

## SILKA CS BLOCKS



**silka**

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# TECHNICAL DATA SILKA CS BLOCKS (SMALL FORMATS)

## Overview Silka - thin bed mortar blocks light - LBL

	Dimensions (mm)	Average compressive strength N/mm <sup>2</sup>	Kg/pc	Pc/m <sup>2</sup>	Kg thin joint mortar/m <sup>2</sup> *
LBL 10 low	298 x 100 x 148	≥ 15N/mm <sup>2</sup>	6.19	22.20	5.40
LBL 10 high	298 x 100 x 198	≥ 15N/mm <sup>2</sup>	8.74	16.70	4.10
LBL 15 low	298 x 150 x 148	≥ 15N/mm <sup>2</sup>	10.73	22.20	8.00
LBL 15 high	298 x 150 x 198	≥ 15N/mm <sup>2</sup>	11.96	16.70	6.20
LBL 20 low	298 x 200 x 148	≥ 15N/mm <sup>2</sup>	14.54	22.20	11.00
LBL 20 high	298 x 200 x 198	≥ 15N/mm <sup>2</sup>	16.78	16.70	8.40

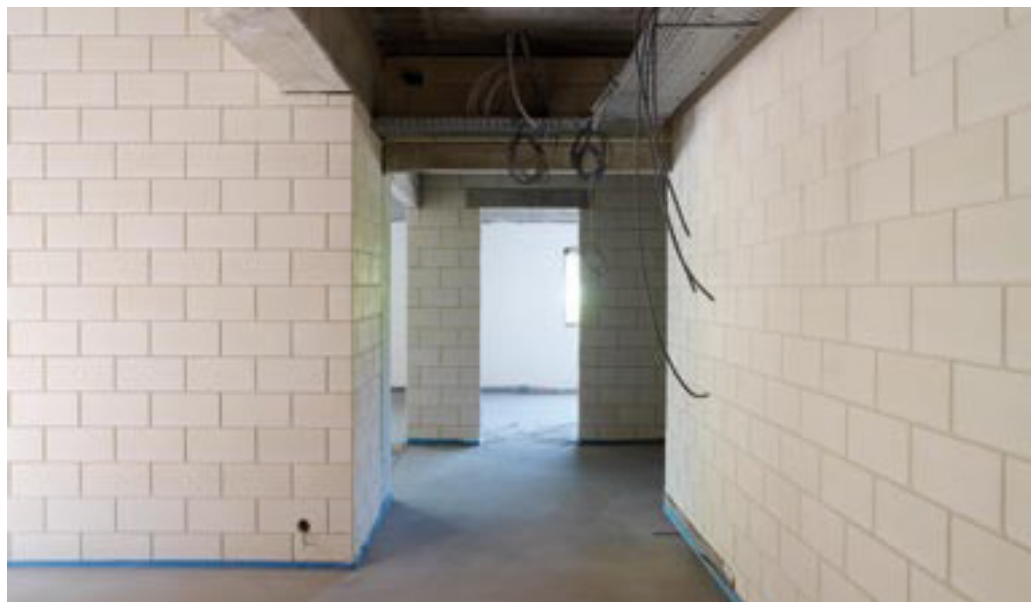
## Overview Silka - thin bed mortar blocks full - LB

	Dimensions (mm)	Average compressive strength N/mm <sup>2</sup>	Kg/pc	Pc/m <sup>2</sup>	Kg thin joint mortar/m <sup>2</sup> *
LB 10 low	298 x 100 x 148	≥ 25N/mm <sup>2</sup>	7.62	22.20	4.70
LB 10 high	298 x 100 x 198	≥ 25N/mm <sup>2</sup>	10.53	16.70	3.50
LB 15 low	298 x 150 x 148	≥ 25N/mm <sup>2</sup>	11.79	22.20	7.40
LB 15 high	298 x 150 x 198	≥ 25N/mm <sup>2</sup>	16.19	16.70	5.60
LB 20 low	298 x 200 x 148	≥ 25N/mm <sup>2</sup>	16.00	22.20	9.50
LB 20 high	298 x 200 x 198	≥ 25N/mm <sup>2</sup>	22.23	16.70	7.20

## Overview Silka - chamfered blocks - VB

	Dimensions (mm)	Average compressive strength N/mm <sup>2</sup>	Kg/pc	Pc/m <sup>2</sup>	Kg thin joint mortar/m <sup>2</sup> *
LBL 10 low	298 x 100 x 148	≥ 15N/mm <sup>2</sup>	6.63	22.20	4.60
LBL 10 high	298 x 100 x 198	≥ 15N/mm <sup>2</sup>	8.63	16.70	3.50
LBL 15 low	298 x 150 x 148	≥ 15N/mm <sup>2</sup>	9.06	22.20	7.00
LBL 15 high	298 x 150 x 198	≥ 15N/mm <sup>2</sup>	11.98	16.70	5.20
LBL 20 low	298 x 200 x 148	≥ 15N/mm <sup>2</sup>	12.75	22.20	9.30
LBL 20 high	298 x 200 x 198	≥ 15N/mm <sup>2</sup>	16.45	16.70	7.00

\* The thin mortar usage is inclusive of waste and spillage and applied on the top side of the blocks



## DISCOVER THE SIMPLICITY

With Silka CS blocks you choose well. The specific qualities of calcium silicate (sound insulation, high load bearing capacity, thermal capacity...) supplemented with an outstanding efficiency.

Silka CS is extremely dimensionally stable and therefore ideal for use with thin joint mortars.

The same counts for the finishing: pointing is not necessary anymore; you can also tile directly or finish economically with a thin plaster.

Our Silka - chamfered blocks are the only blocks on the market that can be left "fair-faced" as lime work.

Silka - thin bed mortar blocks (LB and LBL) are recognizable by their double tongue and groove.

The Silka-chamfered blocks (VB) have a tongue and groove

The dimensions are moduled for glued joints.

Xella Silka service:

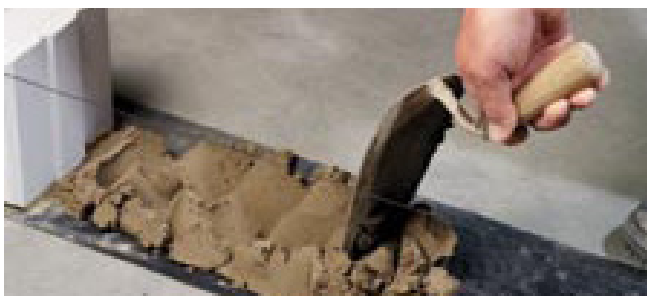
Free from design and throughout construction. Xella gives you free project oriented advice and service on site. Do you have questions, then you can reach us on this number: 0870 609 0306

# WHICH TOOLS DO YOU NEED?

Hereby follows an overview of the additional tools that you will need for construction for Silka - thin bed mortar blocks.

The usage is described in the relevant chapters.

- thin bed mortar applicator
- (electric) mixer and trough
- the classic mason tools
- manual block grab
- mechanical block cutting device
- and/or milling machine
- thin joint mortar
- hammer
- trimming knife and trowel



# THE THIN JOINT MORTAR



The thin joint mortar (Silkafix) will be delivered in powder form in 25 kg bags. Depending on the season it will be summer or winter quality provided by Xella.

The winter mortar can withstand temperatures of up to  $-5^{\circ}\text{C}$  at night.

You empty the bags of thin joint mortar powder into a trough and mix with cold clean water.

Mix 6 litres of water with 25 kg of thin joint mortar. The product must be mixed for at least 4 minutes using an electrical mixer.

Follow the instructions on the thin joint mortar packaging.

Small quantities of thin joint mortar can also be mixed in a bucket. The mixed thin joint mortar can be used for a period of up to 4 hours (winter mortar max 2 hours).

The 'exposure time' after applying to the blocks should not exceed 15 minutes.

The blocks have to be placed within this time limit.



# KICKER COURSE CONSTRUCTION



The first course of Silka CS blocks, called the 'kicker course', is constructed on a traditional mortar bed to ensure it is completely level. In doing so, irregularities in the floor can be corrected.

## **It is important to:**

Make sure the kicker course is completely level.

Once this course is finished, it is almost impossible to correct irregularities using thin joint mortar joints.

The kicker course has to be left to set for at least 1 day before construction with Silka CS blocks or elements can be commenced.



# APPLICATION OF THIN JOINT MORTAR

Thin joint mortar applicators and scoops can be ordered and delivered together with the calcium silicate blocks, for application of thin joint mortar to the joints.

First, a bed joint is applied in thin joint mortar. This is done by filling the applicator using a trowel, then placing it at the end of the wall, opening the slide of the applicator and consequently pulling the applicator forward at a steady pace (max 3 ml). When blocks are placed on the wall, the thin joint mortar will be compressed to approximately 2 mm.

Make sure not to apply thin joint mortar to more than 3 metres of wall during dry weather, so as to avoid thin joint mortar drying ahead of time.

It is also recommended to make the blocks wet with a hand brush before application of the thin joint mortar.



Specially designed thin joint mortar applicators and scoops are available for each wall thickness



# PLACING SILKA CS BLOCKS

Silka CS blocks are placed on to the thin joint mortar layer of the bed joint and adjusted using a soft face hammer.

All Silka - thin bed mortar blocks are with an ergonomic hand grip and therefore easy to use.

If required, a manual block grab can be sold by Xella together with the blocks. This manual clamping device is very helpful in lifting the blocks by hand.





## HOW TO MAKE SPECIAL BLOCKS TO SIZE

In this respect, there is a difference for fair-face and non fair-face masonry:

Cutting special blocks for non fair-face masonry is done by means of a Silka CS block-cutting device. This is a fast and very efficient method.

Special blocks for fair-face masonry are cut to size using a table saw or a right angle disc grinder. This method delivers perfectly straight edges. Chamfered edges can be made using a chamfered edge template.



# ANCHORING MATERIALS

All metal anchoring materials are available in stainless steel.

The most important are:

- The cavity wall anchors (1): These anchors have a flat strip on one side, which can be put into the thin bed mortar joint, with a traditional side that spans across the cavity.

This type of anchor can easily be pushed through a thick and rigid insulation layer.

Required quantity: approximately 7 pc per m<sup>2</sup>.

- Plastic 'lip-clips'(2), for use with cavity wall anchors.

These clips are used in securing the insulation against the wall. They have a water drip device.

- Thin joint mortar coupling strips (3): for coupling adjoining walls in a vertical joint



In load-bearing walls it usually suffices to use one coupling strip, every two courses



With the cavity wall anchors and the matching 'lip-clips', you can perfectly place the insulation against the wall.

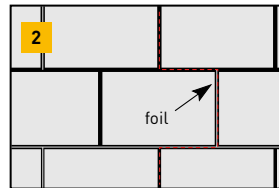
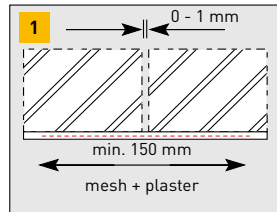
# MOVEMENT JOINTS

Movement joints are used mostly in large buildings to split up in areas that can work separately from each other. This will avoid temperature and humidity differences and also movements.

## Construction

In walls that will be plastered, movement joints can be made as shown in the illustrations 1 and 2.

- A wall constructed using a cold movement joint, with a width of approximately 1mm, and with a seal against air penetration, namely a tension distributing layer, on top of which the finishing of the wall is applied (see 1).
- In walls that will be plastered, movement joints can be made by adhering a PVC scrim tape on the wall (see 2).



## Maximum distance in metres between movement joints

	Wall thickness $\geq 140$ mm			Wall thickness $< 140$ mm		
	Non reinforced	Lightly reinforced	Good reinforced	Non reinforced	Lightly reinforced	Good reinforced
<b>NBN B 24-401</b>						
No opening or stress concentrations	12	18	18	8	12	12
With opening and/or stress concentrations	8	12	12	8	12	12
<b>STS 22</b>						
No openings	8	12	16	8	12	16
With openings	6	9	12	6	9	12

# REMOVING EXCESS THIN JOINT MORTAR AND PROTECTING FINISHED WALLS

## Removing excess thin joint mortar

Excess mortar in the joints should not be spread out. It is advisable to wait a few hours until the mortar has slightly hardened, then remove it, using a putty knife or paint scraper.

Leftovers can be removed with a rigid brush (not steel).

## Protecting finished walls

When expecting heavy rain or frost, it is advised to protect finished walls using plastic covers. This precautionary measure is most certainly required for open cavity walls.



# DRILLING WORK IS MINIMIZED



The Silka - thin bed mortar blocks light (LBL) and the Silka chamfered block (VB) have a defined drill-hole pattern that is formed in a way that the 2 holes align with each other vertically.

So it is perfectly possible to place conduits and pipes in the holes.

After construction: drill-holes for electrical boxes etc can be formed with a drill bit at the location of the vertical holes.



# WALL FINISHING AND ANCHORING

When the walls are constructed, the tolerance is minimal, consequently finishing can be done:

- With thin coat plaster
- With a traditional plaster
- With tiles directly onto the Silka with no additional levelling.
- With only a paint layer (chamfered blocks)



Silka CS walls are not only suitable for hanging picture frames, but also for securing heavy objects, such as wall cupboards, fire hose reels, cable ducts, etc. All anchoring in walls can be done by simply using standard nylon wall plugs and screws.



# SPECIFIC FOR CHAMFERED BLOCKS

The construction of Silka chamfered blocks has the same principle as the other Silka CS blocks.

## **Important!**

Because the blocks are chamfered, it is extra important that every course blocks is constructed completely level.

Place the first course of blocks in mortar and span a wire 7 mm lower than the block height, at chamfering height. The chamfered blocks can be placed completely level.

After every course;

Check the vertical correct construction (e.g. with a plumb bob).

The Silka chamfered blocks have the great advantage that with the well defined pattern of holes, chassing is reduced to a minimum

The Silka chamfered blocks are provided with tongue and groove connection.

It is advisable to wait 20 minutes after construction before removing excess thin joint mortar (to avoid dirty lines)

Special pieces for chamfered blocks are cut to size using a table saw or a right angle disc grinder. Dry- and wet sawing and are both possible. This method delivers perfectly straight edges. After sawing the necessary chamfered edges can be formed by using a chamfered edges template.

It is recommended before construction of every course to stretch a string line at about 1 mm distance from the wall face.



# THE SILKA CS ELEMENTS (LARGE FORMATS)

The Silka CS elements system is the big brother of the Silka CS block range, and is primarily intended for large-scale construction projects.

It also uses thin joint mortar for construction.

Silka CS elements have a modular basic size of 897 or 997 mm length

and 543 or 643 mm height, and come in various thicknesses ranging from 100 to 300 mm.

The special pieces are cut at the factory, based on approved wall drawings.

The entire project is delivered to site, tailor-made and subsequently installed by means of a convenient small crane which can be rented; making this is a very efficient construction system

For more information about Silka calcium silicate elements system, you can ask brochures by Xella or call 0870 609 0306

Visit also our website: [www.xella.co.uk](http://www.xella.co.uk)

## Overview Silka calcium elements

	Dimensions mm <sup>2</sup>	Mechanical characteristics	Kg/pc	Pc/m <sup>2</sup>	Use of mortar kg/m <sup>2</sup>	Acoustic qualities
E 100 low	897 or 997 x 100 x 543	≥ 25 N/mm <sup>2</sup>	94.74	1.85	1.60	43 dB
E 100 high	897 or 997 x 100 x 643	≥ 25 N/mm <sup>2</sup>	112.19	1.56	1.40	43 dB
E 150 low	897 or 997 x 150 x 543	≥ 25 N/mm <sup>2</sup>	142.11	1.85	2.50	50 dB
E 150 high	897 or 997 x 150 x 643	≥ 25 N/mm <sup>2</sup>	168.28	1.56	2.20	50 dB
E 175 low	897 or 997 x 175 x 543	≥ 25 N/mm <sup>2</sup>	165.79	1.85	3.00	52 dB
E 175 high	897 or 997 x 175 x 643	≥ 25 N/mm <sup>2</sup>	196.33	1.56	2.50	52 dB
E 214 low	897 or 997 x 214 x 543	≥ 25 N/mm <sup>2</sup>	202.74	1.85	3.60	55 dB
E 214 high	897 or 997 x 214 x 643	≥ 25 N/mm <sup>2</sup>	240.08	1.56	3.00	55 dB
E 300 low	897 or 997 x 300 x 543	≥ 25 N/mm <sup>2</sup>	184.22	1.85	5.00	58 dB
E 300 high	897 or 997 x 300 x 643	≥ 25 N/mm <sup>2</sup>	336.56	1.56	4.40	58 dB

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