

POLITECNICO DI TORINO

FACULTY OF ENGINEERING

Master's degree in Industrial Engineering



MASTER'S THESIS

DIPARTIMENTO DI ENERGIA

ENERGY AUDIT OF THE BELLVITGE UB HEALTH SCIENCE CAMPUS THROUGH DESIGN BUILDER

ANNEX

Author

Lambert Grange Vilà

Tutor

Professor Vincenzo Corrado

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1. Component and Template Libraries

1.1. Constructions

1.1.1. Floors (external)

<p>1.1.1.1. Aulari – Coberta P4 (external)</p> <p>Cross Section</p> <p>Inner surface</p> <table border="1"> <tr><td>15,00mm</td><td>Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</td></tr> <tr><td>100,00mm</td><td>Cámara de aire sin ventilar horizontal 10 cm</td></tr> <tr><td>300,00mm</td><td>FR Entrevigado de hormigón -Canto 300 mm</td></tr> <tr><td>55,00mm</td><td>Hormigón armado 2300 < d < 2500</td></tr> <tr><td>80,00mm</td><td>Hormigón celular curado en autoclave d 600</td></tr> <tr><td>5,00mm</td><td>Subcapa fieltro(not to scale)</td></tr> <tr><td>3,00mm</td><td>Ethylene propylene diene monomer (EPDM)(not to scale)</td></tr> <tr><td>50,00mm</td><td>XPS Extruded Polystyrene - HFC Blowing(not to scale)</td></tr> <tr><td>80,00mm</td><td>Hormigón en masa 2300 < d < 2600</td></tr> <tr><td>140,00mm</td><td>Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</td></tr> </table> <p>Outer surface</p>	15,00mm	Placa de yeso laminado [PYL] 750 < d < 900(not to scale)	100,00mm	Cámara de aire sin ventilar horizontal 10 cm	300,00mm	FR Entrevigado de hormigón -Canto 300 mm	55,00mm	Hormigón armado 2300 < d < 2500	80,00mm	Hormigón celular curado en autoclave d 600	5,00mm	Subcapa fieltro(not to scale)	3,00mm	Ethylene propylene diene monomer (EPDM)(not to scale)	50,00mm	XPS Extruded Polystyrene - HFC Blowing(not to scale)	80,00mm	Hormigón en masa 2300 < d < 2600	140,00mm	Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250	<table border="1"> <tr><td colspan="2">Inner surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>0,342</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,170</td></tr> <tr><td colspan="2">Outer surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>4,460</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,100</td></tr> <tr><td colspan="2">No Bridging</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>0,341</td></tr> <tr><td>R-Value (m²-K/W)</td><td>3,202</td></tr> <tr><td>U-Value (W/m²-K)</td><td>0,312</td></tr> <tr><td colspan="2">With Bridging (BS EN ISO 6946)</td></tr> <tr><td>Thickness (m)</td><td>0,8280</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>12,3750</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>3,202</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>3,202</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>0,341</td></tr> <tr><td>R-Value (m²-K/W)</td><td>3,202</td></tr> <tr><td>U-Value (W/m²-K)</td><td>0,312</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	0,342	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,170	Outer surface		Convective heat transfer coefficient (W/m ² -K)	4,460	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,100	No Bridging		U-Value surface to surface (W/m ² -K)	0,341	R-Value (m ² -K/W)	3,202	U-Value (W/m²-K)	0,312	With Bridging (BS EN ISO 6946)		Thickness (m)	0,8280	Km - Internal heat capacity (KJ/m ² -K)	12,3750	Upper resistance limit (m ² -K/W)	3,202	Lower resistance limit (m ² -K/W)	3,202	U-Value surface to surface (W/m ² -K)	0,341	R-Value (m ² -K/W)	3,202	U-Value (W/m²-K)	0,312
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R-Value (m ² -K/W)	3,437																																																												
U-Value (W/m²-K)	0,291																																																												

1.1.1.3. Aulari – Forjat normal (pont)																																									
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1.1.2. Floors (Ground)

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1.1.3. Floors (internal)

<p>1.1.3.1. Aulari – CR01-Forjat normal-P01</p> <p>Cross Section</p> <p>Inner surface</p> <table border="1"> <tr><td>40,00mm</td><td>Piedra artificial</td></tr> <tr><td>30,00mm</td><td>Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</td></tr> <tr><td>50,00mm</td><td>Hormigón armado 2300 < d < 2500</td></tr> <tr><td>300,00mm</td><td>FR Entrevigado de hormigón -Canto 300 mm</td></tr> <tr><td>50,00mm</td><td>Cámara de aire sin ventilar horizontal 5 cm</td></tr> <tr><td>15,00mm</td><td>Woodwool Roofing Slabs(not to scale)</td></tr> </table> <p>Outer surface</p>	40,00mm	Piedra artificial	30,00mm	Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250	50,00mm	Hormigón armado 2300 < d < 2500	300,00mm	FR Entrevigado de hormigón -Canto 300 mm	50,00mm	Cámara de aire sin ventilar horizontal 5 cm	15,00mm	Woodwool Roofing Slabs(not to scale)	<table border="1"> <tr><td colspan="2">Inner surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>0,342</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,170</td></tr> <tr><td colspan="2">Outer surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>4,460</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,100</td></tr> <tr><td colspan="2">No Bridging</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>1,764</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,837</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1,195</td></tr> <tr><td colspan="2">With Bridging (BS EN ISO 6946)</td></tr> <tr><td>Thickness (m)</td><td>0,4850</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>173,7500</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>0,837</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>0,837</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>1,764</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,837</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1,195</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	0,342	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,170	Outer surface		Convective heat transfer coefficient (W/m ² -K)	4,460	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,100	No Bridging		U-Value surface to surface (W/m ² -K)	1,764	R-Value (m ² -K/W)	0,837	U-Value (W/m²-K)	1,195	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4850	Km - Internal heat capacity (KJ/m ² -K)	173,7500	Upper resistance limit (m ² -K/W)	0,837	Lower resistance limit (m ² -K/W)	0,837	U-Value surface to surface (W/m ² -K)	1,764	R-Value (m ² -K/W)	0,837	U-Value (W/m²-K)	1,195
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15,00mm	Placa de yeso laminado [PYL] 750 < d < 900(not to scale)																																																				
Inner surface																																																					
Convective heat transfer coefficient (W/m ² -K)	0,342																																																				
Radiative heat transfer coefficient (W/m ² -K)	5,540																																																				
Surface resistance (m ² -K/W)	0,170																																																				
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Surface resistance (m ² -K/W)	0,100																																																				
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U-Value surface to surface (W/m ² -K)	2,096																																																				
R-Value (m ² -K/W)	0,747																																																				
U-Value (W/m²-K)	1,339																																																				
With Bridging (BS EN ISO 6946)																																																					
Thickness (m)	0,4850																																																				
Km - Internal heat capacity (KJ/m ² -K)	173,7500																																																				
Upper resistance limit (m ² -K/W)	0,747																																																				
Lower resistance limit (m ² -K/W)	0,747																																																				
U-Value surface to surface (W/m ² -K)	2,096																																																				
R-Value (m ² -K/W)	0,747																																																				
U-Value (W/m²-K)	1,339																																																				

1.1.3.4. Aulari – CR04-Forjat normal-P02

Cross Section

Inner surface

40,00mm	Polyvinylchloride(PVC)
30,00mm	Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250
50,00mm	Hormigón armado 2300 < d < 2500
300,00mm FR Entrevigado de hormigón -Canto 300 mm	
50,00mm	Cámara de aire sin ventilar horizontal 5 cm
15,00mm	Placa de yeso laminado [PyL] 750 < d < 900(not to scale)

Outer surface

Inner surface

Convective heat transfer coefficient (W/m ² -K)	0,342
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,170

Outer surface

Convective heat transfer coefficient (W/m ² -K)	4,460
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,100

No Bridging

U-Value surface to surface (W/m ² -K)	1,436
R-Value (m ² -K/W)	0,966

U-Value (W/m²-K) 1.035

With Bridging (BS EN ISO 6946)

Thickness (m)	0,4850
Km - Internal heat capacity (KJ/m ² -K)	160,9500
Upper resistance limit (m ² -K/W)	0,966
Lower resistance limit (m ² -K/W)	0,966
U-Value surface to surface (W/m ² -K)	1,436
R-Value (m ² -K/W)	0,966

U-Value (W/m²-K) 1.035

1.1.3.5. Aulari – CR05-Forjat normal-P01

Cross Section

Inner surface

40,00mm	Piedra artificial
30,00mm	Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250
50,00mm	Hormigón armado 2300 < d < 2500
300,00mm FR Entrevigado de hormigón -Canto 300 mm	
50,00mm	Cámara de aire sin ventilar horizontal 5 cm
15,00mm	Froncosa pesada 750 < d < 870(not to scale)

Outer surface

Inner surface

Convective heat transfer coefficient (W/m ² -K)	0,342
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,170

Outer surface

Convective heat transfer coefficient (W/m ² -K)	4,460
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,100

No Bridging

U-Value surface to surface (W/m ² -K)	2,074
R-Value (m ² -K/W)	0,752


U-Value (W/m²-K) 1.329

With Bridging (BS EN ISO 6946)


Thickness (m)	0,4850
Km - Internal heat capacity (KJ/m ² -K)	173,7500
Upper resistance limit (m ² -K/W)	0,752
Lower resistance limit (m ² -K/W)	0,752
U-Value surface to surface (W/m ² -K)	2,074
R-Value (m ² -K/W)	0,752



U-Value (W/m²-K) 1.329

<p>1.1.3.6. Aulari – CR06-Forjat normal-P01</p> <p>Cross Section</p> <p>Inner surface</p> <table border="1"> <tr><td>40,00mm</td><td>Piedra artificial</td></tr> <tr><td>30,00mm</td><td>Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</td></tr> <tr><td>50,00mm</td><td>Hormigón armado 2300 < d < 2500</td></tr> <tr><td colspan="2">300,00mm FR Entrevigado de hormigón -Canto 300 mm</td></tr> <tr><td>50,00mm</td><td>Cámara de aire sin ventilar horizontal 5 cm</td></tr> <tr><td>13,50mm</td><td>Tableros de fibras incluyendo MDF 350 < d < 550(not to scale)</td></tr> <tr><td>1,50mm</td><td>Acero Inoxidable(not to scale)</td></tr> </table> <p>Outer surface</p>	40,00mm	Piedra artificial	30,00mm	Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250	50,00mm	Hormigón armado 2300 < d < 2500	300,00mm FR Entrevigado de hormigón -Canto 300 mm		50,00mm	Cámara de aire sin ventilar horizontal 5 cm	13,50mm	Tableros de fibras incluyendo MDF 350 < d < 550(not to scale)	1,50mm	Acero Inoxidable(not to scale)	<table border="1"> <tr><td colspan="2">Inner surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>0,342</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,170</td></tr> <tr><td colspan="2">Outer surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>8,153</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>1,847</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,100</td></tr> <tr><td colspan="2">No Bridging</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>1,947</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,784</td></tr> <tr><td>U-Value (W/m2-K)</td><td>1,276</td></tr> <tr><td colspan="2">With Bridging (BS EN ISO 6946)</td></tr> <tr><td>Thickness (m)</td><td>0,4850</td></tr> <tr><td>Km - Internal heat capacity (KJ/m2-K)</td><td>173,7500</td></tr> <tr><td>Upper resistance limit (m2-K/W)</td><td>0,784</td></tr> <tr><td>Lower resistance limit (m2-K/W)</td><td>0,784</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>1,947</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,784</td></tr> <tr><td>U-Value (W/m2-K)</td><td>1,276</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	0,342	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,170	Outer surface		Convective heat transfer coefficient (W/m2-K)	8,153	Radiative heat transfer coefficient (W/m2-K)	1,847	Surface resistance (m2-K/W)	0,100	No Bridging		U-Value surface to surface (W/m2-K)	1,947	R-Value (m2-K/W)	0,784	U-Value (W/m2-K)	1,276	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4850	Km - Internal heat capacity (KJ/m2-K)	173,7500	Upper resistance limit (m2-K/W)	0,784	Lower resistance limit (m2-K/W)	0,784	U-Value surface to surface (W/m2-K)	1,947	R-Value (m2-K/W)	0,784	U-Value (W/m2-K)	1,276
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<p>1.1.3.7. Aulari – CR07-Forjat normal-P01</p> <p>Cross Section</p> <p>Inner surface</p> <table border="1"> <tr><td>40,00mm</td><td>Piedra artificial</td></tr> <tr><td>30,00mm</td><td>Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</td></tr> <tr><td>50,00mm</td><td>Hormigón armado 2300 < d < 2500</td></tr> <tr><td colspan="2">300,00mm FR Entrevigado de hormigón -Canto 300 mm</td></tr> <tr><td>50,00mm</td><td>Cámara de aire sin ventilar horizontal 5 cm</td></tr> <tr><td>13,50mm</td><td>Tableros de fibras incluyendo MDF 350 < d < 550(not to scale)</td></tr> <tr><td>1,50mm</td><td>Acero(not to scale)</td></tr> </table> <p>Outer surface</p>	40,00mm	Piedra artificial	30,00mm	Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250	50,00mm	Hormigón armado 2300 < d < 2500	300,00mm FR Entrevigado de hormigón -Canto 300 mm		50,00mm	Cámara de aire sin ventilar horizontal 5 cm	13,50mm	Tableros de fibras incluyendo MDF 350 < d < 550(not to scale)	1,50mm	Acero(not to scale)	<table border="1"> <tr><td colspan="2">Inner surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>0,342</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,170</td></tr> <tr><td colspan="2">Outer surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>8,153</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>1,847</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,100</td></tr> <tr><td colspan="2">No Bridging</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>1,947</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,784</td></tr> <tr><td>U-Value (W/m2-K)</td><td>1,276</td></tr> <tr><td colspan="2">With Bridging (BS EN ISO 6946)</td></tr> <tr><td>Thickness (m)</td><td>0,4850</td></tr> <tr><td>Km - Internal heat capacity (KJ/m2-K)</td><td>173,7500</td></tr> <tr><td>Upper resistance limit (m2-K/W)</td><td>0,784</td></tr> <tr><td>Lower resistance limit (m2-K/W)</td><td>0,784</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>1,947</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,784</td></tr> <tr><td>U-Value (W/m2-K)</td><td>1,276</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	0,342	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,170	Outer surface		Convective heat transfer coefficient (W/m2-K)	8,153	Radiative heat transfer coefficient (W/m2-K)	1,847	Surface resistance (m2-K/W)	0,100	No Bridging		U-Value surface to surface (W/m2-K)	1,947	R-Value (m2-K/W)	0,784	U-Value (W/m2-K)	1,276	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4850	Km - Internal heat capacity (KJ/m2-K)	173,7500	Upper resistance limit (m2-K/W)	0,784	Lower resistance limit (m2-K/W)	0,784	U-Value surface to surface (W/m2-K)	1,947	R-Value (m2-K/W)	0,784	U-Value (W/m2-K)	1,276
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<p>1.1.3.8. Aulari – Forjat normal</p> <p>Cross Section</p> <p>Inner surface</p>  <p>Outer surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>0,342</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,170</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>4,460</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,100</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>2,096</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,747</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1,339</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,4850</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>173,7500</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>0,747</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>0,747</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>2,096</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,747</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1,339</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	0,342	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,170	Outer surface		Convective heat transfer coefficient (W/m ² -K)	4,460	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,100	No Bridging		U-Value surface to surface (W/m ² -K)	2,096	R-Value (m ² -K/W)	0,747	U-Value (W/m²-K)	1,339	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4850	Km - Internal heat capacity (KJ/m ² -K)	173,7500	Upper resistance limit (m ² -K/W)	0,747	Lower resistance limit (m ² -K/W)	0,747	U-Value surface to surface (W/m ² -K)	2,096	R-Value (m ² -K/W)	0,747	U-Value (W/m²-K)	1,339
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1.1.4. Partitions

<p>1.1.4.1. Aulari – Int. Part. M02-CA6.5-M05-R11</p> <p>Cross Section</p> <p>Outer surface</p>  <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>1,462</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,944</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1,059</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,2500</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>91,1250</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>0,944</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>0,944</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>1,462</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,944</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1,059</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	1,462	R-Value (m ² -K/W)	0,944	U-Value (W/m²-K)	1,059	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2500	Km - Internal heat capacity (KJ/m ² -K)	91,1250	Upper resistance limit (m ² -K/W)	0,944	Lower resistance limit (m ² -K/W)	0,944	U-Value surface to surface (W/m ² -K)	1,462	R-Value (m ² -K/W)	0,944	U-Value (W/m²-K)	1,059
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<p>1.1.4.2. Aulari – Int. Part. M02-CA12-M05-R11</p> <p>Cross Section</p> <p>Outer surface</p>  <p>100.00mm Tabicón de LH doble [60 mm < E < 90 mm]</p> <p>120.00mm Air gap 300mm (downwards)</p> <p>70.00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>15.00mm Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</p> <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>1,462</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,944</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1,059</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,3050</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>91,1250</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>0,944</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>0,944</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>1,462</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,944</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1,059</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	1,462	R-Value (m ² -K/W)	0,944	U-Value (W/m²-K)	1,059	With Bridging (BS EN ISO 6946)		Thickness (m)	0,3050	Km - Internal heat capacity (KJ/m ² -K)	91,1250	Upper resistance limit (m ² -K/W)	0,944	Lower resistance limit (m ² -K/W)	0,944	U-Value surface to surface (W/m ² -K)	1,462	R-Value (m ² -K/W)	0,944	U-Value (W/m²-K)	1,059
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<p>1.1.4.3. Aulari – Int. Part. M02-R11</p> <p>Cross Section</p> <p>Outer surface</p>  <p>90.00mm Tabicón de LH doble [60 mm < E < 90 mm]</p> <p>15.00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>20.00mm Ceramic/porcelain</p> <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>3,538</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,543</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1,843</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,1250</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>115,9650</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>0,543</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>0,543</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>3,538</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,543</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1,843</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	3,538	R-Value (m ² -K/W)	0,543	U-Value (W/m²-K)	1,843	With Bridging (BS EN ISO 6946)		Thickness (m)	0,1250	Km - Internal heat capacity (KJ/m ² -K)	115,9650	Upper resistance limit (m ² -K/W)	0,543	Lower resistance limit (m ² -K/W)	0,543	U-Value surface to surface (W/m ² -K)	3,538	R-Value (m ² -K/W)	0,543	U-Value (W/m²-K)	1,843
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1.1.4.4. Aulari – Int. Part. R01-M04-CA15-M05-R04

Cross Section

Outer surface

15,00mm	Resina poliéster no saturado [UP](not to scale)
120,00mm	Concrete Block (Medium)
150,00mm	Air gap 300mm (downwards)
48,00mm	Air gap >=25mm
15,00mm	Placa de yeso laminado [PYL] 750 < d < 900(not to scale)
15,00mm	Resina poliéster no saturado [UP](not to scale)

Inner surface

Inner surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

Outer surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

No Bridging

U-Value surface to surface (W/m ² -K)	1,158
R-Value (m ² -K/W)	1,123
U-Value (W/m²-K)	0,890

With Bridging (BS EN ISO 6946)

Thickness (m)	0,3630
Km - Internal heat capacity (KJ/m ² -K)	37,5750
Upper resistance limit (m ² -K/W)	1,123
Lower resistance limit (m ² -K/W)	1,123
U-Value surface to surface (W/m ² -K)	1,158
R-Value (m ² -K/W)	1,123
U-Value (W/m²-K)	0,890

1.1.4.5. Aulari – Int. Part. R01-M04-CA25-M04-R01

Cross Section

Outer surface

15,00mm	Resina poliéster no saturado [UP](not to scale)
120,00mm	Concrete Block (Medium)
250,00mm	Air gap 300mm (downwards)
120,00mm	Concrete Block (Medium)
15,00mm	Resina poliéster no saturado [UP](not to scale)

Inner surface

Inner surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

Outer surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

No Bridging


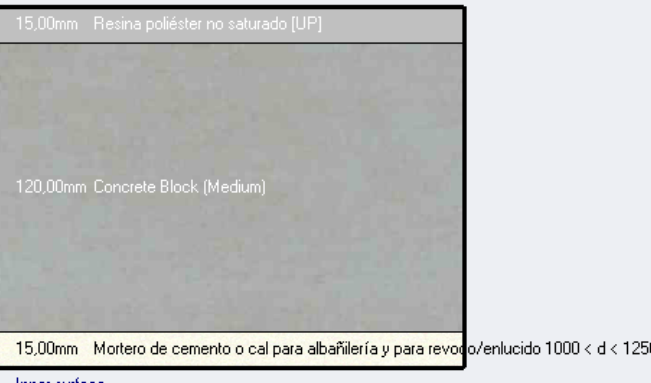
U-Value surface to surface (W/m ² -K)	1,165
R-Value (m ² -K/W)	1,118
U-Value (W/m²-K)	0,894

With Bridging (BS EN ISO 6946)

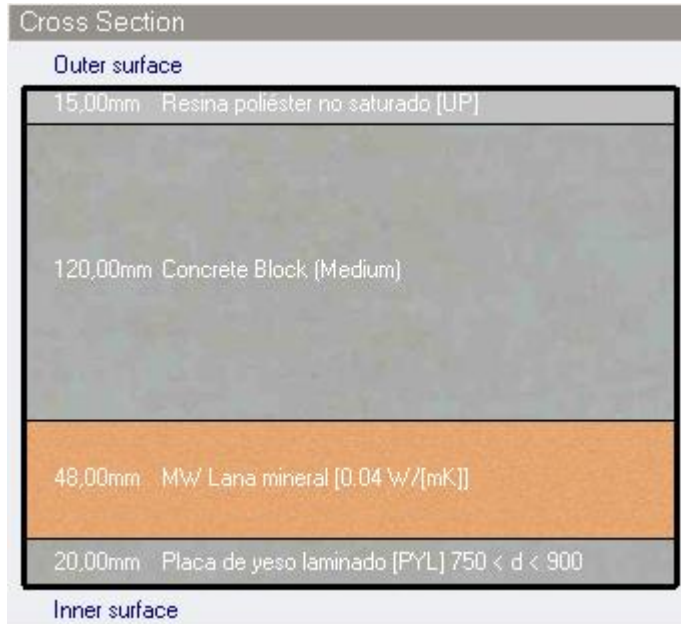
Thickness (m)	0,5200
Km - Internal heat capacity (KJ/m ² -K)	144,2000
Upper resistance limit (m ² -K/W)	1,118
Lower resistance limit (m ² -K/W)	1,118
U-Value surface to surface (W/m ² -K)	1,165
R-Value (m ² -K/W)	1,118
U-Value (W/m²-K)	0,894

<p>1.1.4.6. Aulari – Int. Part. R01-M04-CA25-M05-R04</p> <p>Cross Section</p> <p>Outer surface</p> <table border="1"> <tr> <td>15,00mm</td> <td>Resina polièster no saturado [UP][not to scale]</td> </tr> <tr> <td>120,00mm</td> <td>Concrete Block (Medium)</td> </tr> <tr> <td>250,00mm</td> <td>Air gap 300mm (downwards)</td> </tr> <tr> <td>48,00mm</td> <td>Air gap >=25mm</td> </tr> <tr> <td>15,00mm</td> <td>Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</td> </tr> <tr> <td>15,00mm</td> <td>Resina polièster no saturado [UP][not to scale]</td> </tr> </table> <p>Inner surface</p>	15,00mm	Resina polièster no saturado [UP][not to scale]	120,00mm	Concrete Block (Medium)	250,00mm	Air gap 300mm (downwards)	48,00mm	Air gap >=25mm	15,00mm	Placa de yeso laminado [PYL] 750 < d < 900(not to scale)	15,00mm	Resina polièster no saturado [UP][not to scale]	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m2-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m2-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m2-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m2-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m2-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m2-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m2-K)</td> <td>1,158</td> </tr> <tr> <td>R-Value (m2-K/W)</td> <td>1,123</td> </tr> <tr> <td>U-Value (W/m2-K)</td> <td>0,890</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,4630</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m2-K)</td> <td>37,5750</td> </tr> <tr> <td>Upper resistance limit (m2-K/W)</td> <td>1,123</td> </tr> <tr> <td>Lower resistance limit (m2-K/W)</td> <td>1,123</td> </tr> <tr> <td>U-Value surface to surface (W/m2-K)</td> <td>1,158</td> </tr> <tr> <td>R-Value (m2-K/W)</td> <td>1,123</td> </tr> <tr> <td>U-Value (W/m2-K)</td> <td>0,890</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	No Bridging		U-Value surface to surface (W/m2-K)	1,158	R-Value (m2-K/W)	1,123	U-Value (W/m2-K)	0,890	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4630	Km - Internal heat capacity (KJ/m2-K)	37,5750	Upper resistance limit (m2-K/W)	1,123	Lower resistance limit (m2-K/W)	1,123	U-Value surface to surface (W/m2-K)	1,158	R-Value (m2-K/W)	1,123	U-Value (W/m2-K)	0,890
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<p>1.1.4.7. Aulari – Int. Part. R01-M04-CA-M04-R15</p> <p>Cross Section</p> <p>Outer surface</p> <table border="1"> <tr> <td>15,00mm</td> <td>Resina polièster no saturado [UP][not to scale]</td> </tr> <tr> <td>120,00mm</td> <td>Concrete Block (Medium)</td> </tr> <tr> <td>200,00mm</td> <td>Air gap 300mm (downwards)</td> </tr> <tr> <td>120,00mm</td> <td>Concrete Block (Medium)</td> </tr> <tr> <td>34,00mm</td> <td>MW Lana mineral [0.04 W/[mK]]</td> </tr> <tr> <td>16,00mm</td> <td>Woods - willow, birch, soft beech(not to scale)</td> </tr> </table> <p>Inner surface</p>	15,00mm	Resina polièster no saturado [UP][not to scale]	120,00mm	Concrete Block (Medium)	200,00mm	Air gap 300mm (downwards)	120,00mm	Concrete Block (Medium)	34,00mm	MW Lana mineral [0.04 W/[mK]]	16,00mm	Woods - willow, birch, soft beech(not to scale)	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m2-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m2-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m2-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m2-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m2-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m2-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m2-K)</td> <td>0,573</td> </tr> <tr> <td>R-Value (m2-K/W)</td> <td>2,004</td> </tr> <tr> <td>U-Value (W/m2-K)</td> <td>0,499</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,5050</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m2-K)</td> <td>90,3296</td> </tr> <tr> <td>Upper resistance limit (m2-K/W)</td> <td>2,004</td> </tr> <tr> <td>Lower resistance limit (m2-K/W)</td> <td>2,004</td> </tr> <tr> <td>U-Value surface to surface (W/m2-K)</td> <td>0,573</td> </tr> <tr> <td>R-Value (m2-K/W)</td> <td>2,004</td> </tr> <tr> <td>U-Value (W/m2-K)</td> <td>0,499</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	No Bridging		U-Value surface to surface (W/m2-K)	0,573	R-Value (m2-K/W)	2,004	U-Value (W/m2-K)	0,499	With Bridging (BS EN ISO 6946)		Thickness (m)	0,5050	Km - Internal heat capacity (KJ/m2-K)	90,3296	Upper resistance limit (m2-K/W)	2,004	Lower resistance limit (m2-K/W)	2,004	U-Value surface to surface (W/m2-K)	0,573	R-Value (m2-K/W)	2,004	U-Value (W/m2-K)	0,499
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<p>1.1.4.8. Aulari – Int. Part. R01-M04-CA-M05-R15</p> <p>Cross Section</p> <p>Outer surface</p> <table border="1"> <tr> <td>15,00mm</td> <td>Resina polièster no saturado [UP][not to scale]</td> </tr> <tr> <td>120,00mm</td> <td>Concrete Block (Medium)</td> </tr> <tr> <td>250,00mm</td> <td>Air gap 300mm (downwards)</td> </tr> <tr> <td>33,00mm</td> <td>Air gap >=25mm</td> </tr> <tr> <td>34,00mm</td> <td>MW Lana mineral [0.04 W/[mK]]</td> </tr> <tr> <td>16,00mm</td> <td>Woods - willow, birch, soft beech(not to scale)</td> </tr> </table> <p>Inner surface</p>	15,00mm	Resina polièster no saturado [UP][not to scale]	120,00mm	Concrete Block (Medium)	250,00mm	Air gap 300mm (downwards)	33,00mm	Air gap >=25mm	34,00mm	MW Lana mineral [0.04 W/[mK]]	16,00mm	Woods - willow, birch, soft beech(not to scale)	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,592</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,949</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,513</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,4680</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>20,3296</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>1,949</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>1,949</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,592</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,949</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,513</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	0,592	R-Value (m ² -K/W)	1,949	U-Value (W/m²-K)	0,513	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4680	Km - Internal heat capacity (KJ/m ² -K)	20,3296	Upper resistance limit (m ² -K/W)	1,949	Lower resistance limit (m ² -K/W)	1,949	U-Value surface to surface (W/m ² -K)	0,592	R-Value (m ² -K/W)	1,949	U-Value (W/m²-K)	0,513
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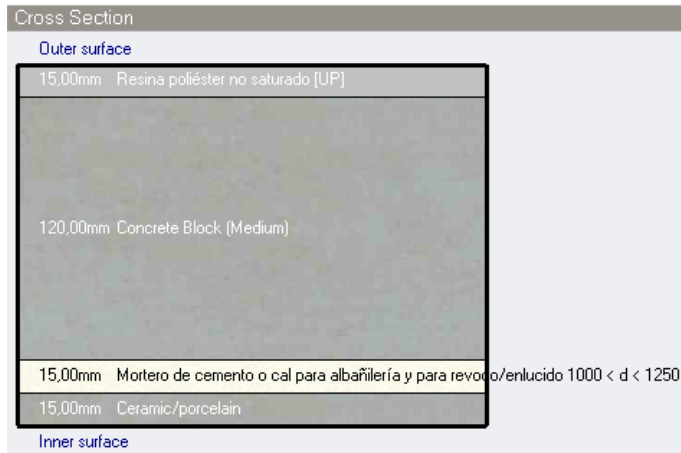
<p>1.1.4.10. Aulari – Int. Part. R01-M04-R01</p> <p>Cross Section</p> <p>Outer surface</p>  <p>15.00mm Resina poliéster no saturado [UP]</p> <p>120.00mm Concrete Block (Medium)</p> <p>15.00mm Resina poliéster no saturado [UP]</p> <p>Inner surface</p>	<table border="1"> <tbody> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,543</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,653</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,531</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,1500</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>144,2000</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,653</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,653</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,543</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,653</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,531</td> </tr> </tbody> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	2,543	R-Value (m ² -K/W)	0,653	U-Value (W/m²-K)	1,531	With Bridging (BS EN ISO 6946)		Thickness (m)	0,1500	Km - Internal heat capacity (KJ/m ² -K)	144,2000	Upper resistance limit (m ² -K/W)	0,653	Lower resistance limit (m ² -K/W)	0,653	U-Value surface to surface (W/m ² -K)	2,543	R-Value (m ² -K/W)	0,653	U-Value (W/m²-K)	1,531
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<p>1.1.4.11. Aulari – Int. Part. R01-M04-R05</p> <p>Cross Section</p> <p>Outer surface</p>  <p>15.00mm Resina poliéster no saturado [UP]</p> <p>120.00mm Concrete Block (Medium)</p> <p>15.00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>Inner surface</p>	<table border="1"> <tbody> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,928</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,602</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,662</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,1500</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>135,8750</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,602</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,602</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,928</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,602</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,662</td> </tr> </tbody> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	2,928	R-Value (m ² -K/W)	0,602	U-Value (W/m²-K)	1,662	With Bridging (BS EN ISO 6946)		Thickness (m)	0,1500	Km - Internal heat capacity (KJ/m ² -K)	135,8750	Upper resistance limit (m ² -K/W)	0,602	Lower resistance limit (m ² -K/W)	0,602	U-Value surface to surface (W/m ² -K)	2,928	R-Value (m ² -K/W)	0,602	U-Value (W/m²-K)	1,662
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1.1.4.12. Aulari – Int. Part. R01-M04-R07



Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
No Bridging	
U-Value surface to surface (W/m ² -K)	0,627
R-Value (m ² -K/W)	1,854
U-Value (W/m²-K)	0,539
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,2030
Km - Internal heat capacity (KJ/m ² -K)	63,2200
Upper resistance limit (m ² -K/W)	1,854
Lower resistance limit (m ² -K/W)	1,854
U-Value surface to surface (W/m ² -K)	0,627
R-Value (m ² -K/W)	1,854
U-Value (W/m²-K)	0,539

1.1.4.13. Aulari – Int. Part. R01-M04-R11



Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
No Bridging	
U-Value surface to surface (W/m ² -K)	2,832
R-Value (m ² -K/W)	0,613
U-Value (W/m²-K)	1,631
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,1650
Km - Internal heat capacity (KJ/m ² -K)	143,8550
Upper resistance limit (m ² -K/W)	0,613
Lower resistance limit (m ² -K/W)	0,613
U-Value surface to surface (W/m ² -K)	2,832
R-Value (m ² -K/W)	0,613
U-Value (W/m²-K)	1,631

<p>1.1.4.14. Aulari – Int. Part. R01-M04-R21</p> <p>Cross Section</p> <p>Outer surface</p> <p>15.00mm Resina poliéster no saturado [UP]</p> <p>120.00mm Concrete Block (Medium)</p> <p>15.00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>Inner surface</p>	<table border="1"> <tr><td colspan="2">Inner surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><td colspan="2">Outer surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><td colspan="2">No Bridging</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>2,928</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,602</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1.662</td></tr> <tr><td colspan="2">With Bridging (BS EN ISO 6946)</td></tr> <tr><td>Thickness (m)</td><td>0,1500</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>135,8750</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>0,602</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>0,602</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>2,928</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,602</td></tr> <tr><td>U-Value (W/m²-K)</td><td>1.662</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	2,928	R-Value (m ² -K/W)	0,602	U-Value (W/m²-K)	1.662	With Bridging (BS EN ISO 6946)		Thickness (m)	0,1500	Km - Internal heat capacity (KJ/m ² -K)	135,8750	Upper resistance limit (m ² -K/W)	0,602	Lower resistance limit (m ² -K/W)	0,602	U-Value surface to surface (W/m ² -K)	2,928	R-Value (m ² -K/W)	0,602	U-Value (W/m²-K)	1.662
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<p>1.1.4.15. Aulari – Int. Part. R02-M04-CA21.5-M06-R04</p> <p>Cross Section</p> <p>Outer surface</p> <p>15.00mm Resina poliéster no saturado [UP] (not to scale)</p> <p>120.00mm Concrete Block (Medium)</p> <p>215.00mm Air gap 300mm (downwards)</p> <p>48.00mm MW Lana mineral [0.04 W/(mK)]</p> <p>15.00mm Placa de yeso laminado [PYL] 750 < d < 900 (not to scale)</p> <p>15.00mm Resina poliéster no saturado [UP] (not to scale)</p> <p>Inner surface</p>	<table border="1"> <tr><td colspan="2">Inner surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><td colspan="2">Outer surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><td colspan="2">No Bridging</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>0,531</td></tr> <tr><td>R-Value (m²-K/W)</td><td>2,143</td></tr> <tr><td>U-Value (W/m²-K)</td><td>0.467</td></tr> <tr><td colspan="2">With Bridging (BS EN ISO 6946)</td></tr> <tr><td>Thickness (m)</td><td>0,4280</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>39,4950</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>2,143</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>2,143</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>0,531</td></tr> <tr><td>R-Value (m²-K/W)</td><td>2,143</td></tr> <tr><td>U-Value (W/m²-K)</td><td>0.467</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	0,531	R-Value (m ² -K/W)	2,143	U-Value (W/m²-K)	0.467	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4280	Km - Internal heat capacity (KJ/m ² -K)	39,4950	Upper resistance limit (m ² -K/W)	2,143	Lower resistance limit (m ² -K/W)	2,143	U-Value surface to surface (W/m ² -K)	0,531	R-Value (m ² -K/W)	2,143	U-Value (W/m²-K)	0.467
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1.1.4.16. Aulari – Int. Part. R02-M04-CA25-M05-R04

Cross Section

Outer surface

15,00mm	Resina poliéster no saturado [UP](not to scale)
120,00mm	Concrete Block (Medium)
250,00mm	Air gap 300mm (downwards)
33,00mm	Air gap ≥ 25 mm
15,00mm	Placa de yeso laminado [PYL] 750 < d < 900(not to scale)
15,00mm	Resina poliéster no saturado [UP](not to scale)

Inner surface

Inner surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

Outer surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

No Bridging

U-Value surface to surface (W/m ² -K)	1,158
R-Value (m ² -K/W)	1,123
U-Value (W/m²-K)	0,890

With Bridging (BS EN ISO 6946)

Thickness (m)	0,4480
Km - Internal heat capacity (KJ/m ² -K)	37,5750
Upper resistance limit (m ² -K/W)	1,123
Lower resistance limit (m ² -K/W)	1,123
U-Value surface to surface (W/m ² -K)	1,158
R-Value (m ² -K/W)	1,123
U-Value (W/m²-K)	0,890

1.1.4.17. Aulari – Int. Part. R02-M04-CA29.5-M06-R04

Cross Section

Outer surface

15,00mm	Resina poliéster no saturado [UP](not to scale)
120,00mm	Concrete Block (Medium)
300,00mm	Air gap 300mm (downwards)
48,00mm	Mw Lana mineral [0.04 W/(mK)]
15,00mm	Placa de yeso laminado [PYL] 750 < d < 900(not to scale)
15,00mm	Resina poliéster no saturado [UP](not to scale)

Inner surface

Inner surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

Outer surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

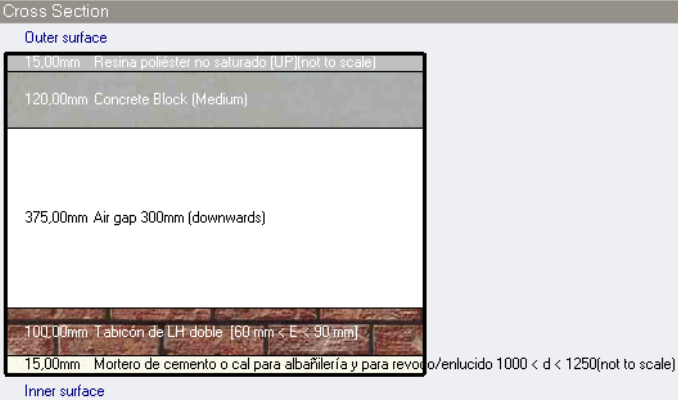
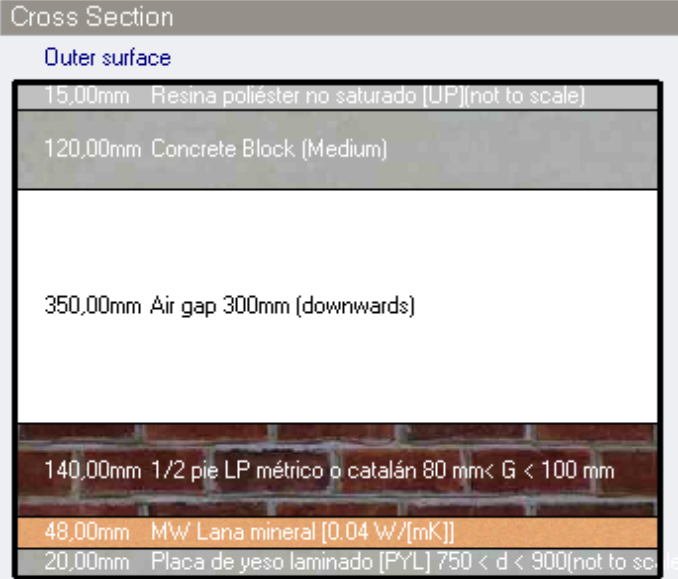
No Bridging

U-Value surface to surface (W/m ² -K)	0,531
R-Value (m ² -K/W)	2,143
U-Value (W/m²-K)	0,467

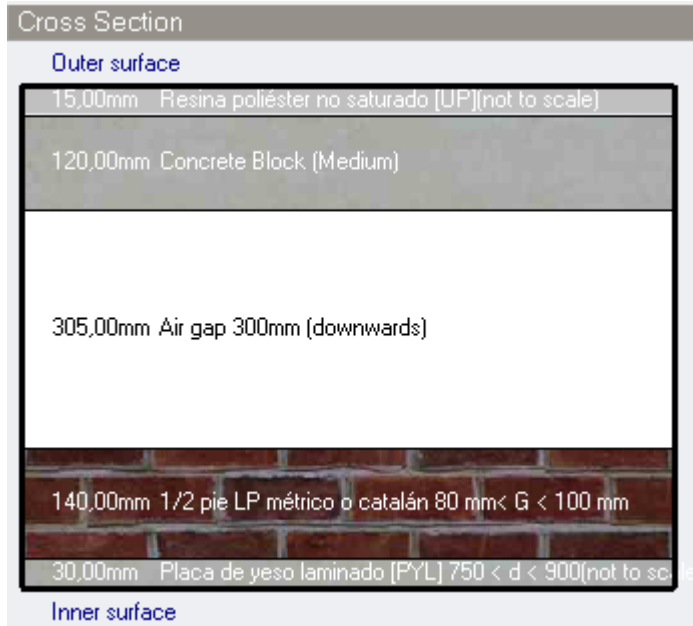
With Bridging (BS EN ISO 6946)

Thickness (m)	0,5130
Km - Internal heat capacity (KJ/m ² -K)	39,4950
Upper resistance limit (m ² -K/W)	2,143
Lower resistance limit (m ² -K/W)	2,143
U-Value surface to surface (W/m ² -K)	0,531
R-Value (m ² -K/W)	2,143
U-Value (W/m²-K)	0,467

<p>1.1.4.18. Aulari – Int. Part. R02-M04-CA32-M02-R11 (3rd Fl.)</p> <p>Cross Section</p> <p>Outer surface</p> <p>15,00mm Resina poliéster no saturado [UP](not to scale)</p> <p>120,00mm Concrete Block (Medium)</p> <p>320,00mm Air gap 300mm (downwards)</p> <p>100,00mm Tabicón de LH doble [60 mm < E < 90 mm]</p> <p>10,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)</p> <p>5,00mm Ceramic/porcelain(not to scale)</p> <p>Inner surface</p>	<p>Inner surface</p> <p>Convective heat transfer coefficient (W/m2-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m2-K) 5,540</p> <p>Surface resistance (m2-K/W) 0,130</p> <p>Outer surface</p> <p>Convective heat transfer coefficient (W/m2-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m2-K) 5,540</p> <p>Surface resistance (m2-K/W) 0,130</p> <p>No Bridging</p> <p>U-Value surface to surface (W/m2-K) 1,201</p> <p>R-Value (m2-K/W) 1,093</p> <p>U-Value (W/m2-K) 0,915</p> <p>With Bridging (BS EN ISO 6946)</p> <p>Thickness (m) 0,5700</p> <p>Km - Internal heat capacity (KJ/m2-K) 99,9600</p> <p>Upper resistance limit (m2-K/W) 1,093</p> <p>Lower resistance limit (m2-K/W) 1,093</p> <p>U-Value surface to surface (W/m2-K) 1,201</p> <p>R-Value (m2-K/W) 1,093</p> <p>U-Value (W/m2-K) 0,915</p>
<p>1.1.4.19. Aulari – Int. Part. R02-M04-CA40-M03-R05</p> <p>Cross Section</p> <p>Outer surface</p> <p>15,00mm Resina poliéster no saturado [UP](not to scale)</p> <p>120,00mm Concrete Block (Medium)</p> <p>400,00mm Air gap 300mm (downwards)</p> <p>140,00mm 1/2 pie LP métrico o catalán 80 mm < G < 100 mm</p> <p>15,00mm Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</p> <p>Inner surface</p>	<p>Inner surface</p> <p>Convective heat transfer coefficient (W/m2-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m2-K) 5,540</p> <p>Surface resistance (m2-K/W) 0,130</p> <p>Outer surface</p> <p>Convective heat transfer coefficient (W/m2-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m2-K) 5,540</p> <p>Surface resistance (m2-K/W) 0,130</p> <p>No Bridging</p> <p>U-Value surface to surface (W/m2-K) 1,160</p> <p>R-Value (m2-K/W) 1,122</p> <p>U-Value (W/m2-K) 0,891</p> <p>With Bridging (BS EN ISO 6946)</p> <p>Thickness (m) 0,6900</p> <p>Km - Internal heat capacity (KJ/m2-K) 88,8750</p> <p>Upper resistance limit (m2-K/W) 1,122</p> <p>Lower resistance limit (m2-K/W) 1,122</p> <p>U-Value surface to surface (W/m2-K) 1,160</p> <p>R-Value (m2-K/W) 1,122</p> <p>U-Value (W/m2-K) 0,891</p>

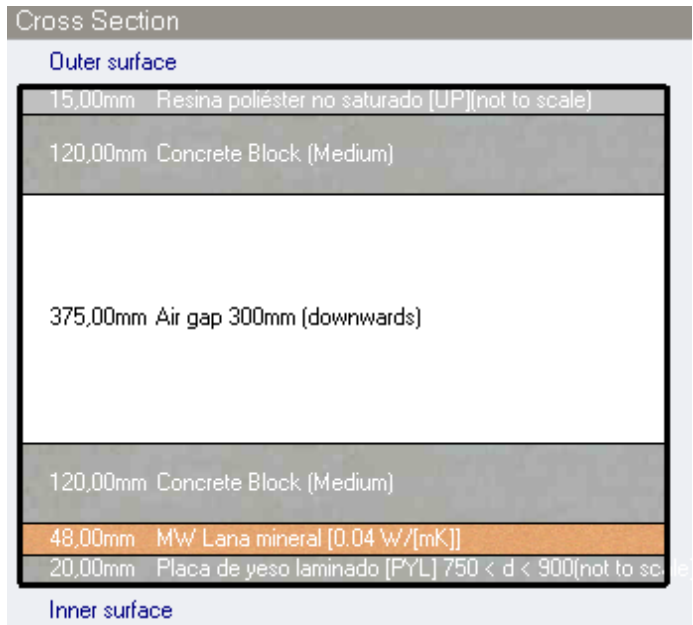
<p>1.1.4.20. Aulari – Int. Part. R02-M04-CA-M02-R05</p> <p>Cross Section</p> <p>Outer surface</p>  <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>1,193</td></tr> <tr><td>R-Value (m²-K/W)</td><td>1,098</td></tr> <tr><td>U-Value (W/m²-K)</td><td>0,911</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,6250</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>95,9250</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>1,098</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>1,098</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>1,193</td></tr> <tr><td>R-Value (m²-K/W)</td><td>1,098</td></tr> <tr><td>U-Value (W/m²-K)</td><td>0,911</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	1,193	R-Value (m ² -K/W)	1,098	U-Value (W/m²-K)	0,911	With Bridging (BS EN ISO 6946)		Thickness (m)	0,6250	Km - Internal heat capacity (KJ/m ² -K)	95,9250	Upper resistance limit (m ² -K/W)	1,098	Lower resistance limit (m ² -K/W)	1,098	U-Value surface to surface (W/m ² -K)	1,193	R-Value (m ² -K/W)	1,098	U-Value (W/m²-K)	0,911
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<p>1.1.4.21. Aulari – Int. Part. R02-M04-CA-M03-R07</p> <p>Cross Section</p> <p>Outer surface</p>  <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>0,480</td></tr> <tr><td>R-Value (m²-K/W)</td><td>2,342</td></tr> <tr><td>U-Value (W/m²-K)</td><td>0,427</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,6930</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>47,2200</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>2,342</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>2,342</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>0,480</td></tr> <tr><td>R-Value (m²-K/W)</td><td>2,342</td></tr> <tr><td>U-Value (W/m²-K)</td><td>0,427</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	0,480	R-Value (m ² -K/W)	2,342	U-Value (W/m²-K)	0,427	With Bridging (BS EN ISO 6946)		Thickness (m)	0,6930	Km - Internal heat capacity (KJ/m ² -K)	47,2200	Upper resistance limit (m ² -K/W)	2,342	Lower resistance limit (m ² -K/W)	2,342	U-Value surface to surface (W/m ² -K)	0,480	R-Value (m ² -K/W)	2,342	U-Value (W/m²-K)	0,427
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U-Value (W/m²-K)	0,427																																								

1.1.4.22. Aulari – Int. Part. R02-M04-CA-M03-R08



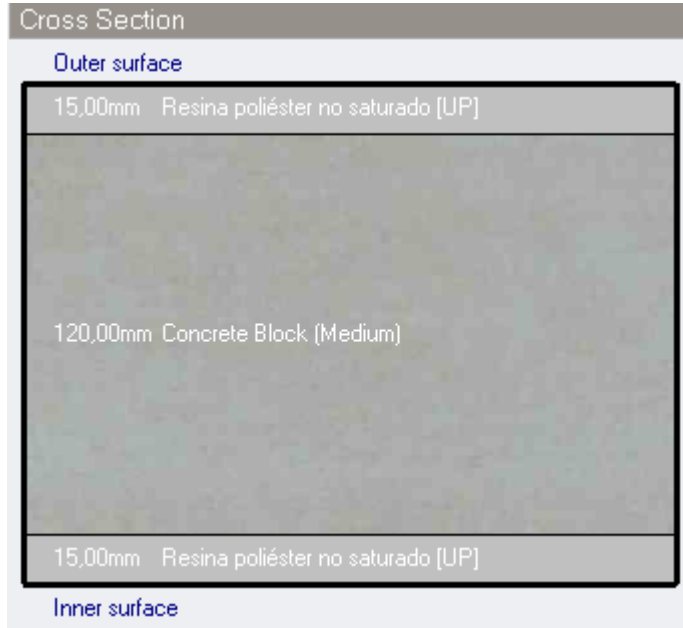
Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
No Bridging	
U-Value surface to surface (W/m ² -K)	1,085
R-Value (m ² -K/W)	1,182
U-Value (W/m²-K)	0,846
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,6100
Km - Internal heat capacity (KJ/m ² -K)	87,7500
Upper resistance limit (m ² -K/W)	1,182
Lower resistance limit (m ² -K/W)	1,182
U-Value surface to surface (W/m ² -K)	1,085
R-Value (m ² -K/W)	1,182
U-Value (W/m²-K)	0,846

1.1.4.23. Aulari – Int. Part. R02-M04-CA-M04-R07



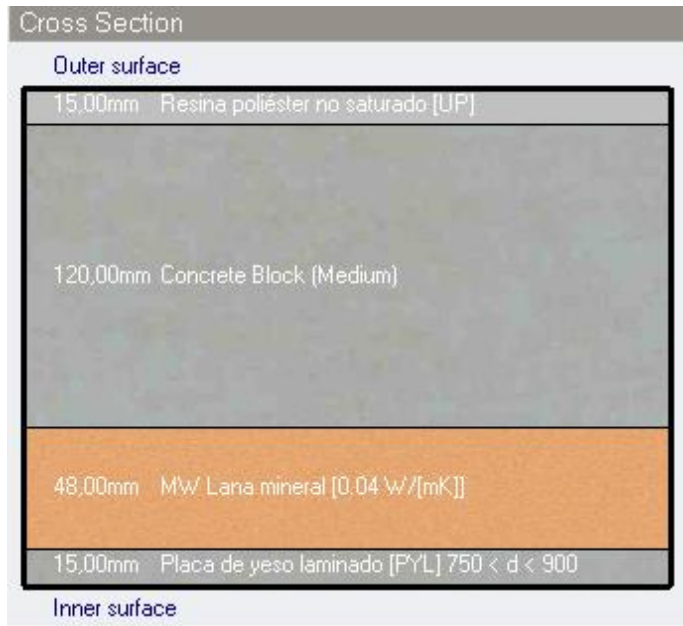
Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
No Bridging	
U-Value surface to surface (W/m ² -K)	0,486
R-Value (m ² -K/W)	2,320
U-Value (W/m²-K)	0,431
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,6980
Km - Internal heat capacity (KJ/m ² -K)	63,2200
Upper resistance limit (m ² -K/W)	2,320
Lower resistance limit (m ² -K/W)	2,320
U-Value surface to surface (W/m ² -K)	0,486
R-Value (m ² -K/W)	2,320
U-Value (W/m²-K)	0,431

1.1.4.24. Aulari – Int. Part. R02-M04-R01





Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
No Bridging	
U-Value surface to surface (W/m ² -K)	2,543
R-Value (m ² -K/W)	0,653
U-Value (W/m²-K)	1,531
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,1500
Km - Internal heat capacity (KJ/m ² -K)	144,2000
Upper resistance limit (m ² -K/W)	0,653
Lower resistance limit (m ² -K/W)	0,653
U-Value surface to surface (W/m ² -K)	2,543
R-Value (m ² -K/W)	0,653
U-Value (W/m²-K)	1,531

1.1.4.25. Aulari – Int. Part. R02-M04-R07



Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
No Bridging	
U-Value surface to surface (W/m ² -K)	0,635
R-Value (m ² -K/W)	1,834
U-Value (W/m²-K)	0,545
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,1980
Km - Internal heat capacity (KJ/m ² -K)	66,0950
Upper resistance limit (m ² -K/W)	1,834
Lower resistance limit (m ² -K/W)	1,834
U-Value surface to surface (W/m ² -K)	0,635
R-Value (m ² -K/W)	1,834
U-Value (W/m²-K)	0,545

<p>1.1.4.26. Aulari – Int. Part. R02-M04-R21</p> <p>Cross Section</p> <p>Outer surface</p>  <p>15,00mm Resina poliéster no saturado [UP]</p> <p>120,00mm Concrete Block (Medium)</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>Inner surface</p>	<p>Inner surface</p> <p>Convective heat transfer coefficient (W/m²-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m²-K) 5,540</p> <p>Surface resistance (m²-K/W) 0,130</p> <p>Outer surface</p> <p>Convective heat transfer coefficient (W/m²-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m²-K) 5,540</p> <p>Surface resistance (m²-K/W) 0,130</p> <p>No Bridging</p> <p>U-Value surface to surface (W/m²-K) 2,928</p> <p>R-Value (m²-K/W) 0,602</p> <p>U-Value (W/m²-K) 1,662</p> <p>With Bridging (BS EN ISO 6946)</p> <p>Thickness (m) 0,1500</p> <p>Km - Internal heat capacity (KJ/m²-K) 135,8750</p> <p>Upper resistance limit (m²-K/W) 0,602</p> <p>Lower resistance limit (m²-K/W) 0,602</p> <p>U-Value surface to surface (W/m²-K) 2,928</p> <p>R-Value (m²-K/W) 0,602</p> <p>U-Value (W/m²-K) 1,662</p>
<p>1.1.4.27. Aulari – Int. Part. R05-M02-R05</p> <p>Cross Section</p> <p>Outer surface</p>  <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>90,00mm Tabicón de LH doble [60 mm < E < 90 mm]</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>Inner surface</p>	<p>Inner surface</p> <p>Convective heat transfer coefficient (W/m²-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m²-K) 5,540</p> <p>Surface resistance (m²-K/W) 0,130</p> <p>Outer surface</p> <p>Convective heat transfer coefficient (W/m²-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m²-K) 5,540</p> <p>Surface resistance (m²-K/W) 0,130</p> <p>No Bridging</p> <p>U-Value surface to surface (W/m²-K) 3,395</p> <p>R-Value (m²-K/W) 0,555</p> <p>U-Value (W/m²-K) 1,803</p> <p>With Bridging (BS EN ISO 6946)</p> <p>Thickness (m) 0,1200</p> <p>Km - Internal heat capacity (KJ/m²-K) 95,9250</p> <p>Upper resistance limit (m²-K/W) 0,555</p> <p>Lower resistance limit (m²-K/W) 0,555</p> <p>U-Value surface to surface (W/m²-K) 3,395</p> <p>R-Value (m²-K/W) 0,555</p> <p>U-Value (W/m²-K) 1,803</p>

<p>1.1.4.28. Aulari – Int. Part. R05-M04-R01</p> <p>Cross Section</p> <p>Outer surface</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>120,00mm Concrete Block (Medium)</p> <p>15,00mm Resina poliéster no saturado [UP]</p> <p>Inner surface</p>	<p>Inner surface</p> <p>Convective heat transfer coefficient (W/m²-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m²-K) 5,540</p> <p>Surface resistance (m²-K/W) 0,130</p> <p>Outer surface</p> <p>Convective heat transfer coefficient (W/m²-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m²-K) 5,540</p> <p>Surface resistance (m²-K/W) 0,130</p> <p>No Bridging</p> <p>U-Value surface to surface (W/m²-K) 2,928</p> <p>R-Value (m²-K/W) 0,602</p> <p>U-Value (W/m²-K) 1,662</p> <p>With Bridging (BS EN ISO 6946)</p> <p>Thickness (m) 0,1500</p> <p>Km - Internal heat capacity (KJ/m²-K) 144,2000</p> <p>Upper resistance limit (m²-K/W) 0,602</p> <p>Lower resistance limit (m²-K/W) 0,602</p> <p>U-Value surface to surface (W/m²-K) 2,928</p> <p>R-Value (m²-K/W) 0,602</p> <p>U-Value (W/m²-K) 1,662</p>
<p>1.1.4.29. Aulari – Int. Part. R06-CA10-FA40-M04-R01</p> <p>Cross Section</p> <p>Outer surface</p> <p>20,00mm Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</p> <p>48,00mm MW Lana mineral [0.04 W/(mK)]</p> <p>100,00mm Cámara de aire sin ventilar vertical 10 cm</p> <p>400,00mm Hormigón armado 2300 < d < 2500</p> <p>120,00mm Concrete Block (Medium)</p> <p>15,00mm Resina poliéster no saturado [UP](not to scale)</p> <p>Inner surface</p>	<p>Inner surface</p> <p>Convective heat transfer coefficient (W/m²-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m²-K) 5,540</p> <p>Surface resistance (m²-K/W) 0,130</p> <p>Outer surface</p> <p>Convective heat transfer coefficient (W/m²-K) 2,152</p> <p>Radiative heat transfer coefficient (W/m²-K) 5,540</p> <p>Surface resistance (m²-K/W) 0,130</p> <p>No Bridging</p> <p>U-Value surface to surface (W/m²-K) 0,511</p> <p>R-Value (m²-K/W) 2,218</p> <p>U-Value (W/m²-K) 0,451</p> <p>With Bridging (BS EN ISO 6946)</p> <p>Thickness (m) 0,7030</p> <p>Km - Internal heat capacity (KJ/m²-K) 144,2000</p> <p>Upper resistance limit (m²-K/W) 2,218</p> <p>Lower resistance limit (m²-K/W) 2,218</p> <p>U-Value surface to surface (W/m²-K) 0,511</p> <p>R-Value (m²-K/W) 2,218</p> <p>U-Value (W/m²-K) 0,451</p>

<p>1.1.4.30. Aulari – Int. Part. R06-CA13.5-FA40-R05</p> <p>Cross Section</p> <p>Outer surface</p> <table border="1"> <tr> <td>70,00mm</td> <td>Placa de yeso laminado [PYL] 750 < d < 900</td> </tr> <tr> <td>135,00mm</td> <td>Air gap 300mm (downwards)</td> </tr> <tr> <td>400,00mm</td> <td>Hormigón armado 2300 < d < 2500</td> </tr> <tr> <td>15,00mm</td> <td>Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)</td> </tr> </table> <p>Inner surface</p>	70,00mm	Placa de yeso laminado [PYL] 750 < d < 900	135,00mm	Air gap 300mm (downwards)	400,00mm	Hormigón armado 2300 < d < 2500	15,00mm	Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)	<table border="1"> <tr> <th colspan="2">Inner surface</th> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <th colspan="2">Outer surface</th> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <th colspan="2">No Bridging</th> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>1,406</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,971</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,030</td> </tr> <tr> <th colspan="2">With Bridging (BS EN ISO 6946)</th> </tr> <tr> <td>Thickness (m)</td> <td>0,6200</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>220,8750</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,971</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,971</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>1,406</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,971</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,030</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	1,406	R-Value (m ² -K/W)	0,971	U-Value (W/m²-K)	1,030	With Bridging (BS EN ISO 6946)		Thickness (m)	0,6200	Km - Internal heat capacity (KJ/m ² -K)	220,8750	Upper resistance limit (m ² -K/W)	0,971	Lower resistance limit (m ² -K/W)	0,971	U-Value surface to surface (W/m ² -K)	1,406	R-Value (m ² -K/W)	0,971	U-Value (W/m²-K)	1,030		
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<p>1.1.4.31. Aulari – Int. Part. R06-CA13.5-FA40-R11</p> <p>Cross Section</p> <p>Outer surface</p> <table border="1"> <tr> <td>60,00mm</td> <td>Placa de yeso laminado [PYL] 750 < d < 900</td> </tr> <tr> <td>135,00mm</td> <td>Air gap 300mm (downwards)</td> </tr> <tr> <td>400,00mm</td> <td>Hormigón armado 2300 < d < 2500</td> </tr> <tr> <td>15,00mm</td> <td>Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)</td> </tr> <tr> <td>15,00mm</td> <td>Ceramic/porcelain(not to scale)</td> </tr> </table> <p>Inner surface</p>	60,00mm	Placa de yeso laminado [PYL] 750 < d < 900	135,00mm	Air gap 300mm (downwards)	400,00mm	Hormigón armado 2300 < d < 2500	15,00mm	Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)	15,00mm	Ceramic/porcelain(not to scale)	<table border="1"> <tr> <th colspan="2">Inner surface</th> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <th colspan="2">Outer surface</th> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <th colspan="2">No Bridging</th> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>1,465</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,943</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,061</td> </tr> <tr> <th colspan="2">With Bridging (BS EN ISO 6946)</th> </tr> <tr> <td>Thickness (m)</td> <td>0,6250</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>213,8550</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,943</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,943</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>1,465</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,943</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,061</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	1,465	R-Value (m ² -K/W)	0,943	U-Value (W/m²-K)	1,061	With Bridging (BS EN ISO 6946)		Thickness (m)	0,6250	Km - Internal heat capacity (KJ/m ² -K)	213,8550	Upper resistance limit (m ² -K/W)	0,943	Lower resistance limit (m ² -K/W)	0,943	U-Value surface to surface (W/m ² -K)	1,465	R-Value (m ² -K/W)	0,943	U-Value (W/m²-K)	1,061
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1.1.4.32. Aulari – Int. Part. R06-CA-FA40-CA-M04-R01

Cross Section

Outer surface

15,00mm	Placa de yeso laminado [PYL] 750 < d < 900(not to scale)
46,00mm	MW Lana mineral [0.04 W/(mK)](not to scale)
100,00mm	Cámara de aire sin ventilar vertical 10 cm
400,00mm	Hormigón armado 2300 < d < 2500
165,00mm	Air gap 17mm (downwards)
120,00mm	Concrete Block (Medium)
15,00mm	Resina poliéster no saturado [UP](not to scale)

Inner surface

Inner surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

Outer surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

No Bridging

U-Value surface to surface (W/m ² -K)	0,484
R-Value (m ² -K/W)	2,328

U-Value (W/m²-K) 0,430

With Bridging (BS EN ISO 6946)

Thickness (m)	0,8610
Km - Internal heat capacity (KJ/m ² -K)	144,2000
Upper resistance limit (m ² -K/W)	2,328
Lower resistance limit (m ² -K/W)	2,328
U-Value surface to surface (W/m ² -K)	0,484
R-Value (m ² -K/W)	2,328
U-Value (W/m²-K) 0,430	

1.1.4.33. Aulari – Int. Part. R07-M04-R27

Cross Section

Outer surface

15,00mm	Placa de yeso laminado [PYL] 750 < d < 900
48,00mm	MW Lana mineral [0.04 W/(mK)]
120,00mm	Concrete Block (Medium)
19,00mm	Tableros de fibras incluyendo MDF 350 < d < 550
2,00mm	Acero(not to scale)

Inner surface

Inner surface

Convective heat transfer coefficient (W/m ² -K)	5,846
Radiative heat transfer coefficient (W/m ² -K)	1,847
Surface resistance (m ² -K/W)	0,130

Outer surface

Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130

No Bridging

U-Value surface to surface (W/m ² -K)	0,613
R-Value (m ² -K/W)	1,891

U-Value (W/m²-K) 0,529



With Bridging (BS EN ISO 6946)

Thickness (m)	0,2040
Km - Internal heat capacity (KJ/m ² -K)	132,1550
Upper resistance limit (m ² -K/W)	1,891
Lower resistance limit (m ² -K/W)	1,891
U-Value surface to surface (W/m ² -K)	0,613
R-Value (m ² -K/W)	1,891
U-Value (W/m²-K) 0,529	

<p>1.1.4.34. Aulari – Int. Part. R08-GRC78-R16</p> <p>Cross Section</p> <p>Outer surface</p> <table border="1"> <tr> <td>15,00mm</td> <td>Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</td> </tr> <tr> <td>50,00mm</td> <td>Cámara de aire ligeramente ventilada vertical 5 cm(not to scale)</td> </tr> <tr> <td colspan="2" style="text-align: center;"> </td> </tr> <tr> <td>780,00mm</td> <td>Hormigón armado 2300 < d < 2500</td> </tr> </table> <p>Inner surface</p>	15,00mm	Placa de yeso laminado [PYL] 750 < d < 900(not to scale)	50,00mm	Cámara de aire ligeramente ventilada vertical 5 cm(not to scale)			780,00mm	Hormigón armado 2300 < d < 2500	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,044</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,749</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,335</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,8450</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>240,0000</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,749</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,749</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,044</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,749</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,335</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	2,044	R-Value (m ² -K/W)	0,749	U-Value (W/m²-K)	1,335	With Bridging (BS EN ISO 6946)		Thickness (m)	0,8450	Km - Internal heat capacity (KJ/m ² -K)	240,0000	Upper resistance limit (m ² -K/W)	0,749	Lower resistance limit (m ² -K/W)	0,749	U-Value surface to surface (W/m ² -K)	2,044	R-Value (m ² -K/W)	0,749	U-Value (W/m²-K)	1,335
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<p>1.1.4.38. Aulari – Int. Part. R13-M04-CA19.5-M06-R04</p> <p>Cross Section</p> <p>Outer surface</p> <table border="1"> <tbody> <tr> <td>1,50mm</td> <td>Acero(not to scale)</td> </tr> <tr> <td>20,00mm</td> <td>Tableros de fibras incluyendo MDF 350 < d < 550(not to scale)</td> </tr> <tr> <td>120,00mm</td> <td>Concrete Block (Medium)</td> </tr> <tr> <td>195,00mm</td> <td>Air gap 300mm (downwards)</td> </tr> <tr> <td>48,00mm</td> <td>MW Lana mineral [0.04 W/[mK]]</td> </tr> <tr> <td>15,00mm</td> <td>Placa de yeso laminado [FYL] 750 < d < 900(not to scale)</td> </tr> <tr> <td>15,00mm</td> <td>Resina poliéster no saturado [UP](not to scale)</td> </tr> </tbody> </table> <p>Inner surface</p>	1,50mm	Acero(not to scale)	20,00mm	Tableros de fibras incluyendo MDF 350 < d < 550(not to scale)	120,00mm	Concrete Block (Medium)	195,00mm	Air gap 300mm (downwards)	48,00mm	MW Lana mineral [0.04 W/[mK]]	15,00mm	Placa de yeso laminado [FYL] 750 < d < 900(not to scale)	15,00mm	Resina poliéster no saturado [UP](not to scale)	<table border="1"> <tbody> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>5,846</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>1,847</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,514</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>2,207</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,453</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,4145</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>39,4950</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>2,207</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>2,207</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,514</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>2,207</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,453</td> </tr> </tbody> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	5,846	Radiative heat transfer coefficient (W/m ² -K)	1,847	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	0,514	R-Value (m ² -K/W)	2,207	U-Value (W/m²-K)	0,453	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4145	Km - Internal heat capacity (KJ/m ² -K)	39,4950	Upper resistance limit (m ² -K/W)	2,207	Lower resistance limit (m ² -K/W)	2,207	U-Value surface to surface (W/m ² -K)	0,514	R-Value (m ² -K/W)	2,207	U-Value (W/m²-K)	0,453
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1.1.4.42. Aulari – Int. Part. R14-M02-R08

Cross Section

Outer surface



Inner surface

Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
No Bridging	
U-Value surface to surface (W/m ² -K)	2,039
R-Value (m ² -K/W)	0,750
U-Value (W/m²-K)	1,333
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,1500
Km - Internal heat capacity (KJ/m ² -K)	89,8500
Upper resistance limit (m ² -K/W)	0,750
Lower resistance limit (m ² -K/W)	0,750
U-Value surface to surface (W/m ² -K)	2,039
R-Value (m ² -K/W)	0,750
U-Value (W/m²-K)	1,333

1.1.4.43. Aulari – Int. Part. R14-M04-CA-M04-R02



Cross Section



Outer surface


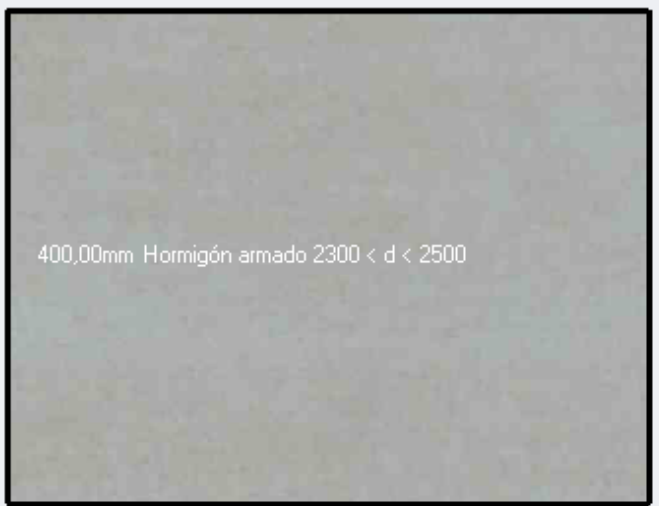


Inner surface

Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
No Bridging	
U-Value surface to surface (W/m ² -K)	1,099
R-Value (m ² -K/W)	1,170
U-Value (W/m²-K)	0,855
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,5350
Km - Internal heat capacity (KJ/m ² -K)	144,2000
Upper resistance limit (m ² -K/W)	1,170
Lower resistance limit (m ² -K/W)	1,170
U-Value surface to surface (W/m ² -K)	1,099
R-Value (m ² -K/W)	1,170
U-Value (W/m²-K)	0,855

<p>1.1.4.44. Aulari – Int. Part. R16-F30-R16</p> <p>Cross Section</p> <p>Outer surface</p>  <p>300,00mm Hormigón armado 2300 < d < 2500</p> <p>Inner surface</p>	<table border="1"> <tbody> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>7,667</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,390</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>2,561</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,3000</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>240,0000</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,390</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,390</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>7,667</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,390</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>2,561</td> </tr> </tbody> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	7,667	R-Value (m ² -K/W)	0,390	U-Value (W/m²-K)	2,561	With Bridging (BS EN ISO 6946)		Thickness (m)	0,3000	Km - Internal heat capacity (KJ/m ² -K)	240,0000	Upper resistance limit (m ² -K/W)	0,390	Lower resistance limit (m ² -K/W)	0,390	U-Value surface to surface (W/m ² -K)	7,667	R-Value (m ² -K/W)	0,390	U-Value (W/m²-K)	2,561
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<p>1.1.4.45. Aulari – Int. Part. R16-FA25-R16</p> <p>Cross Section</p> <p>Outer surface</p>  <p>250,00mm Hormigón armado 2300 < d < 2500</p> <p>Inner surface</p>	<table border="1"> <tbody> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>9,200</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,369</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>2,712</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,2500</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>240,0000</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,369</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,369</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>9,200</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,369</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>2,712</td> </tr> </tbody> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	9,200	R-Value (m ² -K/W)	0,369	U-Value (W/m²-K)	2,712	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2500	Km - Internal heat capacity (KJ/m ² -K)	240,0000	Upper resistance limit (m ² -K/W)	0,369	Lower resistance limit (m ² -K/W)	0,369	U-Value surface to surface (W/m ² -K)	9,200	R-Value (m ² -K/W)	0,369	U-Value (W/m²-K)	2,712
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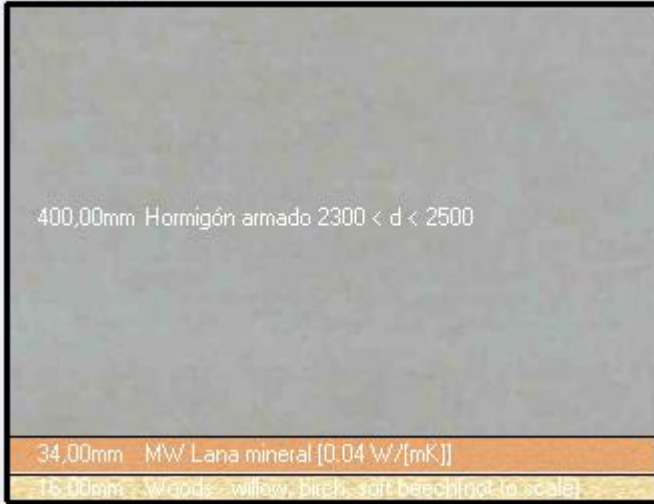
<p>1.1.4.46. Aulari – Int. Part. R16-FA34-R01(R02)</p> <p>Cross Section</p> <p>Outer surface</p>  <p>340,00mm Hormigón armado 2300 < d < 2500</p> <p>15,00mm Resina poliéster no saturado [UP][not to scale]</p> <p>Inner surface</p>	<table border="1"> <tr><td colspan="2">Inner surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><td colspan="2">Outer surface</td></tr> <tr><td>Convective heat transfer coefficient (W/m²-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m²-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m²-K/W)</td><td>0,130</td></tr> <tr><td colspan="2">No Bridging</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>4,410</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,487</td></tr> <tr><td>U-Value (W/m²-K)</td><td>2,054</td></tr> <tr><td colspan="2">With Bridging (BS EN ISO 6946)</td></tr> <tr><td>Thickness (m)</td><td>0,3550</td></tr> <tr><td>Km - Internal heat capacity (KJ/m²-K)</td><td>229,2000</td></tr> <tr><td>Upper resistance limit (m²-K/W)</td><td>0,487</td></tr> <tr><td>Lower resistance limit (m²-K/W)</td><td>0,487</td></tr> <tr><td>U-Value surface to surface (W/m²-K)</td><td>4,410</td></tr> <tr><td>R-Value (m²-K/W)</td><td>0,487</td></tr> <tr><td>U-Value (W/m²-K)</td><td>2,054</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	4,410	R-Value (m ² -K/W)	0,487	U-Value (W/m²-K)	2,054	With Bridging (BS EN ISO 6946)		Thickness (m)	0,3550	Km - Internal heat capacity (KJ/m ² -K)	229,2000	Upper resistance limit (m ² -K/W)	0,487	Lower resistance limit (m ² -K/W)	0,487	U-Value surface to surface (W/m ² -K)	4,410	R-Value (m ² -K/W)	0,487	U-Value (W/m²-K)	2,054
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<p>1.1.4.48. Aulari – Int. Part. R16-FA40-R11</p> <p>Cross Section</p> <p>Outer surface</p>  <p>390,00mm Hormigón armado 2300 < d < 2500</p> <p>10,00mm Ceramic/porcelain(not to scale)</p> <p>Inner surface</p>	<table border="1"> <tbody> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>5,642</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,437</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>2,287</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,4000</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>235,3200</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,437</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,437</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>5,642</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,437</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>2,287</td> </tr> </tbody> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	5,642	R-Value (m ² -K/W)	0,437	U-Value (W/m²-K)	2,287	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4000	Km - Internal heat capacity (KJ/m ² -K)	235,3200	Upper resistance limit (m ² -K/W)	0,437	Lower resistance limit (m ² -K/W)	0,437	U-Value surface to surface (W/m ² -K)	5,642	R-Value (m ² -K/W)	0,437	U-Value (W/m²-K)	2,287
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Radiative heat transfer coefficient (W/m ² -K)	5,540																																								
Surface resistance (m ² -K/W)	0,130																																								
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Surface resistance (m ² -K/W)	0,130																																								
No Bridging																																									
U-Value surface to surface (W/m ² -K)	5,750																																								
R-Value (m ² -K/W)	0,434																																								
U-Value (W/m²-K)	2,305																																								
With Bridging (BS EN ISO 6946)																																									
Thickness (m)	0,4000																																								
Km - Internal heat capacity (KJ/m ² -K)	240,0000																																								
Upper resistance limit (m ² -K/W)	0,434																																								
Lower resistance limit (m ² -K/W)	0,434																																								
U-Value surface to surface (W/m ² -K)	5,750																																								
R-Value (m ² -K/W)	0,434																																								
U-Value (W/m²-K)	2,305																																								

1.1.4.50. Aulari – Int. Part. R16-FA-R15

Cross Section

Outer surface



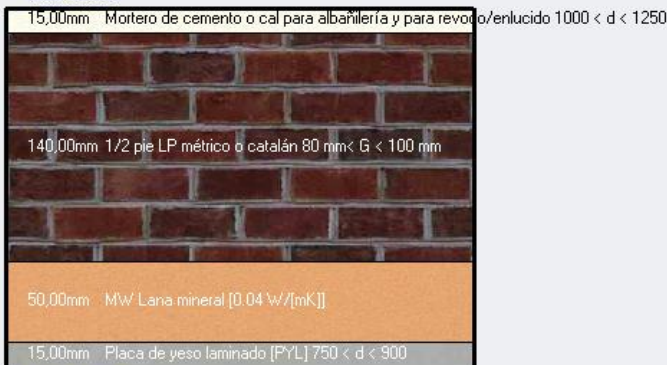
Inner surface

Inner surface	
Convective heat transfer coefficient (W/m2-K)	2,152
Radiative heat transfer coefficient (W/m2-K)	5,540
Surface resistance (m2-K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m2-K)	2,152
Radiative heat transfer coefficient (W/m2-K)	5,540
Surface resistance (m2-K/W)	0,130
No Bridging	
U-Value surface to surface (W/m2-K)	0,879
R-Value (m2-K/W)	1,398
U-Value (W/m2-K)	0,715
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,4500
Km - Internal heat capacity (KJ/m2-K)	140,3296
Upper resistance limit (m2-K/W)	1,398
Lower resistance limit (m2-K/W)	1,398
U-Value surface to surface (W/m2-K)	0,879
R-Value (m2-K/W)	1,398
U-Value (W/m2-K)	0,715

1.1.4.51. Aulari – Int. Part. R21-M03-R07



Cross Section


Outer surface



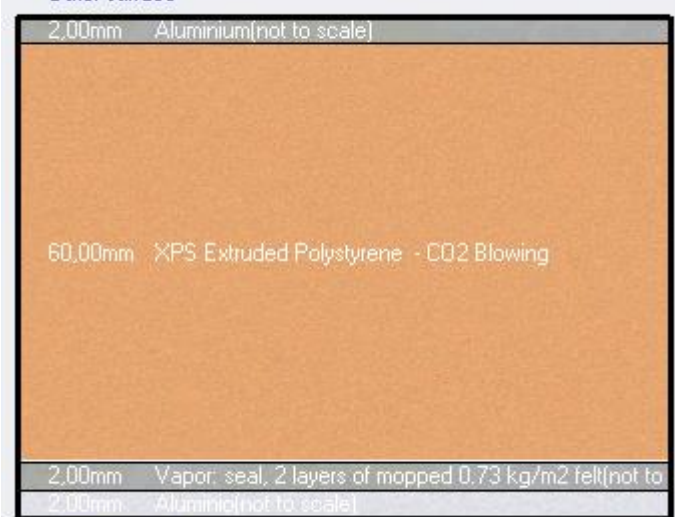
Inner surface

Inner surface	
Convective heat transfer coefficient (W/m2-K)	2,152
Radiative heat transfer coefficient (W/m2-K)	5,540
Surface resistance (m2-K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m2-K)	2,152
Radiative heat transfer coefficient (W/m2-K)	5,540
Surface resistance (m2-K/W)	0,130
No Bridging	
U-Value surface to surface (W/m2-K)	0,627
R-Value (m2-K/W)	1,855
U-Value (W/m2-K)	0,539
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,2200
Km - Internal heat capacity (KJ/m2-K)	45,8750
Upper resistance limit (m2-K/W)	1,855
Lower resistance limit (m2-K/W)	1,855
U-Value surface to surface (W/m2-K)	0,627
R-Value (m2-K/W)	1,855
U-Value (W/m2-K)	0,539



<p>1.1.4.52. Aulari – Int. Part. R21-M03-R08</p> <p>Cross Section</p> <p>Outer surface</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p>  <p>140,00mm 1/2 pie LP métrico o catalán 80 mm< G < 100 mm</p> <p>30,00mm Placa de yeso laminado [FYL] 750 < d < 900</p> <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>2,469</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,665</td></tr> <tr><td>U-Value (W/m2-K)</td><td>1,504</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,1850</td></tr> <tr><td>Km - Internal heat capacity (KJ/m2-K)</td><td>87,7500</td></tr> <tr><td>Upper resistance limit (m2-K/W)</td><td>0,665</td></tr> <tr><td>Lower resistance limit (m2-K/W)</td><td>0,665</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>2,469</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,665</td></tr> <tr><td>U-Value (W/m2-K)</td><td>1,504</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	No Bridging		U-Value surface to surface (W/m2-K)	2,469	R-Value (m2-K/W)	0,665	U-Value (W/m2-K)	1,504	With Bridging (BS EN ISO 6946)		Thickness (m)	0,1850	Km - Internal heat capacity (KJ/m2-K)	87,7500	Upper resistance limit (m2-K/W)	0,665	Lower resistance limit (m2-K/W)	0,665	U-Value surface to surface (W/m2-K)	2,469	R-Value (m2-K/W)	0,665	U-Value (W/m2-K)	1,504
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<p>1.1.4.53. Aulari – Int. Part. R21-M03-R11</p> <p>Cross Section</p> <p>Outer surface</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p>  <p>140,00mm 1/2 pie LP métrico o catalán 80 mm< G < 100 mm</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>20,00mm Ceramic/porcelain</p> <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>3,051</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,588</td></tr> <tr><td>U-Value (W/m2-K)</td><td>1,701</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,1900</td></tr> <tr><td>Km - Internal heat capacity (KJ/m2-K)</td><td>114,0150</td></tr> <tr><td>Upper resistance limit (m2-K/W)</td><td>0,588</td></tr> <tr><td>Lower resistance limit (m2-K/W)</td><td>0,588</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>3,051</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,588</td></tr> <tr><td>U-Value (W/m2-K)</td><td>1,701</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	No Bridging		U-Value surface to surface (W/m2-K)	3,051	R-Value (m2-K/W)	0,588	U-Value (W/m2-K)	1,701	With Bridging (BS EN ISO 6946)		Thickness (m)	0,1900	Km - Internal heat capacity (KJ/m2-K)	114,0150	Upper resistance limit (m2-K/W)	0,588	Lower resistance limit (m2-K/W)	0,588	U-Value surface to surface (W/m2-K)	3,051	R-Value (m2-K/W)	0,588	U-Value (W/m2-K)	1,701
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<p>1.1.4.54. Aulari – Int. Part. R21-M03-R12</p> <p>Cross Section</p> <p>Outer surface</p>  <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>140,00mm 1/2 pie LP métrico o catalán 80 mm < G < 100 mm</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>19,00mm Tableros de fibras incluyendo MDF 350 < d < 550</p> <p>15,00mm Acero Inoxidable</p> <p>Inner surface</p>	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>5,846</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>1,847</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,227</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,709</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,410</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,2040</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>131,8200</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,709</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,709</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,227</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,709</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,410</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	5,846	Radiative heat transfer coefficient (W/m ² -K)	1,847	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	No Bridging		U-Value surface to surface (W/m ² -K)	2,227	R-Value (m ² -K/W)	0,709	U-Value (W/m²-K)	1,410	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2040	Km - Internal heat capacity (KJ/m ² -K)	131,8200	Upper resistance limit (m ² -K/W)	0,709	Lower resistance limit (m ² -K/W)	0,709	U-Value surface to surface (W/m ² -K)	2,227	R-Value (m ² -K/W)	0,709	U-Value (W/m²-K)	1,410
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1.1.5. Roofs

<p>1.1.5.1. Aulari – Roof Floor 5</p> <p>Cross Section</p> <p>Outer surface</p>  <p>2,00mm Aluminium(not to scale)</p> <p>60,00mm XPS Extruded Polystyrene - CO2 Blowing</p> <p>2,00mm Vapor seal, 2 layers of mopped 0.73 kg/m2 felt(not to scale)</p> <p>2,00mm Aluminium(not to scale)</p> <p>Inner surface</p>	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>4,460</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,100</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>23,290</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>1,710</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,506</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>2,115</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,473</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,0660</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>4,7520</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>2,115</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>2,115</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,506</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>2,115</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,473</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	4,460	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,100	Outer surface		Convective heat transfer coefficient (W/m ² -K)	23,290	Radiative heat transfer coefficient (W/m ² -K)	1,710	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	0,506	R-Value (m ² -K/W)	2,115	U-Value (W/m²-K)	0,473	With Bridging (BS EN ISO 6946)		Thickness (m)	0,0660	Km - Internal heat capacity (KJ/m ² -K)	4,7520	Upper resistance limit (m ² -K/W)	2,115	Lower resistance limit (m ² -K/W)	2,115	U-Value surface to surface (W/m ² -K)	0,506	R-Value (m ² -K/W)	2,115	U-Value (W/m²-K)	0,473
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1.1.6. Walls

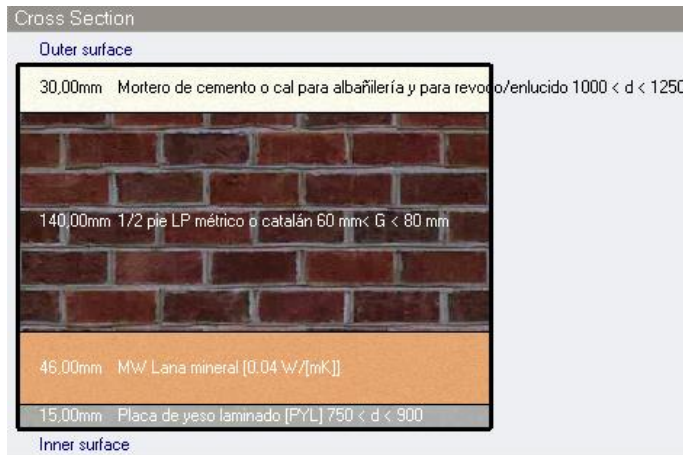
<p>1.1.6.1. Aulari – Mur de façana Est Obra vista</p> <p>Cross Section</p> <p>Outer surface</p>  <p>140,00mm 1/2 pie LP métrico o catalán 80 mm < G < 100 mm</p> <p>48,00mm MW Lana mineral [0.04 W/(mK)]</p> <p>20,00mm Placa de yeso laminado [FYL] 750 < d < 900</p> <p>Inner surface</p>	<table border="1"> <tbody> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,650</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,708</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,586</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,2080</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>47,2200</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>1,708</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>1,708</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,650</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,708</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,586</td> </tr> </tbody> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	0,650	R-Value (m ² -K/W)	1,708	U-Value (W/m²-K)	0,586	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2080	Km - Internal heat capacity (KJ/m ² -K)	47,2200	Upper resistance limit (m ² -K/W)	1,708	Lower resistance limit (m ² -K/W)	1,708	U-Value surface to surface (W/m ² -K)	0,650	R-Value (m ² -K/W)	1,708	U-Value (W/m²-K)	0,586
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<p>1.1.6.2. Aulari – Mur de façana Monocapa</p> <p>Cross Section</p> <p>Outer surface</p>  <p>40,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>140,00mm 1/2 pie LP métrico o catalán 80 mm < G < 100 mm</p> <p>50,00mm Cámara de aire sin ventilar vertical 5 cm</p> <p>48,00mm MW Lana mineral [0.04 W/(mK)]</p> <p>15,00mm Placa de yeso laminado [FYL] 750 < d < 900(not to scale)</p> <p>Inner surface</p>	<table border="1"> <tbody> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,565</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,941</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,515</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,2930</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>14,2950</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>1,941</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>1,941</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,565</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,941</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,515</td> </tr> </tbody> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	0,565	R-Value (m ² -K/W)	1,941	U-Value (W/m²-K)	0,515	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2930	Km - Internal heat capacity (KJ/m ² -K)	14,2950	Upper resistance limit (m ² -K/W)	1,941	Lower resistance limit (m ² -K/W)	1,941	U-Value surface to surface (W/m ² -K)	0,565	R-Value (m ² -K/W)	1,941	U-Value (W/m²-K)	0,515
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1.1.6.3. Aulari – Mur de façana Obra vista



Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	0,589
R-Value (m ² -K/W)	1,868
U-Value (W/m²-K)	0,535
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,2530
Km - Internal heat capacity (KJ/m ² -K)	14,2950
Upper resistance limit (m ² -K/W)	1,868
Lower resistance limit (m ² -K/W)	1,868
U-Value surface to surface (W/m ² -K)	0,589
R-Value (m ² -K/W)	1,868
U-Value (W/m²-K)	0,535

1.1.6.4. Aulari – Mur escales evacuació



Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	0,667
R-Value (m ² -K/W)	1,670
U-Value (W/m²-K)	0,599
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,2310
Km - Internal heat capacity (KJ/m ² -K)	53,9950
Upper resistance limit (m ² -K/W)	1,670
Lower resistance limit (m ² -K/W)	1,670
U-Value surface to surface (W/m ² -K)	0,667
R-Value (m ² -K/W)	1,670
U-Value (W/m²-K)	0,599

1.1.6.5. Aulari – Mur.ext. FA60





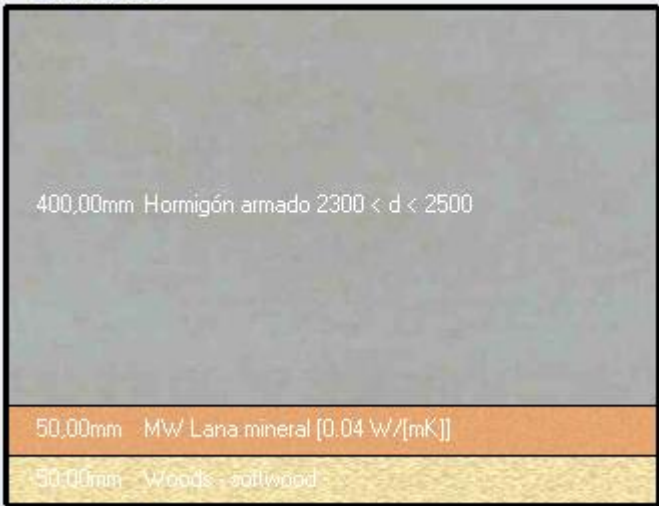

Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	3,833
R-Value (m ² -K/W)	0,431
U-Value (W/m²-K)	2,321
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,6000
Km - Internal heat capacity (KJ/m ² -K)	240,0000
Upper resistance limit (m ² -K/W)	0,431
Lower resistance limit (m ² -K/W)	0,431
U-Value surface to surface (W/m ² -K)	3,833
R-Value (m ² -K/W)	0,431
U-Value (W/m²-K)	2,321


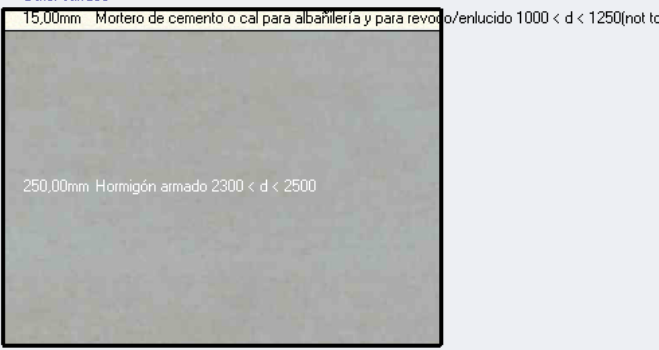
1.1.6.6. Aulari – Mur ext. GRC30-R07



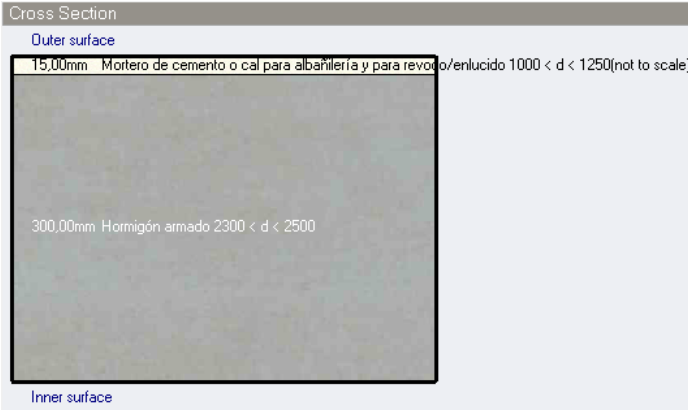
Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	0,694
R-Value (m ² -K/W)	1,610
U-Value (W/m²-K)	0,621
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,3650
Km - Internal heat capacity (KJ/m ² -K)	98,3750
Upper resistance limit (m ² -K/W)	1,610
Lower resistance limit (m ² -K/W)	1,610
U-Value surface to surface (W/m ² -K)	0,694
R-Value (m ² -K/W)	1,610
U-Value (W/m²-K)	0,621

<p>1.1.6.7. Aulari – Mur ext. GRC30-R25</p> <p>Cross Section</p> <p>Outer surface</p>  <p>300,00mm Hormigón armado 2300 < d < 2500</p> <p>50,00mm MW Lana mineral [0.04 W/[mK]]</p> <p>50,00mm Woods softwood</p> <p>Inner surface</p>	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,556</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,967</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,508</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,4000</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>37,1900</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>1,967</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>1,967</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,556</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,967</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,508</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	0,556	R-Value (m ² -K/W)	1,967	U-Value (W/m²-K)	0,508	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4000	Km - Internal heat capacity (KJ/m ² -K)	37,1900	Upper resistance limit (m ² -K/W)	1,967	Lower resistance limit (m ² -K/W)	1,967	U-Value surface to surface (W/m ² -K)	0,556	R-Value (m ² -K/W)	1,967	U-Value (W/m²-K)	0,508
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<p>1.1.6.8. Aulari – Mur ext. GRC40-R07</p> <p>Cross Section</p> <p>Outer surface</p>  <p>400,00mm Hormigón armado 2300 < d < 2500</p> <p>50,00mm MW Lana mineral [0.04 W/[mK]]</p> <p>15,00mm Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</p> <p>Inner surface</p>	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,674</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,654</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,605</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,4650</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>98,3750</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>1,654</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>1,654</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,674</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,654</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,605</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	0,674	R-Value (m ² -K/W)	1,654	U-Value (W/m²-K)	0,605	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4650	Km - Internal heat capacity (KJ/m ² -K)	98,3750	Upper resistance limit (m ² -K/W)	1,654	Lower resistance limit (m ² -K/W)	1,654	U-Value surface to surface (W/m ² -K)	0,674	R-Value (m ² -K/W)	1,654	U-Value (W/m²-K)	0,605
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<p>1.1.6.9. Aulari – Mur ext. GRC40-R25</p> <p>Cross Section</p> <p>Outer surface</p>  <p>400,00mm Hormigón armado 2300 < d < 2500</p> <p>50,00mm MW Lana mineral [0,04 W/[mK]]</p> <p>50,00mm Woods softwood</p> <p>Inner surface</p>	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,543</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>2,011</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,497</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,5000</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>37,1900</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>2,011</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>2,011</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,543</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>2,011</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,497</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	0,543	R-Value (m ² -K/W)	2,011	U-Value (W/m²-K)	0,497	With Bridging (BS EN ISO 6946)		Thickness (m)	0,5000	Km - Internal heat capacity (KJ/m ² -K)	37,1900	Upper resistance limit (m ² -K/W)	2,011	Lower resistance limit (m ² -K/W)	2,011	U-Value surface to surface (W/m ² -K)	0,543	R-Value (m ² -K/W)	2,011	U-Value (W/m²-K)	0,497
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<p>1.1.6.10. Aulari – Mur ext. GRC60-R07</p> <p>Cross Section</p> <p>Outer surface</p>  <p>600,00mm Hormigón armado 2300 < d < 2500</p> <p>50,00mm MW Lana mineral [0,04 W/[mK]]</p> <p>15,00mm Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</p> <p>Inner surface</p>	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,637</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,741</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,574</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,6650</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>98,3750</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>1,741</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>1,741</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,637</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,741</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,574</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	0,637	R-Value (m ² -K/W)	1,741	U-Value (W/m²-K)	0,574	With Bridging (BS EN ISO 6946)		Thickness (m)	0,6650	Km - Internal heat capacity (KJ/m ² -K)	98,3750	Upper resistance limit (m ² -K/W)	1,741	Lower resistance limit (m ² -K/W)	1,741	U-Value surface to surface (W/m ² -K)	0,637	R-Value (m ² -K/W)	1,741	U-Value (W/m²-K)	0,574
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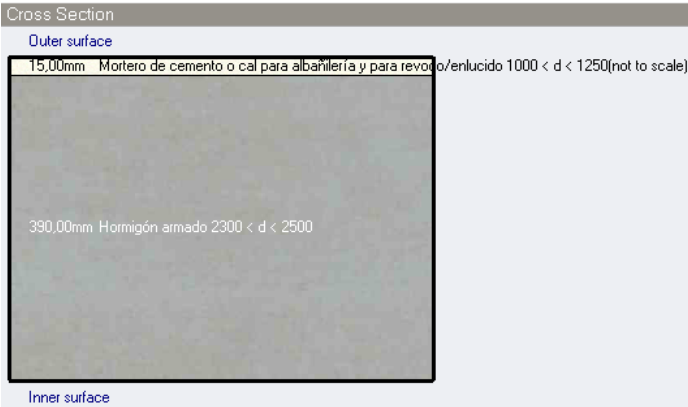
<p>1.1.6.11. Aulari – Mur ext. GRC75-R07</p> <p>Cross Section</p> <p>Outer surface</p>  <p>750,00mm Hormigón armado 2300 < d < 2500</p> <p>50,00mm MW Lana mineral [0.04 W/(mK)]</p> <p>15,00mm Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</p> <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>19,870</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,130</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,040</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>0,611</td></tr> <tr><td>R-Value (m2-K/W)</td><td>1,806</td></tr> <tr><td>U-Value (W/m2-K)</td><td>0,554</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,8150</td></tr> <tr><td>Km - Internal heat capacity (KJ/m2-K)</td><td>98,3750</td></tr> <tr><td>Upper resistance limit (m2-K/W)</td><td>1,806</td></tr> <tr><td>Lower resistance limit (m2-K/W)</td><td>1,806</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>0,611</td></tr> <tr><td>R-Value (m2-K/W)</td><td>1,806</td></tr> <tr><td>U-Value (W/m2-K)</td><td>0,554</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m2-K)	19,870	Radiative heat transfer coefficient (W/m2-K)	5,130	Surface resistance (m2-K/W)	0,040	No Bridging		U-Value surface to surface (W/m2-K)	0,611	R-Value (m2-K/W)	1,806	U-Value (W/m2-K)	0,554	With Bridging (BS EN ISO 6946)		Thickness (m)	0,8150	Km - Internal heat capacity (KJ/m2-K)	98,3750	Upper resistance limit (m2-K/W)	1,806	Lower resistance limit (m2-K/W)	1,806	U-Value surface to surface (W/m2-K)	0,611	R-Value (m2-K/W)	1,806	U-Value (W/m2-K)	0,554
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<p>1.1.6.12. Aulari – Mur ext. Monocapa –FA25-R16</p> <p>Cross Section</p> <p>Outer surface</p>  <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)</p> <p>250,00mm Hormigón armado 2300 < d < 2500</p> <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>19,870</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,130</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,040</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>7,355</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,306</td></tr> <tr><td>U-Value (W/m2-K)</td><td>3,268</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,2650</td></tr> <tr><td>Km - Internal heat capacity (KJ/m2-K)</td><td>240,0000</td></tr> <tr><td>Upper resistance limit (m2-K/W)</td><td>0,306</td></tr> <tr><td>Lower resistance limit (m2-K/W)</td><td>0,306</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>7,355</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,306</td></tr> <tr><td>U-Value (W/m2-K)</td><td>3,268</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m2-K)	19,870	Radiative heat transfer coefficient (W/m2-K)	5,130	Surface resistance (m2-K/W)	0,040	No Bridging		U-Value surface to surface (W/m2-K)	7,355	R-Value (m2-K/W)	0,306	U-Value (W/m2-K)	3,268	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2650	Km - Internal heat capacity (KJ/m2-K)	240,0000	Upper resistance limit (m2-K/W)	0,306	Lower resistance limit (m2-K/W)	0,306	U-Value surface to surface (W/m2-K)	7,355	R-Value (m2-K/W)	0,306	U-Value (W/m2-K)	3,268
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1.1.6.13. Aulari – Mur ext. Monocapa FA30-R16



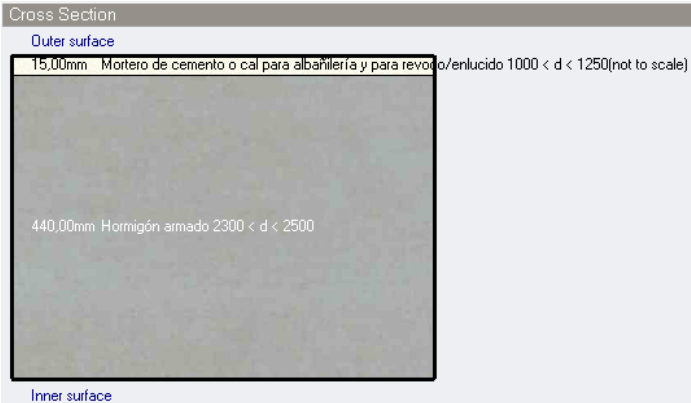
Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	6,341
R-Value (m ² -K/W)	0,328
U-Value (W/m²-K)	3,052
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,3150
Km - Internal heat capacity (KJ/m ² -K)	240,0000
Upper resistance limit (m ² -K/W)	0,328
Lower resistance limit (m ² -K/W)	0,328
U-Value surface to surface (W/m ² -K)	6,341
R-Value (m ² -K/W)	0,328
U-Value (W/m²-K)	3,052

1.1.6.14. Aulari – Mur ext. Monocapa FA39



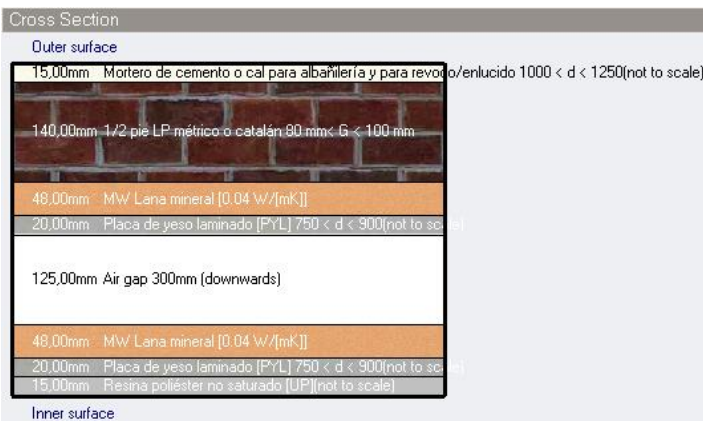
Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	5,080
R-Value (m ² -K/W)	0,367
U-Value (W/m²-K)	2,726
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,4050
Km - Internal heat capacity (KJ/m ² -K)	240,0000
Upper resistance limit (m ² -K/W)	0,367
Lower resistance limit (m ² -K/W)	0,367
U-Value surface to surface (W/m ² -K)	5,080
R-Value (m ² -K/W)	0,367
U-Value (W/m²-K)	2,726

1.1.6.15. Aulari – Mur ext. Monocapa FA44







Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	4,575
R-Value (m ² -K/W)	0,389
U-Value (W/m²-K)	2,573
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,4550
Km - Internal heat capacity (KJ/m ² -K)	240,0000
Upper resistance limit (m ² -K/W)	0,389
Lower resistance limit (m ² -K/W)	0,389
U-Value surface to surface (W/m ² -K)	4,575
R-Value (m ² -K/W)	0,389
U-Value (W/m²-K)	2,573

1.1.6.16. Aulari – Mur ext. R11-M03-R07-CA12,5-M06-R04



Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	0,317
R-Value (m ² -K/W)	3,324
U-Value (W/m²-K)	0,301
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,4310
Km - Internal heat capacity (KJ/m ² -K)	43,6200
Upper resistance limit (m ² -K/W)	3,324
Lower resistance limit (m ² -K/W)	3,324
U-Value surface to surface (W/m ² -K)	0,317
R-Value (m ² -K/W)	3,324
U-Value (W/m²-K)	0,301

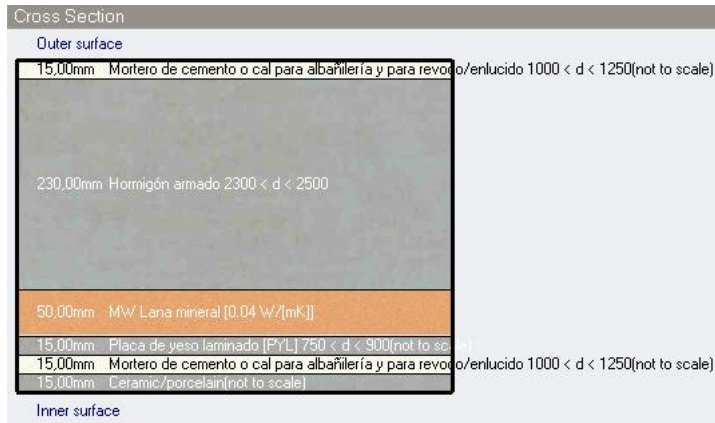
<p>1.1.6.17. Aulari – Mur ext. R16-FA-R16</p> <p>Cross Section</p> <p>Outer surface</p>  <p>400,00mm Hormigón armado 2300 < d < 2500</p> <p>Inner surface</p>	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>5,750</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,344</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>2,908</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,4000</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>240,0000</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,344</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,344</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>5,750</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,344</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>2,908</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	5,750	R-Value (m ² -K/W)	0,344	U-Value (W/m²-K)	2,908	With Bridging (BS EN ISO 6946)		Thickness (m)	0,4000	Km - Internal heat capacity (KJ/m ² -K)	240,0000	Upper resistance limit (m ² -K/W)	0,344	Lower resistance limit (m ² -K/W)	0,344	U-Value surface to surface (W/m ² -K)	5,750	R-Value (m ² -K/W)	0,344	U-Value (W/m²-K)	2,908
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<p>1.1.6.18. Aulari – Mur Nord Monocapa – R06</p> <p>Cross Section</p> <p>Outer surface</p>  <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p> <p>140,00mm 1/2 pie LP métrico o catalán 80 mm < G < 100 mm</p> <p>46,00mm Air gap 5mm</p> <p>15,00mm Placa de yeso laminado [PYL] 750 < d < 900</p> <p>Inner surface</p>	<table border="1"> <tr> <td colspan="2">Inner surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <td colspan="2">Outer surface</td> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <td colspan="2">No Bridging</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,197</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,625</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,600</td> </tr> <tr> <td colspan="2">With Bridging (BS EN ISO 6946)</td> </tr> <tr> <td>Thickness (m)</td> <td>0,2160</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>12,3750</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,625</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,625</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,197</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,625</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,600</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	2,197	R-Value (m ² -K/W)	0,625	U-Value (W/m²-K)	1,600	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2160	Km - Internal heat capacity (KJ/m ² -K)	12,3750	Upper resistance limit (m ² -K/W)	0,625	Lower resistance limit (m ² -K/W)	0,625	U-Value surface to surface (W/m ² -K)	2,197	R-Value (m ² -K/W)	0,625	U-Value (W/m²-K)	1,600
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<p>1.1.6.19. Aulari – Mur Nord Monocapa – R07</p> <p>Cross Section</p> <p>Outer surface</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p>  <p>140,00mm 1/2 pie LP métrico o catalán 80 mm< G < 100 mm</p> <p>50,00mm MW Lana mineral [0.04 W/(mK)]</p> <p>15,00mm Placa de yeso laminado [PYL] 750 < d < 900</p> <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>19,870</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,130</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,040</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>0,627</td></tr> <tr><td>R-Value (m2-K/W)</td><td>1,765</td></tr> <tr><td>U-Value (W/m2-K)</td><td>0,567</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,2200</td></tr> <tr><td>Km - Internal heat capacity (KJ/m2-K)</td><td>45,8750</td></tr> <tr><td>Upper resistance limit (m2-K/W)</td><td>1,765</td></tr> <tr><td>Lower resistance limit (m2-K/W)</td><td>1,765</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>0,627</td></tr> <tr><td>R-Value (m2-K/W)</td><td>1,765</td></tr> <tr><td>U-Value (W/m2-K)</td><td>0,567</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m2-K)	19,870	Radiative heat transfer coefficient (W/m2-K)	5,130	Surface resistance (m2-K/W)	0,040	No Bridging		U-Value surface to surface (W/m2-K)	0,627	R-Value (m2-K/W)	1,765	U-Value (W/m2-K)	0,567	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2200	Km - Internal heat capacity (KJ/m2-K)	45,8750	Upper resistance limit (m2-K/W)	1,765	Lower resistance limit (m2-K/W)	1,765	U-Value surface to surface (W/m2-K)	0,627	R-Value (m2-K/W)	1,765	U-Value (W/m2-K)	0,567
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<p>1.1.6.20. Aulari – Mur Nord Monocapa – R09</p> <p>Cross Section</p> <p>Outer surface</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250</p>  <p>140,00mm 1/2 pie LP métrico o catalán 80 mm< G < 100 mm</p> <p>50,00mm MW Lana mineral [0.04 W/(mK)]</p> <p>15,00mm Placa de yeso laminado [PYL] 750 < d < 900</p> <p>10,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)</p> <p>10,00mm Ceramic/porcelain(not to scale)</p> <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>19,870</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,130</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,040</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>0,617</td></tr> <tr><td>R-Value (m2-K/W)</td><td>1,791</td></tr> <tr><td>U-Value (W/m2-K)</td><td>0,558</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,2400</td></tr> <tr><td>Km - Internal heat capacity (KJ/m2-K)</td><td>58,4450</td></tr> <tr><td>Upper resistance limit (m2-K/W)</td><td>1,791</td></tr> <tr><td>Lower resistance limit (m2-K/W)</td><td>1,791</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>0,617</td></tr> <tr><td>R-Value (m2-K/W)</td><td>1,791</td></tr> <tr><td>U-Value (W/m2-K)</td><td>0,558</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m2-K)	19,870	Radiative heat transfer coefficient (W/m2-K)	5,130	Surface resistance (m2-K/W)	0,040	No Bridging		U-Value surface to surface (W/m2-K)	0,617	R-Value (m2-K/W)	1,791	U-Value (W/m2-K)	0,558	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2400	Km - Internal heat capacity (KJ/m2-K)	58,4450	Upper resistance limit (m2-K/W)	1,791	Lower resistance limit (m2-K/W)	1,791	U-Value surface to surface (W/m2-K)	0,617	R-Value (m2-K/W)	1,791	U-Value (W/m2-K)	0,558
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<p>1.1.6.21. Aulari – Mur Nord Monocapa – FA60-R07</p> <p>Cross Section</p> <p>Outer surface</p> <p>25.00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)</p> <p>615.00mm Hormigón armado 2300 < d < 2500</p> <p>48.00mm MW Lana mineral [0.04 W/(mK)]</p> <p>15.00mm Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</p> <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>19,870</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,130</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,040</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>0,636</td></tr> <tr><td>R-Value (m2-K/W)</td><td>1,743</td></tr> <tr><td>U-Value (W/m2-K)</td><td>0,574</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,7030</td></tr> <tr><td>Km - Internal heat capacity (KJ/m2-K)</td><td>103,0950</td></tr> <tr><td>Upper resistance limit (m2-K/W)</td><td>1,743</td></tr> <tr><td>Lower resistance limit (m2-K/W)</td><td>1,743</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>0,636</td></tr> <tr><td>R-Value (m2-K/W)</td><td>1,743</td></tr> <tr><td>U-Value (W/m2-K)</td><td>0,574</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m2-K)	19,870	Radiative heat transfer coefficient (W/m2-K)	5,130	Surface resistance (m2-K/W)	0,040	No Bridging		U-Value surface to surface (W/m2-K)	0,636	R-Value (m2-K/W)	1,743	U-Value (W/m2-K)	0,574	With Bridging (BS EN ISO 6946)		Thickness (m)	0,7030	Km - Internal heat capacity (KJ/m2-K)	103,0950	Upper resistance limit (m2-K/W)	1,743	Lower resistance limit (m2-K/W)	1,743	U-Value surface to surface (W/m2-K)	0,636	R-Value (m2-K/W)	1,743	U-Value (W/m2-K)	0,574
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<p>1.1.6.22. Aulari – Mur Nord Monocapa-FA30-Elevators</p> <p>Cross Section</p> <p>Outer surface</p> <p>15.00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)</p> <p>300.00mm Hormigón armado 2300 < d < 2500</p> <p>Inner surface</p>	<table border="1"> <tr><th colspan="2">Inner surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>2,152</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,540</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,130</td></tr> <tr><th colspan="2">Outer surface</th></tr> <tr><td>Convective heat transfer coefficient (W/m2-K)</td><td>19,870</td></tr> <tr><td>Radiative heat transfer coefficient (W/m2-K)</td><td>5,130</td></tr> <tr><td>Surface resistance (m2-K/W)</td><td>0,040</td></tr> <tr><th colspan="2">No Bridging</th></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>6,341</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,328</td></tr> <tr><td>U-Value (W/m2-K)</td><td>3,052</td></tr> <tr><th colspan="2">With Bridging (BS EN ISO 6946)</th></tr> <tr><td>Thickness (m)</td><td>0,3150</td></tr> <tr><td>Km - Internal heat capacity (KJ/m2-K)</td><td>240,0000</td></tr> <tr><td>Upper resistance limit (m2-K/W)</td><td>0,328</td></tr> <tr><td>Lower resistance limit (m2-K/W)</td><td>0,328</td></tr> <tr><td>U-Value surface to surface (W/m2-K)</td><td>6,341</td></tr> <tr><td>R-Value (m2-K/W)</td><td>0,328</td></tr> <tr><td>U-Value (W/m2-K)</td><td>3,052</td></tr> </table>	Inner surface		Convective heat transfer coefficient (W/m2-K)	2,152	Radiative heat transfer coefficient (W/m2-K)	5,540	Surface resistance (m2-K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m2-K)	19,870	Radiative heat transfer coefficient (W/m2-K)	5,130	Surface resistance (m2-K/W)	0,040	No Bridging		U-Value surface to surface (W/m2-K)	6,341	R-Value (m2-K/W)	0,328	U-Value (W/m2-K)	3,052	With Bridging (BS EN ISO 6946)		Thickness (m)	0,3150	Km - Internal heat capacity (KJ/m2-K)	240,0000	Upper resistance limit (m2-K/W)	0,328	Lower resistance limit (m2-K/W)	0,328	U-Value surface to surface (W/m2-K)	6,341	R-Value (m2-K/W)	0,328	U-Value (W/m2-K)	3,052
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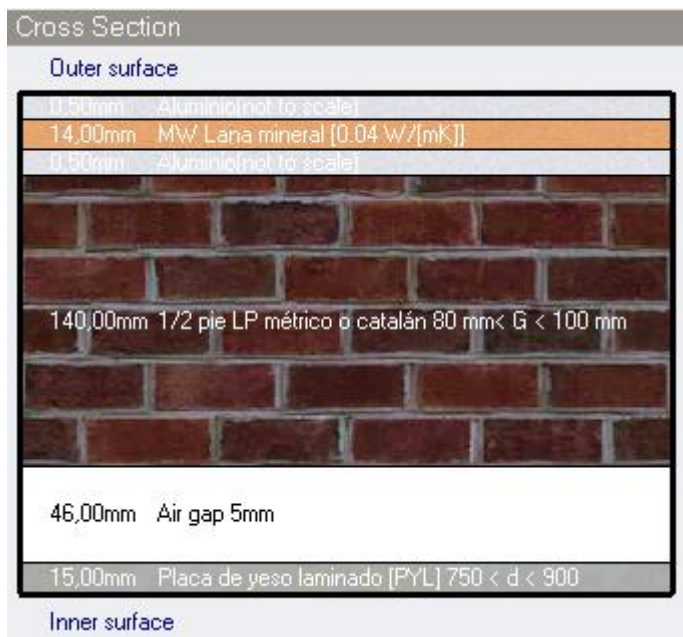
<p>1.1.6.23. Aulari – Mur Nord Monocapa-FA40-CA10-R07</p> <p>Cross Section</p> <p>Outer surface</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)</p> <p>400,00mm Hormigón armado 2300 < d < 2500</p> <p>100,00mm Air gap 300mm (downwards)</p> <p>48,00mm MW Lana mineral [0.04 W/(mK)]</p> <p>20,00mm Placa de yeso laminado [PYL] 750 < d < 900(not to scale)</p> <p>Inner surface</p>	<table border="1"> <tr> <th colspan="2">Inner surface</th> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <th colspan="2">Outer surface</th> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <th colspan="2">No Bridging</th> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,584</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,881</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,532</td> </tr> <tr> <th colspan="2">With Bridging (BS EN ISO 6946)</th> </tr> <tr> <td>Thickness (m)</td> <td>0,5830</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>18,4200</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>1,881</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>1,881</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,584</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,881</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,532</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	0,584	R-Value (m ² -K/W)	1,881	U-Value (W/m²-K)	0,532	With Bridging (BS EN ISO 6946)		Thickness (m)	0,5830	Km - Internal heat capacity (KJ/m ² -K)	18,4200	Upper resistance limit (m ² -K/W)	1,881	Lower resistance limit (m ² -K/W)	1,881	U-Value surface to surface (W/m ² -K)	0,584	R-Value (m ² -K/W)	1,881	U-Value (W/m²-K)	0,532
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<p>1.1.6.24. Aulari – Mur Nord Monocapa-FA-Conductes</p> <p>Cross Section</p> <p>Outer surface</p> <p>15,00mm Mortero de cemento o cal para albañilería y para revoco/enlucido 1000 < d < 1250(not to scale)</p> <p>250,00mm Hormigón armado 2300 < d < 2500</p> <p>Inner surface</p>	<table border="1"> <tr> <th colspan="2">Inner surface</th> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <th colspan="2">Outer surface</th> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <th colspan="2">No Bridging</th> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>7,355</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,306</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>3,268</td> </tr> <tr> <th colspan="2">With Bridging (BS EN ISO 6946)</th> </tr> <tr> <td>Thickness (m)</td> <td>0,2650</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>240,0000</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,306</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,306</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>7,355</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,306</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>3,268</td> </tr> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	7,355	R-Value (m ² -K/W)	0,306	U-Value (W/m²-K)	3,268	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2650	Km - Internal heat capacity (KJ/m ² -K)	240,0000	Upper resistance limit (m ² -K/W)	0,306	Lower resistance limit (m ² -K/W)	0,306	U-Value surface to surface (W/m ² -K)	7,355	R-Value (m ² -K/W)	0,306	U-Value (W/m²-K)	3,268
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1.1.6.25. Aulari – Mur Nord Monocapa-FA-R10



Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	0,677
R-Value (m ² -K/W)	1,646
U-Value (W/m²-K)	0,608
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,3400
Km - Internal heat capacity (KJ/m ² -K)	72,2300
Upper resistance limit (m ² -K/W)	1,646
Lower resistance limit (m ² -K/W)	1,646
U-Value surface to surface (W/m ² -K)	0,677
R-Value (m ² -K/W)	1,646
U-Value (W/m²-K)	0,608

1.1.6.26. Aulari – Mur Nord Panell alumini – R06



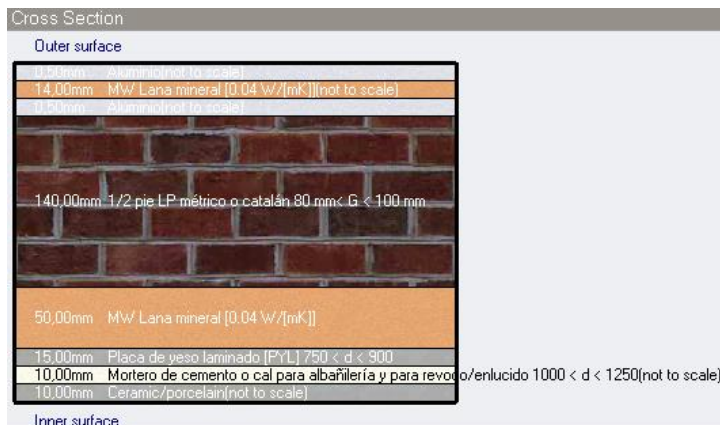
Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	1,286
R-Value (m ² -K/W)	0,948
U-Value (W/m²-K)	1,055
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,2160
Km - Internal heat capacity (KJ/m ² -K)	12,3750
Upper resistance limit (m ² -K/W)	0,948
Lower resistance limit (m ² -K/W)	0,948
U-Value surface to surface (W/m ² -K)	1,286
R-Value (m ² -K/W)	0,948
U-Value (W/m²-K)	1,055

1.1.6.27. Aulari – Mur Nord Panell alumini – R07


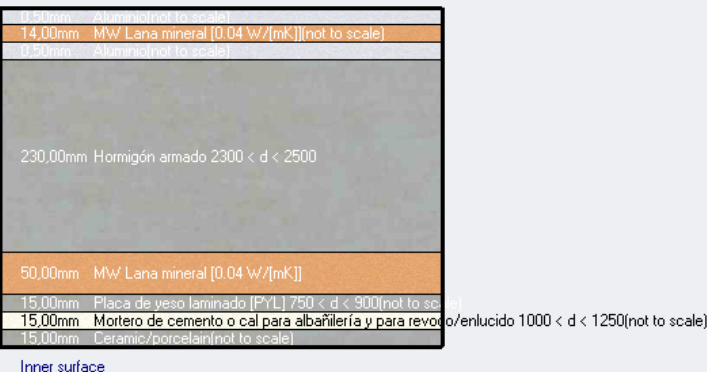


Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	0,521
R-Value (m ² -K/W)	2,088
U-Value (W/m²-K)	0,479
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,2200
Km - Internal heat capacity (KJ/m ² -K)	45,8750
Upper resistance limit (m ² -K/W)	2,088
Lower resistance limit (m ² -K/W)	2,088
U-Value surface to surface (W/m ² -K)	0,521
R-Value (m ² -K/W)	2,088
U-Value (W/m²-K)	0,479

1.1.6.28. Aulari – Mur Nord Panell alumini – R09

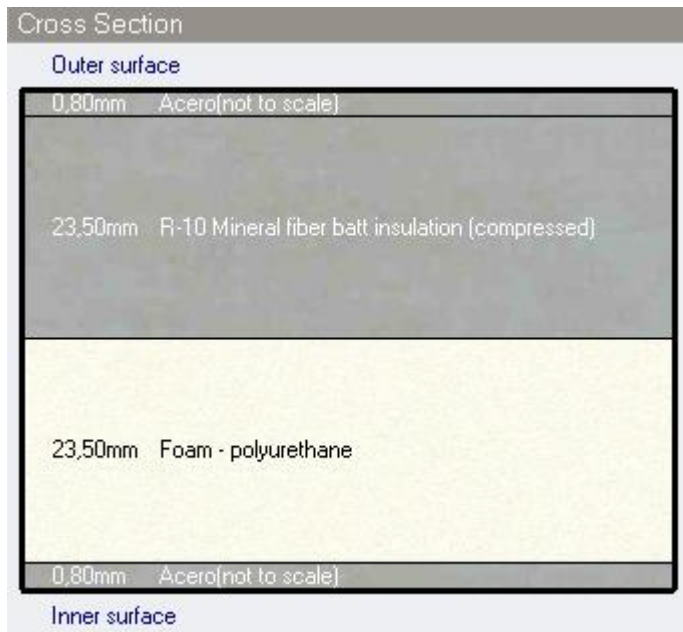


Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,870
Radiative heat transfer coefficient (W/m ² -K)	5,130
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	0,514
R-Value (m ² -K/W)	2,114
U-Value (W/m²-K)	0,473
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,2400
Km - Internal heat capacity (KJ/m ² -K)	58,4450
Upper resistance limit (m ² -K/W)	2,114
Lower resistance limit (m ² -K/W)	2,114
U-Value surface to surface (W/m ² -K)	0,514
R-Value (m ² -K/W)	2,114
U-Value (W/m²-K)	0,473

<p>1.1.6.29. Aulari – Mur Nord Panell alumini-FA-Conductes</p> <p>Cross Section</p> <p>Outer surface</p>  <p>Inner surface</p>	<table border="1"> <thead> <tr> <th colspan="2">Inner surface</th> </tr> </thead> <tbody> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <th colspan="2">Outer surface</th> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <th colspan="2">No Bridging</th> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,180</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,629</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,591</td> </tr> <tr> <th colspan="2">With Bridging (BS EN ISO 6946)</th> </tr> <tr> <td>Thickness (m)</td> <td>0,2650</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>240,0000</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>0,629</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>0,629</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>2,180</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>0,629</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>1,591</td> </tr> </tbody> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	2,180	R-Value (m ² -K/W)	0,629	U-Value (W/m²-K)	1,591	With Bridging (BS EN ISO 6946)		Thickness (m)	0,2650	Km - Internal heat capacity (KJ/m ² -K)	240,0000	Upper resistance limit (m ² -K/W)	0,629	Lower resistance limit (m ² -K/W)	0,629	U-Value surface to surface (W/m ² -K)	2,180	R-Value (m ² -K/W)	0,629	U-Value (W/m²-K)	1,591
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<p>1.1.6.30. Aulari – Mur Nord Panell alumini-FA-R10</p> <p>Cross Section</p> <p>Outer surface</p>  <p>Inner surface</p>	<table border="1"> <thead> <tr> <th colspan="2">Inner surface</th> </tr> </thead> <tbody> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>2,152</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,540</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,130</td> </tr> <tr> <th colspan="2">Outer surface</th> </tr> <tr> <td>Convective heat transfer coefficient (W/m²-K)</td> <td>19,870</td> </tr> <tr> <td>Radiative heat transfer coefficient (W/m²-K)</td> <td>5,130</td> </tr> <tr> <td>Surface resistance (m²-K/W)</td> <td>0,040</td> </tr> <tr> <th colspan="2">No Bridging</th> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,556</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,969</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,508</td> </tr> <tr> <th colspan="2">With Bridging (BS EN ISO 6946)</th> </tr> <tr> <td>Thickness (m)</td> <td>0,3400</td> </tr> <tr> <td>Km - Internal heat capacity (KJ/m²-K)</td> <td>72,2300</td> </tr> <tr> <td>Upper resistance limit (m²-K/W)</td> <td>1,969</td> </tr> <tr> <td>Lower resistance limit (m²-K/W)</td> <td>1,969</td> </tr> <tr> <td>U-Value surface to surface (W/m²-K)</td> <td>0,556</td> </tr> <tr> <td>R-Value (m²-K/W)</td> <td>1,969</td> </tr> <tr> <td>U-Value (W/m²-K)</td> <td>0,508</td> </tr> </tbody> </table>	Inner surface		Convective heat transfer coefficient (W/m ² -K)	2,152	Radiative heat transfer coefficient (W/m ² -K)	5,540	Surface resistance (m ² -K/W)	0,130	Outer surface		Convective heat transfer coefficient (W/m ² -K)	19,870	Radiative heat transfer coefficient (W/m ² -K)	5,130	Surface resistance (m ² -K/W)	0,040	No Bridging		U-Value surface to surface (W/m ² -K)	0,556	R-Value (m ² -K/W)	1,969	U-Value (W/m²-K)	0,508	With Bridging (BS EN ISO 6946)		Thickness (m)	0,3400	Km - Internal heat capacity (KJ/m ² -K)	72,2300	Upper resistance limit (m ² -K/W)	1,969	Lower resistance limit (m ² -K/W)	1,969	U-Value surface to surface (W/m ² -K)	0,556	R-Value (m ² -K/W)	1,969	U-Value (W/m²-K)	0,508
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1.1.7. Doors

1.1.7.1. Aulari - Doors B.El. - a1-a2-a3



Inner surface	
Convective heat transfer coefficient (W/m ² -K)	5,846
Radiative heat transfer coefficient (W/m ² -K)	1,847
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	23,153
Radiative heat transfer coefficient (W/m ² -K)	1,847
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	0,670
R-Value (m ² -K/W)	1,662
U-Value (W/m²-K)	0,602
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,0486
Km - Internal heat capacity (KJ/m ² -K)	3,8443
Upper resistance limit (m ² -K/W)	1,662
Lower resistance limit (m ² -K/W)	1,662
U-Value surface to surface (W/m ² -K)	0,670
R-Value (m ² -K/W)	1,662
U-Value (W/m²-K)	0,602

1.1.7.2. Aulari - Doors B.F. - a1-a2-a3-a4-a5



Inner surface	
Convective heat transfer coefficient (W/m ² -K)	2,152
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,130
Outer surface	
Convective heat transfer coefficient (W/m ² -K)	19,460
Radiative heat transfer coefficient (W/m ² -K)	5,540
Surface resistance (m ² -K/W)	0,040
No Bridging	
U-Value surface to surface (W/m ² -K)	1,400
R-Value (m ² -K/W)	0,884
U-Value (W/m²-K)	1,131
With Bridging (BS EN ISO 6946)	
Thickness (m)	0,0400
Km - Internal heat capacity (KJ/m ² -K)	6,2410
Upper resistance limit (m ² -K/W)	0,884
Lower resistance limit (m ² -K/W)	0,884
U-Value surface to surface (W/m ² -K)	1,400
R-Value (m ² -K/W)	0,884
U-Value (W/m²-K)	1,131

1.2. Glazing

1.2.1. Aulari - M.C.-a1_a6 + F.AL.V.-a1_a2

General	
Name	Aulari - M.C.-a1_a6 + F.AL.V.-a1_a2
Description	
Source	
Category	Double
Region	SPAIN
Definition method	
Definition method	1-Material layers
Layers	
Number layers	2
Outermost pane	
Pane type	Saint-Gobain Glass SGG PLANILUX 10mm
Flip layer	<input type="checkbox"/>
Window gas 1	
Window gas type	AIR 12MM
Innermost pane	
Pane type	Saint-Gobain Glass SGG PLANILUX 12mm
Flip layer	<input type="checkbox"/>

Calculated Values	
Total solar transmission (SHGC)	0.682
Direct solar transmission	0.566
Light transmission	0.761
U-value (ISO 10292/ EN 673) (W/m2-K)	2.756
U-Value (ISO 15099 / NFRC) (W/m2-K)	2.621

1.2.2. Aulari - C.B.F.AL.V.-a1_a10 + F.B.AL.V.-a1_a3 + E.AL.V.-a1

General	
Name	Aulari - C.B.F.AL.V.-a1_a10 + F.B.AL.V.-a1_a3 + E.AL.V.-a1
Description	
Source	
Category	Double
Region	SPAIN
Definition method	
Definition method	1-Material layers
Layers	
Number layers	2
Outermost pane	
Pane type	Saint-Gobain Glass SGG PLANILUX 6mm
Flip layer	<input type="checkbox"/>
Window gas 1	
Window gas type	AIR 12MM
Innermost pane	
Pane type	Saint-Gobain Glass SGG PLANILUX 8mm
Flip layer	<input type="checkbox"/>

Calculated Values	
Total solar transmission (SHGC)	0.741
Direct solar transmission	0.661
Light transmission	0.793
U-value (ISO 10292/ EN 673) (W/m2-K)	2.818
U-Value (ISO 15099 / NFRC) (W/m2-K)	2.679

2. Technical data of the equipment

2.1. AIR – CONDITIONING MACHINERY											
General Description						Technical Characteristics					
						Heat Recovery Mode			Air Cooled Mode		
Ref.	Description	Brand	Model	Coolant	Compressor	Heating/Cooling Power	Electrical consumption	Efficiency (Heating/Cooling)	Cooling Power	Electrical consumption	Efficiency
						[kW]	[kW]	[kW/kW]	[kW]	[kW]	[kW/kW]
RF-HR	Cooling plant with Heat Recovery	Carrier	30RB462	R-410a	Scroll airtight	624,9 / 500,6	130,9	4,78 / 3,83	421,3	191,4	2,2
Dimensions						Heating Mode			Cooling Mode		
	Length x Width x Height [mm]			Weight [kg]		Heating Power	Electrical Consumption	Efficiency	Cooling Power	Electrical consumption	Efficiency
RF-HR	4798 x 2253 x 2297			4720		[kW]	[kW]	[kW/kW]	[kW]	[kW]	[kW/kW]
Ref.	Description	Brand	Model	Coolant	Compressor						
BC 1	Heat pump	Carrier	30RQ372	R-410a	Scroll airtight	366,2	128,3	2,85	334	125,9	2,65

BC 2	Heat pump	Carrier	30RQ372	R-410a	Scroll airtight	366,2	128,3	2,85	334	125,9	2,65
Dimensions						Leaving/Entering Temp.	Fluid Flow	Pressure Drop	Leaving/Entering Temp.	Fluid Flow	Pressure Drop
Length x Width x Height		Weight									
[mm]		[Kg]		[°C]	[L/s]	[kPa]	[°C]	[L/s]	[kPa]		
BC 1	3604 x 2253 x 2297		3560		45 / 40 °C	17,69	30,6	7 / 11,5 °C	17,69	36,5	
BC 2	3604 x 2253 x 2297		3560		45 / 40 °C	17,69	30,6	7 / 11,5 °C	17,69	36,5	

2.2. CIRCULATION PUMPS

General Description						Technical Characteristics			
Ref.	Description	Circuit	Brand	Model	R.P.M	Flow rate	Pressure	Electrical consumption	Description
						[l/h]	[mwc]	[kW]	
B1	Primary pump	Chiller RF-HR	Grundfos	TP 100-130/4	1460	78200	12,2	4	Simple pump Constant flow
B2	Primary pump	Heat pump BC1	Grundfos	TP 80-150/4	1450	60200	12,5	3	Simple pump Constant flow
B3	Primary pump	Heat pump BC2	Grundfos	TP 80-150/4	1450	60200	12,5	3	Simple pump Constant flow
B4	Primary pump Heat Recovery	Heat recovery RF-HR	Grundfos	TP 80-150/4	1450	60200	12,5	3	Simple pump Constant flow

BSF1	Secondary cold pump	CL-FC	Grundfos	TP 100-170/4	1460	93000	15,4	5,5	(BSF1.1=BSF1.2)	Variable flow
BSF2	Secondary cold Pump	CL-FC	Grundfos	TP 100-170/4	1460	93000	15,4	5,5	(BSF2.1=BSF2.2)	Variable flow
BSC1	Secondary heat pump	CL-FC	Grundfos	TP 80/170-4	1460	67900	14,4	4	(BSC1.1=BSC1.2)	Variable flow
BSC2	Secondary heat pump	CL-FC	Grundfos	TP 80/170-4	1460	67900	14,4	4	(BSC2.1=BSC2.2)	Variable flow
BSC3	Batteries secondary pump	Post-heating batteries	Grundfos	TP 80/170-4	1460	67900	14,4	4	(BSC3.1=BSC3.2)	Variable flow

2.3. AIR HANDLING UNITS

Description						Cooling coil			Heating coil		
Ref.	Zone	Floor	Function (*)	Brand	Model	Total Power	Water Temperature	Water Flow	Total Power	Water Temperature	Water Flow
(*) A: Air conditioning; V: Ventilation						[kW]	[°C]	[l/h]	[kW]	[°C]	[l/h]
CL1	Conference Hall + Classrooms 1.1, 1.2	Gr./1 st . FI	A + V	Wolf	TOP 210	140	8°C-13°C	24.040	98	45°C-40°C	17.040
CL2	Classrooms 2.1, 2.2, 2.3, 2.4, 2.5	2 nd . FI	A + V	Wolf	TOP 170	127	8°C-13°C	21.810	85	45°C-40°C	14.780
CL3	Laboratories 3.1, 3.2, 3.3, 3.4	3 rd . FI	A + V	Wolf	TOP 130	100	8°C-13°C	17.170	72	45°C-40°C	12.520

CL4	Classrooms 4.1, 4.2	4 th . Fl	A + V	Wolf	TOP 130	94	8°C-13°C	16.140	64	45°C-40°C	11.130
CL5	Classrooms 2.6, 2.7, 2.8 + Computer Labs 2.1, 2.2, 2.3	2 nd . Fl	A + V	Wolf	TOP 170	132	8°C-13°C	22.670	82	45°C-40°C	14.260
CL6	Laboratories 3.5, 3.6, 3.7, 3.8, 3.9, 3.10	3 rd . Fl	A + V	Wolf	TOP 210	143	8°C-13°C	24.550	103	45°C-40°C	17.910
CL7	Classrooms 4.3, 4.4	4 th . Fl	A + V	Wolf	TOP 170	113	8°C-13°C	19.400	74	45°C-40°C	12.870
CL8	Offices (From 4.1 to 4.11)	4 th . Fl	V	Wolf	TOP 64	29	8°C-13°C	4.980	24	45°C-40°C	4.170
CL_HALL	Entrance Hall	Gr. Fl	A	Wolf	TOP 96	20	8°C-13°C	3.430	18	45°C-40°C	3.130

2.4. FANS

Description							Filters	Recuperator	Width	Length	Height	Weight
Ref.	Air flow ventilation [m3/h]	Flow rate [m3/h]	Available pressure [mm wc]	Return flow rate [m3/h]	Available pressure [mm wc]	Type			[mm]	[mm]	[mm]	[kg]
CL1	11.115	12490	25	12490	20	Plug Fan	F7+F9+F7	Enthalpy rotary	2237	4915	2644	2148
CL2	10.395	10400	25	10400	20	Plug Fan	F7+F9+F7	Enthalpy rotary	1932	4875	2644	1837
CL3	8.640	8700	25	8700	20	Plug Fan	F7+F9+F7	Enthalpy rotary	1932	4570	2034	1482
CL4	7.650	8200	25	8200	20	Plug Fan	F7+F9+F7	Enthalpy rotary	1932	4570	2034	1479
CL5	9.945	11400	25	11400	20	Plug Fan	F7+F9+F7	Enthalpy rotary	1932	4875	2644	1861

CL6	12.240	12300	25	12300	20	Plug Fan	F7+F9+F7	Enthalpy rotary	2237	4915	2644	2154
CL7	9.090	9100	25	9100	20	Plug Fan	F7+F9+F7	Enthalpy rotary	1932	4875	2644	1810
CL8	3.240	3250	25	3250	20	Plug Fan	F7+F9+F7	Crossed flows	1017	4677	1424	805
CL_ENT	-	5900	15	-	-	Plug Fan	F7+F9	-	1017	4170	1017	587

2.5. EXTRACTOR FANS

General Description					Technical Characteristics				
Ref.	Description	Brand	Model	R.P.M	Measured Flow rate	Pressure	Adjustment	Electrical consumption	
					[m ³ /h]	[Pa]		[kW]	[V]
EX 1	Toilet/Store room extractor fan 1	Systemair	KVD 9/9-E6	950	1179	100	Hourly	0,237	230
EX 2	Toilet/Store room extractor fan 2	Systemair	KVD 10/10-E4	1375	1900	100	Hourly	0,55	230
EX L-V	Low-voltage room extractor	Systemair	KVD 9/9-E6	950	2177	100	L-V SB Temperature	0,237	230
EX TS	Transformer Station room Extractor	Systemair	KVB 15/15	1420	7820	330	TS Temperature	2,2	380
EX SP	Emergency staircase overpressure extractor	Systemair	KVB 15/15	1420	7000	330	Pressure sensor	2,2	380

(*) L-V SB: Low-Voltage Switchboard

(**) TS: Transformer Station

2.6. FAN-COILS

		General Description					Technical Characteristics						
Ref.	Zone	Description	Tubes	Units	Brand	Model	Cooling Power	Sensible cooling Capacity	Heating Power	Max. air flow rate	Electrical consumption		Dimensions
							[kW]	[kW]	[kW]	[m ³ /h]	[kW]	[V]	Length x Width x Height [mm]
FC1	Offices	Horizontal	4 tubes	11	Systemair	FC 54	3,47	2,41	3,84	665	0,11	230	1.070 x 470 x 220
FC2	Reception	Vertical	4 tubes	1	Systemair	FC74	5,22	3,65	5,78	1.003	0,15	230	1.270 x 470 x 220

2.7. FLOW REGULATORS PER ZONE (POST-HEATING BATTERIES)

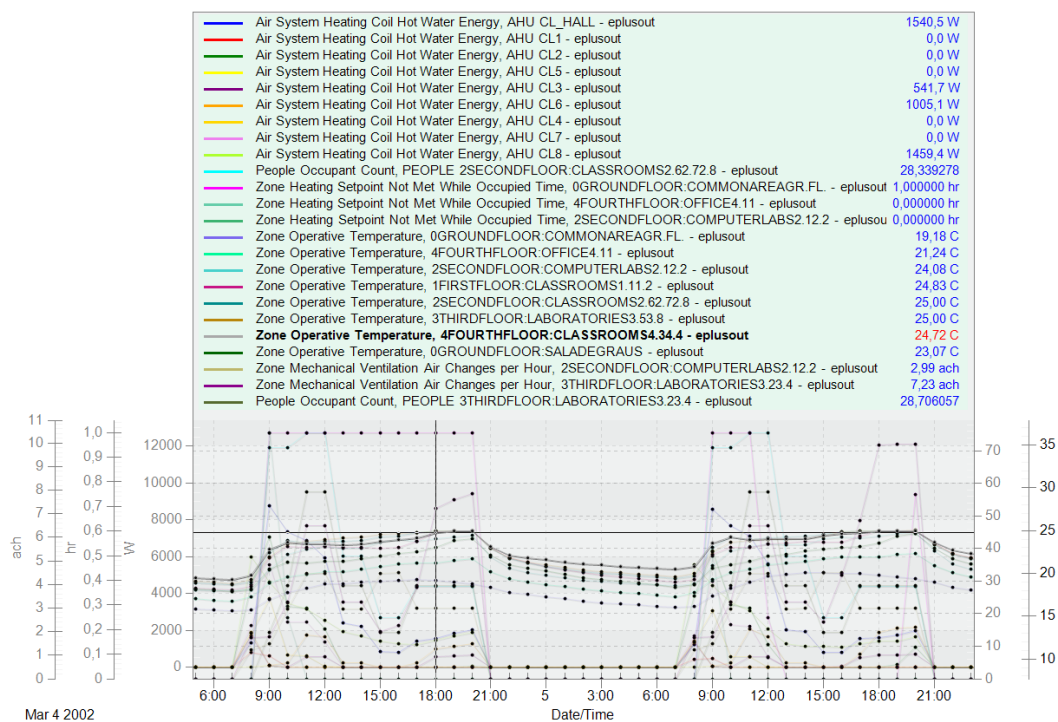
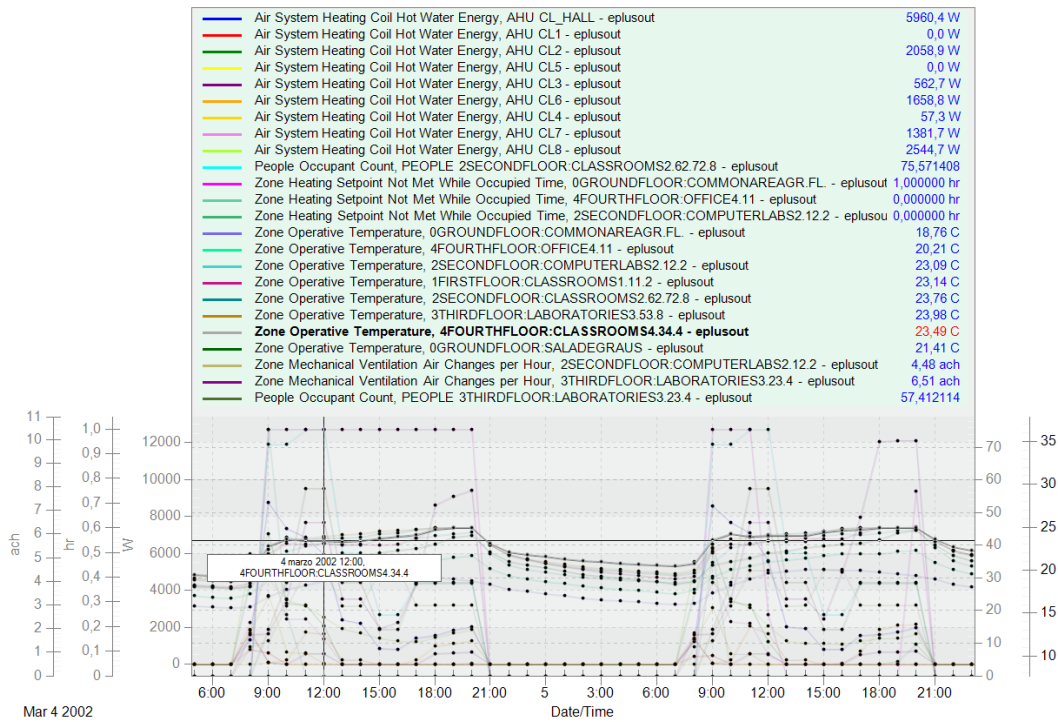
2.7. FLOW REGULATORS PER ZONE (POST-HEATING BATTERIES)						
	Description			Technical Characteristics		
Ref.	Floor	Zone	Model	Air regulator flow rate	Water flow rate	Post-heating battery power
				[m ³ /h]	[L/h]	[W] (Tin_w = 45°C and Tout_w = 40°C)
CVC 7	Ground Floor	Conference Hall	Koolair KS-4000	5.400	3.162	18.390
CVC 5	First Floor	Classroom 1.1	Koolair KS-2000	3.000	1.757	10.210
CVC 5	First Floor	Classroom 1.2	Koolair KS-2000	3.000	1.757	10.210
CVC 4	Second Floor	Classroom 2.1	Koolair KS-1600	2.700	1.581	9.190
CVC 4	Second Floor	Classroom 2.2	Koolair KS-1600	2.700	1.581	9.190
CVC 3	Second Floor	Classroom 2.3	Koolair KS-1200	1.450	849	4.940
CVC 3	Second Floor	Classroom 2.4	Koolair KS-1200	1.450	849	4.940
CVC 3	Second Floor	Classroom 2.5	Koolair KS-1200	1.450	849	4.940
CVC 3	Second Floor	Classroom 2.6	Koolair KS-1200	1.910	1.118	6.500
CVC 3	Second Floor	Classroom 2.7	Koolair KS-1200	1.910	1.118	6.500
CVC 3	Second Floor	Classroom 2.8	Koolair KS-1200	1.910	1.118	6.500
CVC 5	Second Floor	Computer Lab 2.3	Koolair KS-2000	3.110	1.821	10.590
CVC 2	Second Floor	Computer Lab 2.1	Koolair KS-800	1.280	750	4.360

CVC 2	Second Floor	Computer Lab 2.2	Koolair KS-800	1.280	750	4.360
CVC 4	Third Floor	Laboratory 3.1	Koolair KS-1600	2.175	1.274	7.400
CVC 4	Third Floor	Laboratory 3.2	Koolair KS-1600	2.175	1.274	7.400
CVC 4	Third Floor	Laboratory 3.3	Koolair KS-1600	2.175	1.274	7.400
CVC 4	Third Floor	Laboratory 3.4	Koolair KS-1600	2.175	1.274	7.400
CVC 4	Third Floor	Laboratory 3.5	Koolair KS-1600	2.175	1.274	7.400
CVC 4	Third Floor	Laboratory 3.6	Koolair KS-1600	2.175	1.274	7.400
CVC 3	Third Floor	Laboratory 3.7	Koolair KS-1200	1.670	978	5.690
CVC 4	Third Floor	Laboratory 3.8	Koolair KS-1600	2.175	1.274	7.400
CVC 4	Third Floor	Laboratory 3.9	Koolair KS-1600	2.175	1.274	7.400
CVC 4	Third Floor	Laboratory 3.10	Koolair KS-1600	2.175	1.274	7.400
CVC 6	Fourth Floor	Classroom 4.1	Koolair KS-3000	4.100	2.401	13.960
CVC 6	Fourth Floor	Classroom 4.2	Koolair KS-3000	4.100	2.401	13.960
CVC 6	Fourth Floor	Classroom 4.3	Koolair KS-3000	4.500	2.635	15.320
CVC 6	Fourth Floor	Classroom 4.4	Koolair KS-3000	4.550	2.664	15.490

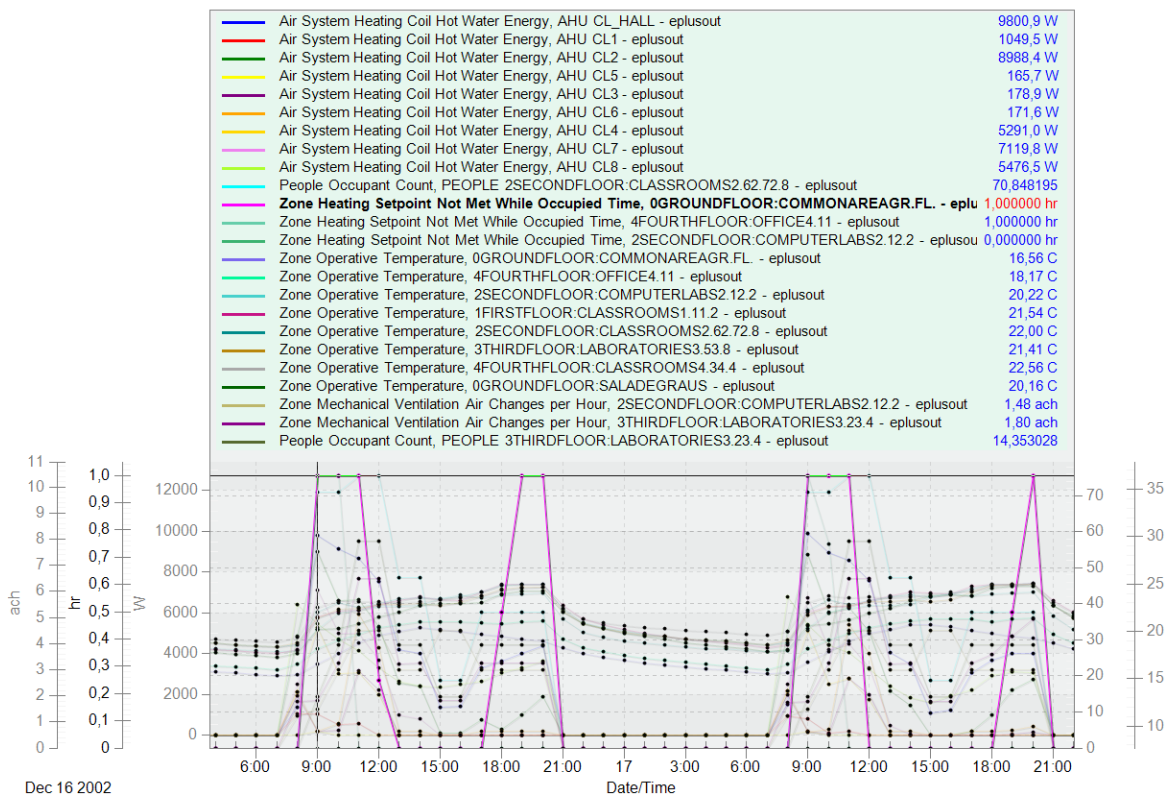
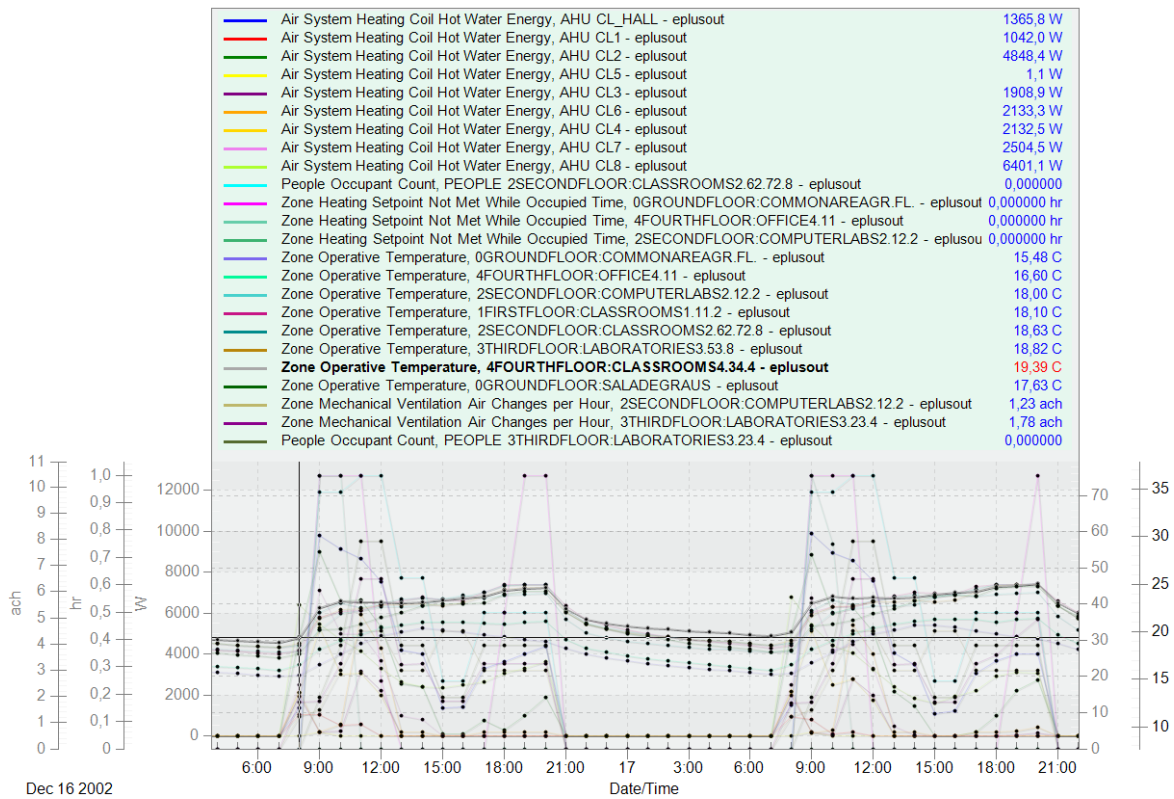
3. Additional obtained results

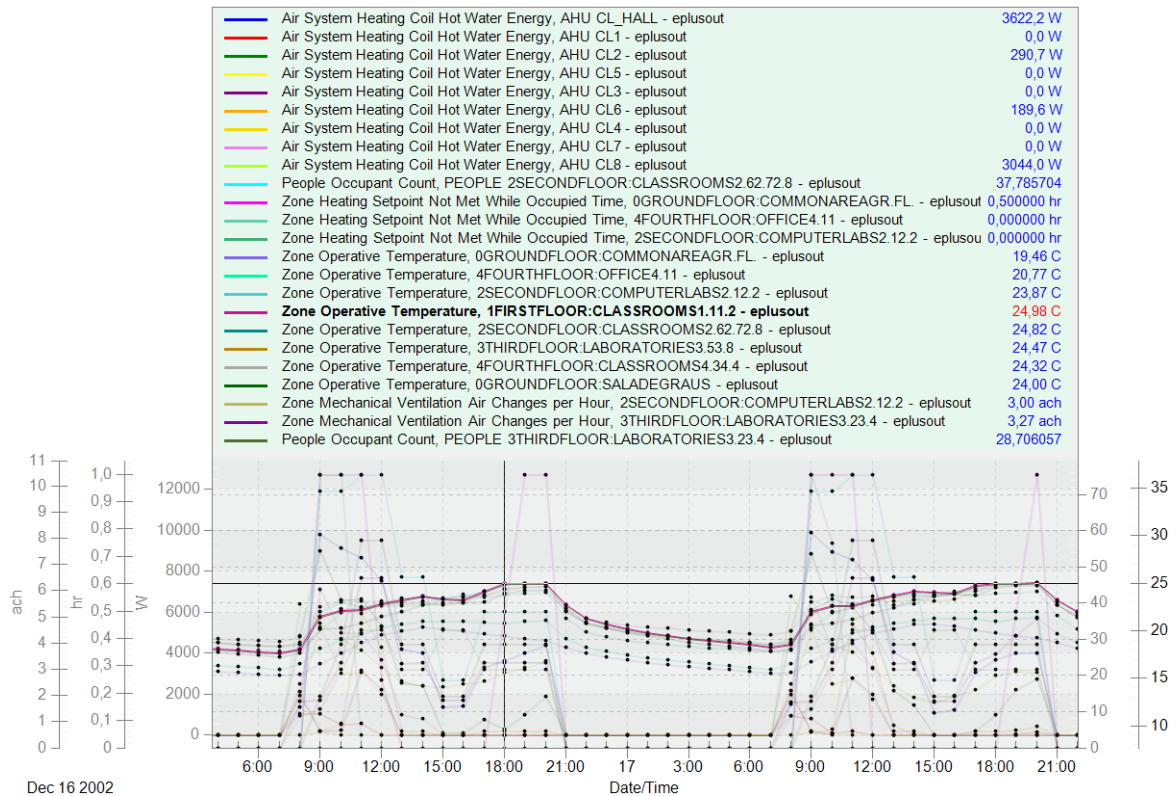
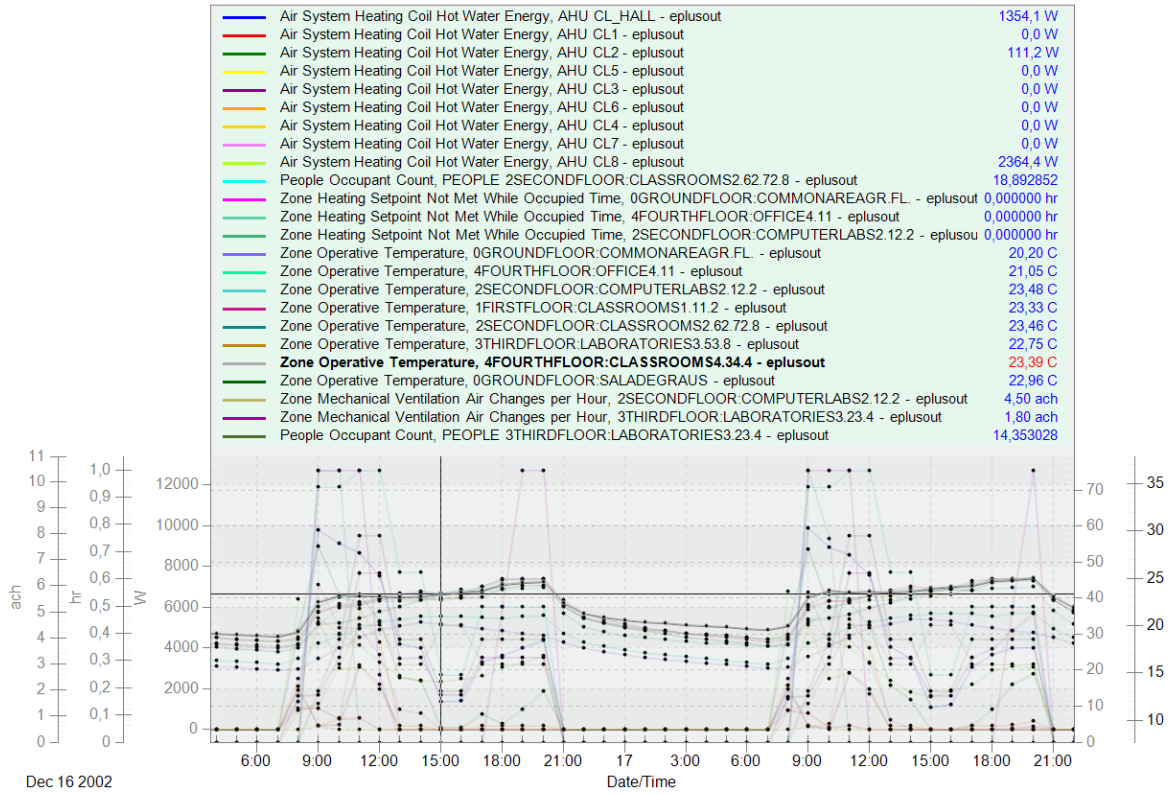
3.1. Heating System

3.1.1. March 4th (12h and 18h)

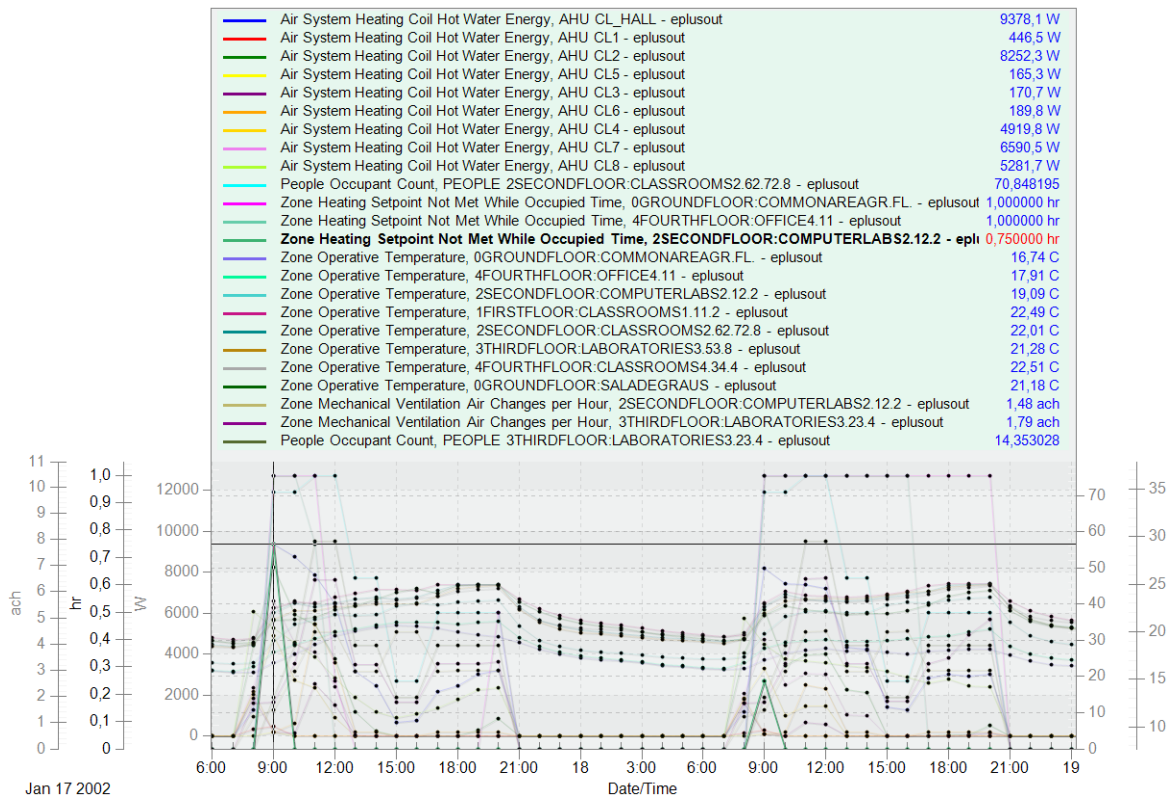
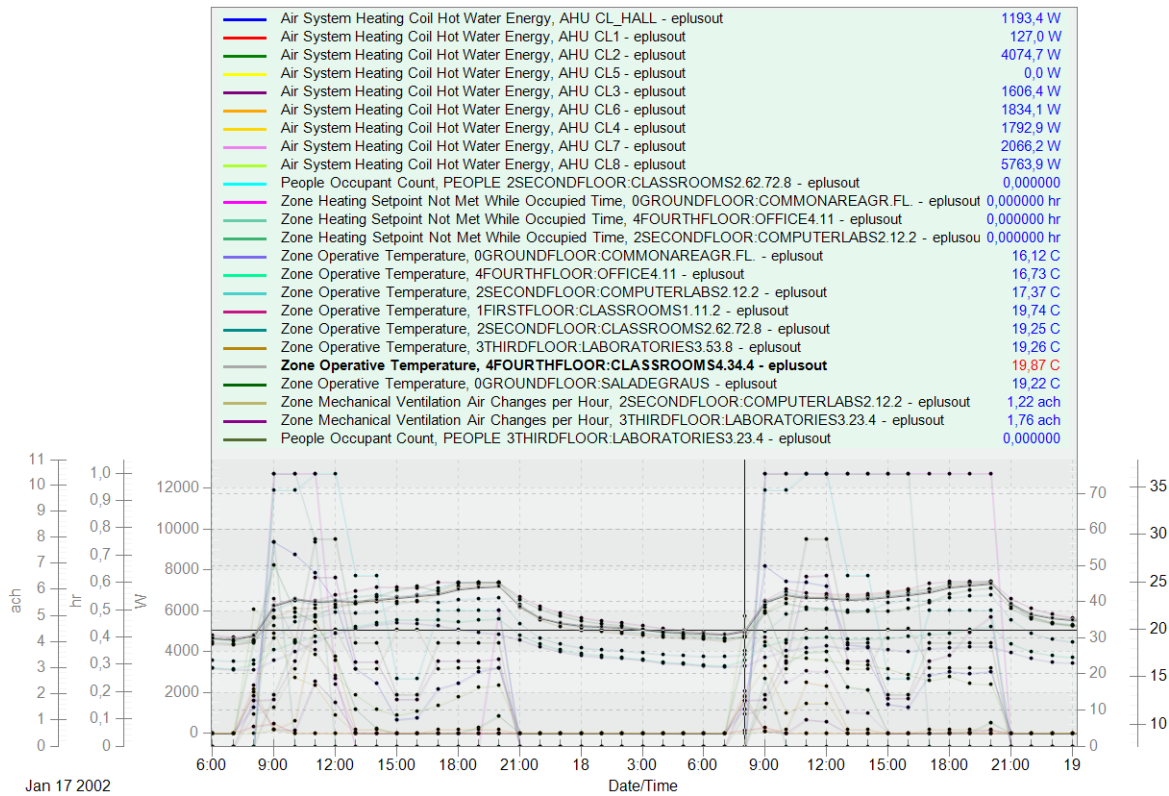


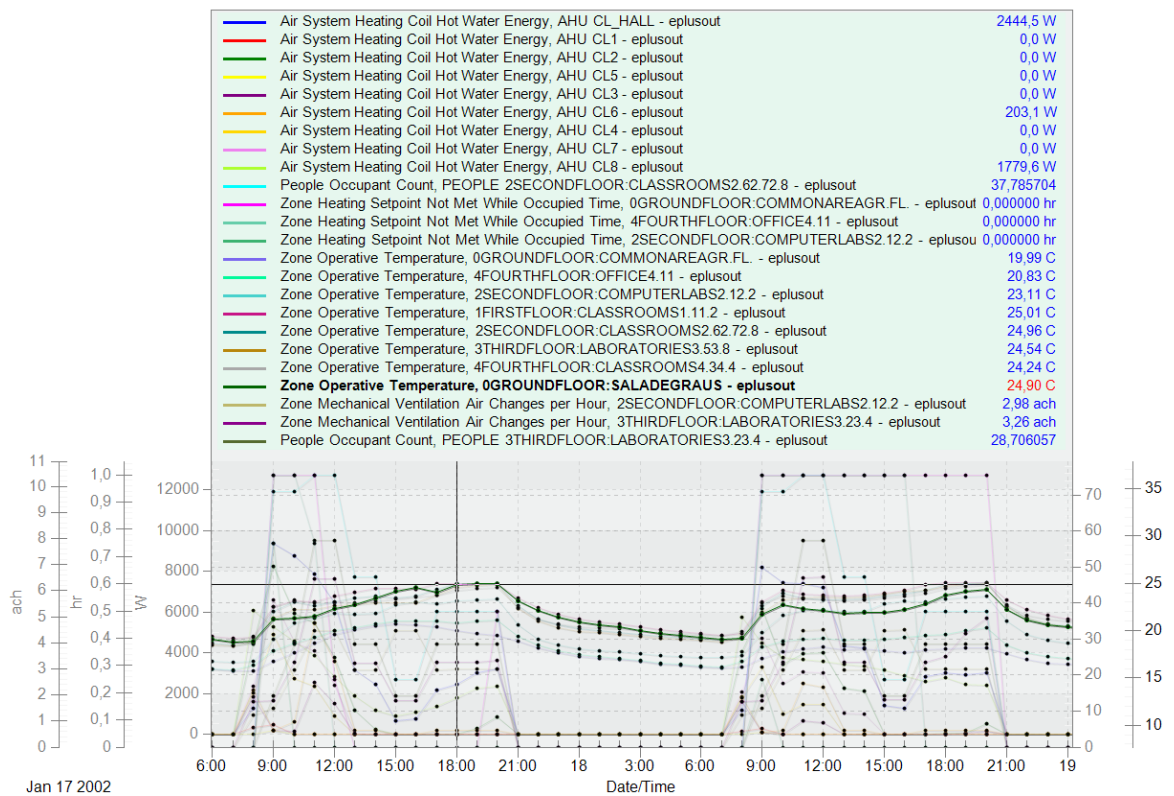
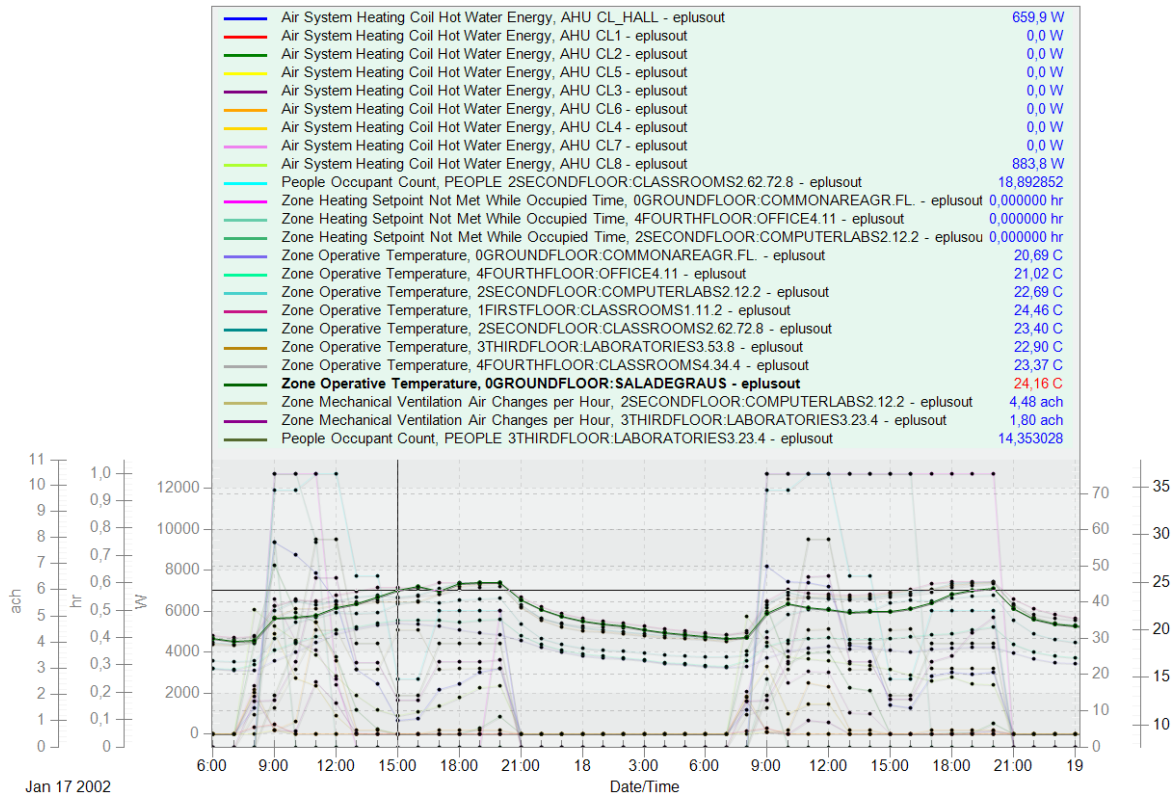
3.1.2. December 16th (8h, 9h, 15h and 18h)





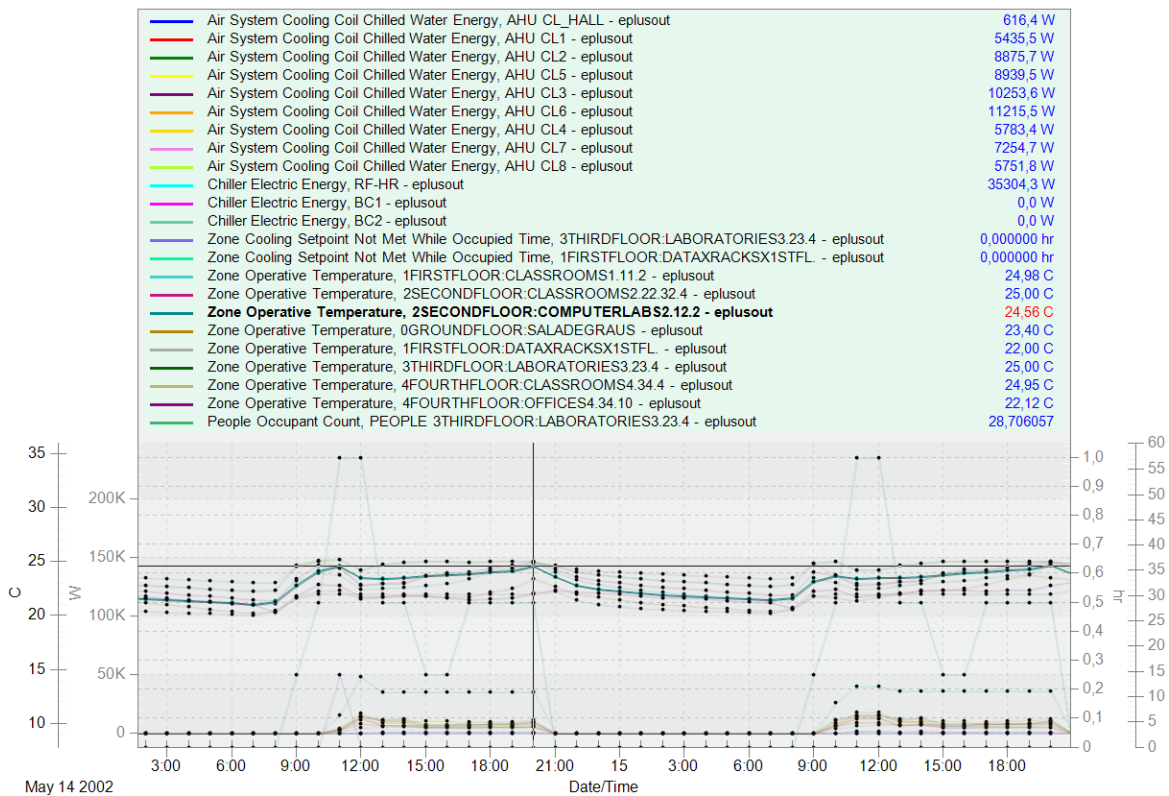
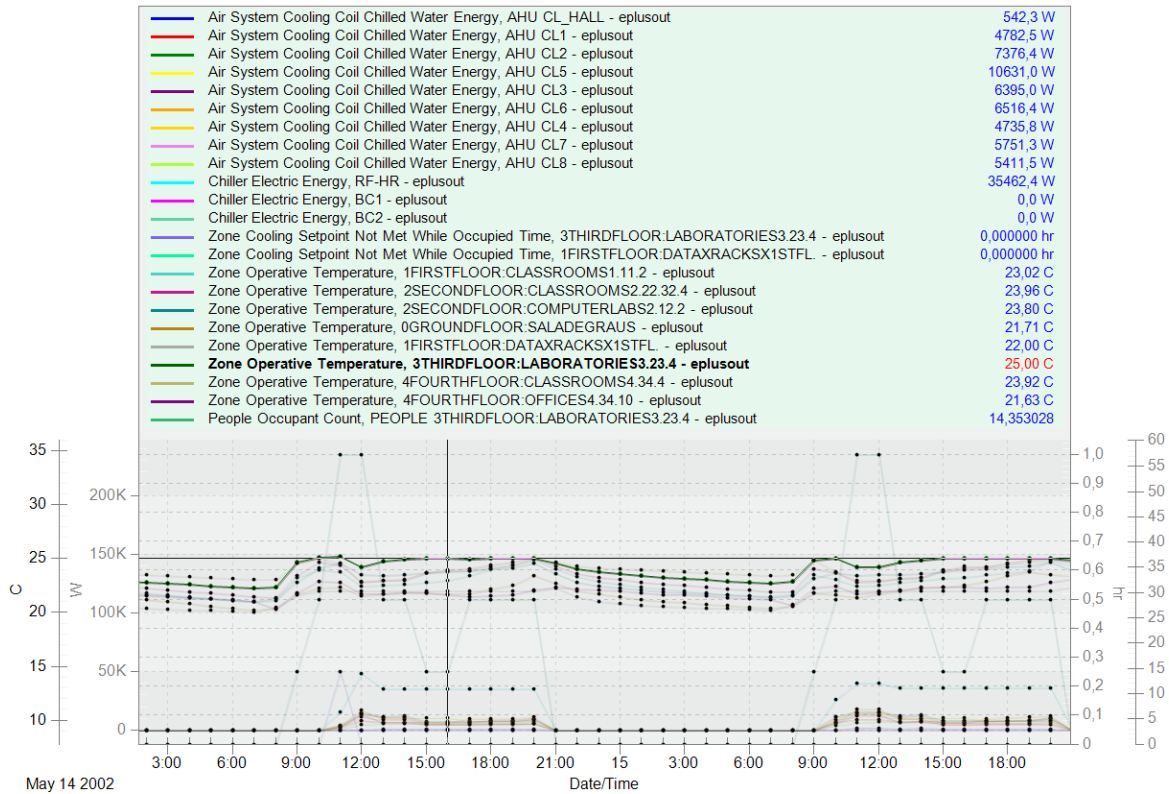
3.1.3. January 17th (8h, 9h, 15h and 18h)



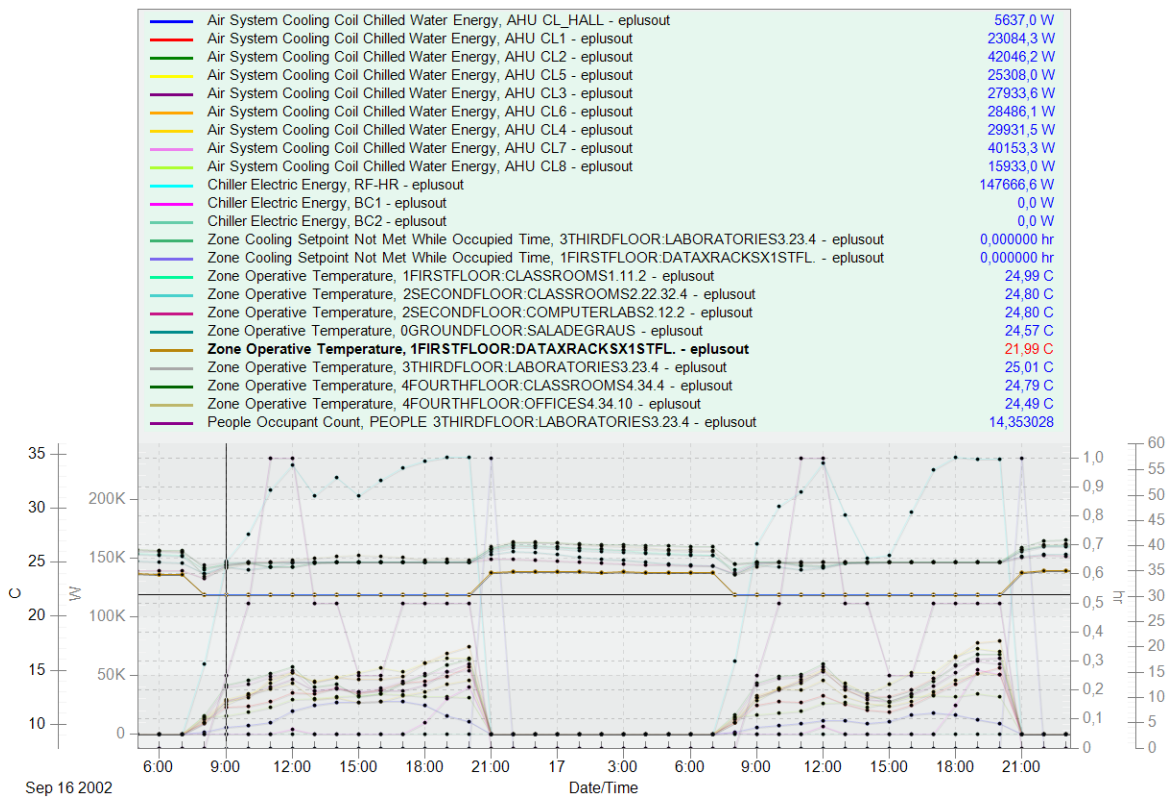
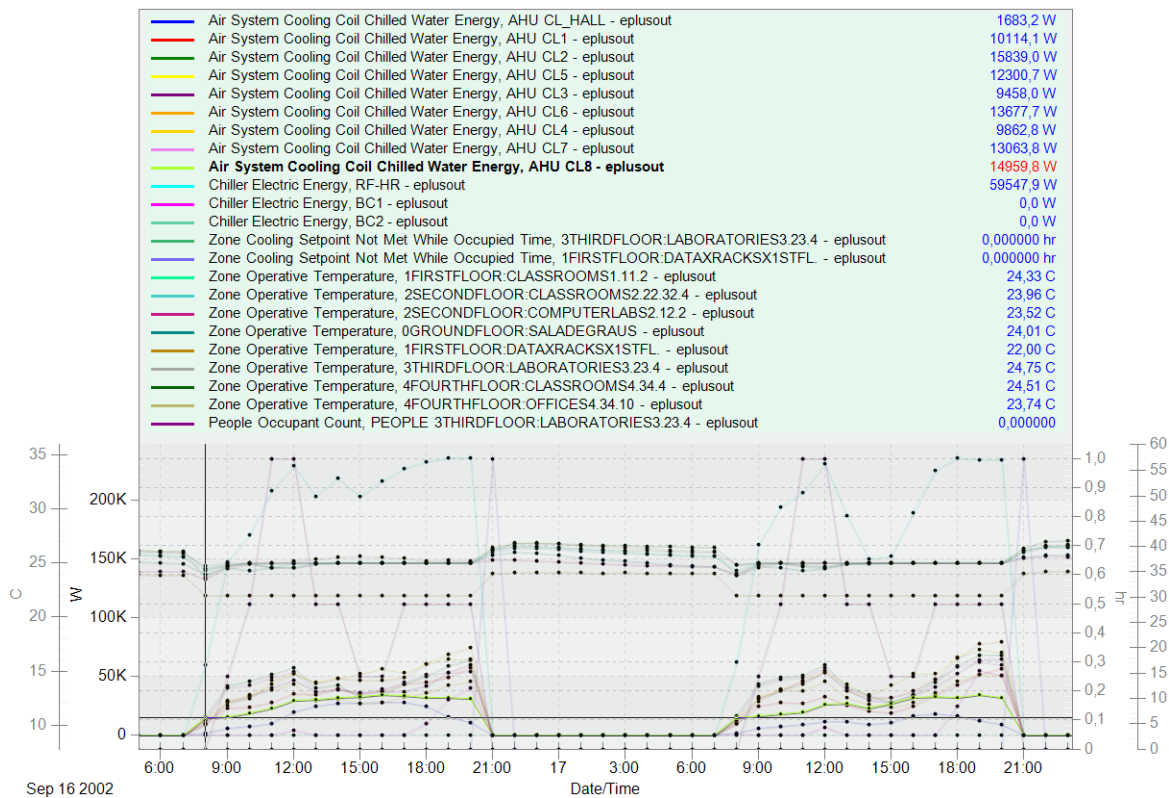


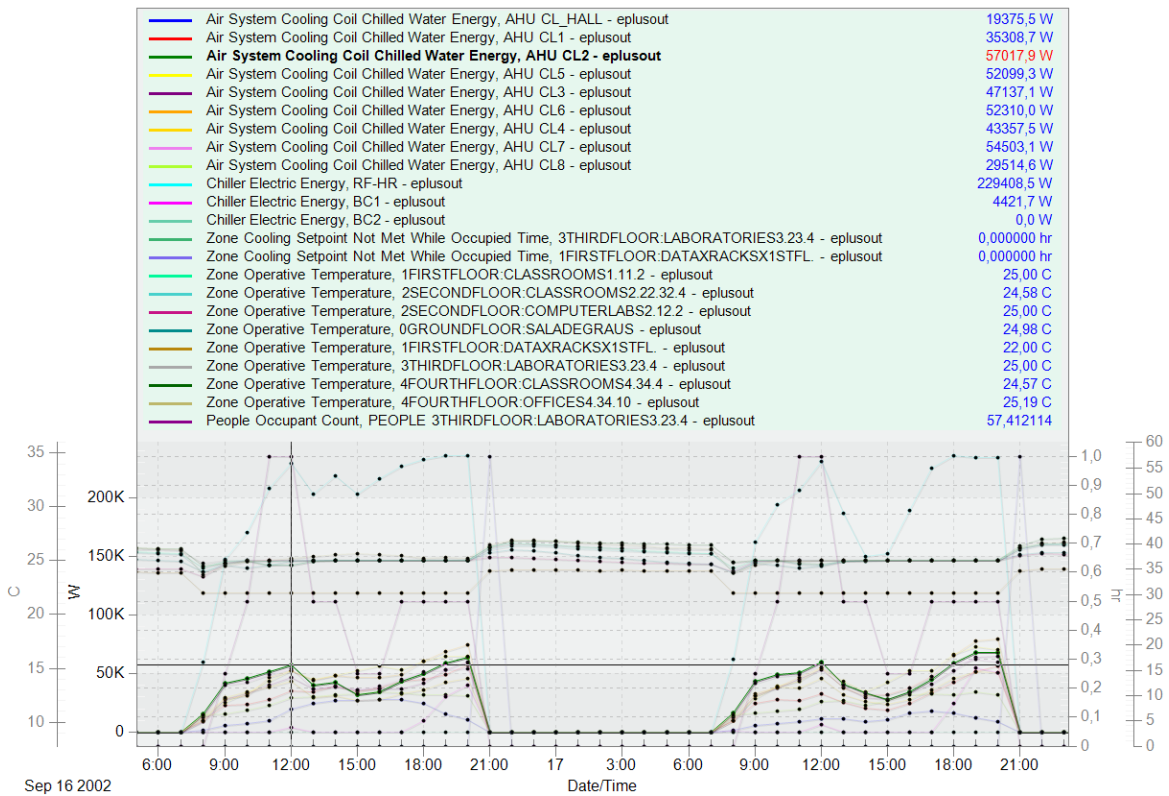
3.2. Cooling System

3.2.1. May 14th (16h and 20h)

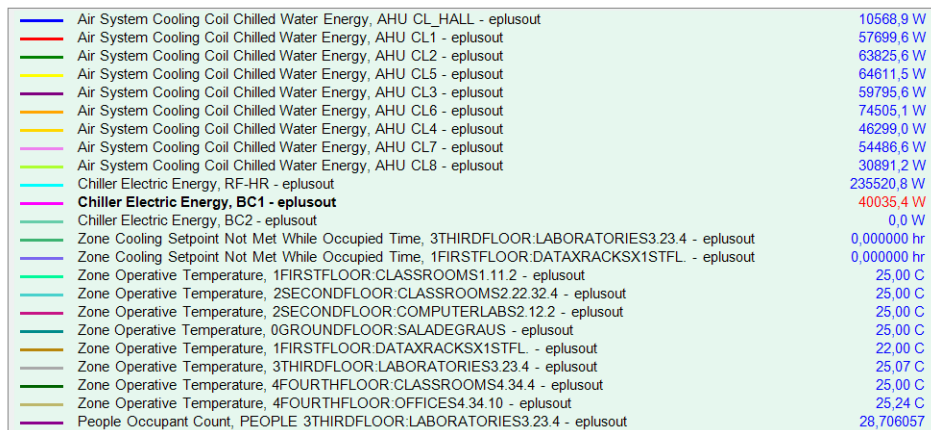


3.2.2. September 16th (8h, 9h, 12h and 20h)



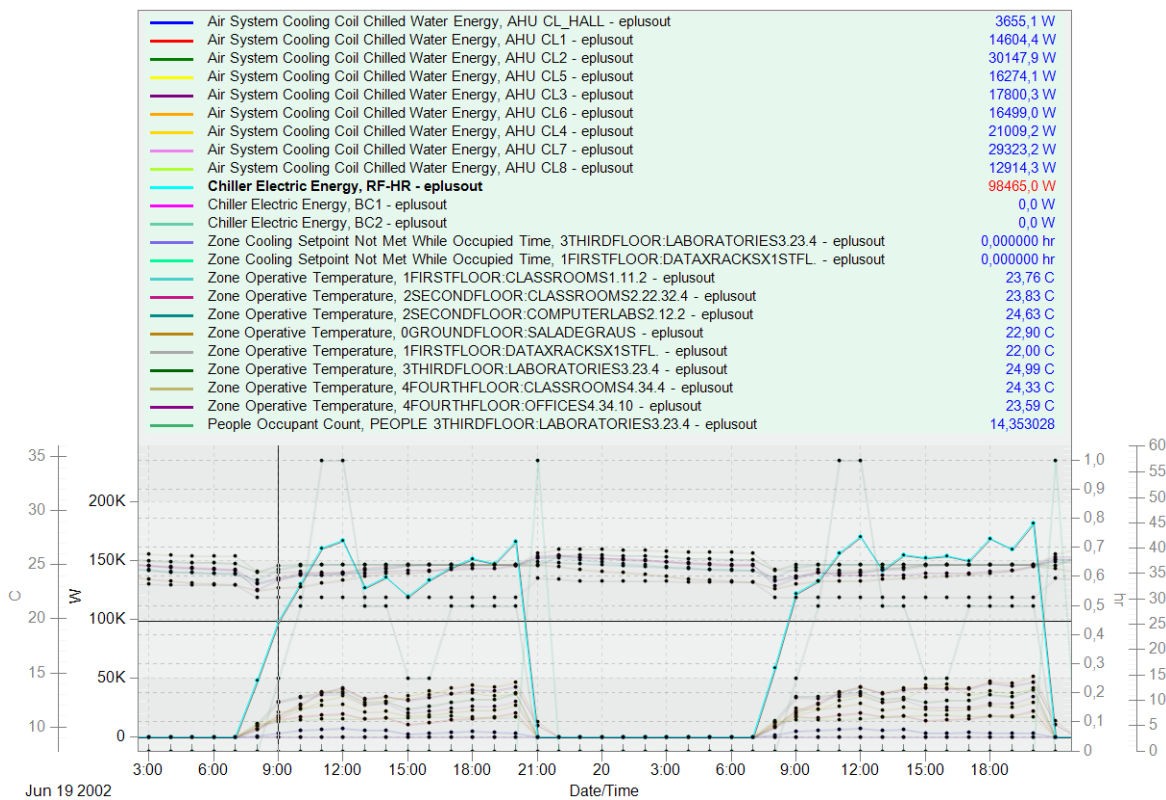
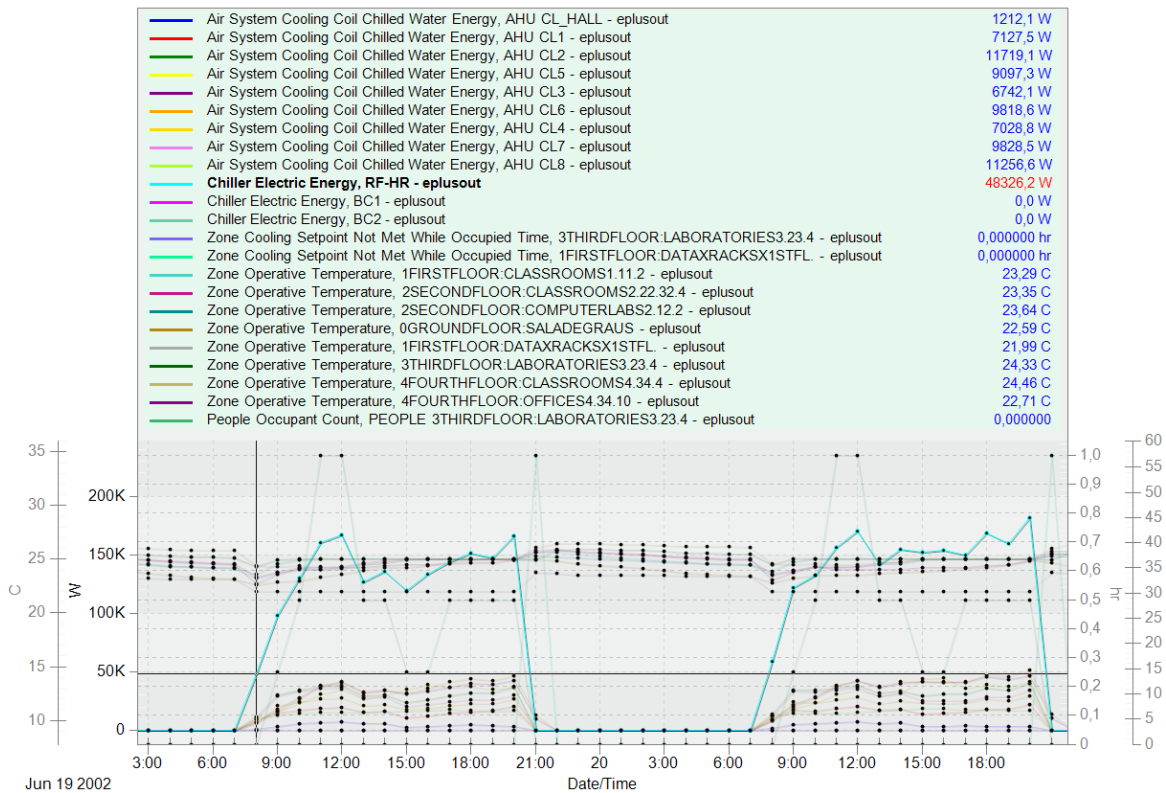


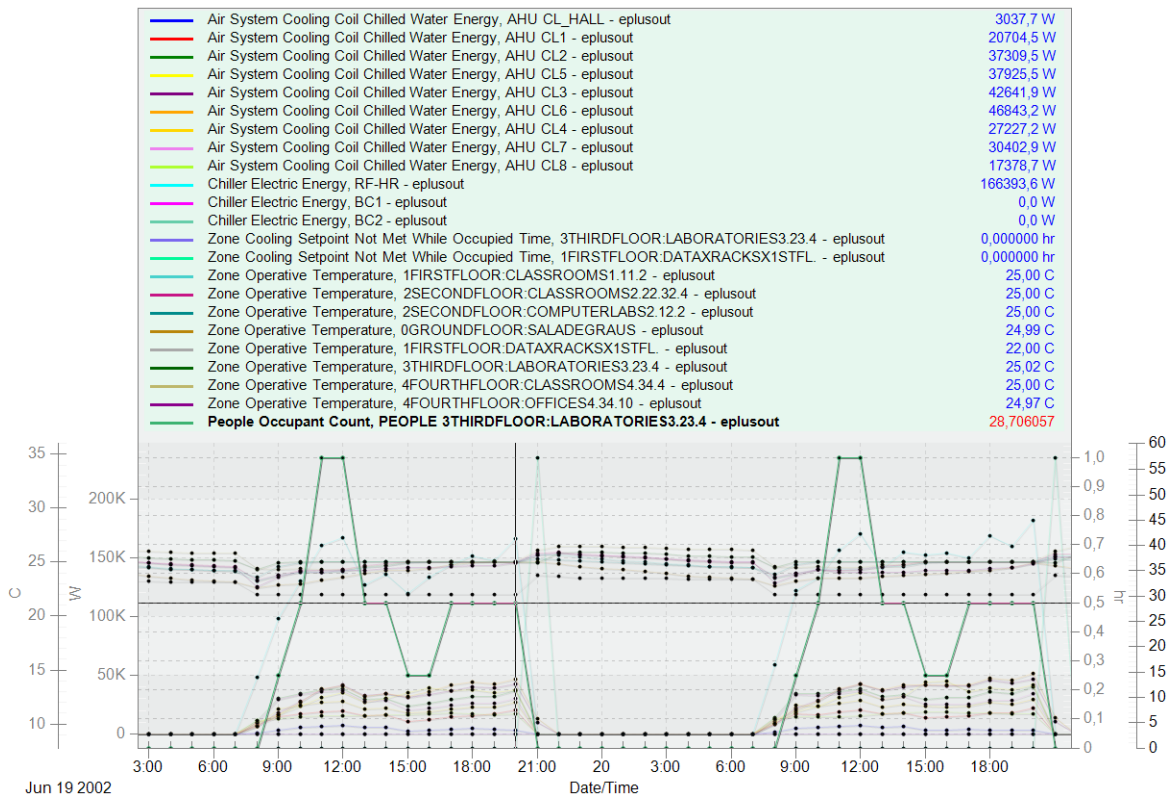
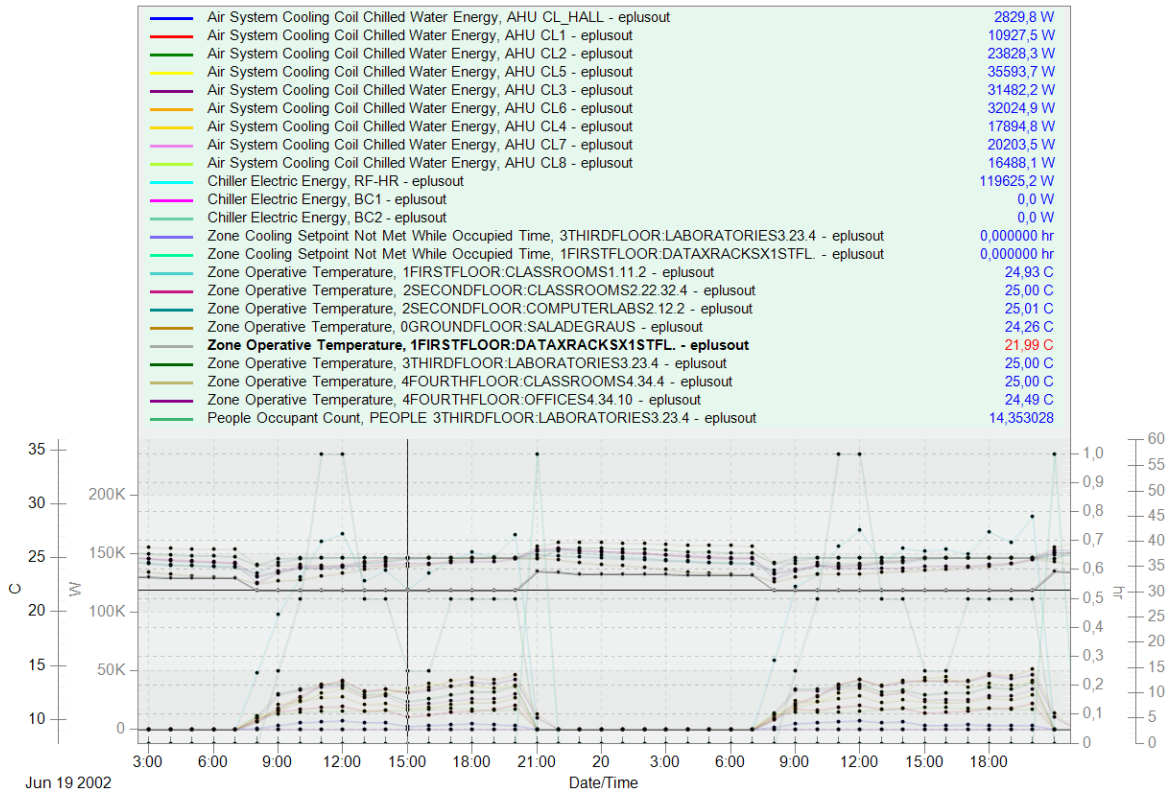
Sep 16 2002



Sep 16 2002

3.2.3. June 19th (8h, 9h, 15h and 20h)





4. Implementation of LED type luminaires

4.1. Current lighting system

4.1.1. Ground Floor

Ruta: S:\Delimitacion OBRAS EN PROCESO\LIB. AULLARIO BELLEVITGE\2015\PLANS ANOS W102892\ELI10\PLI\PLI_DO-06-03-13A.dwg



ELEMENTS D'IL·LUMINACIÓ		ELEMENTS D'IL·LUMINACIÓ		MECANISMES D'IL·LUMINACIÓ		IL·LUMINACIÓ D'EMERGÈNCIA	
ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ
	TIRA CONTINUA SUSPESA 2x 58 W		TIRA CONTINUA FLUORESCENT 3x 80 W + 2x 80 W		INTERRUPTOR ENCASTAT		PANTALLA ESTANCA IP-65 2x 36 W AMB KIT D'EMERGÈNCIA
	LLUMINÀRIA SUSPESA 1x 36 W		TIRA CONTINUA FLUORESCENT ENCASTADA A FALS SOSTRE 1x 35 W		CONMUTADOR ENCASTAT		APLIC 2x 80 W TC-L AMB KIT D' EMERGÈNCIA
	TIRA CONTINUA SUSPESA 2x 58 W REGULABLE		LLUMINÀRIES EN TIRA CONTINUA ENCASTADES A PARET. 1x 38 W		INTERRUPTOR DE SUPERFÍCIE		LLUM D'EMERGÈNCIA AUTÒNOMA DE SUPERFÍCIE, EN PARET.
	LLUMINÀRIA SUSPESA 1x 36 W REGULABLE		DOBLE PROJECTOR 250 W (IL·LUCA) (MONTATGE EN POSICIÓ CENTRAL O OPOSADA)		CONMUTADOR DE SUPERFÍCIE		LLUM D'EMERGÈNCIA AUTÒNOMA DE SUPERFÍCIE, A SOSTRE.
	TIRA CONTINUA SUSPESA 1x 58 W PISARRIA		PROJECTOR 150 W + REFLECTOR MONTATGE A 4 m D'ALTURA (IL·LUCA)		INTERRUPTOR DE SUPERFÍCIE ESTANC		
	TIRA CONTINUA A SOSTRE 1x 58 W		APLIC PER ENCASTAR Q34, 6 W		POLSADOR DE SUPERFÍCIE ESTANC		
	FLUORESCENT 1x 36 W		DOWNLIGHT 2x 26 W		DETECTOR DE PRESENCIA EN PARET		
	PANTALLA ESTANCA IP-65 2x 36 W		PROJECTOR LLUM RÈTOL 150 W		INTERRUPTOR CREPUSCULAR		
	PANTALLA ESTANCA IP-65 2x 36 W REGULABLE		BANYADOR DE PARET HIT-DE 70 W		SONDA DE NIVEL LUMINIC (INSTAL·LADA DINS LA LLUMINÀRIA)		
	TIRA CONTINUA FLUORESCENT 3x 54 W + 2x 80 W						

PLÀNOL
AS BUILT

01	04-10-2013	AS BUILT	C. VERDUGO	M. LARGO
00	19-09-2012	CREACIÓ	C. PEREZ	E. FERNÁNDEZ
No.	Data	Descripció	Nom	Revisat

Cliant: UNIVERSITAT DE BARCELONA

IMPULSA ORTÍZ
U.T.E. AULARI
BELLVITGE

Assumpte:
AMPLIACIÓ DE L'AULARI
DEL CAMPUS DE BELLVITGE

Denominació:
planta baixa
INSTAL·LACIONS ELÈCTRIQUES
ENLLUMENAT

Codi plànol:
ELI010

Nom arxiu:
W102892-ELI010-PL-01_DO-06-03-13A.DWG

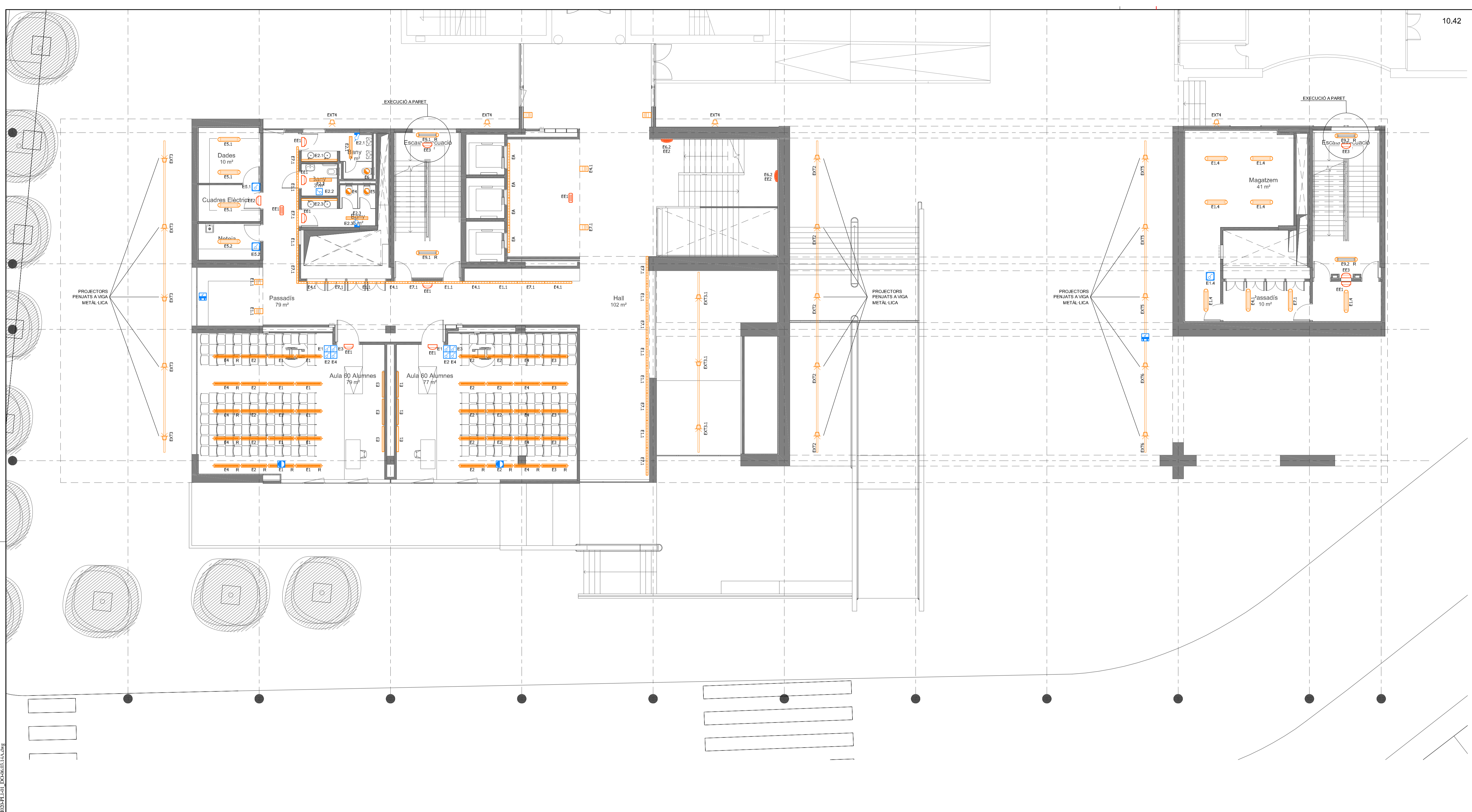
A1
A3

1/100
1/200

Cib: AGF-BASE-01.ctb

Pàg. 1 de 1

4.1.2. First Floor



ELEMENTS D'IL·LUMINACIÓ		ELEMENTS D'IL·LUMINACIÓ		MECANISMES D'IL·LUMINACIÓ		IL·LUMINACIÓ D'EMERGENCIA	
ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ
	TIRA CONTINUA SUSPESA 2x 58 W		TIRA CONTINUA FLUORESCENT 3x 80 W + 2x 80 W		INTERRUPTOR ENCASTAT		PANTALLA ESTANCA IP-65 2x 36 W AMB KIT D'EMERGENCIA
	LLUMINÀRIA SUSPESA 1x 36 W		TIRA CONTINUA FLUORESCENT ENCASTADA A FALS SOSTRE 1x 35 W		CONMUTADOR ENCASTAT		APLIC 2x 80 W TC-L AMB KIT D' EMERGENCIA
	TIRA CONTINUA SUSPESA 2x 58 W REGULABLE		LLUMINÀRIES EN TIRA CONTINUA ENCASTADES A PARET. 1x 38 W		INTERRUPTOR DE SUPERFICIE		LLUM D'EMERGENCIA AUTÒNOMA DE SUPERFICIE, EN PARET.
	LLUMINÀRIA SUSPESA 1x 36 W REGULABLE		DOBLE PROJECTOR 250 W (IL·LUCA) (MONTATGE EN POSICIÓ CENTRAL O OPOSADA)		CONMUTADOR DE SUPERFICIE		LLUM D'EMERGENCIA AUTÒNOMA DE SUPERFICIE, A SOSTRE.
	TIRA CONTINUA SUSPESA 1x 58 W PISARRA		PROJECTOR 150 W + REFLECTOR MONTATGE A 4 m DE ALTURA (IL·LUCA)		INTERRUPTOR DE SUPERFICIE ESTANC		
	TIRA CONTINUA A SOSTRE 1x 58 W		APLIC PER ENCASTAR Q34, 6 W		POLSADOR DE SUPERFICIE ESTANC		
	FLUORESCENT 1x 36 W		DOWNLIGHT 2x 26 W		DETECTOR DE PRESENCIA EN PARET		
	PANTALLA ESTANCA IP-65 2x 36 W		PROJECTOR LLUM RÈTOL 150 W		INTERRUPTOR CREPUSCULAR		
	PANTALLA ESTANCA IP-65 2x 36 W REGULABLE		BANYADOR DE PARET HIT-DE 70 W		SONDA DE NIVEL LUMINIC (INSTAL·LADES DINS LA LLUMINÀRIA)		
	TIRA CONTINUA FLUORESCENT 3x 54 W + 2x 80 W						

**PLÀNOL
AS BUILT**

No.	Data	Descripció	Nom	Revisat
01	26-09-2013	AS BUILT	C.VERDUGO	M.LARGO
00	19-09-2012	CREACIÓ	C.PÉREZ	E.FERNÁNDEZ

Cient:

IMPULSA
U.T.E. AULARI
BELLVITGE

Assumpte:
AMPLIACIÓ DE L'AULARI
DEL CAMPUS DE BELLVITGE

Denominació:
INSTAL·LACIONS ELÈCTRIQUES
ENLLUMENAT

Codi plànol:
ELI020

Nombre arxiu:
W102892-ELI020-PL1-01_DO-06.03.14A.DWG

A1
A3

1/100
1/200

Cib: AGF-BASE-01.ctb

Pàg. 1 de 1

4.1.3. Second Floor



ELEMENTS D'IL·LUMINACIÓ		ELEMENTS D'IL·LUMINACIÓ		MECANISMES D'IL·LUMINACIÓ		IL·LUMINACIÓ D'EMERGENCIA	
ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ
	TIRA CONTINUA SUSPESA 2x 58 W		TIRA CONTINUA FLUORESCENT 3x 80 W + 2x 80 W		INTERRUPTOR ENCASTAT		PANTALLA ESTANCA IP-65 2x 36 W AMB KIT D'EMERGENCIA
	LLUMINÀRIA SUSPESA 1x 36 W		TIRA CONTINUA FLUORESCENT ENCASTADA A FALS SOSTRE 1x 35 W		CONMUTADOR ENCASTAT		APLIC 2x 80 W TC-L AMB KIT D' EMERGENCIA
	TIRA CONTINUA SUSPESA 2x 58 W REGULABLE		LLUMINÀRIES EN TIRA CONTINUA ENCASTADES A PARET. 1x 38 W		INTERRUPTOR DE SUPERFICIE		LLUM D'EMERGENCIA AUTÒNOMA DE SUPERFICIE, EN PARET.
	LLUMINÀRIA SUSPESA 1x 36 W REGULABLE		DOBLE PROJECTOR 250 W (IL·LUCA) (MONTATGE EN POSICIÓ CENTRAL O OPOSADA)		CONMUTADOR DE SUPERFICIE		LLUM D'EMERGENCIA AUTÒNOMA DE SUPERFICIE, A SOSTRE.
	TIRA CONTINUA SUSPESA 1x 58 W PISARRA		PROJECTOR 150 W + REFLECTOR MONTATGE A 4 m DE ALTURA (IL·LUCA)		INTERRUPTOR DE SUPERFICIE ESTANC		
	TIRA CONTINUA A SOSTRE 1x 58 W		APLIC PER ENCASTAR Q34, 6 W		POLSADOR DE SUPERFICIE ESTANC		
	FLUORESCENT 1x 36 W		DOWNLIGHT 2x 26 W		DETECTOR DE PRESENCIA EN PARET		
	PANTALLA ESTANCA IP-65 2x 36 W		PROJECTOR LLUM RÈTOL 150 W		INTERRUPTOR CREPUSCULAR		
	PANTALLA ESTANCA IP-65 2x 36 W REGULABLE		BANYADOR DE PARET HIT-DE 70 W		SONDA DE NIVEL LUMINIC (INSTAL·LADA DINS LA LLUMINÀRIA)		
	TIRA CONTINUA FLUORESCENT 3x 54 W + 2x 80 W						

**PLÀNOL
AS BUILT**

01	03-10-2013	AS BUILT	C.VERDUGO	M.LARGO
00	19-09-2012	CREACIÓ	C.PEREZ	E.FERNÁNDEZ
No.	Data	Descripció	Nom	Revisat

Cient:

Assumpte:
AMPLIACIÓ DE L'AULARI
DEL CAMPUS DE BELLVITGE

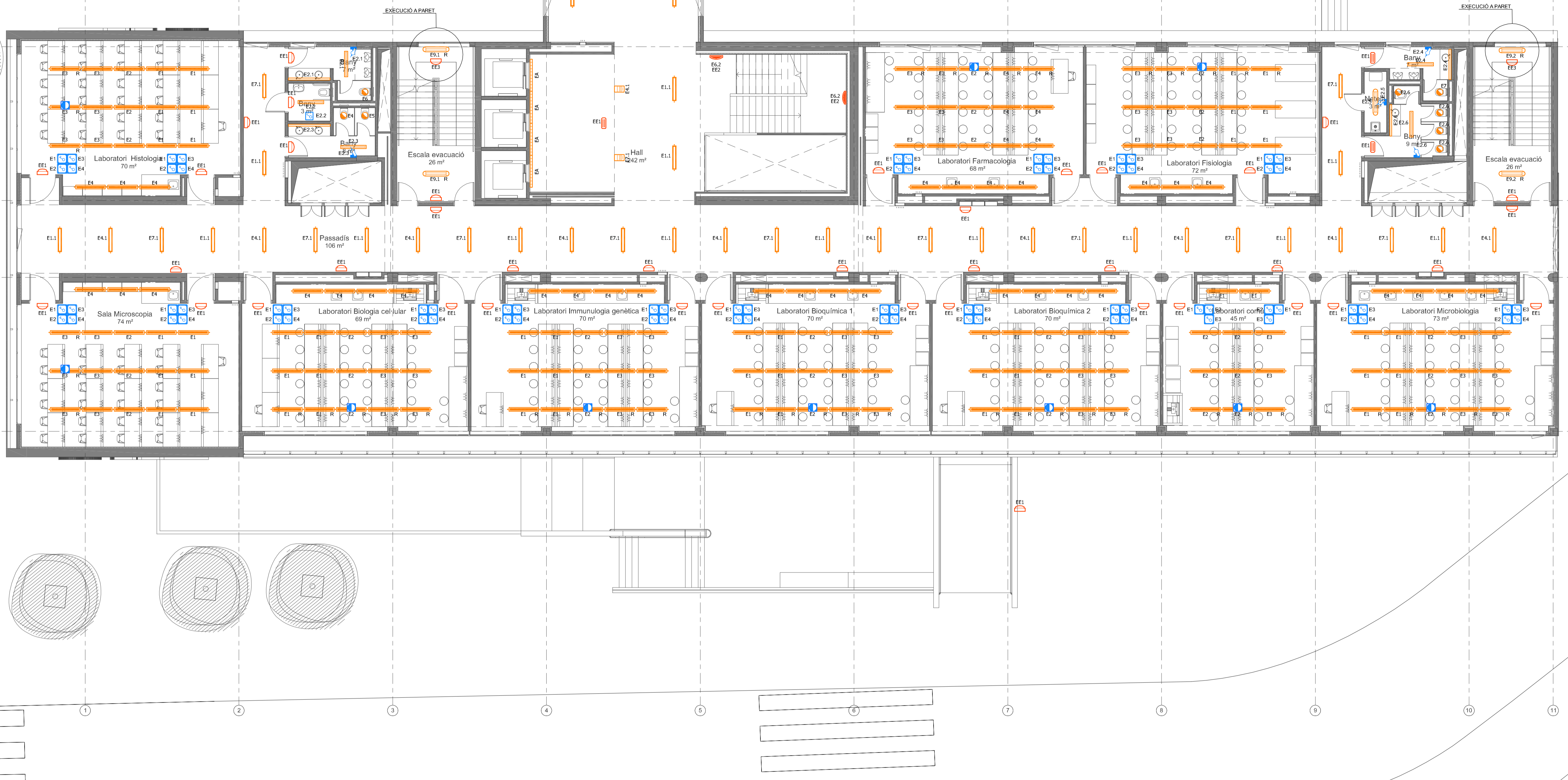
Denominació: INSTAL·LACIONS ELÈCTRIQUES ENLLUMENAT	Codi plànol: ELI030
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Nom arxíu: W102892-ELI030-PL2-01_DO-06.03.15A.DWG	A1 A3	1/100 1/200
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Cib: AGF-BASE-01.ctb Pàg. 1 de 1

Ruta: S:\Delimitacion OBRAS EN PROCESO\LIB. AULARIO BELLVITGE\W102892-01-PL2-01-ANOS W102892-ELI030-PL2-01_DO-06.03.15A.dwg

4.1.4. Third Floor



ELEMENTS D'IL·LUMINACIÓ		ELEMENTS D'IL·LUMINACIÓ		MECANISMES D'IL·LUMINACIÓ		IL·LUMINACIÓ D'EMERGENCIA	
ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ
	TIRA CONTINUA SUSPESA 2x 58 W		TIRA CONTINUA FLUORESCENT 3x 80 W + 2x 80 W		INTERRUPTOR ENCASTAT		PANTALLA ESTANCA IP-65 2x 36 W AMB KIT D'EMERGENCIA
	LLUMINÀRIA SUSPESA 1x 36 W		TIRA CONTINUA FLUORESCENT ENCASTADA A FALS SOSTRE 1x 35 W		CONMUTADOR ENCASTAT		APLIC 2x 80 W TC-L AMB KIT D' EMERGENCIA
	TIRA CONTINUA SUSPESA 2x 58 W REGULABLE		LLUMINÀRIES EN TIRA CONTINUA ENCASTADES A PARET. 1x 38 W		INTERRUPTOR DE SUPERFICIE		LLUM D'EMERGENCIA AUTÒNOMA DE SUPERFICIE, EN PARET.
	LLUMINÀRIA SUSPESA 1x 36 W REGULABLE		DOBLE PROJECTOR 250 W (LLUÇA) (MONTATGE EN POSICIÓ CENTRAL O OPOSADA)		CONMUTADOR DE SUPERFICIE		LLUM D'EMERGENCIA AUTÒNOMA DE SUPERFICIE, A SOSTRE.
	TIRA CONTINUA SUSPESA 1x 58 W PISARRA		PROJECTOR 150 W + REFLECTOR MONTATGE A 4 m D'ALTURA (LLUÇA)		INTERRUPTOR DE SUPERFICIE ESTANC		
	TIRA CONTINUA A SOSTRE 1x 58 W		APLIC PER ENCASTAR Q34, 6 W		POLSADOR DE SUPERFICIE ESTANC		
	FLUORESCENT 1x 36 W		DOWNLIGHT 2x 26 W		DETECTOR DE PRESENCIA EN PARET		
	PANTALLA ESTANCA IP-65 2x 36 W		PROJECTOR LLUM RÈTOL 150 W		INTERRUPTOR CREPUSCULAR		
	PANTALLA ESTANCA IP-65 2x 36 W REGULABLE		BANYADOR DE PARET HIT-DE 70 W		SONDA DE NIVEL LUMINIC (INSTAL·LADA DINS LA LLUMINÀRIA)		
	TIRA CONTINUA FLUORESCENT 3x 54 W + 2x 80 W						

**PLÀNOL
AS BUILT**

No.	Data	Descripció	Nom	Revisat
01	03-10-2013	AS BUILT	C.VERDUGO	M.LARGO
00	19-09-2012	CREACIÓ	C.PÉREZ	E.FERNÁNDEZ

Cliant: UNIVERSITAT DE BARCELONA

IMPULSA ORTIZ
U.T.E. AULARI
BELLVITGE

Assumpte:
AMPLIACIÓ DE L'AULARI
DEL CAMPUS DE BELLVITGE

Denominació:
INSTAL·LACIONS ELÈCTRIQUES
ENLLUMENAT

Codi plànol:
ELI040

Nom arxiu:
W102892-ELI040-PL3-00_DO-06.03.16A.DWG

A1
A3

1/100
1/200

Cib: AGF-BASE-01.ctb

Pàg. 1 de 1

4.1.5. Fourth Floor



ELEMENTS D'IL·LUMINACIÓ		ELEMENTS D'IL·LUMINACIÓ		MECANISMES D'IL·LUMINACIÓ		IL·LUMINACIÓ D'EMERGENCIA	
ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ
	TIRA CONTINUA SUSPESA 2x 58 W		TIRA CONTINUA FLUORESCENT 3x 80 W + 2x 80 W		INTERRUPTOR ENCASTAT		PANTALLA ESTANCA IP-65 2x 36 W AMB KIT D'EMERGENCIA
	LLUMINÀRIA SUSPESA 1x 36 W		TIRA CONTINUA FLUORESCENT ENCASTADA A FALS SOSTRE 1x 35 W		CONMUTADOR ENCASTAT		APLIC 2x 80 W TC-L AMB KIT D' EMERGENCIA
	TIRA CONTINUA SUSPESA 2x 58 W REGULABLE		LLUMINÀRIES EN TIRA CONTINUA ENCASTADES A PARET. 1x 38 W		INTERRUPTOR DE SUPERFICIE		LLUM D'EMERGENCIA AUTÒNOMA DE SUPERFICIE, EN PARET.
	LLUMINÀRIA SUSPESA 1x 36 W REGULABLE		DOBLE PROJECTOR 250 W (IL·LUCA) (MONTATGE EN POSICIÓ CENTRAL O OPOSADA)		CONMUTADOR DE SUPERFICIE		LLUM D'EMERGENCIA AUTÒNOMA DE SUPERFICIE, A SOSTRE.
	TIRA CONTINUA SUSPESA 1x 58 W PISARRIA		PROJECTOR 150 W + REFLECTOR MONTATGE A 4 m DE ALTURA (IL·LUCA)		INTERRUPTOR DE SUPERFICIE ESTANC		
	TIRA CONTINUA A SOSTRE 1x 58 W		APLIC PER ENCASTAR Q34, 6 W		POLSADOR DE SUPERFICIE ESTANC		
	FLUORESCENT 1x 36 W		DOWNLIGHT 2x 26 W		DETECTOR DE PRESENCIA EN PARET		
	PANTALLA ESTANCA IP-65 2x 36 W		PROJECTOR LLUM RÈTOL 150 W		INTERRUPTOR CREPUSCULAR		
	PANTALLA ESTANCA IP-65 2x 36 W REGULABLE		BANYADOR DE PARET HIT-DE 70 W		SONDA DE NIVEL LUMINIC (INSTAL·LADA DINS LA LLUMINÀRIA)		
	TIRA CONTINUA FLUORESCENT 3x 54 W + 2x 80 W						

**PLÀNOL
AS BUILT**

01	03-10-213	AS BUILT	C.VERDUGO	M.LARGO
00	19-09-2012	CREACIÓ	C.PEREZ	E.FERNÁNDEZ
No.	Data	Descripció	Nom	Revisat



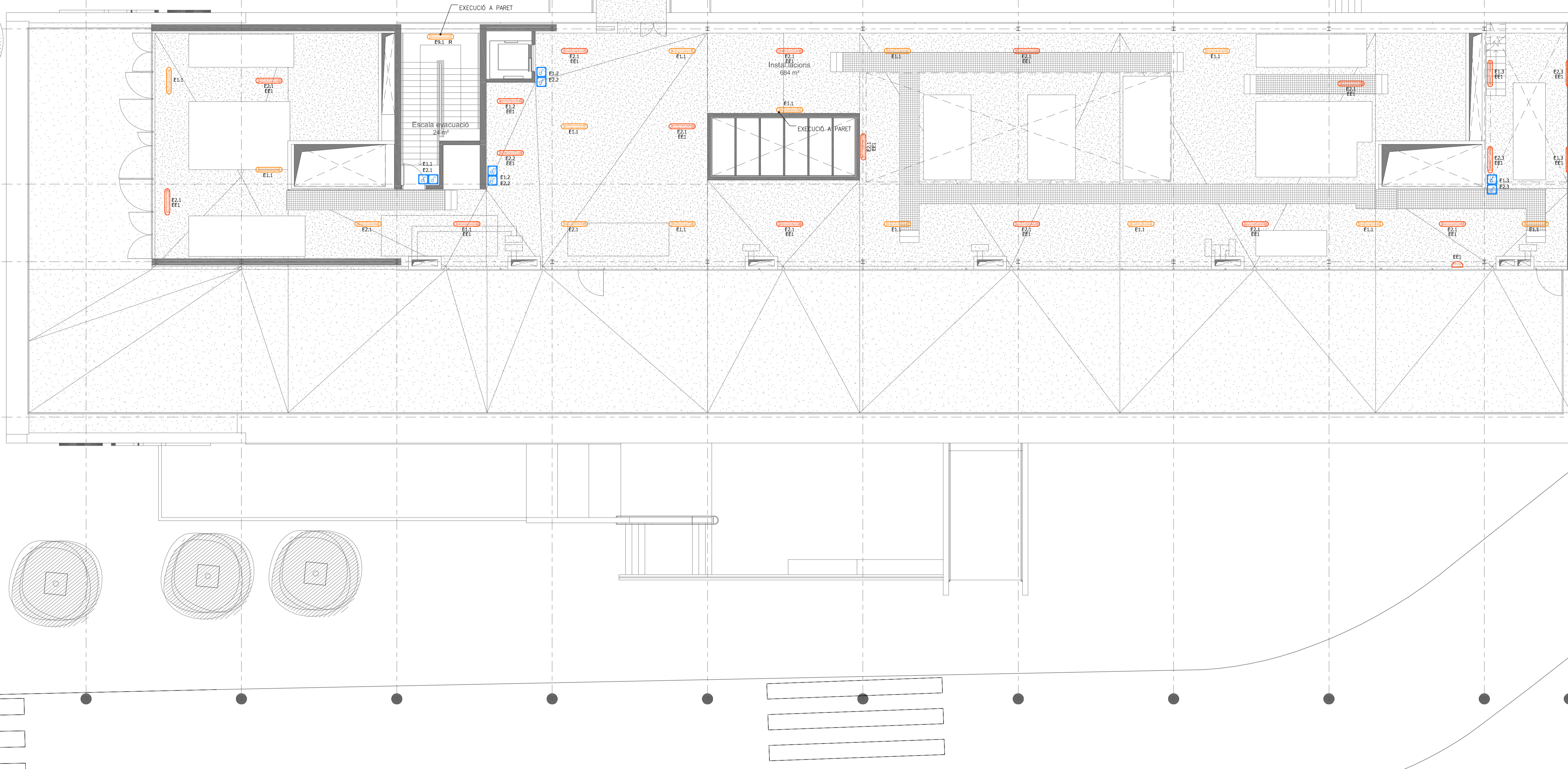
Assumpte:
AMPLIACIÓ DE L'AULARI
DEL CAMPUS DE BELLVITGE

Denominació: INSTAL·LACIONS ELÈCTRIQUES ENLLUMENAT	Codi plànol: ELI050
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Nom arxíu: W102892-ELI050-PL4-01_DO-06.03.17A.DWG	A1 A3	1/100 1/200
Cib:	AGF-BASE-01.ctb	Pàg. 1 de 1

Rut: S:\Delimitacion OBRAS EN PROCESO\LIB. AULARIO BELLVITGE\W102892-015-PL4-01-ANOS W102892-ELI050-PL4-01_DO-06.03.17A.dwg

4.1.6. Fifth Floor



ELEMENTS D'IL·LUMINACIÓ		ELEMENTS D'IL·LUMINACIÓ		MECANISMES D'IL·LUMINACIÓ		IL·LUMINACIÓ D'EMERGENCIA	
ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ	ELEMENT	DESCRIPCIÓ
	TIRA CONTINUA SUSPESA 2x 58 W		TIRA CONTINUA FLUORESCENT 3x 80 W + 2x 80 W		INTERRUPTOR ENCASTAT		PANTALLA ESTANCA IP-65 2x 36 W AMB KIT D'EMERGENCIA
	LLUMINÀRIA SUSPESA 1x 36 W		TIRA CONTINUA FLUORESCENT ENCASADA A FALS SOSTRE 1x 35 W		CONMUTADOR ENCASTAT		APLIC 2x 80 W TC-L AMB KIT D' EMERGENCIA
	TIRA CONTINUA SUSPESA 2x 58 W REGULABLE		LLUMINÀRIES EN TIRA CONTINUA ENCASADES A PARET. 1x 38 W		INTERRUPTOR DE SUPERFICIE		LLUM D'EMERGENCIA AUTÒNOMA DE SUPERFICIE, EN PARET.
	LLUMINÀRIA SUSPESA 1x 36 W REGULABLE		DOBLE PROJECTOR 250 W (IL·LUCA) (MONTATGE EN POSICIÓ CENTRAL O OPOSADA)		CONMUTADOR DE SUPERFICIE		LLUM D'EMERGENCIA AUTÒNOMA DE SUPERFICIE, A SOSTRE.
	TIRA CONTINUA SUSPESA 1x 58 W PISARRA		PROJECTOR 150 W + REFLECTOR MONTATGE A 4 m DE ALTURA (IL·LUCA)		INTERRUPTOR DE SUPERFICIE ESTANC		
	TIRA CONTINUA A SOSTRE 1x 58 W		APLIC PER ENCASTAR Q34, 6 W		POLSADOR DE SUPERFICIE ESTANC		
	FLUORESCENT 1x 36 W		DOWNLIGHT 2x 26 W		DETECTOR DE PRESENCIA EN PARET		
	PANTALLA ESTANCA IP-65 2x 36 W		PROJECTOR LLUM RÈTOL 150 W		INTERRUPTOR CREPUSCULAR		
	PANTALLA ESTANCA IP-65 2x 36 W REGULABLE		BANYADOR DE PARET HIT-DE 70 W		SONDA DE NIVEL LUMINIC (INSTAL·LADA DINS LA LLUMINÀRIA)		
	TIRA CONTINUA FLUORESCENT 3x 54 W + 2x 80 W						

**PLÀNOL
AS BUILT**

01	14-10-2013	AS BUILT	C. VERDUGO	M. LARGO
00	19-09-2012	CREACIÓ	C. PEREZ	E. FERNÁNDEZ
No.	Data	Descripció	Nom	Revisat

Cient:

IMPULSA **ORTIZ**

Assumpte:
 AMPLIACIÓ DE L'AULARI
 DEL CAMPUS DE BELLVITGE

Denominació:
 planta quinta
 INSTAL·LACIONS ELÈCTRIQUES
 ENLLUMENAT

Codi plànol:
ELI060

Nom arxíu:
 W102892-ELI060-PL5-01_DO-06.03.18A.DWG

A1
 A3

1/100
 1/200

Cib: AGF-BASE-01.ctb

Pàg. 1 de 1

Ruta: S:\Delimitacion OBRAS EN PROCESO\LIB. AULLARIO BELLEVITGE\W102892-015-06-03-18A.DWG\PL5-01_DO-06.03.18A.dwg

5. Implementation of Photovoltaic Panels

5.1. Atlas of solar radiation of Catalonia (Barcelona)

Radiació solar global diària sobre superfícies inclinades (MJ/m²/dia). Estació: Barcelona

Orientació: 0°													
Inclinació	Gen	Feb	Mar	Abr	Mai	Jun	Jul	Ago	Set	Oct	Nov	Des	Anual
0°	6,80	9,65	13,88	18,54	22,25	24,03	23,37	20,42	16,05	11,40	7,73	6,04	15,04
5°	7,70	10,56	14,72	19,15	22,58	24,21	23,63	20,93	16,85	12,32	8,66	6,94	15,71
10°	8,56	11,41	15,47	19,67	22,78	24,25	23,74	21,31	17,54	13,17	9,55	7,80	16,29
15°	9,37	12,19	16,14	20,07	22,84	24,13	23,70	21,59	18,13	13,95	10,38	8,61	16,78
20°	10,12	12,90	16,70	20,35	22,76	23,87	23,52	21,76	18,61	14,63	11,15	9,37	17,17
25°	10,81	13,52	17,17	20,51	22,60	23,48	23,24	21,80	18,98	15,23	11,85	10,07	17,46
30°	11,43	14,07	17,52	20,54	22,32	23,02	22,86	21,71	19,23	15,73	12,47	10,71	17,65
35°	11,97	14,52	17,77	20,45	21,90	22,43	22,34	21,48	19,36	16,13	13,01	11,28	17,73
40°	12,44	14,88	17,91	20,23	21,35	21,70	21,69	21,12	19,37	16,43	13,47	11,77	17,71
45°	12,83	15,15	17,94	19,89	20,67	20,84	20,90	20,63	19,26	16,63	13,85	12,19	17,58
50°	13,14	15,32	17,86	19,43	19,87	19,86	20,00	20,02	19,03	16,72	14,13	12,53	17,33
55°	13,36	15,40	17,67	18,85	18,95	18,77	18,97	19,29	18,68	16,71	14,32	12,78	16,98
60°	13,49	15,37	17,36	18,16	17,92	17,60	17,84	18,44	18,22	16,59	14,42	12,95	16,53
65°	13,53	15,25	16,95	17,36	16,83	16,41	16,71	17,48	17,65	16,36	14,42	13,04	16,00
70°	13,49	15,03	16,44	16,46	15,70	15,14	15,48	16,43	16,97	16,03	14,33	13,03	15,38
75°	13,35	14,72	15,83	15,47	14,48	13,78	14,18	15,35	16,19	15,60	14,14	12,94	14,67
80°	13,13	14,31	15,12	14,41	13,18	12,36	12,80	14,17	15,31	15,08	13,86	12,77	13,87
85°	12,82	13,81	14,32	13,29	11,82	10,93	11,35	12,93	14,34	14,45	13,50	12,51	13,00
90°	12,43	13,23	13,44	12,11	10,41	9,57	9,99	11,62	13,30	13,74	13,04	12,16	12,08

Orientació: 30°													
Inclinació	Gen	Feb	Mar	Abr	Mai	Jun	Jul	Ago	Set	Oct	Nov	Des	Anual
0°	6,80	9,65	13,88	18,54	22,25	24,03	23,37	20,42	16,05	11,40	7,73	6,04	15,04
5°	7,58	10,44	14,61	19,09	22,54	24,19	23,59	20,86	16,74	12,20	8,54	6,82	15,62
10°	8,32	11,17	15,25	19,55	22,70	24,20	23,67	21,24	17,33	12,93	9,30	7,56	16,12
15°	9,01	11,83	15,83	19,89	22,80	24,11	23,67	21,50	17,82	13,58	10,01	8,25	16,55
20°	9,64	12,42	16,32	20,11	22,75	23,92	23,55	21,62	18,23	14,15	10,66	8,90	16,88
25°	10,22	12,93	16,71	20,24	22,57	23,58	23,28	21,62	18,54	14,63	11,24	9,49	17,11
30°	10,73	13,37	17,00	20,28	22,31	23,13	22,91	21,55	18,74	15,02	11,75	10,02	17,25
35°	11,18	13,72	17,18	20,19	21,94	22,61	22,46	21,35	18,82	15,32	12,19	10,49	17,30
40°	11,55	13,99	17,26	19,98	21,44	21,95	21,87	21,02	18,79	15,52	12,55	10,89	17,25
45°	11,85	14,17	17,24	19,65	20,81	21,17	21,15	20,56	18,64	15,63	12,83	11,21	17,09
50°	12,08	14,26	17,10	19,22	20,10	20,31	20,35	20,01	18,39	15,64	13,03	11,47	16,84
55°	12,22	14,26	16,90	18,73	19,33	19,39	19,50	19,39	18,07	15,56	13,14	11,65	16,52
60°	12,29	14,18	16,60	18,12	18,44	18,36	18,53	18,66	17,63	15,39	13,17	11,76	16,10
65°	12,28	14,02	16,20	17,41	17,45	17,23	17,45	17,82	17,10	15,14	13,11	11,79	15,59
70°	12,19	13,76	15,69	16,59	16,40	16,10	16,35	16,87	16,45	14,78	12,98	11,74	15,00
75°	12,01	13,43	15,10	15,70	15,34	14,92	15,21	15,90	15,72	14,34	12,76	11,61	14,34
80°	11,77	13,00	14,41	14,79	14,20	13,67	14,00	14,88	14,88	13,80	12,46	11,41	13,61
85°	11,44	12,50	13,64	13,80	12,99	12,45	12,77	13,77	14,03	13,19	12,08	11,13	12,82
90°	11,04	11,93	12,84	12,74	11,86	11,23	11,58	12,61	13,11	12,49	11,62	10,79	11,98

5.2. Technical data of the chosen PV panel



*Black frame product can be provided upon request.

CS6K-265|270|275|280P

Canadian Solar's modules use the latest innovative cell technology, increasing module power output and system reliability, ensured by 15 years of experience in module manufacturing, well-engineered module design, stringent BOM quality testing, an automated manufacturing process and 100% EL testing.



25 years linear power output warranty



10 years product warranty on materials and workmanship

KEY FEATURES



Excellent module efficiency of up to: 17.11 %



High PTC rating of up to: 92.14 %



Outstanding low irradiance performance of up to: 96.5 %



IP68 junction box for long-term weather endurance



Heavy snow load up to 6000 Pa, wind load up to 4000 Pa *

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2008 / Quality management system

ISO 14001:2004 / Standards for environmental management system

OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / TÜV-Rheinland / CE / MCS / CEC AU / INMETRO / CQC

UL 1703 / IEC 61215 performance: CEC listed (US) / FSEC (US Florida)

UL 1703: CSA / IEC 61701 ED2: VDE / IEC 62716: VDE

UNI 9177 Reaction to Fire: Class 1

IEC 60068-2-68: SGS

Take-e-way



* Please contact your local Canadian Solar sales representative for the specific product certificates applicable in your market.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 21 GW deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

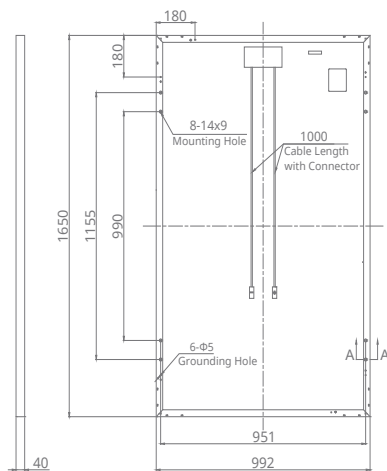
*For detailed information, please refer to the Installation Manual.

CANADIAN SOLAR INC.

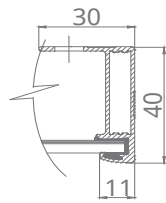
545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.canadiansolar.com, support@canadiansolar.com

ENGINEERING DRAWING (mm)

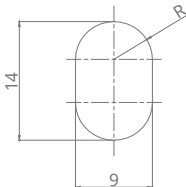
Rear View



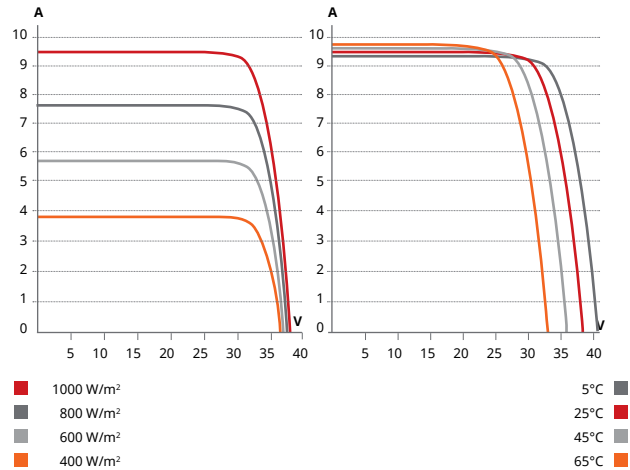
Frame Cross Section A-A



Mounting Hole



CS6K-280P / I-V CURVES



ELECTRICAL DATA | STC*

CS6K	265P	270P	275P	280P
Nominal Max. Power (Pmax)	265 W	270 W	275 W	280 W
Opt. Operating Voltage (Vmp)	30.6 V	30.8 V	31.0 V	31.3 V
Opt. Operating Current (Imp)	8.66 A	8.75 A	8.88 A	8.95 A
Open Circuit Voltage (Voc)	37.7 V	37.9 V	38.0 V	38.2 V
Short Circuit Current (Isc)	9.23 A	9.32 A	9.45 A	9.52 A
Module Efficiency	16.19%	16.50%	16.80%	17.11%
Operating Temperature	-40°C ~ +85°C			
Max. System Voltage	1000 V (IEC) or 1000 V (UL)			
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)			
Max. Series Fuse Rating	15 A			
Application Classification	Class A			
Power Tolerance	0 ~ + 5 W			

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA | NMOT*

CS6K	265P	270P	275P	280P
Nominal Max. Power (Pmax)	195 W	198 W	202 W	206 W
Opt. Operating Voltage (Vmp)	28.2 V	28.3 V	28.5 V	28.8 V
Opt. Operating Current (Imp)	6.92 A	7.00 A	7.08 A	7.14 A
Open Circuit Voltage (Voc)	35.1 V	35.3 V	35.4 V	35.6 V
Short Circuit Current (Isc)	7.45 A	7.53 A	7.63 A	7.69 A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

PERFORMANCE AT LOW IRRADIANCE

Outstanding performance at low irradiance, with an average relative efficiency of 96.5 % for irradiances between 200 W/m² and 1000 W/m² (AM 1.5, 25°C).

The aforesaid datasheet only provides the general information on Canadian Solar products and, due to the on-going innovation and improvement, please always contact your local Canadian Solar sales representative for the updated information on specifications, key features and certification requirements of Canadian Solar products in your region.

Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

MECHANICAL DATA

Specification	Data
Cell Type	Poly-crystalline, 6 inch
Cell Arrangement	60 (6×10)
Dimensions	1650×992×40 mm (65.0×39.1×1.57 in)
Weight	18.2 kg (40.1 lbs)
Front Cover	3.2 mm tempered glass
Frame Material	Anodized aluminium alloy
J-Box	IP68, 3 diodes
Cable	4.0 mm ² (IEC), 12 AWG (UL), 1000 mm (39.4 in)
Connector	T4 series
Per Pallet	27 pieces, 538 kg (1186.1 lbs)
Per Container (40' HQ)	756 pieces

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.41 % / °C
Temperature Coefficient (Voc)	-0.31 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature (NMOT)	43 ± 2 °C

PARTNER SECTION

