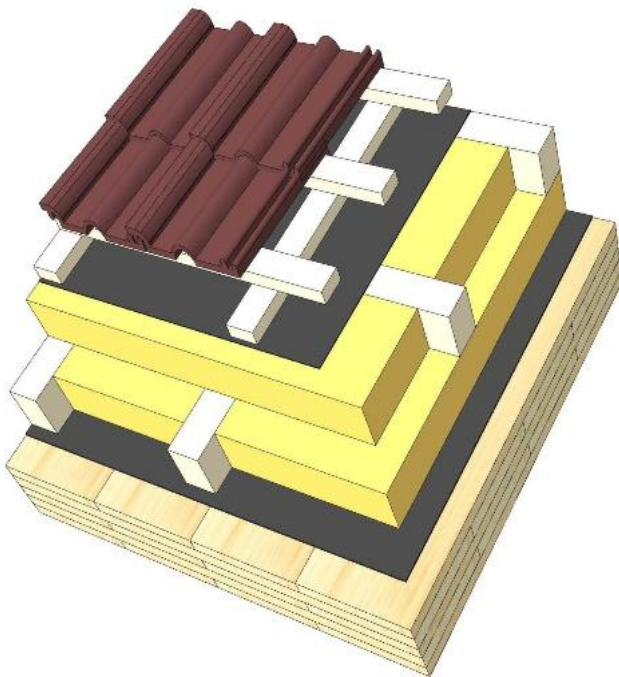
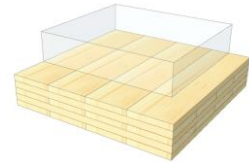


DA 01

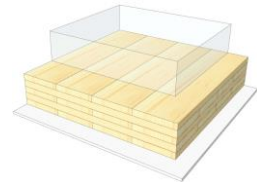
Steep roof / tiles



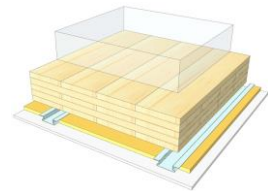
KLH® Visible



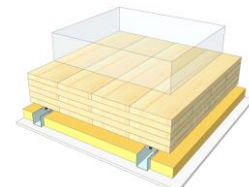
+ G



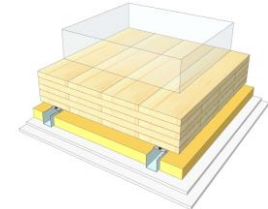
+ RP



+ SC



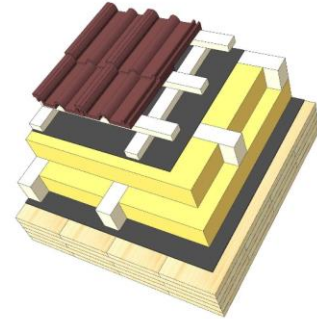
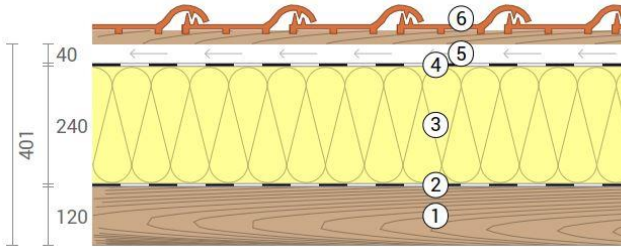
+ SC / 2*G



	KLH® Visible	+ G	+ RP	+ SC	+ SC / 2*G
Airborne Rw [dB]	50	51	52	56	62
Impact Ln,w [dB]					
Thermal U [W/m²K]	0,14	0,14	0,13	0,12	0,12
Fire R*EI [min]	60	60	60	60	90
Thickness [mm]	504	517	544	577	589
Ecology [kg CO2 eq./m²]	-100	-98	-94	-92	-89

DA 01 V

Pitched roof / tile roofing



No	mm	Material
1	120	KLH® - CLT
2	0,5	Vapour barrier
3	240	Mineral wool / wood fiber
4	0,5	Underroof sheet, breather membrane $s_d \leq 1$ m
5	40	Battens, vertical
6	103	Roof tiles / battens

R*EI (fire attack from below)
60 minutes

U-Value
0,14 W/(m²K)

Rw
50 (-4;11) dB

Thickness
504 mm
Mass per squaremeter
142 kg/m²

Global warming potential
-100 kg CO ₂ eq./m²
Primary energy (n. renewable)
226 kWh/m²

Link Ubakus
[DA 01 V Ubakus](#)

Link pre-dimensioning fire
[KLH REI 60](#)

Fire resistance
R*EI
60

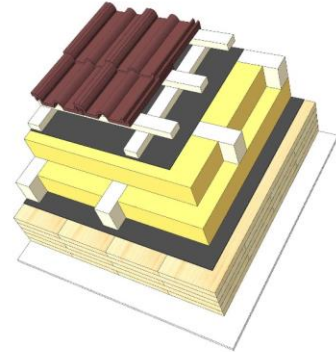
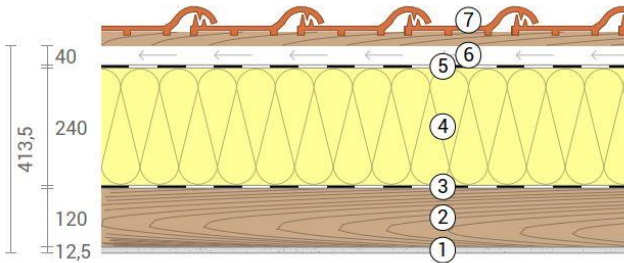
Thermal protection
W/(m²K)
0,14

Sound insulation
dB
50

Ecology
kg CO₂eq./m²
-100

DA 01 G

Pitched roof / tile roofing
Cladded



No	mm	Material
1	12,5	Gt-F board
2	120	KLH® - CLT
3	0,5	Vapour barrier
4	240	Mineral wool / wood fiber
5	0,5	Underroof sheet, breather membrane $s_d \leq 1$ m
6	40	Battens, vertical
7	103	Roof tiles / battens

R*EI (fire attack from below)
60 minutes

U-Value
0,14 W/(m²K)

Rw
51 (-4;11) dB

Thickness
517 mm
Mass per squaremeter
152 kg/m²

Global warming potential
-98 kg CO ₂ eq./m²
Primary energy (n. renewable)
236 kWh/m²

Link Ubakus
[DA 01 G Ubakus](#)

Link pre-dimensioning fire
[KLH REI 60](#)

Fire resistance
R*EI
60

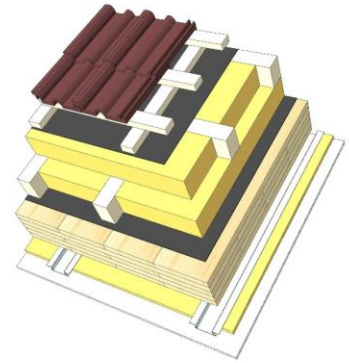
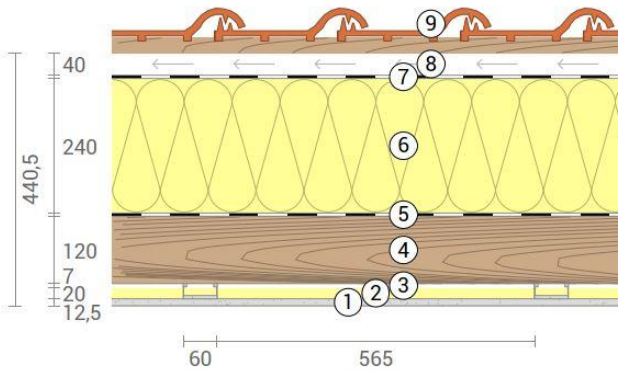
Thermal protection
W/(m²K)
0,14

Sound insulation
dB
51

Ecology
kg CO₂eq./m²
-98

DA 01 RP

Pitched roof / tile roofing
SC on resilient profiles



No	mm	Material
1	12,5	Gt-F board
2	20	Mineral wool
3	27	Resilient profile
4	120	KLH® - CLT
5	0,5	Vapour barrier
6	240	Mineral wool / wood fiber
7	0,5	Underroof sheet, breather membrane $sd \leq 1$ m
8	40	Battens, vertical
9	103	Roof tiles / battens

R*EI (fire attack from below)
60 minutes

U-Value
0,13 W/(m ² K)

Rw
52 (-5;-12) dB

Thickness
544 mm
Mass per squaremeter
153 kg/m ²

Global warming potential
-94 kg CO ₂ eq./m ²
Primary energy (n. renewable)
248 kWh/m ²

Link Ubakus
[DA 01 RP Ubakus](#)

Link pre-dimensioning fire
[KLH REI 60](#)

Fire resistance
R*EI
60

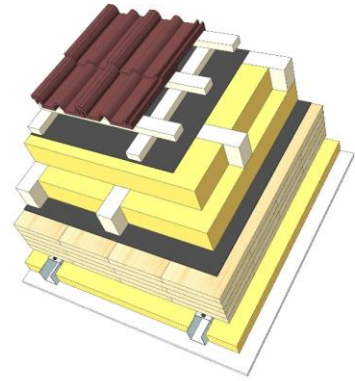
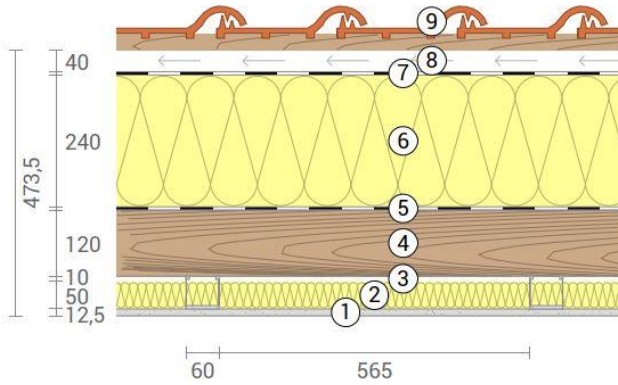
Thermal protection
W/(m²K)
0,13

Sound insulation
dB
52

Ecology
kg CO₂eq./m²
-94

DA 01 SC

Pitched roof / tile roofing
SC on CD-profiles



No	mm	Material
1	12,5	Gt-F board
2	50	Rock wool
3	60	CD-profiles
4	120	KLH® - CLT
5	0,5	Vapour barrier
6	240	Mineral wool / wood fiber
7	0,5	Underroof sheet, breather membrane $sd \leq 1$ m
8	40	Battens, vertical
9	103	Roof tiles / battens

R*EI (fire attack from below)
60 minutes

U-Value
0,12 W/(m²K)

Rw
56 (-4;11) dB

Thickness	577 mm
Mass per squaremeter	154 kg/m ²

Global warming potential	-92 kg CO ₂ eq./m ²
Primary energy (n. renewable)	256 kWh/m ²

Link Ubakus
[DA 01 SC Ubakus](#)

Link pre-dimensioning fire
[KLH REI 60](#)

Fire resistance
R*EI
60

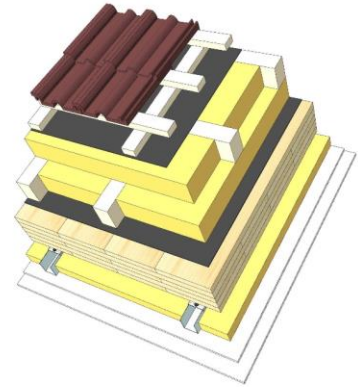
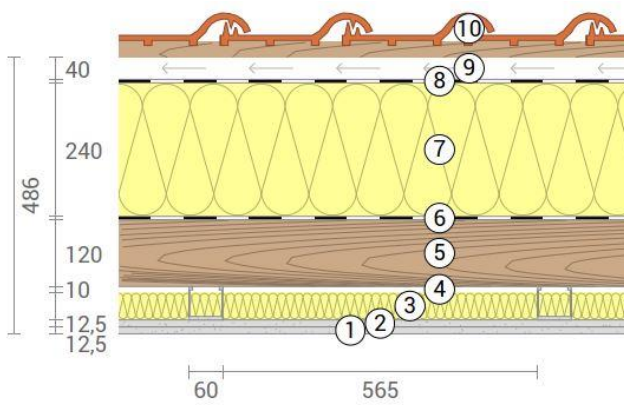
Thermal protection
W/(m²K)
0,12

Sound insulation
dB
56

Ecology
kg CO₂eq./m²
-92

DA 01 SC2

Pitched roof / tile roofing
 SC on CD-profiles, resilient clips



No	mm	Material
1	12,5	Gt-F board
2	12,5	Gt-F board
3	50	Rock wool
4	60	CD-profiles on resilient clips
5	120	KLH® - CLT
6	0,5	Vapour barrier
7	240	Mineral wool / wood fiber
8	0,5	Underroof sheet, breather membrane $sd \leq 1$ m
9	40	Battens, vertical
10	103	Roof tiles / battens

R*EI (fire attack from below)	90 minutes
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U-Value	0,12 W/(m ² K)
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Rw	62 (-6;-15) dB
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Thickness	589 mm
Mass per squaremeter	164 kg/m ²

Global warming potential	-89 kg CO ₂ eq./m ²
Primary energy (n. renewable)	266 kWh/m ²

Link Ubakus
[DA 01 SC2 Ubakus](#)

Link pre-dimensioning fire
[KLH REI 90](#)

Fire resistance
 R*EI
90

Thermal protection
 W/(m²K)
0,12

Sound insulation
 dB
62

Ecology
 kg CO₂eq./m²
-89