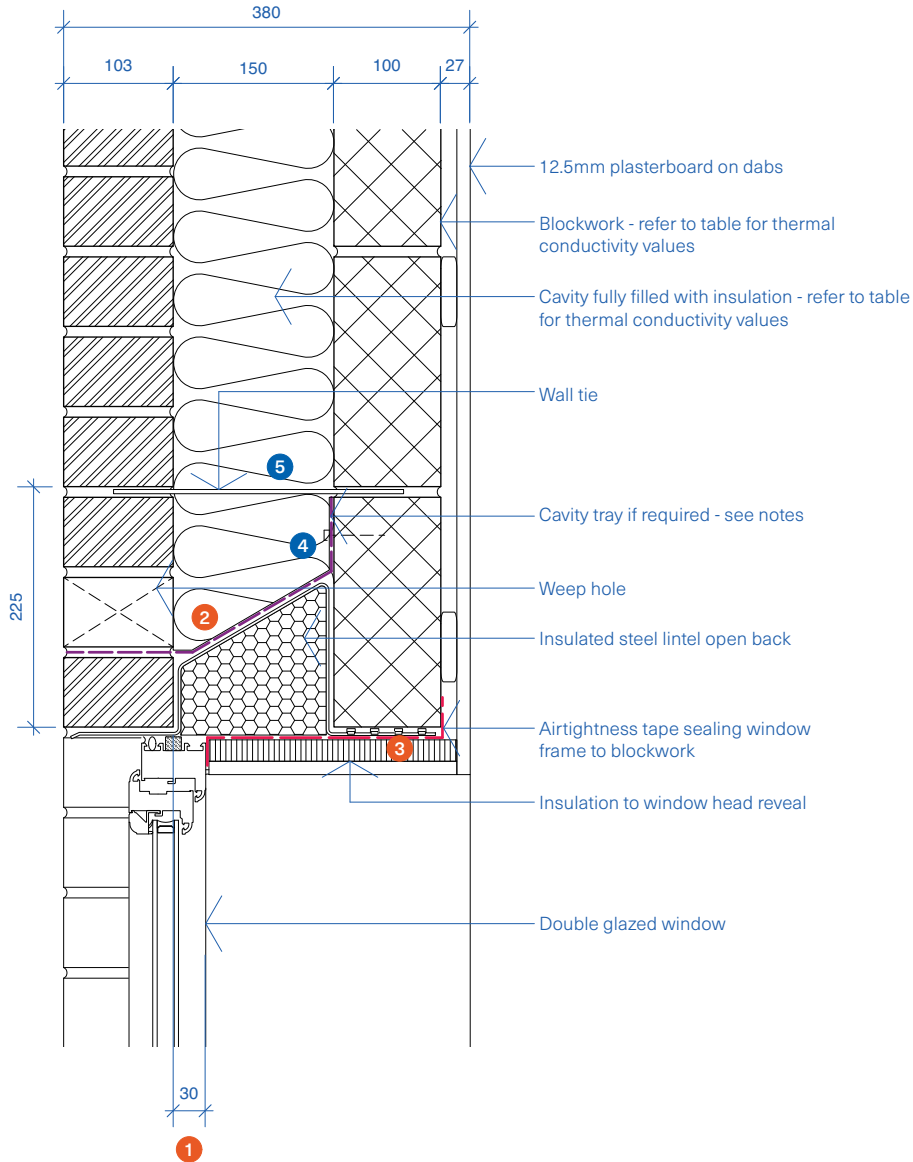


Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|--------------|--------------|--------------|--------------|--------------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | 0.221 | 0.234 | 0.246 | 0.268 | 0.312 | 0.363 |
| 0.034 | 0.219 | 0.232 | 0.244 | 0.265 | 0.310 | 0.359 |
| 0.037 | 0.216 | 0.230 | 0.241 | 0.261 | 0.305 | 0.354 |

f-values: 0.879 - 0.885 (values above 0.75 indicate low risk of condensation and mould)

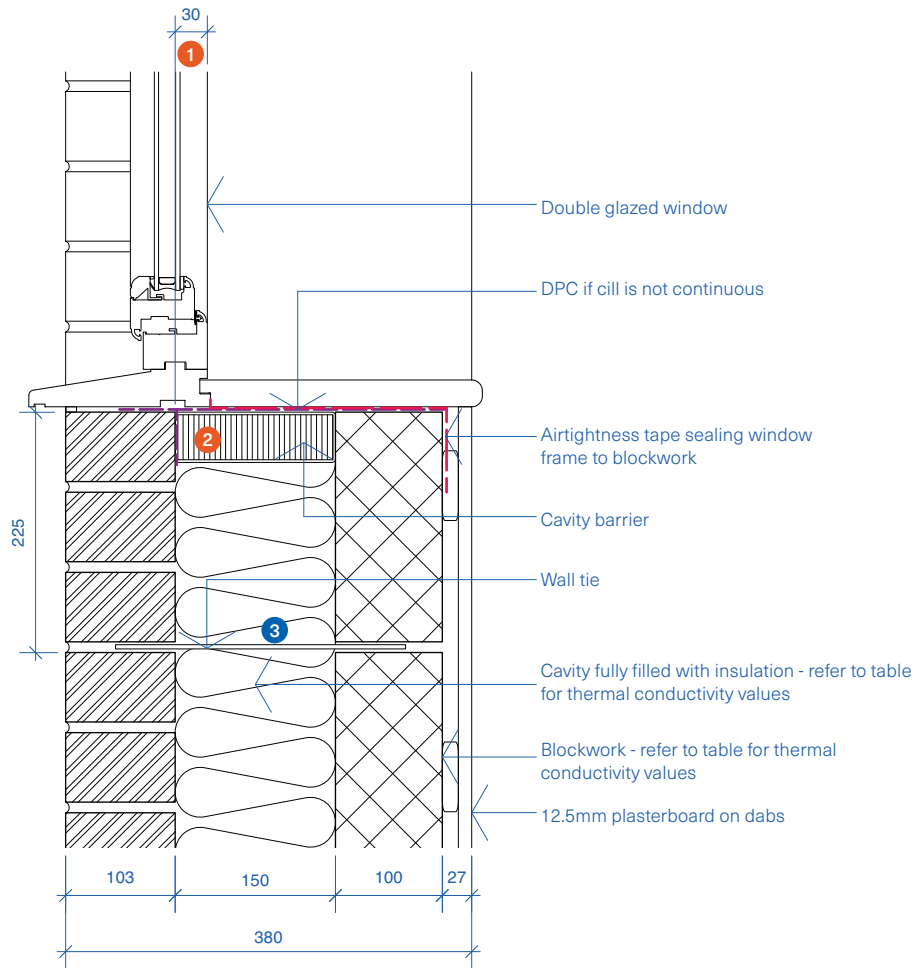
Ψ (Psi) value Thermal Compliance Notes

- 1 Minimum 30mm overlap of window frame and insulated wall cavity.
- 2 Ensure insulation is fitted above the angle of the cavity tray.
- 3 20mm insulation with $\lambda \leq 0.026$ W/mK to head reveal.

Construction Notes

- 4 If using galvanised lintel cavity tray is required. Secure the cavity tray DPC to the face of the blockwork using a compatible double-sided adhesive tape. Do not create a slip plane by continuing the DPC into the same mortar joint as the wall tie.
- 5 Wall tie: 225mm maximum distance from opening. No greater than 450mm vertical spacing. 450mm horizontal centres for first row of wall ties above and below opening.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|--------------|--------------|--------------|--------------|--------------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | 0.024 | 0.023 | 0.022 | 0.022 | 0.021 | 0.021 |
| 0.034 | 0.023 | 0.022 | 0.022 | 0.021 | 0.021 | 0.021 |
| 0.037 | 0.023 | 0.022 | 0.022 | 0.021 | 0.020 | 0.020 |

f-values: 0.881 - 0.893 (values above 0.75 indicate low risk of condensation and mould)

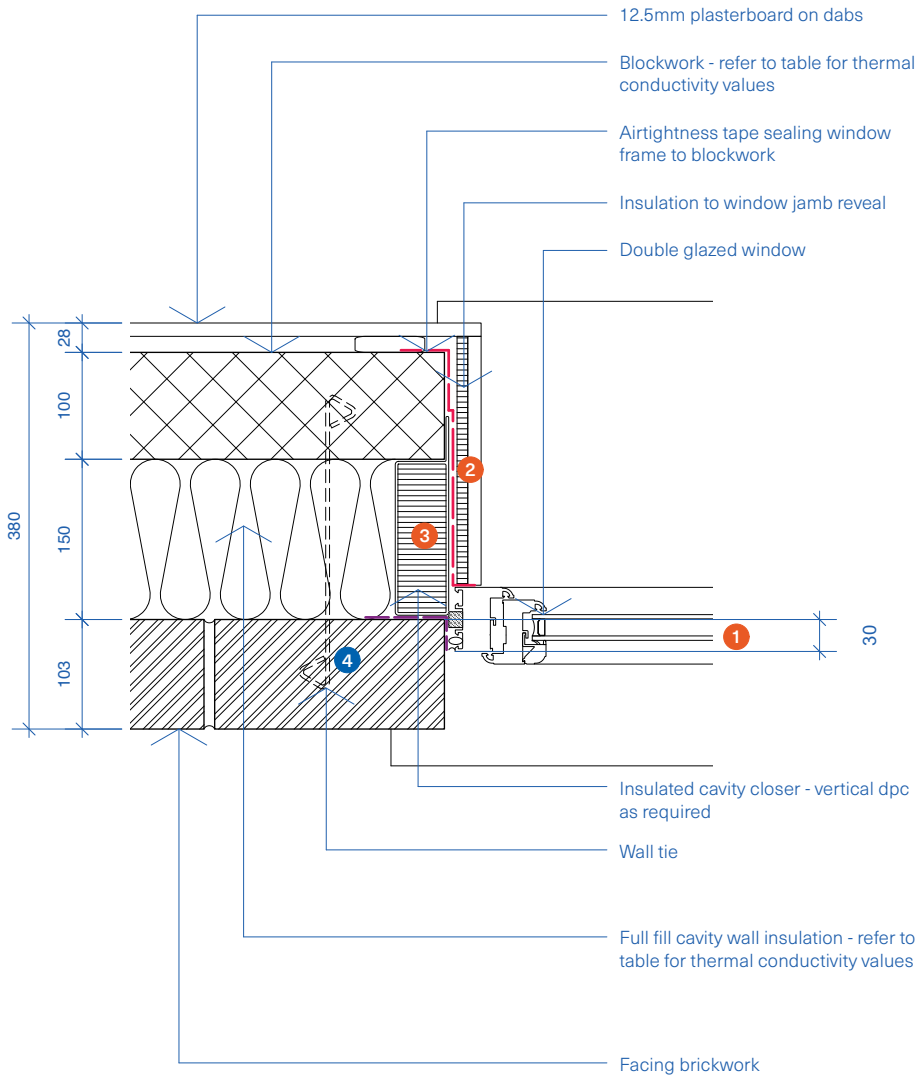
Ψ (Psi) value Thermal Compliance Notes

- 1 Minimum 30mm overlap of window frame and insulated wall cavity.
- 2 Insulated cavity barrier with $\lambda \leq 0.026$ W/mK fixed in accordance with manufacturers guidelines. If fixing spikes are used, they should be installed at the required centres. For compression fit cavity barriers, use the correct size for a compressive fit in the cavity.

Construction Notes

- 3 Wall tie: 225mm maximum distance from opening. No greater than 450mm vertical spacing. 450mm horizontal centres for first row of wall ties above and below opening.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|--------------|--------------|--------------|--------------|--------------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | 0.019 | 0.018 | 0.017 | 0.017 | 0.016 | 0.016 |
| 0.034 | 0.019 | 0.017 | 0.017 | 0.016 | 0.016 | 0.016 |
| 0.037 | 0.018 | 0.017 | 0.017 | 0.016 | 0.015 | 0.015 |

f-values: 0.931 - 0.938 (values above 0.75 indicate low risk of condensation and mould)

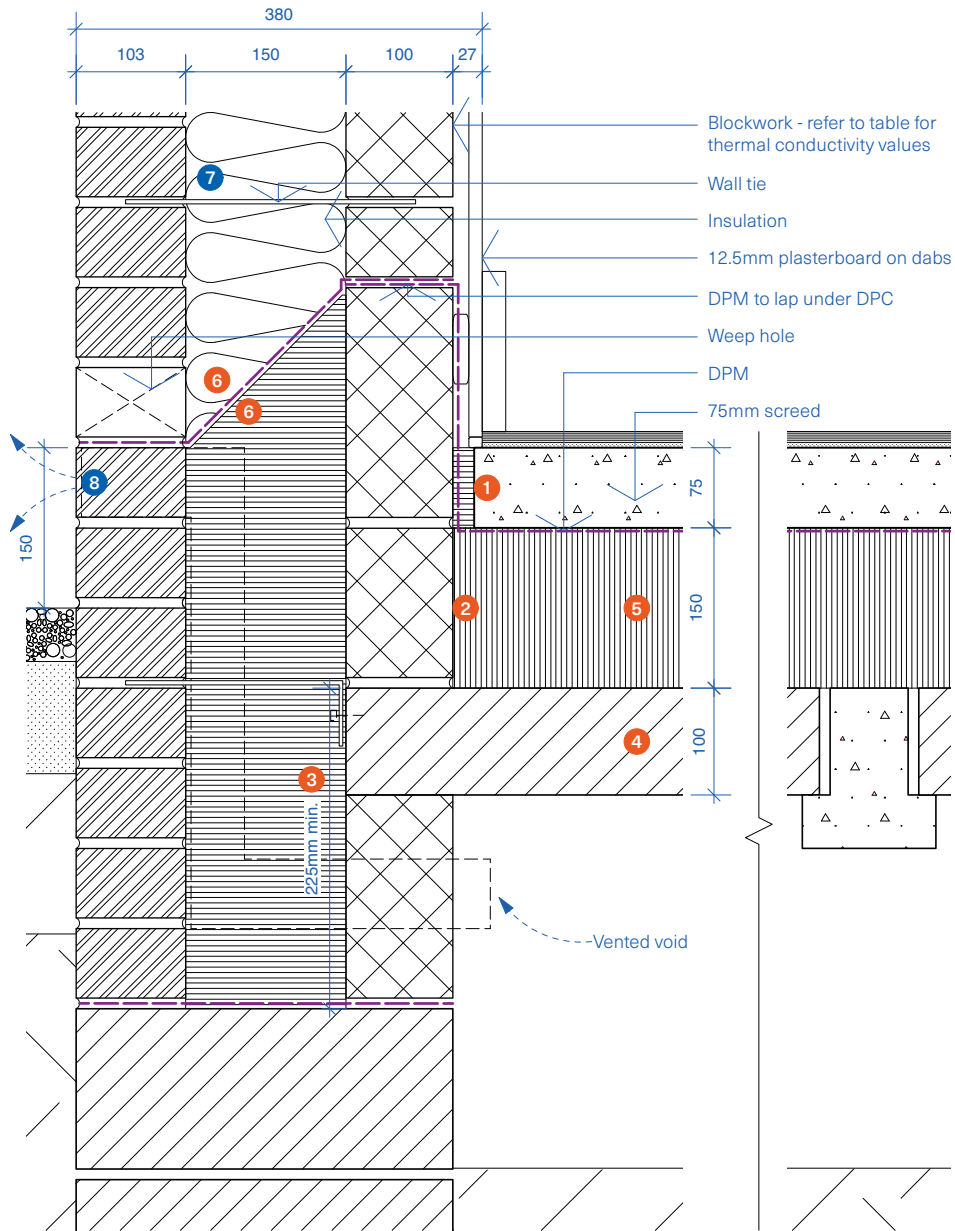
Ψ (Psi) value Thermal Compliance Notes

- 1 Minimum 30mm overlap of window frame and insulated wall cavity.
- 2 10mm insulation with $\lambda \leq 0.026 \text{ W/mK}$ to window jamb reveal.
- 3 Insulated cavity barrier with $\lambda \leq 0.026 \text{ W/mK}$ fixed in accordance with manufacturers guidelines. If fixing spikes are used, they should be installed at the required centres. For compression fit cavity barriers, use the correct size for a compressive fit in the cavity.

Construction Notes

- 4 Wall tie: 225mm maximum distance from opening. No greater than 450mm vertical spacing. 450mm horizontal centres for first row of wall ties above and below opening.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|-------|-------|-------|-------|-------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | 0.060 | 0.068 | 0.067 | 0.084 | 0.111 | 0.144 |
| 0.034 | 0.061 | 0.068 | 0.067 | 0.085 | 0.111 | 0.144 |
| 0.037 | 0.062 | 0.069 | 0.068 | 0.085 | 0.112 | 0.145 |

f-values: 0.922 - 0.953 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- 1 Minimum 20mm perimeter insulation with $\lambda \leq 0.022 \text{ W/mK}$.
- 2 Ensure the floor insulation is tightly butted against the external wall.
- 3 Continue full fill rigid cavity insulation at least 225mm below the top of the beams. Insulation below DPC to provide thermal resistance equal to or better than main wall insulation.
- 4 150mm Beam and Aircrete block infill.
- 5 150mm insulation (0.022W/mK) above slab.
- 6 Ensure insulation is cut and fitted around the angle of the cavity tray.

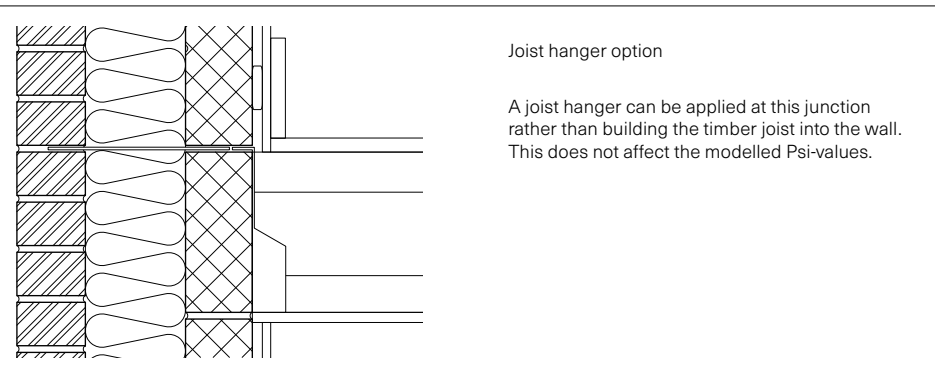
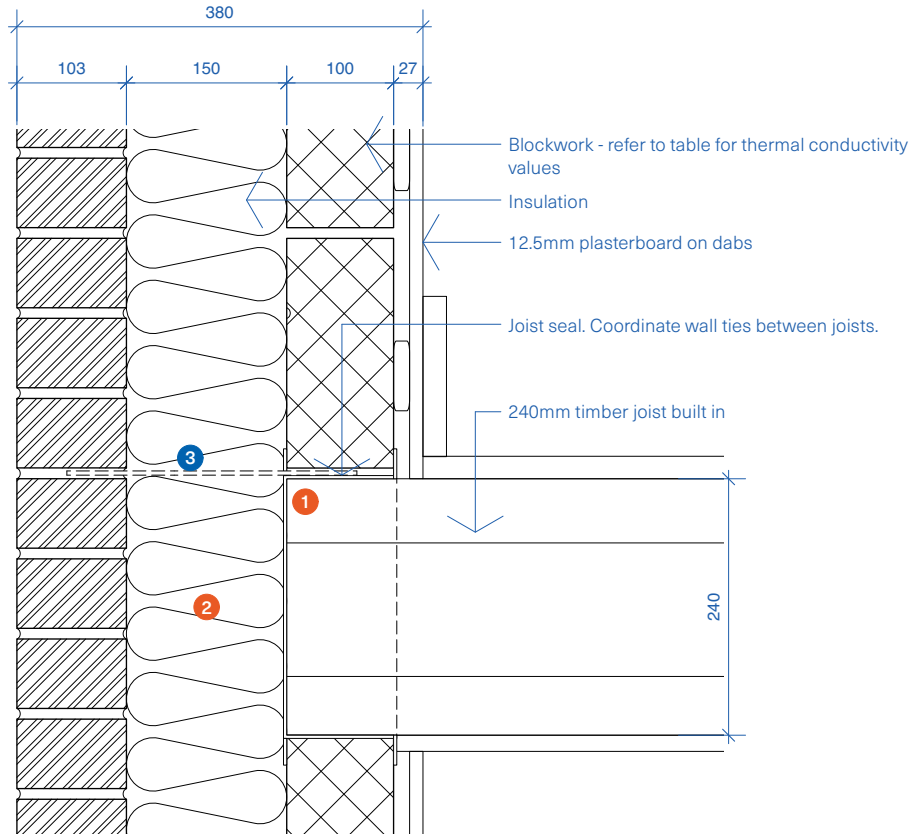
Construction Notes

- 7 Wall tie: No greater than 450mm vertical spacing.
- 8 Telescopic void vent. Ensure voids around vents are fitted with cut insulation.

General Notes

Rigid insulation below DPC to provide structural stability and stop water ingress.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|-------|-------|-------|-------|-------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | 0.000 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 |
| 0.034 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.003 |
| 0.037 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 |

f-values: 0.972 - 0.985 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- 1 Joist seal to the end of the timber joist, built into the internal leaf blockwork. Airtightness seal.
- 2 Insulation to be continuous across floor abutment zone.

Construction Notes

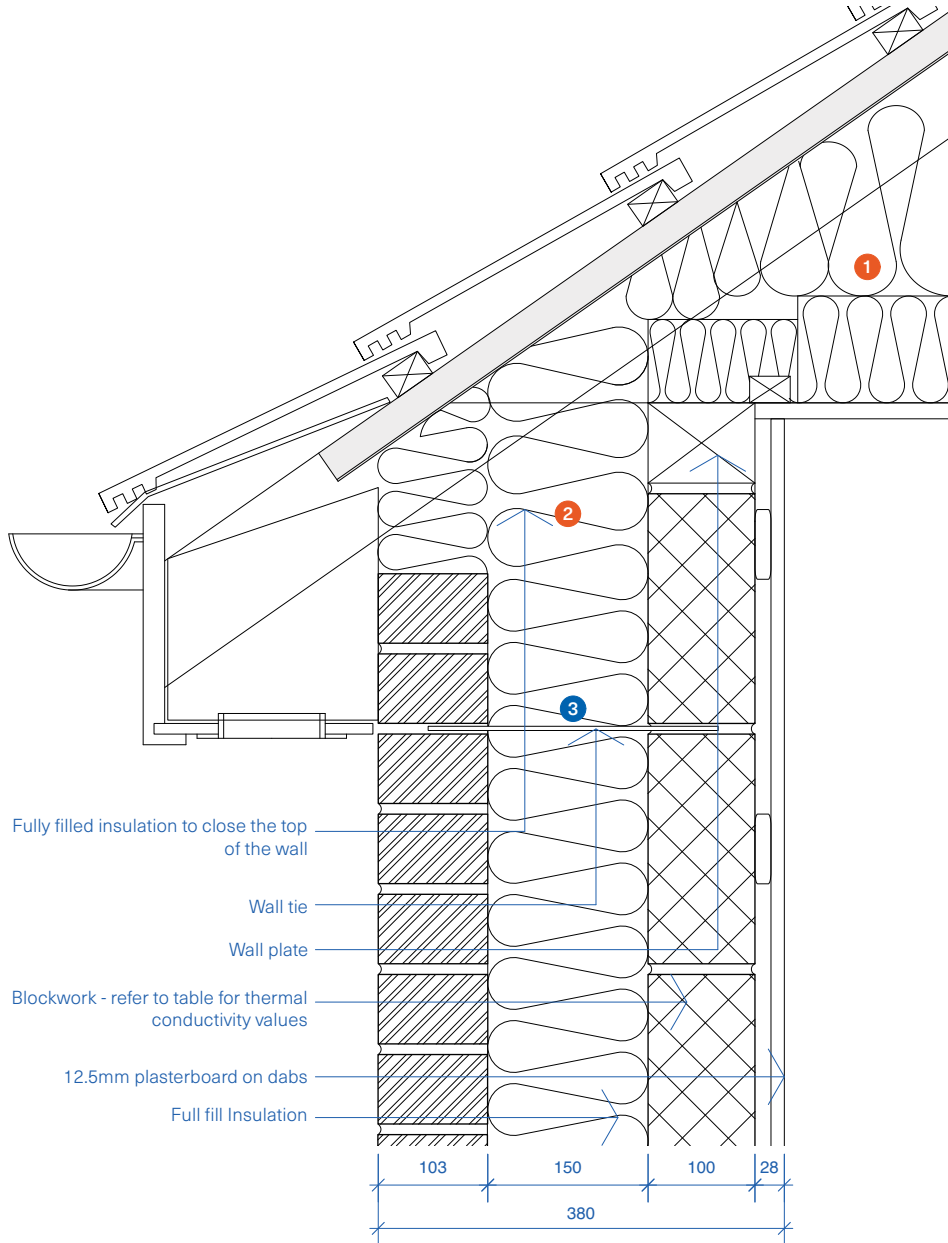
- 3 Wall tie: No greater than 450mm vertical spacing.

General Notes

You can alternatively build this detail with a joist hanger rather than building the timber joist into the blockwork.

Maintain clear separation of components to prevent congestion within the cavity and mortar joints.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|-------|-------|-------|-------|-------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | 0.051 | 0.055 | 0.057 | 0.060 | 0.065 | 0.068 |
| 0.034 | 0.050 | 0.053 | 0.055 | 0.058 | 0.063 | 0.066 |
| 0.037 | 0.047 | 0.050 | 0.052 | 0.055 | 0.059 | 0.062 |

f-values: 0.924 - 0.939 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- 1 400mm insulation quilt (0.044 W/mK), minimum roof pitch 40 degrees.
- 2 Ensure continuity of insulation between the loft and external wall.

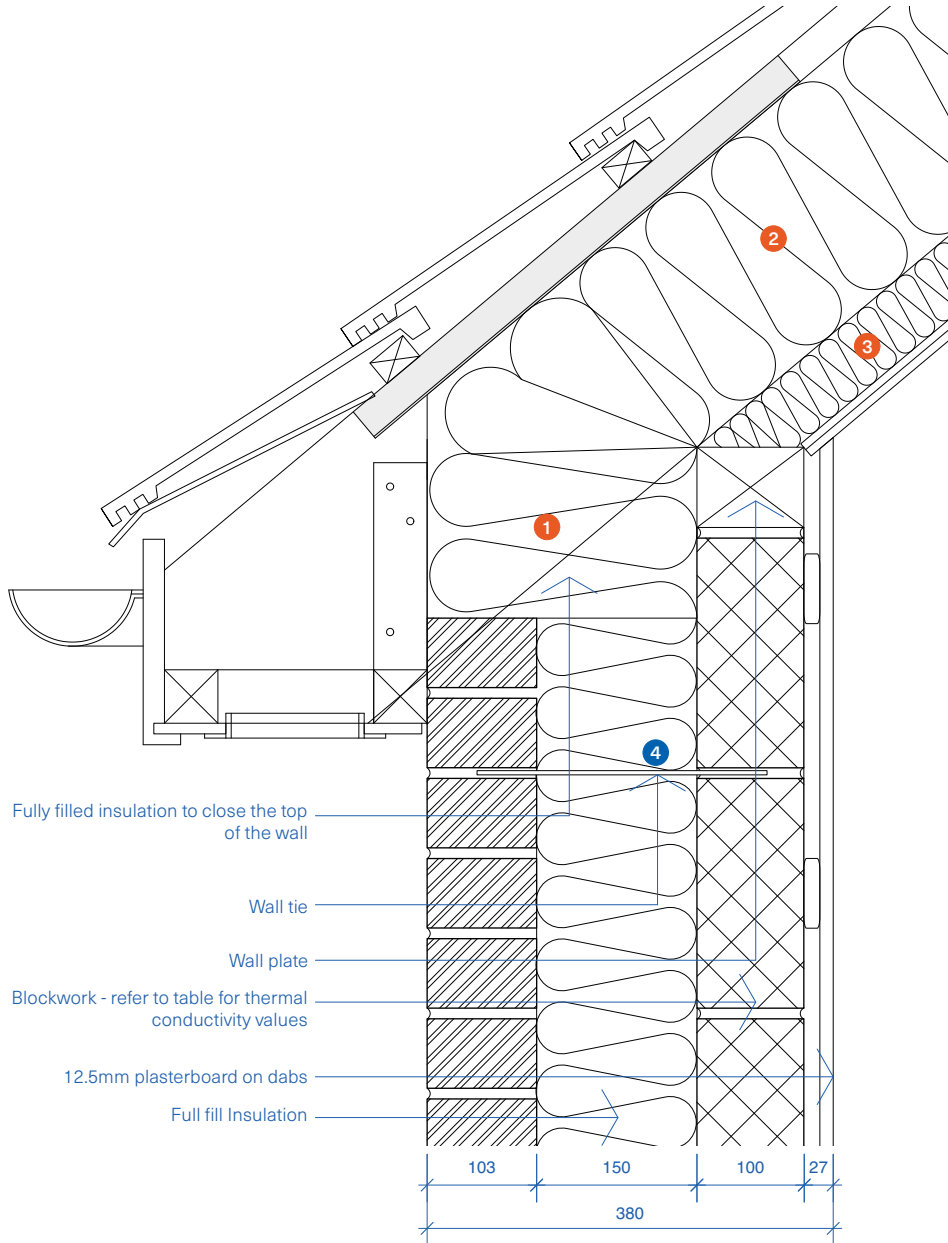
Construction Notes

- 3 Wall tie: 225mm maximum distance from opening. No greater than 450mm spacing.

General Notes

When the cavity is fully filled with insulation additional cavity closing is not required at the head of the wall. This meets the provisions of Diagram 5.3 ADBv1.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|--------------|--------------|--------------|--------------|--------------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | 0.017 | 0.018 | 0.018 | 0.018 | 0.018 | 0.019 |
| 0.034 | 0.017 | 0.017 | 0.017 | 0.016 | 0.017 | 0.018 |
| 0.037 | 0.016 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 |

f-values: 0.951 - 0.963 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- 1 Fully fill the void with insulation and ensure continuity of insulation between the roof and external wall.
- 2 200mm insulation (0.032 W/mK) between rafters.
- 3 60mm (0.022 W/mK) beneath rafters.

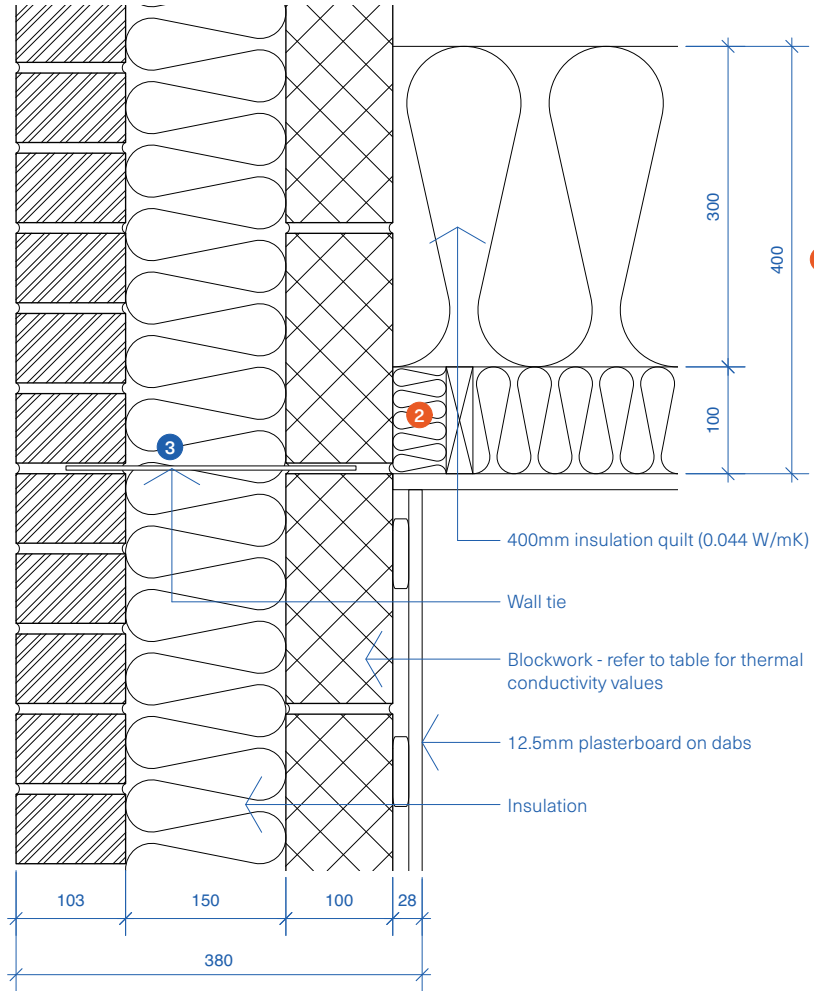
Construction Notes

- 4 Wall tie: 225mm maximum distance from opening. No greater than 450mm spacing.

General Notes

When the cavity is fully filled with insulation additional cavity closing is not required at the head of the wall. This meets the provisions of Diagram 5.3 ADBv1.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|--------------|--------------|--------------|--------------|--------------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | 0.029 | 0.037 | 0.043 | 0.056 | 0.097 | 0.175 |
| 0.034 | 0.030 | 0.037 | 0.044 | 0.057 | 0.098 | 0.174 |
| 0.037 | 0.031 | 0.038 | 0.044 | 0.057 | 0.099 | 0.174 |

f-values: 0.878 - 0.949 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- 1 400mm insulation quilt (0.044 W/mK).
- 2 Fill the space between the wall and joist with insulation.

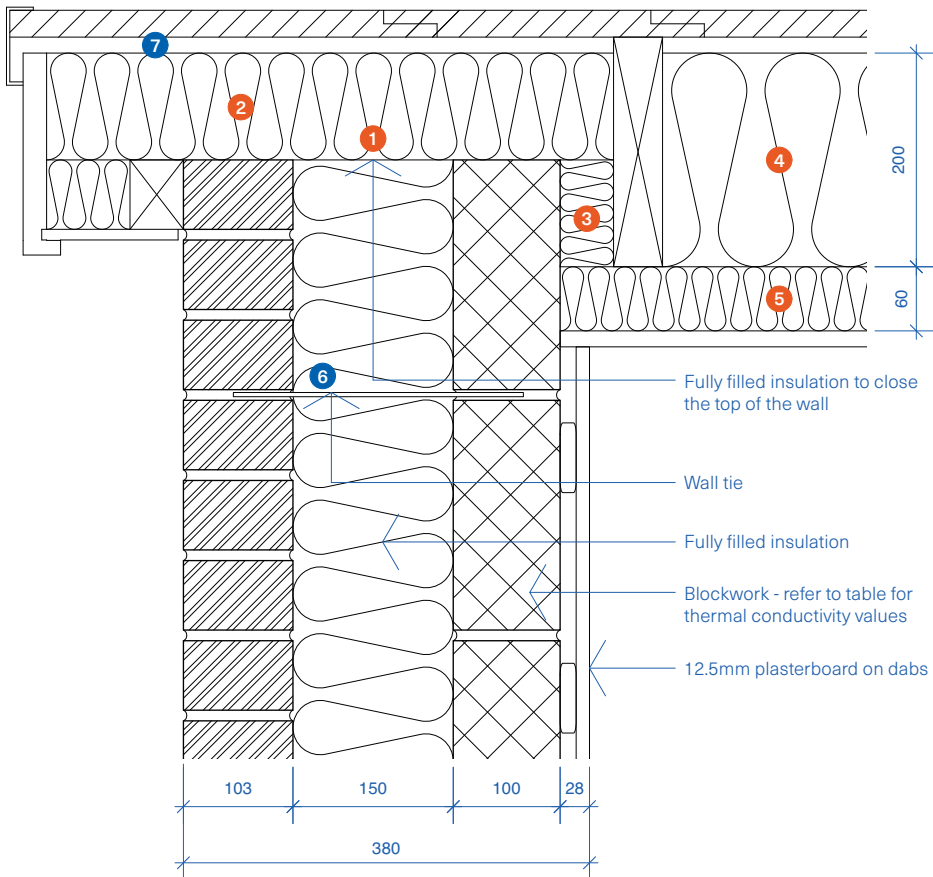
Construction Notes

- 3 Wall tie: 225mm maximum distance from opening. No greater than 450mm spacing.

General Notes

When the cavity is fully filled with insulation additional cavity closing is not required at the head of the wall. This meets the provisions of Diagram 5.3 ADBv1.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|--------------|--------------|--------------|--------------|--------------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | 0.028 | 0.033 | 0.036 | 0.041 | 0.050 | 0.058 |
| 0.034 | 0.028 | 0.033 | 0.036 | 0.041 | 0.051 | 0.058 |
| 0.037 | 0.028 | 0.033 | 0.036 | 0.042 | 0.051 | 0.059 |

f-values: 0.926 - 0.950 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- 1 Continue cavity insulation up to the wall head.
- 2 Minimum 100mm insulation $\lambda \leq 0.044$ W/mK to void above the wall.
- 3 Pack insulation between the final rafter and the wall.
- 4 200mm insulation (0.032 W/mK) between rafters.
- 5 60mm (0.022 W/mK) beneath rafters.

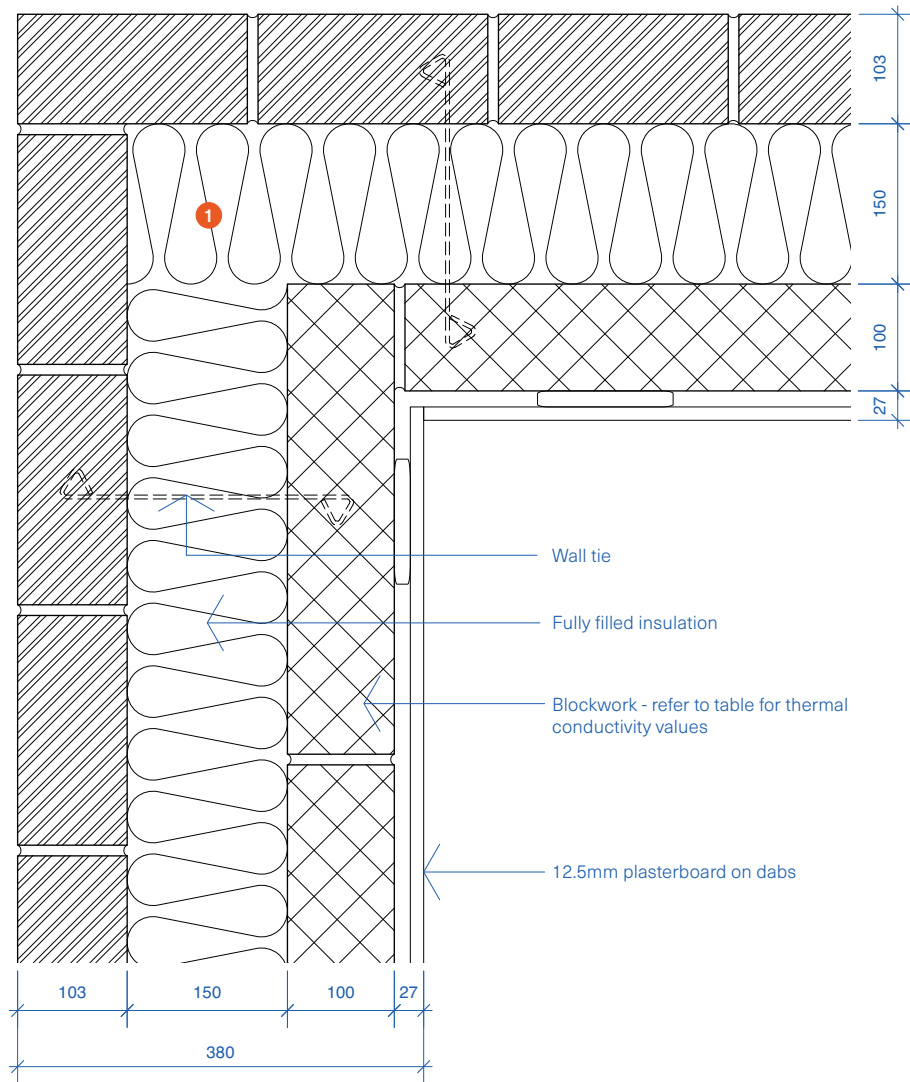
Construction Notes

- 6 Wall tie: 225mm maximum distance from opening. No greater than 450mm spacing.
- 7 Maintain air gap for ventilation.

General Notes

When the cavity is fully filled with insulation additional cavity closing is not required at the head of the wall. This meets the provisions of Diagram 5.3 ADBv1.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

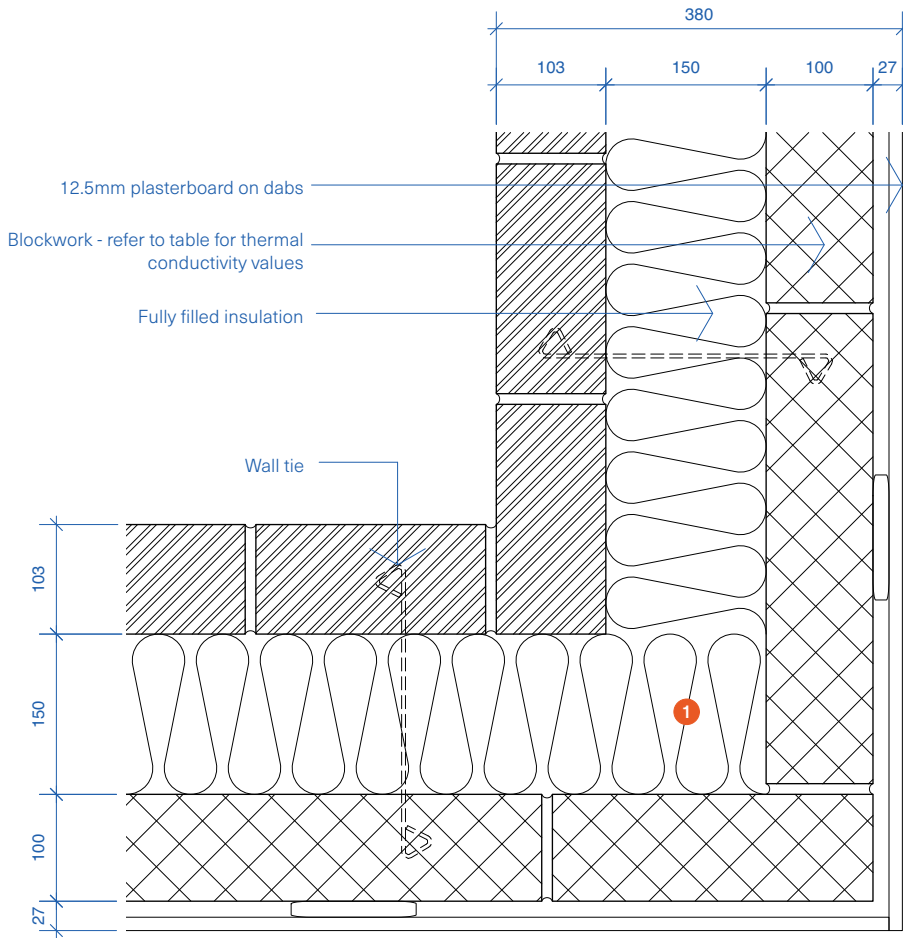
| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|-------|-------|-------|-------|-------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | 0.037 | 0.040 | 0.042 | 0.046 | 0.051 | 0.054 |
| 0.034 | 0.037 | 0.041 | 0.044 | 0.047 | 0.054 | 0.057 |
| 0.037 | 0.039 | 0.043 | 0.046 | 0.051 | 0.057 | 0.061 |

f-values: 0.924 - 0.966 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- 1 Ensure continuity of insulation at the corner.

Construction Detail



Calculated Ψ (Psi) value for use in SAP Calculation

| Insulation thermal conductivity (W/mK) | Internal leaf block thermal conductivity (W/mK) | | | | | |
|--|---|--------|--------|--------|--------|--------|
| | 0.11 | 0.15 | 0.19 | 0.28 | 0.6 | 1.33 |
| 0.032 | -0.079 | -0.082 | -0.085 | -0.088 | -0.091 | -0.093 |
| 0.034 | -0.083 | -0.086 | -0.089 | -0.094 | -0.097 | -0.098 |
| 0.037 | -0.087 | -0.092 | -0.096 | -0.099 | -0.105 | -0.107 |

f-values: 0.972 - 0.986 (values above 0.75 indicate low risk of condensation and mould)

Ψ (Psi) value Thermal Compliance Notes

- 1 Ensure continuity of insulation at the corner.