



Multi-Comfort  
House

# SATE PARED EXTERIOR – SUELO SOBRE SOTANO CALEFACTADO

V nbp-sp2012-1.0

**ISOVER**  
SAINT-GOBAIN

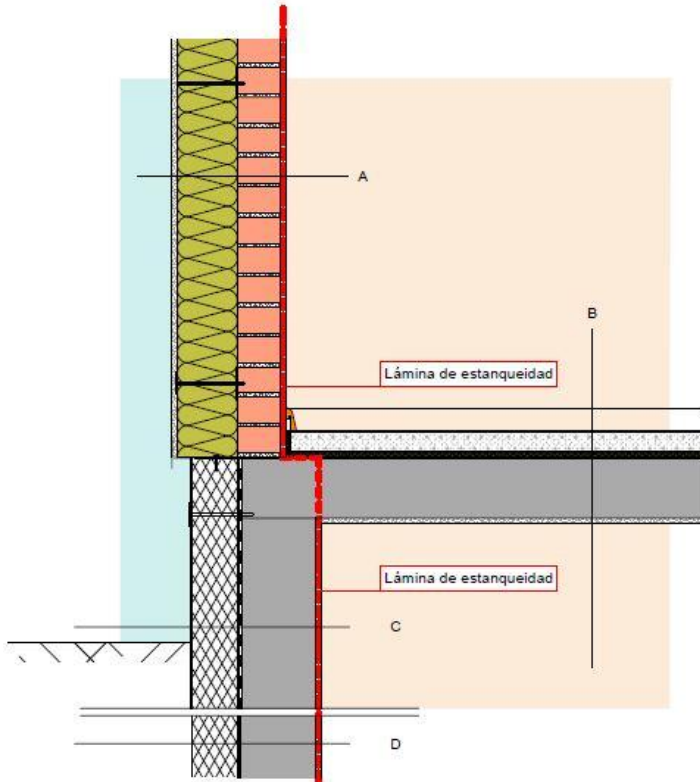
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# 1. DETALLE CONSTRUCTIVO

## A3

### SATE : Pared exterior - suelo sobre sótano calefactado



#### Sección A en mm

- 15 Revestimiento interior
- 115 Ladrillo cerámico perforado
- 100 Aislamiento ISOVER. Panel ISOFOX de lana de roca ( $\lambda=0,036$ )
- 15 Revestimiento exterior

#### Sección B en mm

- Acabado
- Capa de mortero
- Lámina de polietileno
- 15 Aislamiento mediante ARENA PF de ISOVER ( $\lambda=0,032$ )
- Losa de hormigón (333 Kg/m<sup>2</sup>)
- 12,5 Placa de yeso

#### Sección C en mm - Aislamiento del zócalo

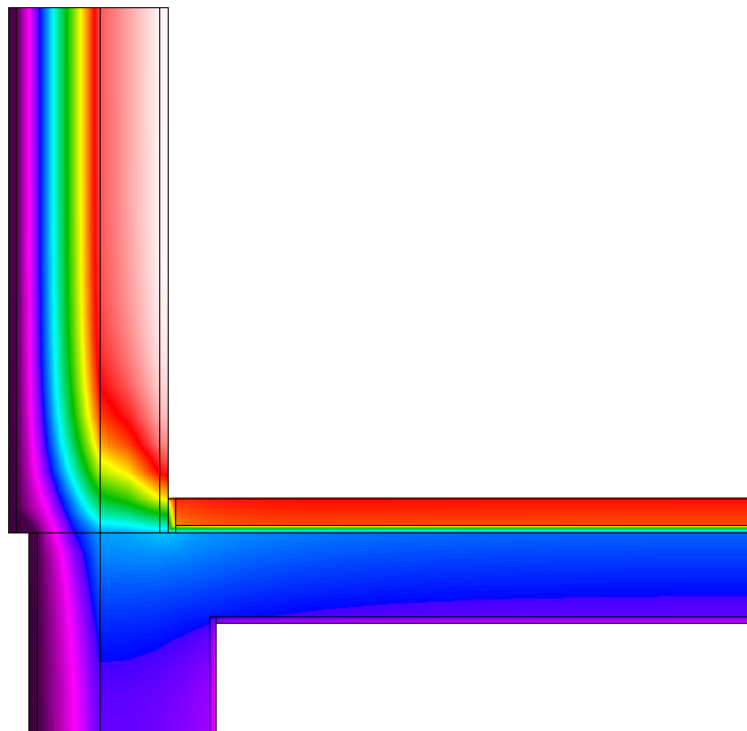
- 12,5 Placa de yeso
- Pared de hormigón
- Aislamiento resistente al agua con barrera de vapor
- 120 XPS ISOVER ( $\lambda=0,032$ )
- 15 Revestimiento exterior

#### Sección D en mm - Aislamiento perimetral

- 15 Revestimiento interno
- 120 Pared de hormigón
- Aislamiento resistente al agua con barrera de vapor
- 120 XPS ISOVER ( $\lambda=0,032$ )

## 2. ISOTHERMAS

				Delta T	1 K
homogen	U(Decke gg EB, horiz)=	1,106 W/m²K		Länge:	1,37 m
	U(AW gg AL, vert)=	0,196 W/m²K			1,00 m
aus Therm Berechnung					
	U(Decke gg AL, horiz)=	1,092 W/m²K		Länge:	1,26 m
	U(Wand erdberührt, vert)=	W/m²K		Länge:	m
	U(Wand, vert)=	0,161 W/m²K		Länge:	1,20 m
<b>Wärmestrom pro Längeneinheit</b>					
<b>homogen</b>					
	Q/l=(U*b)*delta T=	1,711 W/m			
<b>Wärmestrom pro Längeneinheit</b>					
<b>Wärmebrücke</b>					
	Q(außen, horiz, vert)/l=(U*b)*delta T=	0,193 W/m			
	Summe:	1,574 W/m			
<b>Leitwertzuschlag L(Psi)</b>		<b>-0,138 W/mK</b>			



### 3. CALCULO DE TRANSMITANCIA

Passive House Planning						
U - VALUES OF BUILDING ELEMENTS						
Building:					Wedge Shaped Building Element Layers and Still Air Spaces -> Secondary Calculation to the Right	
<b>A3 Section A</b>						
Assembly No. Building Assembly Description						
Heat Transfer Resistance [m <sup>2</sup> K/W] interior R <sub>si</sub> : <b>0,13</b>						
exterior R <sub>se</sub> : <b>0,04</b>						
Area Section 1	λ [W/(mK)]	Area Section 2 (optional)	λ [W/(mK)]	Area Section 3 (optional)	λ [W/(mK)]	Total Width Thickness [mm]
1. <b>internal rendering</b>	<b>0,700</b>					<b>15</b>
2. <b>ceramic perf bricks</b>	<b>0,250</b>					<b>115</b>
3. <b>ISOFEX</b>	<b>0,036</b>					<b>160</b>
4. <b>external rendering</b>	<b>1,000</b>					<b>15</b>
5.						
6.						
7.						
8.						
		Percentage of Sec. 2		Percentage of Sec. 3		Total
						<b>30,5</b> cm
U-Value: <b>0,196</b> W/(m <sup>2</sup> K)						
<b>A3 Section B</b>						
Assembly No. Building Assembly Description						
Heat Transfer Resistance [m <sup>2</sup> K/W] interior R <sub>si</sub> : <b>0,17</b>						
exterior R <sub>se</sub> : <b>0,17</b>						
Area Section 1	λ [W/(mK)]	Area Section 2 (optional)	λ [W/(mK)]	Area Section 3 (optional)	λ [W/(mK)]	Total Width Thickness [mm]
1. <b>screed</b>	<b>1,400</b>					<b>50</b>
2. <b>ARENA PF</b>	<b>0,032</b>					<b>15</b>
3. <b>concrete slab</b>	<b>2,300</b>					
4. <b>plaster board</b>	<b>0,210</b>					<b>13</b>
5.						
6.						
7.						
8.						
		Percentage of Sec. 2		Percentage of Sec. 3		Total
						<b>7,8</b> cm
U-Value: <b>1,106</b> W/(m <sup>2</sup> K)						

**A3 Section C**

Assembly No. Building Assembly Description

Heat Transfer Resistance [m<sup>2</sup>K/W] interior R<sub>si</sub>: **0,17**  
 exterior R<sub>se</sub>: **0,04**

Area Section 1	λ [W/(mK)]	Area Section 2 (optional)	λ [W/(mK)]	Area Section 3 (optional)	λ [W/(mK)]	Total Width Thickness [mm]
1. plaster board	0,210					13
2. concrete foundation w	2,300					210
3. XPS	0,032					120
4. external rendering	1,000					15
5.						
6.						
7.						
8.						
		Percentage of Sec. 2		Percentage of Sec. 3		Total
						<b>35,8</b> cm
<b>U-Value:</b>					<b>0,242</b>	W/(m <sup>2</sup> K)

Assembly No. Building Assembly Description

Heat Transfer Resistance [m<sup>2</sup>K/W] interior R<sub>si</sub>: **0,13**  
 exterior R<sub>se</sub>: **0,04**

Area Section 1	λ [W/(mK)]	Area Section 2 (optional)	λ [W/(mK)]	Area Section 3 (optional)	λ [W/(mK)]	Total Width Thickness [mm]
1.	0,032					40
2.	0,035					30
3.	2,300					160
4.	0,032					120
5.						
6.						
7.						
8.						
		Percentage of Sec. 2		Percentage of Sec. 3		Total
						<b>35,0</b> cm
<b>U-Value:</b>					<b>0,164</b>	W/(m <sup>2</sup> K)