










Firetherm Spanatherm

Product Data Sheet No. 378

Slab Edge - Curtain Wall Fire Barrier

Features:

-  **Most Economic Overall System**
-  **Up To 2 Hours Fire Protection**
-  **High Movement Capacity**
-  **Economic Fixings**
-  **Vapour Barrier**
-  **Smoke Barrier**
-  **Acoustic Seal**



What is Spanatherm?

Spanatherm is a dry fit system designed to be a cost effective and efficient method of firestopping static and movement joints for slab edge/curtain walling details.

Description

Spanatherm is a strong pre-engineered rock fibre movement-joint fire seal, that allows significant movement accommodation at the same time as providing fire integrity, insulation and an effective smoke seal.

Spanatherm is a dense fibrous lamella system faced on both sides with foil to provide Class O surface spread of flame and a vapour check barrier.

Spanatherm is not a health, spill or environmental hazard.

Fire Performance

Spanatherm has been rigorously tested to BS476 Parts 20 and 22: 1987 at a UKAS accredited laboratory for up to two hours fire integrity and 111 minutes insulation.

General Performance

Spanatherm uses materials that are rot proof, do not sustain vermin and will not encourage the growth of fungi, mould or bacteria. The mineral wool is also odourless and non-hygroscopic.

Contract Support

All Firetherm products are supported on site by a dedicated technical support team who are there to advise and help our customers where ever possible - please call +44 (0) 1322 551010.

Specification Wording

“Install Firetherm Spanatherm to provide up to two hours fire protection in (static/movement) joints as specified on drawings, fully in accordance with Firetherm's design and installation instructions”.

Packaging

Spanatherm is supplied as 1200mm x 600mm x 100mm thick slabs - foiled to both surfaces. Firetherm also offer a cut to size service for larger projects.

Size	Quantity per Pallet	Weight per Pallet
1200 x 600mm	36	225 kg

Installation

Clean all surfaces to remove loose debris, dirt and grease.

Carefully remove Spanatherm from its packaging.

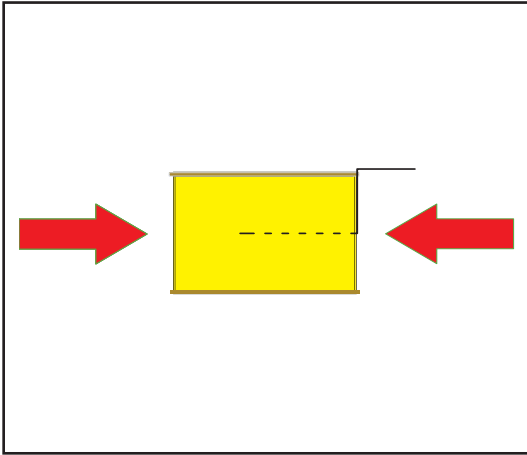
Measure the gap width of the opening to be sealed.

Cut the Spanatherm into strips lengthways to the width of opening plus approximately 10% (minimum 5mm) to ensure a compressed joint.

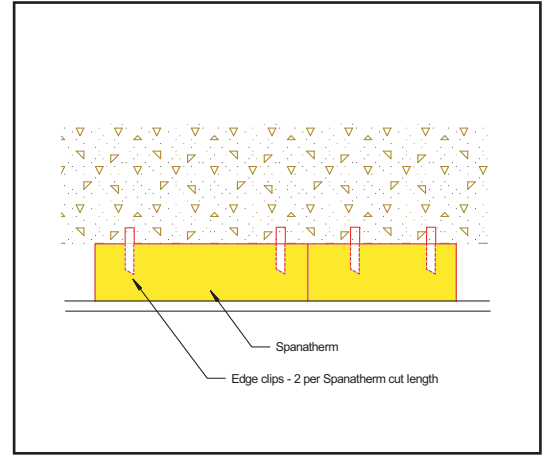
Under compression, install the cut length of Spanatherm. Where the opening width exceeds 50mm, Firetherm edge clips are required to provide additional support. The clip is fixed into the slab side edge of Spanatherm and mechanically fixed to the top of the floor slab. Two fixing clips are required for each cut length of Spanatherm. Butt join additional lengths of Spanatherm along the seal as required.

Seal adjoining edges of Spanatherm using suitable adhesive backed foil tape. 50 micron 100mm wide tape is recommended and is available from Firetherm.

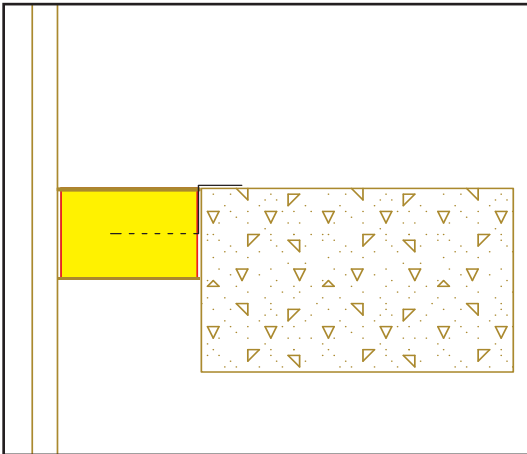
To complete the installation, apply a bead of Firetherm Intumastic or Intumastic ADL sealant to any gaps or discontinuities up to 25mm such as around window mullions. This will leave a sealed face providing a good fire and smoke seal.



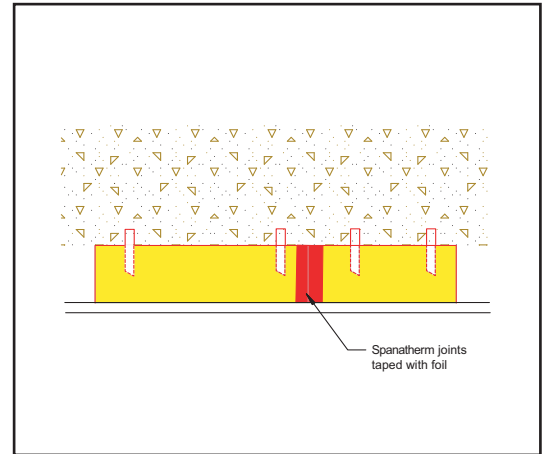
Compress Spanatherm 10% (5mm minimum)
With edge clips in place where required.



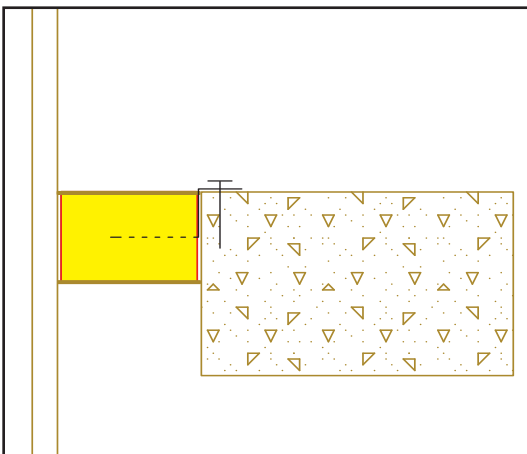
Two edge clips required per cut length of
Spanatherm.



Fit between slab edge and curtain wall.



Foil tape adjacent lengths of Spanatherm.



Mechanically secure edge clip to slab edge
using suitable steel fixing.



Product Safety Data Notes—Firetherm Spanatherm

1) IDENTIFICATION OF PRODUCT AND MANUFACTURER

Product: Spanatherm. High-density foil faced mineral wool slab used as a movement joint to provide up to two hours fire protection to slab edge/curtain walling. It is free of asbestos and all fibres exceed 3 microns thickness and 200 microns in length.
Company: Firetherm, Unit F, Acorn Industrial Park, Crayford Road, Crayford Kent DA1 4FT, England.
Tel: +44 (0) 1322 551010.

2) COMPOSITION: HAZARDOUS INGREDIENTS

Non-hazardous.

3) HAZARD IDENTIFICATION

Prime Hazards None.

4) FIRST AID MEASURES

Eye contact: Flush with copious quantities of fresh water for 15 minutes. Seek medical attention without delay.

Skin contact: Sensitive skin may be irritated. Wash immediately with soap and water without extensive rubbing or scratching - showering is ideal if available. Do not use solvents on the skin. If skin irritation persists seek medical attention.

Inhalation: May cause irritation. Remove patient to fresh air.

Ingestion: Ingestion of small quantities of Spanatherm is unlikely to cause significant reaction. Do not induce vomiting because of the risk of fluid entering the lungs. Wash out mouth and give plenty of water to drink.

5) FIRE FIGHTING MEASURES

Spanatherm is non-flammable.

Suitable extinguishing media: Water spray, dry powder, foam and carbon dioxide.

Unsuitable extinguishing media: None

Special exposure hazards: None

6) LEAK AND SPILL PROCEDURE

Dispose of as non hazardous waste, sealed in strong polythene bags.

7) HANDLING AND STORAGE

Do not eat or drink during use. Observe good industrial hygiene.

When cutting material use sharp hand tools and avoid power tools.

Store sealed in packaging in a dry place.

8) PERSONAL PROTECTION & EXPOSURE CONTROLS

MEL - Airborne dust: 5 mg/m³, 8 hour TWA (gravimetric method). For product used in its intended application and with account taken of the guidance given in this document, it is unlikely that this limit will be exceeded.

Respiratory protection: In confined spaces it is recommended that disposable face masks complying with EN149 FFP1 or FFP2 should be used and are suitable for most applications to improve comfort.

Hand protection: Cloth, leather or rubber gloves can be worn to reduce any mechanical irritation affects which may occur, but see section 15.

Eye protection: When working with product above head height, eye protection to BS EN 166 is advised.

Skin protection: Loose fitting clothing is advised.

9) PHYSICAL DATA

Appearance: Brown coloured boards 1200mm x 600mm x 100mm foil faced to both sides.

Odour: None

10) REACTIVITY DATA

Chemically stable.

Not reactive with other substances.

11) TOXICOLOGICAL INFORMATION

Not classified as a carcinogen under the EU Dangerous Substances Directive 67/548/EEC and Directive 97/69/EC

No link between exposure to mineral fibres and lung disease in production or user industries. IARC Group 3 (not classifiable).

No adverse irritant reaction to skin in dermal patch tests. No chronic effects usually associated with skin or dry eye contact.

12) ECOLOGICAL INFORMATION

None.

13) WASTE DISPOSAL

Off cuts and waste should be swept up or vacuumed and placed in strong polythene bags. The waste is non-hazardous.

Dispose of at an approved waste site suitable for building waste, observing local regulations.

14) TRANSPORT INFORMATION

Non-hazardous. Not classified for transport.

15) REGULATORY INFORMATION

R phrases R38, irritating to skin.

S phrases S:(2)36/37 use proper protective clothing and protective gloves.

COSHH Regulations - schedule 1: MEL of 5mg/m³ dust, 8 hour TWA (gravimetric) applies to all mineral wool dust.

16) OTHER INFORMATION

Conforms to EEC Directive 67/548/E and Directive 97/69/EC.

HSE Guidance note EH46: Man made mineral fibres

HSE Guidance note EH40: Occupational Exposure Limits



**Firetherm Intumescent & Insulation Supplies Ltd, Unit F, Acorn Industrial Park,
Crayford Road, Crayford, Kent. DA1 4FT.**

Tel: +44 (0)1322 551010. Fax: (0)1322 552727. Website: www.firetherm.com

In presenting this technical advice we cannot claim to serve in any but an advisory capacity and can undertake no liability since actual conditions of use are beyond our control.

Our Standard Terms & Conditions Apply At All Times



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CONFIDENTIAL

Test Report : Chilt/IF06026

**A fire resistance test performed on a horizontally fitted
'Spanatherm' batt and a vertically fitted 'Intufloor F2' seal**

**Ad Hoc test conducted to temperature and pressure
conditions of BS476: Part 20: 1987 and principles of
BS476: Part 22: 1987**

Test Date: 11 July 2006

Test for : **Firetherm Ltd**
 Unit F
 Acorn Industrial Estate
 Crayford Road
 Crayford
 DA1 4FT

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1 Introduction

Two specimens were tested during this test.

The seals were supplied for test by the client and delivered on 11 July 2006. Chiltern International Fire Limited (CIFL) constructed a vertical block work wall and a horizontal block slab and the client installed the specimens into the supporting constructions.

2 Specification

2.1 Supporting construction

The vertical supporting construction was constructed from medium density blocks and measured 1100mm wide x 555mm high creating a 1100mm wide x 495mm high aperture (key to figure 1).

The horizontal supporting construction was constructed from medium density blocks and measured 1500mm wide x 1500mm long with a 1000mm long x 400mm wide aperture centrally located in the block work (key to figure 2).

2.2 Specimen details

Horizontally fitted 'Spanatherm' seal – Floor seal

The 'Spanatherm' seal consisted of two sections of rock mineral fibre slab (density 100kg/m³) measuring 440mm wide x 540mm long x 100mm thick each slab had foil applied to the unexposed face only (key to figure 3). The two slabs were butt jointed together and compressed to fit into the aperture. Aluminium foil tape was then applied over the unexposed face of the joint only (key to figure 4).

Located within the 'Spanatherm' seal was two 'Z' section 0.9mm thick steel brackets (see figure 2) which attached to the right long edge of the slab and were fixed to the face of the supporting construction using 60mm long tapcon masonry screws one in each bracket (key to figure 5).

Vertically fitted 'Intufloor F2' seal – Wall seal

The 'Intufloor F2' seal consisted of two sections of rock mineral fibre slab (density 140kg/m³) one measuring 270mm wide x 415mm high x 50mm thick (key to figure 6) and one measuring 870mm wide x 415mm high x 50mm thick (key to figure 7). Both sections had foil applied to both faces of the slab. The two slabs were joined together using a tongue and groove joint with the central groove measuring 20mm wide x 20mm high to accept the 20mm wide x 20mm high tongue. The two sections were then compressed to fit into the aperture (see figure 2).

3 Test conditions

- 3.1 Where areas of the test specification are ambiguous or open to interpretation the Fire Test Study Group Resolutions No's 70, 71 and 72 have been followed (further specific details are available on request). These Resolutions provide basis of common agreements between the fire test laboratories which are members of this Group.
- 3.2 The ambient temperature of the test area at commencement of test was 22°C.
- 3.3 After the first eight minutes of the test, the furnace pressure was maintained at 4.5 ± 2 Pa with respect to atmosphere, at the underside of the floor section.
- 3.4 The furnace was controlled to follow the temperature/time relationship specified in BS 476: Part 20: 1987 as closely as possible, using the average of four thermocouples suitably distributed within the furnace on the vertical plane. The temperatures recorded are shown graphically in Section 7.1.
- 3.5 The temperature of the unexposed surface of the specimens was monitored by means of three thermocouples fixed to the surface of each specimen, one on each section of slab and one attached to each of the joints. The temperatures recorded are shown graphically in Section 7.1.

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4 Test results

When tested to the general principles BS 476: Part 22: 1987, the requirements of the standard were satisfied for the following periods:



	Integrity	Insulation
'Spanatherm'	136 (one hundred and thirty six) minutes*	111 (one hundred and eleven) minutes
'Intufloor F2'	136 (one hundred and thirty six) minutes*	75 (seventy five) minutes

* The test was terminated at the request of the sponsor. The specimen had not failed the test criteria at this time.

5 Limitations

The results only relate to the behaviour of the element of construction under the particular conditions of test; they are not intended to be the sole criteria for assessing the potential fire performance of the element in use nor do they reflect the actual behaviour in fires.

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over 5 years old should be considered by the user. CIFL will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test to ensure that they are consistent with current practices, and if required may endorse the test report.

Signature:		
Name:	Matthew Cox	Jonathan Osborn
Title:	Test Engineer	Technical Manager
Date of issue:	11 September 2006	

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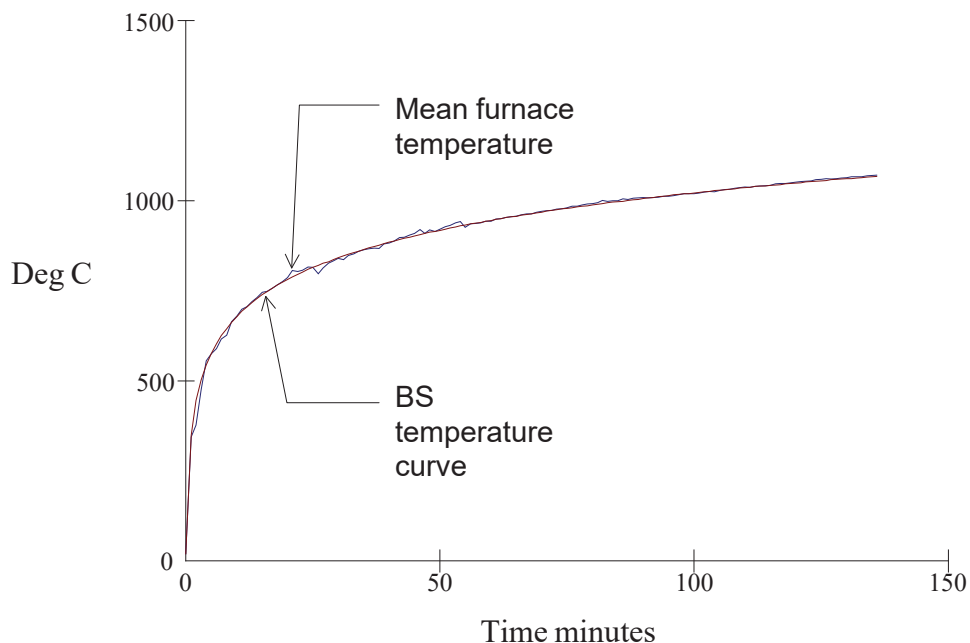
6 Observations

All comments relate to the unexposed face unless otherwise specified.

Time (minutes)	Comments
00.00	Test started.
10.14	Reached pressure of 4.5 Pa at the underside of the floor section.
31.52	Front, there is smoke issuing from small holes in the face.
60.00	Both specimens satisfactory.
120.00	Both specimens satisfactory.
132.00	Both specimens satisfactory.
136.26	Test terminated.

7 Furnace temperature curve

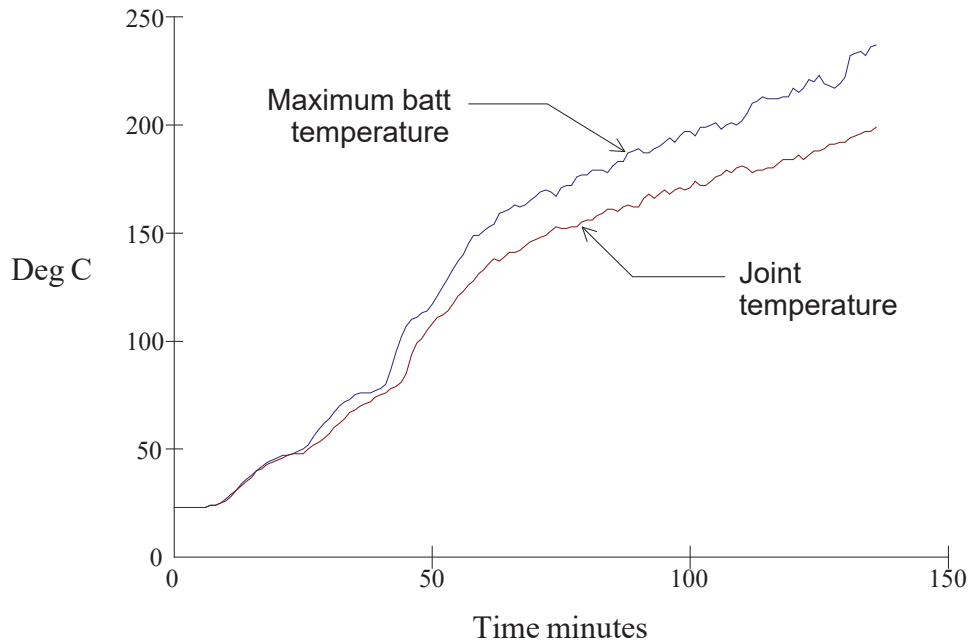
7.1 Furnace temperature curve



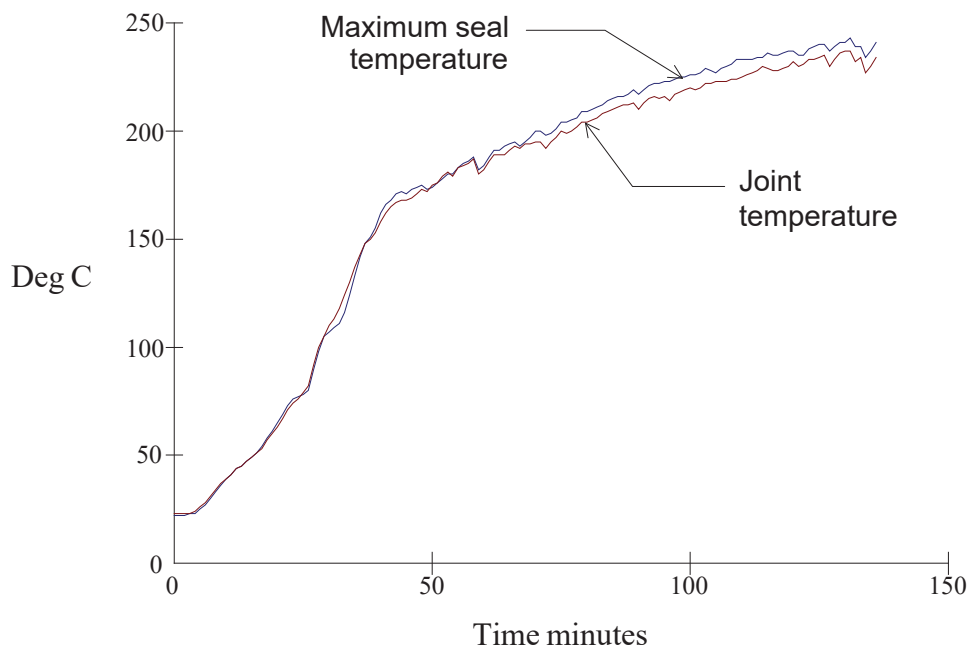
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Unexposed face temperature curves

'Spanatherm' batt



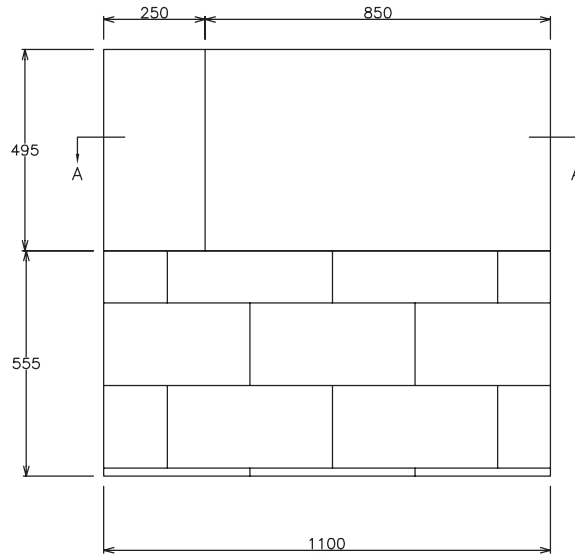
'Intufloor F2' seal



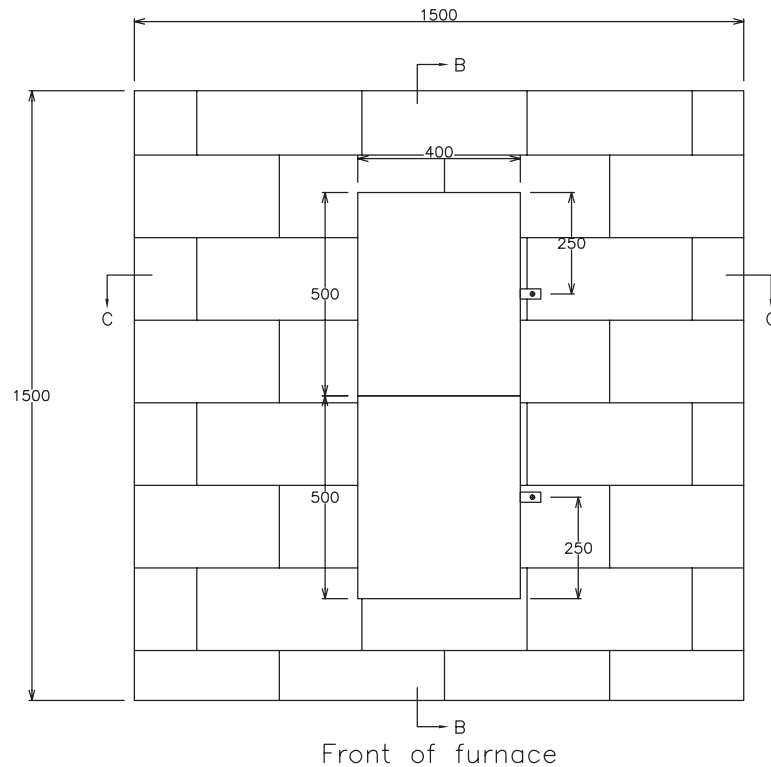
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Vertical Specimen

Top of furnace



Horizontal Specimen



Front of furnace



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High Wycombe, Buckinghamshire, HP14 4ND, UK.
Tel: +44 (0)1494 569800 Fax: +44 (0)1494 564895

Title

Unexposed face elevation
(All dimensions in mm)

Date Drawn
18/07/06

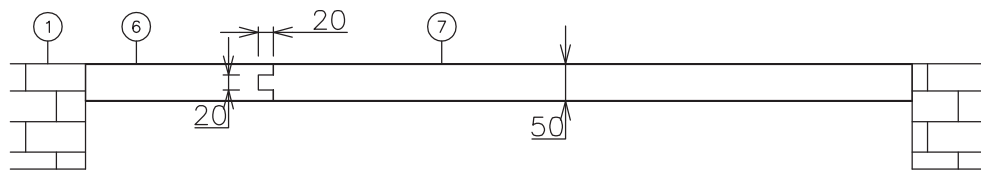
Drawn By
MTC

Scale
NTS

Project No.
Chilt/IF06026

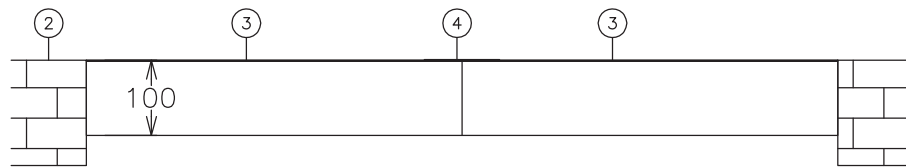
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Section A-A



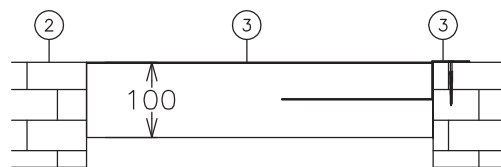
Fire side

Section B-B



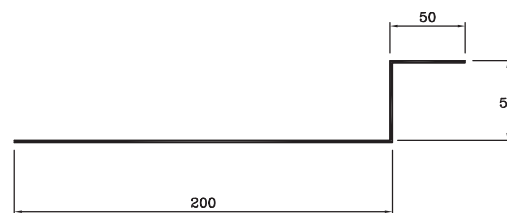
Fire side

Section C-C



Fire side

Bracket detail



Chiltern House, Stocking Lane, Hughenden Valley
High Wycombe, Buckinghamshire, HP14 4ND, UK.

Tel: +44 (0)1494 569800 Fax: +44 (0)1494 564895

Title

Cross sections
(All dimensions in mm)

Date Drawn
18/07/06

Drawn By
MTC

Scale
NTS

Project No.
Chilt/IF06026

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