

Summary of calculated values (Ψ) for thermal junctions containing Besblock Star Performer blocks

Issued by Besblock Technical Services on 17th October 2013

A. Junctions with external walls.

Besblock certificate no.	Junction detail	Table K1 ref	Approved Ψ value	100mm F/F cav. U-value 0.30-0.22 W/m ² K	125mm F/F cav. U-value 0.28-0.18 W/m ² K	125mm P/F cav. U-value 0.25-0.17W/m ² K	150mm F/F cav. U-value 0.23-0.15 W/m ² K	95mm Cavitytherm U-value 0.23 -0.15 W/m ² K	120mm Cavitytherm U-value 0.19-0.13W/m ² K
GCU-13	Insulated steel lintel.	E1	0.50	0.299	0.302	0.310	0.305	0.327	0.326
GCU-14	Folded steel lintel (no base plate).	E2	0.30	0.209	0.214	0.215	0.214	0.284	0.240
GCU-15	Independent concrete lintel.	E2	0.30	0.002	0.006	0.012	0.011	0.014	0.015
GCU-16	Window sill.	E3	0.04	0.013	0.017	0.023	0.021	0.019	0.022
GCU-17	Window jamb.	E4	0.05	0.008	0.012	0.017	0.015	0.014	0.017
GCU-01	Ground floor, insulation ABOVE slab, screed finish.	E5	0.16	0.093	0.092	0.091	0.090	0.092	0.091
GCU-01	Ground floor, insulation ABOVE slab, screed finish AIRCRETE FOUNDATION BLOCK	E5	0.16	0.086	0.084	0.083	0.082	0.084	0.082

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B. Junctions with external walls continued.

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GCU-02	Ground floor, insulation BELOW slab, screed finish.	E5	0.16	0.107	0.106	0.107	0.105	0.106	0.108
GCU-02	Ground floor, insulation BELOW slab, screed finish, Aircrete foundation block.	E5	0.16	0.092	0.090	0.090	0.088	0.093	0.091
GCU-03	Suspended timber ground floor. The value given is the average for beams perpendicular and parallel.	E5	0.16	0.09	0.093	0.093	0.095	0.094	0.096
GCU-04	Suspended beam and block floor, insulation ABOVE slab. The value given is the average for beams perpendicular and parallel.	E5	0.16	0.095	0.096	0.096	0.098	0.097	0.098
GCU-05	Hanson Jet Floor. The value given is the average for beams perpendicular and parallel.	E5	0.16	0.098	0.094	0.092	0.091	0.092	0.088
GCU-07	Intermediate floor WITHIN a dwelling – external wall	E6	0.07	0.000	0.001	0.000	0.000	0.000	0.001

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GC-U06	Concrete Intermediate floor BETWEEN dwellings-external wall	E7	0.07	0.000	0.001	0.000	0.000	0.000	0.000
GCU-09	Pitched roof eaves, – external wall, ventilated loft	E10	0.06	No bespoke detail. Use table K1 ref. = 0.06					
GCU-10	Pitched roof eaves, - external wall, insulation between and below rafter.	E11	0.04	No bespoke detail. Use table K1 REF. = 0.04					
GCU-11	Pitched roof gable – external wall, ventilated loft	E12	0.24	0.109	0.106	0.103	0.101	0.072	0.068
GCU-12	Pitched roof – external wall. Insulation between and below rafter.	E13	0.04	No bespoke detail. Use table K1 ref. = 0.04					
GCU-18	Normal (external) corner	E16	0.09	0.067	0.060	0.053	0.053	0.047	0.042
GCU-19	Inverted (internal) corner	E17	-0.09	-0.117	-0.105	-0.089	-0.081	-0.075	-0.066
GCU-08	Masonry separating wall to external wall. The value of ψ is applied to EACH dwelling	E18	0.03	-0.003	-0.002	-0.002	-0.0015	-0.002	-0.001

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B Junctions with separating (party) walls

Besblock certificate no.	Junction Detail Note. The value of ψ is assigned to each dwelling	Table K1 ref	Approved ψ Value	Calculated ψ value
GCU-20	Suspended timber floor to separating (party) wall.	P1	0.16	0.121
GCU-21	Solid ground floor to separating (party) wall, insulation ABOVE slab, screed finish.	P1	0.16	0.044
GCU-22	Solid ground floor to separating (party) wall, insulation BELOW slab, screed finish.	P1	0.16	0.089
GCU-23	Hanson Jet Floor to separating (party) wall. The value given is the average of beams perpendicular and parallel.	P1	0.16	0.095
GCU-24	Suspended beam and block floor to separating (party) wall. The value given is the average for beams perpendicular and parallel.	P1	0.16	0.113
GCU-25	Intermediate floor WITHIN a dwelling to separating (party) wall	P2	0.04	0.000
GCU-26	Separating floor BETWEEN dwellings to separating (party) wall	P3	0.04	0.000
GCU-27	Separating (party) wall to roof, with insulation at ceiling level	P4	0.24	0.096
GCU-28	Separating (party) wall to roof with insulation at rafter level	P5	0.04	0.017

Important notes:

The calculations and certificates pertaining to the stated values within this table have been performed in accordance with:

BS EN ISO 10211:2007, BR 497 and BS-EN-ISO 13370:2007

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Certificates & junction detailing:

This information may be downloaded from the relevant section of our web site.

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