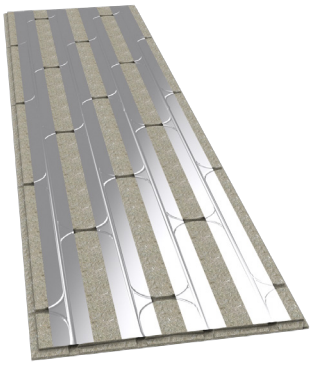
TIMOLEON EUROPE

CB12-600

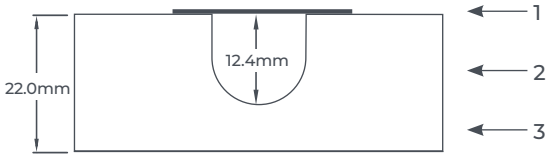
DATASHEET – ROUTED & STRIP FOILED CHIPBOARD PANEL FOR JOISTS/BATTENS AT 600mm CENTRES

DS_CB12-600_01.0



Combination Panel (Pattern 7)
CB12-600 (P5)-PAT7
CB12-600 (P6)-PAT7
CB12-600 (P7)-PAT7

ROUTED PANEL CROSS SECTION

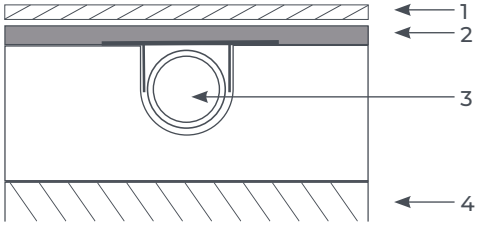


1 – Soft temper aluminium diffuser

2 – 12mm channel

3 – P5, P6 or P7 chipboard

APPLICATION CROSS SECTION



1 – Floor finish

2 – Minimum 6mm flooring grade plywood

3 – 12mm pipe

4 – Joisted or battened subfloor

PRODUCT OVERVIEW

Independently tested structural underfloor heating panel which replaces the floor deck used in constructions on a joisted or battened floor and provides a high output as the pipe is as close to the floor finish as possible. Manufactured from P5, P6 or P7 tongued and grooved chipboard, the panels have pre-routed channels to accept 12mm continuous pipe (supplied by others) and are factory fitted with aluminium diffuser strips to provide improved performance and a means of detecting the pipe. The panels are laid on 600mm centre joists or battens in industry standard brick pattern and the pipe is installed by piercing through the soft temper aluminium diffuser strips. The flow and return pipework for each circuit drop into the joist space and are fed to and from the manifold as a continuous system beneath the floor level. The panels then require a minimum 6mm flooring grade Ply screwed and glued to complete the structural deck.

PRODUCT TECHNICAL DATA

Material (Grades)	P5 & P7 for humid conditions, P6 for dry conditions
Panel profile	Tongued and grooved
Panel dimensions	2400 x 600mm
Thickness	22mm
Panel options	Combination panel (P7)
Pipe centres	150mm
Pipe channels/external pipe diameter	12mm
100mm wide foil diffuser strips	50µm
Joist centres	400mm
Thermal conductivity	0.13W/mK
Hygiene Class (Formaldehyde EN120)	E1 (≤ 8.0mg per 100g)

	Grade P5	Grade P6	Grade P7
Density	670 kg/m3	700 kg/m3	770 kg/m3
Bending Strength (EN310)	14 N/mm2	16 N/mm2	18.5 N/mm2
Integral Bond tensile strength (EN319)	0.40 N/mm2	0.40 N/mm2	0.65 N/mm2
Modules of elasticity in bending (EN310)	2150 N/mm2	2550 N/mm2	2900 N/mm2
Swelling in thickness 24 h immersion in water (EN317)	10%	15%	10%
Internal bond tensile strength after moisture stress test (EN321)	0.20 N/mm2		0.33 N/mm2
Swelling in thickness after humidity/moisture stress test (EN321)	11%		10%
Fire Class (EN 13501-1)	D	D	D

MATERIAL CREDENTIALS

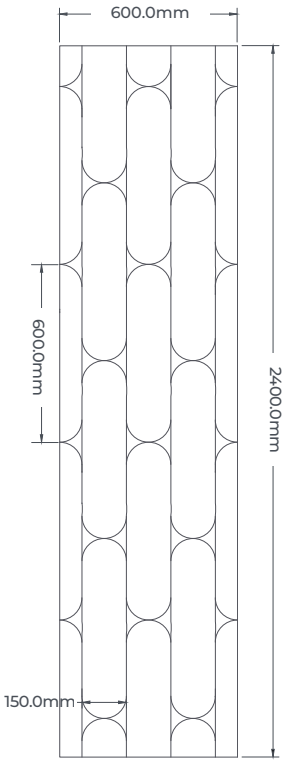
- Structurally tested to EN 1195:1998 and EN 12872:2010 and assessed against the requirements of Class I of EN 12871:2013 (E). All tests passed and carried out by an accredited, external consultancy lab. Point Load results yielded a preliminary $F_{max,est}$ of 8.31 kN.
- FSC Certified.
- CE Mark.
- 100% recyclable.

INSTALLATION GUIDANCE

1. Store panels in a safe dry, weather tight area out of direct sunlight. All boards, must be stacked horizontally and raised off the ground and must not be exposed to moisture or high humidity.
2. Ensure all joists & battens are level & even, free from nails, debris etc before installation commences.
3. Lay panels perpendicular to the joists/ batten subfloor in a run ensuring the end of each panel falls on a joist/ batten centre line. Use the off-cut of each run to start the next run. Ensure that each row of panels has a group of return loops at each end.
4. Panels must be glued on both sides of all adjoining tongues & grooves and screwed and glued to the joists with appropriate PVA adhesive.
5. At the first panel of your circuit, drill a hole at a 20º angle in your first routed channel and feed your pipework (flow) into the floor void. Proceed to the floor below and feed the pipework through the void to the manifold location. Return to your coil of pipework and insert the pipe into the routed board channels piercing the aluminium diffuser strips as you go. At the end of your circuit, drill a second 20º hole to drop your pipework (return) and feed this back to the manifold from below. Continue for all circuits.
6. Pressure test each circuit on the system.
7. Bond & mechanically fix a minimum of 6mm flooring grade ply over the CB12 panel staggered and in the opposite direction to provide further rigidity to complete the structural deck ready to receive floor finish.

Note: If access is available to the floor void from below, steps 3 to 7 can be completed for the whole floor deck at once. If access is NOT available to the floor void from below, steps 3-7 will need to be completed room by room, starting at the room furthest from the manifold with the flow and return pipework fitted from above into the void.

DETAILS OF PANEL DESIGN OPTIONS



Combination Panel (Pattern 7)

PRODUCT TOLERANCE

Panel	
Length	+/-2mm
Width	+/-2mm
Thickness	+/-0.5mm
Channel routed depth	
12mm pipe	-0/+0.3mm