

# A Handbook of thermal bridging details incorporating Monarfloor Wall Cap — Lamatherm System

Book 4 — Thermal bridging solutions for party wall  
details with external wall

Prepared for *Icopal Ltd*

Monarfloor  
Acoustic Systems



by the *BBA* and *RDL*

**Constructive Details Ltd**  
Bucknalls Lane,  
Watford  
Hertfordshire WD25 9BA

**t:** + 44 (0)1923 665300  
**f:** + 44 (0)1923 665301  
**e:** [enquiries@constructivedetails.co.uk](mailto:enquiries@constructivedetails.co.uk)  
**w:** [www.constructivedetails.co.uk](http://www.constructivedetails.co.uk)



©2013

Copyright is owned by Constructive Details Ltd.  
Copying or reproduction of the contents is not permitted  
without the consent of Constructive Details Ltd.

# Table of Contents

## List of Constructive Details

## How to use this handbook

## Front page — Illustration

## Main body — $\psi$ -values

## Last page — Checklist

## External wall. Party wall. CD0053 — CD0055

### Purpose of the handbook

This handbook was prepared for Icopal Ltd (they can be contacted at [www.icopal.com](http://www.icopal.com)) and it provides three thermal bridging junction details for a new dwelling, incorporating the Monarfloor Wall Cap – Lamatherm System. The details are for a masonry external wall with full fill and partial fill cavity wall insulation, constructed using blocks of different conductivity values and for a timber frame wall with a clear cavity. The drawings provided are for typical details and show all the elements essential in achieving the calculated  $\psi$ -values. All other site requirements and all relevant building regulations must be taken into consideration when implementing the details. This includes any requirements for acoustic performance as they relate to those details.

Each detail in this handbook includes drawings of the junction,  $\psi$ -values calculated by an experienced thermal modeller and a process checklist for use on site to facilitate the achievement of the calculated  $\psi$ -values.

### List of Constructive Details

There are a total of three details, labelled CD0053, CD0054 and CD0055. To provide additional guidance for designers and specifiers the corresponding E numbers given in the latest SAP conventions document are also included.

The Handbook covers the use of the product Monarfloor Wall Cap — Lamatherm System in masonry and timber frame constructions.

Detail number	Detail title	SAP Ref
CD0053	Monarfloor Wall Cap – Lamatherm System External masonry cavity wall. Full Fill — Party wall between dwellings	E18
CD0054	Monarfloor Wall Cap – Lamatherm System External timber frame wall — Party wall between dwellings	E18
CD0055	Monarfloor Wall Cap — Lamatherm System External masonry cavity wall. Partial Fill — Party wall between dwellings	E18

## How to use this handbook

The details have been prepared in line with the range of U values appropriate to achieve compliance within The Building Regulations 2010 (England and Wales), Part L. Therefore all of the building elements have an upper U value limit of  $0.30 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$  for a wall inline with the limiting fabric parameters given in Approved Document L1A.

The  $\psi$ -values are provided for different bands of U values and stud dimensions. For each band the  $\psi$ -value is calculated for the worst case after considering the effect of thickness and conductivity of insulation independently. This  $\psi$ -value can therefore be taken for the complete range of U values quoted.

In all of the details the wall finish is drawn as per the client requirements. The  $\psi$ -values are also valid for intermediate thermal conductivities of the blocks shown in the three details. It is also possible to use either rendered block or brick for the outer leaf. As a general rule, unless a specific solution for a wall or floor finish is either indicated in the Notes section or is explicitly mentioned in the annotations, it should be considered optional. The main driver in selecting the materials for each detail would be to achieve the U value bands as provided in each detail.

The manufacturer has provided specific air tightness solutions with regards to their system incorporated in the details. This includes the use of clips and also parge coat (8 mm sand and cement parge coat on both external and party walls) dependant upon the conductivity/density of the blocks. It is also noted that all three details have been modelled using a full fill and a clear party wall cavity. The  $\psi$ -values quoted for the case of a full or an empty party wall cavity are not significantly different, and therefore will apply in both cases.

A series of tips on interpreting the information in each Constructive Detail, is given below, starting from the first to the last page.

## Front page — Illustration

### *The drawing*

The front page drawing is in full colour, and the annotations identify the critical parameters that must be observed in order for this junction to achieve the calculated  $\psi$ -values. The annotations are also consistent with the wording used in the Notes section, to make it easier to read and understand the important elements.

### *The notes*

This section relates to the steps in the build process of the junction that are essential for the construction of the detail with regards to achieving the stated  $\psi$ -values. Any other guidance by all relevant Building Regulations must be followed and this detail focuses only on the thermal performance and provides basic guidance with regards to air tightness.

## Main body — $\psi$ -values

### *The drawing*

The second drawing provides additional information to that given on the front page. It highlights in colour the product for which these details have been produced, in this case, Monarfloor Wall Cap — Lamatherm System. It also indicates the position of the air barrier that must be maintained and provides the necessary information to enable the U value calculation, based on the examples provided.

### $\psi$ -values

A table of  $\psi$ -values (psi-values) and temperature factors is provided for each detail. The banding of U values and the dimensions of the studs provide the specifier with the flexibility to use different U values for the main elements, but ensure that the calculated  $\psi$ -value is still valid within that range. The  $\psi$ -values were calculated and checked by an experienced individual, as required by Approved Document L1A, using the software THERM.

The temperature factor is a property of the construction and is used to assess the risk of surface condensation or mould growth. This parameter is provided in all the junctions. In all cases the calculated values are higher than the critical temperature factor for dwellings (0.75) as given in BRE Information Paper IP 1/06 *Assessing the effects of thermal bridging at junctions and around openings*, which limits the risk of surface condensation or mould growth.

All  $\psi$ -values have been calculated in accordance with BRE Report 497 : 2007 *Conventions for calculating linear thermal transmittance and temperature factors* and other relevant standards quoted within that document.

## U value examples

Some indicative guidance on the insulation thickness and thermal conductivity values required to achieve the U value example constructions in combination with the Monarfloor Wall Cap — Lamatherm System, are also provided. Depending on the complexity of the detail, there are one or more U value bands available. There is no specification for the type of insulation used, but the necessary information is provided to enable the calculations to be repeated. The U values were calculated in accordance with BRE Report (BR 443: 2006) *Conventions for U-value calculations* and other relevant British Standards.

A fully detailed U value calculation using the stated thickness and thermal conductivity values may produce lower U values than that indicated in the details, as only the minimum amount of information is provided, such as the use of different conductivity blocks, thickness and conductivity of insulation. Other combinations of thicknesses and conductivities can be used to achieve the U values, and as long as these are within the bands provided, the corresponding  $\psi$ -value will still be valid. This provides the user with considerable flexibility compared to more traditional representations of  $\psi$ -values, while maintaining the accuracy and technical rigour of the calculation.

## Last page — Checklist

### Guidance checklist

This part of the detail relates to the quality assurance aspect, which used in combination with guidance given on the first page, would provide reassurance to the builder that this detail will perform as expected. The Notes box is intended for the inspector or the site supervisor to record any additional information or changes that may have occurred to the final built detail. It can be used as a log of the work done for each detail and as a process for checking by the site supervisor, to ensure the detail was constructed as detailed and so that the calculated  $\psi$ -values can be achieved.

## Terms and Conditions

Please refer to [www.constructivedetails.co.uk](http://www.constructivedetails.co.uk) for full terms and conditions.

You may not edit or amend the contents or format or otherwise incorporate them into any other publication or work or media.

### Constructive Details Ltd

Bucknalls Lane,  
Watford  
Hertfordshire WD25 9BA

**t:** + 44 (0)1923 665300

**f:** + 44 (0)1923 665301

**e:** [enquiries@constructivedetails.co.uk](mailto:enquiries@constructivedetails.co.uk)

**w:** [www.constructivedetails.co.uk](http://www.constructivedetails.co.uk)



©2013

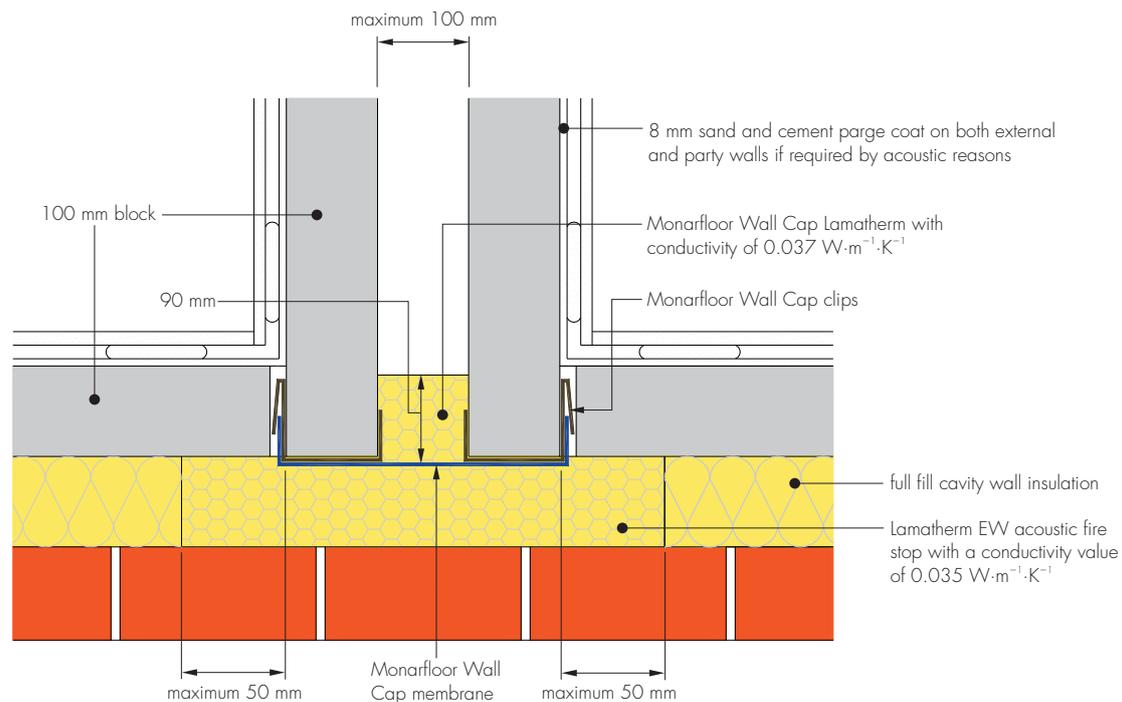
Copyright is owned by Constructive Details Ltd.  
Copying or reproduction of the contents is not permitted  
without the consent of Constructive Details Ltd.

## Monarfloor Wall Cap — Lamatherm System

External masonry cavity wall. Full Fill —  
Party wall between dwellings  
CD0053

constructive

**DETAILS**

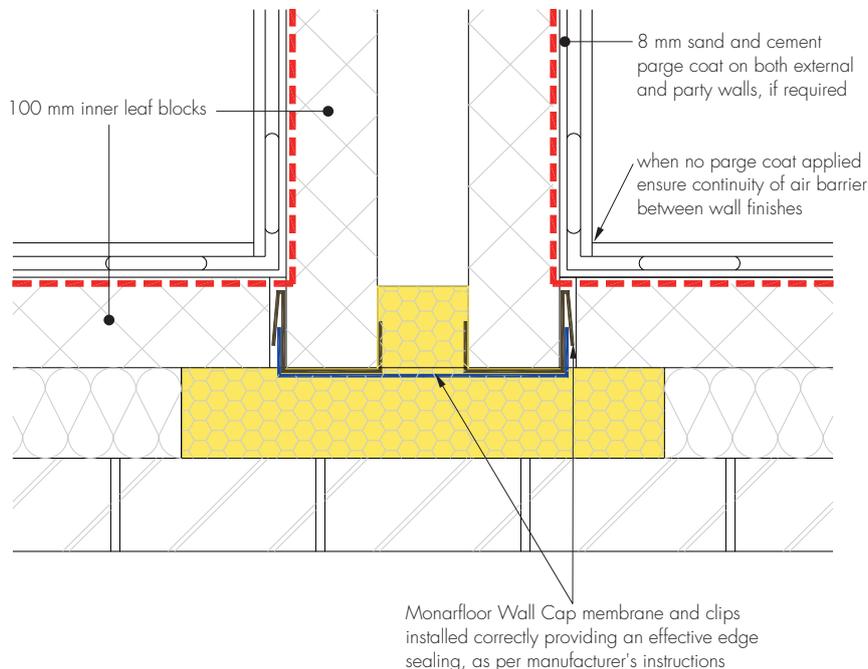


This indicative guidance illustrates good practice for design and construction with respect to achieving thermal performance and air barrier continuity only. It must be implemented taking due regard of site conditions and all other requirements imposed by Building Regulations.

### Notes

- maximum party wall cavity width of 100 mm, empty or full fill with insulation (not shown in drawing)
- 100 mm wide blocks both for external and party wall
- Monarfloor Wall Cap thermal conductivity values is  $0.037 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and the insulation extends in the party wall cavity by 90 mm
- insulated fire stop thermal conductivity of  $0.035 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and extends in the external wall cavity 50 mm maximum
- ensure Monarfloor Wall Cap — Lamatherm System achieves an effective edge sealing and is installed correctly and in accordance to the manufacturer's instructions
- use 8 mm sand and cement parge coat as per manufacturer's instructions for acoustic and air tightness purposes if required and dependant upon conductivity of the blocks
- ensure continuity of the insulation throughout the junction leaving no gaps
- ensure cavities and wall ties are kept clear of mortar or other debris during construction
- ensure that the full fill wall insulation is installed correctly between the inner and outer leaf of the cavity wall with no gaps.

Monarfloor Wall Cap — Lamatherm System  
 External masonry cavity wall. Full Fill —  
 Party wall between dwellings  
 CD0053



----- denotes 'notional' line of continuous air barrier to be maintained

This indicative guidance illustrates good practice for design and construction with respect to achieving thermal performance and air barrier continuity only. It must be implemented taking due regard of site conditions and all other requirements imposed by Building Regulations.

### Calculated $\psi$ -values for this detail

Inner leaf block (external and party wall conductivity) ( $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ )	Wall U value less than or equal to $0.20 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$		Wall U value between $0.21$ and $0.25 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$		Wall U value between $0.26$ and $0.30 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$	
	$\psi$ -value ( $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ )	Temperature factor	$\psi$ -value ( $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ )	Temperature factor	$\psi$ -value ( $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ )	Temperature factor
0.19	0.051	0.96	0.061	0.95	0.070	0.94
0.75	0.057	0.97	0.069	0.96	0.081	0.94
1.35	0.060	0.97	0.072	0.96	0.087	0.95

The  $\psi$ -value is applied to each dwelling.

*In all the example calculations, wall ties are stainless steel double triangle types ( $2.5 \text{ per m}^2$ ), with 100 mm inner leaf blocks.*

Wall U values  $\leq 0.30 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$  can be achieved with:

- $95 \text{ mm} \leq$  insulation thickness  $\leq 115 \text{ mm}$  with  $\lambda \leq 0.036 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $0.19 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less
- $110 \text{ mm} \leq$  insulation thickness  $\leq 125 \text{ mm}$  with  $\lambda \leq 0.036 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $1.35 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less.

Wall U values  $\leq 0.25 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$  can be achieved with:

- $120 \text{ mm} \leq$  insulation thickness  $\leq 150 \text{ mm}$  with  $\lambda \leq 0.036 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $0.19 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less
- $130 \text{ mm} \leq$  insulation thickness  $\leq 160 \text{ mm}$  with  $\lambda \leq 0.036 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $1.35 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less.

Monarfloor Wall Cap — Lamatherm System  
External masonry cavity wall. Full Fill —  
Party wall between dwellings  
CD0053

Wall U values  $\leq 0.20 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$  can be achieved with:

- 155 mm minimum insulation thickness with  $\lambda \leq 0.036 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $0.19 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less
- 165 mm minimum insulation thickness with  $\lambda \leq 0.036 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $1.35 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less.

Monarfloor Wall Cap – Lamatherm System  
 External masonry cavity wall. Full Fill —  
 Party wall between dwellings.  
 CD0053

**Guidance checklist**

Date: ..... Site manager/supervisor: .....

Site name: ..... Plot No: .....

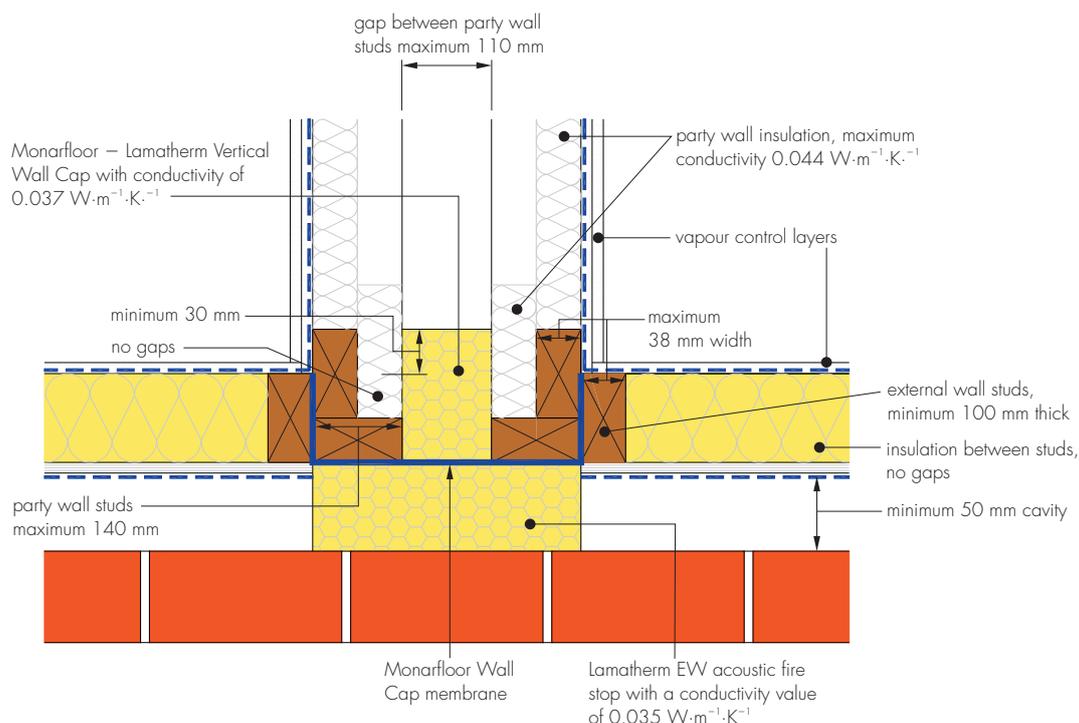
Ref	Item	Yes/No	Inspected (initials and date)
1	Is the block width for the external and party wall 100 mm?	<input type="checkbox"/> <input type="checkbox"/>	.....
2	Is the party wall cavity width 100 mm or less?	<input type="checkbox"/> <input type="checkbox"/>	.....
3	Is the conductivity of the Monarfloor Wall Cap 0.037 W·m <sup>-1</sup> ·K <sup>-1</sup> and extends into the party wall cavity 90 mm?	<input type="checkbox"/> <input type="checkbox"/>	.....
4	Is the conductivity of fire stop 0.035 W·m <sup>-1</sup> ·K <sup>-1</sup> and extends into the external wall cavity 50 mm or less?	<input type="checkbox"/> <input type="checkbox"/>	.....
5	Is the Monarfloor Wall Cap — Lamatherm System installed correctly?	<input type="checkbox"/> <input type="checkbox"/>	.....
6	If no parge coat is applied on both external and party walls, is the continuity of air barrier achieved?	<input type="checkbox"/> <input type="checkbox"/>	.....
7	Is the full fill wall insulation installed correctly with no gaps?	<input type="checkbox"/> <input type="checkbox"/>	.....
8	Is the full fill wall insulation appropriate for moisture and wall exposure?	<input type="checkbox"/> <input type="checkbox"/>	.....

**Notes** (include details of any corrective action)



## Monarfloor Wall Cap — Lamatherm System

External timber frame wall —  
Party wall between dwellings  
CD0054

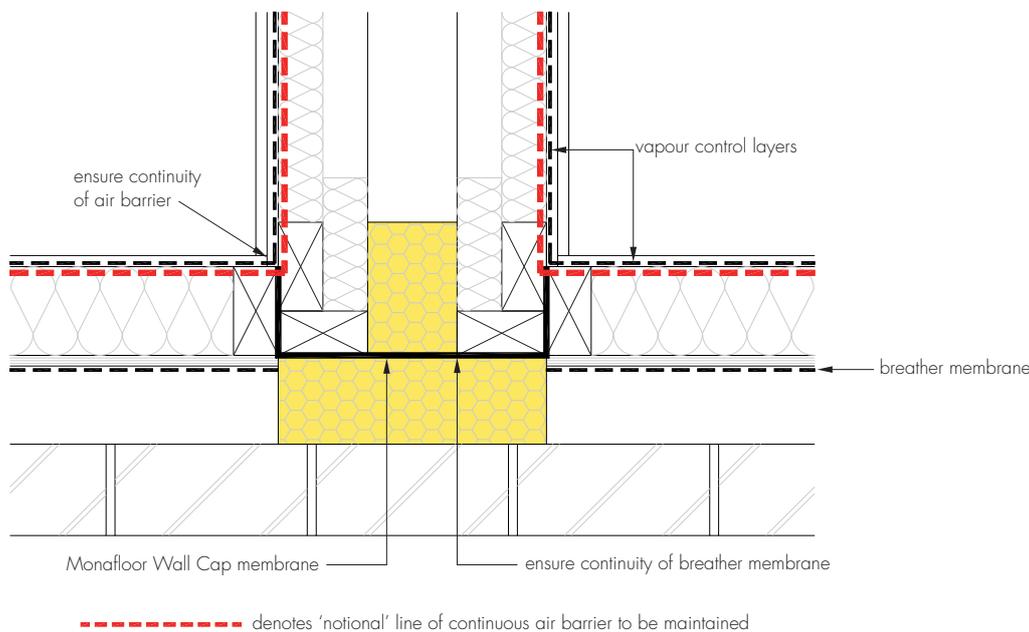


This indicative guidance illustrates good practice for design and construction with respect to achieving thermal performance and air barrier continuity only. It must be implemented taking due regard of site conditions and all other requirements imposed by Building Regulations.

### Notes

- maximum gap between party wall studs 110 mm, with or without sheathing and partial or full fill with insulation (not shown in drawing)
- maximum party wall studs 140 mm
- external wall studs minimum 100 mm thickness and maximum 38 mm width
- Monarfloor Wall Cap thermal conductivity values is 0.037 W·m<sup>-1</sup>·K<sup>-1</sup> and extends into the party wall at least 30 mm from external wall stud
- insulated fire stop thermal conductivity of 0.035 W·m<sup>-1</sup>·K<sup>-1</sup> and covers the full width of the abutting wall
- ensure Monarfloor Wall Cap — Lamatherm System achieves an effective edge sealing and is installed correctly in accordance to manufacturer's instructions
- party wall insulation with a maximum conductivity of 0.044 W·m<sup>-1</sup>·K<sup>-1</sup>
- ensure that the party wall insulation fill the gaps between Monarfloor - Lamatherm Vertical Wall Cap and studs
- ensure that external wall insulation is tightly fitted between timber studs at corner junctions leaving no gaps
- ensure that party wall and external wall vapour control layers are lapped to form continuous air barrier
- ensure that breather membranes are lapped to form a continuous breather membrane.

Monarfloor Wall Cap — Lamatherm System  
 External timber frame wall —  
 Party wall between dwellings  
 CD0054



This indicative guidance illustrates good practice for design and construction with respect to achieving thermal performance and air barrier continuity only. It must be implemented taking due regard of site conditions and all other requirements imposed by Building Regulations.

### Calculated $\psi$ -values for this detail

#### Gap between party wall studs less or equal to 75 mm

Party wall studs	External wall studs between 100 mm and 139 mm		External wall studs greater or equal to 140 mm	
	$\psi$ -value ( $W \cdot m^{-1} \cdot K^{-1}$ )	Temperature factor	$\psi$ -value ( $W \cdot m^{-1} \cdot K^{-1}$ )	Temperature factor
Less or equal to 50 mm	0.058	0.90	0.048	0.92
Between 51 mm and 95 mm	0.066	0.89	0.056	0.91
Between 96 mm and 140 mm	0.076	0.89	0.064	0.91

#### Gap between party wall studs between 76 mm and 110 mm

Party wall studs	External wall studs between 100 mm and 139 mm		External wall studs greater or equal to 140 mm	
	$\psi$ -value ( $W \cdot m^{-1} \cdot K^{-1}$ )	Temperature factor	$\psi$ -value ( $W \cdot m^{-1} \cdot K^{-1}$ )	Temperature factor
Less or equal to 50 mm	0.061	0.90	0.051	0.92
Between 51 mm and 95 mm	0.070	0.89	0.059	0.91
Between 96 mm and 140 mm	0.079	0.89	0.066	0.91

The  $\psi$ -value is applied to each dwelling.

These values are valid for external wall  $U \leq 0.30 W \cdot m^{-2} \cdot K^{-1}$ .

Wall  $U$  values  $\leq 0.30 W \cdot m^{-2} \cdot K^{-1}$  can be achieved with 100 mm minimum insulation thickness with  $\lambda \leq 0.023 W \cdot m^{-1} \cdot K^{-1}$  between timber studs (15%).

Monarfloor Wall Cap — Lamatherm System  
 External timber frame wall —  
 Party wall between dwellings  
 CD0054

Guidance checklist

Date: ..... Site manager/supervisor: .....

Site name: ..... Plot No: .....

Ref	Item	Yes/No Inspected (initials and date)
1	Is the gap between party wall studs 110 mm or less?	<input type="checkbox"/> <input type="checkbox"/> .....
2	Are the party wall studs 140 mm or less?	<input type="checkbox"/> <input type="checkbox"/> .....
3	Is the thickness of the external wall studs 100 mm or more and the width 38 mm or less?	<input type="checkbox"/> <input type="checkbox"/> .....
4	Is the conductivity of the Monarfloor Wall Cap $0.037 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ and extends into the party wall cavity 30 mm from external wall stud?	<input type="checkbox"/> <input type="checkbox"/> .....
5	Is the conductivity of fire stop $0.035 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ and covers the full width of the abutting wall?	<input type="checkbox"/> <input type="checkbox"/> .....
6	Is the Monarfloor Wall Cap — Lamatherm System installed correctly?	<input type="checkbox"/> <input type="checkbox"/> .....
7	Is the conductivity of the party wall $0.044 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ or less?	<input type="checkbox"/> <input type="checkbox"/> .....
8	Does the party wall insulation fill the gaps between Monarfloor — Lamatherm Vertical Wall Cap and studs leaving no gaps?	<input type="checkbox"/> <input type="checkbox"/> .....
9	Is the external wall insulation tightly fitted between timber studs leaving no gaps?	<input type="checkbox"/> <input type="checkbox"/> .....
10	Is the continuity of the vapour control layer (air barrier) achieved?	<input type="checkbox"/> <input type="checkbox"/> .....
11	Are the breather membranes lapped forming a continuous membrane?	<input type="checkbox"/> <input type="checkbox"/> .....

Notes (include details of any corrective action)

**Constructive Details Ltd**

Bucknalls Lane,  
 Watford  
 Hertfordshire WD25 9BA

**t:** + 44 (0)1923 665300

**f:** + 44 (0)1923 665301

**e:** enquiries@constructivedetails.co.uk

**w:** www.constructivedetails.co.uk

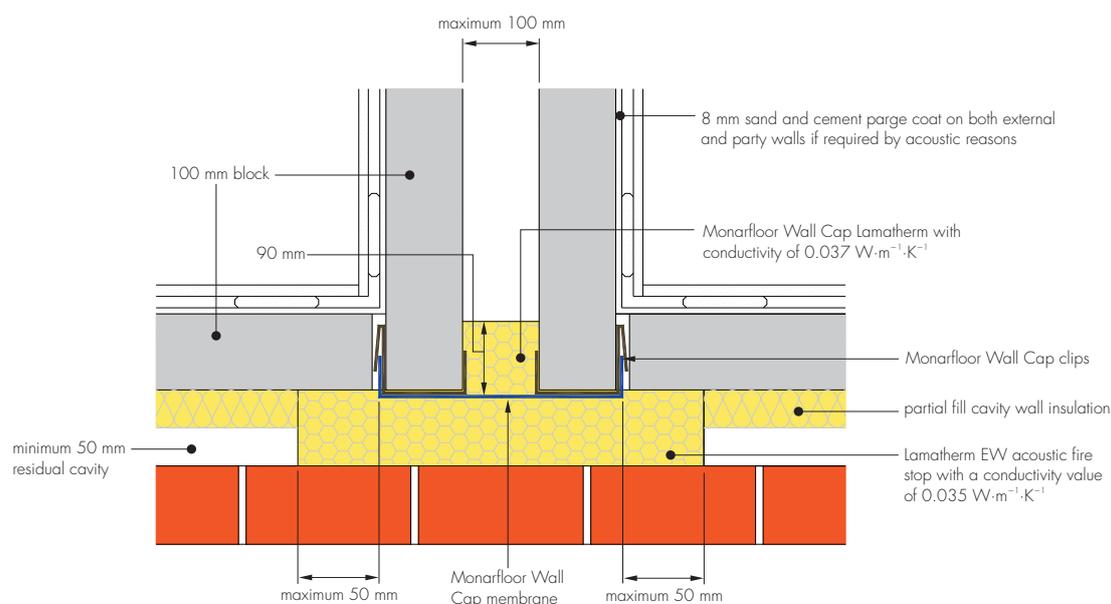


©2013

Copyright is owned by Constructive Details Ltd.  
 Copying or reproduction of the contents is not permitted  
 without the consent of Constructive Details Ltd.

## Monarfloor Wall Cap — Lamatherm System

External masonry cavity wall. Partial Fill —  
Party wall between dwellings  
CD0055

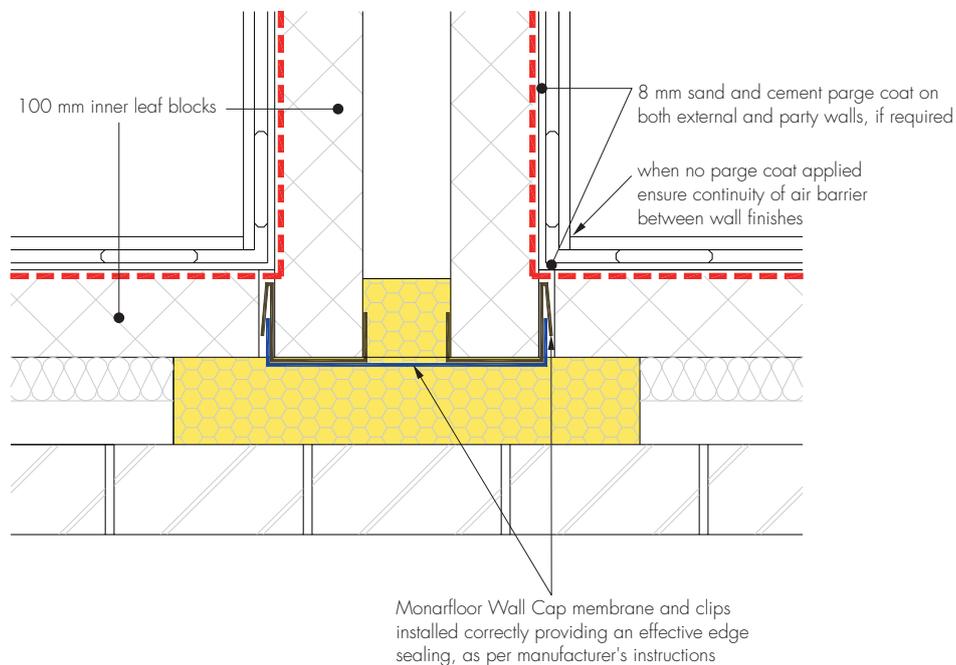


This indicative guidance illustrates good practice for design and construction with respect to achieving thermal performance and air barrier continuity only. It must be implemented taking due regard of site conditions and all other requirements imposed by Building Regulations.

### Notes

- maximum party wall cavity width of 100 mm, empty or full fill with insulation (not shown in drawing)
- 100 mm wide blocks both for external and party wall
- Monarfloor Wall Cap thermal conductivity values is  $0.037 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and the insulation extends in the party wall cavity by 90 mm
- insulated fire stop thermal conductivity of  $0.035 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and extends in the external wall cavity 50 mm maximum
- maintain a minimum 50 mm of residual external wall cavity. For residual cavities less than 50 mm the  $\psi$ -values calculated for the full fill case can be applied
- ensure Monarfloor Wall Cap — Lamatherm System achieves an effective edge sealing and is installed correctly and in accordance to the manufacturer's instructions
- Use 8 mm sand and cement parge coat as per manufacturer's instructions for acoustic and air tightness purposes if required
- ensure continuity of the insulation throughout the junction leaving no gaps
- ensure cavities and wall ties are kept clear of mortar or other debris during construction
- ensure that the partial fill wall insulation is installed correctly between the inner and outer leaf of the cavity wall with no gaps.

Monarfloor Wall Cap — Lamatherm System  
 External masonry cavity wall. Partial Fill —  
 Party wall between dwellings  
 CD0055



----- denotes 'notional' line of continuous air barrier to be maintained

This indicative guidance illustrates good practice for design and construction with respect to achieving thermal performance and air barrier continuity only. It must be implemented taking due regard of site conditions and all other requirements imposed by Building Regulations.

### Calculated $\psi$ -values for this detail

Inner leaf block (external and party wall) conductivity ( $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ )	Wall U value less than or equal to $0.20 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$		Wall U value between $0.21$ and $0.25 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$		Wall U value between $0.26$ and $0.30 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$	
	$\psi$ -value ( $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ )	Temperature factor	$\psi$ -value ( $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ )	Temperature factor	$\psi$ -value ( $\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ )	Temperature factor
0.19	0.041	0.96	0.048	0.95	0.052	0.95
0.75	0.045	0.97	0.052	0.96	0.059	0.96
1.35	0.046	0.97	0.054	0.96	0.061	0.96

The  $\psi$ -value is applied to each dwelling.

*In all the example calculations, wall ties are stainless steel double triangle types ( $2.5 \text{ per m}^2$ ), with 100 mm inner leaf blocks and 50 mm low  $\epsilon$  residual cavity.*

Wall U values  $\leq 0.30 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$  can be achieved with:

- 50 mm  $\leq$  foil-faced insulation thickness  $\leq$  55 mm with  $\lambda \leq 0.022 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $0.19 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less
- 60 mm  $\leq$  foil-faced insulation thickness  $\leq$  65 mm with  $\lambda \leq 0.022 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $1.35 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less.

Wall U values  $\leq 0.25 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$  can be achieved with:

- 60 mm  $\leq$  foil-faced insulation thickness  $\leq$  80 mm with  $\lambda \leq 0.022 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $0.19 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less
- 70 mm  $\leq$  foil-faced insulation thickness  $\leq$  90 mm with  $\lambda \leq 0.022 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $1.35 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less.

Monarfloor Wall Cap — Lamatherm System  
External masonry cavity wall. Partial Fill —  
Party wall between dwellings  
CD0055

Wall U values  $\leq 0.20 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$  can be achieved with:

- 85 mm minimum foil-faced insulation thickness with  $\lambda \leq 0.022 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $0.19 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less
- 95 mm minimum foil-faced insulation thickness with  $\lambda \leq 0.022 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  and inner block conductivity of  $1.35 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$  or less.

Monarfloor Wall Cap — Lamatherm System  
 External masonry cavity wall. Partial Fill —  
 Party wall between dwellings  
 CD0055

Guidance checklist

Date: ..... Site manager/supervisor: .....

Site name: ..... Plot No: .....

Ref	Item	Yes/No	Inspected (initials and date)
1	Is the block width for the external and party wall 100 mm?	<input type="checkbox"/> <input type="checkbox"/>	.....
2	Is the party wall cavity width 100 mm or less?	<input type="checkbox"/> <input type="checkbox"/>	.....
3	Is the residual external wall cavity 50 mm or more?	<input type="checkbox"/> <input type="checkbox"/>	.....
4	Is the conductivity of the Monarfloor Wall Cap 0.037 W·m <sup>-1</sup> ·K <sup>-1</sup> and extends into the party wall cavity 90 mm?	<input type="checkbox"/> <input type="checkbox"/>	.....
5	Is the conductivity of fire stop 0.035 W·m <sup>-1</sup> ·K <sup>-1</sup> and extends into the external wall cavity 50 mm or less?	<input type="checkbox"/> <input type="checkbox"/>	.....
6	Is the Monarfloor Wall Cap – Lamatherm System installed correctly?	<input type="checkbox"/> <input type="checkbox"/>	.....
7	If no parge coat is applied on both external and party walls, is the continuity of air barrier achieved?	<input type="checkbox"/> <input type="checkbox"/>	.....
8	Is the partial fill wall insulation installed correctly with no gaps?	<input type="checkbox"/> <input type="checkbox"/>	.....

Notes (include details of any corrective action)

