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# Product Data Sheet Smartbloc System I

### **N-BLOC Product description**

Cementitious building block with EPS with two layers for strength and insulation. Smartbloc is designed for supporting insulated wall structures.

Blocks are stacked without the use of mortar. EPS Ø12cm locking pins to adjust the blocks into correct position. Steel rebar's are placed and concrete is poured into the remaining pillars.

Stated thermal conductivity, U-value presupposes that blocks assembled by the manufacturer's instructions. Concrete per m<sup>2</sup> wall is approx. 25L.

Fire resistance is REI60/R120. Wall contribution to fire is equivalent to Euroclass A1 with Smartbloc plaster and A2 without plaster. Bloc is Euroclass B.

### **Insulated building block**

Properties	Values	Reference
Length	600 mm ±1mm	
Width	300 mm ±1mm	
Height	300 mm ±1mm	
Number of blocks per. m <sup>2</sup>	5,5	
Pillar size	120 mm	Ø120
Density dry	230 kg/m <sup>3</sup>	
Sound insulation	39,0 dB	
Sound insulation*	53,5 dB	
Sound insulation**	66,0 dB	
Compressive Strength	700 kN/m <sup>2</sup>	
Thermal conductivity	0,05 W/mk <	CSN EN 12664
U-value	0,18 W/m <sup>2</sup> k	CSN EN 12664 ISO 6946:2007
U-value*	0,15 W/m²k	ISO 6946:2007
U-value**	0,12 W/m²k	ISO 6946:2007
Fire Resistance	REI 60	
Load Bearing	R120	CSN EN 1365-1
Contribution to Fire		
Built wall with plaster	A1	ISO 1182/ISO 1716
Built wall without plaster	A2	ISO 1716/ISO 13823
Bloc	В	EN 13823/ISO 11925-2

\*With 50 mm Rockwool X33 and 13mm plaster board \*\*With 100 mm Rockwool X33 and 13mm plaster board

13mm plaster board: 0,2100 Lambda [W/mKm<sup>2</sup>] Rockwool X33: 0,0330 Lambda [W/mKm<sup>2</sup>]

CE

Revision: 2/3/18



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# Product Data Sheet Smartbloc System I

### **U-BLOC Product description**

Cementitious building block with EPS with two layers for strength and insulation. Smartbloc is designed for supporting insulated wall structures.

Blocks are stacked without the use of mortar. EPS Ø12cm locking pins to adjust the blocks into correct position. Steel rebar's are placed and concrete is poured into the remaining pillars.

Stated thermal conductivity, U-value presupposes that blocks assembled by the manufacturer's instructions. Concrete per m<sup>2</sup> wall is approx. 25L.

Fire resistance is REI60/R120. Wall contribution to fire is equivalent to Euroclass A1 with Smartbloc plaster and A2 without plaster. Bloc is Euroclass B.

### **Insulated building block**

Properties	Values	Reference
Length	600 mm ±1mm	
Width	300 mm ±1mm	
Height	300 mm ±1mm	
Number of blocks per. m <sup>2</sup>	5,5	
Pillar size	120 mm	
Density dry	230 kg/m <sup>3</sup>	80
Sound insulation	39,0 dB	
Sound insulation*	53,5 dB	
Sound insulation**	66,0 dB	
Compressive Strength	700 kN/m <sup>2</sup>	
Thermal conductivity	0,05 W/mk <	CSN EN 12664
U-value	0,23 W/m²k	ISO 6946:2007
U-value*	0,17 W/m <sup>2</sup> k	ISO 6946:2007
U-value**	0,14 W/m²k	ISO 6946:2007
Fire Resistance	REI 60	
Load Bearing	R120	CSN EN 1365-1 300
Contribution to Fire		× × /
Built wall with plaster	A1	ISO 1182/ISO 1716
Built wall without plaster	A2	ISO 1716/ISO 13823
Bloc	В	EN 13823/ISO 11925-2

\*With 50 mm Rockwool X33 and 13mm plaster board \*\*With 100 mm Rockwool X33 and 13mm plaster board

13mm plaster board: 0,2100 Lambda [W/mKm<sup>2</sup>] Rockwool X33: 0,0330 Lambda [W/mKm<sup>2</sup>]

CE

Revision: 2/3/18



# Product Data Sheet Smartbloc System I

### **L-BLOC Product description**

Cementitious building block with EPS with two layers for strength and insulation. Smartbloc is designed for supporting insulated wall structures.

Blocks are stacked without the use of mortar. EPS Ø12cm locking pins to adjust the blocks into correct position. Steel rebar's are placed and concrete is poured into the remaining pillars.

Stated thermal conductivity, U-value presupposes that blocks assembled by the manufacturer's instructions. Concrete per m<sup>2</sup> wall is approx. 25L.

Fire resistance is REI60/R120. Wall contribution to fire is equivalent to Euroclass A1 with Smartbloc plaster and A2 without plaster. Bloc is Euroclass B.

#### Insulated building block

Properties	Values	Reference	
Length	750 mm ±1mm		
Width	450 mm ±1mm		
Height	300 mm ±1mm		
Number of blocks per. m <sup>2</sup>	2,78		
Pillar size	120 mm		
Density dry	230 kg/m <sup>3</sup>		
Sound insulation	39,0 dB		K
Sound insulation*	53,5 dB	2	2
Sound insulation**	66,0 dB	10	300
Compressive Strength	700 kN/m <sup>2</sup>		
Thermal conductivity	0,05 W/mk <	CSN EN 12664	1.1
U-value	0,18 W/m <sup>2</sup> k	ISO 6946:2007	
U-value*	0,15 W/m²k	ISO 6946:2007	$\sim$
U-value**	0,12 W/m²k	ISO 6946:2007	
Fire Resistance	REI 60	CSN EN 1365-1	
Load Bearing	R120	CSN EN 1365-1	
Contribution to Fire			
Built wall with plaster	A1	ISO 1182/ISO 1716	
Built wall without plaster	A2	ISO 1716/ISO 13823	
Bloc	В	EN 13823/ISO 11925-2	

\*With 50 mm Rockwool X33 and 13mm plaster board \*\*With 100 mm Rockwool X33 and 13mm plaster board

13mm plaster board: 0,2100 Lambda [W/mKm<sup>2</sup>] Rockwool X33: 0,0330 Lambda [W/mKm<sup>2</sup>]

CE

Revision: 2/3/18



# Product Data Sheet Smartbloc System I

## LUL/LUR-BLOC Product description

Cementitious building block with EPS with two layers for strength and insulation. Smartbloc is designed for supporting insulated wall structures.

Blocks are stacked without the use of mortar. EPS Ø12cm locking pins to adjust the blocks into correct position. Steel rebar's are placed and concrete is poured into the remaining pillars.

Stated thermal conductivity, U-value presupposes that blocks assembled by the manufacturer's instructions. Concrete per m<sup>2</sup> wall is approx. 25L.

Fire resistance is REI60/R120. Wall contribution to fire is equivalent to Euroclass A1 with Smartbloc plaster and A2 without plaster. Bloc is Euroclass B.

### Insulated building block

Properties	Values	Reference
Length	750 mm ±1mm	
Width	450 mm ±1mm	
Height	300 mm ±1mm	450
Number of blocks per. m <sup>2</sup>	2,78	
Pillar size	120 mm	
Density dry	230 kg/m <sup>3</sup>	
Sound insulation	39,0 dB	
Sound insulation*	53,5 dB	
Sound insulation**	66,0 dB	
Compressive Strength	700 kN/m <sup>2</sup>	
Thermal conductivity	0,05 W/mk <	CSN EN 12664
U-value	0,23 W/m <sup>2</sup> k	ISO 6946:2007
U-value*	0,17 W/m²k	ISO 6946:2007 ISO 6946:2007
U-value**	0,14 W/m²k	ISO 6946:2007
Fire Resistance	REI 60	CSN EN 1365-1
Load Bearing	R120	CSN EN 1365-1
Contribution to Fire		4 50
Built wall with plaster	A1	ISO 1182/ISO 1716
Built wall without plaster	A2	ISO 1716/ISO 13823
Bloc	В	EN 13823/ISO 11925-2

\*With 50 mm Rockwool X33 and 13mm plaster board \*\*With 100 mm Rockwool X33 and 13mm plaster board

13mm plaster board: 0,2100 Lambda [W/mKm²] Rockwool X33: 0,0330 Lambda [W/mKm²]

CE

Revision: 2/3/18



# Product Data Sheet Smartbloc System I

### **X-BLOC Product description**

Cementitious building block with EPS with two layers for strength and insulation. Smartbloc is designed for supporting insulated wall structures.

Blocks are stacked without the use of mortar. EPS Ø12cm locking pins to adjust the blocks into correct position. Steel rebar's are placed and concrete is poured into the remaining pillars.

Stated thermal conductivity, U-value presupposes that blocks assembled by the manufacturer's instructions. Concrete per m<sup>2</sup> wall is approx. 25L.

Tip! X-BLOC can be trimmed to T-BLOC.

Fire resistance is REI60/R120. Wall contribution to fire is equivalent to Euroclass A1 with Smartbloc plaster and A2 without plaster. Bloc is Euroclass B.

### Insulated building block

Widh900 mm ±1mmHeight300 mm ±1mmNumber of blocks per. m²2,22Pillar size120 mmDensity dry230 kg/m³Sound insulation39,0 dBSound insulation*53,5 dBSound insulation**66,0 dBCompressive Strength700 kN/m²Thermal conductivity0,05 W/mk <U-value0,18 W/m²kU-value*0,15 W/m²kU-value**0,12 W/m²kLoad BearingR120Contribution to FirereferenceBuilt wall with plasterA1ISO 1182/ISO 1716	Properties	Values	Reference
Height300 mm ±1mmNumber of blocks per. m²2,22Pillar size120 mmDensity dry230 kg/m³Sound insulation39,0 dBSound insulation*53,5 dBSound insulation**66,0 dBCompressive Strength700 kN/m²Thermal conductivity0,05 W/mk <	Length	900 mm ±1mm	
Number of blocks per. m²2,22Pillar size120 mmDensity dry230 kg/m³Sound insulation39,0 dBSound insulation*53,5 dBSound insulation**66,0 dBCompressive Strength700 kN/m²Thermal conductivity0,05 W/mk <	Width	900 mm ±1mm	No.
Pillar size120 mmDensity dry230 kg/m³Sound insulation39,0 dBSound insulation*53,5 dBSound insulation**66,0 dBCompressive Strength700 kN/m²Thermal conductivity0,05 W/mk <	Height	300 mm ±1mm	
Density dry230 kg/m³Sound insulation39,0 dBSound insulation*53,5 dBSound insulation**66,0 dBCompressive Strength700 kN/m²Thermal conductivity0,05 W/mk <	Number of blocks per. m <sup>2</sup>	2,22	Ø120
Sound insulation39,0 dBSound insulation*53,5 dBSound insulation**66,0 dBCompressive Strength700 kN/m²Thermal conductivity0,05 W/mk <	Pillar size	120 mm	
Sound insulation39,0 dBSound insulation*53,5 dBSound insulation**66,0 dBCompressive Strength700 kN/m²Thermal conductivity0,05 W/mk <	Density dry	230 kg/m <sup>3</sup>	*50 ×50
Sound insulation**     66,0 dB       Compressive Strength     700 kN/m²       Thermal conductivity     0,05 W/mk <	Sound insulation	39,0 dB	
Compressive Strength     700 kN/m²       Thermal conductivity     0,05 W/mk <	Sound insulation*	53,5 dB	
Thermal conductivity     0,05 W/mk <     CSN EN 12664       U-value     0,18 W/m²k     ISO 6946:2007       U-value*     0,15 W/m²k     ISO 6946:2007       U-value*     0,12 W/m²k     ISO 6946:2007       U-value**     0,12 W/m²k     ISO 6946:2007       Fire Resistance     REI 60     CSN EN 1365-1       Load Bearing     R120     CSN EN 1365-1       Gontribution to Fire     ISO 1182/ISO 1716	Sound insulation**	66,0 dB	
U-value     0,18 W/m²k     ISO 6946:2007       U-value*     0,15 W/m²k     ISO 6946:2007       U-value**     0,12 W/m²k     ISO 6946:2007       Fire Resistance     REI 60     CSN EN 1365-1       Load Bearing     R120     CSN EN 1365-1       Contribution to Fire	Compressive Strength	700 kN/m <sup>2</sup>	
U-value*     0,15 W/m²k     ISO 6946:2007       U-value**     0,12 W/m²k     ISO 6946:2007       Fire Resistance     REI 60     CSN EN 1365-1       Load Bearing     R120     CSN EN 1365-1       Contribution to Fire	Thermal conductivity	0,05 W/mk <	CSN EN 12664
U-value**0,12 W/m²kISO 6946:2007Fire ResistanceREI 60CSN EN 1365-1Load BearingR120CSN EN 1365-1Contribution to FireISO 1182/ISO 1716	U-value	0,18 W/m <sup>2</sup> k	ISO 6946:2007
U-value**0,12 W/m²kISO 6946:2007Fire ResistanceREI 60CSN EN 1365-1Load BearingR120CSN EN 1365-1Contribution to FireISO 1182/ISO 1716	U-value*	0,15 W/m <sup>2</sup> k	ISO 6946:2007
Fire Resistance REI 60 CSN EN 1365-1   Load Bearing R120 CSN EN 1365-1   Contribution to Fire ISO 1182/ISO 1716	U-value**	0,12 W/m <sup>2</sup> k	ISO 6946:2007
Contribution to Fire ISO 1182/ISO 1716	Fire Resistance	REI 60	
Built wall with plaster A1 ISO 1182/ISO 1716	Load Bearing	R120	CSN EN 1365-1
	Contribution to Fire		
Built well without plagter A2	Built wall with plaster	A1	ISO 1182/ISO 1716
Built wali without plaster AZ 150 17 10/150 13623	Built wall without plaster	A2	ISO 1716/ISO 13823
Bloc B EN 13823/ISO 11925-2	Bloc	В	EN 13823/ISO 11925-2

\*With 50 mm Rockwool X33 and 13mm plaster board \*\*With 100 mm Rockwool X33 and 13mm plaster board

13mm plaster board: 0,2100 Lambda [W/mKm<sup>2</sup>] Rockwool X33: 0,0330 Lambda [W/mKm<sup>2</sup>] CE

Revision: 2/3/18



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#### Revision: 2/3/18

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# Product Data Sheet Smartbloc System I

## **XU-BLOC Product description**

Cementitious building block with EPS with two layers for strength and insulation. Smartbloc is designed for supporting insulated wall structures.

Blocks are stacked without the use of mortar. EPS Ø12cm locking pins to adjust the blocks into correct position. Steel rebar's are placed and concrete is poured into the remaining pillars.

Stated thermal conductivity, U-value presupposes that blocks assembled by the manufacturer's instructions. Concrete per m<sup>2</sup> wall is approx. 25L.

Tip! XU-BLOC can be trimmed to TU-BLOC.

Fire resistance is REI60/R120. Wall contribution to fire is equivalent to Euroclass A1 with Smartbloc plaster and A2 without plaster. Bloc is Euroclass B.

### Insulated building block

Properties	Values	Reference
Length	900 mm ±1mm	AG4
Width	900 mm ±1mm	
Height	300 mm ±1mm	
Number of blocks per. m <sup>2</sup>	2,22	
Pillar size	120 mm	130 850
Density dry	230 kg/m <sup>3</sup>	
Sound insulation	39,0 dB	
Sound insulation*	53,5 dB	
Sound insulation**	66,0 dB	
Compressive Strength	700 kN/m <sup>2</sup>	
Thermal conductivity	0,05 W/mk <	CSN EN 12664
U-value	0,23 W/m <sup>2</sup> k	CSN EN 12664 ISO 6946:2007
U-value*	0,17 W/m²k	ISO 6946:2007
U-value**	0,14 W/m²k	ISO 6946:2007
Fire Resistance	REI 60	CSN EN 1365-1
Load Bearing	R120	CSN EN 1365-1
Contribution to Fire		
Built wall with plaster	A1	ISO 1182/ISO 1716
Built wall without plaster	A2	ISO 1716/ISO 13823
Bloc	В	EN 13823/ISO 11925-2

With 50 mm Rockwool X33 and 13mm plaster board \*\*With 100 mm Rockwool X33 and 13mm plaster board

13mm plaster board: 0,2100 Lambda [W/mKm<sup>2</sup>] Rockwool X33: 0,0330 Lambda [W/mKm<sup>2</sup>]

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#### Revision: 2/3/18

# Product Data Sheet Smartbloc System I

## **W-BLOC Product description**

Cementitious building block with EPS with two layers for strength and insulation. Smartbloc W-BLOC is designed for openings in combinations with Smartbloc System I

Stated thermal conductivity, U-value presupposes that blocks assembled by the manufacturer's instructions. Concrete per m W-BLOC is approx. 31L.

Fire resistance is REI60/R120. Wall contribution to fire is equivalent to Euroclass A1 with Smartbloc plaster and A2 without plaster. Bloc is Euroclass B.

### Insulated building block

Properties	Values	Reference
Length	2400 mm ±1mm	250 25
Width	300 mm ±1mm	
Height	300 mm ±1mm	00
Number of blocks per. m <sup>2</sup>	1,38	
Density dry	350 kg/m <sup>3</sup>	. 8
Sound insulation	39,0 dB	120
Sound insulation*	53,5 dB	
Sound insulation**	66,0 dB	
Compressive Strength	1215 kN/m <sup>2</sup>	
Thermal conductivity	0,05 W/mk <	CSN EN 12664
U-value	0,17 W/m <sup>2</sup> k	ISO 6946:2007
U-value*	0,15 W/m <sup>2</sup> k	ISO 6946:2007
U-value**	0,12 W/m <sup>2</sup> k	ISO 6946:2007
Fire Resistance	REI 60	CSN EN 1365-1
Load Bearing	R120	CSN EN 1365-1
Contribution to Fire		
Built wall with plaster	A1	ISO 1182/ISO 1716
Built wall without plaster	A2	ISO 1716/ISO 13823
Bloc	В	EN 13823/ISO 11925-2

\*With 50 mm Rockwool X33 and 13mm plaster board \*\*With 100 mm Rockwool X33 and 13mm plaster board

13mm plaster board:0,2100 Lambda [W/mKm²]Rockwool X33:0,0330 Lambda [W/mKm²]

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# Product Data Sheet Smartbloc System I

# **F-BLOC Product description**

Cementitious building block with EPS. SMARTBLOC F-BLOC is developed for use in combination with SMARTBLOC System I as start bloc where the ground is compressed with a minimum of 300 kN/m<sup>2</sup>

Blocks are stacked without the use of mortar. Concrete per m wall is approx. 58L.

Fire resistance is REI60/R120. Wall contribution to fire is equivalent to Euroclass A1 with Smartbloc plaster and A2 without plaster. Bloc is Euroclass B.

#### Insulated building block

Properties	Values	
Length	2400 mm ±1mm	259 25
Width	300 mm ±1mm	
Height	300 mm ±1mm	8
Weight	24kg	9 <u>- 220</u> <u>- 15</u> 70
Number of blocks per. m <sup>2</sup>	1,38	_ S
Density dry	350 kg/m <sup>3</sup>	
Compressive Strength	1215 kN/m <sup>2</sup>	
Strength with B30 concrete	>35 MPa	
Contribution to Fire		$\sim$
Built wall with plaster	A1	ISO 1182/ISO 1716
Built wall without plaster	A2	ISO 1716/ISO 13823
Bloc	В	EN 13823/ISO 11925-2

CE

Revision: 2/3/18

