





HYGIENIC INSTALLATIONS

Hygienic environments, such as those found in the manufacturing and processing of food products, are subject to the most rigorous regulation with regards to cleanliness. Construction of these environments must therefore aid the adherence to these regulations and facilitate efficient and effective hygienic maintenance.

Application

Trimo manufactures and supplies a range of mineral wool insulated panels- the Trimoterm FTV and SNV ranges are specifically designed to meet the stringent fire protection and hygienic requirements of food and other hygienic installations from temperature controlled chilled environments and food processing areas through to ambient distribution depots.

Trimo panels are ideally suited to applications such as internal hygienic wall and ceiling constructions as well as external walls and are increasingly being specified for controlled areas such as pharmaceutical and bio-technology particularly where hygiene and fire protection are major considerations.

Hygienic by design

Trimo composite panels offer a range of profiles with food-safe coatings including optically smooth surface to facilitate efficient cleaning, whilst their long-spanning capabilities - up to 14 m and panel module up to 1.2 m limits the number of joints required in the system, which are typically weak areas in hygienic construction. Trimo panels, engineered for controlled environments are also available in the range of standard Corus coatings widening their application further.

This flexibility to meet specification demands comes accompanied by a standard set of construction installation details specific to Trimo's hygienic panel range and has been designed to enhance the efficiency of the controlled environment.





Trimo panels enable a fast and simple installation where all surfaces, fixings and finishes to internal wall and floor joints are designed to be exceptionally tight, resisting the ingress of moisture, detritus and bacteria and removing any possibility of 'dirt traps', in addition to aiding the cleaning processes, both of which makes hygienic cleaning more efficient.

Economy in use

Trimoterm panels are exceptionally strong and durable and can be installed either vertically or horizontally, in addition to having proven and certified fire resistance and excellent thermal and acoustic performance. These contribute to overall efficiency savings and also to reduced insurance premiums that can lower the whole-life cost of a building.



FM 4880 for internal use



Cert. No. 650a to LPS 1208





TECHNICAL PROPERTIES

Partition and Fire Walls

Trimoterm FTV fireproof panels are ideal for use as internal partition and fire wall applications as well as ceiling structures especially in hygienic and food-safe environments where its clean and dry installation and thermal properties exceeds the performance of more traditional wet concrete walls. It is worth noting that the panel has excellent fire resistant properties offering up to 2 hours fire resistance on a clear span of up to 8.0 m having been tested to European Standard EN 1364-1.

Trimo panels also offer a high degree of flexibility due to the demountability of the system and ease of creating new or closing existing openings which enables the end-user to adapt to changing operational requirements with ease.

Information below is made for Trimoterm FTV width of 1200 mm.



EN 14509:2006

An example of panel marking:

FTV IW gs-120/1200 W/W

FTV C gs-150/1200 W/P

IW - Internal Wall Panel

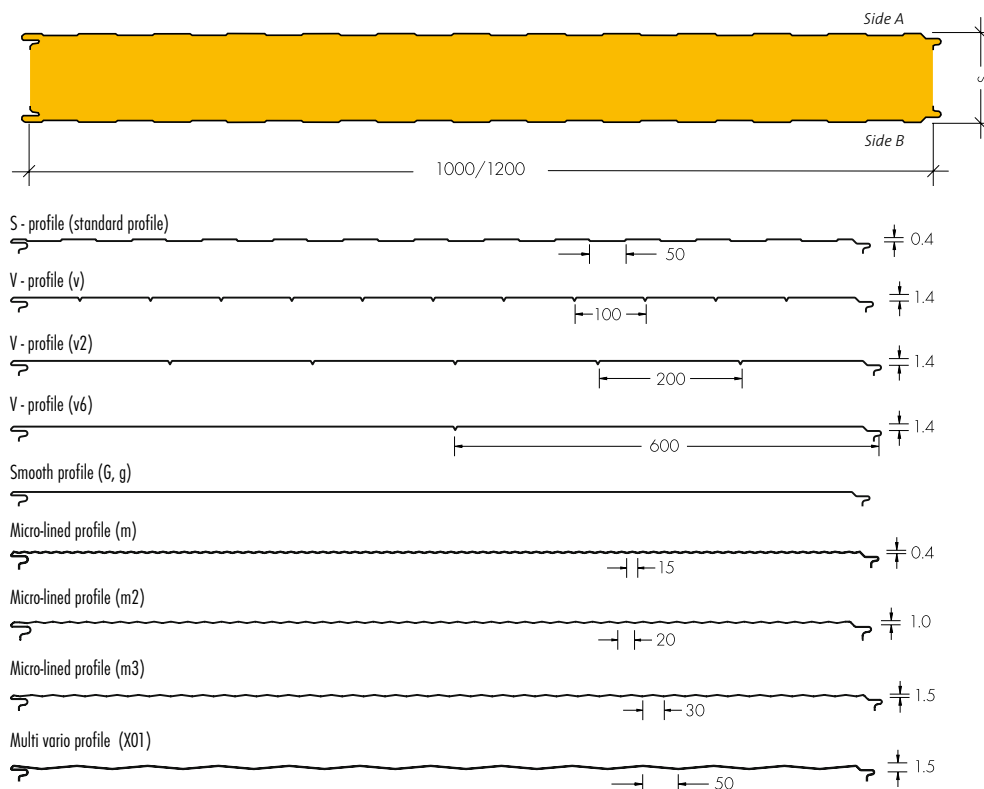
C - Ceiling Panel

gs - Profile Finish Side A and B

120/1200 - thickness/width

W - white foodsafe stalvetite coating

P - primer or polyester coating



Profile Type	A	B
S - profile (s)	•	•
V - profile (v, v2, v6)	•	•
Smooth profile (G, g)	•	•
Micro-lined profile (m, m3)	•	
Micro-lined profile (m2)		•
Multi vario (X)	•	

Side A is usually the external side of a panel. Thickness selection for the panels: 50, 60, 80, 100, 120, 133, 150, 172, 200, 240 mm. Non-standard panel widths can be made by special request.

Panel lengths range up to 14 m.

Steel sheet thickness for profile v2, v6, G-gladio and Multi vario (except X01 profile) is 0.7 mm. For more profile variants contact Trimo's technical service.

Technical data FTV STANDARD	FTV 50	FTV 60	FTV 80	FTV 100	FTV 120	FTV 133	FTV 150	FTV 172	FTV 200	FTV 240	
Panel thickness [mm]	50	60	80	100	120	133	150	172	200	240	
Weight FTV 1200 [kg/m ²]	Fe 0.6/Fe 0.6	16.1	17.3	19.7	22.1	24.5	26.1	28.1	30.8	34.1	38.9
Weight FTV 1000 [kg/m ²]	Fe 0.6/Fe 0.6	16.3	17.5	19.9	22.3	24.7	26.3	28.3	31.1	34.3	39.1
U Thermal conductivity [W/m ² K] (EN 14509:2006)		0.74	0.61	0.47	0.39	0.32	0.30	0.26	0.23	0.20	0.17
EI Fire resistance class (EN 13501-2)		EI 30	EI 60	EI 90	EI 120		EI 180		EI 240		
Combustibility of insulant core (EN 13501-1)	Non - combustible, class A1										
Rw Sound reduction [dB] (EN ISO 140-3)		30	32								
Cover width [mm]	1200										
Panel length [m]	up to 14										

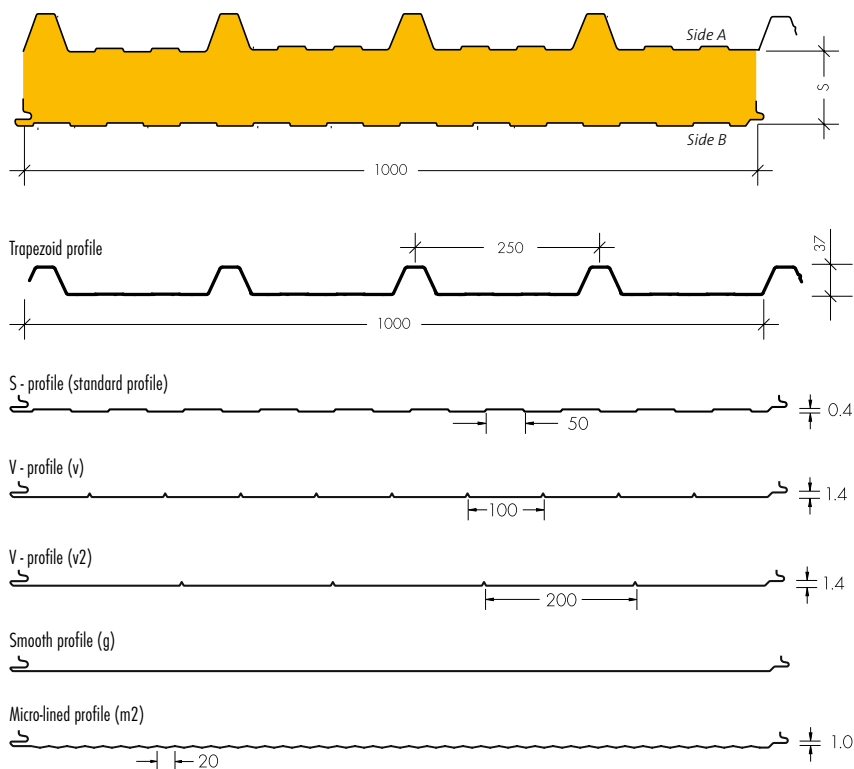
TECHNICAL PROPERTIES

Ceilings

Trimoterm SNV fireproof panels have recently been developed for ceiling applications where the panel's upper deep trapezoidal profile imparts additional strength, walk-on resistance during installation and maintenance offering improved durability to the ceiling structure.

Trimo recommends using SNV panels over conventional used flat panels as a suspended ceiling structure due to its proven safety advantages and contribution to ceiling structural firmness and stability. This enables a 2 hour fire rating (tested to European Standard EN 1365-2). Factory performed cut backs and a range of profile fillers and flashings are available for easier and faster installation.

Smooth (FTV) panels are also available with a 2 hour fire rating.



CE
EN 14509:2006

An example of panel marking:

SNV C v 120/1000 P/W

C - Ceiling Panel
v - Bottom Side Profile Finish
120/1000 - thickness/width
P - primer or polyester coating
W - white foodsafe stalvetite coating

Profile Type	A	B
Trapezoid	•	
S - profile (s)		•
V - profile (v, v2)		•
Smooth profile (g)		•
Micro-lined profile (m2)		•

Thickness selection for the panels 60, 80, 100, 120, 150, 172 and 200 mm.
Panel lengths range up to 14 m.

Technical data SNV	SNV 60	SNV 80	SNV 100	SNV 120	SNV 150	SNV 172	SNV 200
Panel thickness [mm]	60	80	100	120	150	172	200
Weight SNV [kg/m ²]	18.9	21.3	23.7	26.1	29.7	32.4	35.7
U Thermal conductivity [W/m ² K] (EN 14509:2006)	0.60	0.47	0.38	0.32	0.26	0.23	0.20
Fire resistance class SNV (EN 13501-2)	REI 30	REI 60	REI 90	REI 120	REI 180		
Combustibility of insulant core (EN 13501-1)	Non - combustible, class A1						
Rw Sound reduction [dB] (EN ISO 140-3)		30	32				
Min. roof slope	5° or 3° with additional sealing						
Cover width [mm]	SNV 1000						
Panel length [m]	up to 14						



Trimoterm internal wall and ceiling applications - Span Tables

Wall application base for calculation:

- Temperature and gradient over panel $0^{\circ}\text{C} - 6^{\circ}\text{C}$
- Internal loading 0.3 kN/m^2
- Maximum deflection $L / 150$

Ceiling application base for calculation:

- Temperature and gradient over panel $0^{\circ}\text{C} - 6^{\circ}\text{C}$.
- Panel dead weight loading
- Point load of 0.9 kN and a UDL of 0.25 kN/m^2 as BS6399 Part 1
- Maximum deflection $L / 200$

Spans for wall panels

FTV Panels	L max (m) DP 12
FTV 60	6.60
FTV 80	7.70
FTV 100	8.70
FTV 120	9.60
FTV 150	10.40
FTV 200	11.40

Spans for ceiling panels

FTV Panels	L max (m) DP 13
FTV 60	4.00 (40 mm)
FTV 80	5.00 (40 mm)
FTV 100	5.70 (40 mm)
FTV 120	6.30 (40 mm)
FTV 150	6.70 (42 mm)
FTV 200	7.10 (46 mm)

SNV Panels	L max (m) DP 12
SNV 80	5.70 (40 mm)
SNV 100	6.50 (45 mm)
SNV 120	7.20 (51 mm)
SNV 150	8.20 (60 mm)

*DP12 = rock-wool density 120 kg/m^3 ; DP13 = rock-wool density 130 kg/m^3
 Values in brackets represents minimum load bearing width on each end of the panel.*

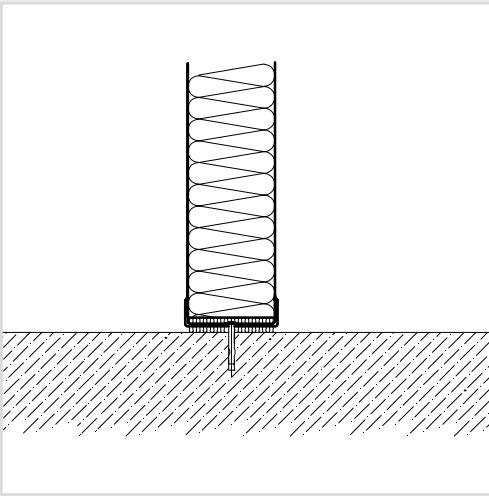
Note:

For all other cases than specified in this document a recalculation needs to be performed by Trimo technical department. As the specific conditions of use of this product are outside the supplier's control, the client is responsible for ensuring the requirements of relevant performance of the panel structure.

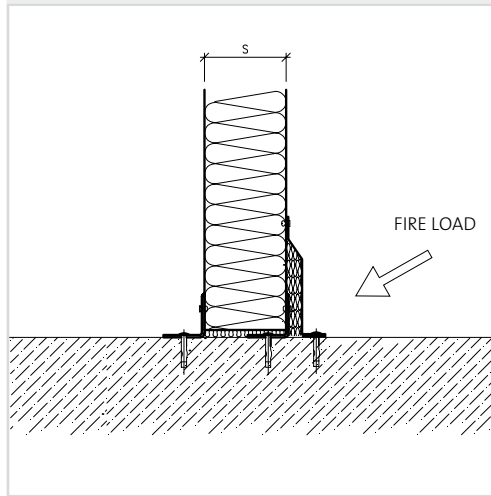


INSTALLATION DETAILS

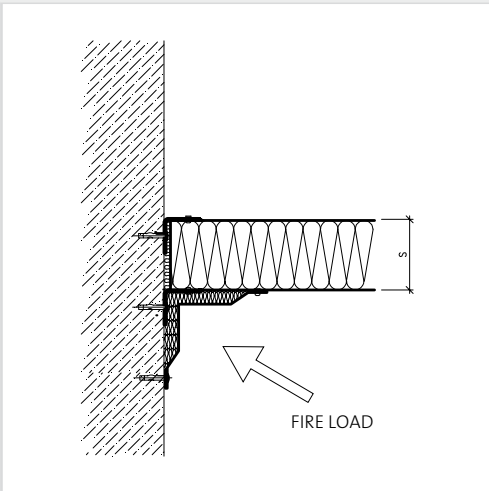
Detail 1. Standard base detail



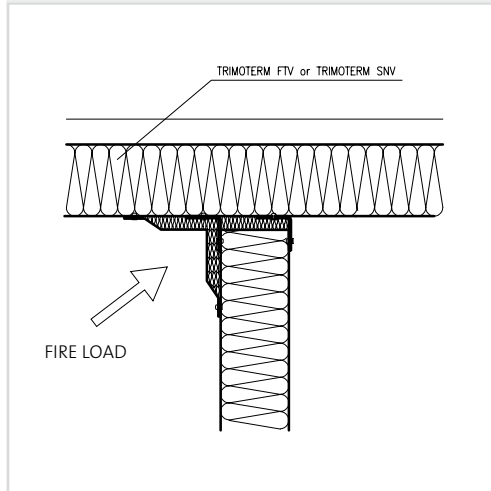
Detail 2. Fire rated base detail



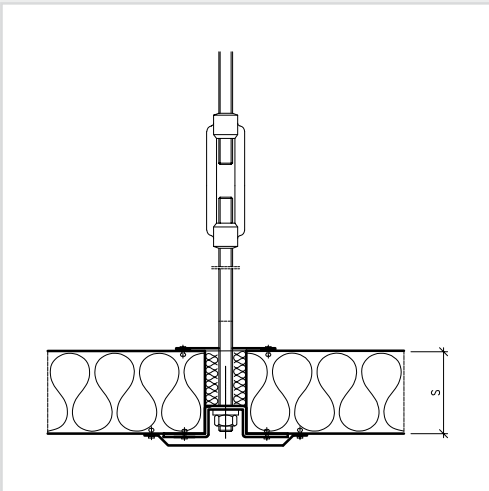
Detail 3. Wall-to-wall fire rated detail



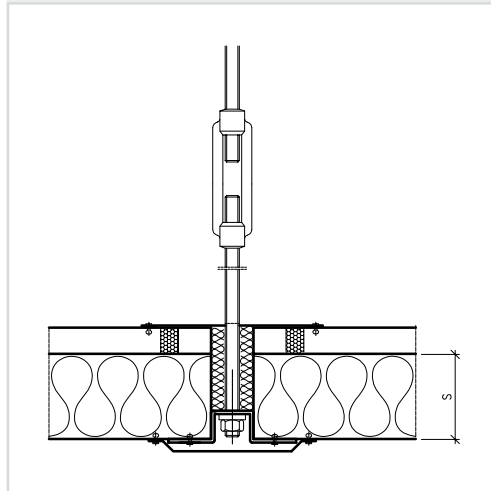
Detail 4. Wall-to-ceiling joint



Detail 5. FTV Ceiling detail



Detail 6. SNV Ceiling detail





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