TYPICAL U-VALUES

USING BATTEN AND COUNTER BATTEN WITH RAFTER ROLL 32 (BETWEEN RAFTERS) AND ROCKSILK® RS45 BETWEEN BATTENS INTERNALLY

– with LR underlay pulled taught and insulation to full depth of rafters

	U-value (W/m²K)	
	Rocksilk® RS45 thickness (mm)	
Rafter Roll 32 thickness (mm)	25	50
250 (100+2x75)	0.14	0.13
225 (3 x 75)	0.15	0.14
200 (2 x 100)	0.17	0.15
175 (100+75)	0.19	0.17
150 (2 x 75)	0.21	0.18
100 (1 x 100)	0.28	0.24

Note: Rafter sizes assumed to be 38mm wide at 600mm centres (6.3% bridging and the same depth as the insulation). Rocksilk® RS45 (0.035 W/mK) installed internally between 47mm wide timber battens at 600mm centres. (12% bridging and the same depth as the insulation layer). 12.5mm Plasterboard internal finish (λ0.190).

USING BATTEN AND COUNTER BATTEN WITH RAFTER ROLL 32 (BETWEEN RAFTERS)

–with LR underlay pulled taught and insulation to full depth of rafters.

Rafter Roll 32 thickness (mm)	U-value (W/m²K)
250 (100+2x75)	0.16
225 (3 x 75)	0.17
200 (2 x 100)	0.19
175 (100+75)	0.21
150 (2 x 75)	0.25

Note: Rafter sizes assumed to be 38mm wide at 600mm centres (6.3% bridging and the same depth as the insulation). 12.5mm Plasterboard internal finish (λ0.190).

USING RAFTER ROLL 32 (BETWEEN RAFTERS) AND ROCKSILK® RS45 BETWEEN BATTENS INTERNALLY –With draped membrane and 50mm air gap to insulation

		U-value (W/m²K)		
		Rocksilk® RS45 thickness (mm)		
Rafter Depth	Rafter Roll 32 thickness (mm)	None	25	50
250	200 (2x100)	0.18	0.17	0.15
225	175 (100+75)	0.21	0.19	0.17
200	150 (2x75)	0.23	0.21	0.18
150	100 (1x100)	0.32	0.28	0.24

Note: Rafter sizes assumed to be 38mm wide at 600mm centres (6.3% bridging and the same depth as the insulation plus the airspace). A nominal 50mm ventilated airspace is required between Rafter Roll and the existing HR roof tile underlay. Rocksilk® RS45 (0.035 W/mK) installed internally between 47mm wide timber battens at 600mm centres. (12% bridging and the same depth as the insulation layer). 12.5mm Plasterboard internal finish (λ0.190). Where no Rocksilk® RS45 is installed between battens the service void has an assumed airspace resistance of 0.160.

For any U-value calculations for alternative construction build-ups, please contact our Technical Support Team on 01744 766 666 or visit our online tool at knaufinsulation.co.uk/uvalue-calculator

For written U-value calculations, please email details of your full construction build-up to technical.uk@knaufinsulation.com and we will respond accordingly to meet your requirements.