

POROTHERM MONOLITHIC GUIDE

PRECISION ENGINEERED CLAY BLOCKS

ROOF / BRICK / PAVER / FACADE / BLOCK




Wienerberger

WHAT IS POROTHERM AND WHY SHOULD YOU USE IT?

A modern construction method with the reassuringly traditional values of clay, the Porotherm Monolithic System gives you the ability to construct a water-tight structure, when designed appropriately.

Porotherm Monolithic consists of a multi-cellular clay block measuring 249mm in height. When Wienerberger thin joint mortar is applied with the roller applicator, a 1mm thick bed is achieved and will then fit into a coursing height of 250mm. Wienerberger thin bed mortar comes in a bag and is dry mixed. When mixed with water on site in accordance with the instructions it will lay one entire pack of blocks.

Porotherm blocks are perforated clay blocks manufactured by Wienerberger and intended for use in masonry which is above DPC and protected against water penetration. Protection may be provided to external masonry by using a suitable render, cladding or external wall insulation system. The bed surfaces of the blocks are ground flat and parallel, so that the target thickness of the bed joint is 1mm. The cross-joints are formed by interlocking features in the header ends of the units and contain no mortar.

Porotherm products have been used successfully in Europe for over 30 years. Porotherm products comply with BS EN 771-1 and can be used in masonry designed in accordance with BS EN 1996-1-1.

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UK MONOLITHIC RANGE

External Walls

T9 System	Material Code	Length	Width	Height
Porotherm T9 365 (6N)	32572505	248	365	249
Porotherm T9 365 (8N)	32872505	248	365	249
Porotherm T9 425 (6N)	31872615	248	425	249
Porotherm T9 425 (8N)	32872605	248	425	249
Porotherm Half Block 365 (T9)	33320515	248	365	121
Porotherm Half Block 425 (T9)	33390645	248	425	121

T7 System	Material Code	Length	Width	Height
Porotherm T7 365 MW	33352506	248	365	249
Porotherm T7 425 MW	33352605	248	425	249
Porotherm T7 490 MW	33352635	248	490	249
Porotherm Half Block T7 365 MW	33352505	248	365	121
Porotherm Half Block T7 425 MW	33352625	248	425	121
Porotherm Half Block T7 490 MW	33352725	248	490	121



NOTE:

Specified strengths denote the block strength class. 6N has a mean strength of $\geq 7.5\text{N/mm}^2$ and 8N has a mean strength of $\geq 10\text{N/mm}^2$.

BLOCK RANGE

Internal Walls

	Material Code	Length	Width	Height
Porotherm ZWP Plan T 115 (0.8)	32504135	498	115	249
Porotherm Plan T 175 (0.8)	32803295	498	175	249
Porotherm Plan T 240 (0.8)	32803396	373	240	249
Porotherm PFZ T 240	32505305	373	240	249
Porotherm ZWP Plan T 115 (1.2) *	31603135	373	115	249
Porotherm Plan T 175 (1.2) *	31603256	373	175	249

NOTE:

*Denotes acoustic blocks.



PLAN-T 175



PFZ-T 240*



ZWP PLAN-T 115

* Blocks are filled in situ with a concrete of minimum strength class C12/15 with aggregates of greater than 8mm but not to exceed 16mm and a flow consistency of F4/F5.

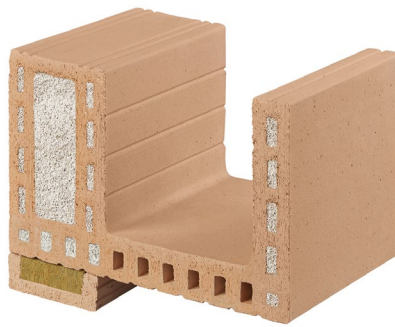
BLOCK RANGE

System Components

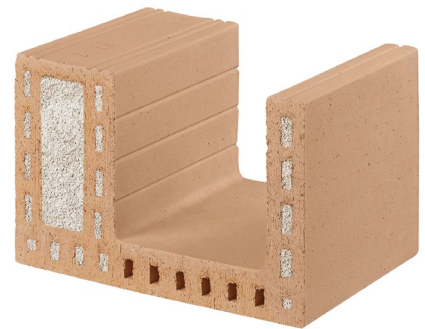
	Material Code	Length	Width	Height
Porotherm DRS Neo 20/12	13578807	498	120	199
U Schale 240	32830315	250	240	238
U Schale 365	32830505	250	365	238
WU Schale Without Stop 365	32833505	250	365	238
WU Schale Without Stop 425	32833605	250	425	238
WU Schale With Stop 365	32803575	250	365	238
WU Schale With Stop 425	32833675	250	425	238
Porotherm 115 Lintel	See lintel section	Various	115	113
Porotherm 175 Lintel	See lintel section	Various	175	113
Porotherm 300 Thermally Broken Lintel	See lintel section	Various	300	113
Porotherm 365 Thermally Broken Lintel	See lintel section	Various	365	113
P-AS 120/45	32106105	250	120	45
P-AS 120/60	32106115	250	120	60
P-AS 175/60	32106125	250	175	60



DRS NEO



WU SCHALE WITH STOP



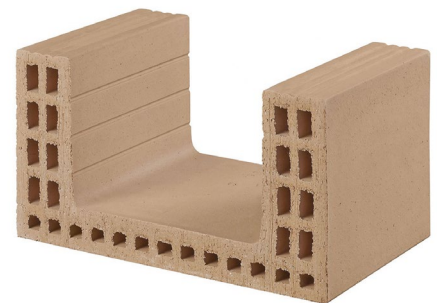
WU SCHALE WITHOUT STOP



THERMALLY BROKEN LINTEL



115X113 LINTEL



U SCHALE

U-VALUE TABLE

Dri Lined

U-value W/m ² K	Block Type				
	T9 365	T7 MW 365	T9 425	T7 MW 425	T7 MW 490
0.23	✓				
0.21			✓		
0.19		✓			
0.18					
0.16				✓	
0.15					
0.14					✓

Monolithic Block Types

Our Monolithic blocks are available in the following different sizes; 365, 425, 490 and 500mm.

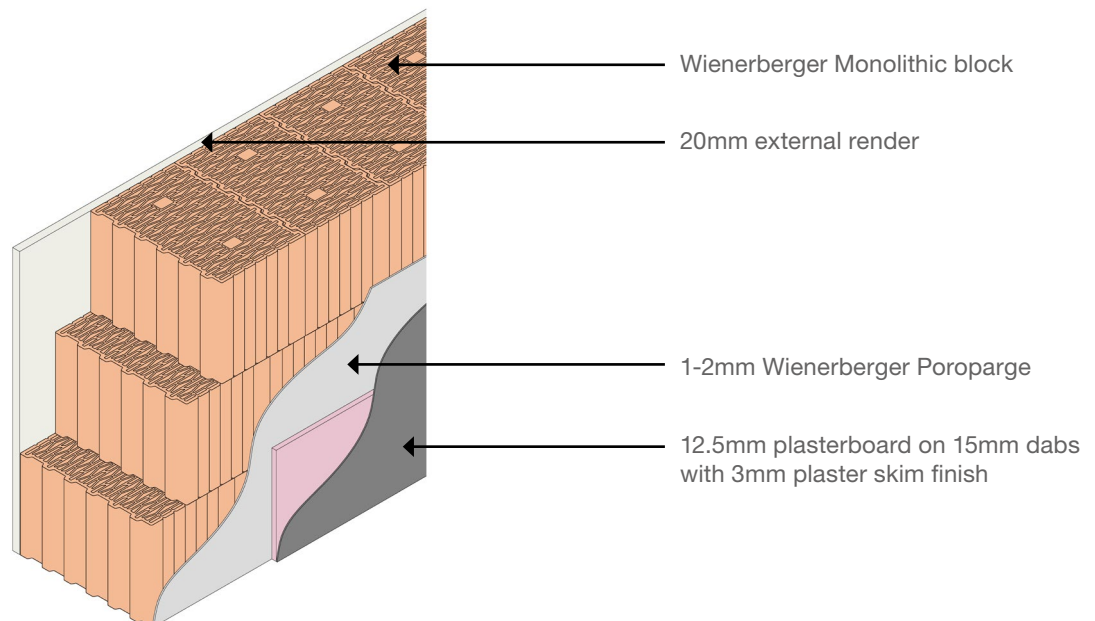
All of the above block sizes have a length of 248mm and a height of 249mm.

The 'T' prefix corresponds to the Thermal Conductivity of the block; e.g. T9 = 0.09 (W/mK).

The 'MW' prefix indicate that the blocks are filled with mineral wool to provide optimal insulative properties.

The values shown within the table on the left are based on the wall build-up below comprising 20mm external render with plasterboard on dabs with plaster skim finish internally.

Dri Lined Finish



U-VALUE TABLE

Wet Plaster

U-value W/m ² K	Block Type				
	T9 365	T7 MW 365	T9 425	T7 MW 425	T7 MW 490
0.24	✓				
0.21			✓		
0.19		✓			
0.18					
0.17					
0.16				✓	
0.14					✓

Monolithic Block Types

Our Monolithic blocks are available in the following different sizes; 365, 425, 490 and 500mm.

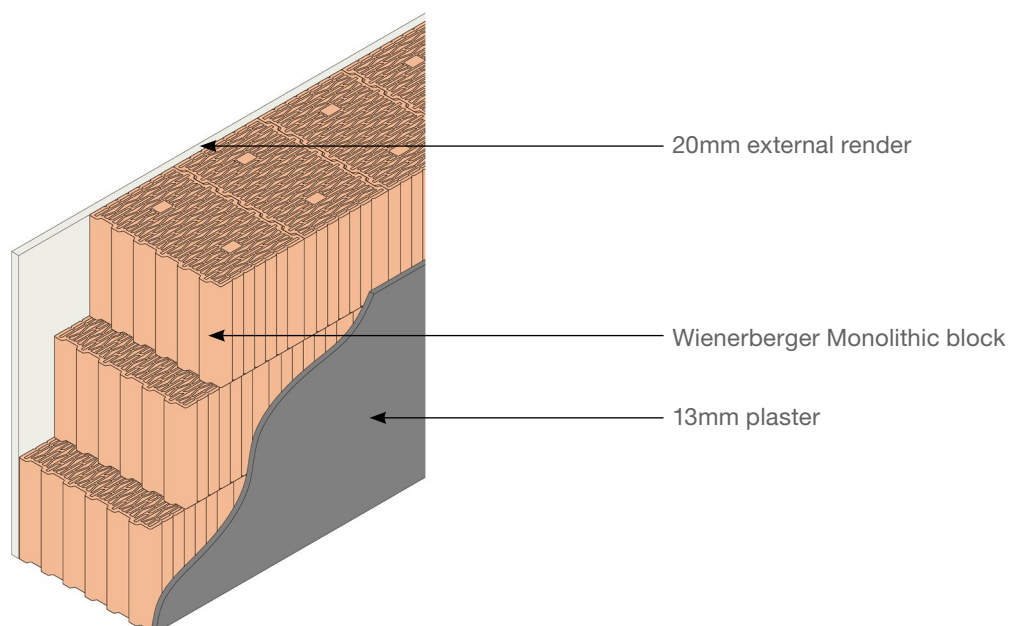
All of the above block sizes have a length of 248mm and a height of 249mm.

The 'T' prefix corresponds to the Thermal Conductivity of the block; e.g. T9 = 0.09 (W/mK).

The 'MW' prefix indicate that the blocks are filled with mineral wool to provide optimal insulative properties.

The values shown within the table on the left are based on the wall build-up below comprising 20mm external render with plasterboard on dabs with plaster skim finish internally.

Wet Plaster Finish



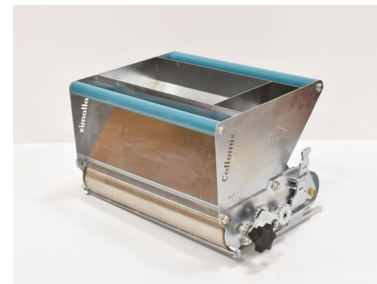
TOOLS



Mortar Rollers

Rollers simplify the application of mortar by producing a finished continuous 1mm bed of even coverage for both filled and unfilled Porotherm Monolithic blocks. Available in different sizes to suit our Monolithic block range:

- 240mm mortar roller (with possible reduction to 175mm)
- 365mm mortar roller (with possible reduction to 300mm)
- 425mm mortar roller (with possible reduction to 365mm)
- 490mm mortar roller (with possible reduction to 425mm)



Alligator Saw & Paddle Mixer

Alligator saws can be used to cut Porotherm Monolithic blocks when fitted with the appropriate blade. The alligator saw cuts through Porotherm blocks easily and creates very little dust. For high volumes or repetitive cuts, wet bench saws can be used on site. Paddle mixers can be used for mixing mortar locally to the laying of blocks.



Thin Joint Mortar

Wienerberger thin joint mortar comes in bags dry mixed. Dependent on which mortar is being used you will require 1 or 2 bags per pack of blocks.

A mixing bucket and measuring jug for the correct amount of water will be required for mixing the thin joint mortar.



BASE COURSE



Traditional Mortar Bed

The base course is the most crucial part of the Porotherm Monolithic system. It must be laid on a traditional sand and cement mortar bed, ensuring the following points are followed precisely. All variations in floor height need to be accommodated within this traditional mortar bed and DPC.

This is the most critical stage of laying the blocks to ensure they are plumb and completely level. This is really important to provide for speed and efficiency during the rest of the construction.

Laying the Block

Porotherm Monolithic blocks should only ever be laid above ground, and above DPC.

You must ensure your base course is in-line and level across both planes of the block with no steps or staggers across the top. Do not try plumbing up the face of the blockwork at the base course; simply rely on levelling the block through both planes on the top. This is the most crucial stage of the process, as it determines the levelness of each of the subsequent courses and the speed and accuracy of the construction. Use a string line to keep the wall straight. Set out the blocks from fixed points such as corners and door or window openings.

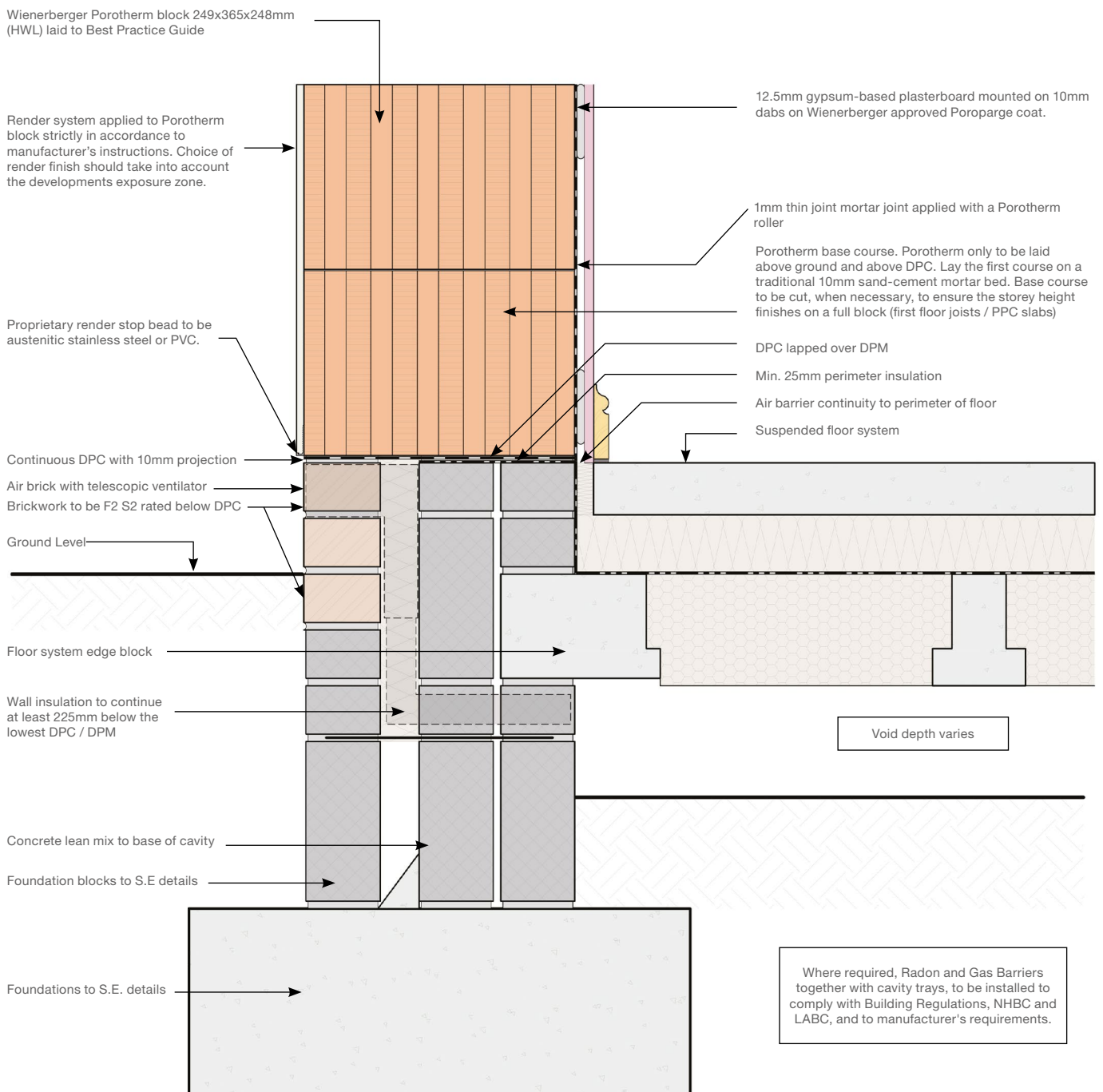
Coursing heights should be accounted for in the base course, incorporating any cut or coursing blocks to ensure you finish with a full block at the top of the wall with any resulting cut to be placed cut side down into the traditional mortar bed. Adequate time should be allowed for the traditional mortar strength to cure and form a solid base.

BASE COURSE

365 Block To Suspended Floor

Drawing number WBR-PTN-365-B02

Full booklet of details available for download from www.wienerberger.com



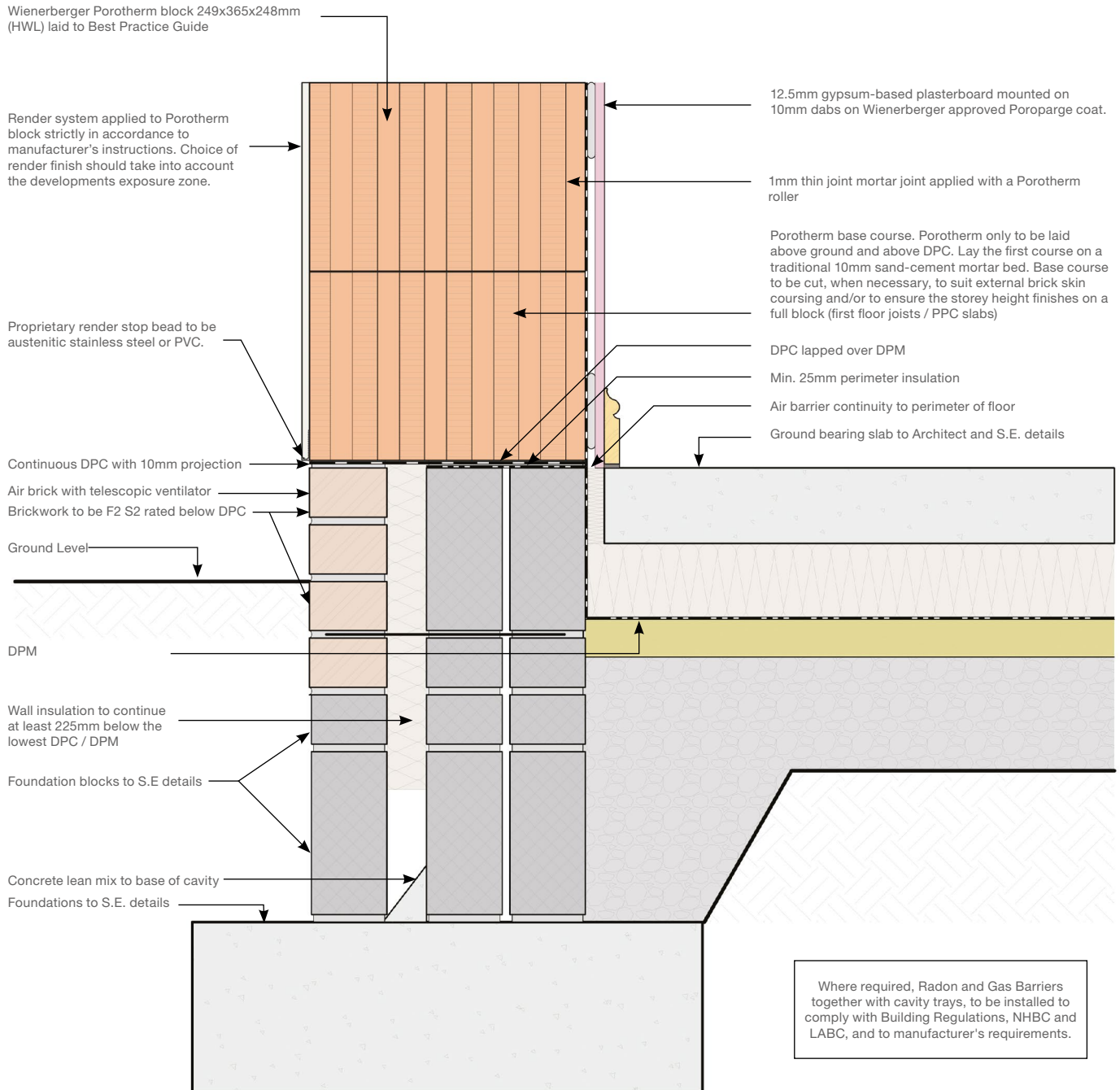
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BASE COURSE

365 Block To Ground Bearing Slab

Drawing number WBR-PTN-365-C02

Full booklet of details available for download from www.wienerberger.com



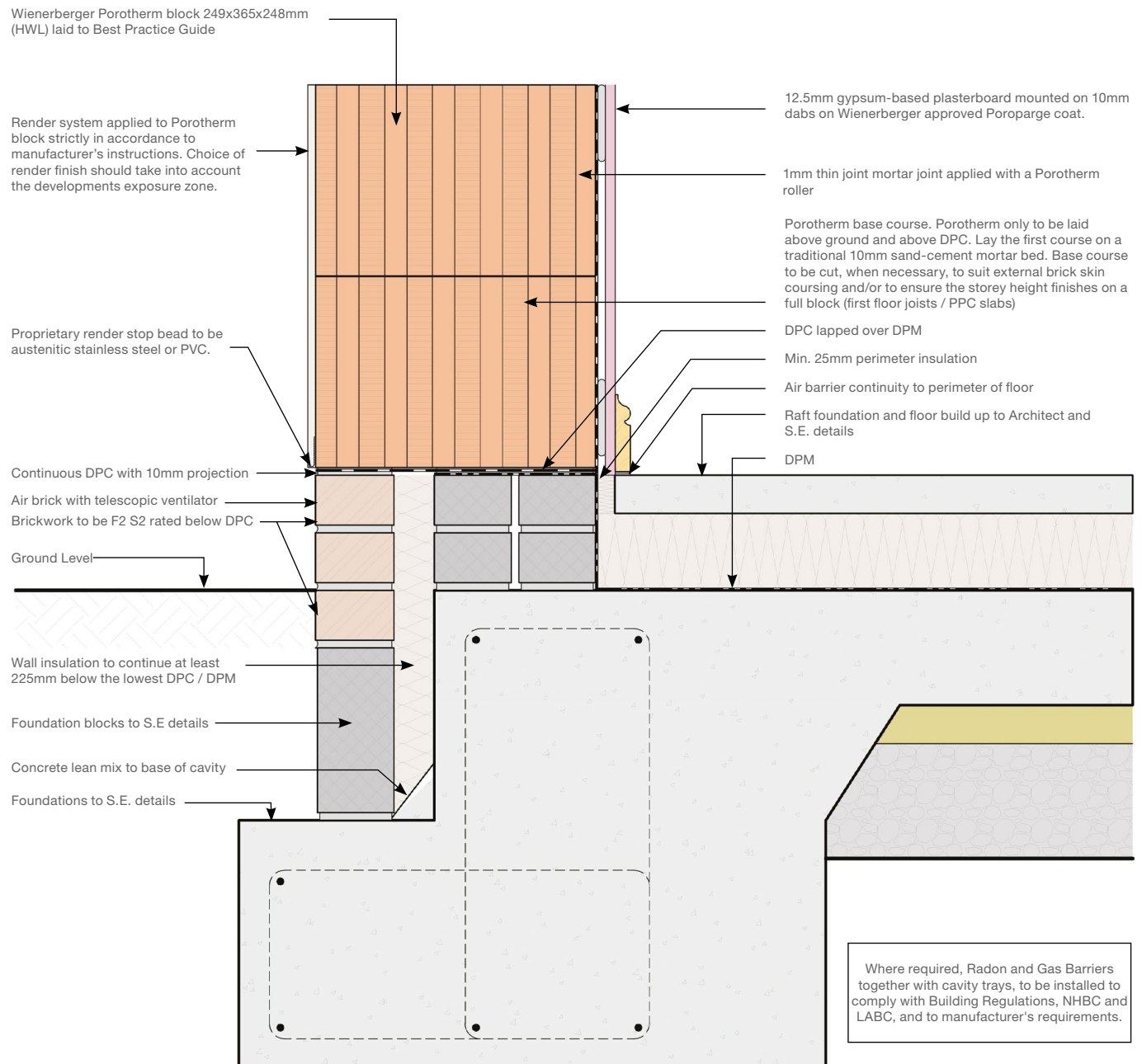
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BASE COURSE

365 Block Wall To Raft

Drawing number WBR-PTN-365-D02

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THIN JOINT MORTAR

Mixing & Applying Thin Joint Mortar

There are two mortar types for use with Porotherm Monolithic blocks: German mortar, usually supplied with the blocks in 15kg bags, and ZeroPlus mortar, supplied at an extra cost, in 12.5kg bags (two bags per pack required) for cold weather working.

Mix the thin joint mortar according to the guidelines and quantities on the packaging. Once mixed it is important to allow roughly 5 minutes standing time for the polymers in the mortar to start working. Once this time has passed give the mortar a quick whisk with the mixer then pour into the roller.

Brush down the top of the blocks using a dampened brush to remove dust and debris. This will allow ease of application of mortar and reduce any “kick-ups” on subsequent courses.

Apply the thin joint mortar to the blocks using the roller. This will ensure an even coverage of a 1mm bed of mortar is applied to the blocks. The mortar mix is at the right consistency when a “blanket” of mortar is applied to the block bed face.

Lay the blocks on the mortar bed, using a string line to keep the wall linear straight. Care should be taken to ensure the blocks have a minimum bond of 100mm over the block beneath. Repeat until the wall is complete.

Don't forget to brush the bed face of the laid course of blocks with a damp soft bristled brush prior to laying the following course.



CUTTING

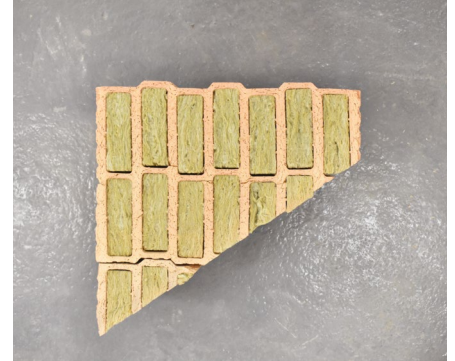
Cutting the Blocks

Alligator saws can be used to cut Porotherm Monolithic blocks when fitted with the appropriate blade. The alligator saw cuts through Porotherm blocks easily and creates very little dust. For high volumes or repetitive cuts, wet bench saws can be used on site. Paddle mixers can be used for mixing mortar locally to the laying of blocks. A dust mask and eye protection should be worn whilst cutting. Although the blade will direct the dust downwards it is advised to lightly wet the blocks prior to cutting to reduce airborne dust. Filled Porotherm bricks can be cut wet or dry.



Chamfered Window Reveal Cuts

The angle can be cut on the single block as depicted below. The chamfer can alternatively be cut off at after the reveals have been formed with an alligator saw. Defects on the cutting surface (open webs) are closed with traditional mortar or Wienerberger Porofill.



Gable Cuts

The angle of the gable wall is drawn 20mm below the anticipated cut line required. When the gable blocks have been installed the blocks are then capped with approx. 20mm of traditional mortar.

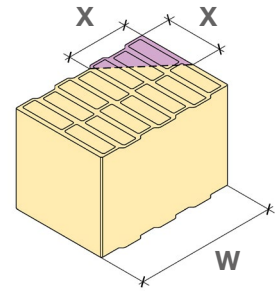


CUTTING

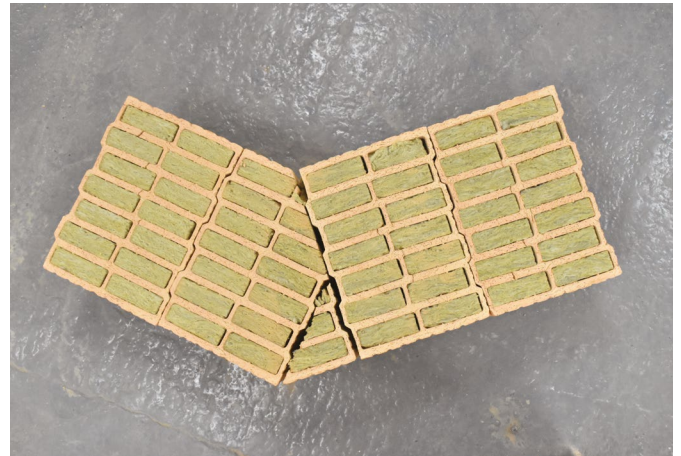
Angle Cutting

A 45°/135° corner can be easily created without special angle blocks. The first and second layers are laid with alternating cuts to form a bond. Joint widths >5mm require pointing with traditional mortar. Approximate diagonal saw cut according to the block width can be found in the table below:

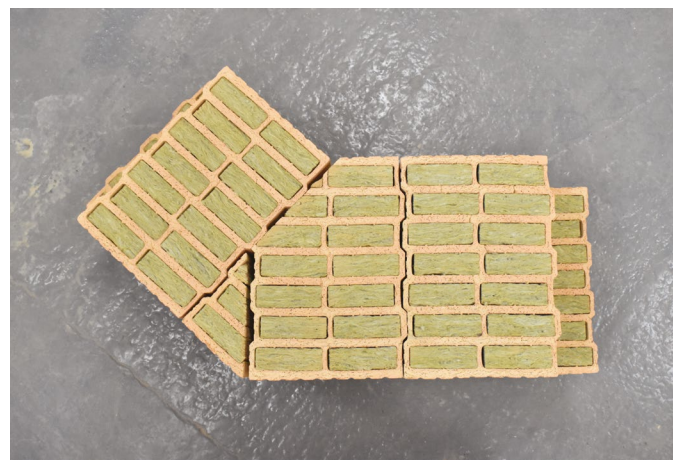
Block Width (W)	Cut Length (X)
365 mm	approx. 145 mm
425 mm	approx. 170 mm
490 mm	approx. 200 mm



BASE COURSE



ALTERNATE COURSE



WALLING UP

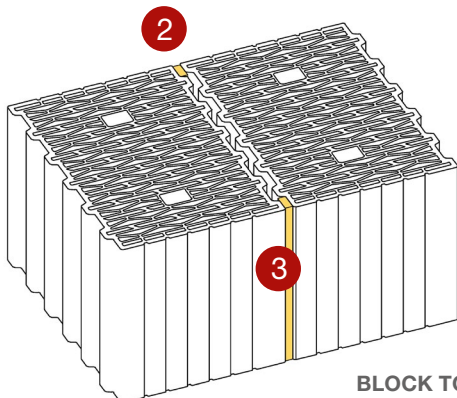
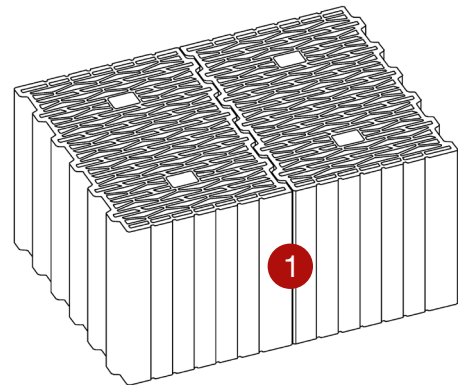
Blockwork Standards

A minimum bond of 100mm MUST be achieved in all areas (applies to all block sizes). Porotherm Monolithic block should be closely abutted using the interlock system. The maximum joint when using cut blocks should be 10 to 15mm depending on interlock. If thin joint mortar is mixed and applied correctly, there should be no excessive mortar runs on the face of the block.

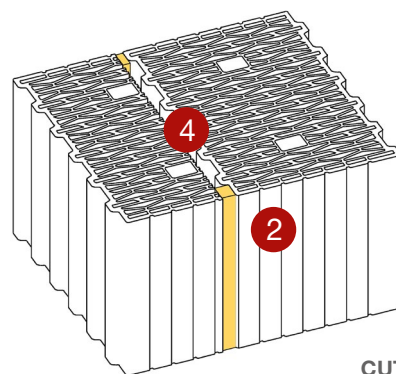
Perp-end Joints

Porotherm Monolithic blocks have a tongue and groove interlock system on perpend which allows for a mortarless joint. Care should be taken to ensure a close interlock bond between blocks. In certain cases, i.e. inclusion of cut blocks, allowance for dimensional deviations within a block, mortar pointing is required to seal the perpend for thermal, airtightness and ease of render/plaster application. The following information is to be followed and used in conjunction with Building Codes of Practice for correct bonding of perpend:

1. If the perpend gap at the face of the block is $\leq 5\text{mm}$ then no pointing with traditional mortar is required
2. Max. 10mm perpend joint pointed with traditional mortar with depth circa 25mm for gaps $> 5\text{mm} \leq 10\text{mm}$
3. Where there is a female interlock, Max. 15mm perpend joint pointed with traditional mortar with depth circa 25mm
4. Max. 10mm between interlocking blocks



**BLOCK TO BLOCK
GAP $> 5\text{MM} \leq 10\text{MM}$**



**CUT BLOCK TO BLOCK
MAX. 10MM GAP**

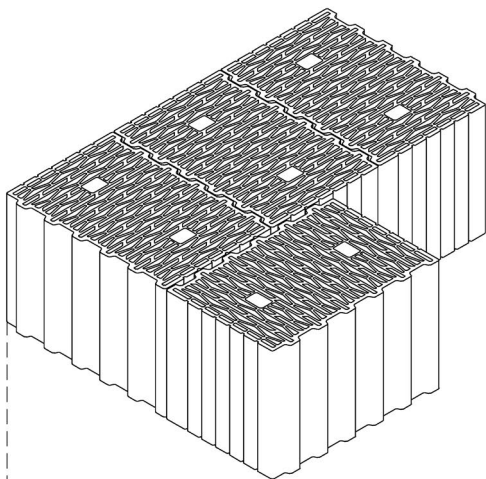
WALLING UP

Bonding

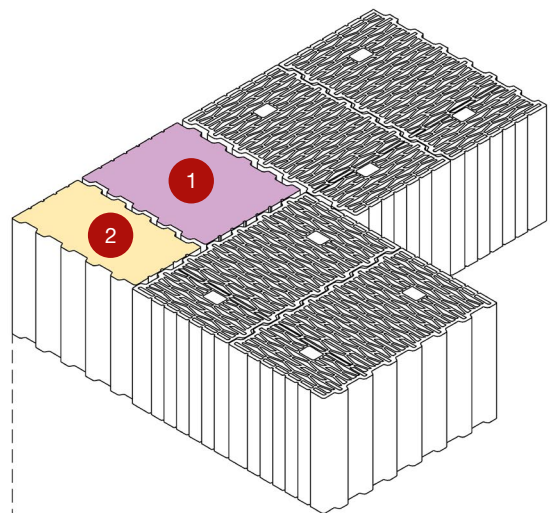
Porotherm Monolithic blocks should be laid half bond to the courses above and below. To enable this, starter blocks for the corners can be supplied or alternatively cut blocks can be used at the corners to create half bond. When bonding at reveals and junctions the bond should not be allowed to fall below a 100mm overlap on the courses above and below.

1. 300mm starter block
2. 175mm starter block

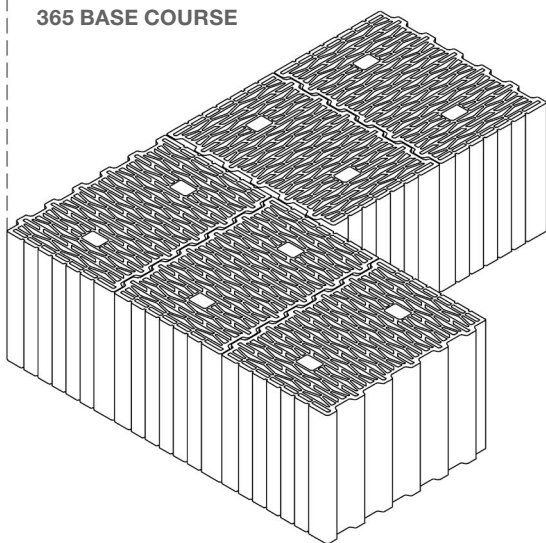
365 ALTERNATE COURSE



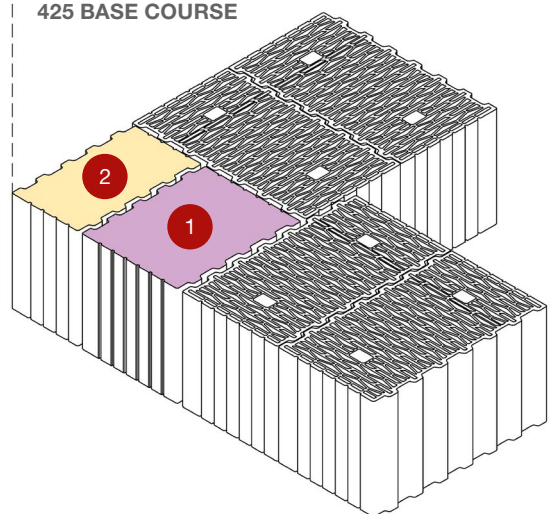
425 ALTERNATE COURSE



365 BASE COURSE



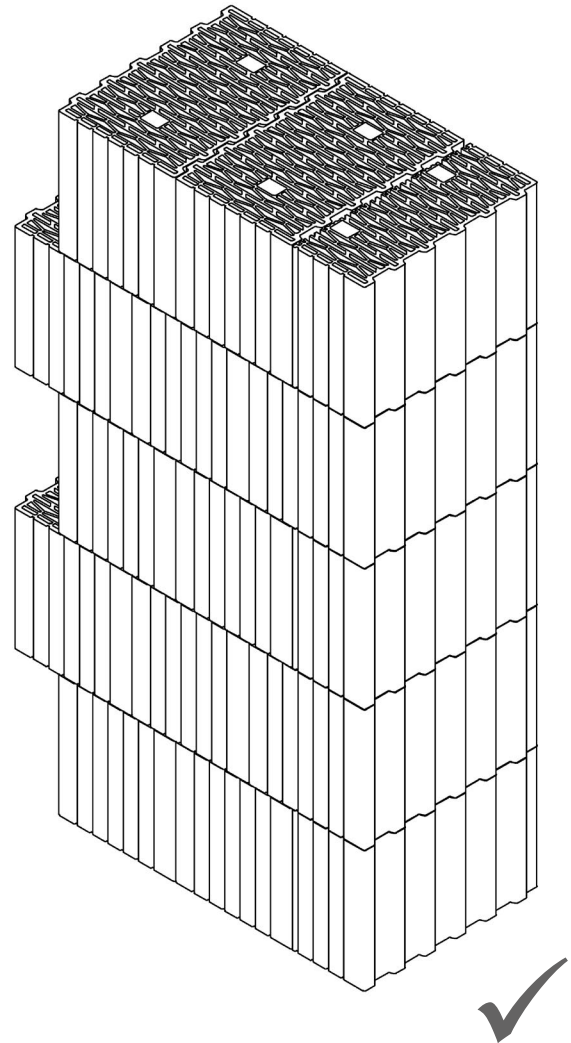
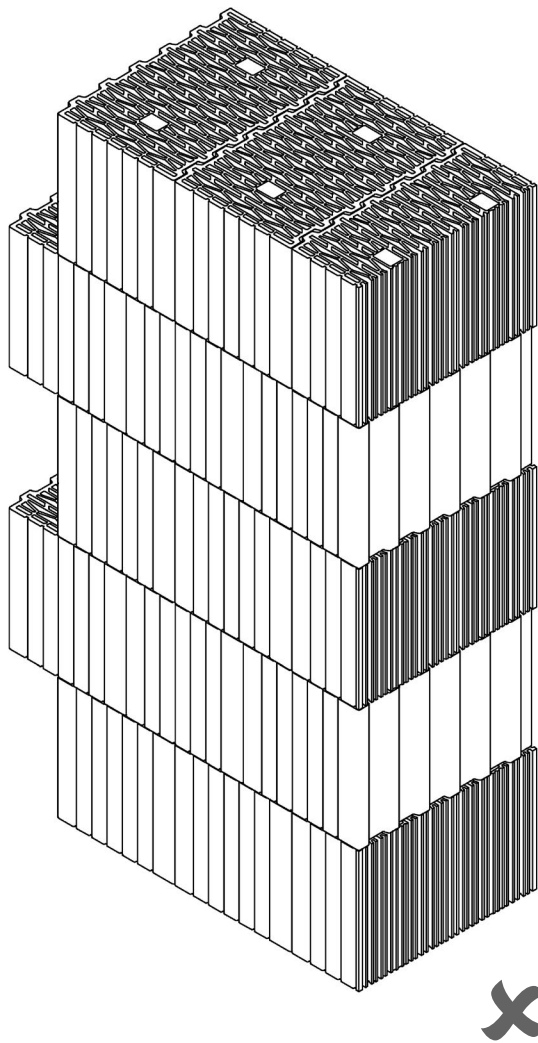
425 BASE COURSE



WALLING UP

Forming Reveals

When bonding at reveals the bond should not be allowed to fall below a 100mm overlap on the courses above and below. When forming reveals always present the formed side of any cut blocks to the reveal.



LINTELS

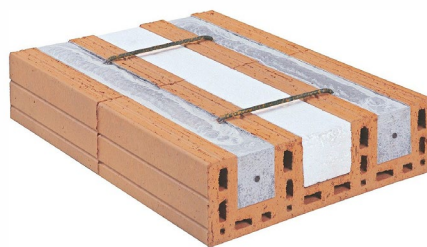


Thermally Broken Lintels

A wide range of internal lintels and external, thermally broken lintels are available for the Porotherm Monolithic system.

Porotherm Monolithic thermally broken lintels are cast with concrete and steel reinforcement in the factory to the desired structural opening (250mm increments up to a maximum of 3m). The lintels have an insulated core providing a thermal break.

These are composite lintels and must be propped at a maximum of 1200mm centres until at least 2 courses of blockwork are laid above and the mortar allowed to cure



TEMPORARY PROPPING OF LINTELS

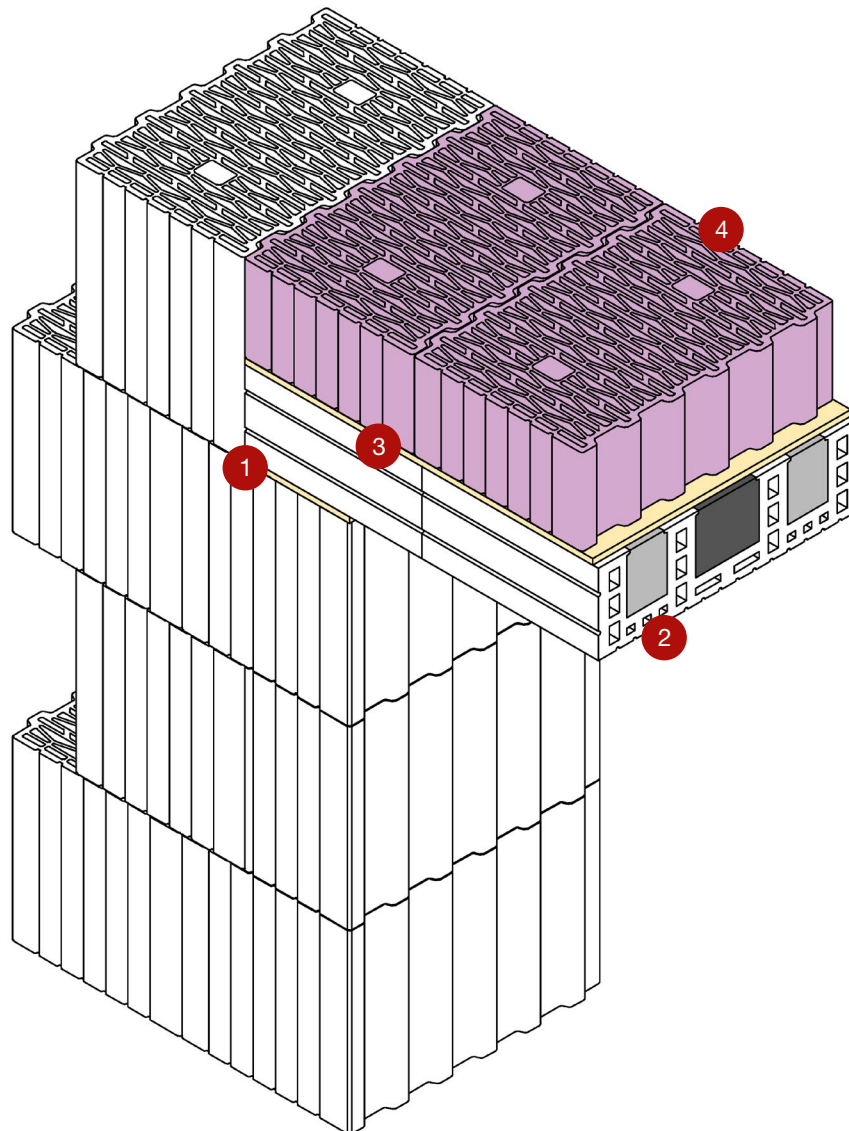


LINTELS

Installation

Thin joint mortar is used to bed DPC under the lintel bearing, with the lintel profiles bedded on two separate beds of traditional mortar with an air gap in between them. This is to ensure that the mortar bed does not provide a cold thermal bridge across the wall. Cut blocks over lintels should be laid on a bed of traditional mortar cut side down, ensuring they are in line and level across both planes with no steps or staggers across the top. Alternatively, Porotherm Half Blocks can be used over the lintel to minimise on site cutting. Lintels MUST be propped at a maximum of 1200mm centres until at least 2 courses of blockwork are laid above. Lintels require a minimum of 150mm bearing at each side of the opening unless otherwise advised by the project engineer.

1. DPC and traditional mortar bed
2. Thermally broken lintel
3. Traditional mortar joint
4. Cut block / Half block

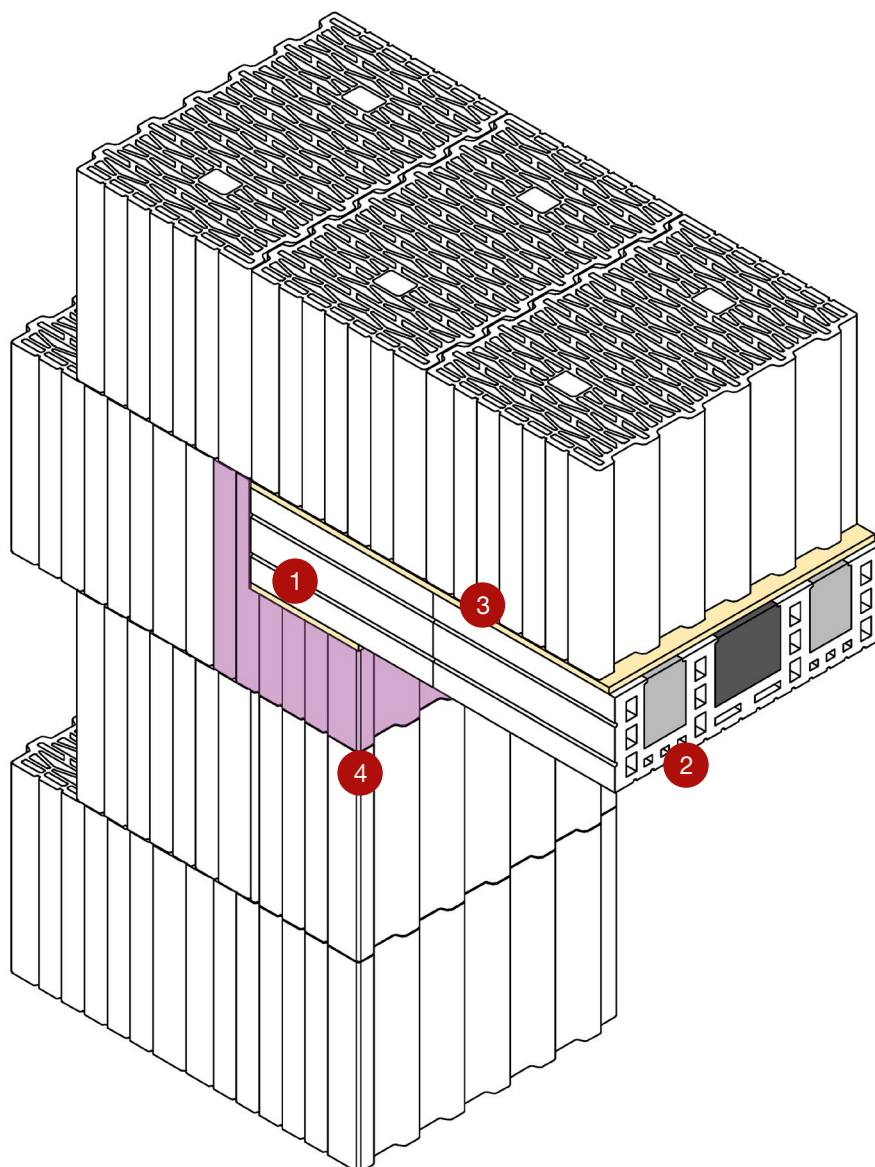


LINTELS

Installation - Boot Cut

Where lintel heights do not course in with Porotherm Monolithic block heights it is considered best practice to use a boot cut block for the lintel bearing. Cut blocks over lintels should be laid on a bed of traditional mortar cut side down, ensuring they are in line and level across both planes with no steps or staggers across the top. Lintels MUST be propped at maximum of 1200mm centres until at least 2 courses of blockwork are laid above. Lintels require a minimum of 150mm bearing at each side of the opening unless otherwise advised by the project engineer.

1. DPC and traditional mortar bed
2. Thermally broken lintel
3. Traditional mortar joint
4. Boot cut block



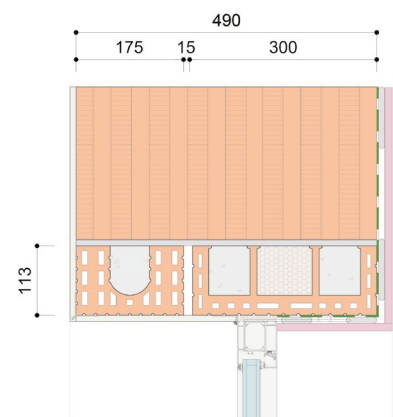
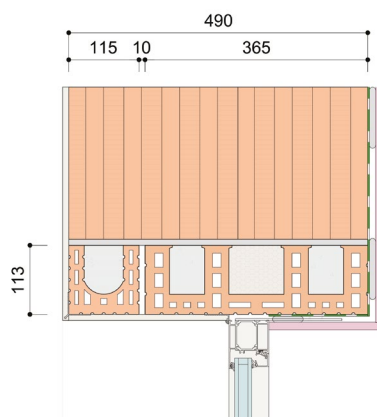
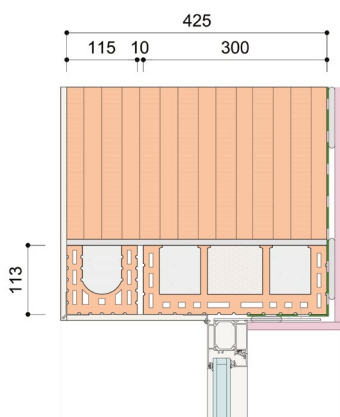
LINTELS

Table Of Porotherm 115 Lintel Range

	Material Code	Length	Width	Height
Porotherm 115 Lintel	64168161	1000	115	113
Porotherm 115 Lintel	64168163	1250	115	113
Porotherm 115 Lintel	64168166	1500	115	113
Porotherm 115 Lintel	64168168	1750	115	113
Porotherm 115 Lintel	64168171	2000	115	113
Porotherm 115 Lintel	64168173	2250	115	113
Porotherm 115 Lintel	64168176	2500	115	113
Porotherm 115 Lintel	64168178	2750	115	113
Porotherm 115 Lintel	64168181	3000	115	113

Table Of Porotherm 175 Lintel Range

	Material Code	Length	Width	Height
Porotherm 175 Lintel	64168761	1000	175	113
Porotherm 175 Lintel	64168763	1250	175	113
Porotherm 175 Lintel	64168766	1500	175	113
Porotherm 175 Lintel	64168768	1750	175	113
Porotherm 175 Lintel	64168771	2000	175	113
Porotherm 175 Lintel	64168773	2250	175	113
Porotherm 175 Lintel	64168776	2500	175	113
Porotherm 175 Lintel	64168778	2750	175	113
Porotherm 175 Lintel	64168781	3000	175	113



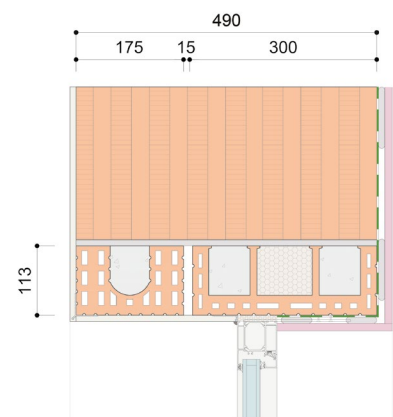
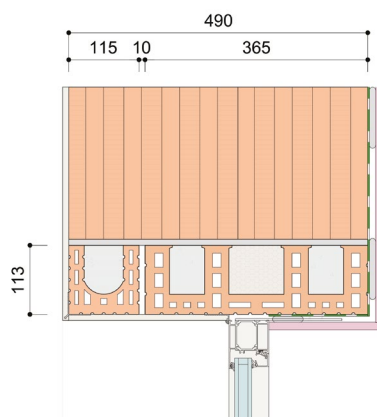
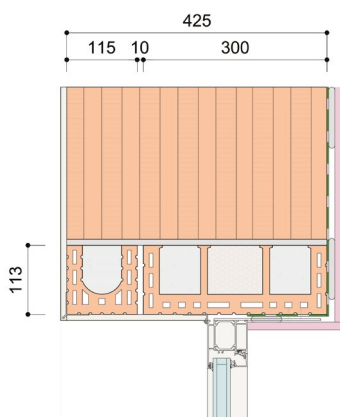
LINTELS

Table Of Porotherm 300 Lintel Range

	Material Code	Length	Width	Height
Porotherm 300 Thermally broken lintel	32844015	1000	300	113
Porotherm 300 Thermally broken lintel	32844025	1250	300	113
Porotherm 300 Thermally broken lintel	32844035	1500	300	113
Porotherm 300 Thermally broken lintel	32844045	1750	300	113
Porotherm 300 Thermally broken lintel	32844055	2000	300	113
Porotherm 300 Thermally broken lintel	32844065	2250	300	113
Porotherm 300 Thermally broken lintel	32844075	2500	300	113
Porotherm 300 Thermally broken lintel	32844085	2750	300	113
Porotherm 300 Thermally broken lintel	32844095	3000	300	113

Table Of Porotherm 365 Lintel Range

	Material Code	Length	Width	Height
Porotherm 365 Thermally broken lintel	32844115	1000	365	113
Porotherm 365 Thermally broken lintel	32844125	1250	365	113
Porotherm 365 Thermally broken lintel	32844135	1500	365	113
Porotherm 365 Thermally broken lintel	32844145	1750	365	113
Porotherm 365 Thermally broken lintel	32844155	2000	365	113
Porotherm 365 Thermally broken lintel	32844165	2250	365	113
Porotherm 365 Thermally broken lintel	32844175	2500	365	113
Porotherm 365 Thermally broken lintel	32844185	2750	365	113
Porotherm 365 Thermally broken lintel	32844195	3000	365	113

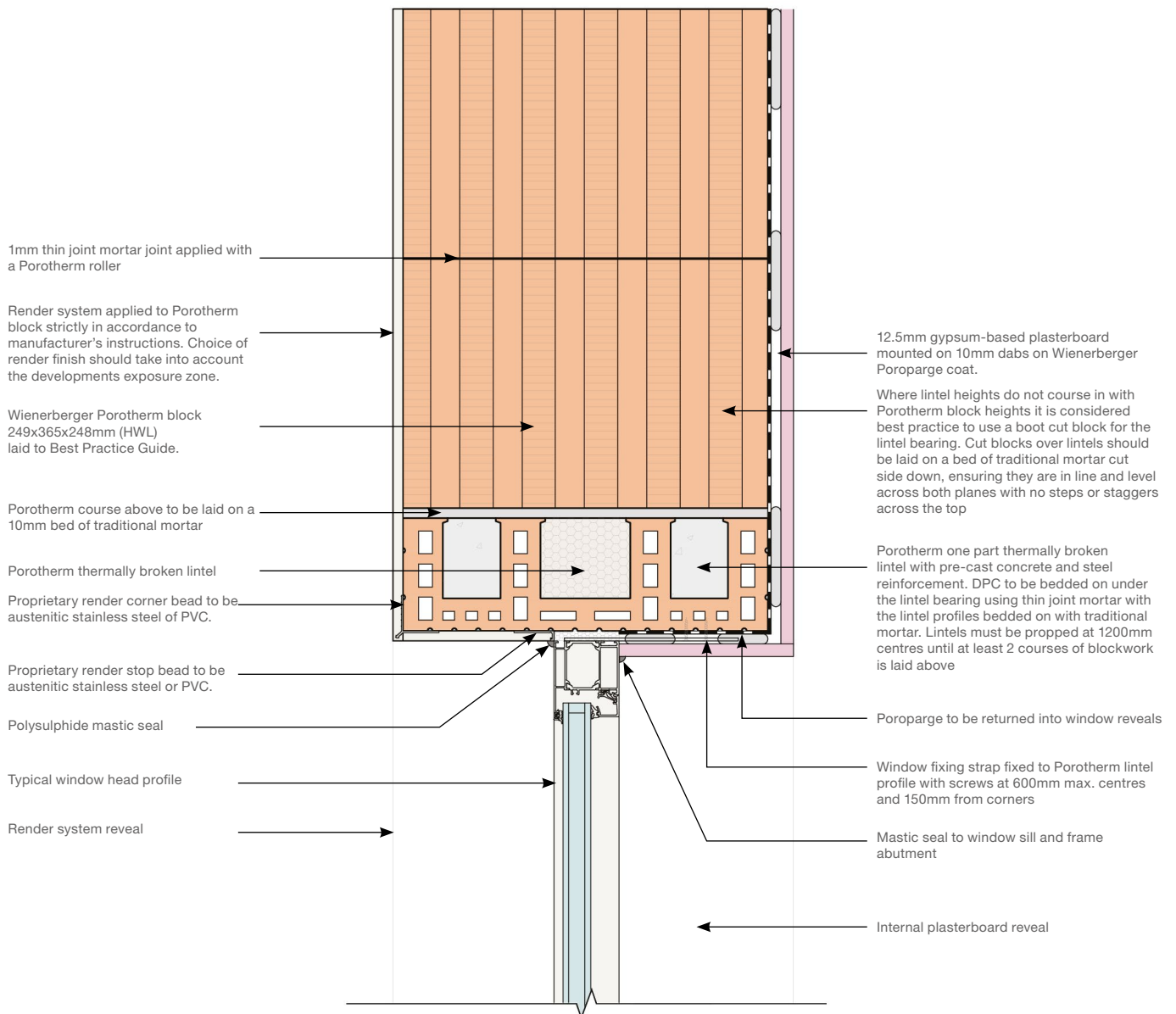


LINTELS

Typical Detail - 365 Block To Thermally Broken Lintel

Drawing number WBR-PTN-365-F02

Full booklet of details available for download from www.wienerberger.com



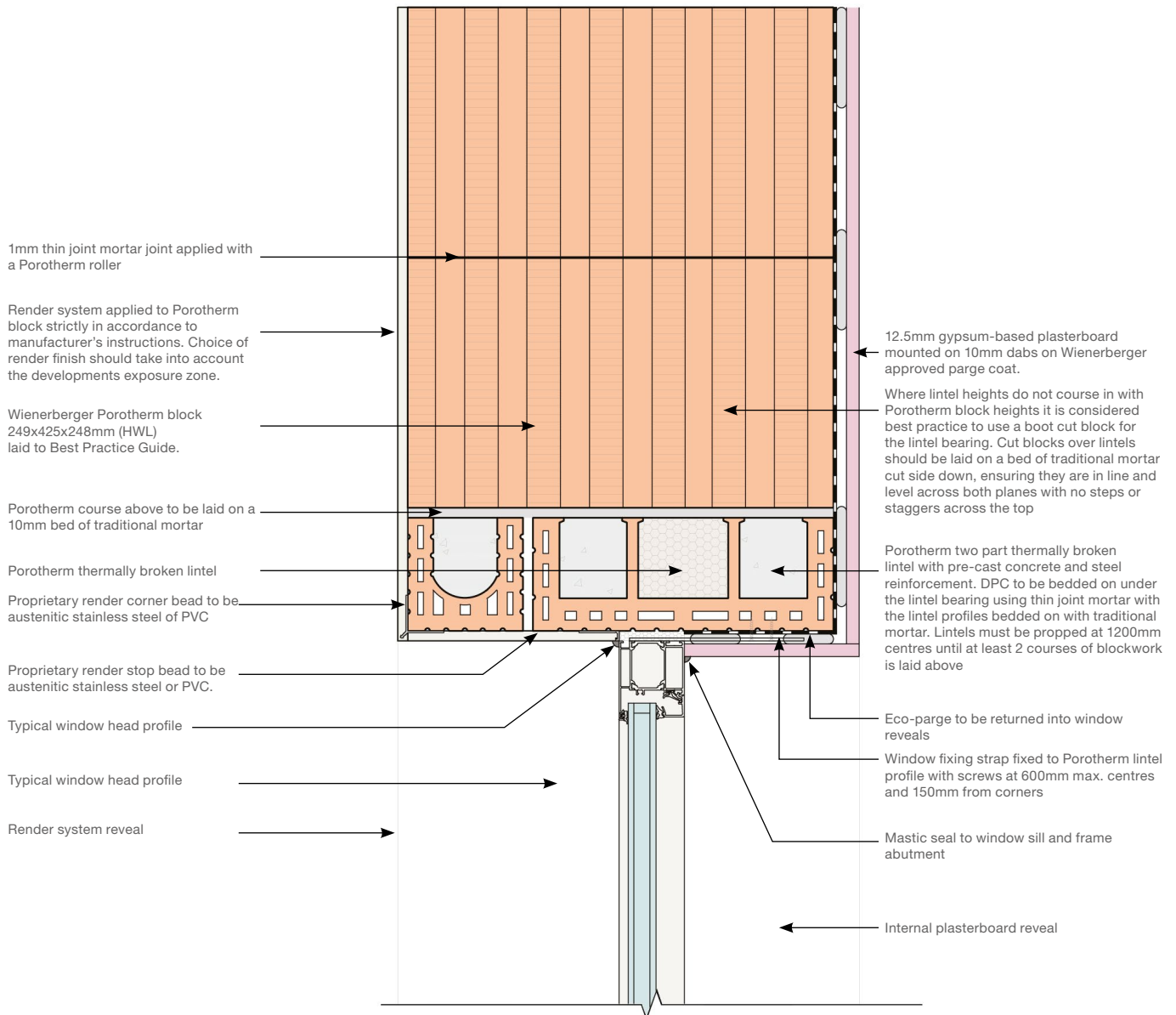
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LINTELS

Typical Detail - 425 Block To Thermally Broken Lintel

Drawing number WBR-PTN-425-F03

Full booklet of details available for download from www.wienerberger.com



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LINTELS

U Schale

For wider openings lintels can be fabricated on site using our U Schale system. This consists of a U-shaped clay former that is laid on to a temporary timber former over the opening and on to the bearings at either side. The ends of the U Schale should be bonded together using a light application of thin joint mortar. Reinforcing steel and spacers are then placed in the channel to your engineer's specification and the channel filled with concrete, also to your engineer's specification, to form the lintel over the opening.

Horizontal timber formwork will need to be of sufficient robustness to support the weight of the U Schale with concrete and steel and be temporary supported by props at not greater than 1200mm centers. Temporary props should remain in place until the concrete has cured and 2 course of blockwork built above and the mortar allowed to cure.

Alternatively lintels using U Schale can be constructed on the floor and mechanically lifted into position when concrete is cured. Timber props will still be required at not greater than 1200mm centers until 2 course of blockwork is built above and mortar allowed to cure

U Schale can also be used to form a ring beam.



U SCHALE LAID IN POSITION ON TEMPORARY TIMBER SUPPORT



REINFORCING STEEL LAID INTO CHANNEL



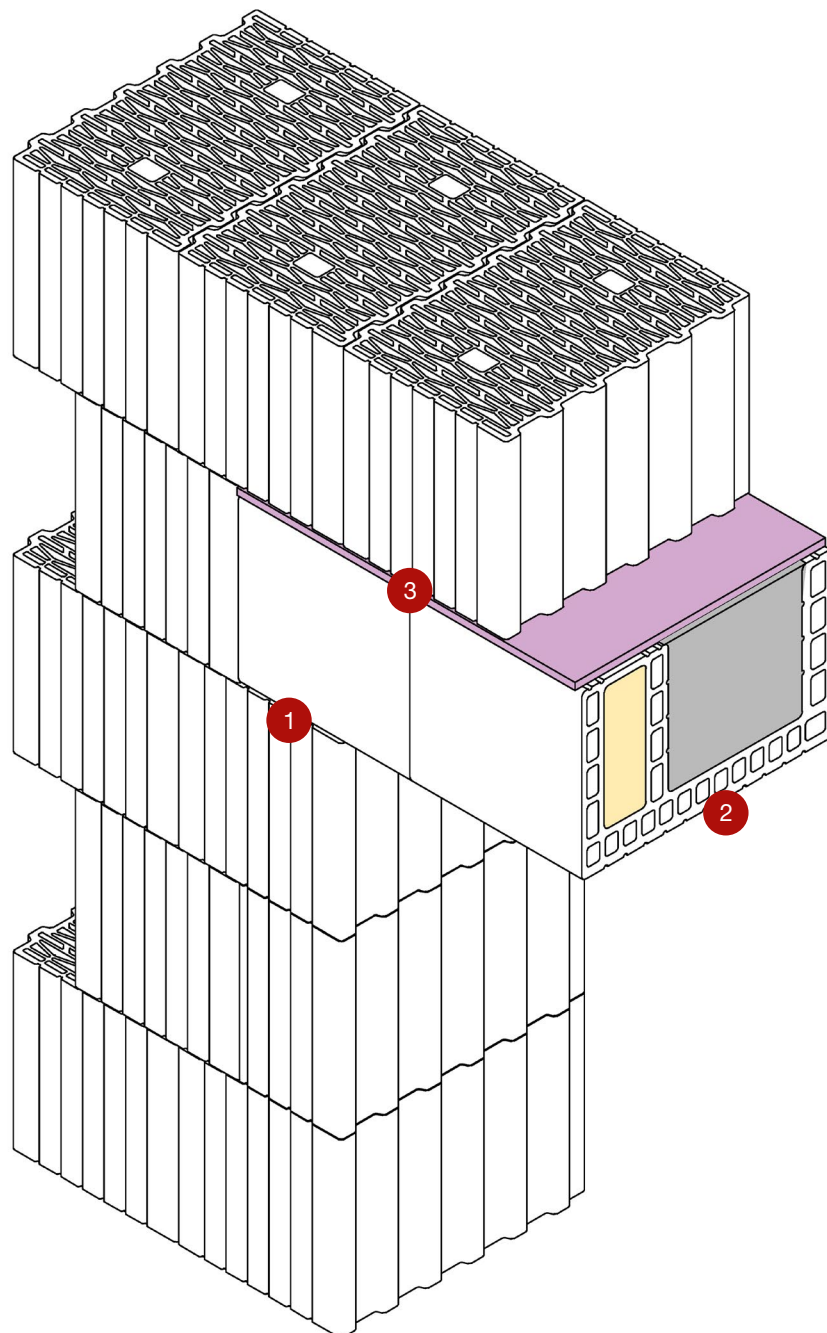
U SCHALE FILLED WITH CONCRETE

LINTELS

Installation

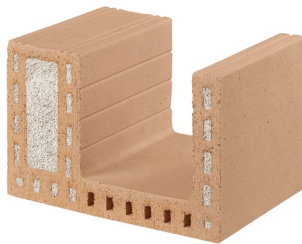
The U Schale lintel profile is bedded onto the block bearing using thin joint mortar. Porotherm Monolithic blocks over the U Schale should be laid on a bed of traditional mortar ensuring they are in line and level across both planes with no steps or staggers across the top. Any cuts should be placed cut side down into the traditional mortar bed.

1. Thin joint mortar joint
2. U Schale lintel
3. Traditional mortar joint

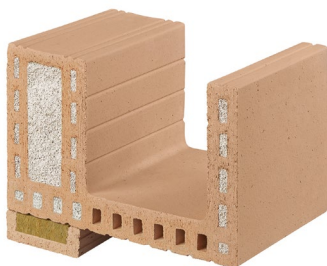


LINTELS

U Schale Range



	Material Code	O/A dimensions L x W x H (mm)	Internal former W x H (mm)
WU Schale without stop 365	32833505	250 x 365 x 238	195 x 190
WU Schale without stop 425	32833605	250 x 425 x 238	250 x 190



	Material Code	O/A dimensions L x W x H (mm)	Internal former W x H (mm)
WU Schale with stop 365	32803575	250 x 365 x 238	250 x 365 x 238
WU Schale with stop 425	32833675	250 x 425 x 238	250 x 425 x 238



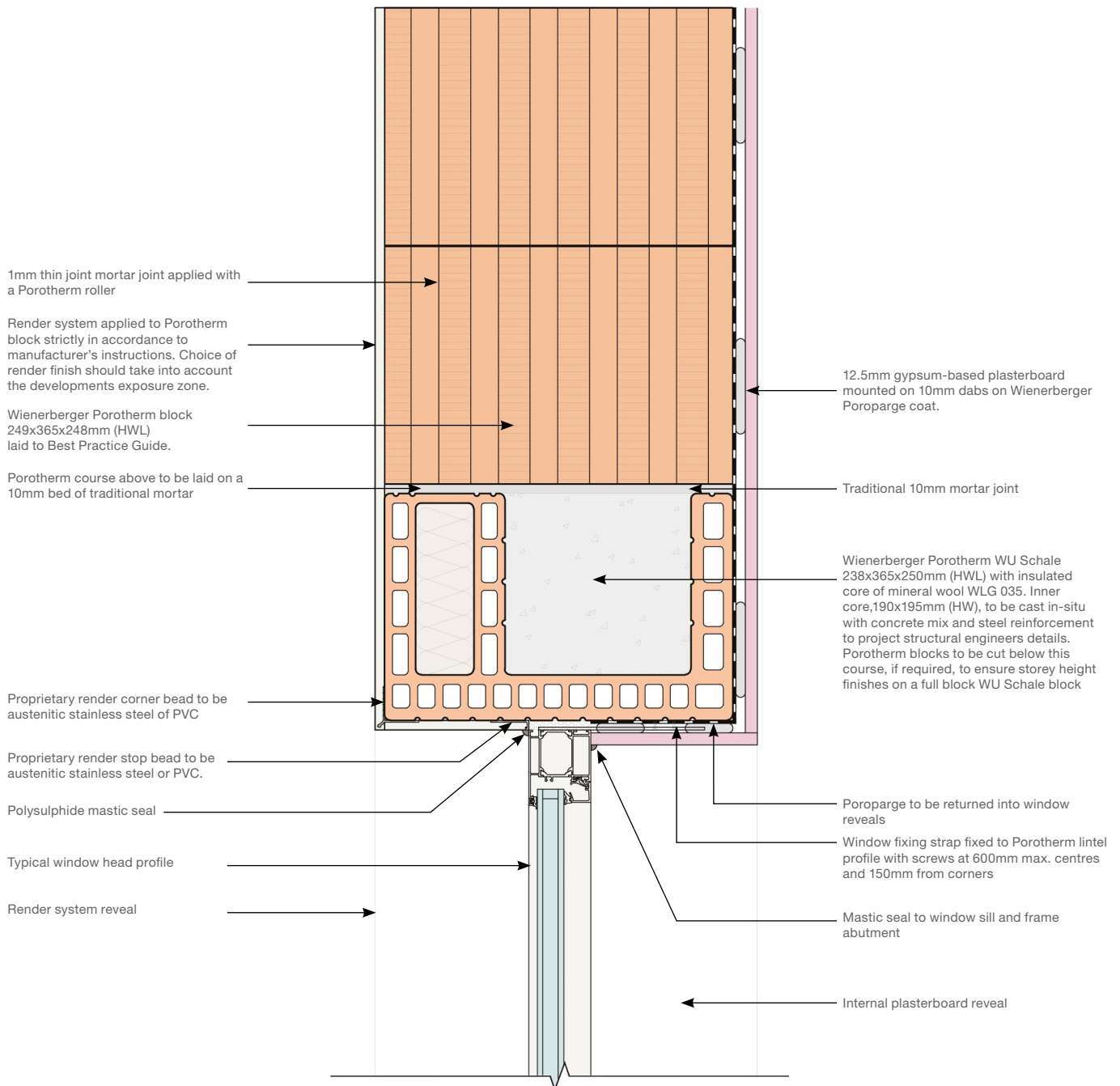
	Material Code	O/A dimensions L x W x H (mm)	Internal former W x H (mm)
U Schale 240	32830315	250 x 240 x 238	250 X 240 X 238
U Schale 365	32830505	250 x 365 x 238	250 X 365 X 238

LINTELS

Typical Detail - 365 Block To WU-Schale

Drawing number WBR-PTN-365-F14

Full booklet of details available for download from www.wienerberger.com

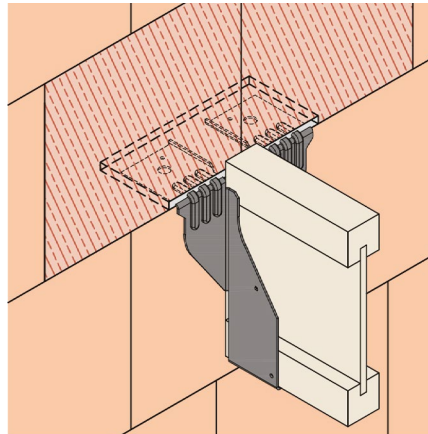


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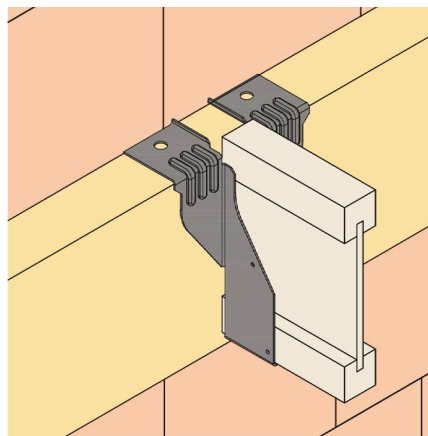
INTERMEDIATE FLOOR

Timber Joists

When installing hangers, ensure the back flange to be tight against Porothersm Monolithic block. Hangers are to be bedded on using a traditional 10mm mortar joint. Alternatively, the block above can be notched around joist hanger ensuring the notch is fully filled with traditional mortar (enabling thin jointing to continue). Please refer to hanger manufacturers guidelines when installing joists hangers before loading.



An alternative method would be to fix a timber pole plate back to Porothersm Monolithic block using appropriate fixings specified by project structural engineer. See fixings section for further information. Again, ensure the joist hanger back flange to be tight against timber wall plate. Hangers to be secured to wall plate as instructed by project structural engineer. Please refer to hanger manufacturers guidelines when installing joists hangers before loading.

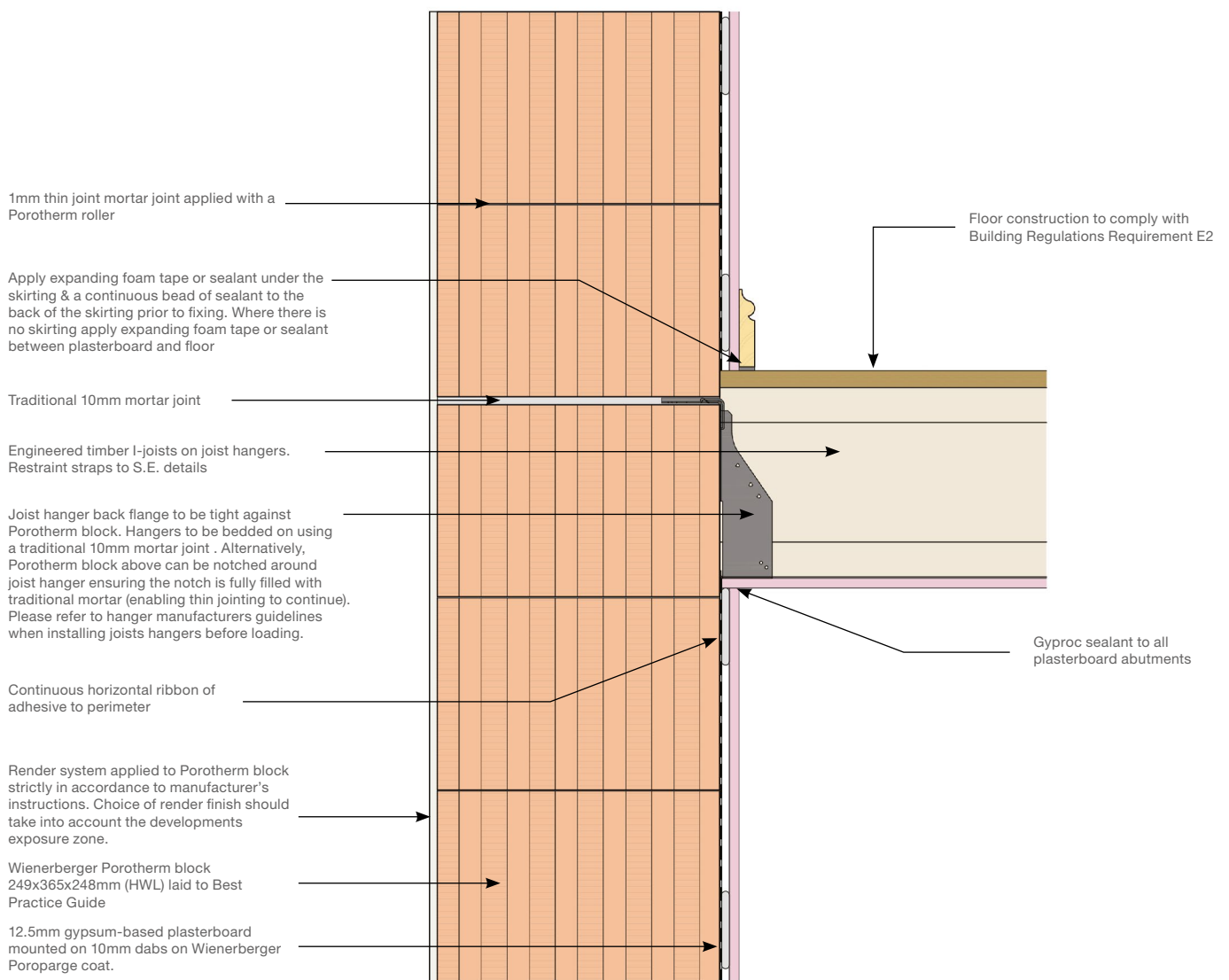


INTERMEDIATE FLOOR

Typical Detail - 365 Block To Timber I Joists On Hangers

Drawing number WBR-PTN-365-G02

Full booklet of details available for download from www.wienerberger.com



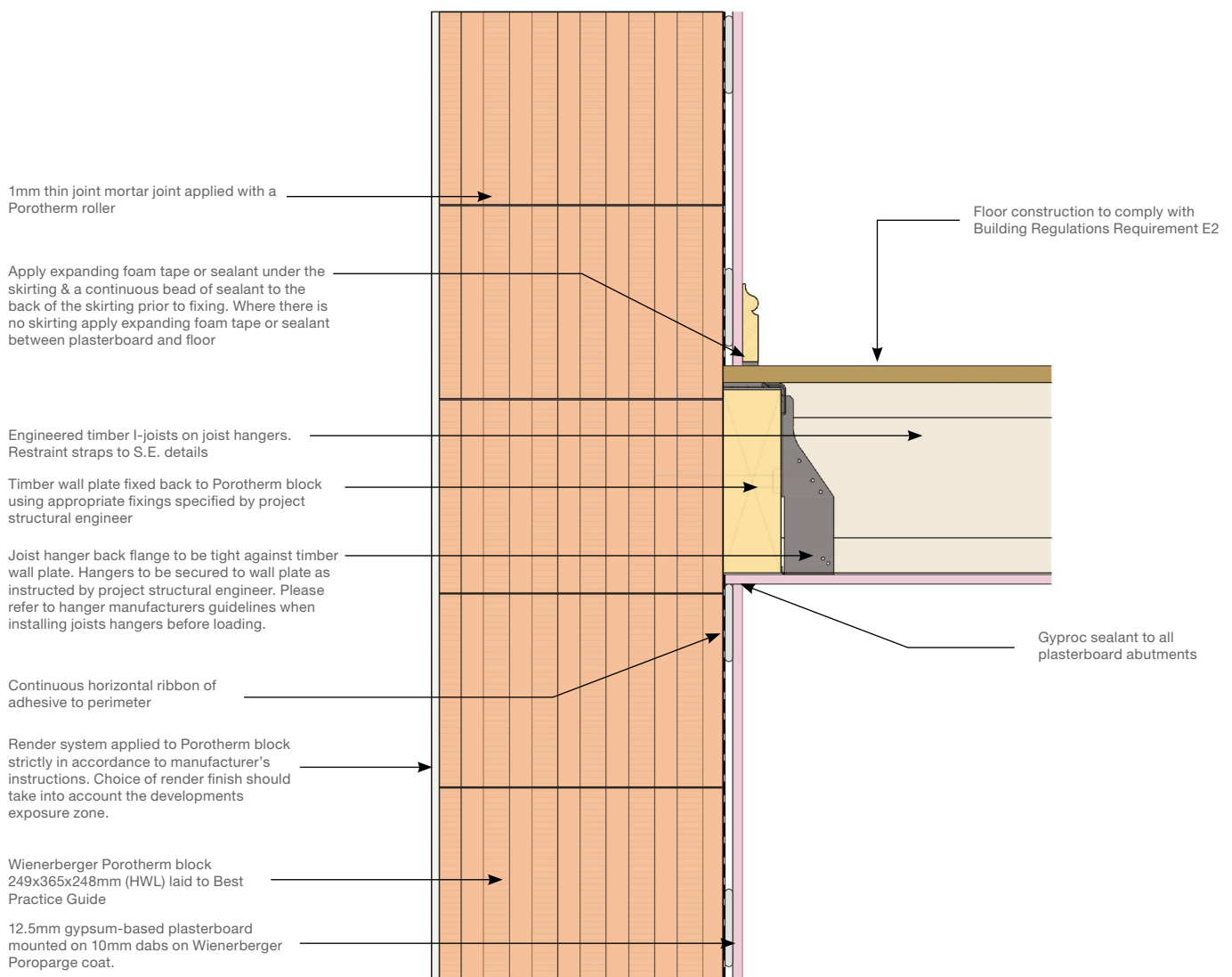
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INTERMEDIATE FLOOR

Typical Detail - 365 Block To Timber I Joists On Pole Plate

Drawing number WBR-PTN-365-H02

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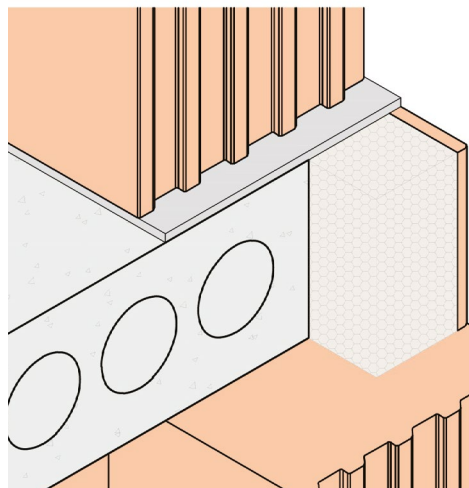
INTERMEDIATE FLOOR

Concrete Planks

All precast concrete floor planks shall be laid strictly in accordance with the Guidelines set out in the Precast Flooring Federation endorsed Guidance Document.

Wienerberger Porotherm DRS edge blocks are used to create a thermal break. Various size DRS edge blocks are available to suit the required floor slab depth. DRS blocks comprise of a 15mm shell facing with 105mm Neopor Cadence sound insulation for optimal thermal insulation and to accommodate ceiling movements. DRS block is bedded on with thin joint mortar.

Porotherm course above structural slab to be laid on a traditional 10mm sand-cement mortar bed. Block to be cut, when necessary, to ensure the storey height finishes on a full block. Block to be placed cut side down into the traditional mortar joint.

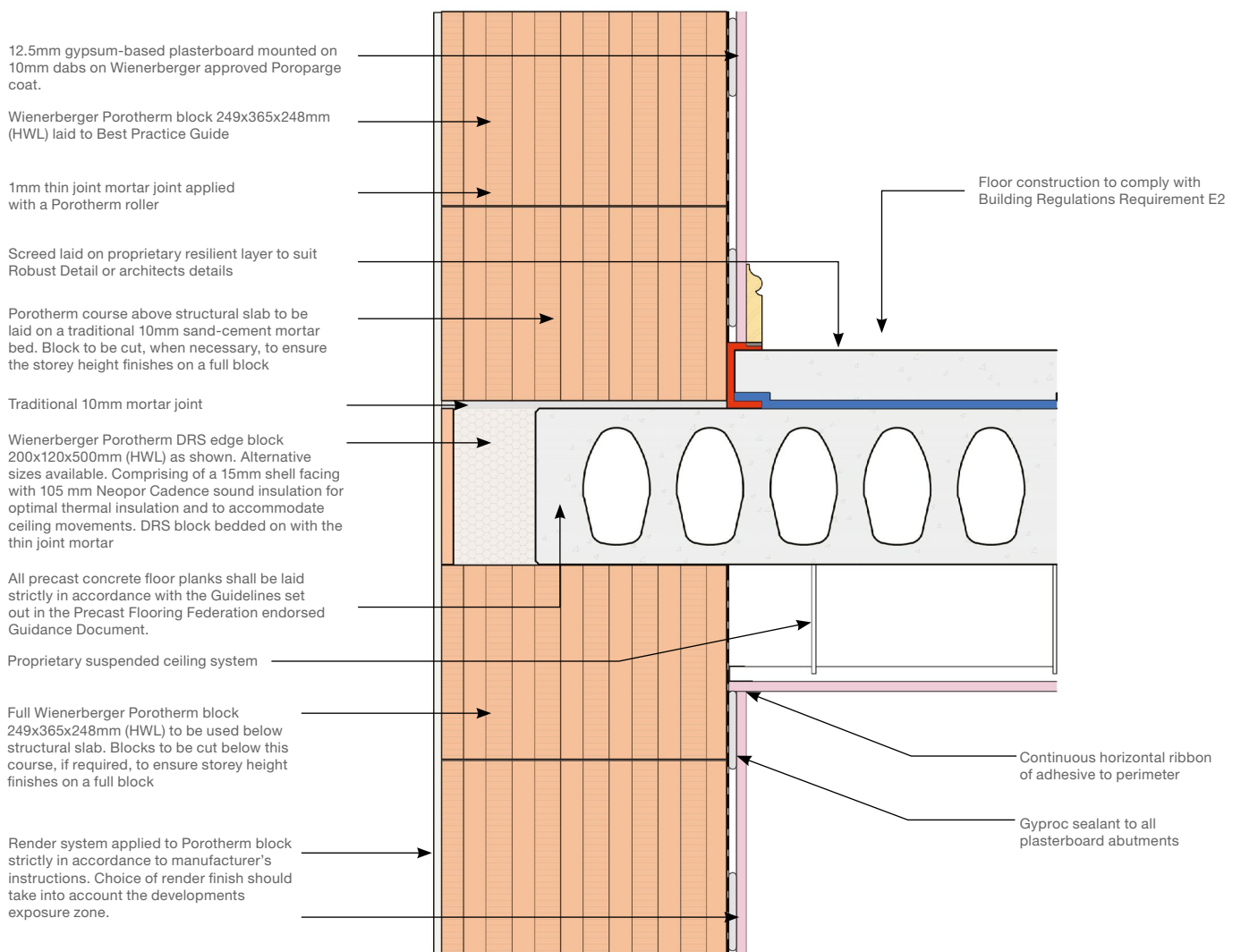


INTERMEDIATE FLOOR

Typical Detail - 365 Block To Precast Concrete Floor

Drawing number WBR-PTN-365-J02

Full booklet of details available for download from www.wienerberger.com



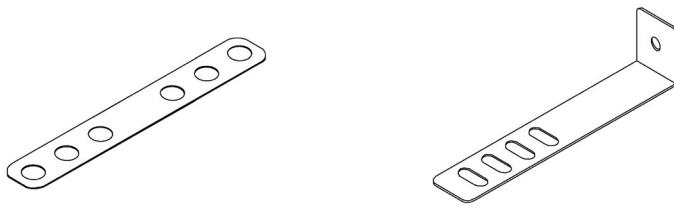
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INTERNAL WALLS

Flanking walls

Internal wall junctions are bonded into the external walls with the use of an abutment tie such as the Ancon CCB-IWJ-180 or Bever MV wall starter tie. Wall ties are built into the external blockwork.

Alternatively face fix ties such as the Ancon CCB-L200 can be fixed to the external walls.



Party Walls

There are two different options for building party walls to meet the requirement of Building Regulations regarding sound transference and thermal values.

Option 1 : Cavity party wall using two leaves of 115mm ZWP Plan-T blocks tied to the Monolithic external wall.

Option 2 : 240mm PFZ-T block post-filled with concrete and bonded into the Monolithic external wall.

When using option 2, a concrete mix of minimum C20 strength class is required with an aggregate size of between 8-16mm and a flow consistency of F4/F5.



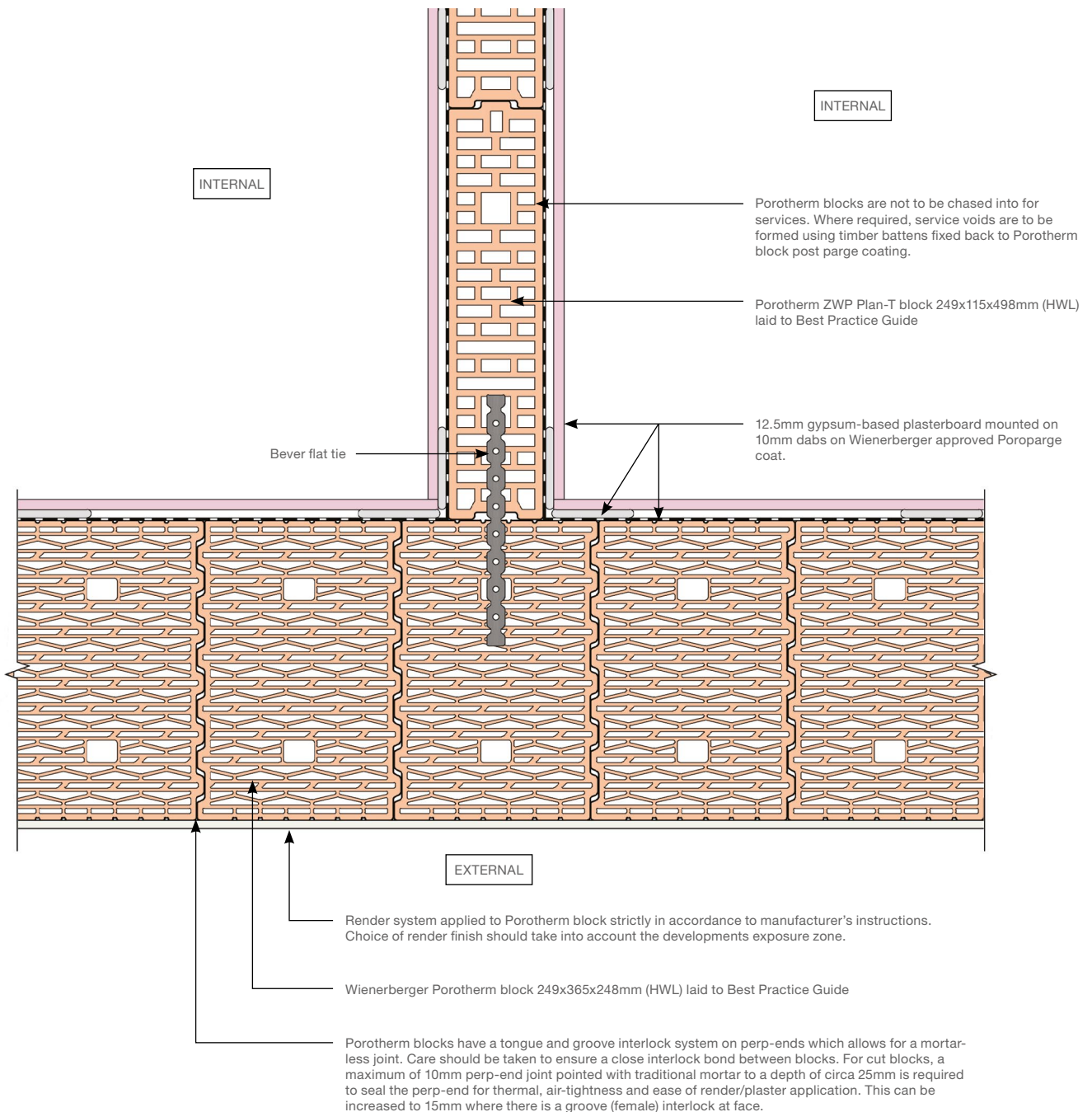
ZWP Plan-T and PFZ-T Porotherm blocks are 249mm in height and when Wienerberger thin joint mortar is applied with the applicator at 1mm thick provides a coursing height of 250mm, coursing in with the external Monolithic external wall.

INTERNAL WALLS

Typical Detail - 365 Block To Flanking Wall

Drawing number WBR-PTN-365-U04

Full booklet of details available for download from www.wienerberger.com

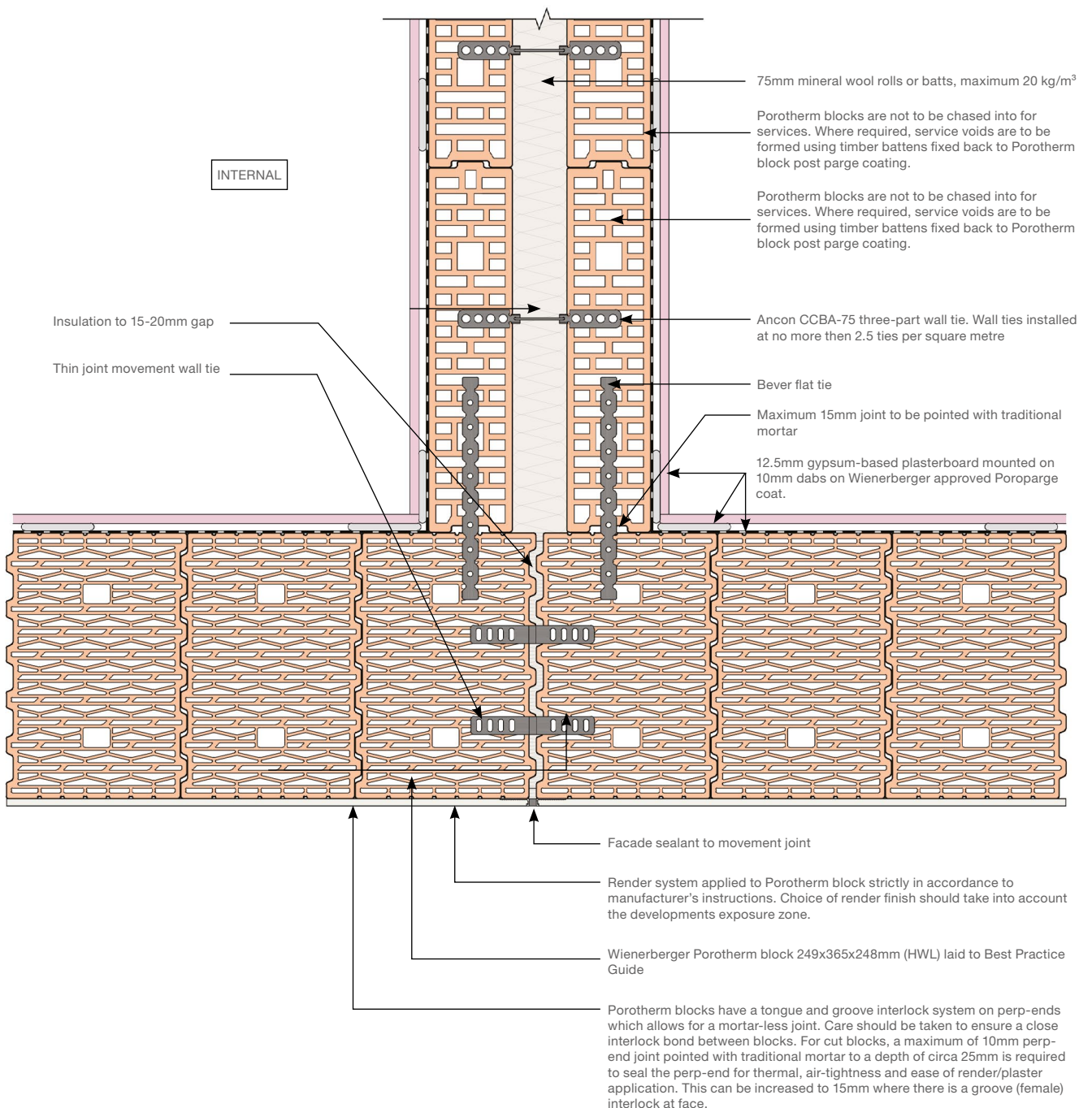


INTERNAL WALLS

Typical Detail - Option 1 Cavity Party Wall

Drawing number WBR-PTN-365-U07

Full booklet of details available for download from www.wienerberger.com

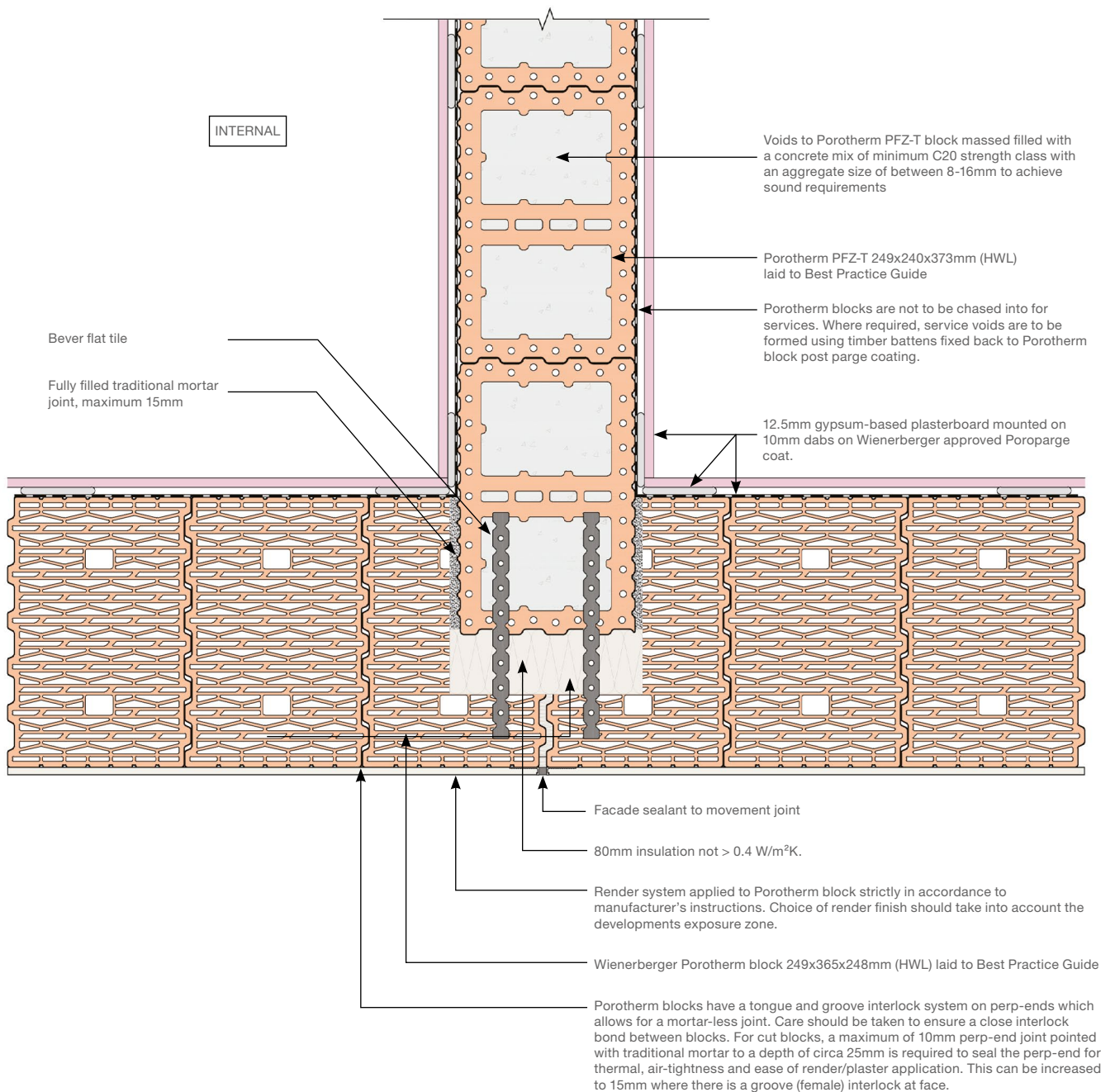


INTERNAL WALLS

Typical Detail - Option 2 Monolithic Party Wall

Drawing number WBR-PTN-365-U04

Full booklet of details available for download from www.wienerberger.com

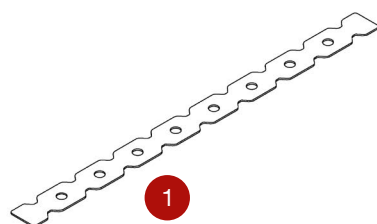
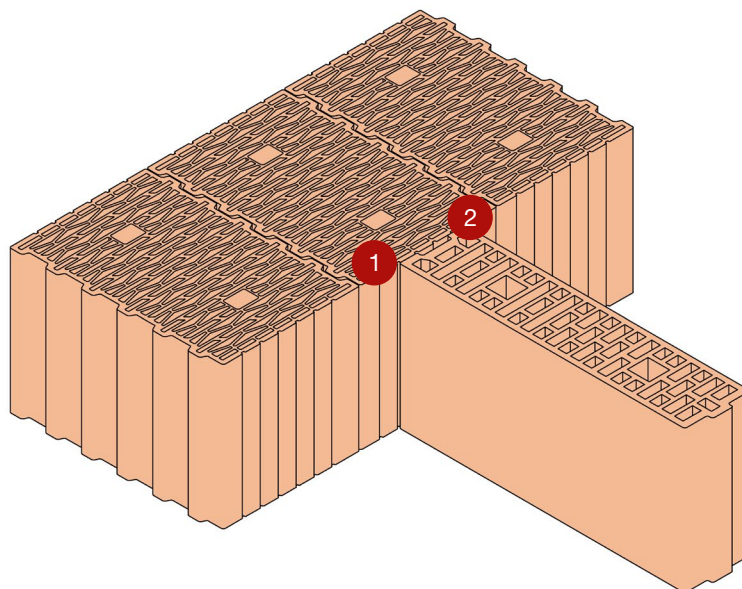


WALL TIES

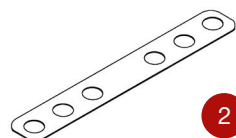
Tie for abutment internal wall to Monolithic external wall



Ancon and Bever have developed an innovative range of wall ties for Porotherm Monolithic blocks. The ties have been designed to accommodate the 1mm bed joints. The range includes ties for internal wall junctions and internal party cavity walls.



Bever MV
Flat tie

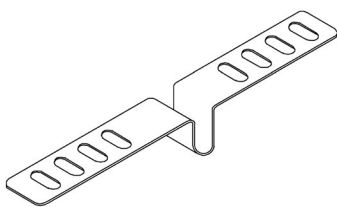
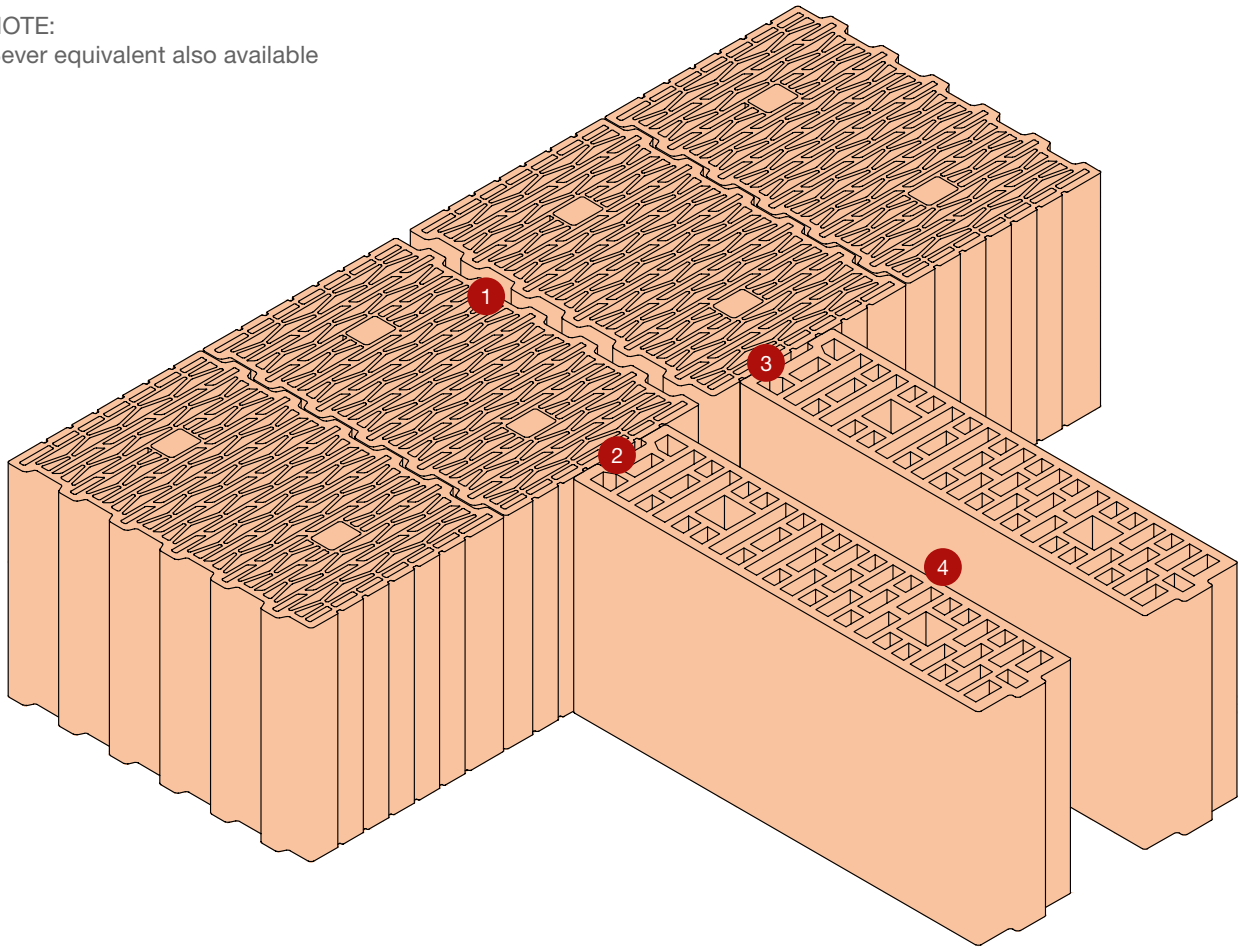


Ancon CCB-IWJ-180
Flat tie

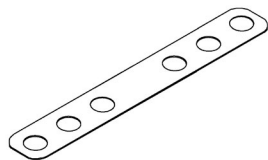
WALL TIES

Cavity Party Wall and Abutment Tie Options

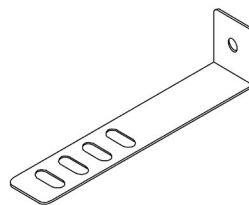
NOTE:
Bever equivalent also available



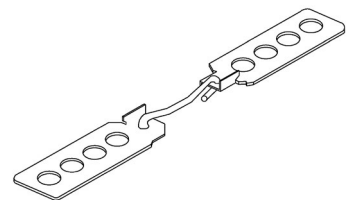
1. ANCON CCB-TMJ-200
Movement tie



2. ANCON CCB-IWJ-180
Flat tie



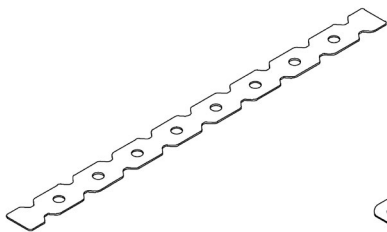
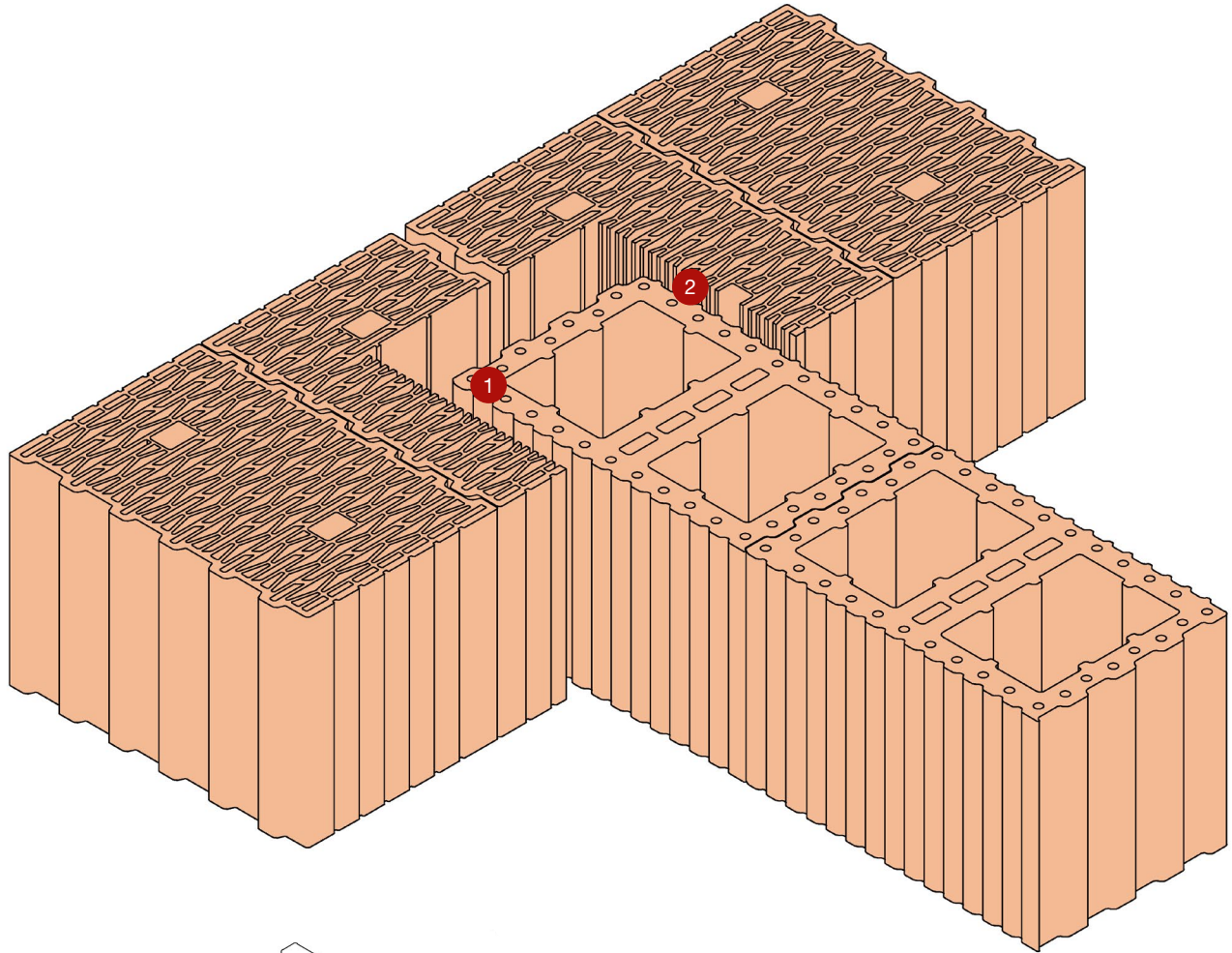
3. ANCON CCB-L200
Abutment tie



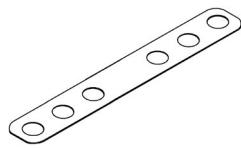
4. ANCON CCBA
Party wall tie (75 & 100mm
cavity)

WALL TIES

Monolithic Party Wall Tie Options



1. BEVER MV
Flat tie



2. ANCON CCB-IWJ-180
Flat tie

FIXINGS

Fixings



When fixing into Porotherm, ensure the fixings you are using are suitable for multi cellular clay blocks/vertically perforated brick. Please contact your fixing supplier for more information on fixings.

Heavy duty fixings are available, and if required, technical guidance should be sought from the fixing manufacturer.

When drilling into Porotherm Monolithic blocks, simply use a traditional masonry bit, but please ensure that there is no percussion employed. Percussion and or hammer action simply isn't required. Drilling with a rotary setting and masonry bit is more than sufficient to give the desired results.



FIXINGS

The below fixing data for maximum allowable loads is based on generic results tested according to BS 8539 for post-installed anchors and tested according to the EOTA technical Report 051 for EWI fixings.

Fixings used with Wienerberger Porotherm T7 Masonry Unit:

Anchor	Anchor type	Drill hole diameter (mm)	Drill hole depth (mm)	Embedment depth (mm)	Max Allowable Load		
					Tensile Load (kN)	Edge Distance (mm)	Anchor Spacing (mm)
SXRL 10 x 120 FUS²	Frame Anchor	10	70	70	1.1	100	N/A ¹
DuoXpand 10 x 100 FUS²	Frame Anchor	10	70	70	0.64	100	N/A ¹
DuoPower 10 x 50	Nylon Plug Anchor	10	60	50	0.14	100	N/A ¹
FIS H 18 x 85 N/FIS A M10 x 110	Injection Anchor Sleeve	18	95	85	0.61	80	N/A ¹
FIF CN 8/100²	EWI Fixing	8	45	45	0.005	50	140
DIPK 10/100²	Render Fixing	10	45	45	0.02	50	140
DHM 40²	Fire Rated insulation Fixing	8	50	50	0.05	60	140

Fixings used with Wienerberger Porotherm T9 Masonry Unit:

Anchor	Anchor type	Drill hole diameter (mm)	Drill hole depth (mm)	Embedment depth (mm)	Max Allowable Load		
					Tensile Load (kN)	Edge Distance (mm)	Anchor Spacing (mm)
SXRL 10 x 120 FUS²	Frame Anchor	10	70	70	0.28	100	N/A ¹
DuoXpand 10 x 100 FUS²	Frame Anchor	10	70	70	0.22	100	N/A ¹
DuoPower 10 x 50	Nylon Plug Anchor	10	60	50	0.06	100	N/A ¹
FIS H 18 x 85 N/FIS A M10 x 110	Injection Anchor Sleeve	18	95	85	0.38	80	N/A ¹
FIF CN 8/100²	EWI Fixing	8	45	45	0.02	50	140
DIPK 10/100²	Render Fixing	10	45	45	0.03	50	140
DHM 40²	Fire Rated insulation Fixing	8	50	50	0.03	60	140

¹ One anchor per block

² Longer length of anchor used for this test to allow us to attach our test equipment. Anchor will be embedded at depth stated.

CHASING FOR SERVICES

Chases



Installing chases for the purposes of running services is best achieved by using a proprietary tool designed specifically for the purpose e.g. a wall chaser with two parallel diamond tipped cutting wheels.

A bolster chisel can then be used to remove the cut section.

The chase should then be sealed for air tightness using Wienerberger Porofill.

Contractors must follow guidelines to make the installation of electrical cables as safe as possible and note new circuit work may be covered by Part P of the building regulations.

Ideally works pertaining to chasing and making good should be completed prior to applying a parge coat. Should chasing and making good be undertaken after a parge coat is applied then an additional parge coat must be applied over the chased area.

CHASING FOR SERVICES

Chases

Sizes of vertical chases and recesses in masonry, allowed without calculation.

Thickness of wall (mm)	Chases and recesses formed after the construction of masonry		Chases and recesses formed during the construction of masonry	
	Max depth (mm)	Max width (mm)	Minimum wall leaf thickness remaining (mm)	Max width (mm)
85-115	30	100	70	300
116-175	30	125	90	300
176-225	30	150	140	300
226-300	30	175	175	300
>300	30	200	215	300

Note 1

The maximum depth of the recess or chase should include the depth of any hole reached when forming the recess or chase.

Note 2

Vertical chases which do not extend more than one third of the storey height above floor level may have a depth up to 80mm and a width up to 120mm if the thickness of the wall is 225mm or more.

Note 3

The horizontal distance between adjacent chases or between a chase and a recess or an opening should not be less than 225mm.

Note 4

The horizontal distance between any two adjacent recesses, whether they occur on the same side or on opposite sides of the wall, or between a recess and an opening, should not be less than twice the width of the wider of the two recesses.

Note 5

The cumulative width of vertical chases and recesses should not exceed 0.13 times the length of the wall.

Note 6

When installing gas pipework into chases cut into Porotherm, the pipework should be secured using proprietary side fixed clips into the face of the block and not into the inner face of the chase. As with all masonry types, the sealing of the chase should be in line with Gas Safe regulations. If in doubt, the advice of a heating engineer should be sought.

If chases are too deep or back-to-back the structural integrity of the wall will have been altered and therefore will be subject to a structural engineers' survey and report. The person chasing for electrical work may not be the same person who hangs a picture or cuts a retrospective window, therefore, all chases should be sensibly placed allowing everyone the opportunity of working out where services are in relation to lights, switches, sockets and appliance points.

PARGE COAT

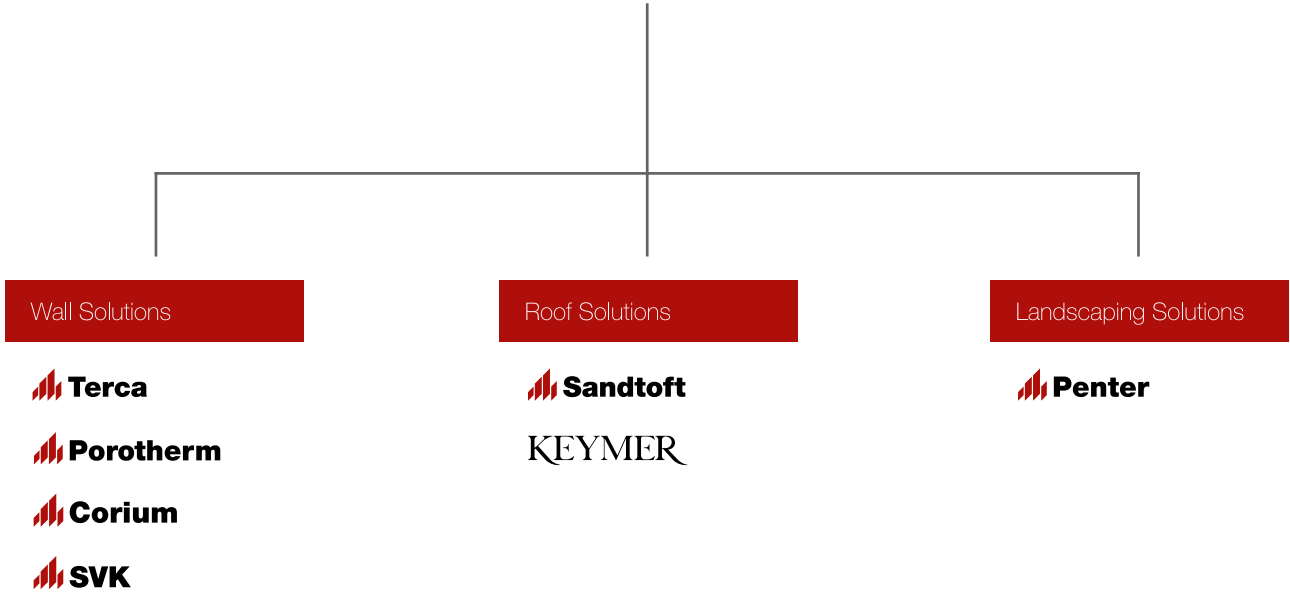
Parge Coat

Porotherm is a dry perpend system, so something is required to seal the vertical joints for airtightness if dry lining rather than wet plastering. That is the job of Wienerberger Poroparge. It comes as a bagged dry powder and is mechanically mixed with water in accordance with instructions and applied with a soft brush. Wienerberger Poroparge has an expansive quality as it dries to assist with the filling of the joints. Poroparge should be applied to clean dry walls and so it is important to keep blockwork covered during inclement weather.



When applying parge coat to the 1st floor walls, extend the parge coat a minimum of 300mm into the roof space. For further information refer to the technical data sheet.





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Have questions?

Want to know more, or are you looking for support with your next project? Visit our website to contact us. Our team of experts are ready to answer your questions.