

Hemsec Control 60 - Freezer

175mm and 200mm – Deflection Temperature Difference = 50°C

60 minute fire rated composite panels for use as internal walls and ceilings.



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PANEL DATA

Cover width:

1155mm

Panel Thickness (mm)	Min. Panel Length (m)	Max. Single Span Wall Height * (m)	Max. Single Span Ceiling * (m)	Thermal Transmittance U W/M ² K ***	Deflection Temp. Difference *	Weight Kg/m ² (0.5/0.5)
175	2.0	11.85	8.40	0.11	50°C	14.40
200	2.0	13.10	9.37	0.10	50°C	15.70

* Max. Single wall spans (horizontal and vertical) are based on a combination of stress and deflection of 0.3kN/m² with both walls and ceilings on a temperature difference (between internal and external environments) of 50°C, typically encompassing negative temperature zones (i.e. Freezers). For structural loadings beyond the above stated, consult Hemsec.

For specific Fire Rated spans, please refer to the Hemsec 'Fire Rating Matrix' document.

The stated temperature difference may decrease when used within higher temperature zones such as chill and ambient production areas, this will allow the stated spans above to increase, refer to 'Hemsec Control 60 – Chill and Ambient' datasheet for further guidance.

Max. Single ceiling spans are based on 0.9kN point load at mid-span and 0.25kN/m² UDL (**Hemsec strongly recommend referring to our 'Ceiling Care' document for greater detail**). Minimum bearing/support of 50mm at panel ends. Consult Hemsec for further information on permitted bearing loads and edge supports.

Panels are manufactured to bespoke lengths starting at the stated minimums above; maximum lengths stated may be increased upon referral to Hemsec up to a manufacturing capability limit of 15m**

** Hemsec should be consulted on any panel lengths greater than the maximum stated in the above table due to the difficulties faced when handling and on installation.

*** Calculated using the method required by the Building Regulations Part L2 (England & Wales) and Building Standards Part J (Scotland). Thermal transmittance based on λ mean = 0.02038 W/Mk.

MATERIALS - STEEL

Panel Finishes *	Internal Steel Face	External Steel Face	Steel Substrate **	Paint Thickness μ m (nominal)	Laminate Thickness μ m (nominal)
Foodsafe Laminate	✓	✓	0.5mm Z225 HDG	-	120
Foodsafe Polyester	✓	✓	0.5mm Z225 HDG	25	-
Primer/Liner	✓	✓	0.5mm Z225 HDG	7-10	-

* Other finishes available on request.

** 0.7mm steel available on request (will increase weight).

Facing Profile Options:

- 100 Rib
- Smooth
- Microrib (one face only)

INSULATION CORE

PIR Polyisocyanurate closed cell insulation HCFC free zero ODP rated core.

Panel Thickness	175mm	200mm
Max. Thermal Temp. Difference *	87°C	90°C

* Temperature difference between internal and external environments.

PANEL JOINT

Tongue and groove joint achieves excellent vapour resistance, hygiene seal, thermal and fire performance.

AIR LEAKAGE

Panel joint air-tightness = 0.01 m³/m²/hr at 50 Pa when tested to EN 12114 in accordance with BS EN 14509: 2013.

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FIRE

Reaction to fire:

White Foodsafe Laminate (WFSL) faced panels have a reaction to fire according to EN13501-1 of: B, s2, d0. (50mm exclusion = B, s3, d0.)

For fire specification on other panel finishes please contact Hemsec.

Fire resistance:

FM4880:

Class 1 fire rating of building panels or interior finish materials.

For internal use only up to a maximum height of 9.1m and for panel thicknesses between 175 and 200mm.



LPCB LPS 1208 Cert:558a:

LPS Rating FR60 for 175-200mm thicknesses with maximum unsupported span 4m (walls) & 4.5m (ceilings).

LPS Rating FR30 for 175-200mm thicknesses with maximum unsupported span 7.5m (walls & ceilings).

BS EN 13501-2: 2016:

125-175mm thicknesses achieve EI30 under Extended field of Application BS EN 15254-5: 2009 with maximum unsupported span 12m (walls).

200mm thickness achieves EI45 under Extended field of Application BS EN 15254-5: 2009 with maximum unsupported span 12m (walls).

Please refer to the Hemsec 'Fire Rating Matrix' document for further detail, available to download from our website.

ACOUSTICS

All panels have a predicted figure weighted sound reduction $R_w = 26\text{dB}$.

QUALITY & DURABILITY

Hemsec metal faced panels are manufactured from high quality materials, using state of the art production equipment to rigorous quality control standards (complying with an approved BS EN ISO 9001:20015 QMS standard) ensuring long-term durability and service life.

GUARANTEES & WARRANTIES

Dependant upon application, please contact Hemsec.

PACKAGING

Hemsec metal faced composite insulated panels are stacked horizontally with protective jiffy foam laid between the ends of each panel; they are then wrapped in polythene and strapped on top of a 3mm hardboard sheet to prevent forklift damage and to protect against the weather. The pack is supported by a number of polystyrene bearers, (150mm x 100mm), regularly spaced under the hardboard to keep the panels elevated from the floor avoiding dirt and possible damage.

The number of panels in each pack depends on panel length and weight. Typical pack height is 1100mm.

Panel Thickness	175mm	200mm
No. panels/pack (max)	5	4

Maximum pack weight is 1000kg. Each pack is labeled with project information and customer panel references.

DELIVERY & SITE PROCEDURES

All deliveries are made by road transport to the project site, subsequent offloading and storage is the responsibility of the customer. Please refer to the Hemsec 'Panel Care Instructions' document for further detail, available to download from our website.

Indicative drawing details are available on request from Hemsec.