / -40 Zone TC	+1,92 / -1,92
	60 - 120	3962	+45 / -45 Zone TC	+2,15 / -2,15
	60 - 120	3658	+50 / -50 Zone TC	+2,39 / -2,39
	60 - 120	2413	+75 / -75 Zone TC	+3,59 / -3,59

Unterkonstruktion:

$t_{nom} \geq 2,54$ mm

Dehngrenze ≥ 220 MPa

Querschnitt– ONDATHERM 1003 - Fuge





Befestigung Ondatherm 2003

Verdeckte Befestigung mit 2 Schrauben und einer Lastverteilerplatte je Auflager

Zertifizierte Schrauben: SFS SXC5-S16-5,5 xL

SFS SXC5-S19-6,3 xL

Stützabstand:

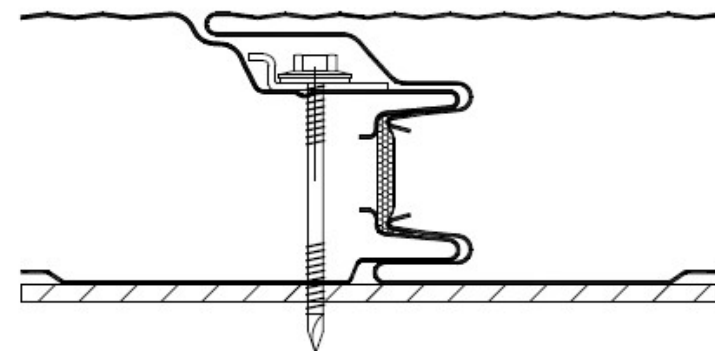
Getestet und zertifizierte Paneele:

- Minstdicke der Paneele: 60mm
- Minstdicke der Deckschalen (außen/innen = 0,50/0,50mm)
- Maximaler Stützabstand: siehe Tabelle
- Installation sowohl vertikal als auch horizontal möglich

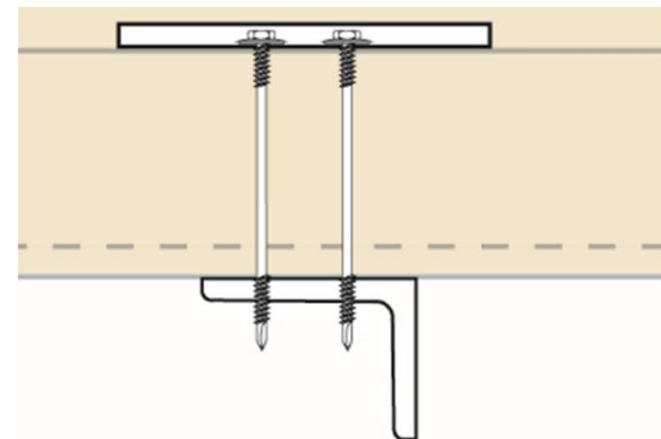
Windbelastung:

	Panel thickness	Max. Spannweite [mm]	Windbelastung [psf]	Windbelastung [KN/m ²]
Einfeld- / Mehrfeldsystem	60 - 160 mm	1740	+45 / -45 Zone TC	+2,15 / -2,15
	120 - 160 mm	1740	+80 / -80 Zone TC	+3,83 / -3,83
	120 - 160 mm	2400	+50 / -50 Zone TC	+2,39 / -2,39

Querschnitt– ONDATHERM 2003 - Fuge



Längsschnitt– ONDATHERM 2003 - Fuge



Stützabstand:

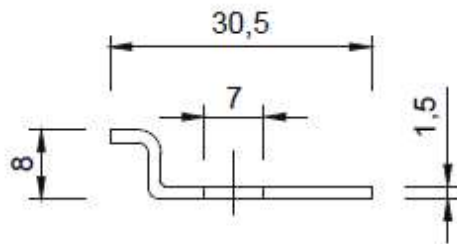
Verdeckte Befestigung mit 2 Schrauben und einer Lastverteilerplatte je Auflager

Zertifizierte Schrauben: SFS SXC5-S16-5,5 xL
SFS SXC5-S19-6,3 xL

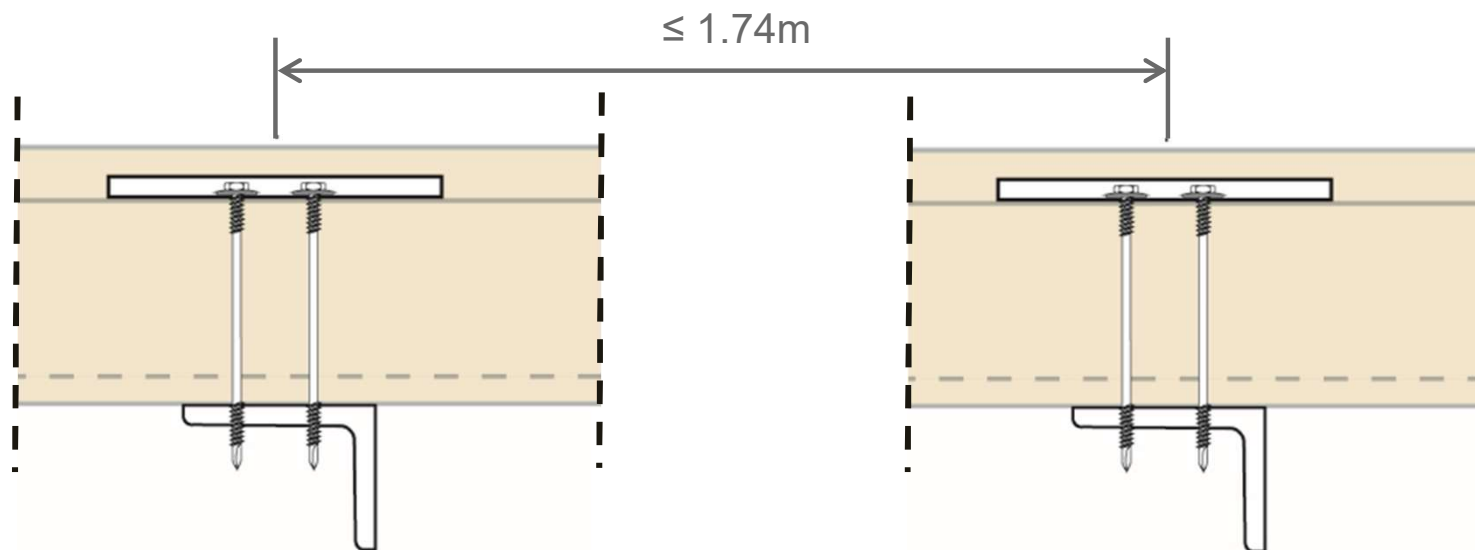
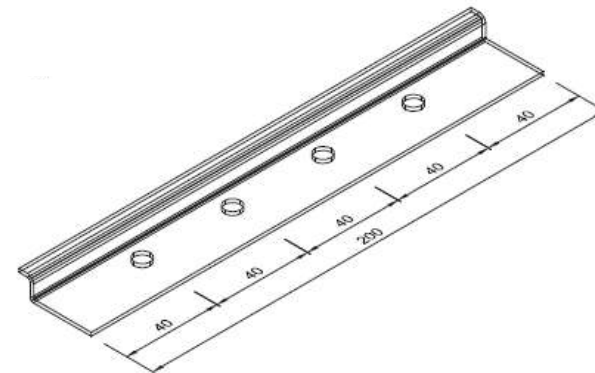
Unterkonstruktion:

- $t_{\text{nom}} \geq 2,00 \text{ mm}$
- Dehngrenze $\geq 220 \text{ MPa}$

Querschnitt Lastverteilerplatte



Querschnitt Lastverteilerplatte – Isometrie





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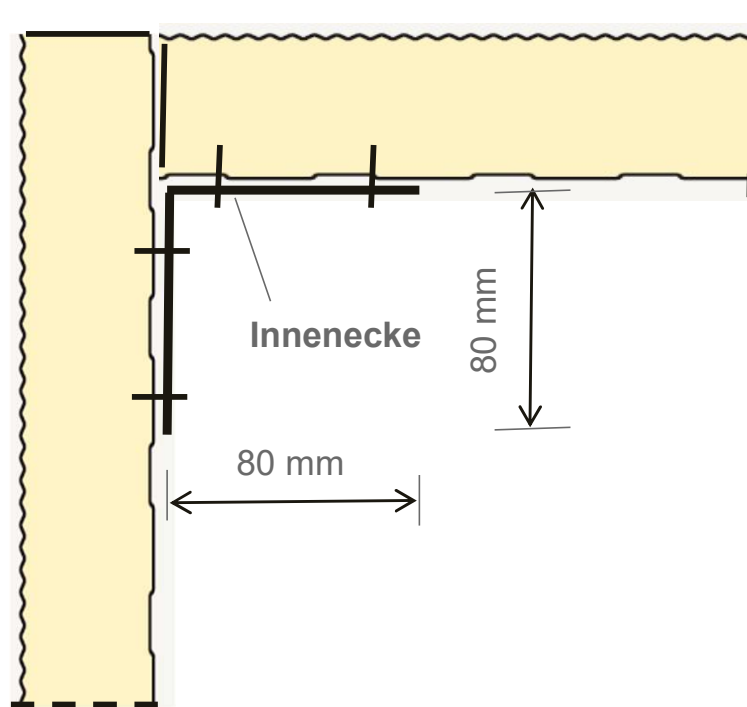


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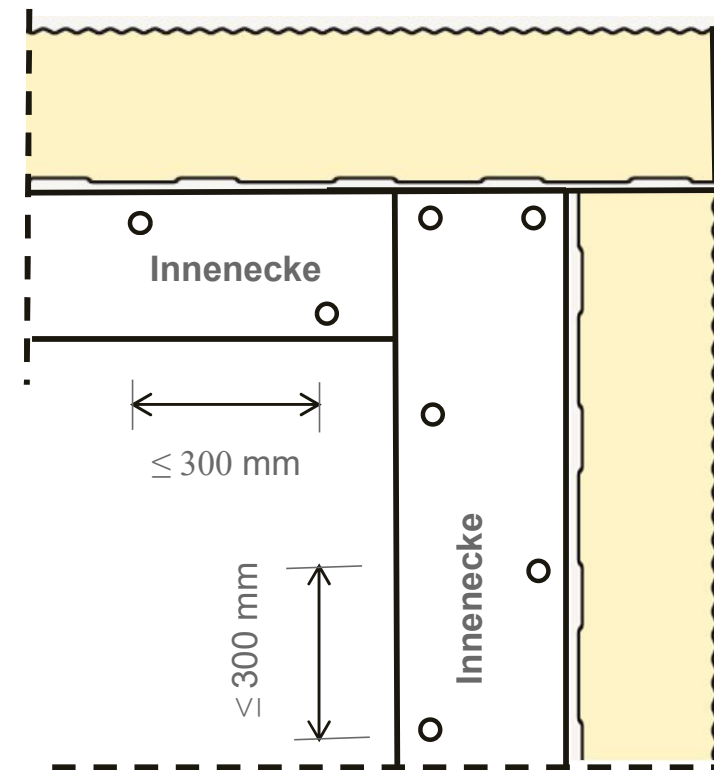
Innenecke:

Innen ecken sind mit einem Kantteil zu verbinden. Folgende Anforderungen sind zu beachten:

- Schenkellänge: 80 x 80 mm
- Blechdicke t_{nom} 0,75mm
- Schrauben Bohrschrauben
- Dichtung Silikon- und/oder Butyldichtung



Innenecke - Querschnitt
(Abmessung Kantteil)



Innenecke – Ansicht
(Befestigungsanordnung)

Installation Guide



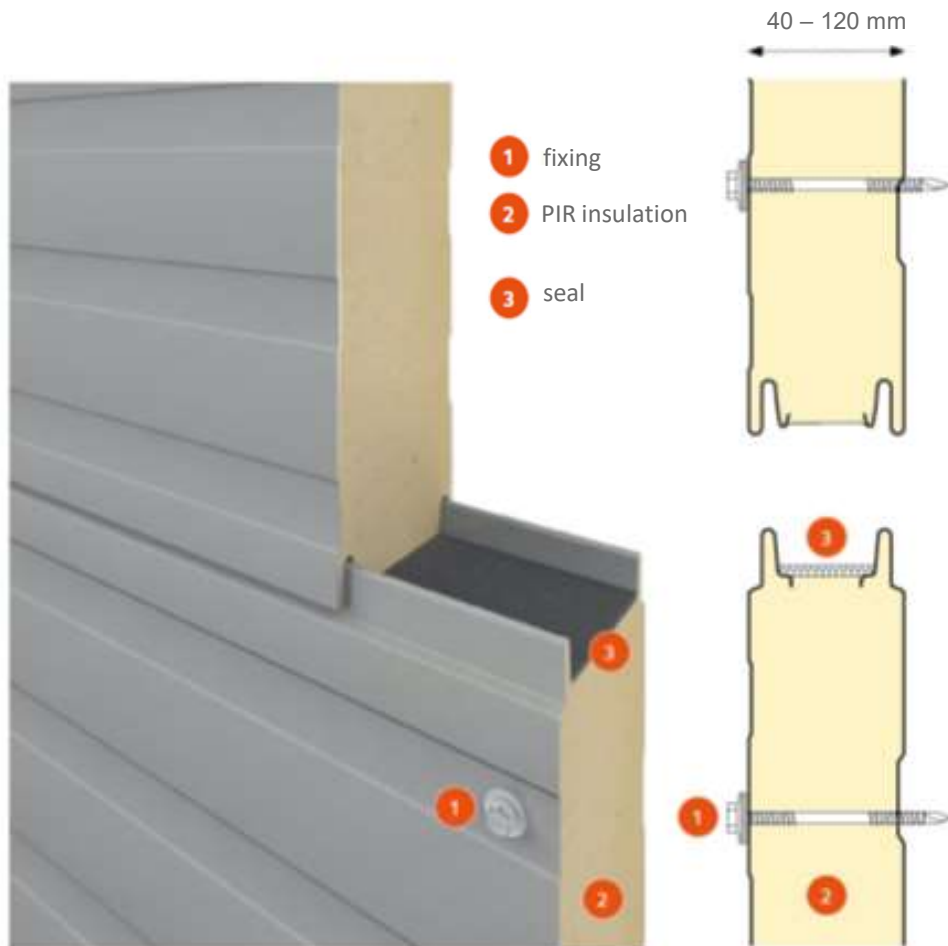
ONDATHERM 1003 und ONDATHERM 2003 Panels



ONDATHERM 1003 Panels

are tested and certified by FM-Approval for:

- insulated Wall and/or Ceiling Panels for Interior Use (Standard 4880)
- and/or Wall Panels for Exterior Use (Standard 4881)



FM Approval Ratings:

Fire rating:	Class 1, exterior wall
Maximum height:	no limit
Hail rating:	severe SH
Wind rating:	see table



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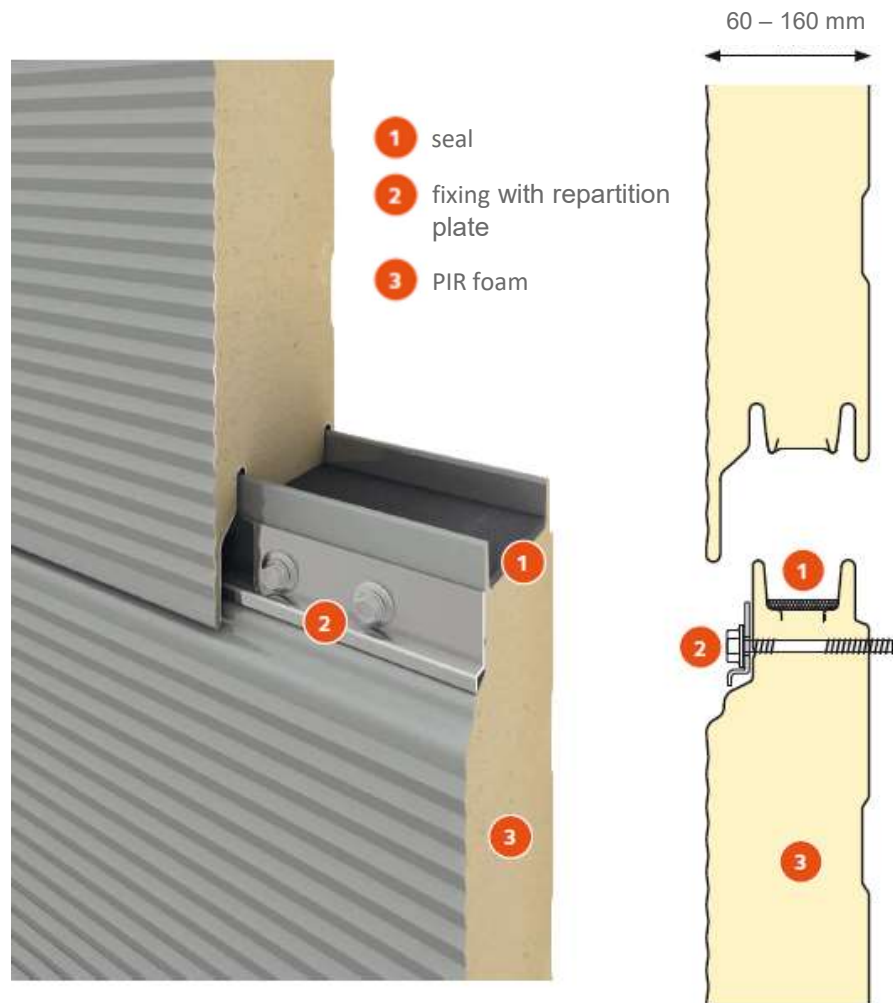




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- insulated Wall and/or Ceiling Panels for Interior Use (Standard 4880)
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certified steel decklayers – external faces:

- Steel yield strength $\geq 320\text{MPa}$
- minimum thickness : $t_{\text{nom1}} = 0,50\text{mm}$



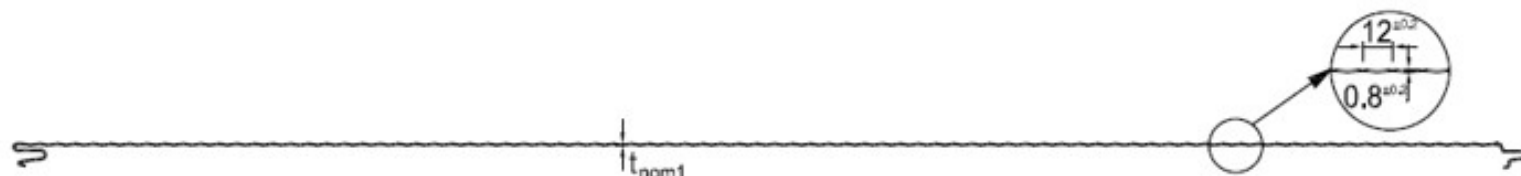
Ondatherm 1003



Ondatherm 2003

External faces

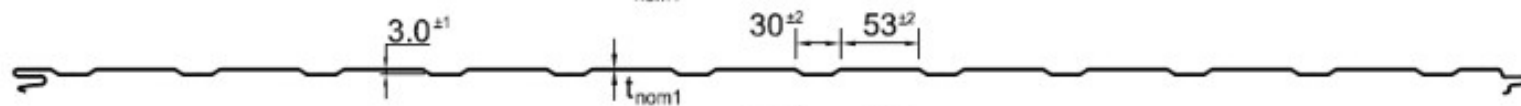
micro profiled



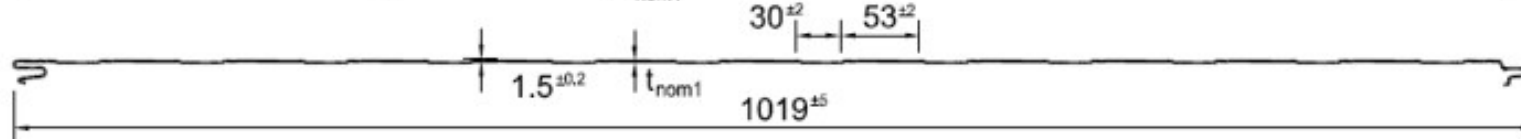
flat



lined



profiled





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certified steel decklayers – internal faces:

- Steel yield strength $\geq 320\text{MPa}$
- minimum thickness $t_{\text{nom}2} = 0,50\text{mm}$

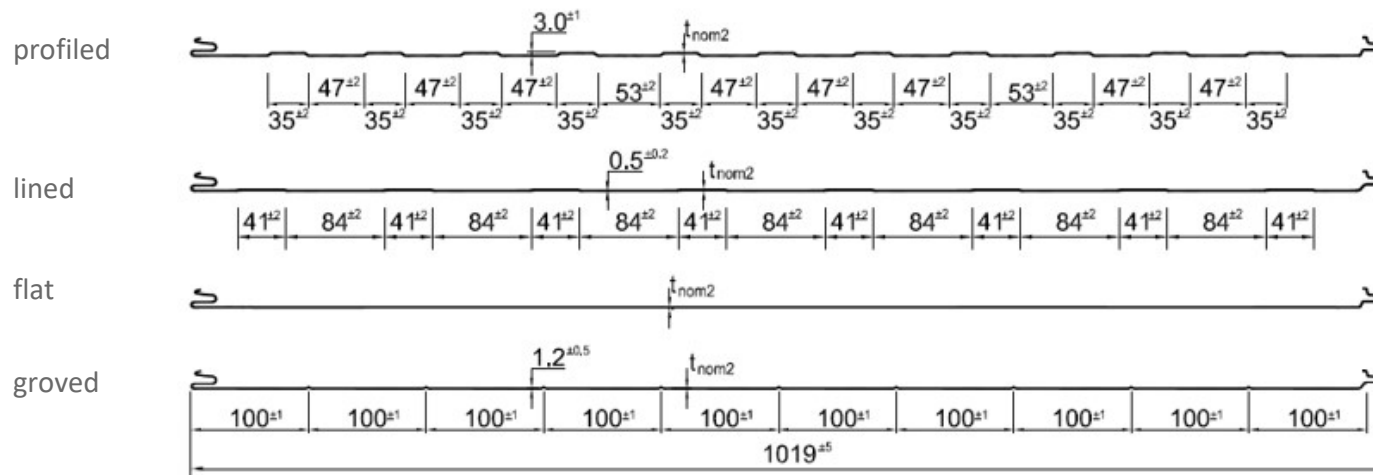


Ondatherm 1003



Ondatherm 2003

Internal faces





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decklayer combinations

Ondatherm 1003:

decklayer combination		
	external	internal
1003 GG	profiled	profiled
1003 GF	profiled	flat
1003 GL	profiled	lined
1003 GR	profiled	grooved
1003 MG	micro profiled	profiled
1003 MF	micro profiled	flat
1003 ML	micro profiled	lined
1003 MR	micro profiled	grooved

t_{nom1} : nominal thickness of external decklayer

t_{nom2} : nominal thickness of internal decklayer

D : panel thickness

decklayer combination		
	Außen	Innen
1003 FG	flat	profiled
1003 FF	flat	flat
1003 FL	flat	lined
1003 FR	flat	grooved
1003 LG	lined	profiled
1003 LF	lined	flat
1003 LL	lined	lined
1003 LR	lined	grooved

t_{nom1} : 0,50 ; 0,63 ; 0,75 ; 0,88 ; 1,00 mm

t_{nom2} : 0,40 ; 0,50 ; 0,63 ; 0,75 ; 0,88 ; 1,00 mm

D : 60, 80, 100, 120 mm

Ondatherm 2003:

decklayer combination		
	external	internal
2003 GG	profiled	profiled
2003 GF	profiled	flat
2003 GL	profiled	lined
2003 GR	profiled	grooved
2003 MG	micro profiled	profiled
2003 MF	micro profiled	flat
2003 ML	micro profiled	lined
2003 MR	micro profiled	grooved

decklayer combination		
	external	internal
2003 FG	flat	profiled
2003 FF	flat	flat
2003 FL	flat	lined
2003 FR	flat	grooved

D : panel thickness

D : 60, 80, 100, 120, 140, 160 mm

t_{nom1} : nominal thickness of external decklayer

t_{nom1} : 0,50 ; 0,63 ; 0,75 ; 0,88 ; 1,00 mm

t_{nom2} : nominal thickness of internal decklayer

t_{nom2} : 0,40 ; 0,50 ; 0,63 ; 0,75 ; 0,88 ; 1,00 mm



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Fixing Ondatherm 1003

Visible fixed with SFS Intec. SXC5-S19-5,5xL fasteners

Supporting width:

tested and certified panels:

- minimum panel thickness: 60mm
- minimum thickness of decklayer(outside/inside = 0,50/0,50mm)
- maximum supporting width : see Table
- Installation direction can be vertical or horizontal

Wind loads:

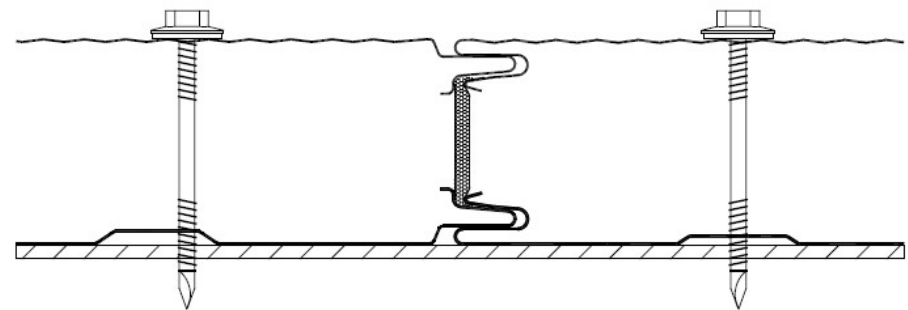
	Panel thickness	Max. Support [mm]	Wind rating [psf]	Wind rating [KN/m ²]
single Span	60 - 120	4877	+50 / -50 Zone TC	+2,39 / -2,39
multi span	60 - 120	4572	+40 / -40 Zone TC	+1,92 / -1,92
	60 - 120	3962	+45 / -45 Zone TC	+2,15 / -2,15
	60 - 120	3658	+50 / -50 Zone TC	+2,39 / -2,39
	60 - 120	2413	+75 / -75 Zone TC	+3,59 / -3,59

Substructure:

$$t_{\text{nom}} \geq 2,54 \text{ mm}$$

$$\text{yeald strength} \geq 220 \text{ MPa}$$

Cross section – ONDATHERM 1003 - joint





Fixing Ondatherm 2003

hidden fixed with 2 screws and repartition plate per fixation point

certified screw types: SFS SXC5-S16-5,5 xL

SFS SXC5-S19-6,3 xL

Supporting width:

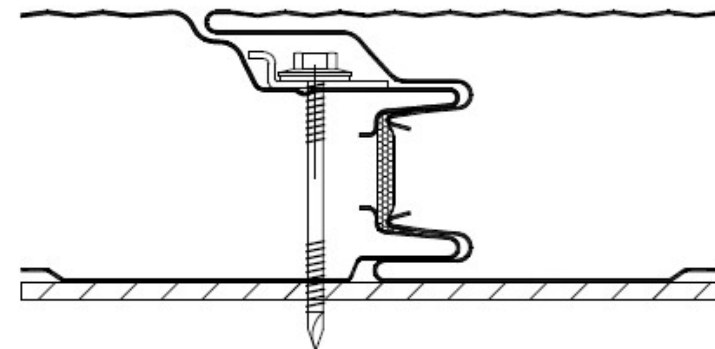
tested and certified panels:

- minimum panel thickness: 60mm
- minimum thickness of decklayer (outside/inside = 0,50/0,50mm)
- S maximum supporting width : see Table
- Installation direction can be vertical or horizontal

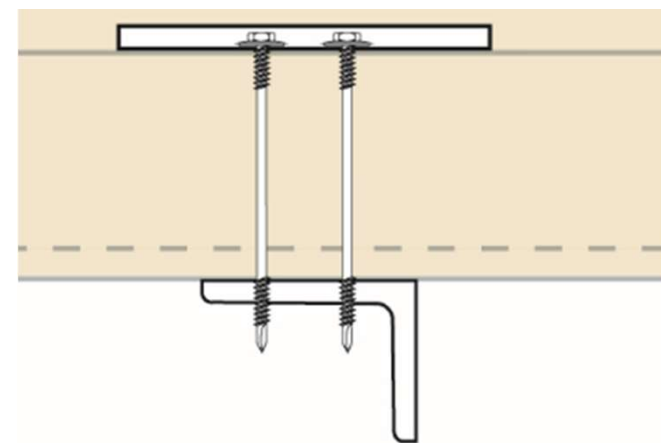
Wind loads:

	Panel thickness	Max. Support [mm]	Wind rating [psf]	Wind rating [KN/m ²]
single and multi span	60 - 160 mm	1740	+45 /-45 Zone TC	+2,15 /-2,15
	120 - 160 mm	1740	+80 /-80 Zone TC	+3,83 /-3,83
	120 - 160 mm	2400	+50 /-50 Zone TC	+2,39 /-2,39

Cross section – ONDATHERM 2003 - joint



Longitudinal section – ONDATHERM 2003 - joint





Supporting width:

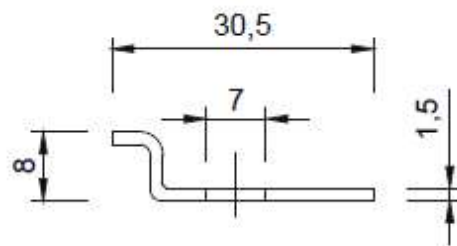
hidden fixed with 2 screws and repartition plate per fixation point

certified screw type: SFS SXC5-S16-5,5 xL
SFS SXC5-S19-6,3 xL

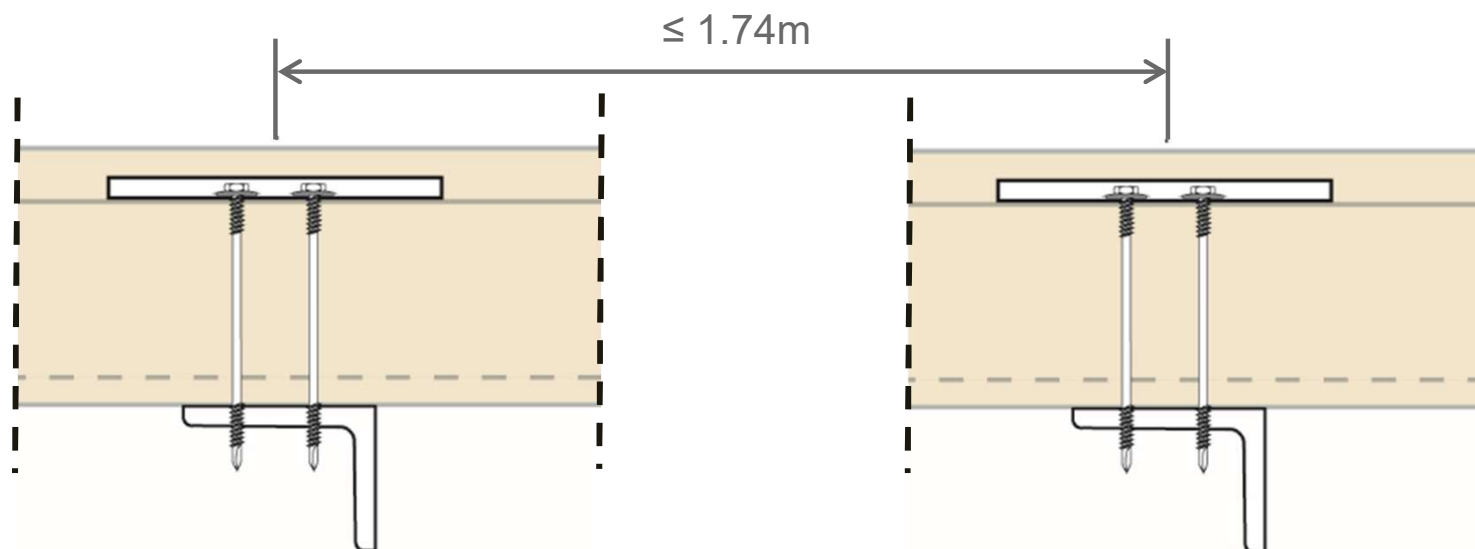
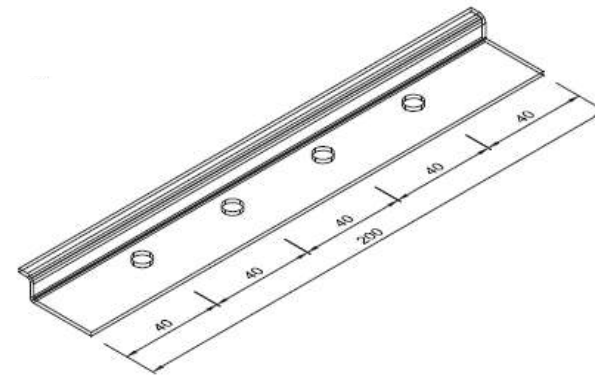
Substructure:

- $t_{nom} \geq 3,00$ mm
- yield strength ≥ 220 MPa

Cross section repartition plate



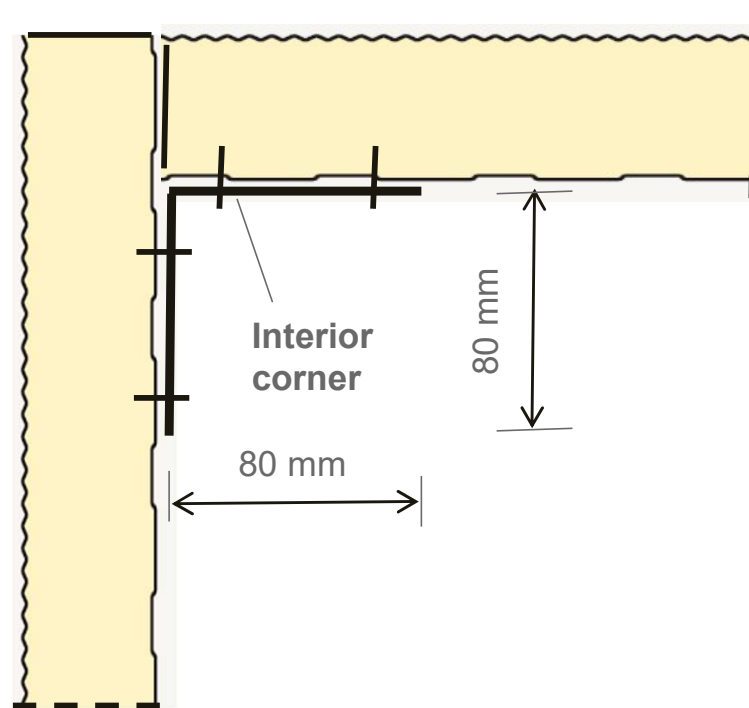
Isometric drawing



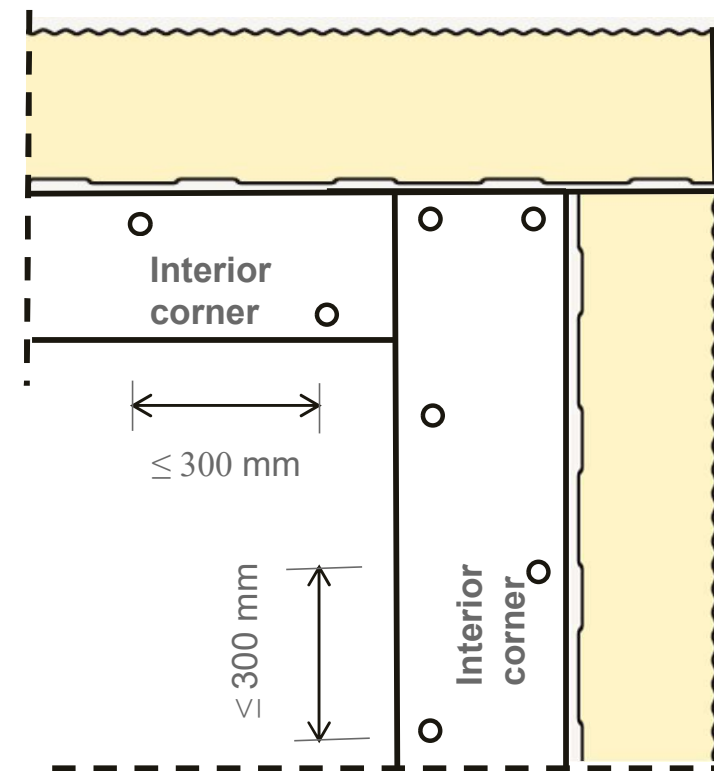
Interior corners :

Inner edges have to be fixed and mounted with flashings as follows:

- dimensions 80 x 80 mm
- steel thickness t_{nom} 0,75mm
- Fasteners Self drilling fasteners
- Sealant / Gasket Silicone sealant and/or butyl sealant optional



interior corner cross section
(dimensions of flashings)



Interior corner front view
(fixation)