Linear Thermal Transmittance Junction Details

(Psi Values)

SAP Detail Reference	Description of Detail	Durisol D365 Block	Durisol D300 Block	Default SAP Values	Accredited Details Values	Notes/ Comments
		W/mK*	W/mK*	W/mK*	W/mK*	
E2	Other lintels	0.037	0.049	1.000	0.300	Durisol values significantly better than accredited details
E3	Cill	0.015	0.019	0.080	0.040	Durisol values significantly better than accredited details
E4	Jamb	0.030	0.034	0.100	0.050	Durisol values significantly better than accredited details
E5	Ground Floor- B&B Parallel (Aircrete floor infill)	0.176	0.077	0.320	0.160	Durisol 300mm values are significantly better and 365mm values are very close to accredited details
E5	Ground Floor- B&B Parallel (Aircrete at edges only, conc. block infill)	0.176	0.075	0.320	0.160	Durisol 300mm values are significantly better and 365mm values are very close to accredited details
E5	Ground Floor - B&B Perpendicular (Aircrete floor infill)	0.176	0.050	0.320	0.160	Durisol 300mm values are significantly better and 365mm values are very close to accredited details
E5	Ground Floor - B&B Perpendicular (Aircrete at edges only, conc. block infill)	0.176	0.050	0.320	0.160	Durisol 300mm values are significantly better and 365mm values are very close to accredited details
E6	Intermediate floor within dwelling	0.039	0.048	0.140	0.070	Durisol values significantly better than accredited details
E10	Eaves (insulation at ceiling level)	0.002	0.009	0.120	0.060	Durisol values significantly better than accredited details
E12	Gable (insulation at ceiling level)	0.011	0.015	0.480	0.240	Durisol values significantly better than accredited details
E16	Normal Corner	0.002	0.002	0.180	0.090	Durisol values significantly better than accredited details
E17	Inverted Corner	-0.002	-0.001	0.000	-0.090	Durisol values significantly better than accredited details
E18	Party wall between dwellings	0.011	0.015	0.120	0.060	Durisol values significantly better than accredited details
P1	Ground Floor- B&B Parallel	0.059		0.160	0.080	Durisol values significantly better than accredited details
P1	Ground Floor- B&B Parallel	0.059		0.160	0.080	Durisol values significantly better than accredited details
P1	Ground Floor - B&B Perpendicular	0.063		0.160	0.080	Durisol values significantly better than accredited details
P1	Ground Floor - B&B Perpendicular	0.061		0.160	0.080	Durisol values significantly better than accredited details
P4	Roof (insulation at ceiling level)	0.140		0.240	0.240	Durisol values significantly better than accredited details
Building with Durisol delivers highly efficient thermal performance due to excellent U Values and low loss through thermal bridging						

Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

carbonplan

Certificate No:	2638 – 300mm Lintel E2	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

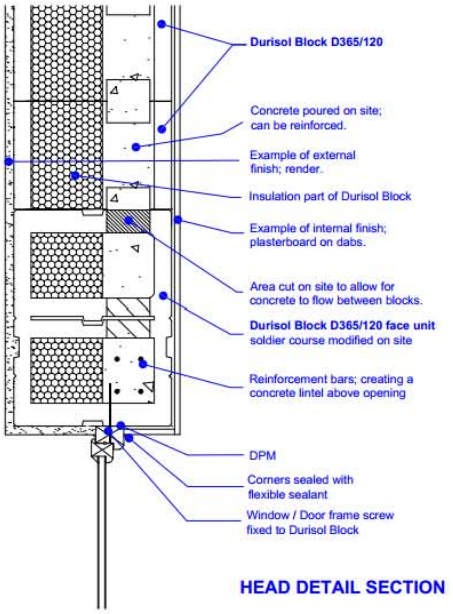
Utilises standard Durisol detail for 300mm blocks.

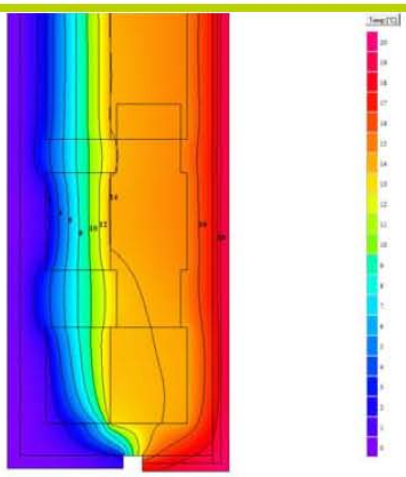
Material Thermal Conductivities:

Reinforced Concrete @ Lintel: **2.3 W/m.K**
Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**

Description:	300mm Standard Lintel Junction
Reference:	2638 – 300mm Lintel E2

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.049

Temperature Factor[3] for Humidity and Mould	
f =	0.882

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

CarbonPlan Ltd. Omnibus Workspace 39-41 North Road London N7 9DP
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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 365mm Lintel E2	Issued:	11/18/2014

Issued to:

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Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

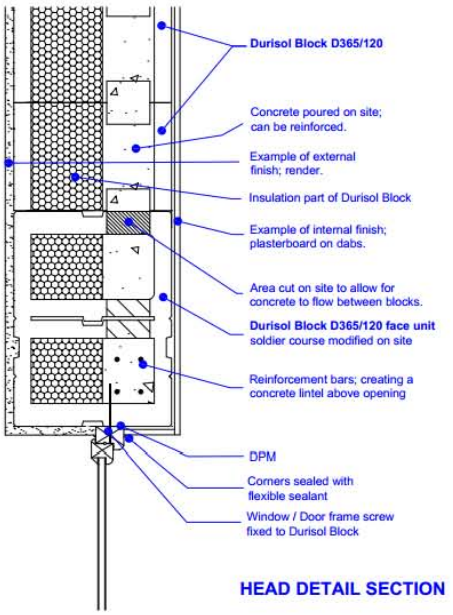
Utilises standard Durisol detail for 365mm blocks.

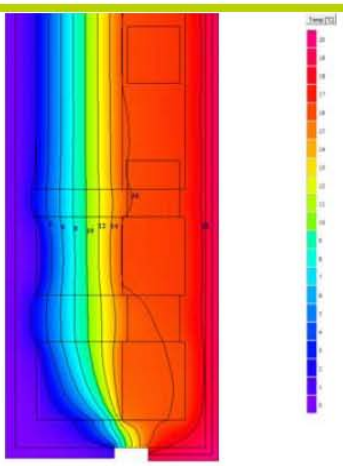
Material Thermal Conductivities:

Reinforced Concrete @ Lintel: **2.3 W/m.K**
Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**

Description:	365mm Standard Lintel Junction
Reference:	2638 – 365mm Lintel E2

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.037

Temperature Factor[3] for Humidity and Mould	
f =	0.946

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 300mm Cill E3	Issued:	11/18/2014

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Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

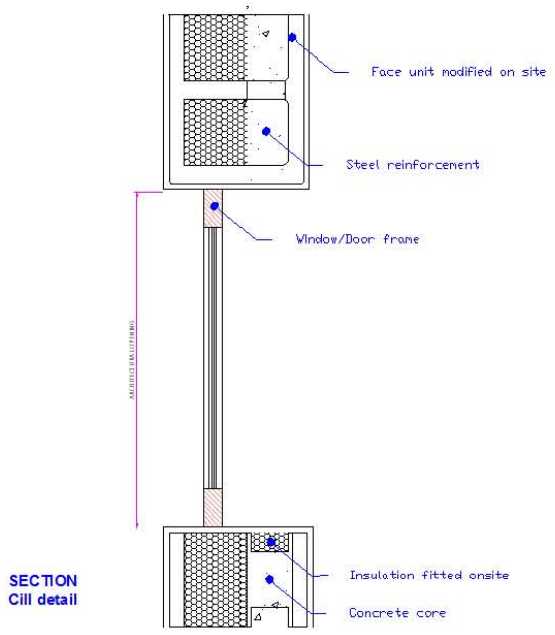
Utilises standard Durisol detail for 300mm blocks.
Concrete not poured at Cill, but special 50mm PIR 0.022 W/m.K insulation inserted below timber cill.

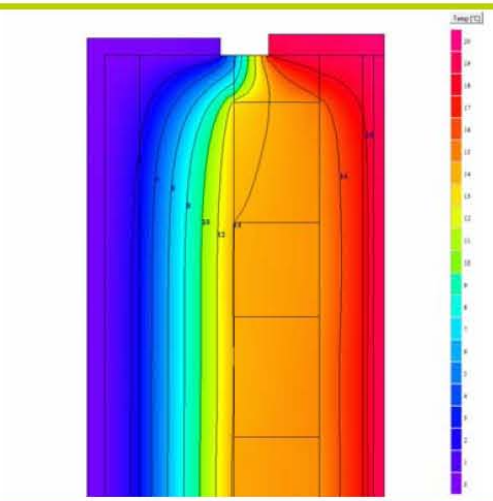
Material Thermal Conductivities:

Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**
Timber Cill: **0.15 W/m.K**

Description:	300mm Cill Junction with insulation insert
Reference:	2638 – 300mm Cill E3

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.019

Temperature Factor[3] for Humidity and Mould	
f =	0.961

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 365mm Cill E3	Issued:	11/18/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

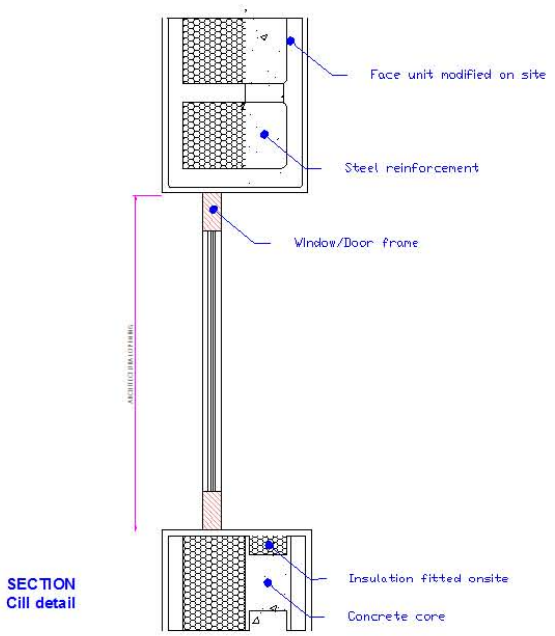
Utilises standard Durisol detail for 365mm blocks.
Concrete not poured at Cill, but special 50mm PIR 0.022 W/m.K insulation inserted below timber cill.

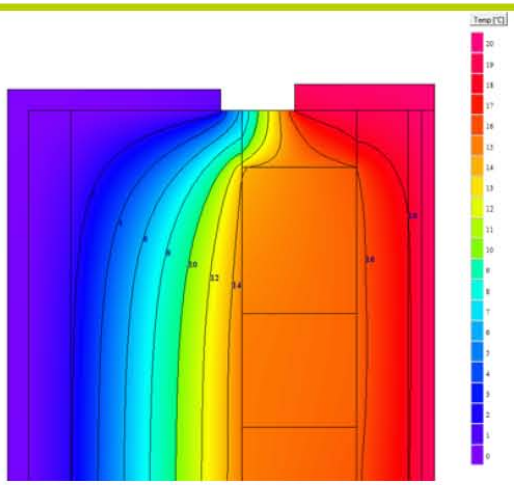
Material Thermal Conductivities:

Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**
Timber Cill: **0.15 W/m.K**

Description:	365mm Cill Junction with insulation insert
Reference:	2638 – 365mm Cill E2

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.015

Temperature Factor[3] for Humidity and Mould	
f =	0.969

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 300mm Jamb E4	Issued:	11/18/2014

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Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

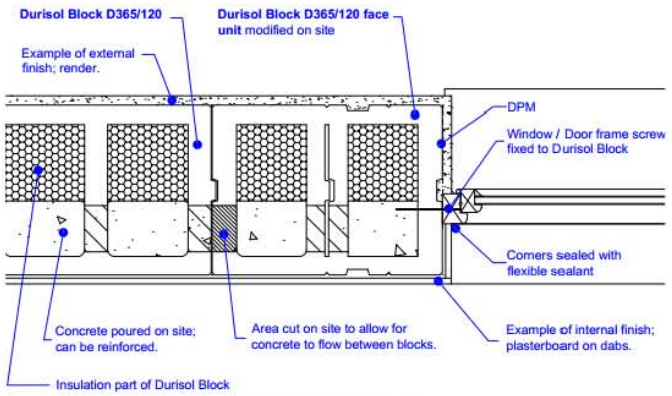
Utilises standard Durisol detail for **300mm** blocks.

Material Thermal Conductivities:

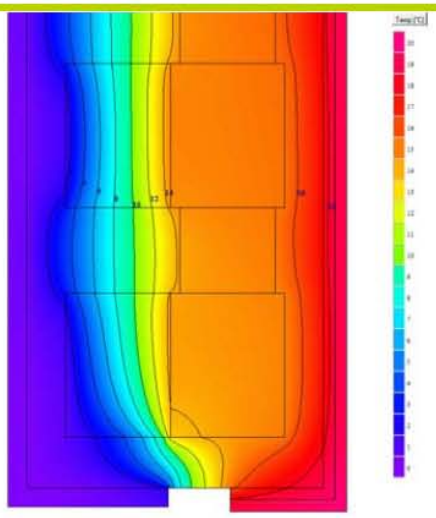
Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**

Description:	300mm Standard Jamb Junction
Reference:	2638 – 300mm Jamb E4

Junction Detail



JAMB DETAIL PLAN



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.034

Temperature Factor[3] for Humidity and Mould	
f =	0.935

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 365mm Jamb E4	Issued:	11/18/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

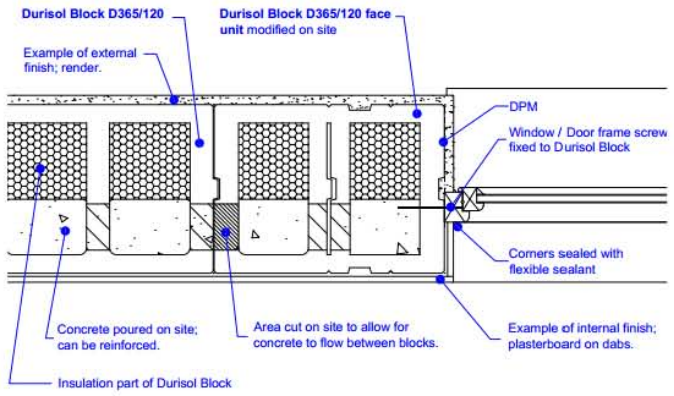
Utilises standard Durisol detail for **365mm** blocks.

Material Thermal Conductivities:

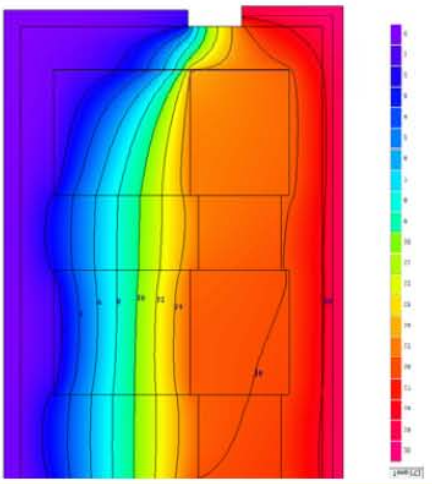
Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**

Description:	365mm Standard Jamb Junction
Reference:	2638 – 365mm Jamb E4

Junction Detail



JAMB DETAIL PLAN



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.030

Temperature Factor[3] for Humidity and Mould	
f =	0.935

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 300mm GF B&B E5 PERP Aircrete	Issued:	18/11/2014

Issued to:

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Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

- Utilises standard Durisol 300mm block.
- 440mm wide and deep Aircrete Threnchblock foundation
- 170mm high Aircrete coursing block @ 100mm wide rests on Trechblock to external face under Durisol blocks
- 120mm thick 0.022 W/m.K insulation @ 170mm high between coursing block to underside of Durisol Block
- 65mm high Aircrete coursing block @ 215mm wide rests on Trechblock to internal face
- 170mm pre-stressed concrete beams run Perpendicular to wall.
- Floor infill with Aircrete Floor Blocks
- Min 150mm 0.022 W/m.K insulation between screed and structure
- Min 20mm thick 0.022 W/m.K Edge insulation from top of B&B floor to top edge of screed

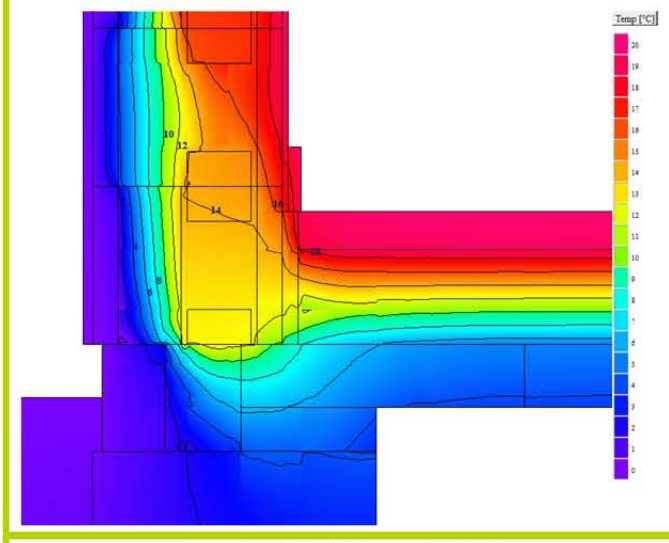
Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.

2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
- **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	300mm Ground Floor Block and Beam – Perpendicular with Aircrete Floor Blocks
Reference:	2638 - 300mm GF B&B Perpendicular E5 Aircrete Infill



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.050

Temperature Factor for Humidity and Mould	
f =	0.865

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 365mm GF B&B E5 PAR Aircrete	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

- Utilises standard Durisol 365mm block.
- 440mm wide and deep Aircrete Threnchblock foundation
- 170mm high Aircrete coursing block @ 100mm wide rests on Trechblock to external face under Durisol blocks
- 120mm thick 0.022 W/m.K insulation @ 170mm high between coursing block to underside of Durisol Block
- 65mm high Aircrete coursing block @ 215mm wide rests on Trechblock to internal face
- 170mm pre-stressed concrete beams run Parallel to wall.
- Floor infill with Aircrete Floor Blocks
- Min 150mm 0.022 W/m.K insulation between screed and structure
- Min 20mm thick 0.022 W/m.K Edge insulation from top of B&B floor to top edge of screed

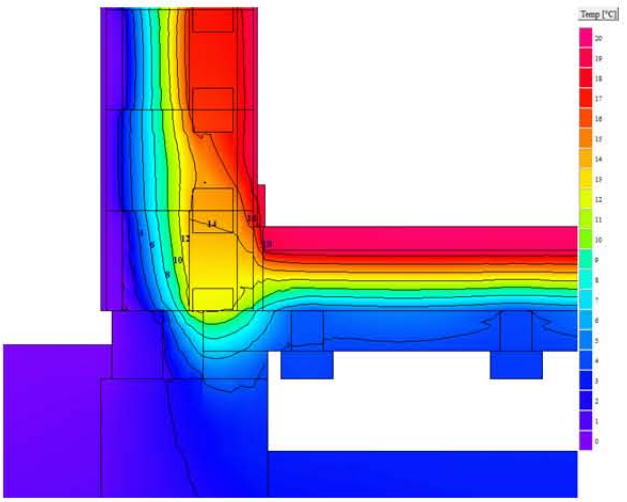
Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.

2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
- **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	365mm Ground Floor Block and Beam – Parallel with Aircrete Floor Blocks
Reference:	2638 - 365mm GF B&B Parallel E5 Aircrete Infill



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.176

Temperature Factor for Humidity and Mould	
f =	0.894

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 300mm GF B&B E5 PAR Conc	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

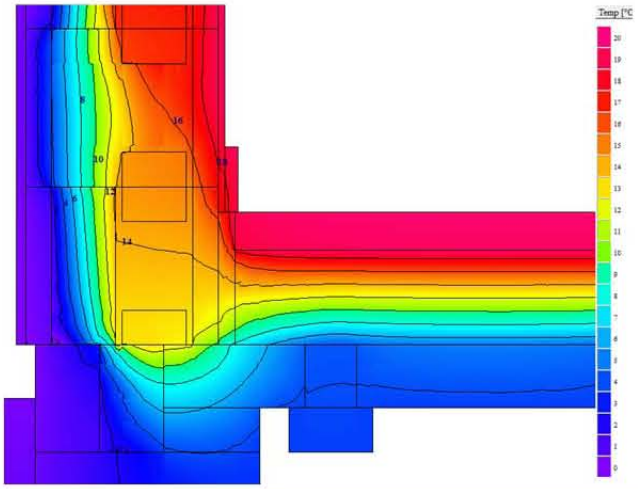
Notes about Detail:

- Utilises standard Durisol **300mm** block.
- **440mm wide and deep Aircrete Threnchblock** foundation
- **170mm high** Aircrete coursing block @ **100mm wide** rests on Trechblock to external face under Durisol blocks
- **120mm thick 0.022 W/m.K** insulation @ **170mm high** between coursing block to underside of Durisol Block
- **65mm high** Aircrete coursing block @ **215mm wide** rests on Trechblock to internal face
- **170mm** pre-stressed concrete beams run **Parallel** to wall.
- Floor infill with **Aircrete Blocks to perimeter and Medium Density Concrete Blocks elsewhere**
- Min **150mm 0.022 W/m.K** insulation between screed and structure
- Min **20mm thick 0.022 W/m.K** Edge insulation from top of B&B floor to top edge of screed

Notes: -

1. Ψ and *f* are only valid for the detail drawn and described above.
2. In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:
   - **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
   - **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	300mm Ground Floor Block and Beam – Parallel with Medium Density Concrete Blocks
Reference:	2638 - 300mm GF B&B Parallel E5 Concrete Infill



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.077

Temperature Factor for Humidity and Mould	
f =	0.910

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 365mm GF B&B E5 PAR Conc	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

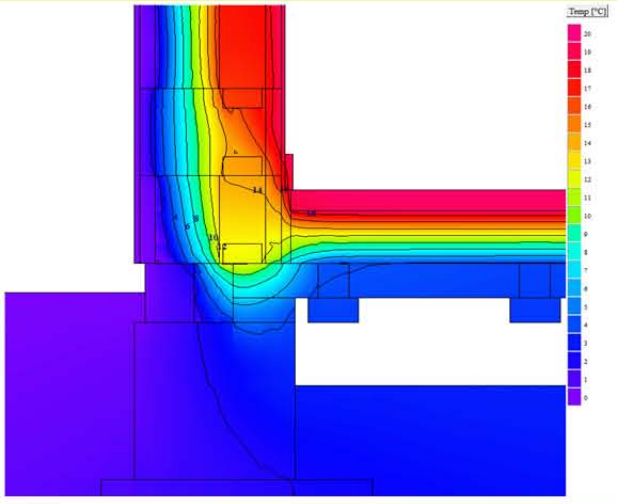
Notes about Detail:

- Utilises standard Durisol 365mm block.
- 440mm wide and deep Aircrete Threnchblock foundation
- 170mm high Aircrete coursing block @ 100mm wide rests on Trechblock to external face under Durisol blocks
- 120mm thick 0.022 W/m.K insulation @ 170mm high between coursing block to underside of Durisol Block
- 65mm high Aircrete coursing block @ 215mm wide rests on Trechblock to internal face
- 170mm pre-stressed concrete beams run Parallel to wall.
- Floor infill with Aircrete Blocks to perimeter and Medium Density Concrete Blocks elsewhere
- Min 150mm 0.022 W/m.K insulation between screed and structure
- Min 20mm thick 0.022 W/m.K Edge insulation from top of B&B floor to top edge of screed

Notes: -

1. Ψ and *f* are only valid for the detail drawn and described above.
2. In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:
   - **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
   - **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	365mm Ground Floor Block and Beam – Parallel with Medium Density Concrete Blocks
Reference:	2638 - 365mm GF B&B Parallel E5 Concrete Infill



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.176

Temperature Factor for Humidity and Mould	
f =	0.878

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

carbonplan

Certificate No:	2638 – 300mm GF B&B E5 PERP Aircrete	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

- Utilises standard Durisol 300mm block.
- 440mm wide and deep Aircrete Threnchblock foundation
- 170mm high Aircrete coursing block @ 100mm wide rests on Trechblock to external face under Durisol blocks
- 120mm thick 0.022 W/m.K insulation @ 170mm high between coursing block to underside of Durisol Block
- 65mm high Aircrete coursing block @ 215mm wide rests on Trechblock to internal face
- 170mm pre-stressed concrete beams run Perpendicular to wall.
- Floor infill with Aircrete Floor Blocks
- Min 150mm 0.022 W/m.K insulation between screed and structure
- Min 20mm thick 0.022 W/m.K Edge insulation from top of B&B floor to top edge of screed

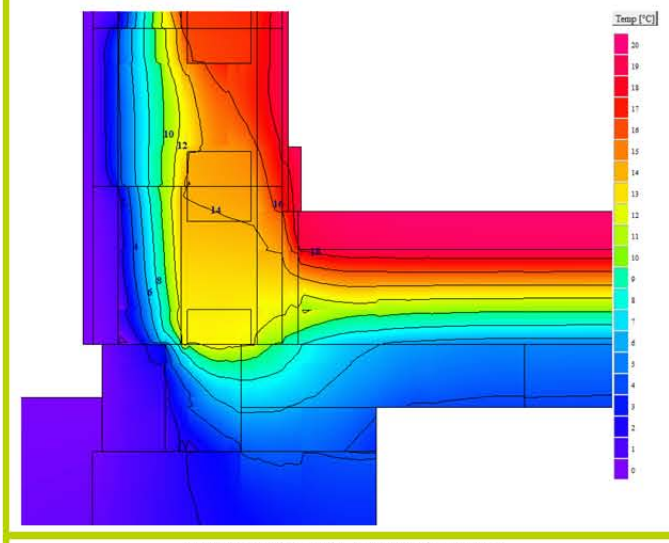
Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.

2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
- **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	300mm Ground Floor Block and Beam – Perpendicular with Aircrete Floor Blocks
Reference:	2638 - 300mm GF B&B Perpendicular E5 Aircrete Infill



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.050

Temperature Factor for Humidity and Mould	
f =	0.865

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

carbonplan

Certificate No:	2638 – 365mm GF B&B E5 PERP Aircrete	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

- Utilises standard Durisol **365mm** block.
- **440mm wide and deep Aircrete Threnchblock** foundation
- **170mm high** Aircrete coursing block @ **100mm wide** rests on Trechblock to external face under Durisol blocks
- **120mm thick 0.022 W/m.K** insulation @ **170mm high** between coursing block to underside of Durisol Block
- **65mm high** Aircrete coursing block @ **215mm wide** rests on Trechblock to internal face
- **170mm** pre-stressed concrete beams run **Perpendicular** to wall.
- Floor infill with **Aircrete Floor Blocks**
- Min **150mm 0.022 W/m.K** insulation between screed and structure
- Min **20mm thick 0.022 W/m.K** Edge insulation from top of B&B floor to top edge of screed

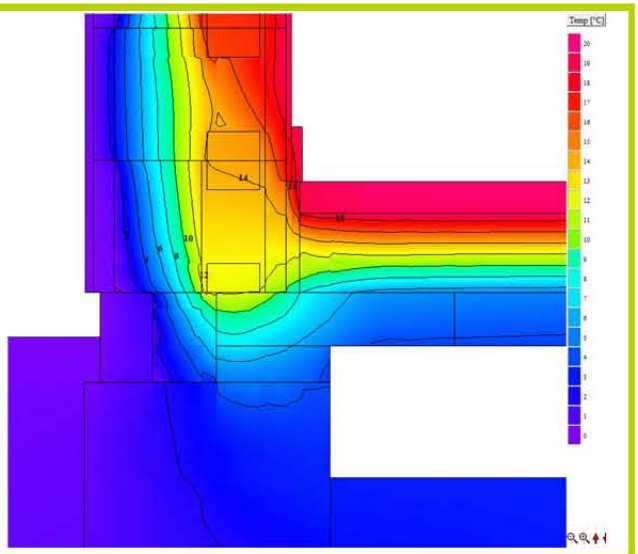
Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.

2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
- **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	**365mm Ground Floor Block and Beam – Perpendicular with Aircrete Floor Blocks**
Reference:	**2638 - 365mm GF B&B Perpendicular E5 Aircrete Infill**



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.176

Temperature Factor for Humidity and Mould	
f =	0.808

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

carbonplan

Certificate No:	2638 – 300mm GF B&B E5 PERPEND Conc	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

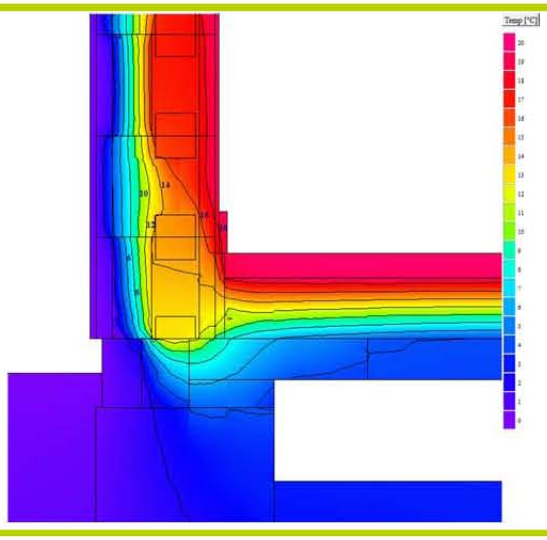
Notes about Detail:

- Utilises standard Durisol 300mm block.
- 440mm wide and deep Aircrete Threnchblock foundation
- 170mm high Aircrete coursing block @ 100mm wide rests on Trechblock to external face under Durisol blocks
- 120mm thick 0.022 W/m.K insulation @ 170mm high between coursing block to underside of Durisol Block
- 65mm high Aircrete coursing block @ 215mm wide rests on Trechblock to internal face
- 170mm pre-stressed concrete beams run Perpendicular to wall.
- Floor infill with Aircrete Blocks to perimeter and Medium Density Concrete Blocks elsewhere
- Min 150mm 0.022 W/m.K insulation between screed and structure
- Min 20mm thick 0.022 W/m.K Edge insulation from top of B&B floor to top edge of screed

Notes: -

1. Ψ and *f* are only valid for the detail drawn and described above.
2. In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:
   - **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
   - **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	300mm Ground Floor Block and Beam – Perpendicular with Medium Density Concrete Blocks
Reference:	2638 - 300mm GF B&B Perpendicular E5 Concrete Infill



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.050

Temperature Factor for Humidity and Mould	
f =	0.890

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

carbonplan

Certificate No:	2638 – 365mm GF B&B E5 PAR Conc	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

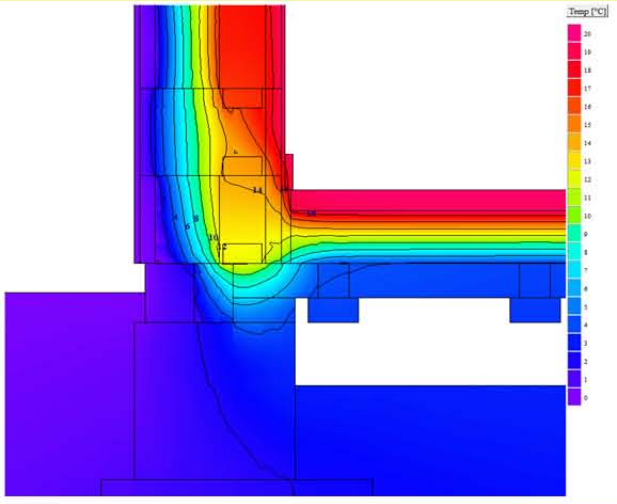
Notes about Detail:

- Utilises standard Durisol 365mm block.
- 440mm wide and deep Aircrete Threnchblock foundation
- 170mm high Aircrete coursing block @ 100mm wide rests on Trechblock to external face under Durisol blocks
- 120mm thick 0.022 W/m.K insulation @ 170mm high between coursing block to underside of Durisol Block
- 65mm high Aircrete coursing block @ 215mm wide rests on Trechblock to internal face
- 170mm pre-stressed concrete beams run Parallel to wall.
- Floor infill with Aircrete Blocks to perimeter and Medium Density Concrete Blocks elsewhere
- Min 150mm 0.022 W/m.K insulation between screed and structure
- Min 20mm thick 0.022 W/m.K Edge insulation from top of B&B floor to top edge of screed

Notes: -

1. Ψ and *f* are only valid for the detail drawn and described above.
2. In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:
   - **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
   - **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	365mm Ground Floor Block and Beam – Parallel with Medium Density Concrete Blocks
Reference:	2638 - 365mm GF B&B Parallel E5 Concrete Infill



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.176

Temperature Factor for Humidity and Mould	
f =	0.878

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 300mm E6-Intermediary Floor	Issued:	18/11/2014

Issued to:

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Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

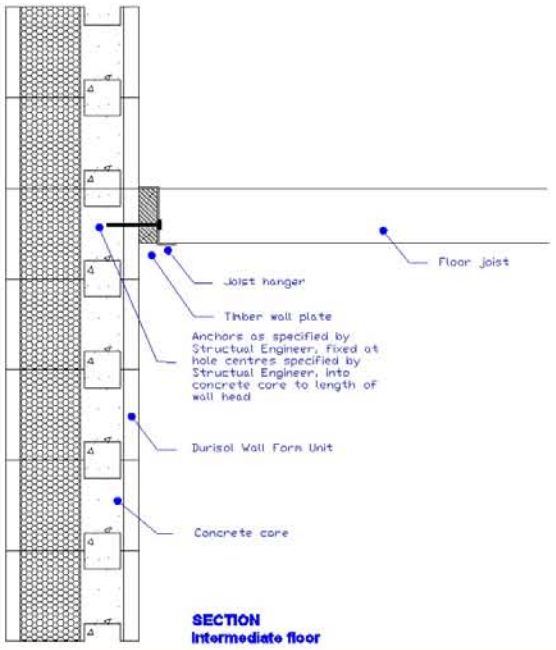
Utilises standard Durisol detail for **300mm** blocks.

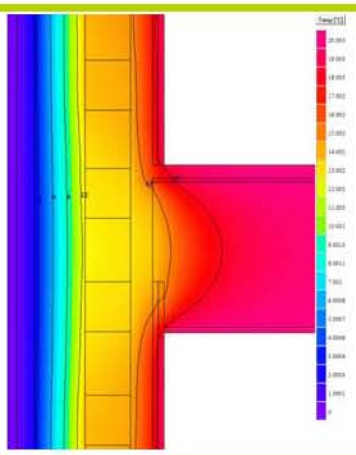
Material Thermal Conductivities:

Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**
High density acoustic floor membrane: **0.5021 W/m.K**
Air gap between ceiling and floor: **0.0251 W/m.K**

Description:	300mm E6 - Intermediary Floor
Reference:	2638 – 300mm E6 - Intermediary Floor

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.048

Temperature Factor[3] for Humidity and Mould	
f =	0.914

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 365mm E6-Intermediary Floor	Issued:	18/11/2014

Issued to:

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Parkway,
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Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

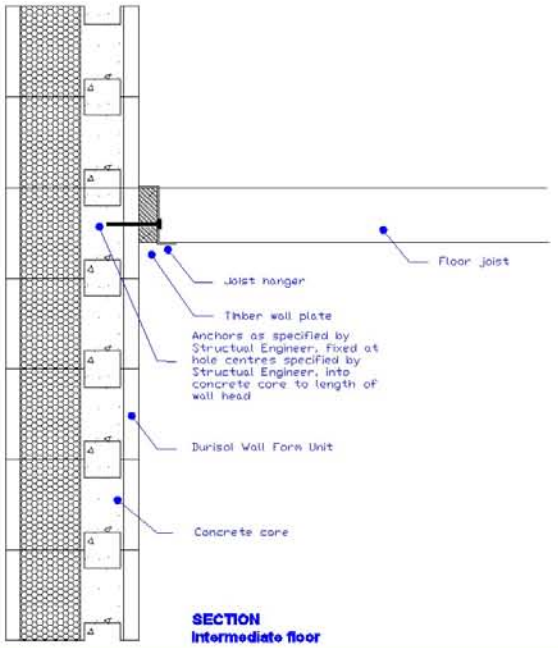
Utilises standard Durisol detail for 365mm blocks.

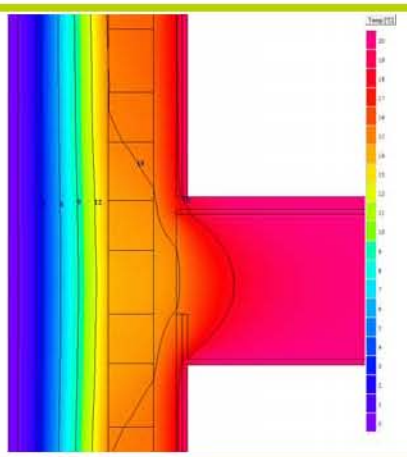
Material Thermal Conductivities:

Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**
High density acoustic floor membrane: **0.5021 W/m.K**
Air gap between ceiling and floor: **0.0251 W/m.K**

Description:	365mm E6 - Intermediary Floor
Reference:	2638 – 365mm E6 - Intermediary Floor

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.039

Temperature Factor[3] for Humidity and Mould	
f =	0.932

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 300mm Eaves Ins @ Ceiling E10	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

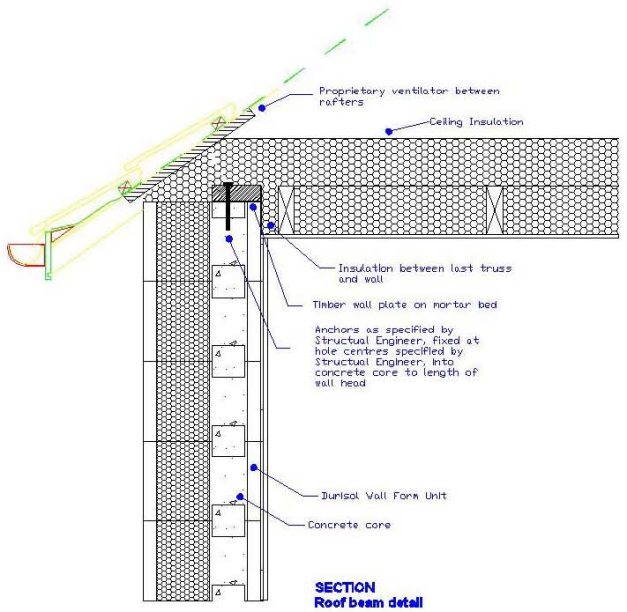
Utilises standard Durisol detail for **300mm** blocks.
Area behind wall plate to be packed with **min 200mm** mineral wool insulation with **R = 0.036 W/m.K**

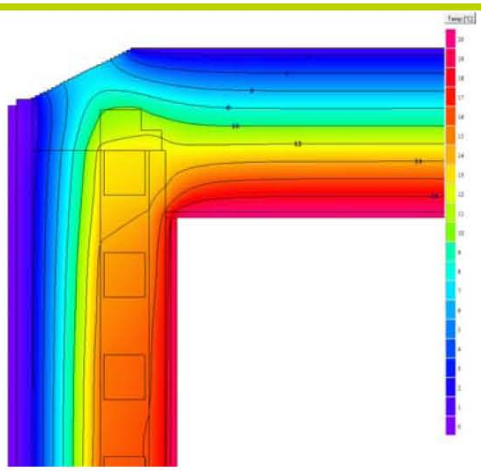
Material Thermal Conductivities:

PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**
Mineral wool loft roll insulation: **0.036 W/m.K**

Description:	365mm Eaves Insulation at Ceiling Junction
Reference:	2638 – 365mm E10 Eaves Ins at Ceiling Junction

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.009

Temperature Factor[3] for Humidity and Mould	
f =	0.882

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 365mm Eaves Ins @ Ceiling E10	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

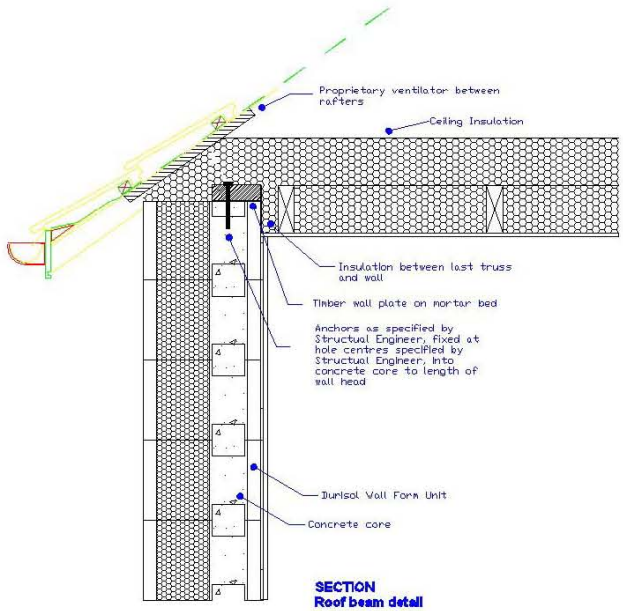
Utilises standard Durisol detail for **365mm** blocks.
Area behind wall plate to be packed with **min 200mm** mineral wool insulation with **R = 0.036 W/m.K**

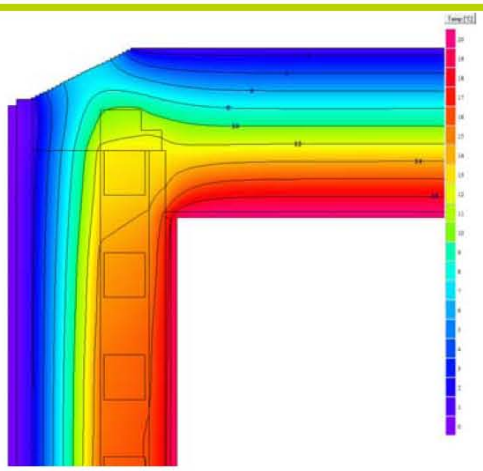
Material Thermal Conductivities:

PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**
Mineral wool loft roll insulation: **0.036 W/m.K**

Description:	**365mm Eaves Insulation at Ceiling Junction**
Reference:	**2638 – 365mm E10 Eaves Ins at Ceiling Junction**

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	**0.002**

Temperature Factor[3] for Humidity and Mould	
***f* =**	**0.882**

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – Gable with Ins @ ceiling 300mm E12	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

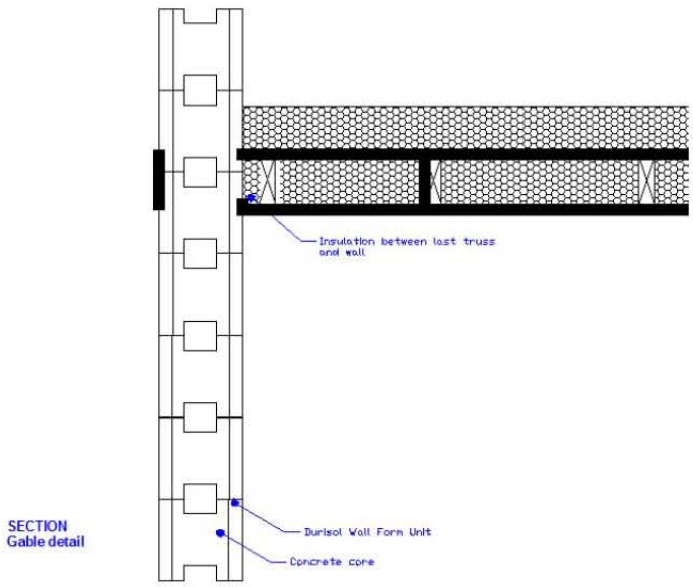
Utilises standard Durisol detail for **300mm** blocks.

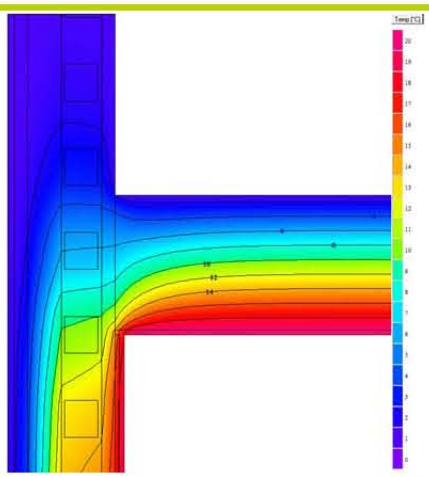
Material Thermal Conductivities:

Reinforced Concrete @ Lintel: **2.3 W/m.K**
Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**
Mineral wool loft roll insulation: **0.036 W/m.K**

Description:	300mm E12 Gable Ins at Ceiling Junction
Reference:	2638 – 300mm E12

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.015

Temperature Factor[3] for Humidity and Mould	
f =	0.893

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

carbonplan

Certificate No:	2638 – Gable with Ins @ ceiling 365mm E12	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

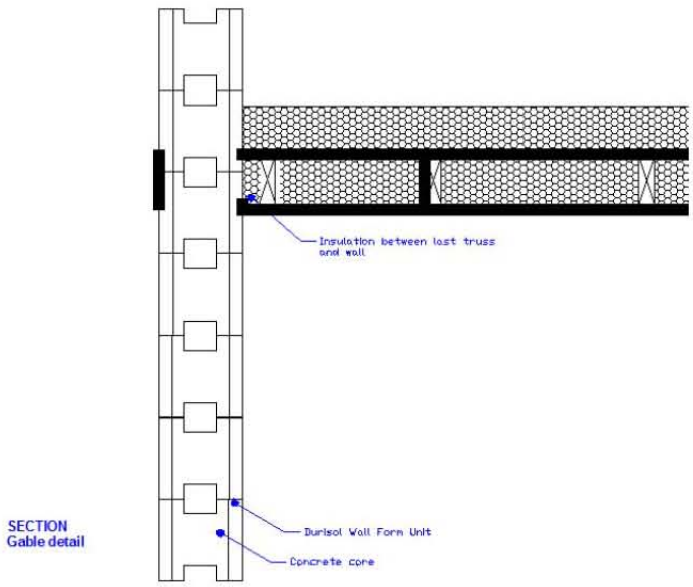
Utilises standard Durisol detail for **365mm** blocks.

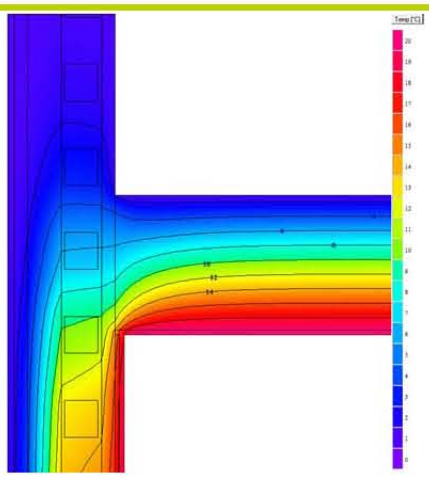
Material Thermal Conductivities:

Reinforced Concrete @ Lintel: **2.3 W/m.K**
Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**
Mineral wool loft roll insulation: **0.036 W/m.K**

Description:	365mm E12 Gable Ins at Ceiling Junction
Reference:	2638 – 365mm E12

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.011

Temperature Factor[3] for Humidity and Mould	
f =	0.921

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – Corner 300mm E16	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

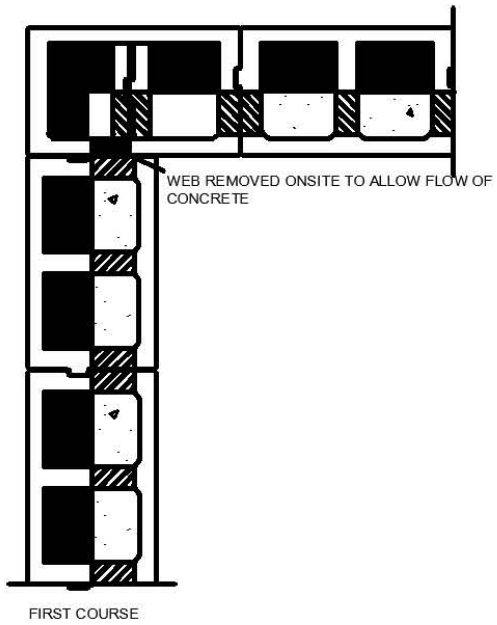
Utilises standard Durisol detail for 300mm blocks.

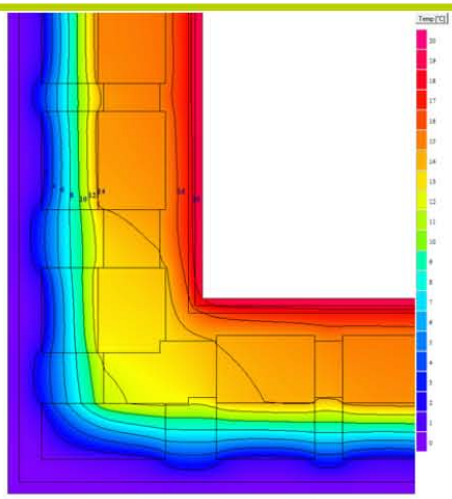
Material Thermal Conductivities:

Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**

Description:	**300mm E16 Normal Corner Junction**
Reference:	**2638 – 300mm E16**

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	**0.002**

Temperature Factor[3] for Humidity and Mould	
***f* =**	**0.899**

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – Corner 365mm E16	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

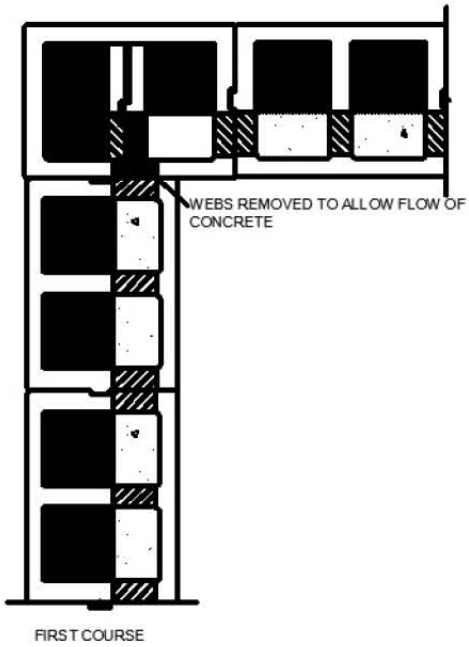
Utilises standard Durisol detail for **365mm** blocks.

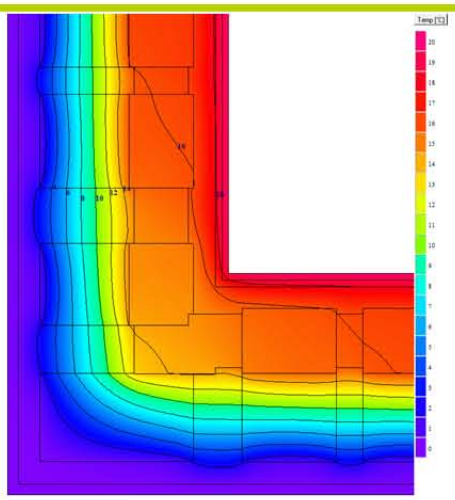
Material Thermal Conductivities:

Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**

Description:	365mm E16 Normal Corner Junction
Reference:	2638 – 365mm E16

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.002

Temperature Factor[3] for Humidity and Mould	
f =	0.921

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – Inverted Corner 300mm E17	Issued:	18/11/2014

Issued to:

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Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

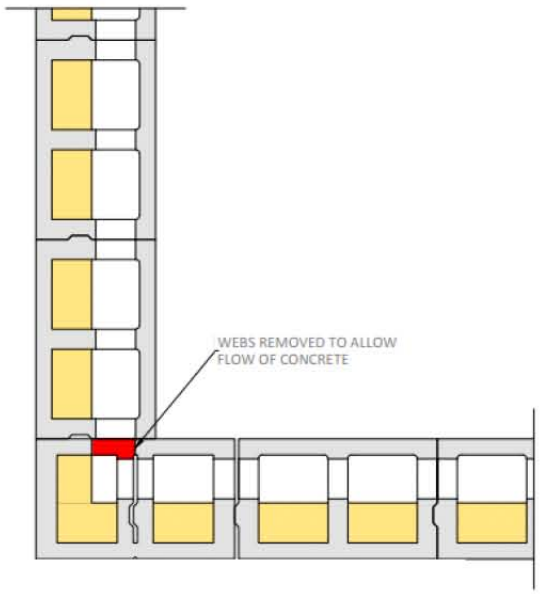
Utilises standard Durisol detail for **300mm** blocks.

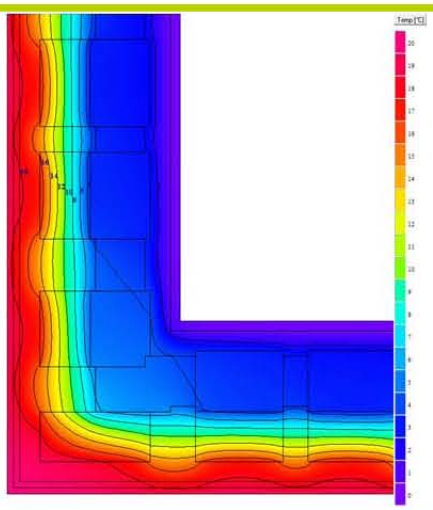
Material Thermal Conductivities:

Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**

Description:	**300mm E17 Inverted Corner Junction**
Reference:	**2638 – 300mm E17**

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	-0.001

Temperature Factor[3] for Humidity and Mould	
f =	0.999

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – Inverted Corner 365mm E17	Issued:	18/11/2014

Issued to:

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Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

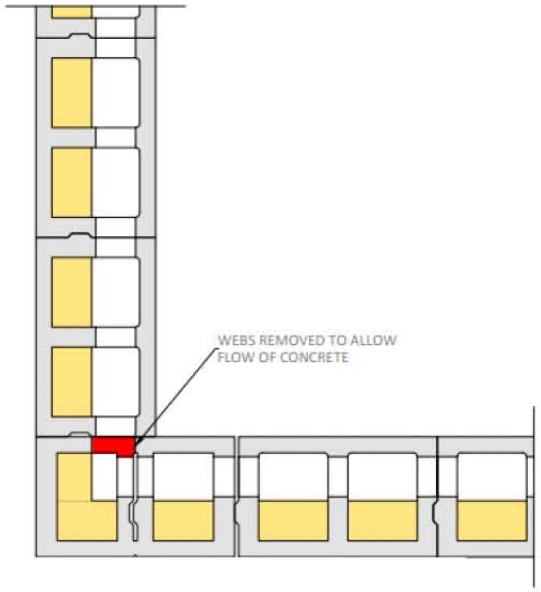
Utilises standard Durisol detail for **365mm** blocks.

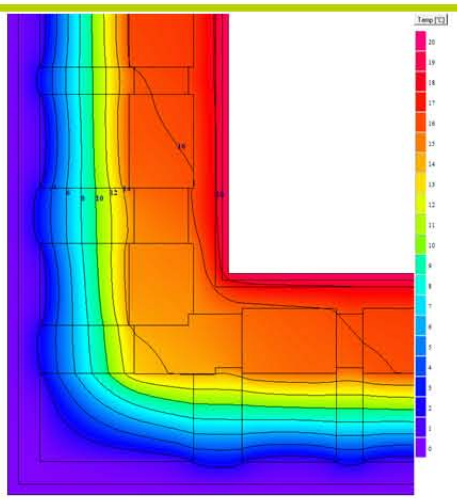
Material Thermal Conductivities:

Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**

Description:	365mm E17 Inverted Corner Junction
Reference:	2638 – 365mm E17

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.002

Temperature Factor[3] for Humidity and Mould	
f =	0.999

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – 300mm E18	Issued:	18/11/2014

Issued to:

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Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

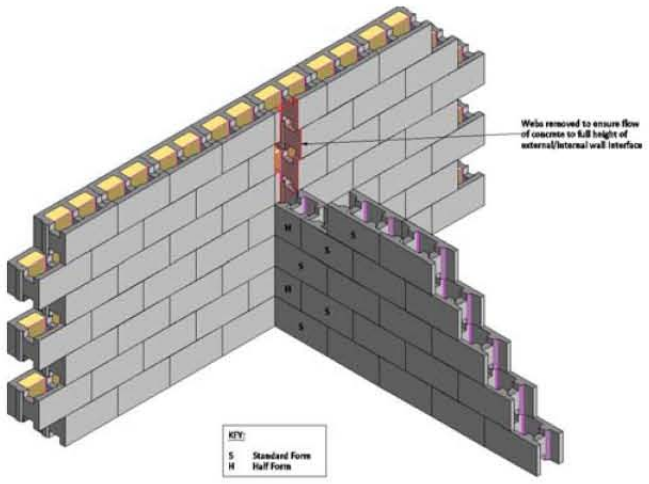
Utilises standard Durisol detail for **300mm** blocks.

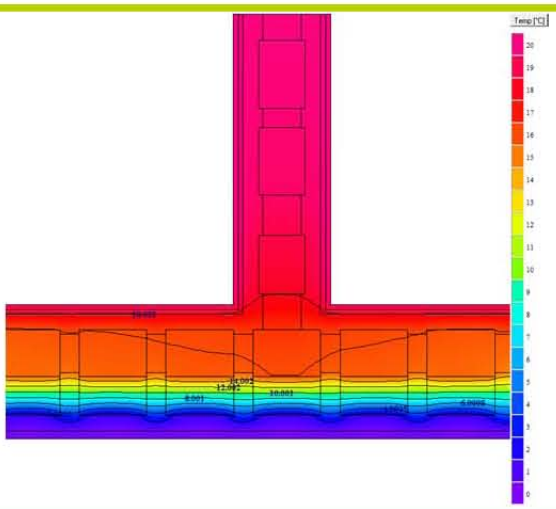
Material Thermal Conductivities:

Reinforced Concrete: **2.3 W/m.K**
Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**

Description:	300mm E18 Party Wall Junction
Reference:	2638 – 300mm E18

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.015

Temperature Factor[3] for Humidity and Mould	
f =	0.893

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – Party Wall 365mm E18	Issued:	18/11/2014

Issued to:

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NP11 3EF

Notes about Detail:

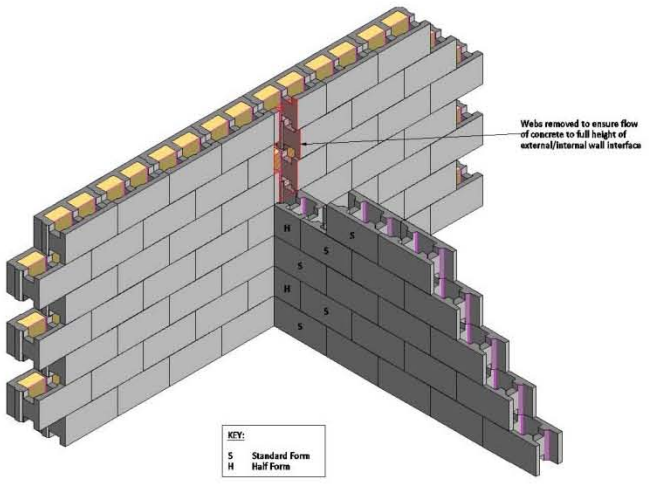
Utilises standard Durisol detail for **365mm** blocks.

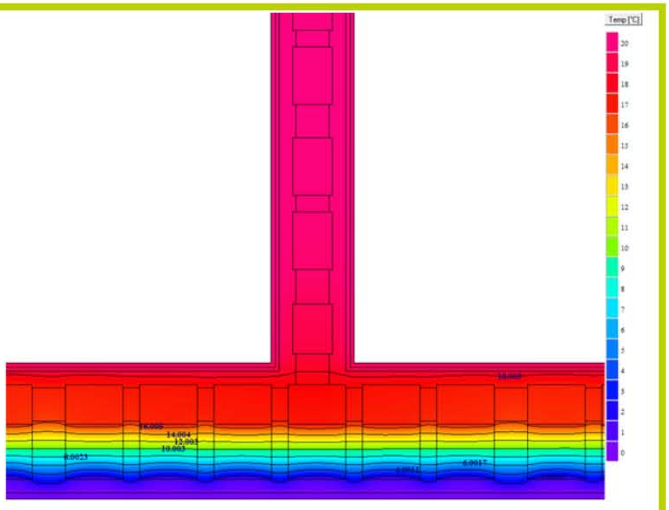
Material Thermal Conductivities:

Reinforced Concrete: **2.3 W/m.K**
Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**

Description:	365mm E18 Party Wall Junction
Reference:	2638 – 365mm E18

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.011

Temperature Factor[3] for Humidity and Mould	
f =	0.921

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – BOTH GF B&B P1 PARAL AIRCRETE	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

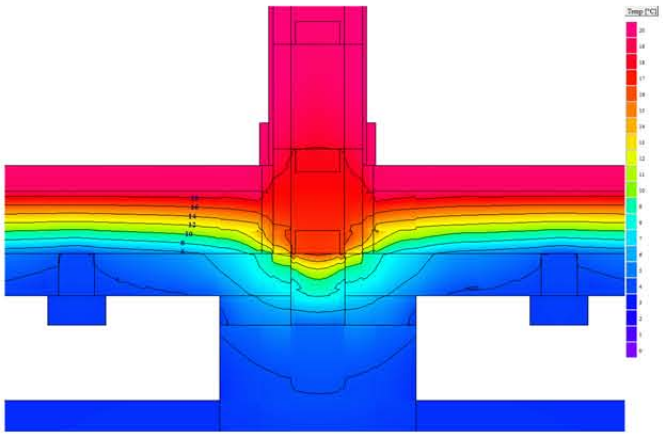
Notes about Detail:

- Utilises standard Durisol **300mm and 365mm** block with **170mm party wall** block.
- **440mm wide and deep Aircrete Threnchblock** foundation
- **65mm high** Aircrete coursing block @ **160mm wide** rests on Trechblock to external face and internal face under Durisol blocks
- **120mm thick 0.022 W/m.K** insulation @ **170mm high** between coursing block to underside of Durisol Block
- **170mm** pre-stressed concrete beams run **Parallel** to wall.
- Floor infill with **Aircrete Blocks**
- Min **150mm 0.022 W/m.K** insulation between screed and structure
- Min **20mm thick 0.022 W/m.K** Edge insulation from top of B&B floor to top edge of screed

Notes: -

1. Ψ and *f* are only valid for the detail drawn and described above.
2. In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:
   - **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
   - **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	Ground Floor Block and Beam Party Wall – BOTH Parallel with Aircrete Floor Blocks
Reference:	2638 - Both GF B&B Party Wall Parallel P1 Aircrete Floor Blocks



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.059

Temperature Factor for Humidity and Mould	
f =	0.966

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – BOTH GF B&B P1 PERPEND Conc	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

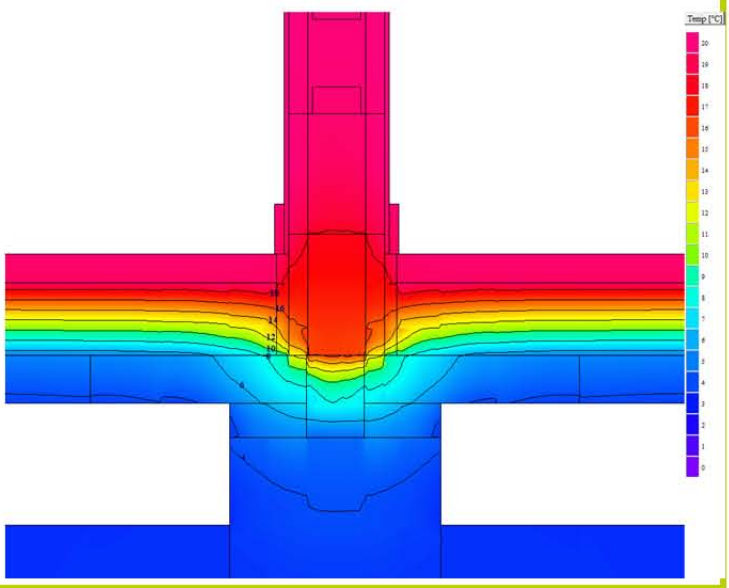
Notes about Detail:

- Utilises standard Durisol **300mm and 365mm** block with **170mm party wall** block.
- **440mm wide and deep Aircrete Threnchblock** foundation
- **65mm high** Aircrete coursing block @ **160mm wide** rests on Trechblock to external face and internal face under Durisol blocks
- **120mm thick 0.022 W/m.K** insulation @ **170mm high** between coursing block to underside of Durisol Block
- **170mm** pre-stressed concrete beams run **Perpendicular** to wall.
- Floor infill with **Aircrete Blocks to perimeter and Medium Density Concrete Blocks elsewhere**
- Min **150mm 0.022 W/m.K** insulation between screed and structure
- Min **20mm thick 0.022 W/m.K** Edge insulation from top of B&B floor to top edge of screed

Notes: -

1. Ψ and *f* are only valid for the detail drawn and described above.
2. In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:
   - **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
   - **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	**Ground Floor Block and Beam Party Wall – BOTH Perpendicular with Medium Density Concrete Blocks**
Reference:	**2638 - Both GF B&B Party Wall Perpendicular P1 Concrete Infill**



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.061

Temperature Factor for Humidity and Mould	
f =	0.967

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – BOTH GF B&B P1 PERPEND AIRCRETE	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

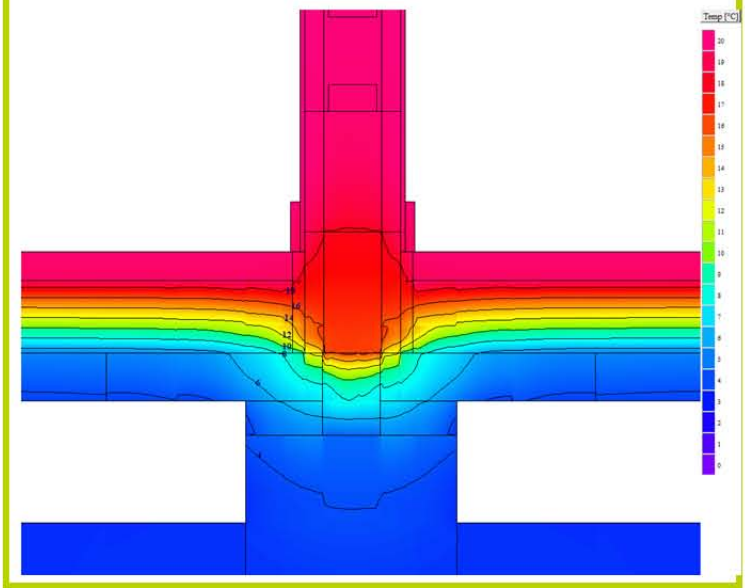
Notes about Detail:

- Utilises standard Durisol **300mm and 365mm** block with **170mm party wall** block.
- **440mm wide and deep Aircrete Threnchblock** foundation
- **65mm high** Aircrete coursing block @ **160mm wide** rests on Trechblock to external face and internal face under Durisol blocks
- **120mm thick 0.022 W/m.K** insulation @ **170mm high** between coursing block to underside of Durisol Block
- **170mm** pre-stressed concrete beams run **Perpendicular** to wall.
- Floor infill with **Aircrete Blocks**
- Min **150mm 0.022 W/m.K** insulation between screed and structure
- Min **20mm thick 0.022 W/m.K** Edge insulation from top of B&B floor to top edge of screed

Notes: -

1. Ψ and *f* are only valid for the detail drawn and described above.
2. In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:
   - **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
   - **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	Ground Floor Block and Beam Party Wall – BOTH Perpendicular with Aircrete Floor Blocks
Reference:	2638 - Both GF B&B Party Wall Perpendicular P1 Aircrete Floor Blocks



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.063

Temperature Factor for Humidity and Mould	
f =	0.968

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – BOTH GF B&B P1 PERPEND Conc	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

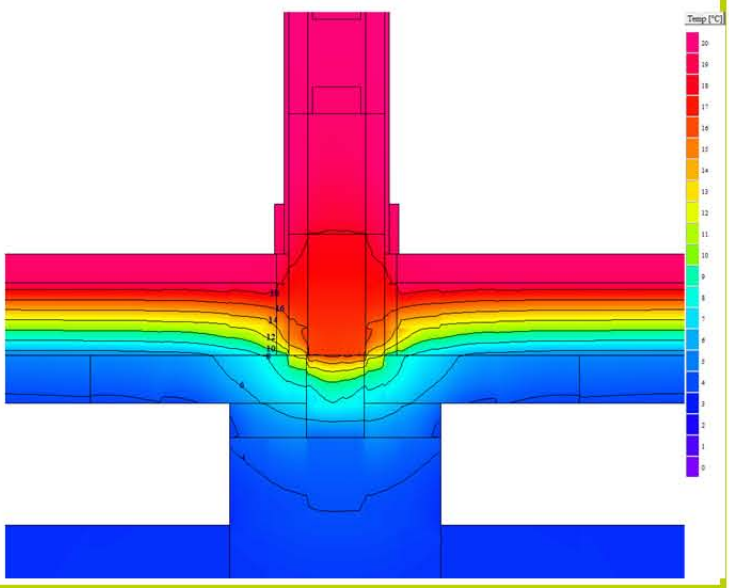
Notes about Detail:

- Utilises standard Durisol **300mm and 365mm** block with **170mm party wall** block.
- **440mm wide and deep Aircrete Threnchblock** foundation
- **65mm high** Aircrete coursing block @ **160mm wide** rests on Trechblock to external face and internal face under Durisol blocks
- **120mm thick 0.022 W/m.K** insulation @ **170mm high** between coursing block to underside of Durisol Block
- **170mm** pre-stressed concrete beams run **Perpendicular** to wall.
- Floor infill with **Aircrete Blocks to perimeter and Medium Density Concrete Blocks elsewhere**
- Min **150mm 0.022 W/m.K** insulation between screed and structure
- Min **20mm thick 0.022 W/m.K** Edge insulation from top of B&B floor to top edge of screed

Notes: -

1. Ψ and *f* are only valid for the detail drawn and described above.
2. In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth. Calculations have been performed in accordance and with reference to the following publications:
   - **EN ISO 10211_2007 & EN ISO 6946** *(British Standards)*
   - **IP 1/06 & BR497 & BR443** *(BRE Press)*

Description:	**Ground Floor Block and Beam Party Wall – BOTH Perpendicular with Medium Density Concrete Blocks**
Reference:	**2638 - Both GF B&B Party Wall Perpendicular P1 Concrete Infill**



Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.061

Temperature Factor for Humidity and Mould	
f =	0.967

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Linear Thermal Transmittance (Ψ) and Temperature Factor (*f*)

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Certificate No:	2638 – Party Gable Ins @ Ceiling P4	Issued:	18/11/2014

Issued to:

DURISOL UK

Parkway,
Pen-y-Fan Industrial Estate,
Crumlin,
Gwent,
NP11 3EF

Notes about Detail:

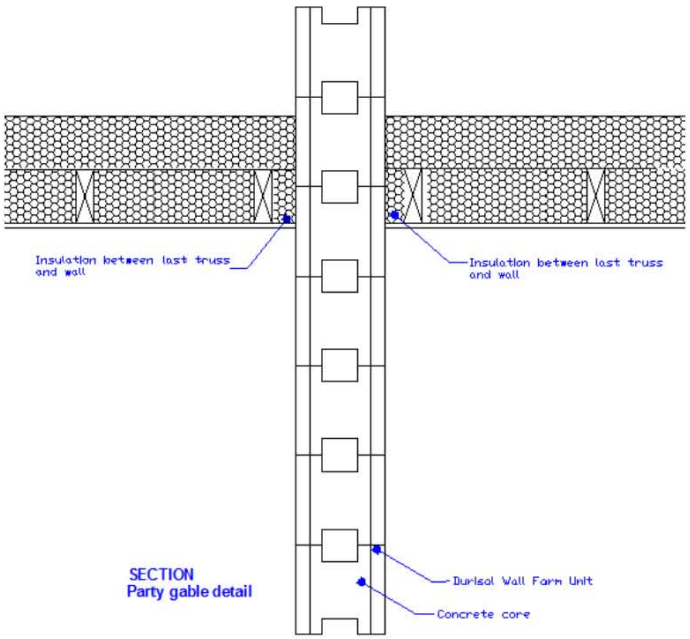
Utilises standard Durisol **300mm and 365mm** block with **170mm** party wall.

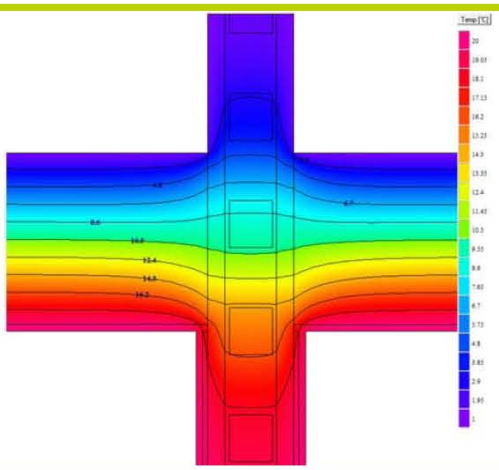
Material Thermal Conductivities:

Reinforced Concrete @ Lintel: **2.3 W/m.K**
Medium Density Concrete: **1.65 W/m.K**
PIR Insulation: **0.022 W/m.K**
PIR Insulation Bridged by Durisol: **0.064 W/m.K**
Durisol Block: **0.13 W/m.K**
Plasterboard: **0.21 W/m.K**
Vertical High E Plaster dabs cavity: **R= 0.125 W/m.K**
Durisol Bridged with Concrete: **0.8 W/m.K**
Mineral wool loft roll insulation: **0.036 W/m.K**

Description:	P4 Party Gable Ins at Ceiling Junction
Reference:	2638 – 300mm and 365mm P4 Party Wall Gable Ins at Ceiling Junction

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	0.140

Temperature Factor[3] for Humidity and Mould	
f =	0.937

Calculation Prepared By:	Alan Calcott

Notes: -

1 Ψ and *f* are only valid for the detail drawn and described above.
2 In dwellings, a temperature factor f that is >0.75 would avoid the risk of mould growth.
Calculations have been performed in accordance and with reference to the following publications:

- **EN ISO 10211_2007** *(British Standards)*
- **IP 1/06 & BR497** *(BRE Press)*
- **EN ISO 6946** *(British Standards)*
- **BR443** *(BRE Press)*

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