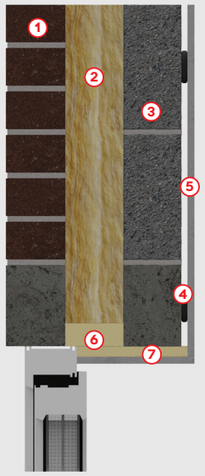
# E02 - Independent Concrete Lintel

**Superglass Superwall 32 & Superwall 34 Cavity Batt**

**Date of Issue: September 2026**

| | Wall Build-up | |
|---|---|---|
| | **Thickness (mm)** | **Thermal Conductivity (W/mK)** |
| Outer Leaf Brickwork | 102.5 | 0.77 |
| Superglass Superwall Cavity Batt | Shown in tables below | |
| Inner Leaf Blockwork | 100 | Shown in tables below |
| Plaster Dabs | 15 | 0.088 |
| Standard Plasterboard | 12.5 | 0.19 |

Linear Thermal Transmittance (Ψ-value) and Temperature Factor (f-value) calculated for a range of block types and insulation thicknesses.




1. 102.5mm Outer Leaf Brickwork
2. Superglass Superwall Cavity Batts
3. 100mm Inner Leaf Blockwork
4. 15mm Plaster Dabs
5. 12.5mm Standard Plasterboard
6. 45mm Cavity Closer
7. 15mm PIR Insulation

Images for illustration purposes only.

**Superwall 32 – 0.032W/mK**

| | Insulation & Cavity Thickness | 100mm | | 125mm | | 150mm | | 175mm (100+75mm) | | 200mm (2x100mm) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Block Type** | **Thermal Conductivity (W/mK)** | **Ψ-value (W/mK)** | **f-value** | **Ψ-value (W/mK)** | **f-value** | **Ψ-value (W/mK)** | **f-value** | **Ψ-value (W/mK)** | **f-value** | **Ψ-value (W/mK)** | **f-value** |
| Lightweight Aircrete | 0.11 | 0.015 | 0.966 | 0.014 | 0.964 | 0.014 | 0.963 | 0.016 | 0.962 | 0.017 | 0.961 |
| Standard Aircrete | 0.15 | 0.012 | 0.966 | 0.011 | 0.964 | 0.013 | 0.963 | 0.014 | 0.962 | 0.015 | 0.961 |
| High Strength Aircrete | 0.19 | 0.009 | 0.966 | 0.010 | 0.964 | 0.011 | 0.963 | 0.013 | 0.962 | 0.015 | 0.961 |
| Ultra Lightweight Aggregate | 0.28 | 0.006 | 0.966 | 0.008 | 0.964 | 0.010 | 0.963 | 0.012 | 0.962 | 0.014 | 0.962 |
| Medium Dense | 0.45 | 0.004 | 0.966 | 0.006 | 0.964 | 0.009 | 0.963 | 0.011 | 0.962 | 0.013 | 0.962 |
| Dense Concrete | 1.13 | 0.001 | 0.966 | 0.004 | 0.964 | 0.007 | 0.963 | 0.010 | 0.962 | 0.012 | 0.962 |

**Superwall 34 – 0.034W/mK**

| | Insulation & Cavity Thickness | 100mm | | 125mm | | 150mm | | 175mm (100+75mm) | | 200mm (2x100mm) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Block Type** | **Thermal Conductivity (W/mK)** | **Ψ-value (W/mK)** | **f-value** | **Ψ-value (W/mK)** | **f-value** | **Ψ-value (W/mK)** | **f-value** | **Ψ-value (W/mK)** | **f-value** | **Ψ-value (W/mK)** | **f-value** |
| Lightweight Aircrete | 0.11 | 0.016 | 0.965 | 0.014 | 0.964 | 0.015 | 0.963 | 0.016 | 0.962 | 0.017 | 0.961 |
| Standard Aircrete | 0.15 | 0.012 | 0.965 | 0.012 | 0.964 | 0.013 | 0.963 | 0.014 | 0.962 | 0.015 | 0.961 |
| High Strength Aircrete | 0.19 | 0.009 | 0.965 | 0.010 | 0.964 | 0.011 | 0.963 | 0.013 | 0.962 | 0.015 | 0.961 |
| Ultra Lightweight Aggregate | 0.28 | 0.006 | 0.965 | 0.008 | 0.964 | 0.010 | 0.963 | 0.012 | 0.962 | 0.014 | 0.961 |
| Medium Dense | 0.45 | 0.004 | 0.965 | 0.006 | 0.964 | 0.008 | 0.963 | 0.011 | 0.962 | 0.013 | 0.961 |
| Dense Concrete | 1.13 | 0.001 | 0.964 | 0.004 | 0.964 | 0.007 | 0.964 | 0.010 | 0.962 | 0.012 | 0.961 |

The independent lintels are concrete, with a thermal conductivity of 1.33W/mK, and are 215mm high. They are lined with 15mm PIR insulation (thermal conductivity 0.022W/mK) and 12.5mm plasterboard (thermal conductivity 0.19W/mK). The cavity closer consists of 45 mm of insulation with a thermal conductivity of 0.026W/mK.

The adiabatic frame is 70mm wide, with a 30mm overlap.

The results have been generated using AutoPsi Thermal Modelling Tool. The calculations have been completed using the methodology outlined in BS EN ISO 10211 and in accordance with BR497 2nd Edition.

Any deviation from the details used as part of this calculation will result in the calculation being inaccurate. To request a copy of a calculation or a different build-up please email technical.stirling@etexgroup.com