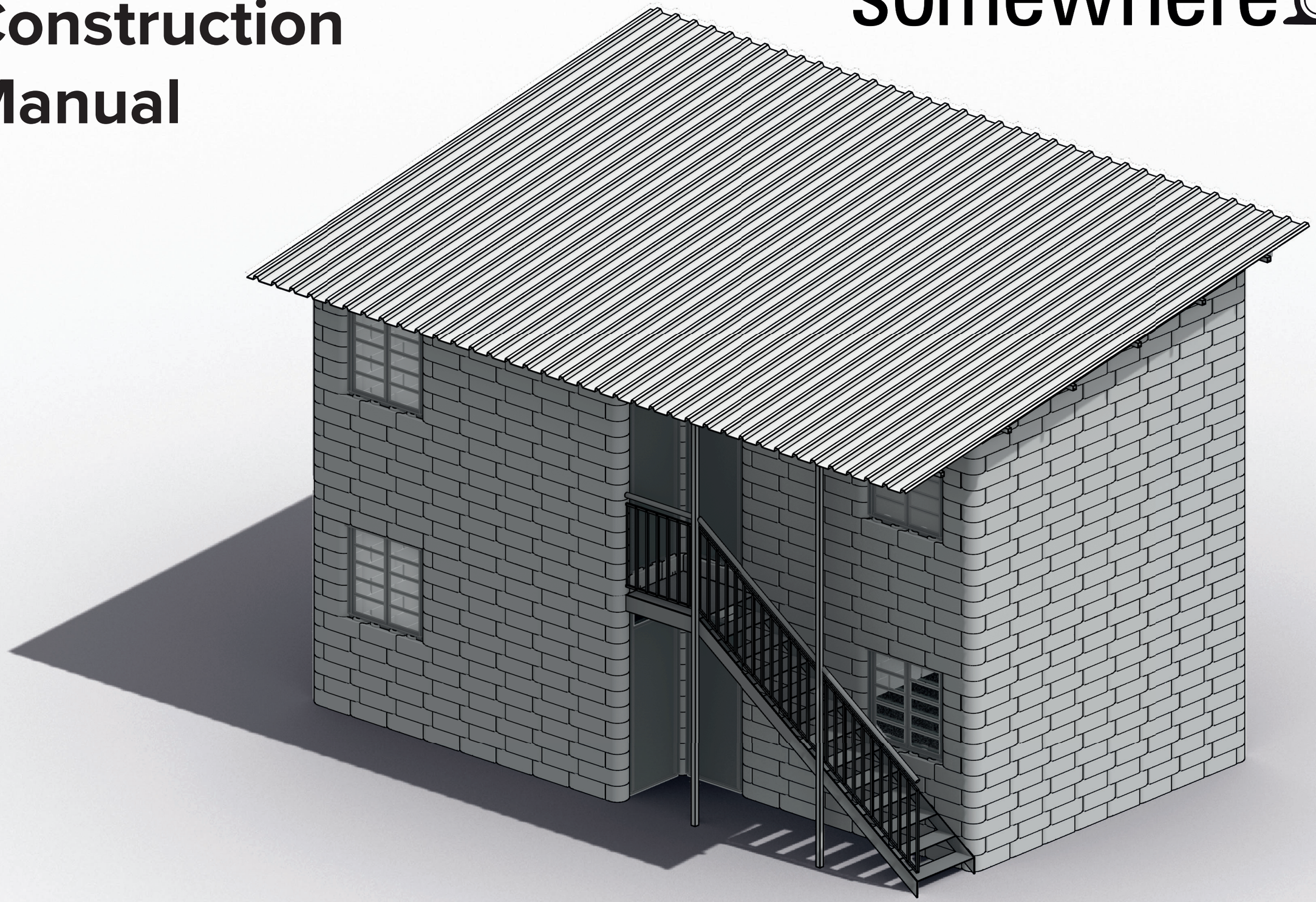
start somewhere

Construction Manual



Introduction

TwistBlocks® are an affordable building solution that are produced in small scale factories in low-income areas. The blocks are interlocking, lightweight, fire-resistant and easy to use.

For more information visit: www.startsomewhere.eu

USING THIS MANUAL

This document is a manual for the construction of buildings using TwistBlocks®. The manual assumes that you have a basic understanding of gerneral construction principals. Any detailed structural work should be designed and overseen by a structural engineer.

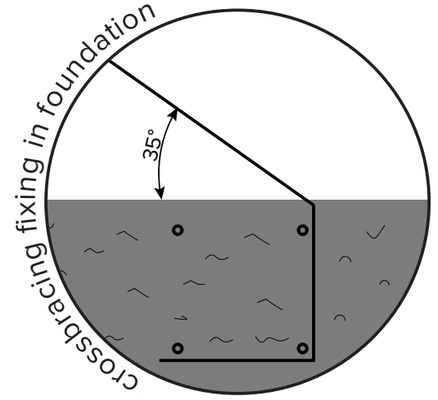
DISCLAIMER

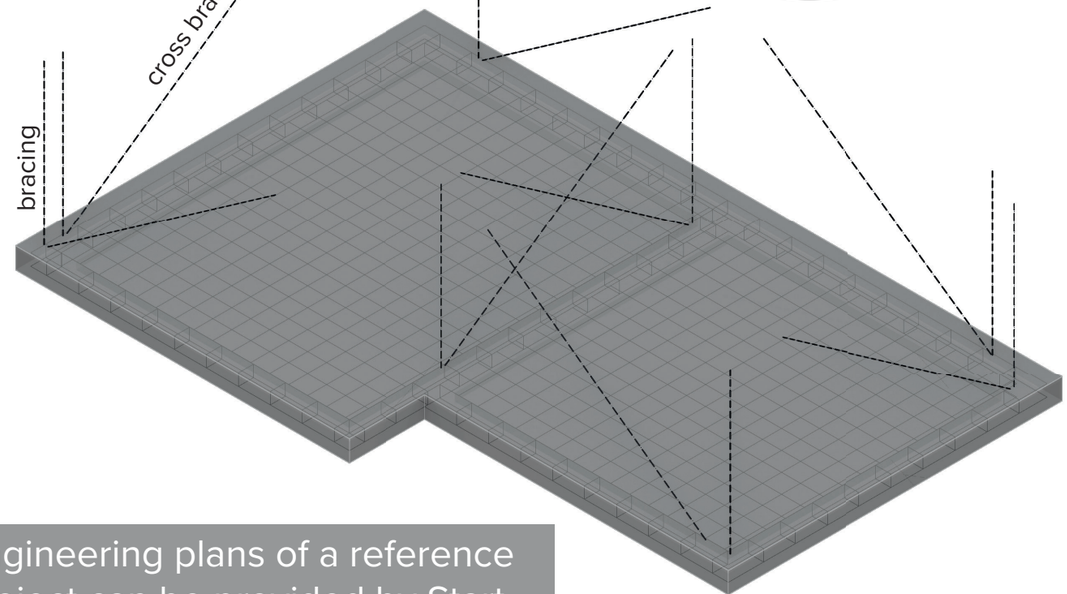
TwistBlocks® are sold as standalone products and Start Somewhere takes no liability for improper structural use of them. It is the responsibility of the user to engage with qualified engineer for foundation, column, and ring beam design to ensure safety and compliance with local regulations. Start Somewhere offers design services for an additional fee.

By purchasing these blocks, you agree to assume full responsibility for their correct and safe usage, including adherence to this building manual and all relevant building codes and standards. Start Somewhere shall not be held liable for any damages, losses or injuries.

Foundation

Start Somewhere cannot provide exact plans for the foundation, as local subsoil conditions must be taken into account.
The dimensioning of the foundation as well as the size and positioning of the reinforcement must be discussed with a local structural engineer on a site-specific basis.



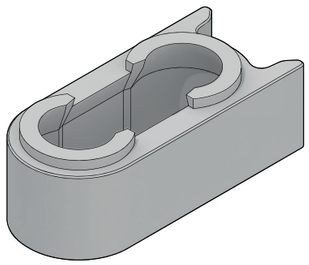


Engineering plans of a reference project can be provided by Start Somewhere.
Contact: info@startsomewhere.eu

Materials

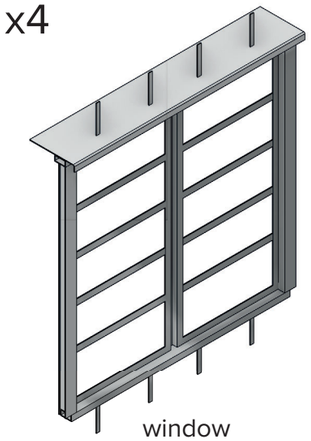
TWISTBLOCK SPECIFIC MATERIALS

x1800
incl. reserve



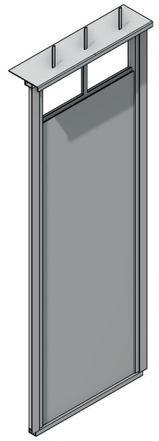
TwistBlock®

x4



window

x4



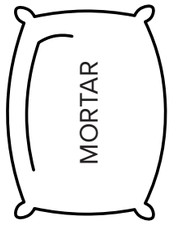
door

x1

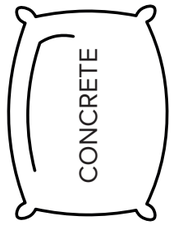
stairs

Standard size windows and doors are not compatible with the TwistBlock construction method. Please hire local artisans to construct some. Plans can be provided by Start Somewhere. Contact: info@startsomewhere.eu

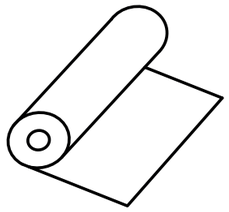
OTHER MATERIALS



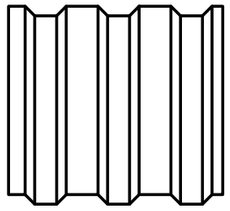
mortar



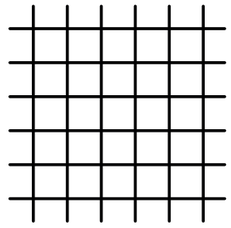
concrete



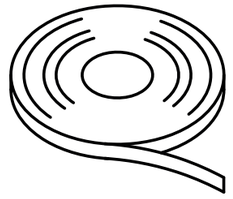
DPM foil



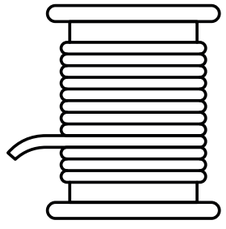
trapezoidal sheet



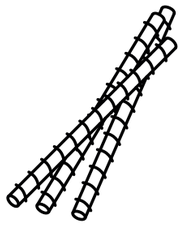
wire mesh



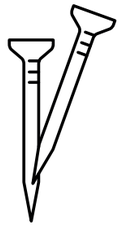
hoop irons



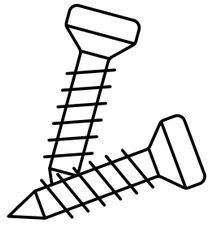
wire



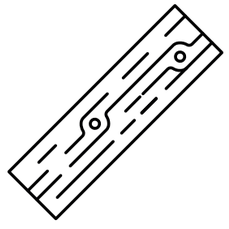
rebars



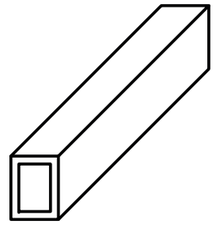
nails



screws



timber planks

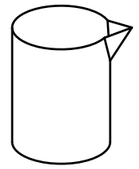


steel beams

Toolbox

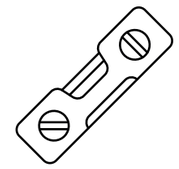
chalk

hammer



can

bucket

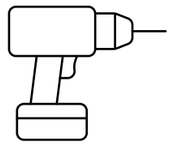


level

broom

saw

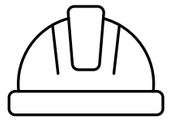
angle grinder



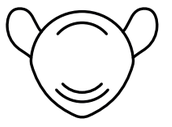
screwdriver

safety glases

gloves



helmet



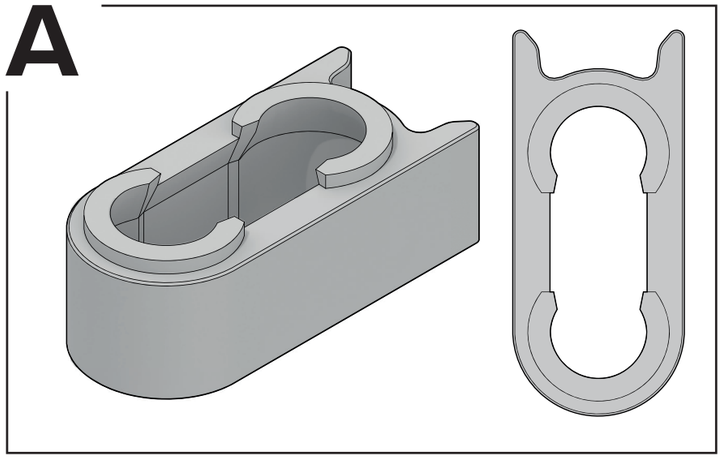
mask

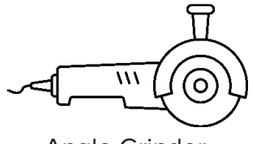
earmuffs

TwistBlock Adjustments

WALL

A

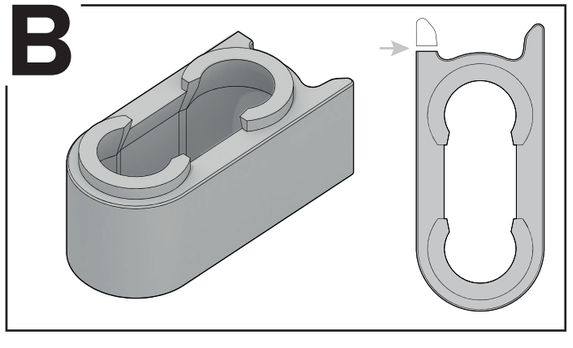




Angle Grinder

Be aware that some of the Twistblocks may break while cutting.

B



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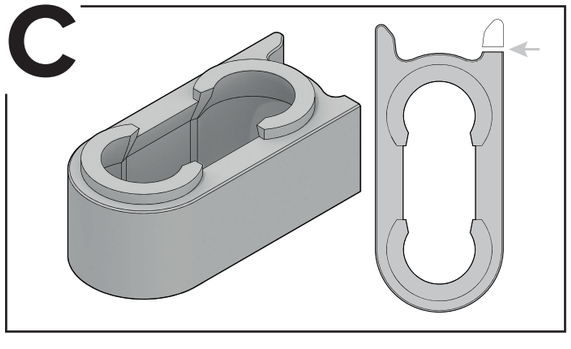
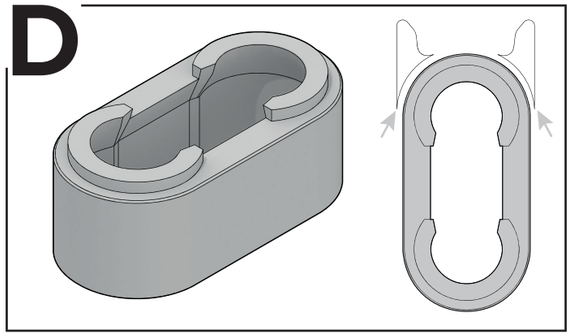
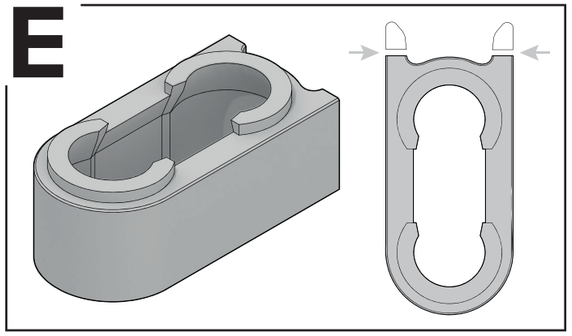


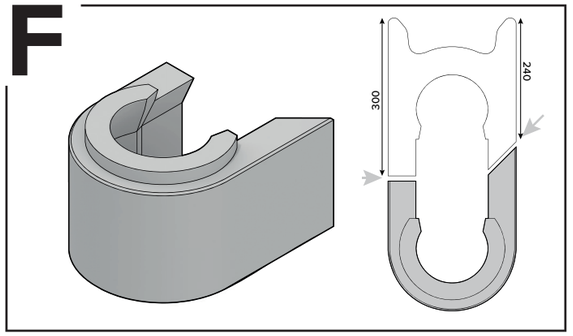
D



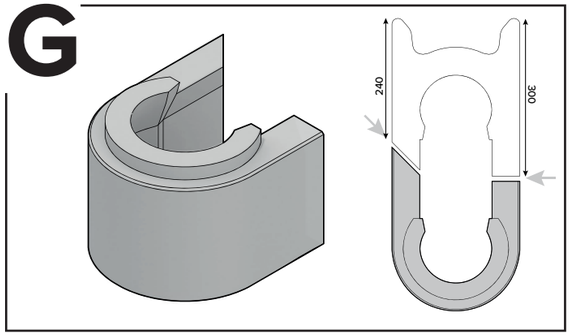
E



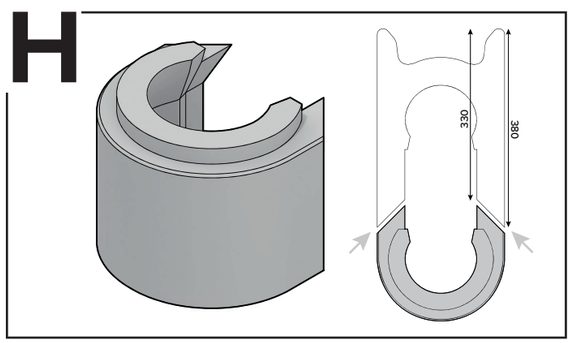
F



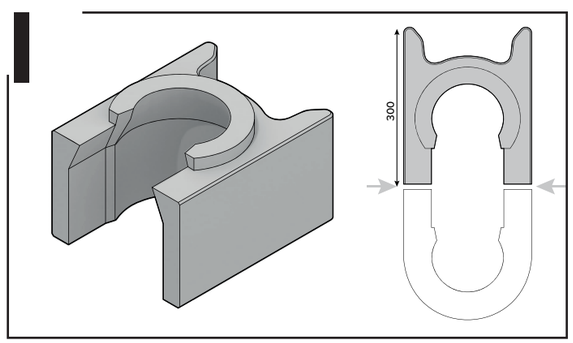
G



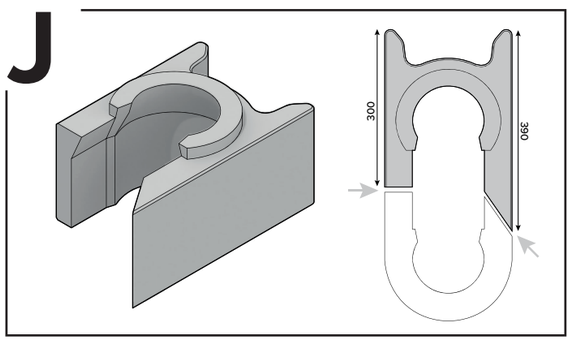
H



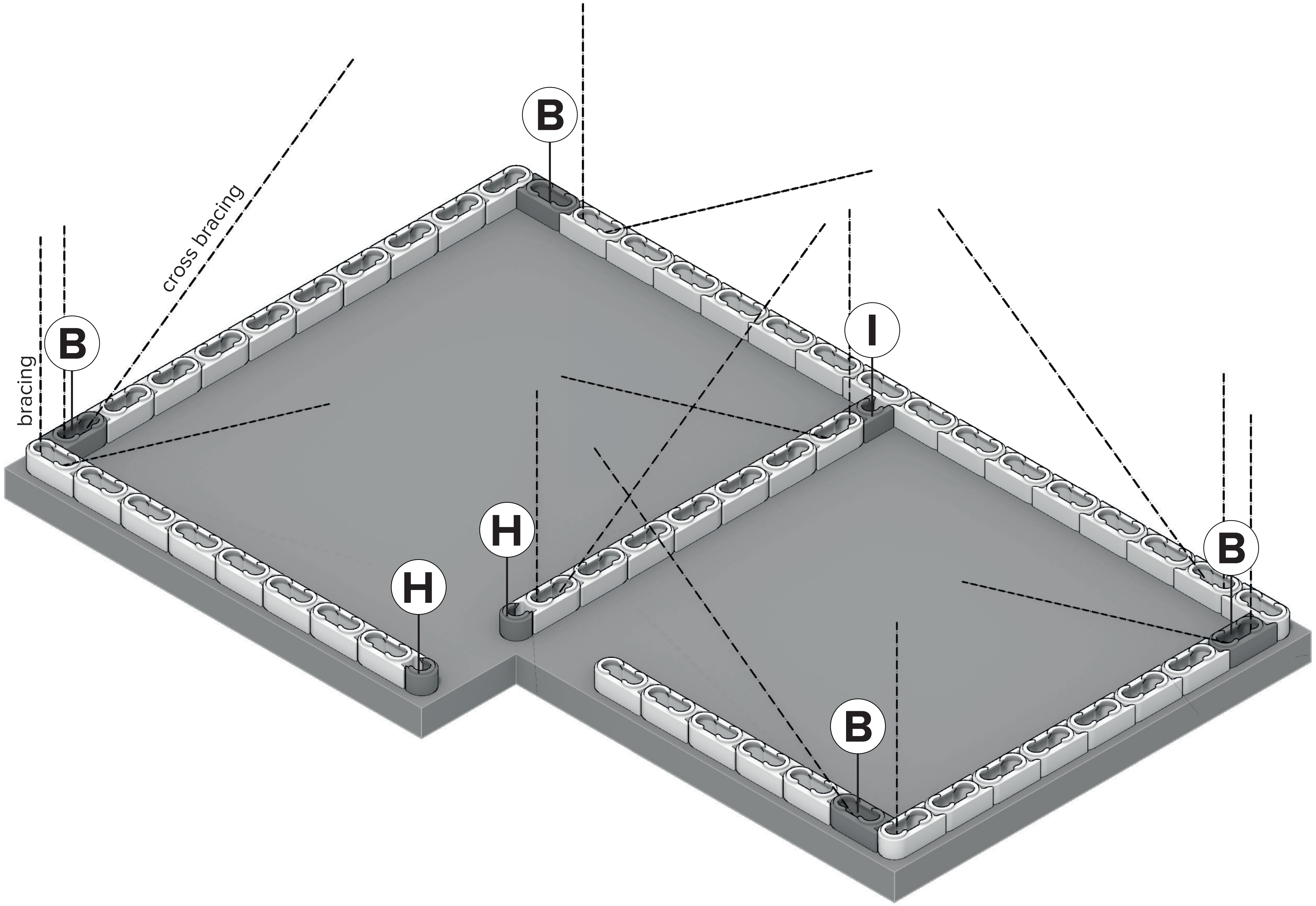
I

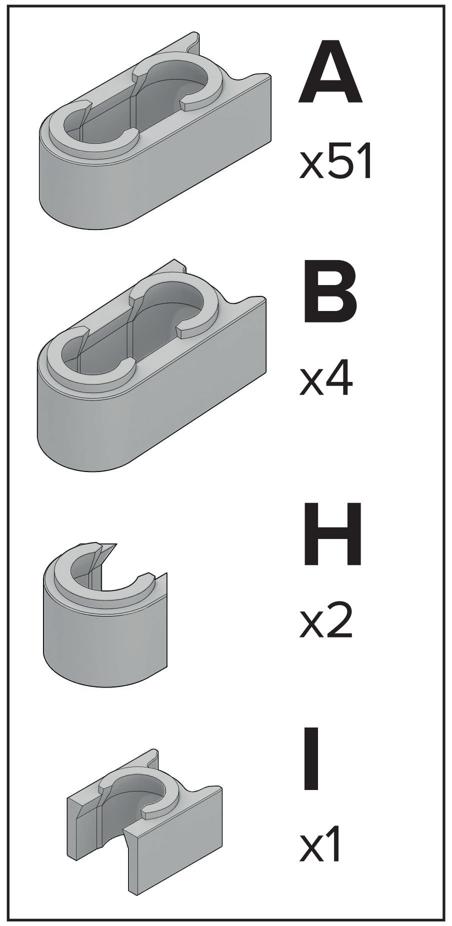


J

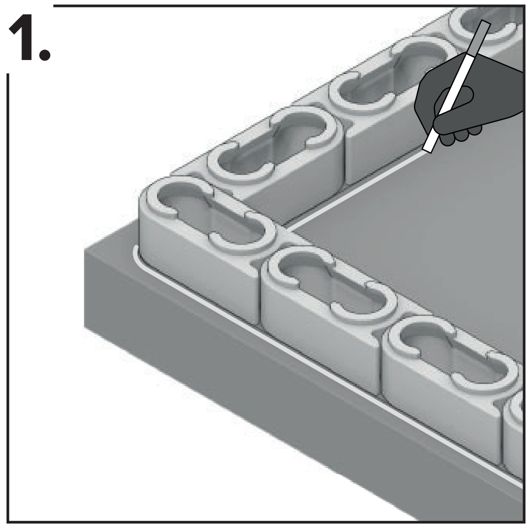


1st row



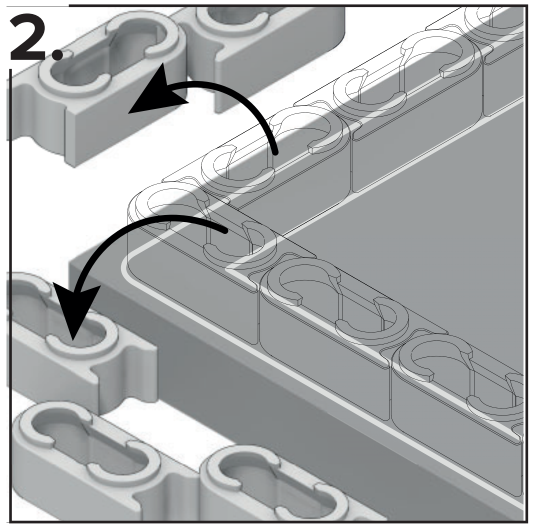


1.



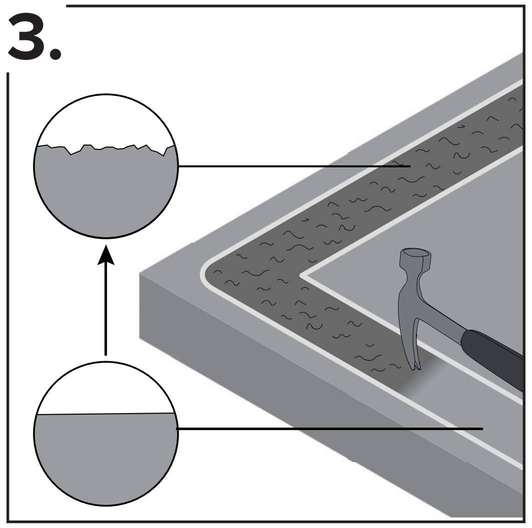
Make a test layout of the TBs and mark the outline with chalk.

2.



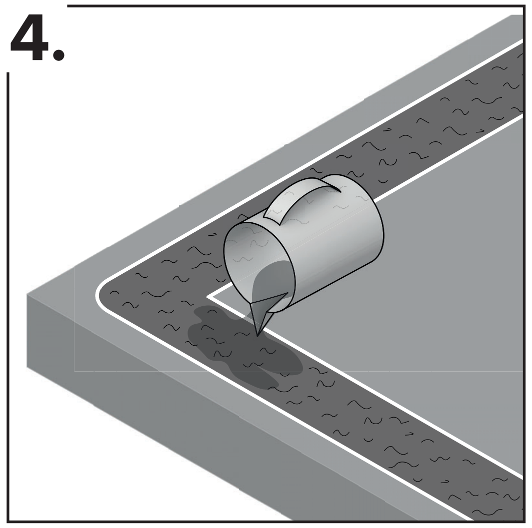
Remove the test layout and put TBs aside.

3.



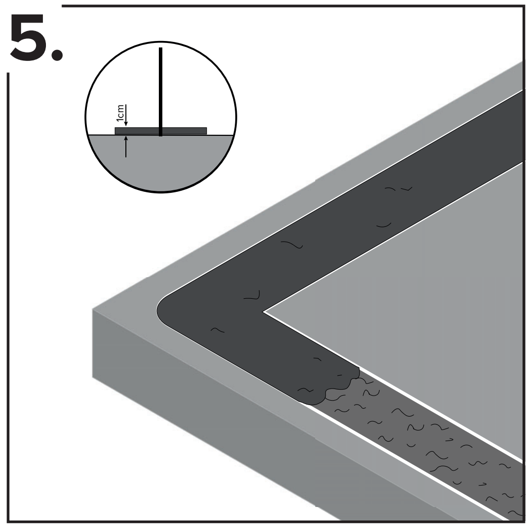
Hack the surface of the foundation concrete where the blocks will lie.

4.



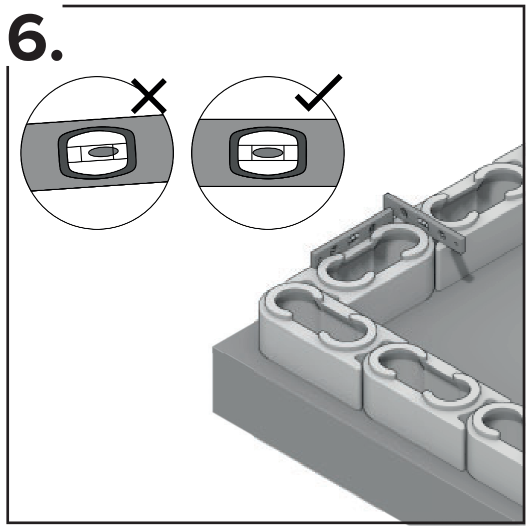
Wet the hacked surface with water to ensure better bonding.

5.



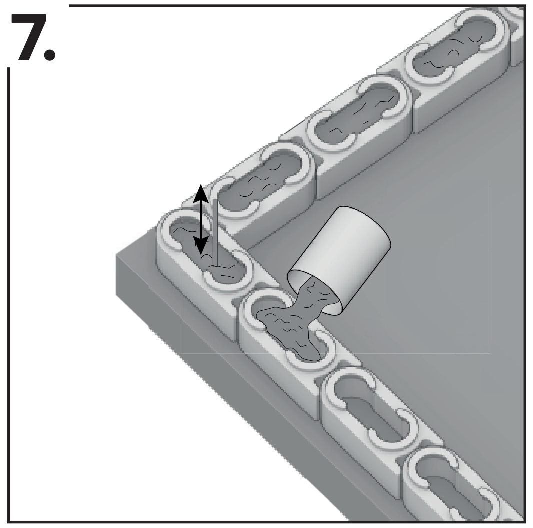
Put on a small layer of mortar for precision and proper leveling.

6.



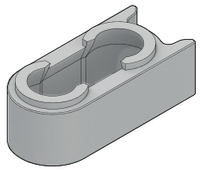
Place the first row of TBs and level them perfectly. This is very important for the stability of the whole building.

7.

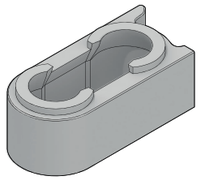


Pour concrete halfway into the TBs and poke with a stick, preventing movement during subsequent block laying.

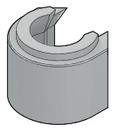
2nd row



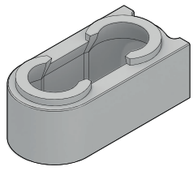
A
x51



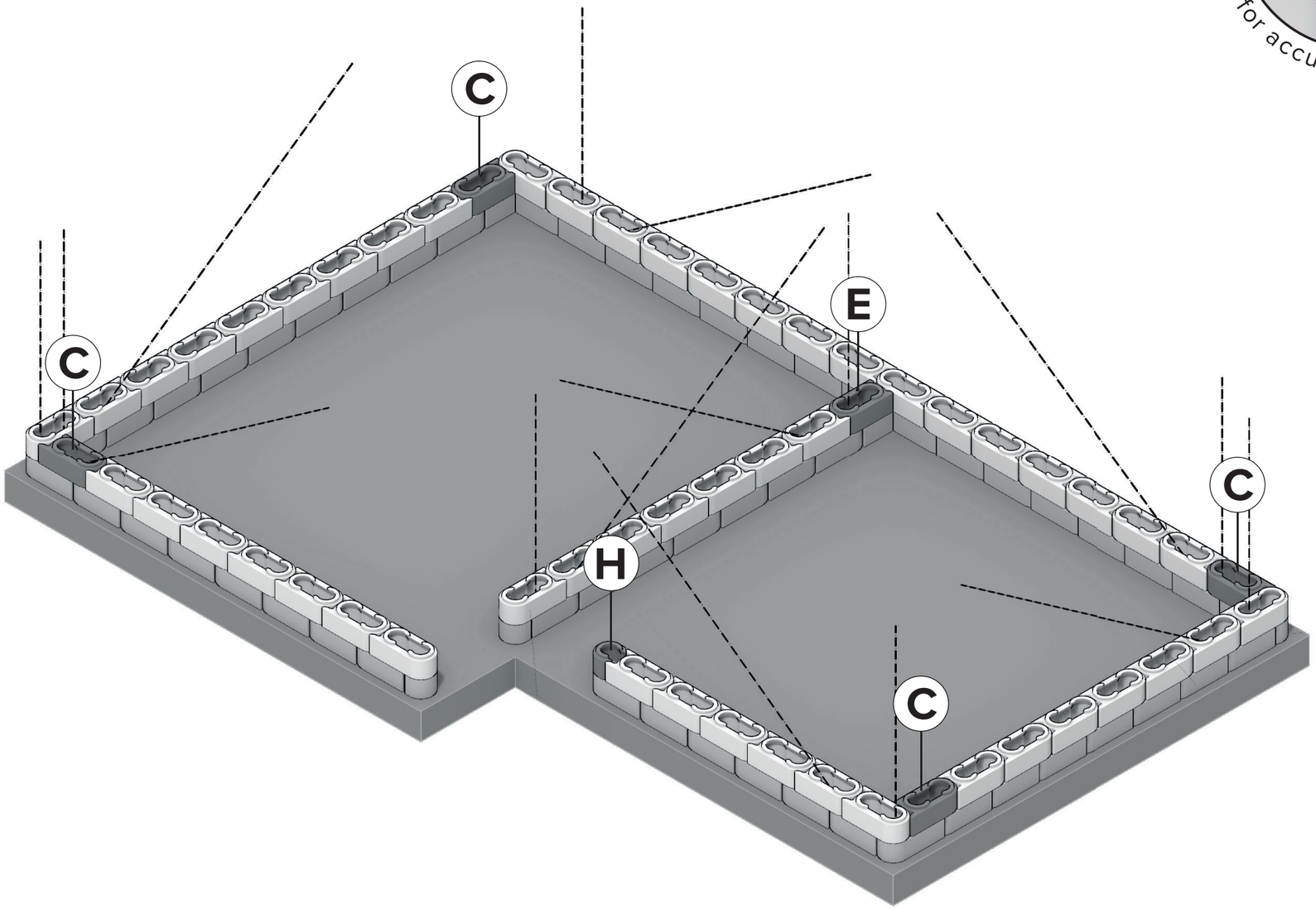
C
x4



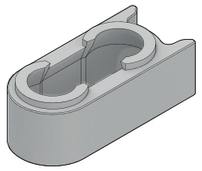
H
x1



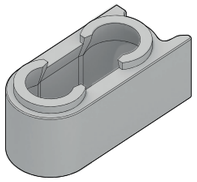
E
x1



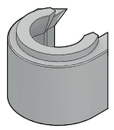
3rd row



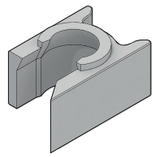
A
x50



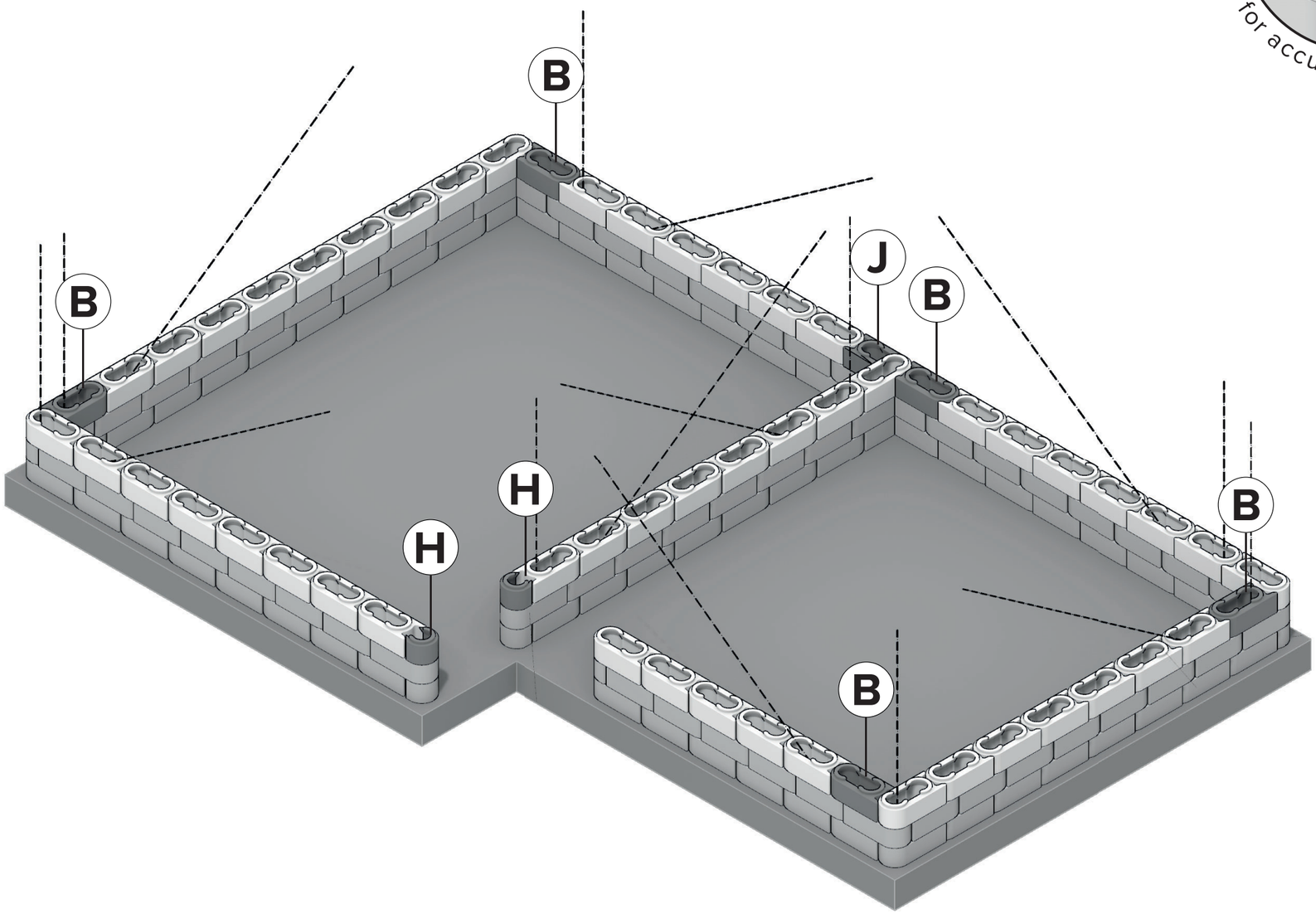
B
x5

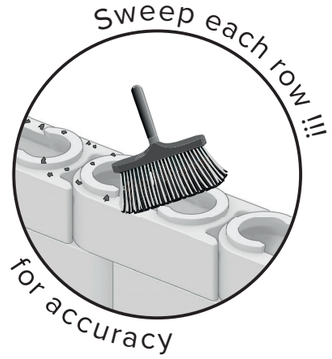


H
x2

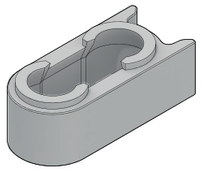


J
x1

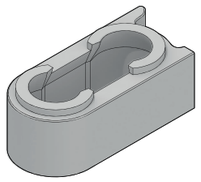




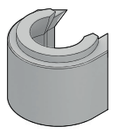
4th row



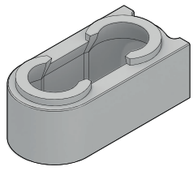
A
x51



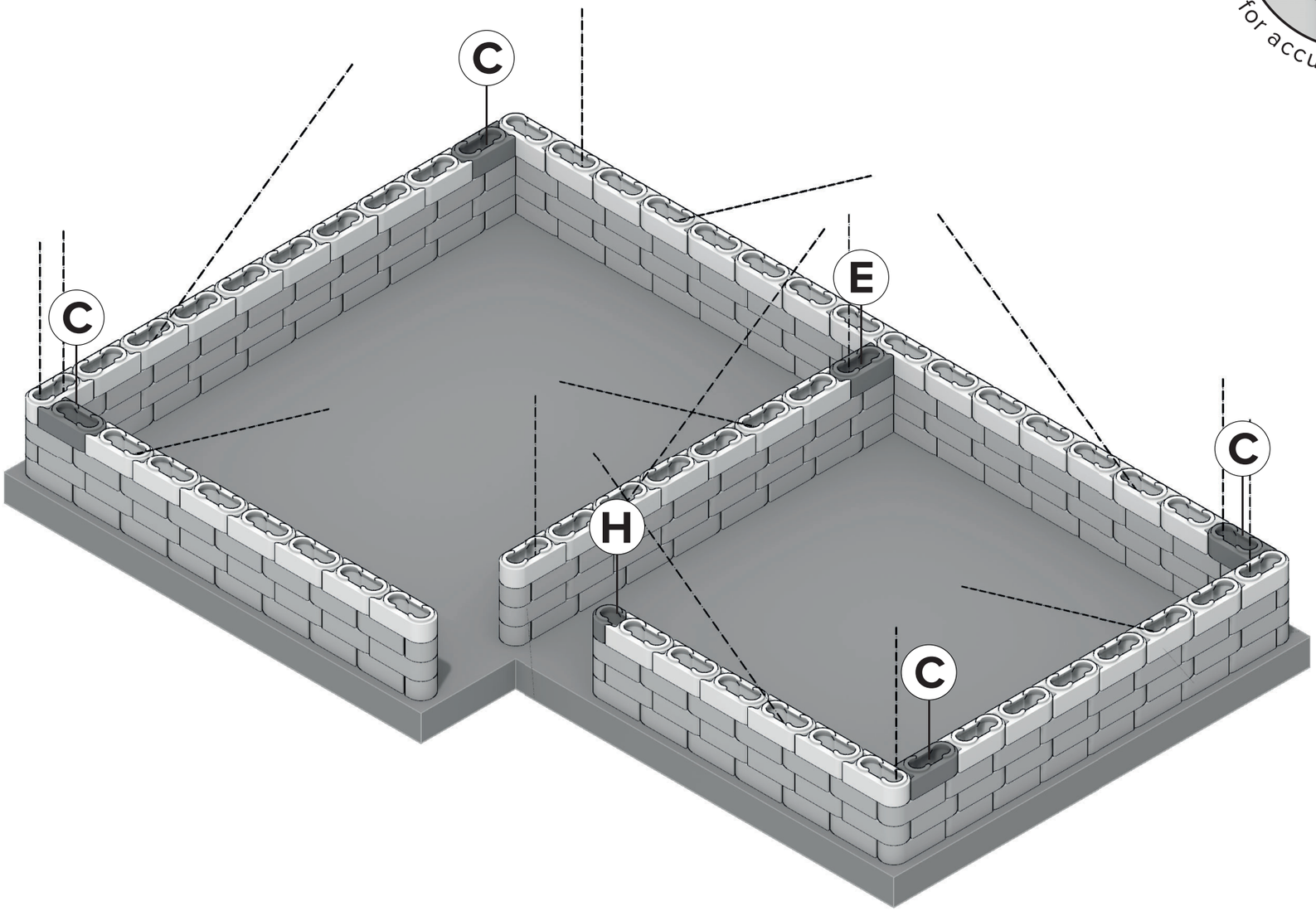
C
x4



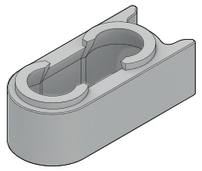
H
x1



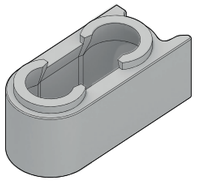
E
x1



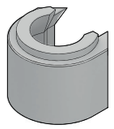
5th row



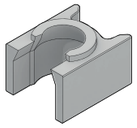
A
x51



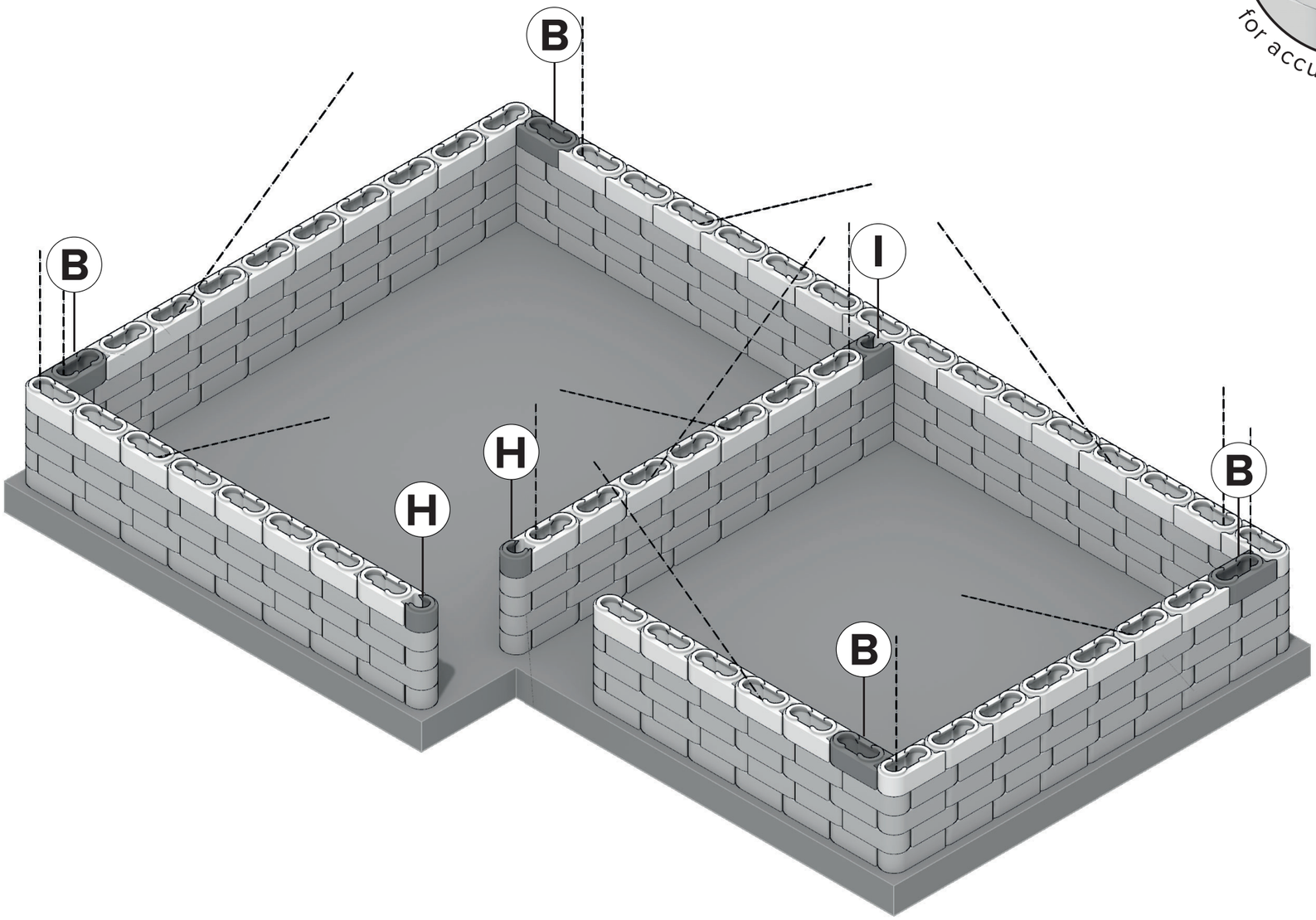
B
x4



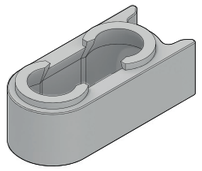
H
x2



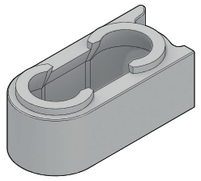
I
x1



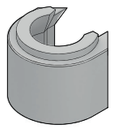
6th row



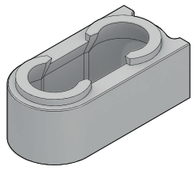
A
x51



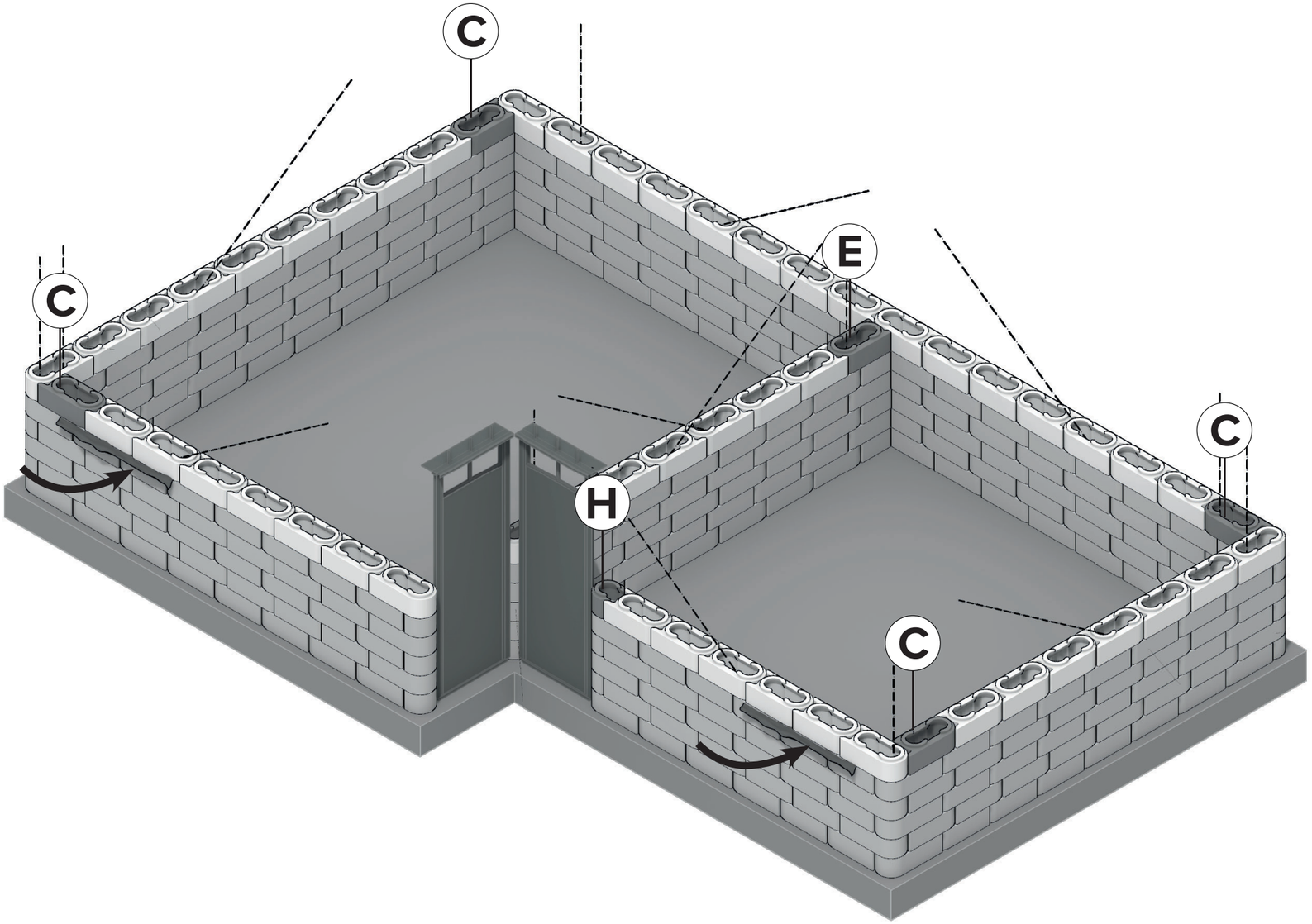
C
x4

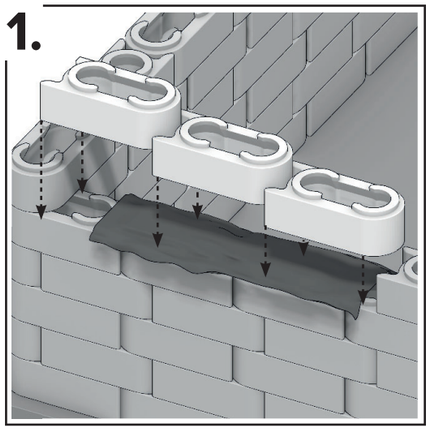


H
x1

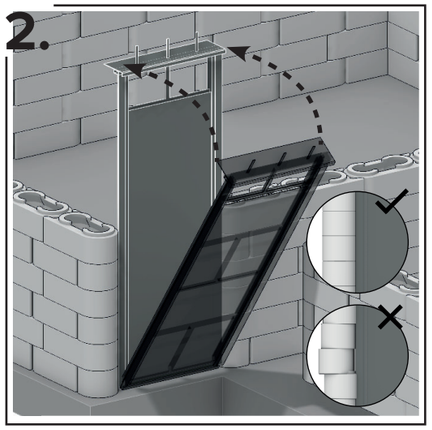


E
x1



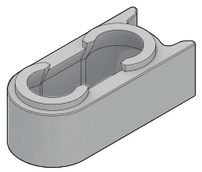


Use DPM foil to cover TBs of the 5th row underneath the window openings. Put TBs on top and clamp foil down.

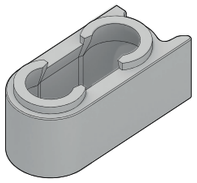


Fit doors in and align with the TBs. Make sure to also align the following rows.

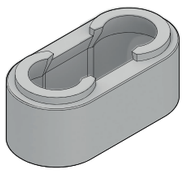
7th row



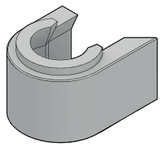
A
x45



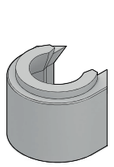
B
x4



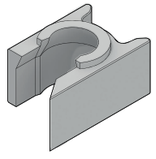
D
x1



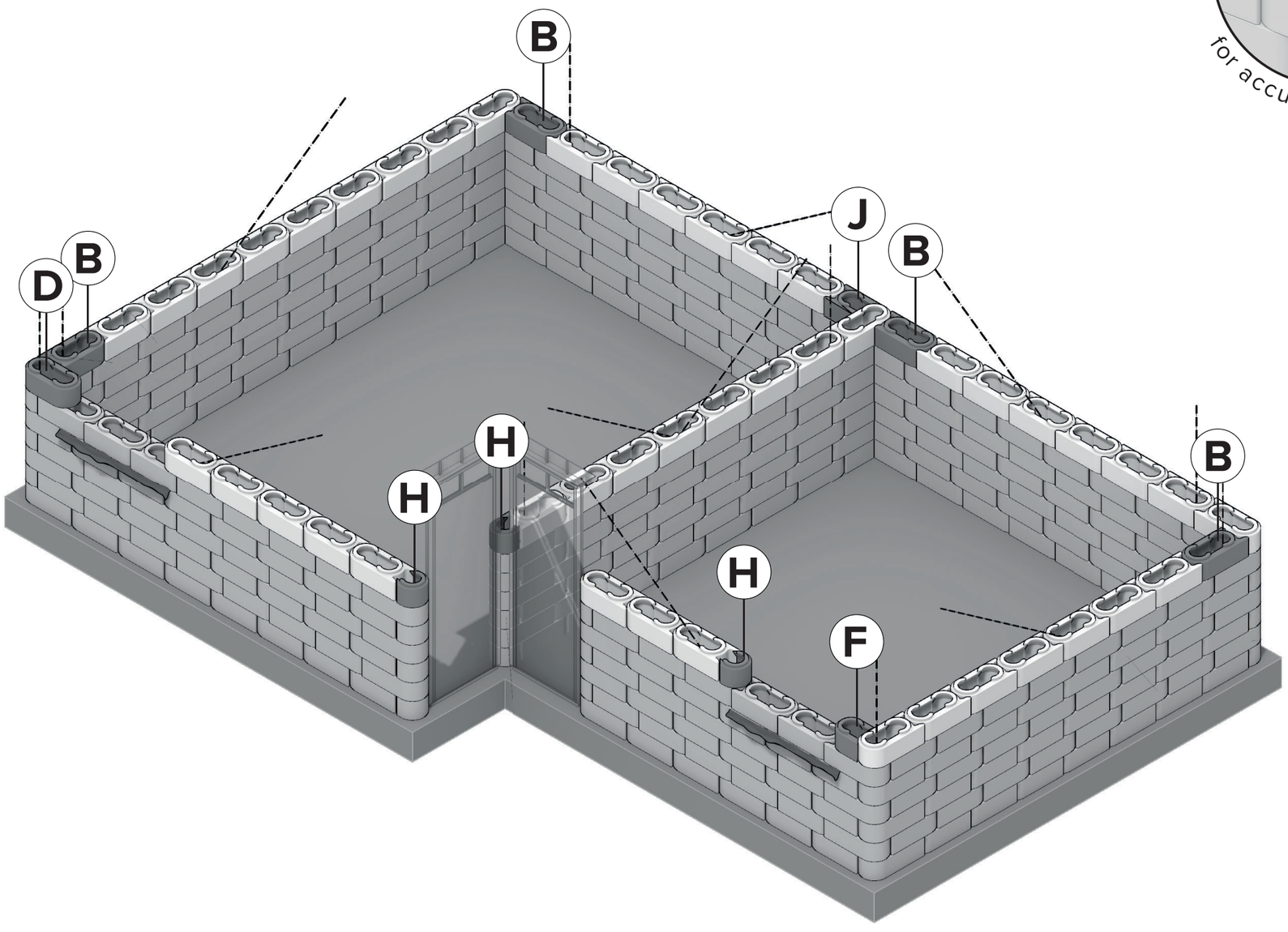
F
x1

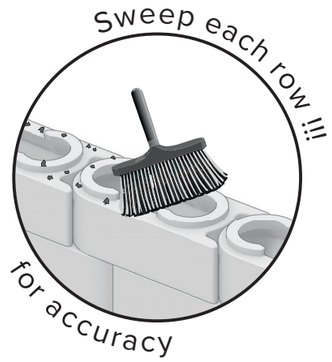


H
x3

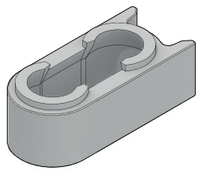


J
x1

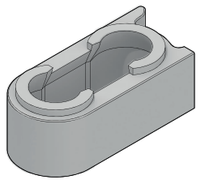




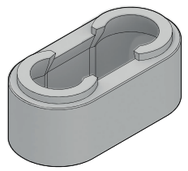
8th row



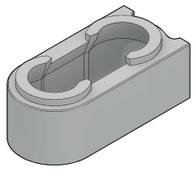
A
x46



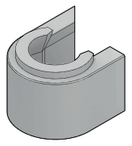
C
x3



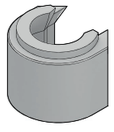
D
x1



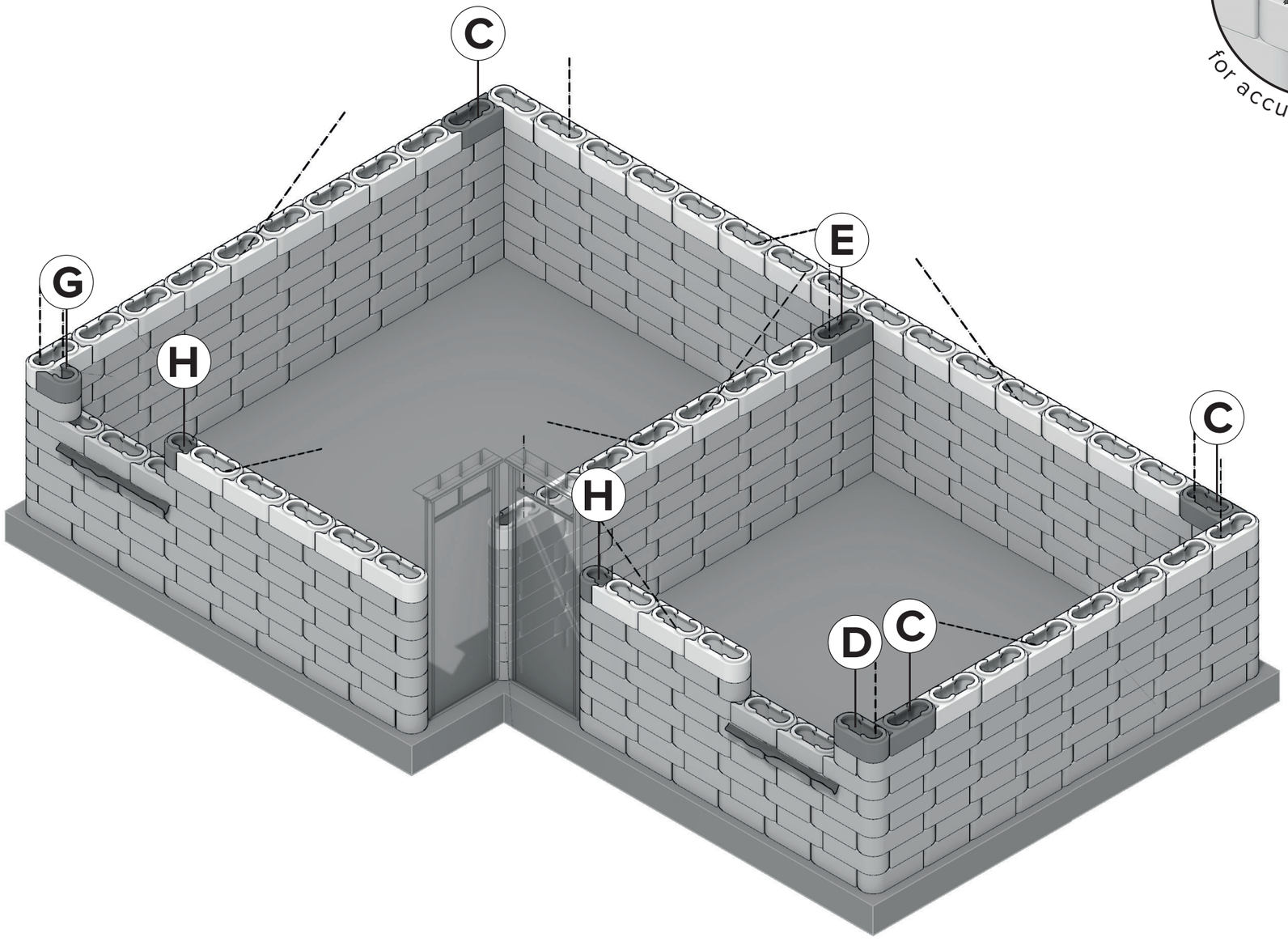
E
x1

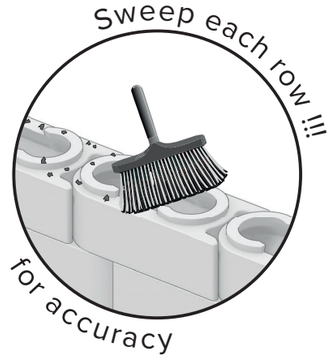


G
x1

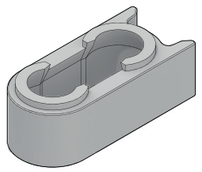


H
x2

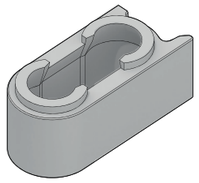




9th row



A
x46



B
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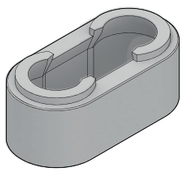
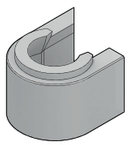
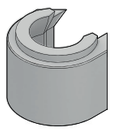


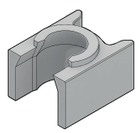
D
x1



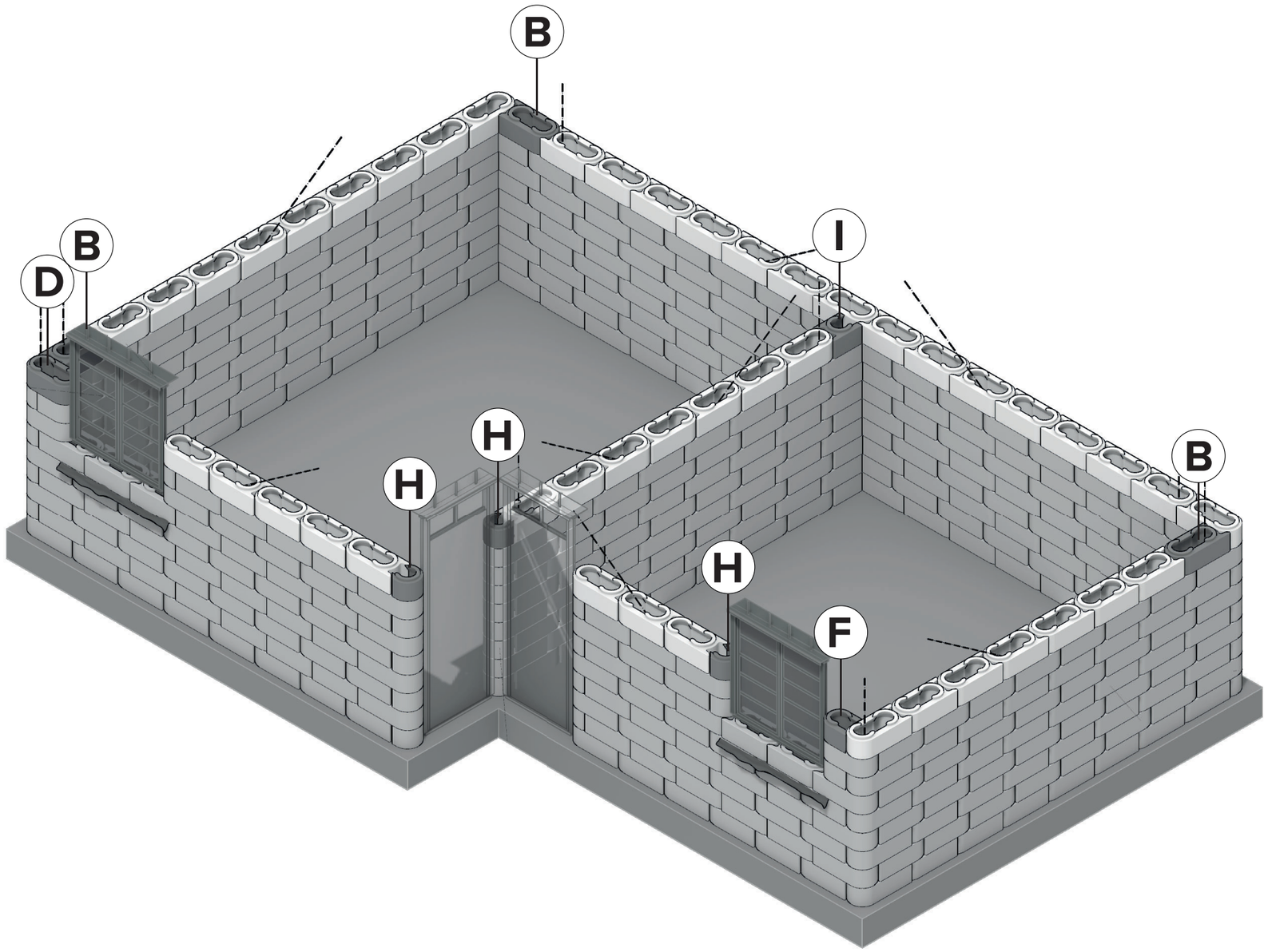
F
x1

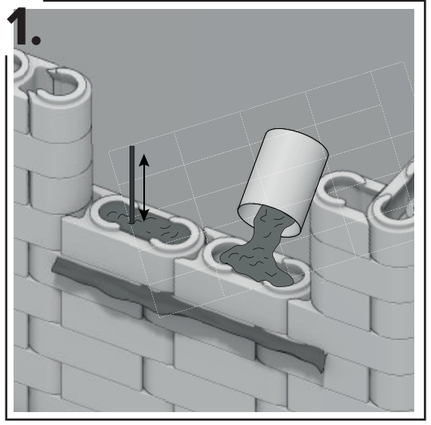


H
x3



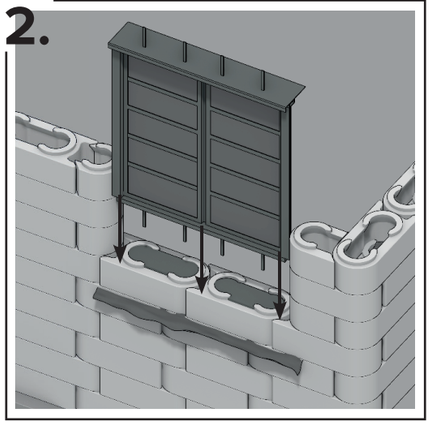
I
x1





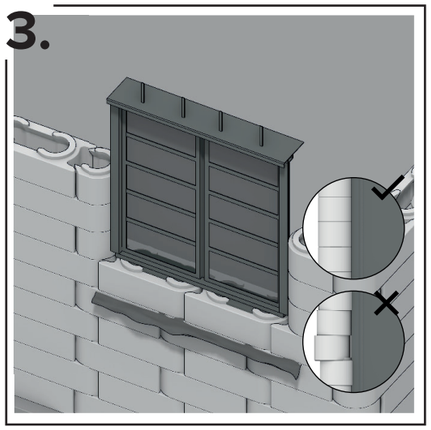
1.

Pour concrete in below the windows and poke with a stick. Be carful not to rip the DPM foil.



2.

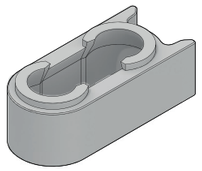
Slides window frames in. Hoop irons go in the concrete.



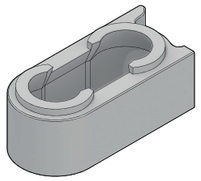
3.

Align window frames with the wall.

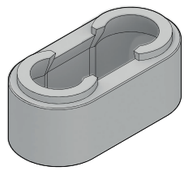
10th row



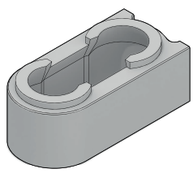
A
x46



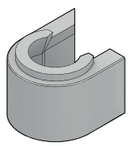
C
x3



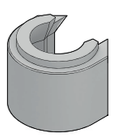
D
x1



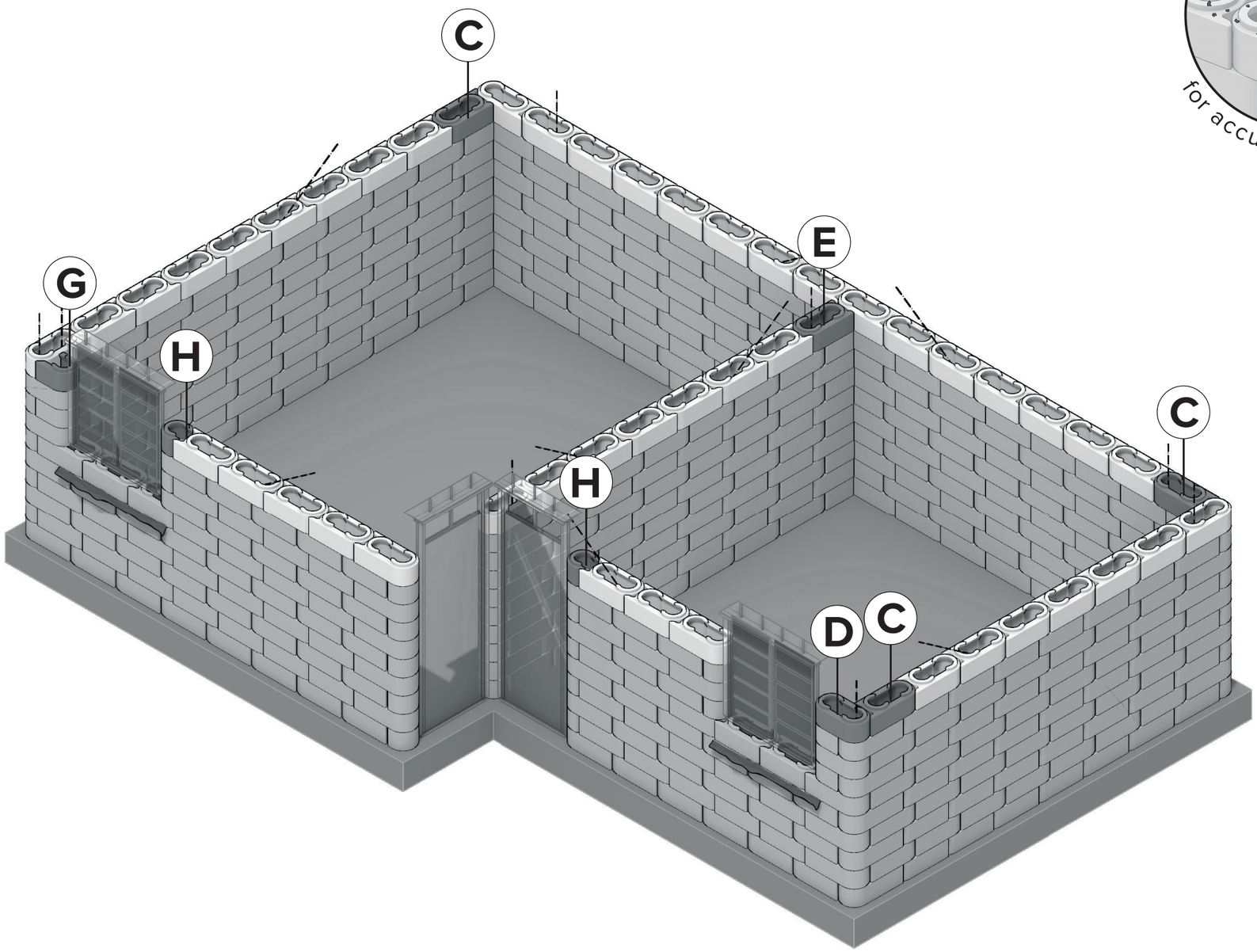
E
x1

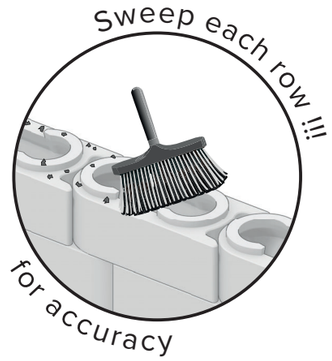


G
x1

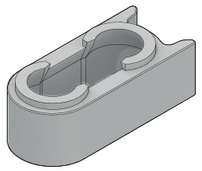


H
x2

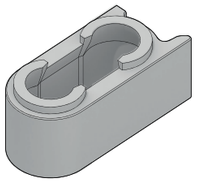




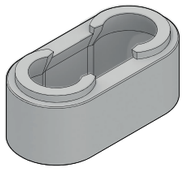
11th row



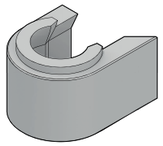
A
x45



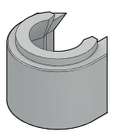
B
x4



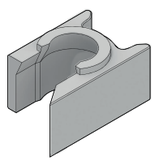
D
x1



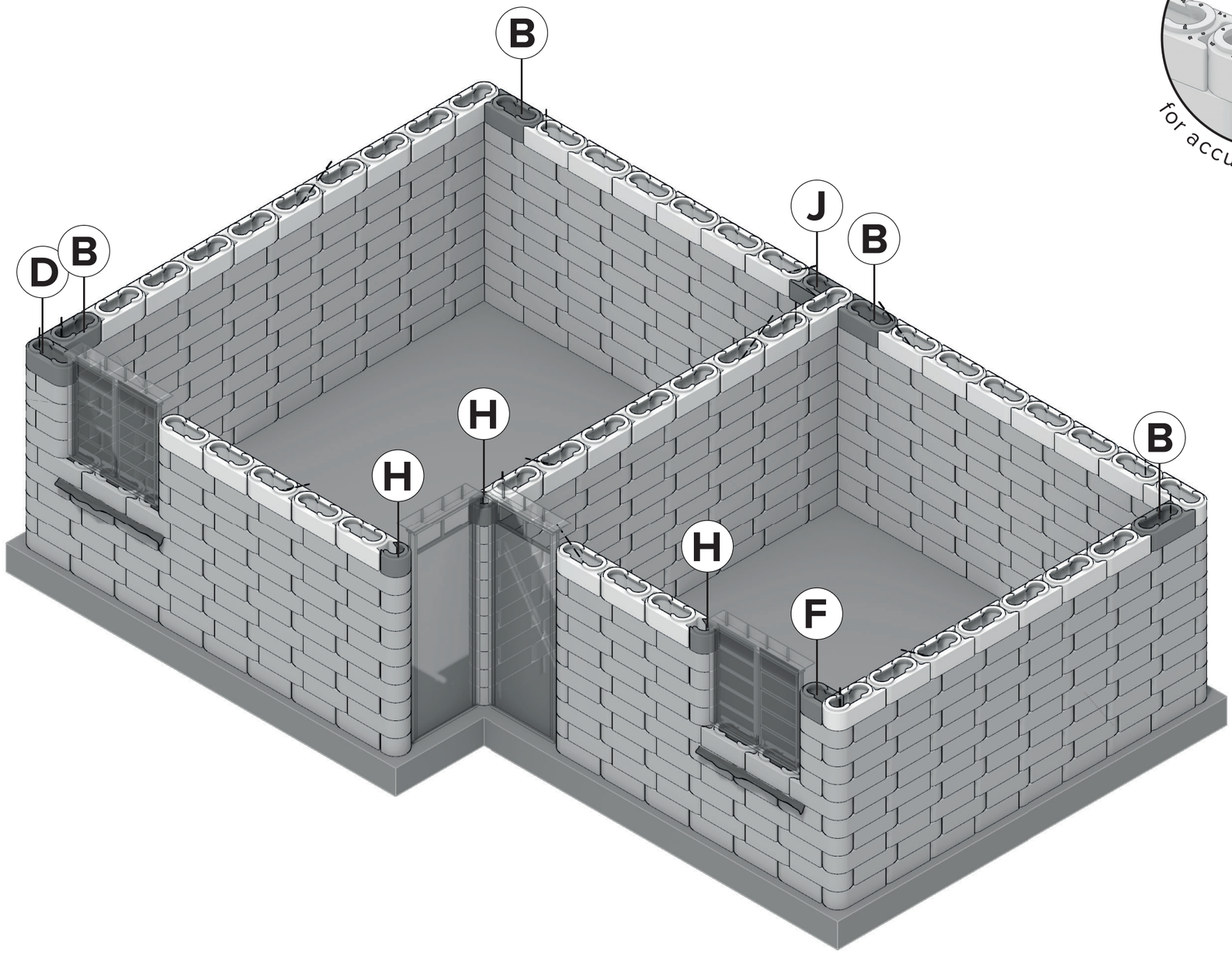
F
x1

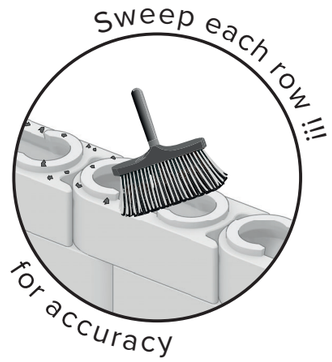


H
x3

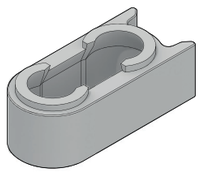


J
x1

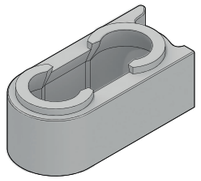




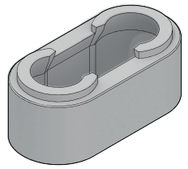
12th row



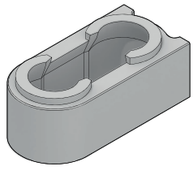
A
x46



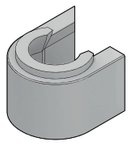
C
x3



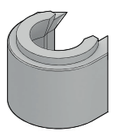
D
x1



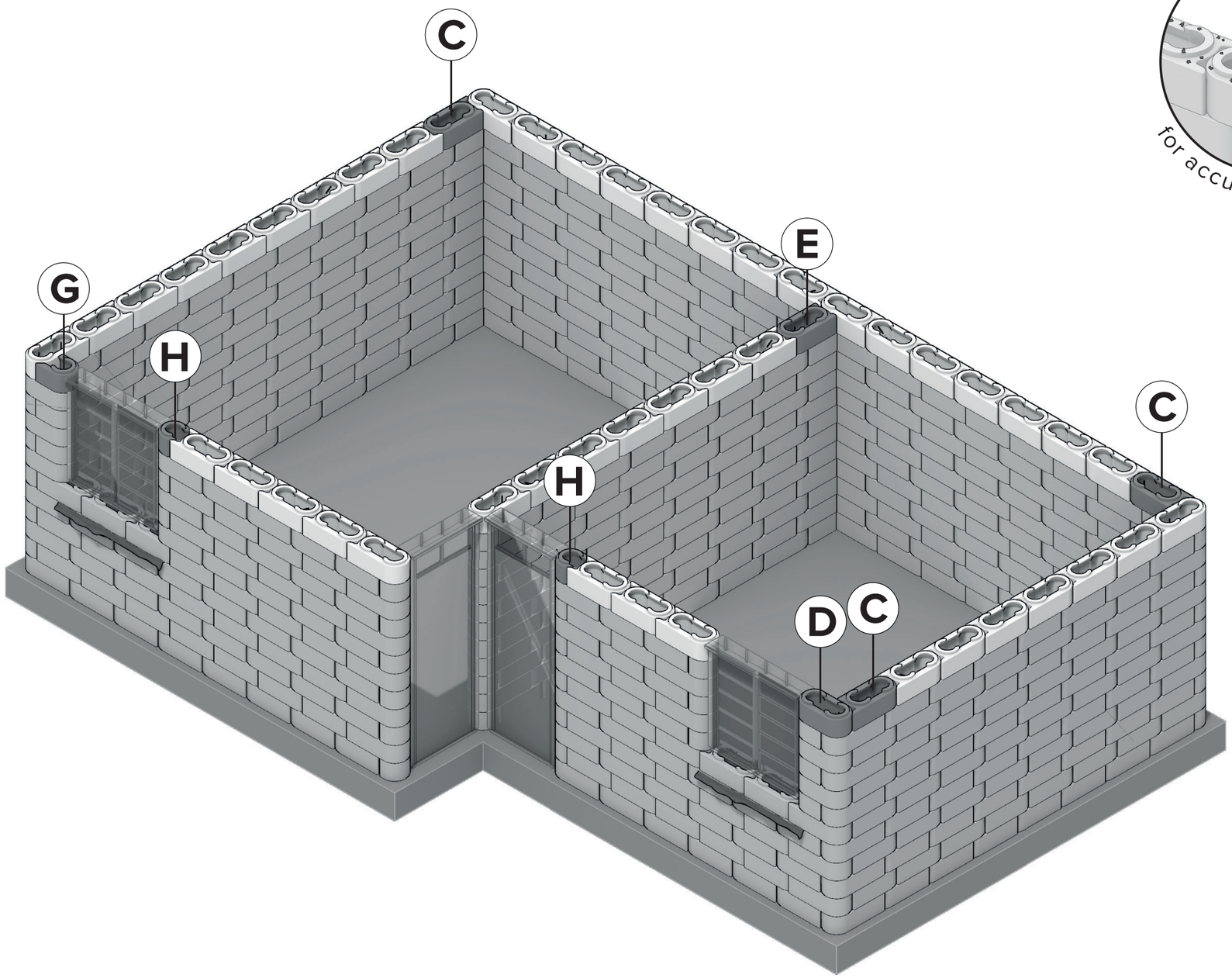
E
x1

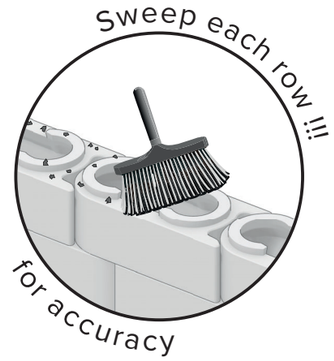


G
x1



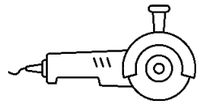
H
x2

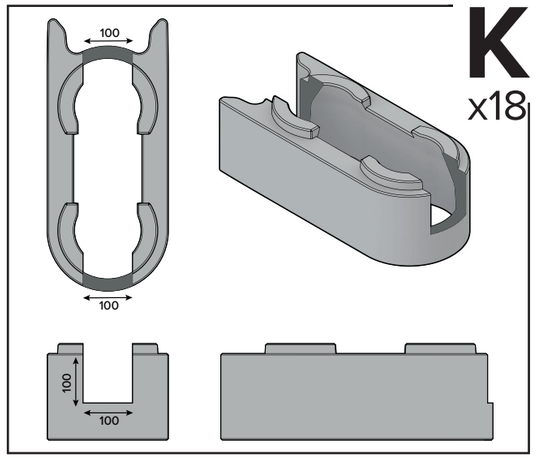


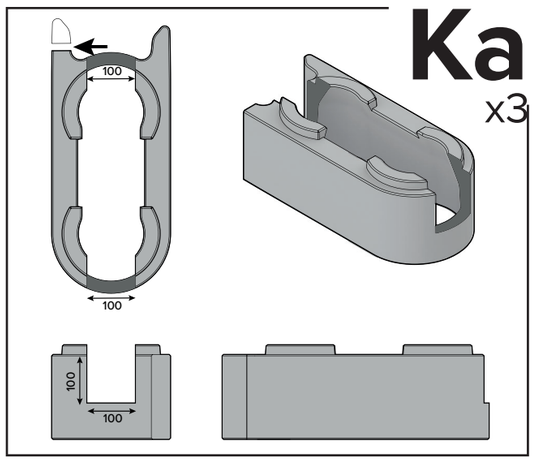


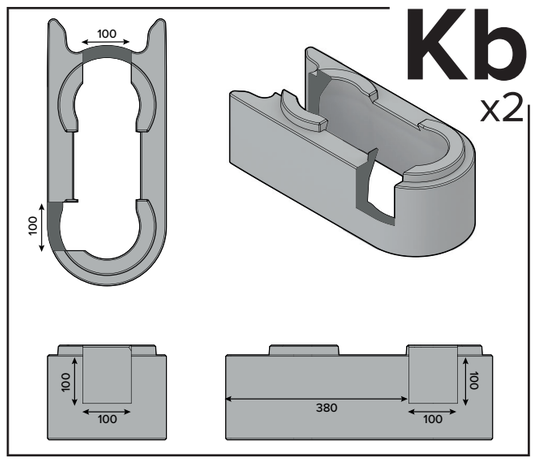
Ringbeam 1 - 1st row

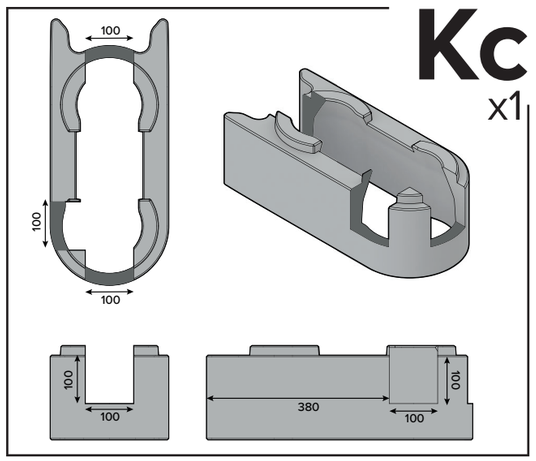
TWISTBLOCK ADJUSTMENTS

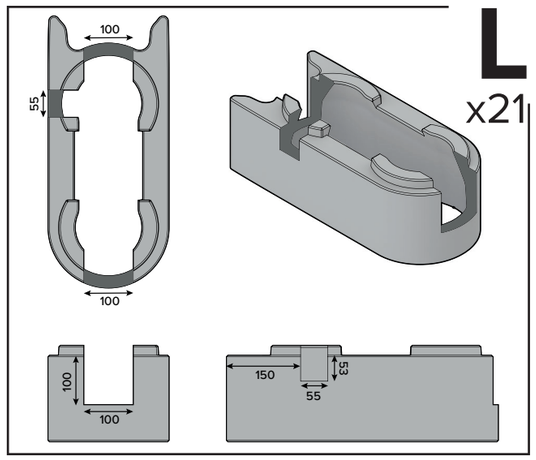


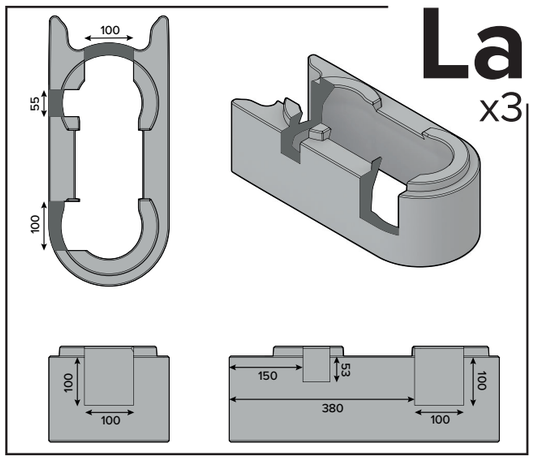


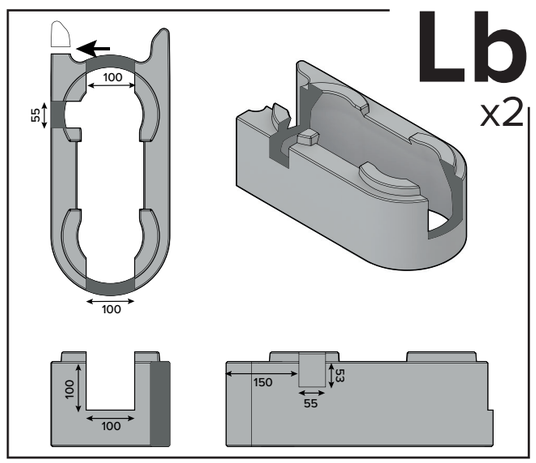


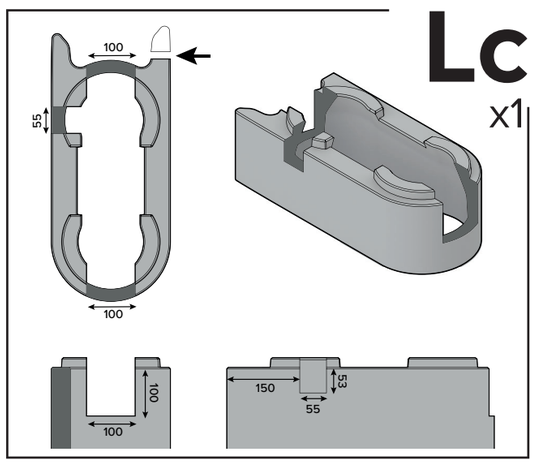


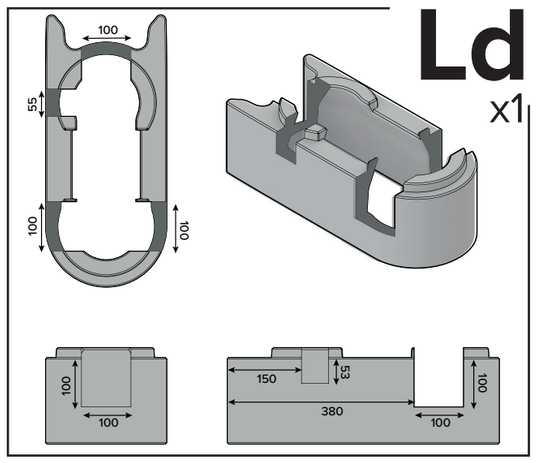


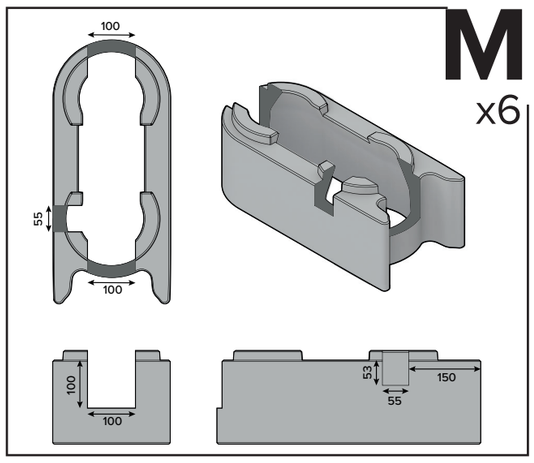


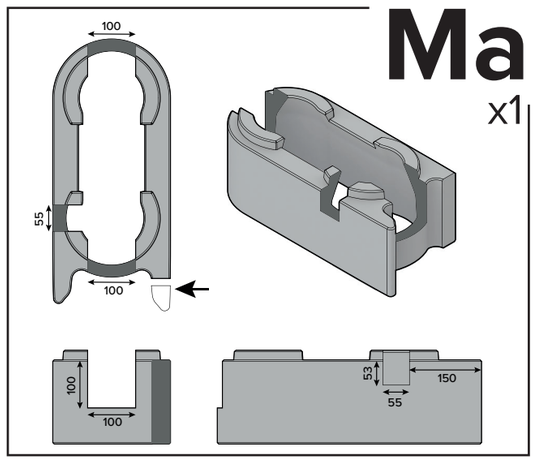


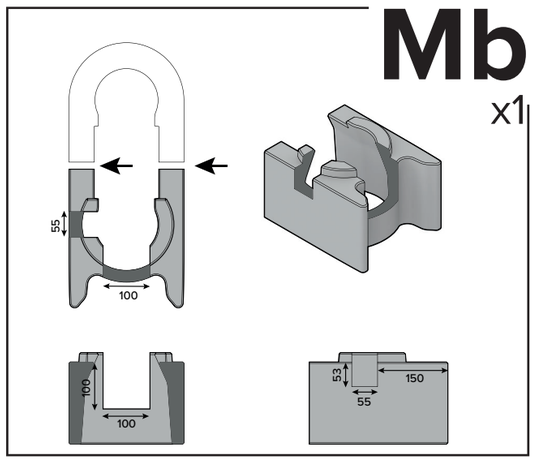






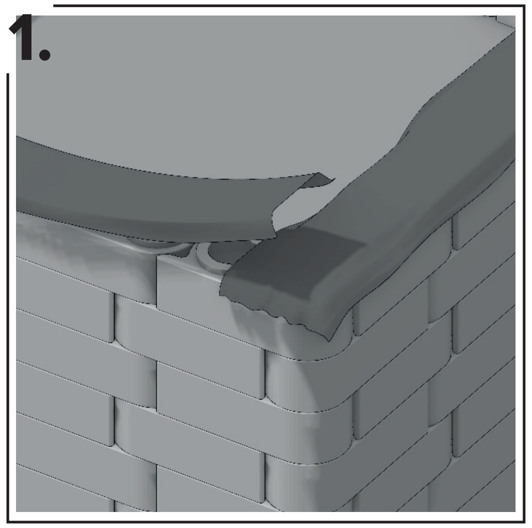






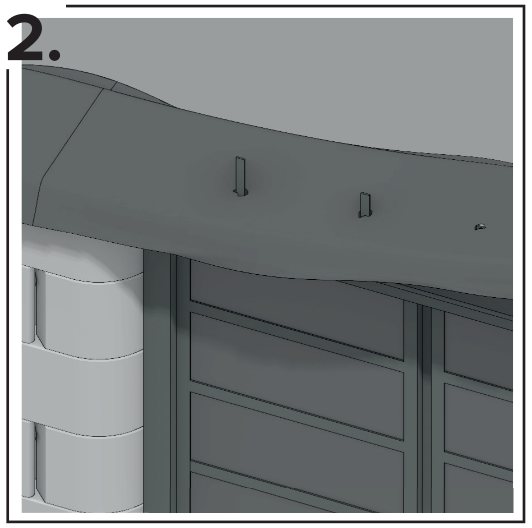
Ringbeam 1 - 1st row

1.

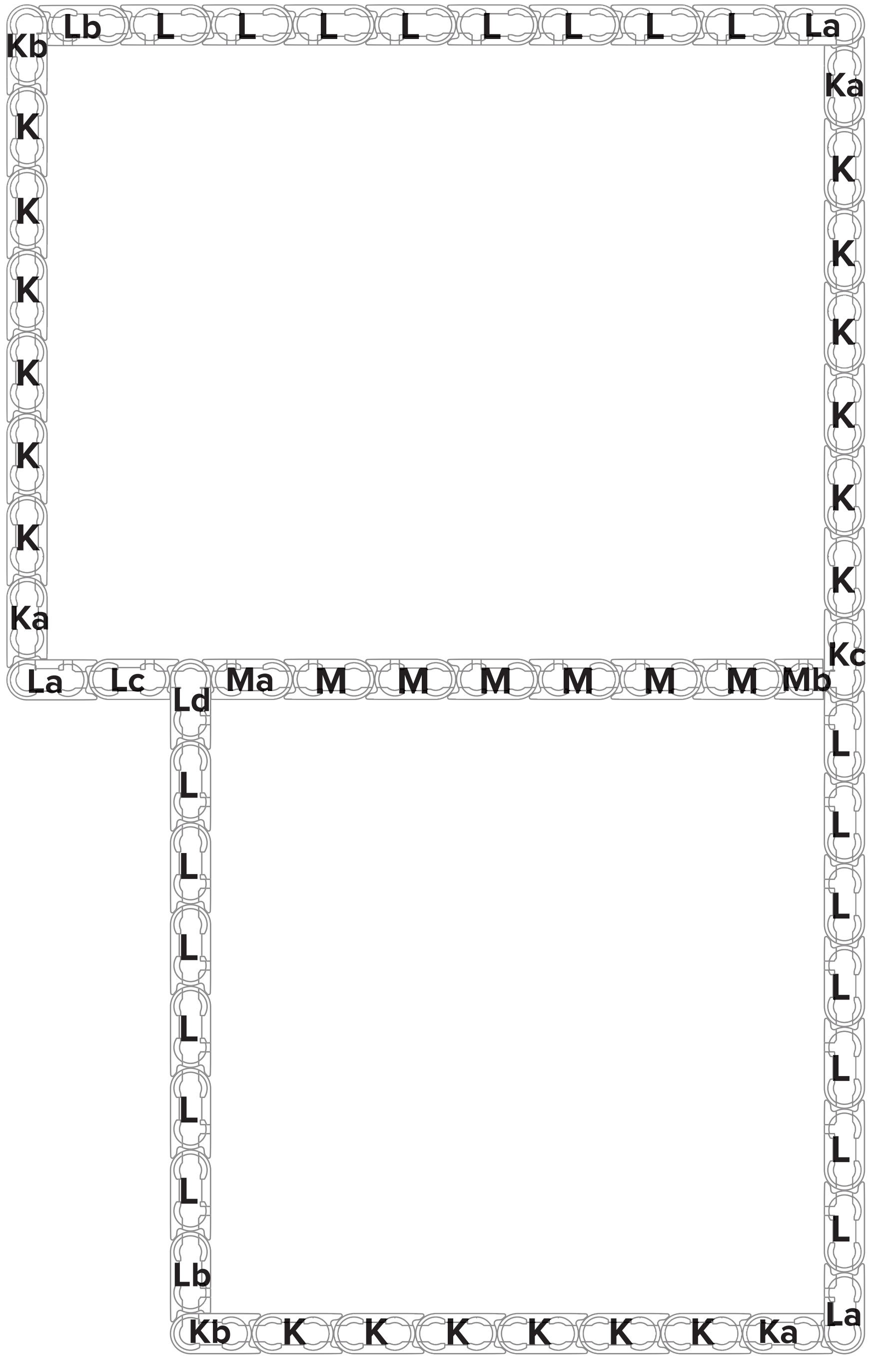


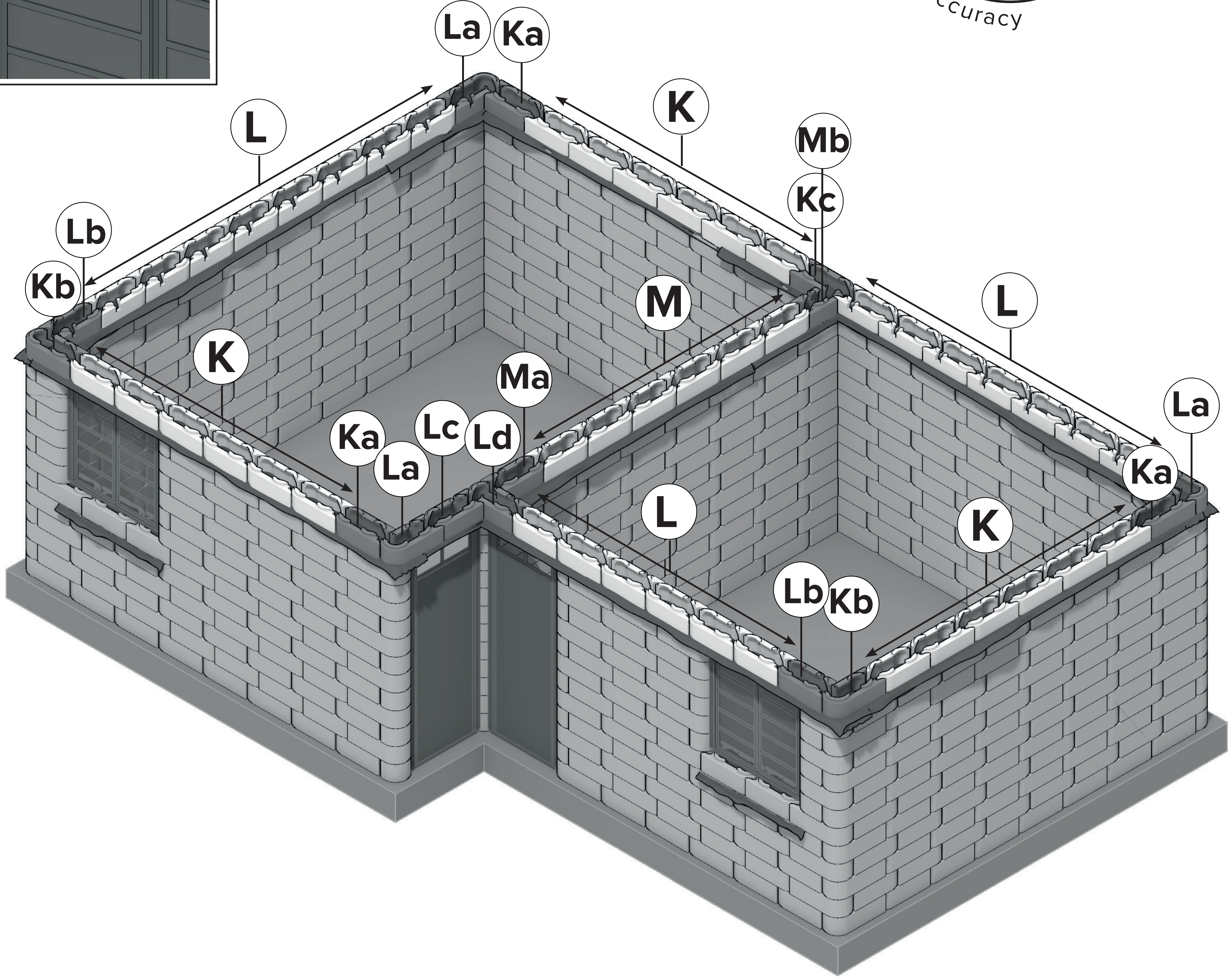
Cover the whole 12th layer with DPM foil.

2.



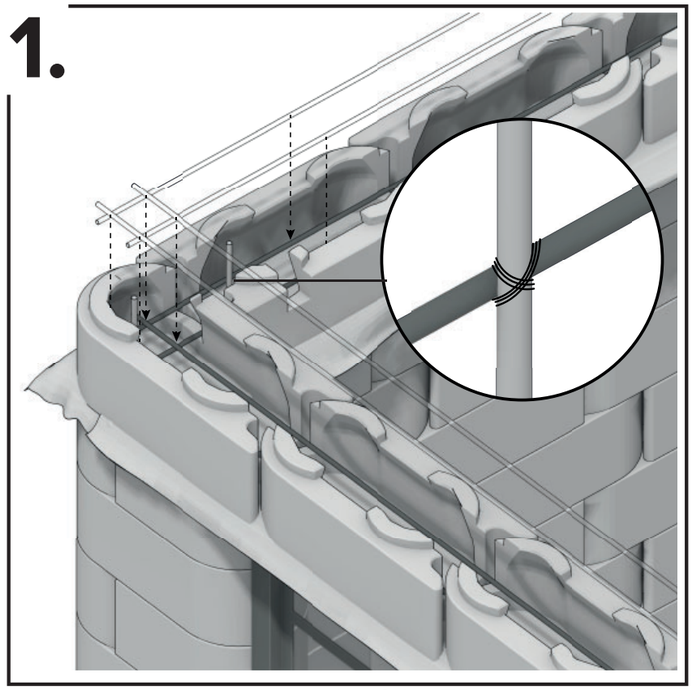
Poke holes trough the foil where hoop irons stand out from window and door frames.





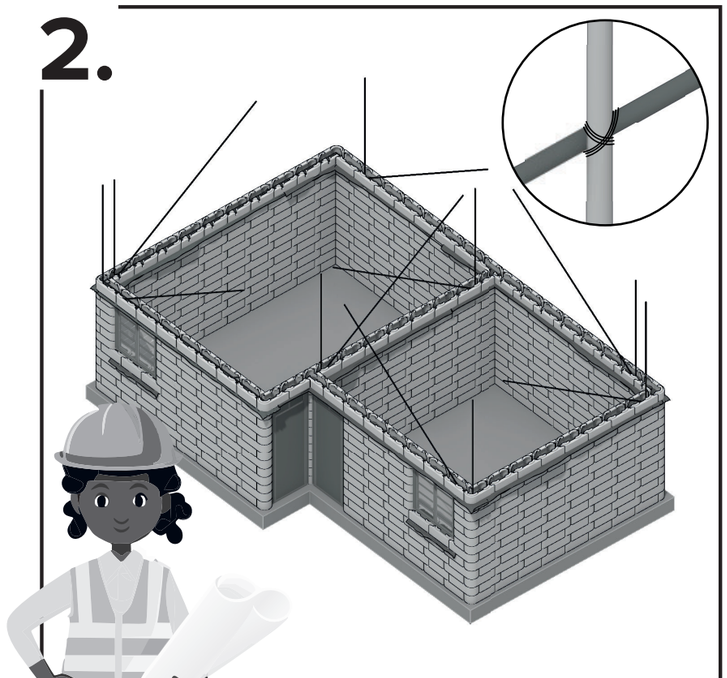
Ringbeam 1 - 1st row

1.



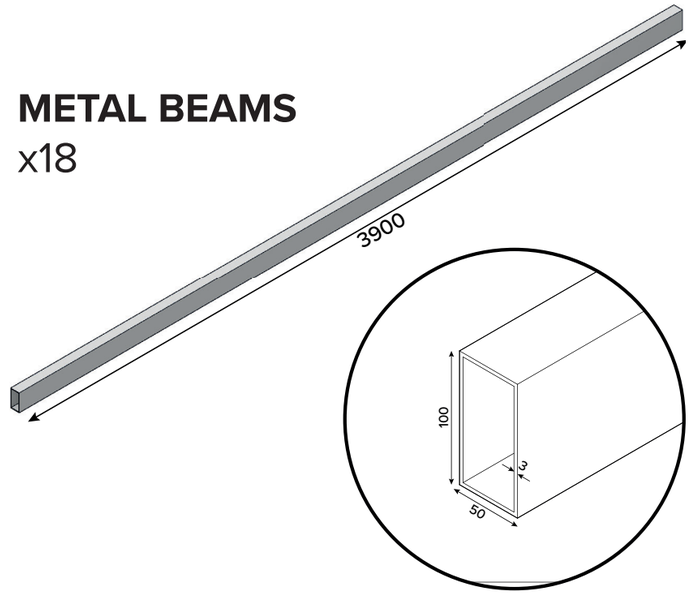
Insert rebars in the channels of the TBs. Connect the rebars to the bracing of the walls with wire.

2.

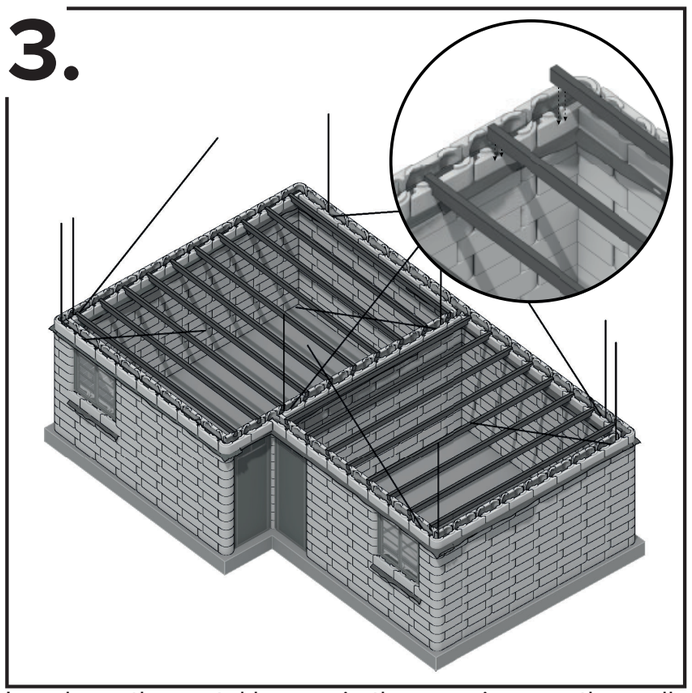


Insert bracing and crossbracing for the 1st floor according to engineering. Connect them to rebars with wire.

METAL BEAMS
x18

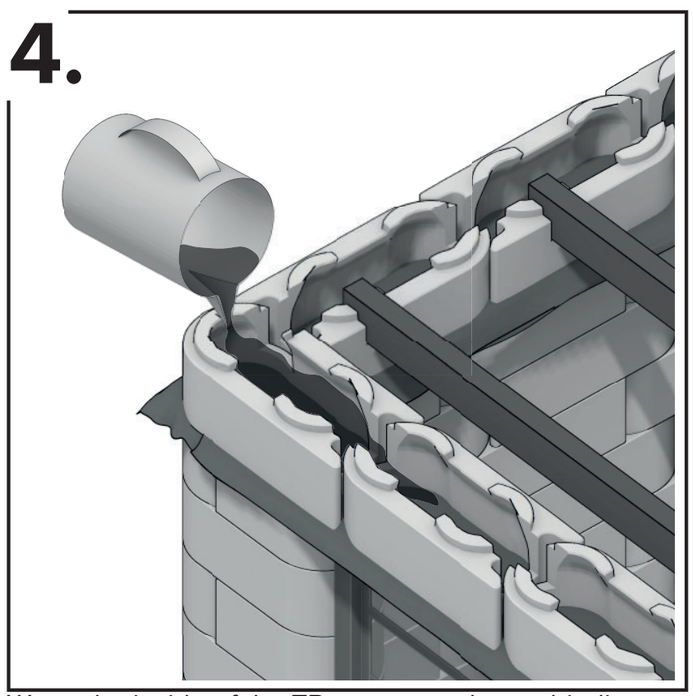


3.



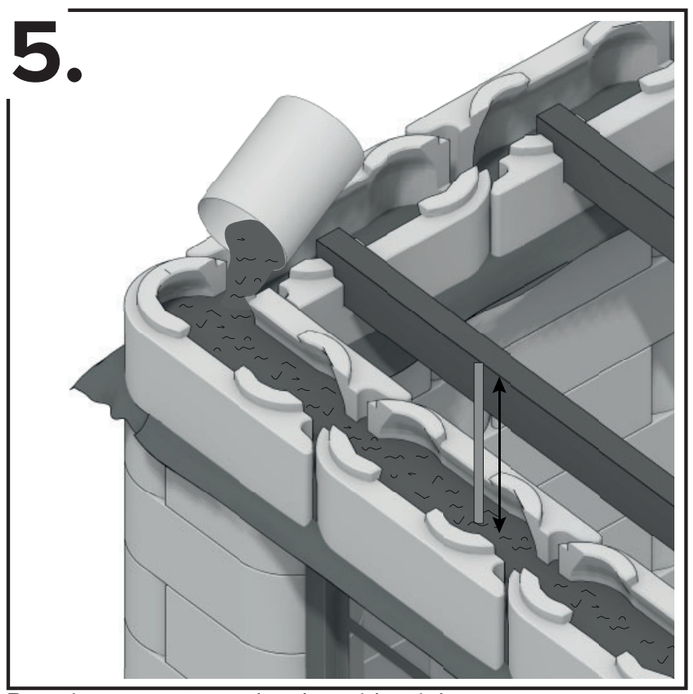
Lay down the metal beams in the openings on the wall.

4.



Water the inside of the TBs to ensure better binding between blocks and concrete.

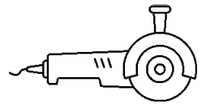
5.

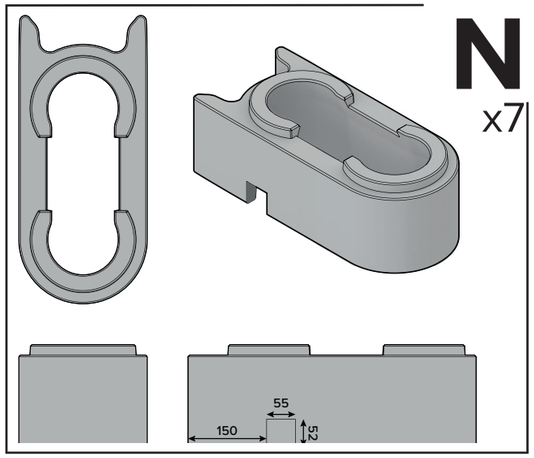


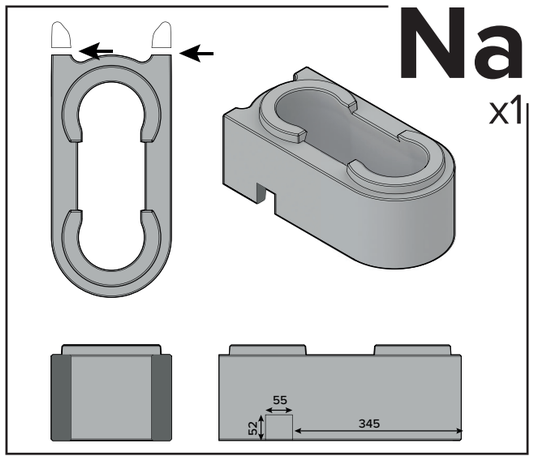
Pour in concrete and poke with stick.

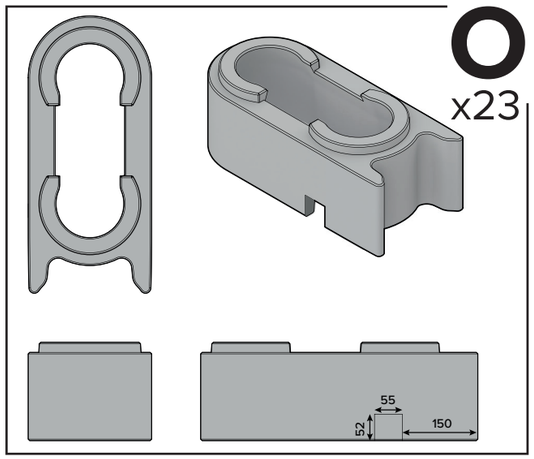
Ringbeam 1 - 2nd row

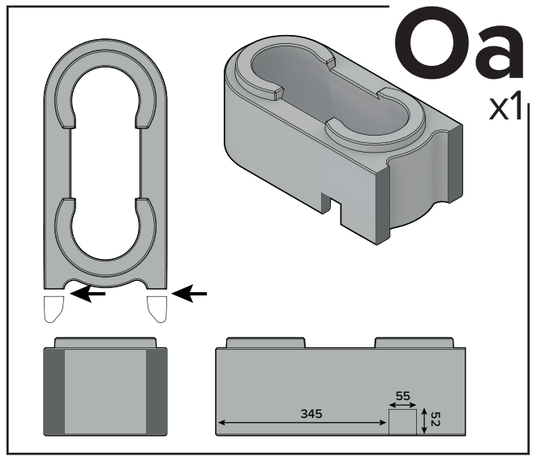
TWISTBLOCK ADJUSTMENTS

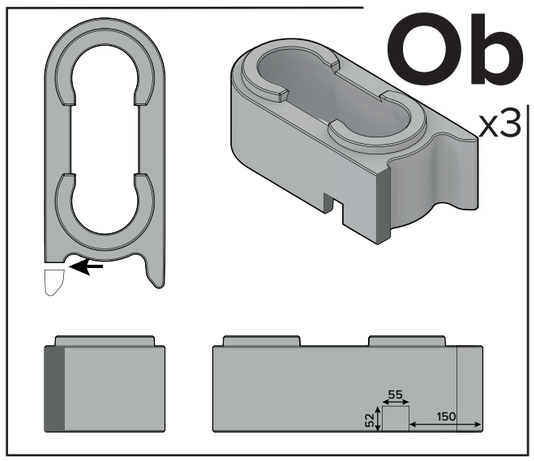


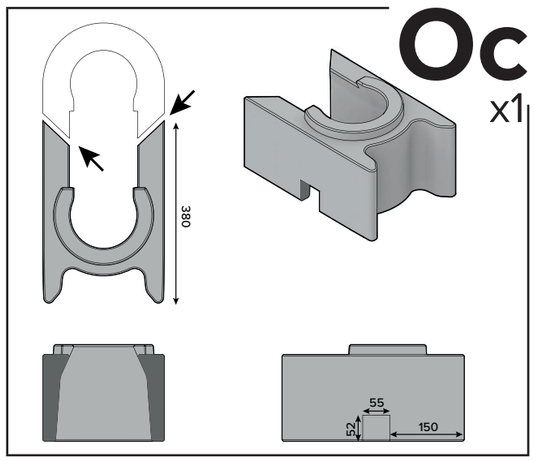


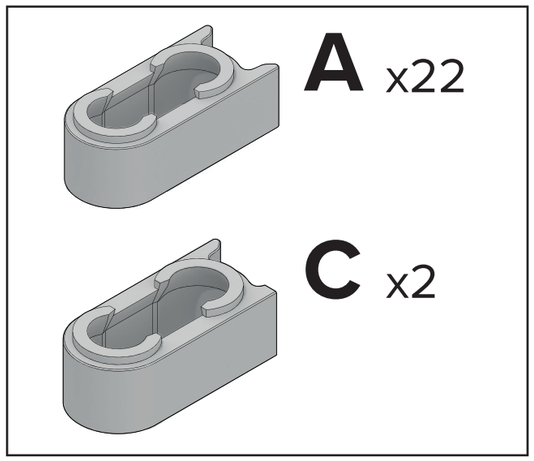




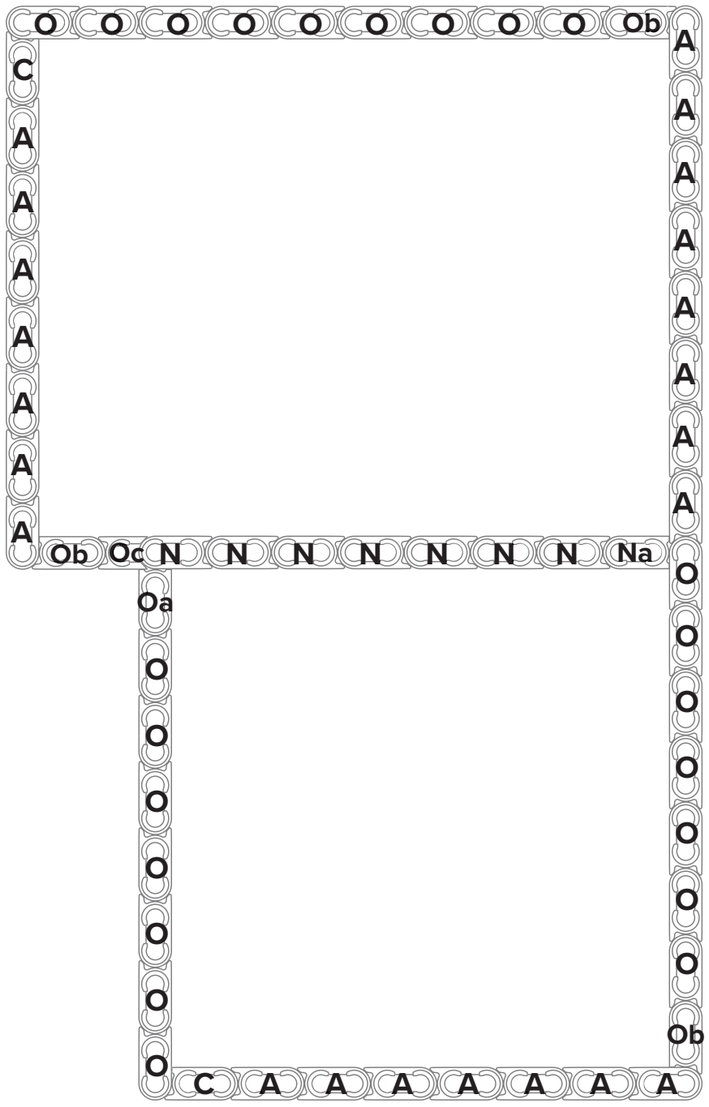


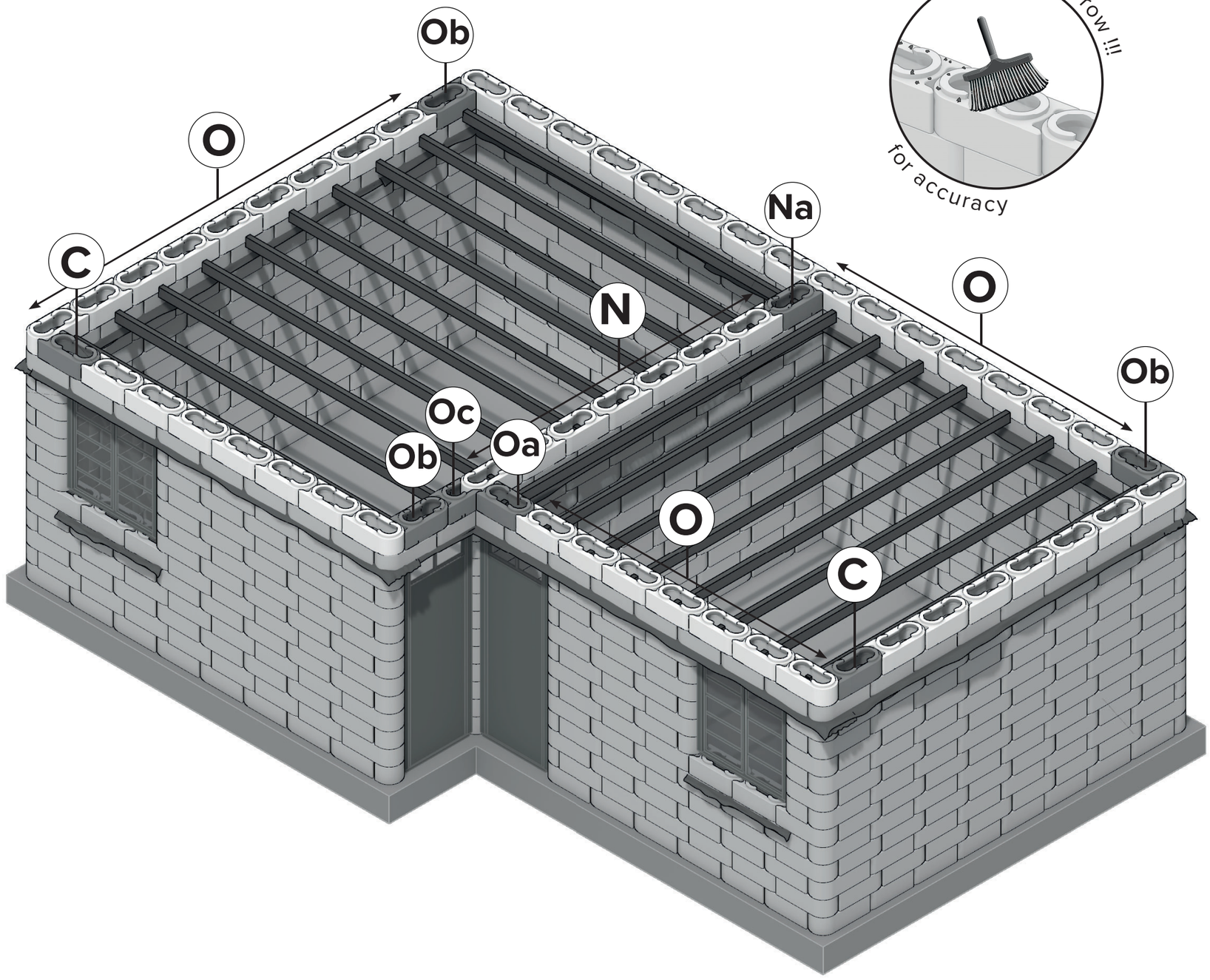






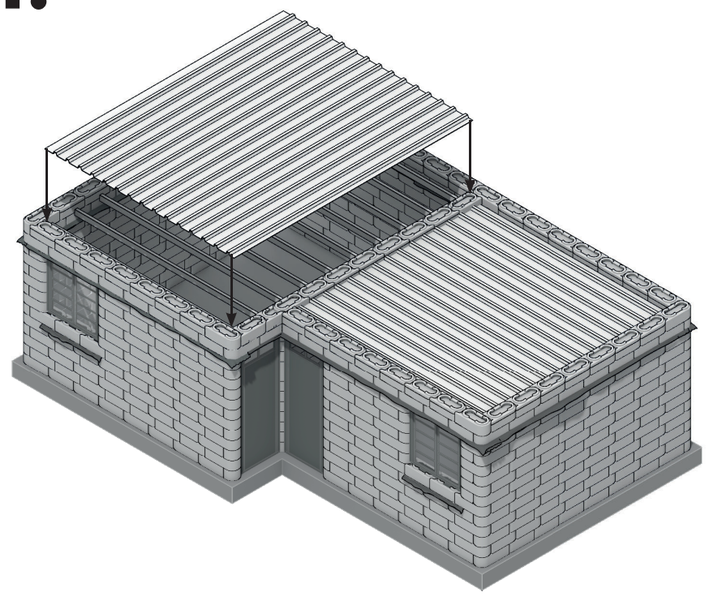
Ringbeam 1 - 2nd row





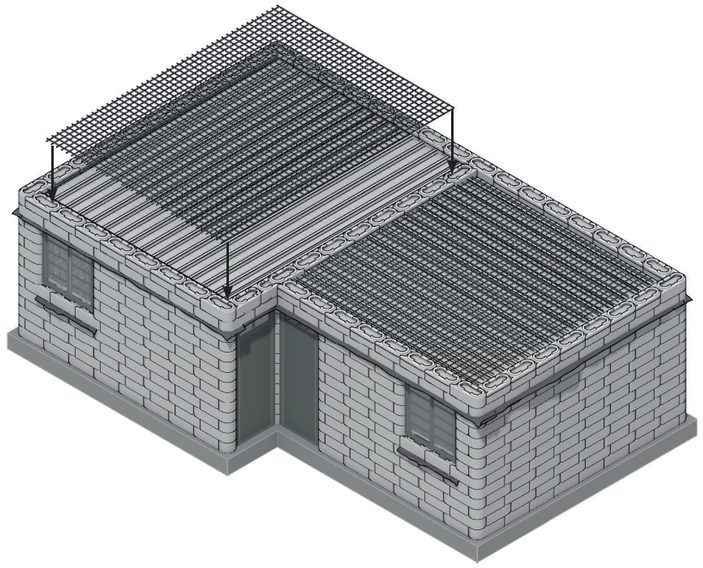
Flooring

1.



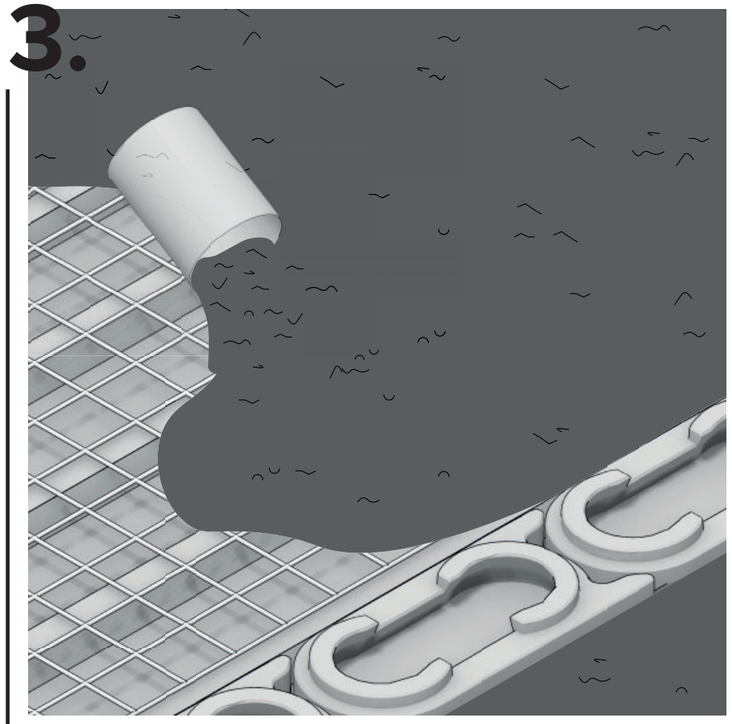
Lay down trapezoidal sheets on the metal beams .

2.



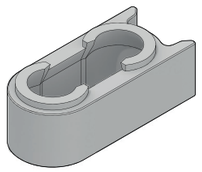
Lay down wire on top of the trapezoidal sheet.
Use some stones as spacers to keep a distance of 30 -50 mm to the sheet metal.

3.

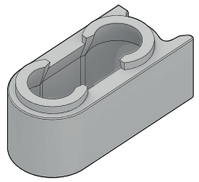


Pour in concrete and distribute evenly.

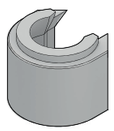
15th row



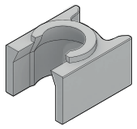
A
x51



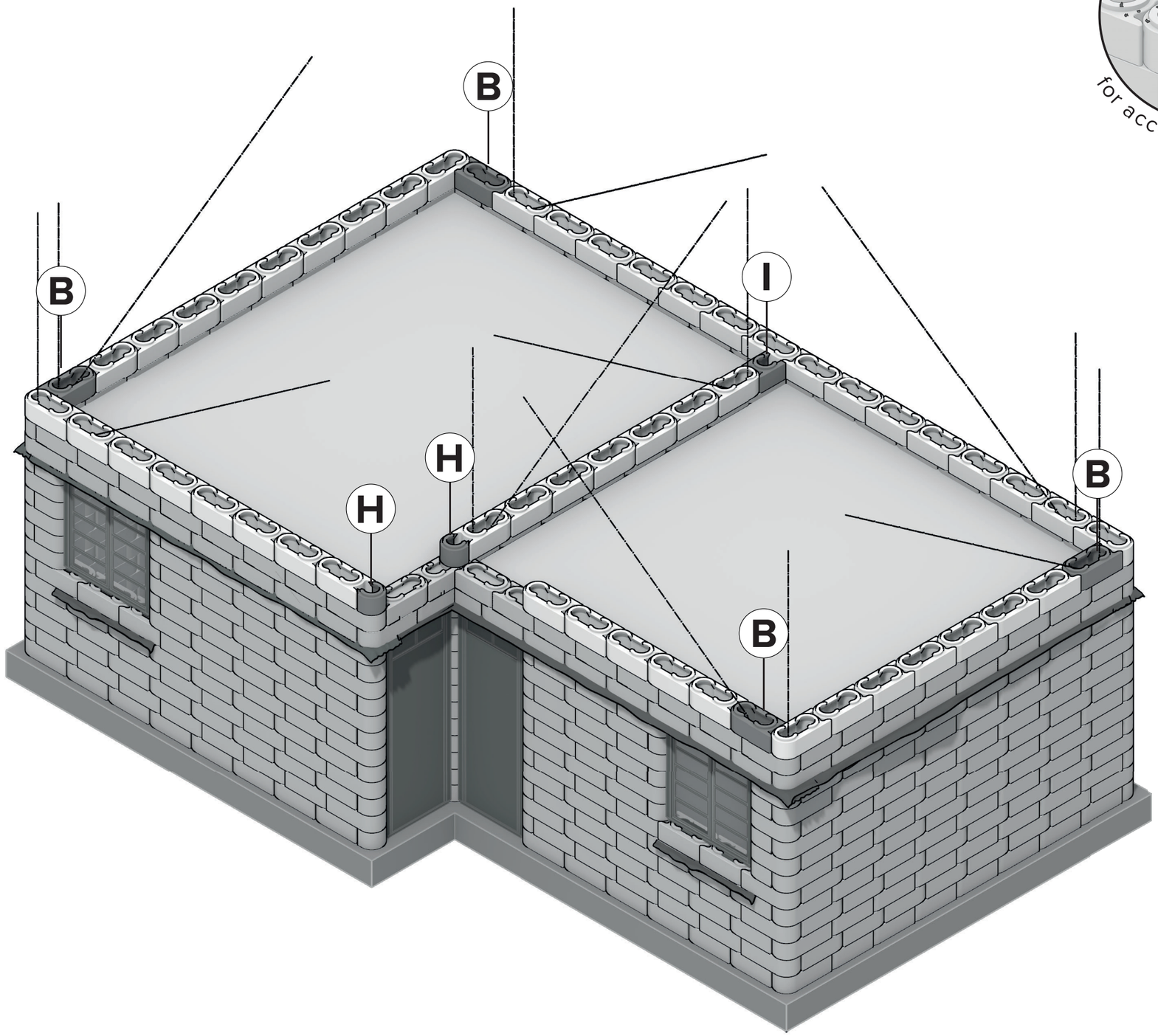
B
x4

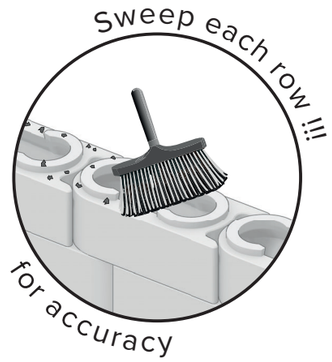


H
x2

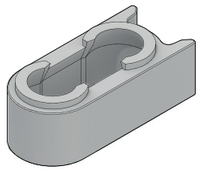


I
x1

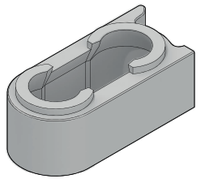




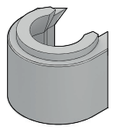
16th row



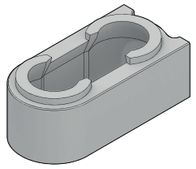
A
x51



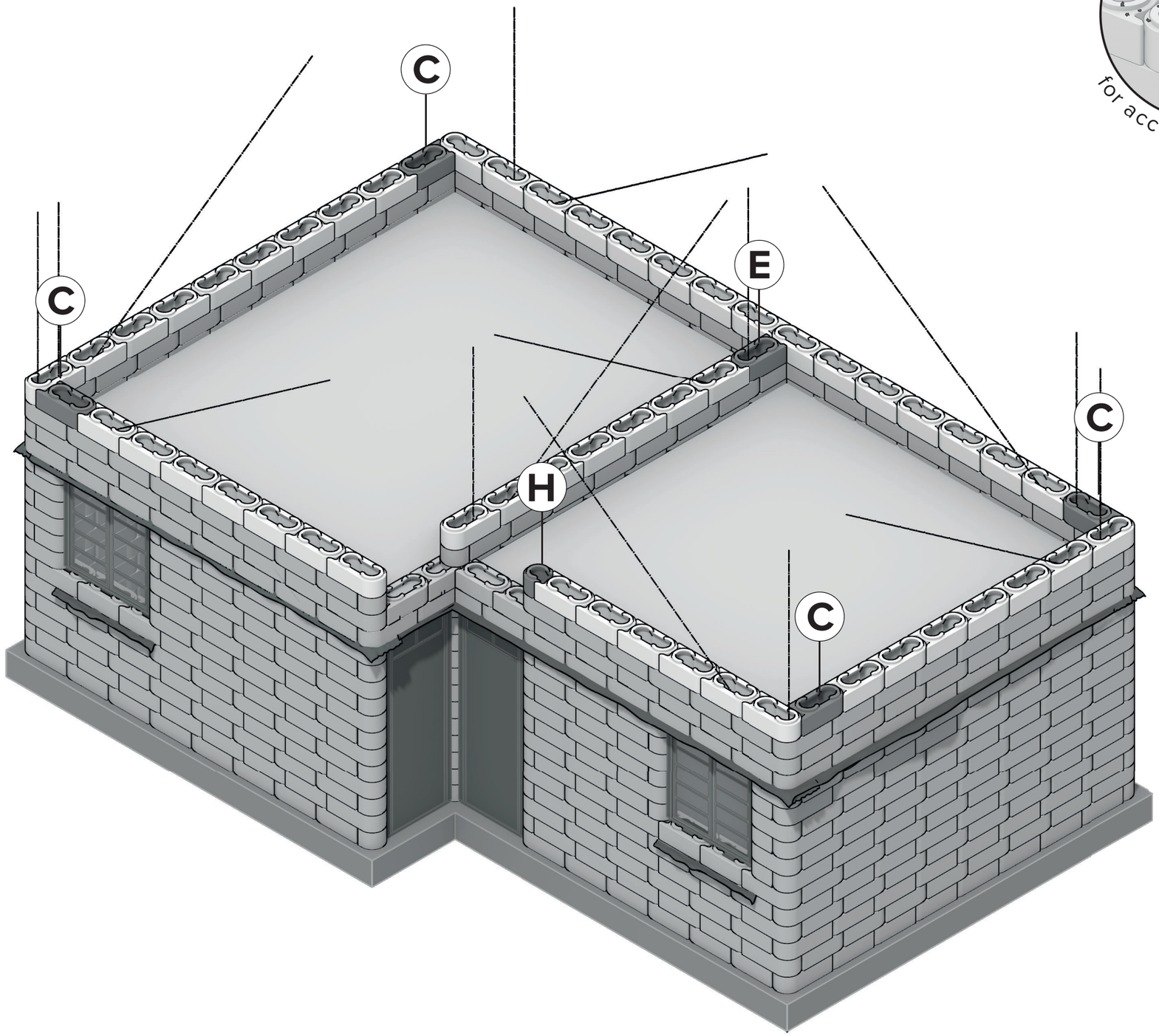
C
x4



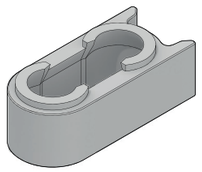
H
x1



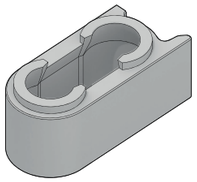
E
x1



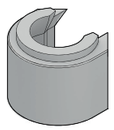
17th row



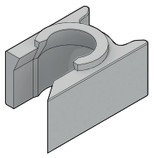
A
x50



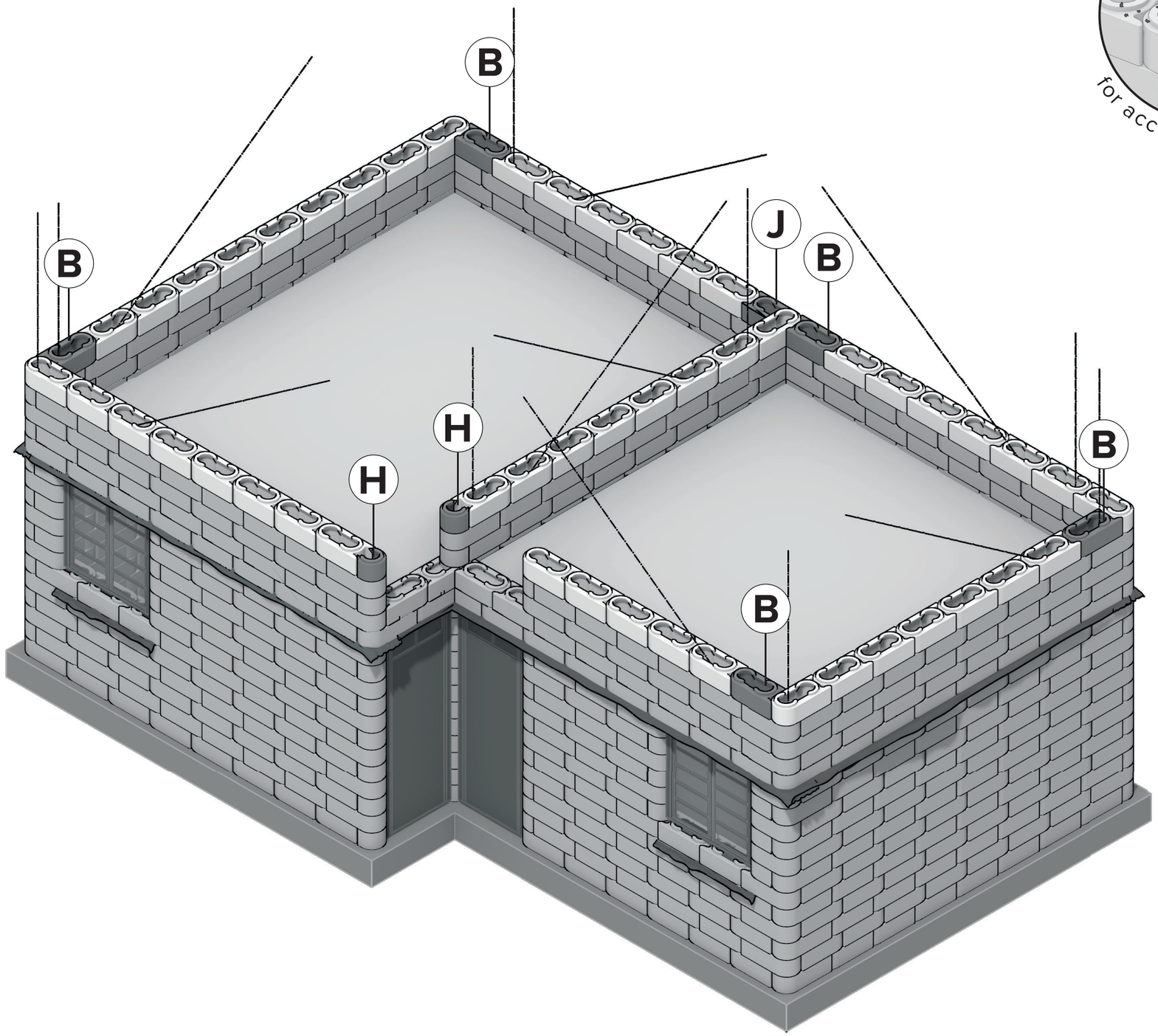
B
x5

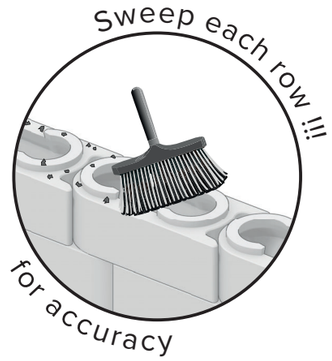


H
x2

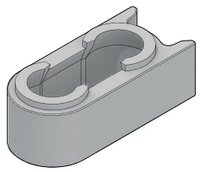


J
x1

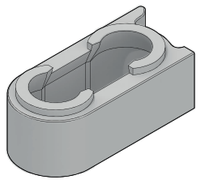




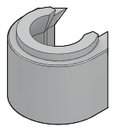
18th row



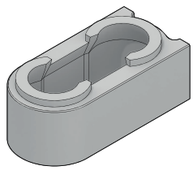
A
x51



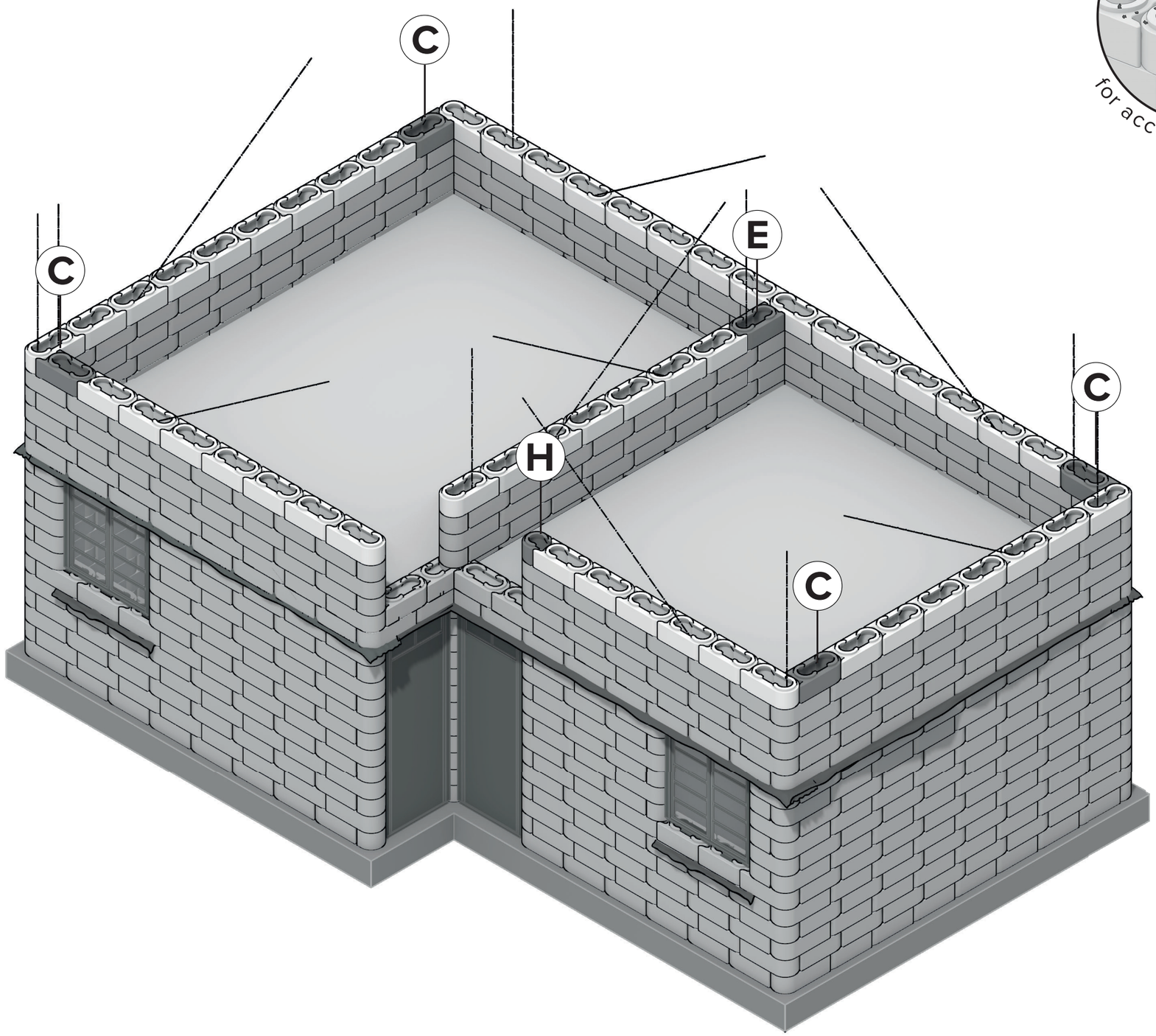
C
x4

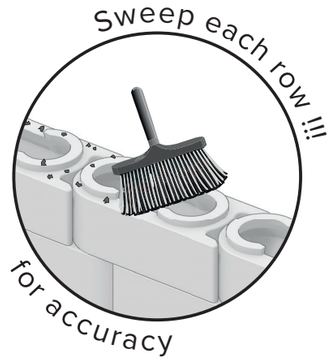


H
x1

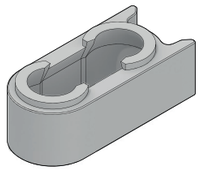


E
x1

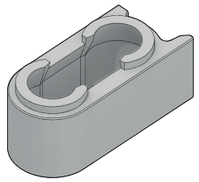




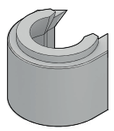
19th row



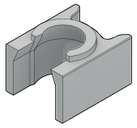
A
x51



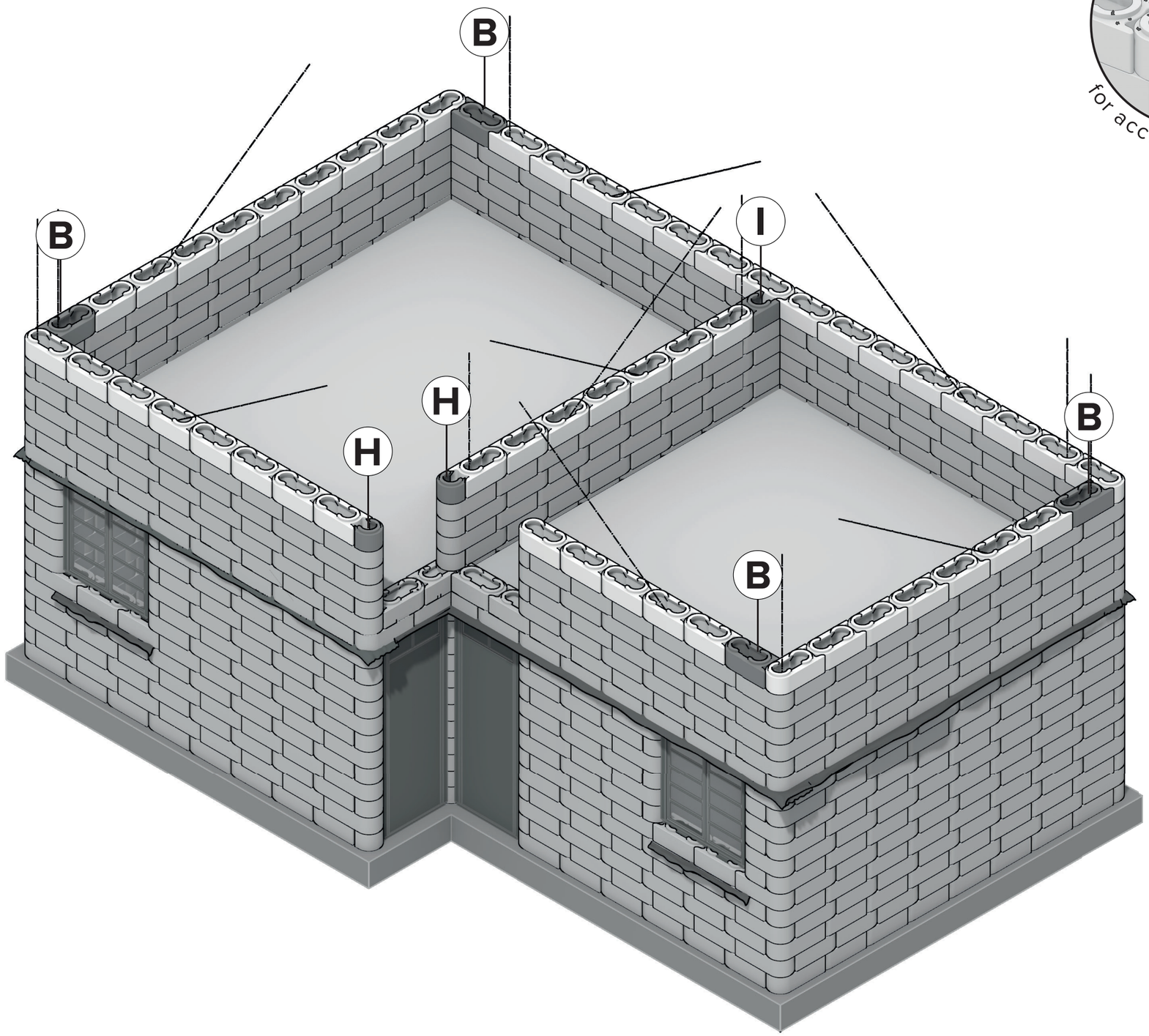
B
x4



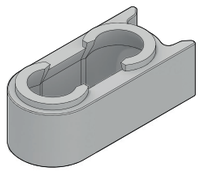
H
x2



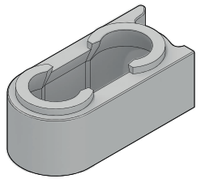
I
x1



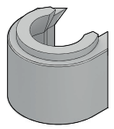
20th row



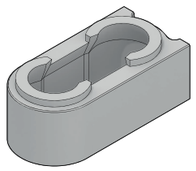
A
x51



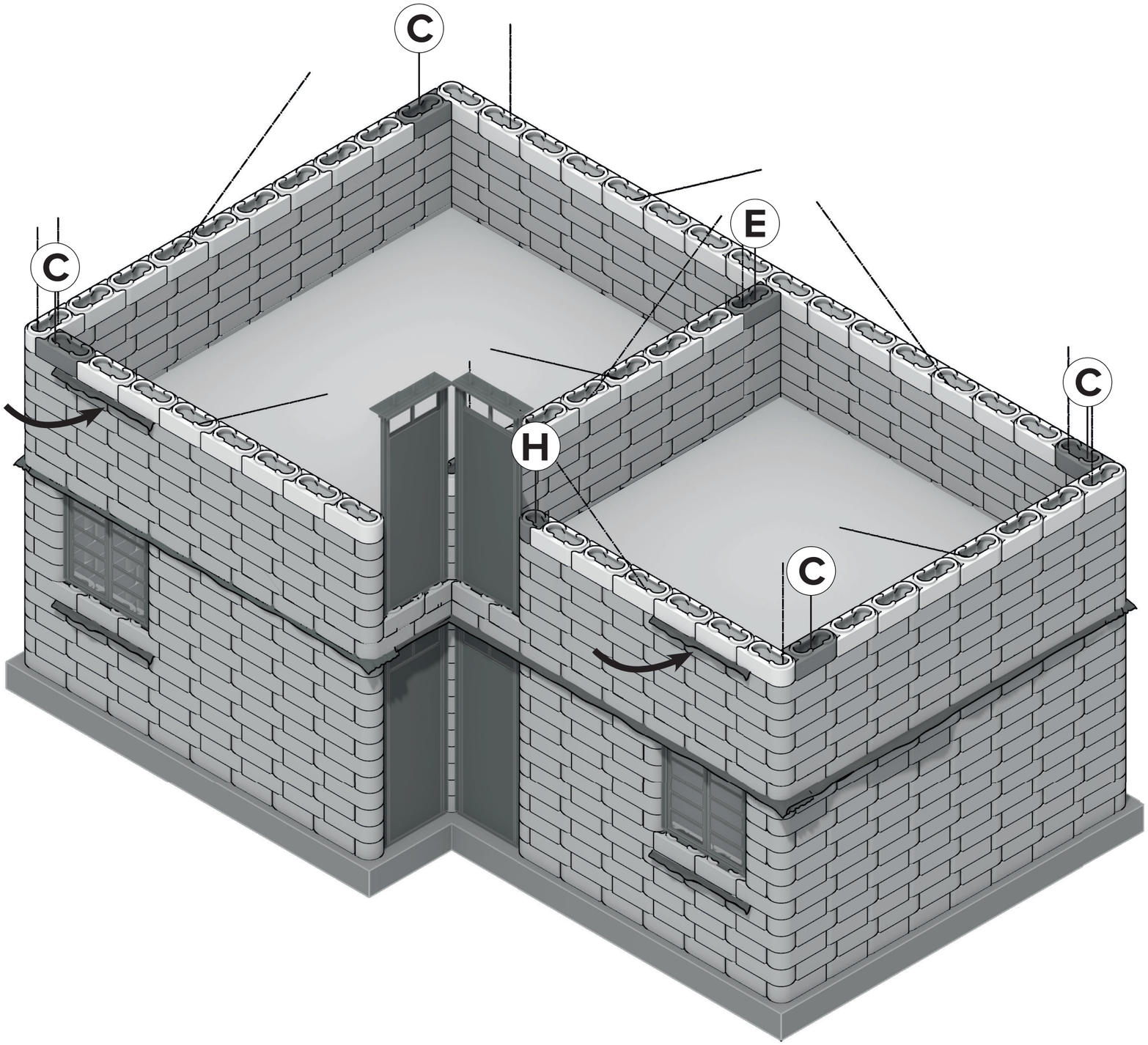
C
x4



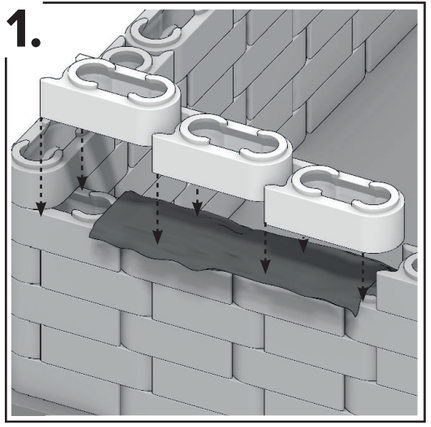
H
x1



E
x1

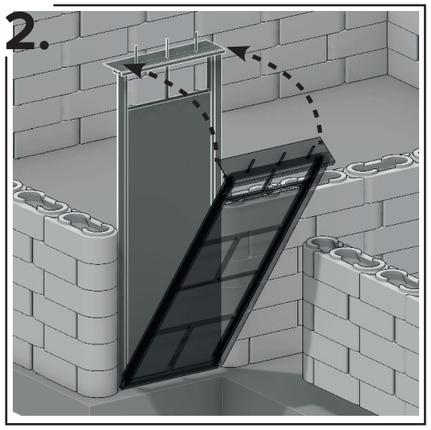


1.



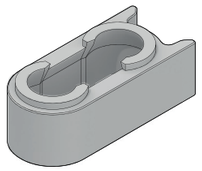
Use DPM foil to cover TBs of the 5th row underneath the window openings. Put TBs on top and clamp foil down.

2.

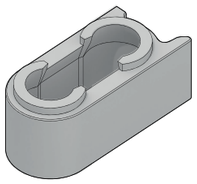


Fit doors in and align with the TBs. Make sure to also align the following rows.

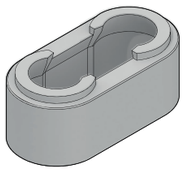
21st row



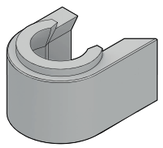
A
x45



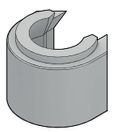
B
x4



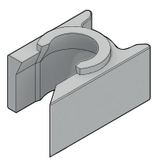
D
x1



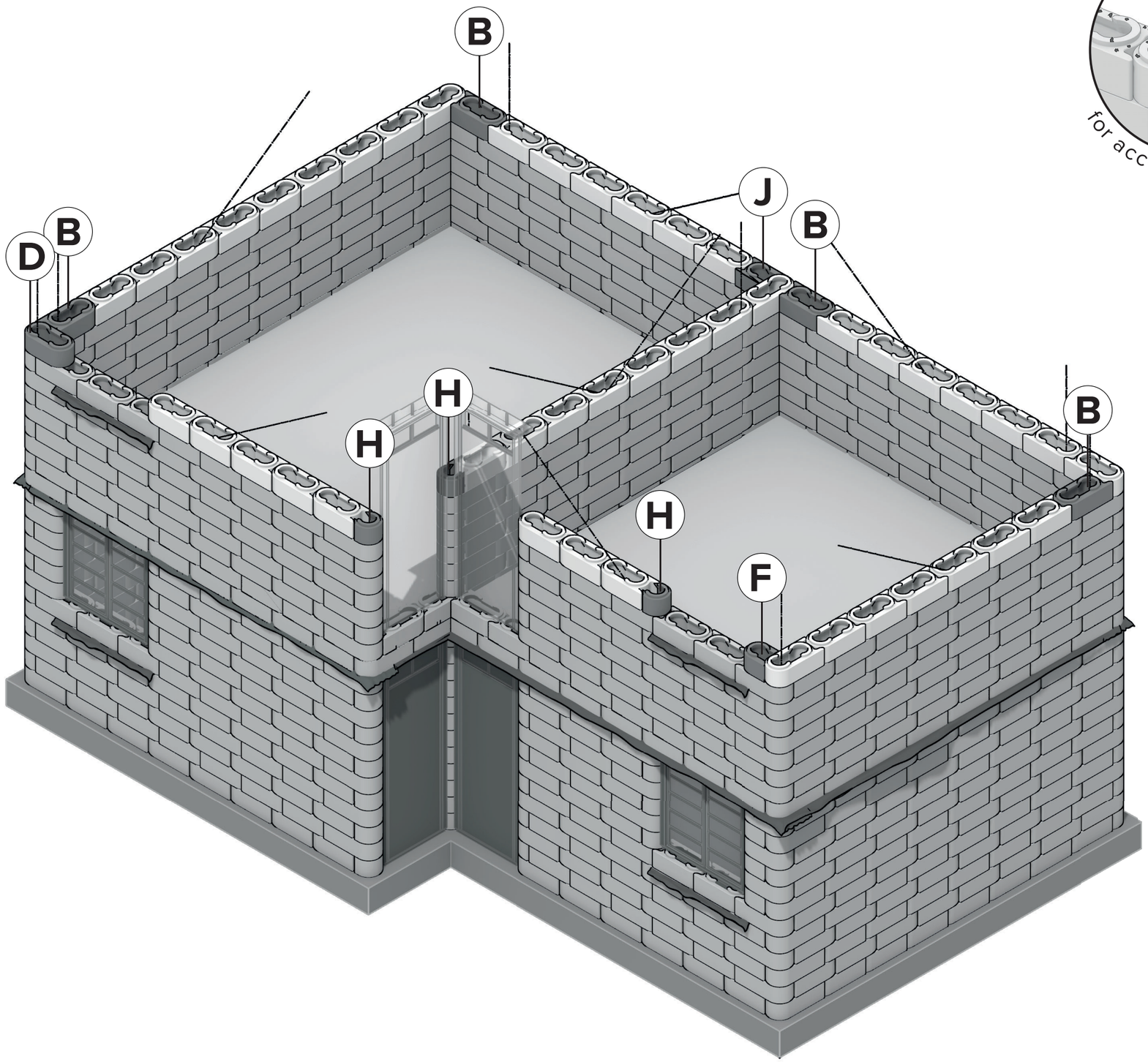
F
x1

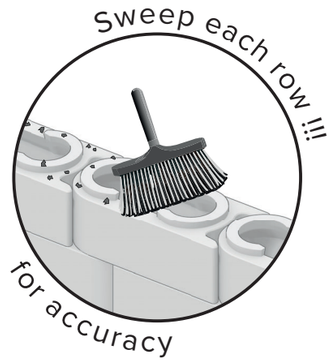


H
x3

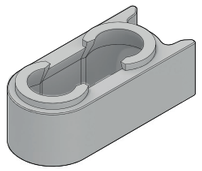


J
x1

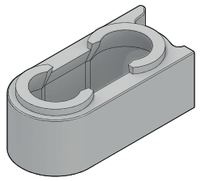




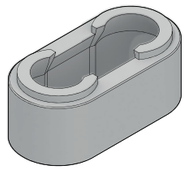
22nd row



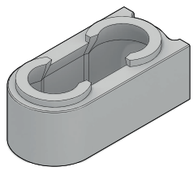
A
x46



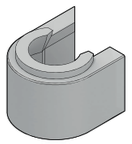
C
x3



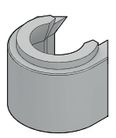
D
x1



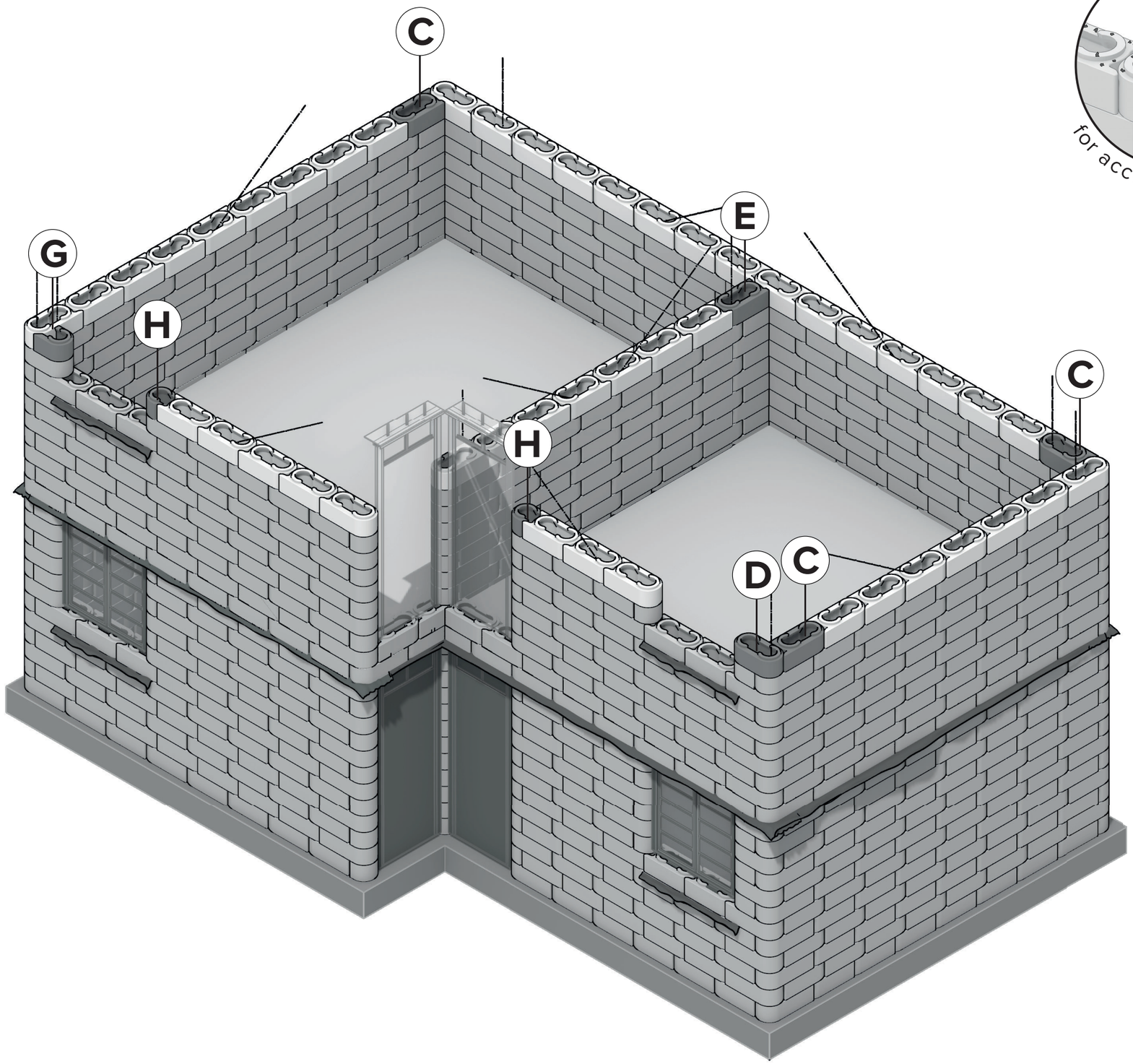
E
x1

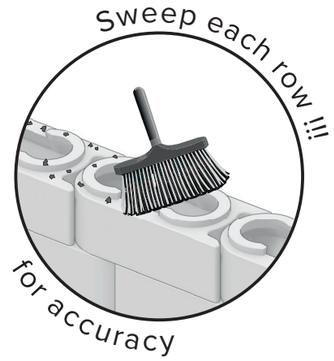


G
x1

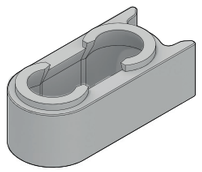


H
x2

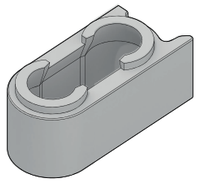




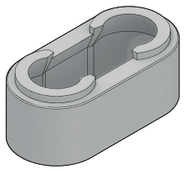
23rd row



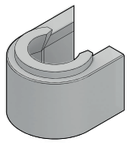
A
x46



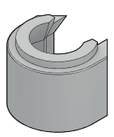
B
x3



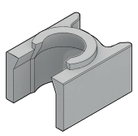
D
x1



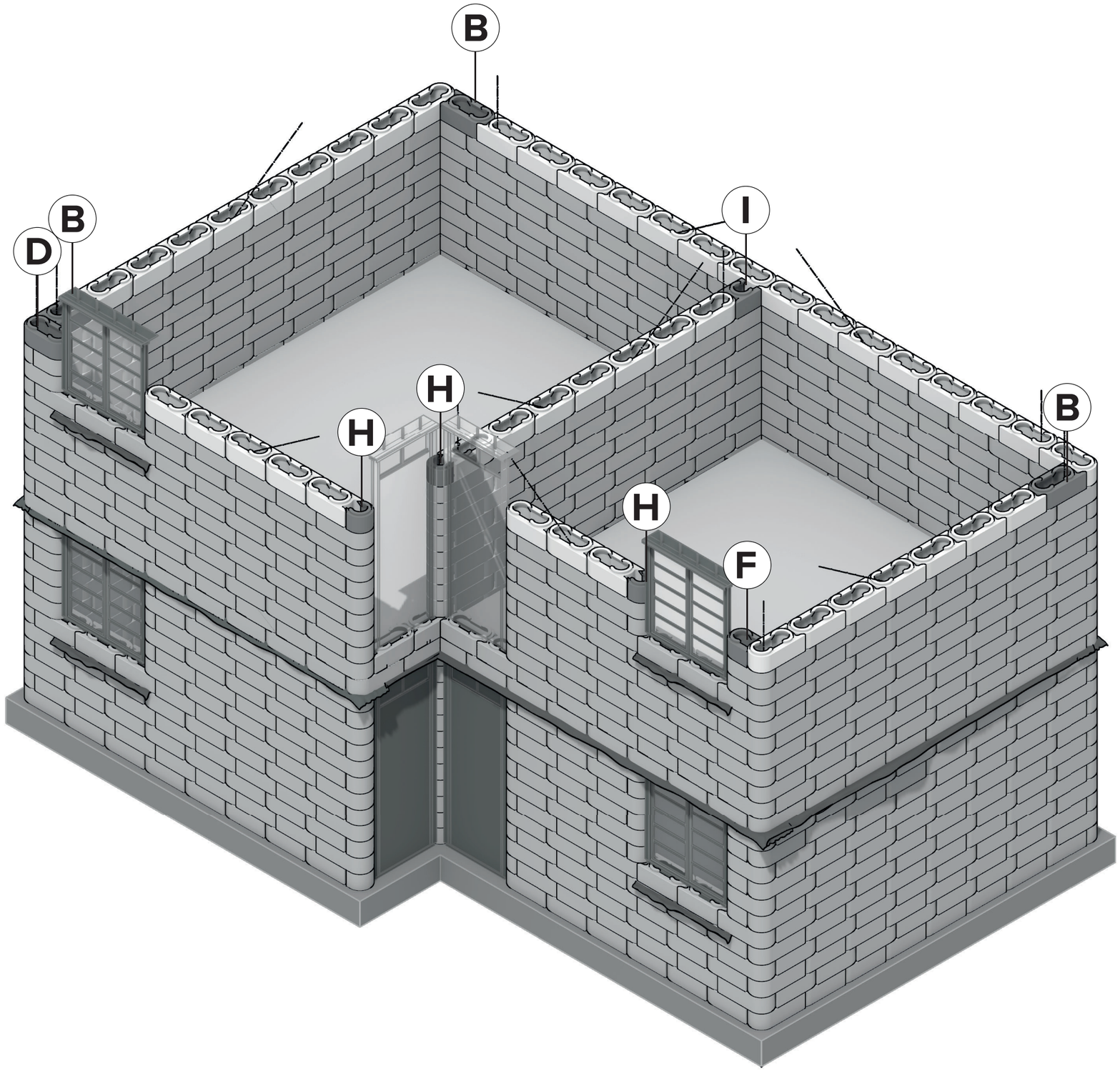
F
x1



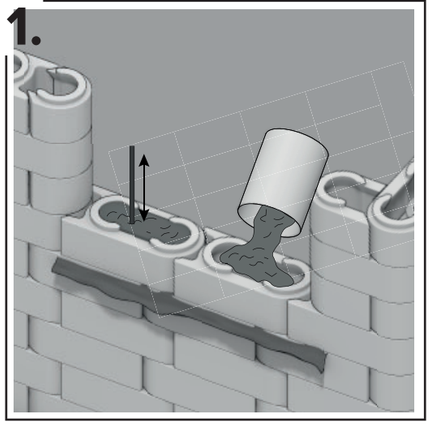
H
x3



I
x1

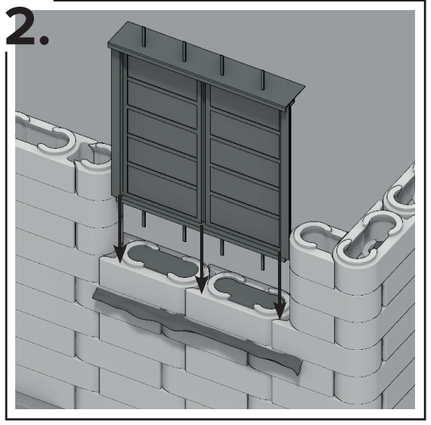


1.



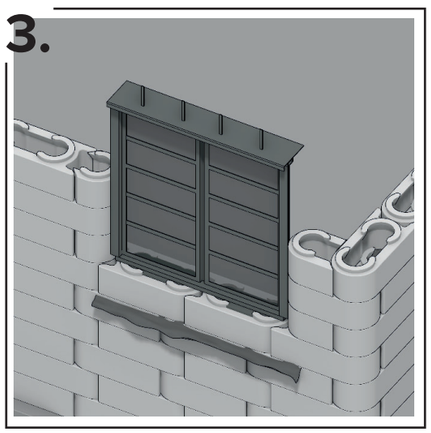
Pour concrete in below the windows and poke with a stick. Be carful not to rip the DPM foil.

2.



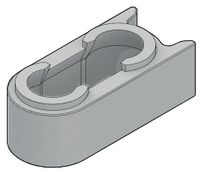
Slides window frames in. Hoop irons go in the concrete.

3.

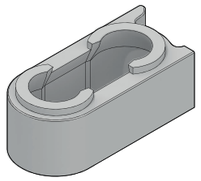


Align window frames with the wall.

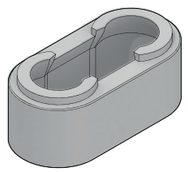
24th row



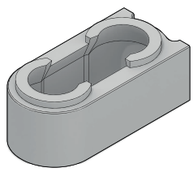
A
x46



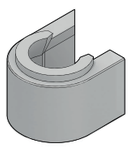
C
x3



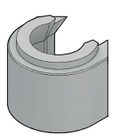
D
x1



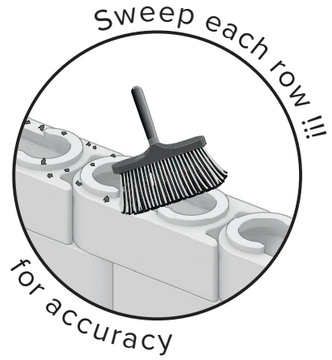
E
x1

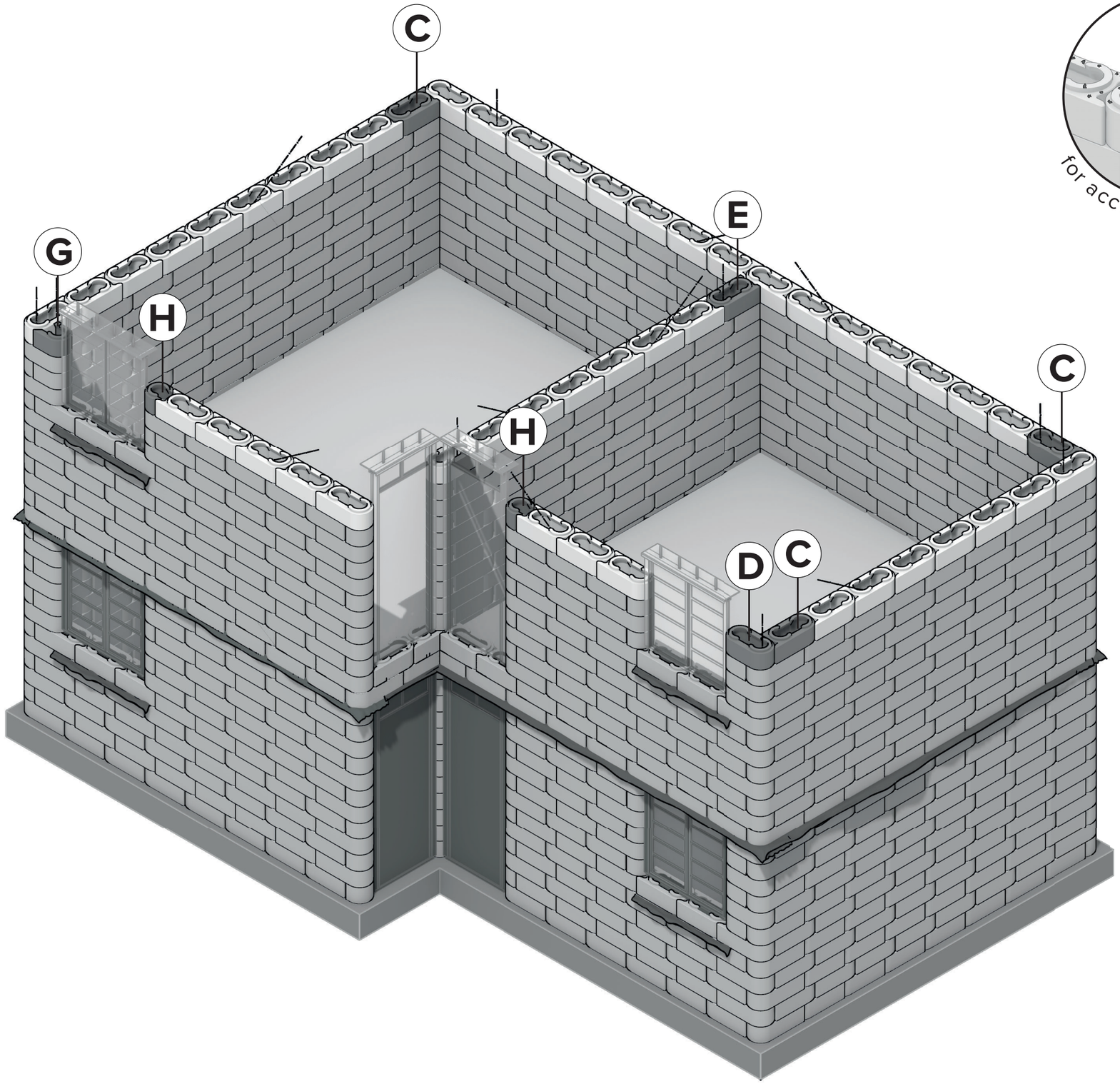


G
x1

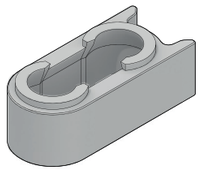


H
x2

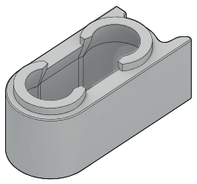




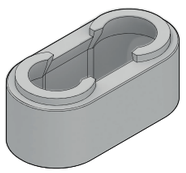
25th row



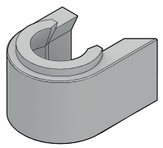
A
x45



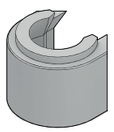
B
x4



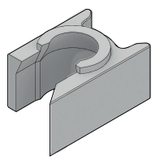
D
x1



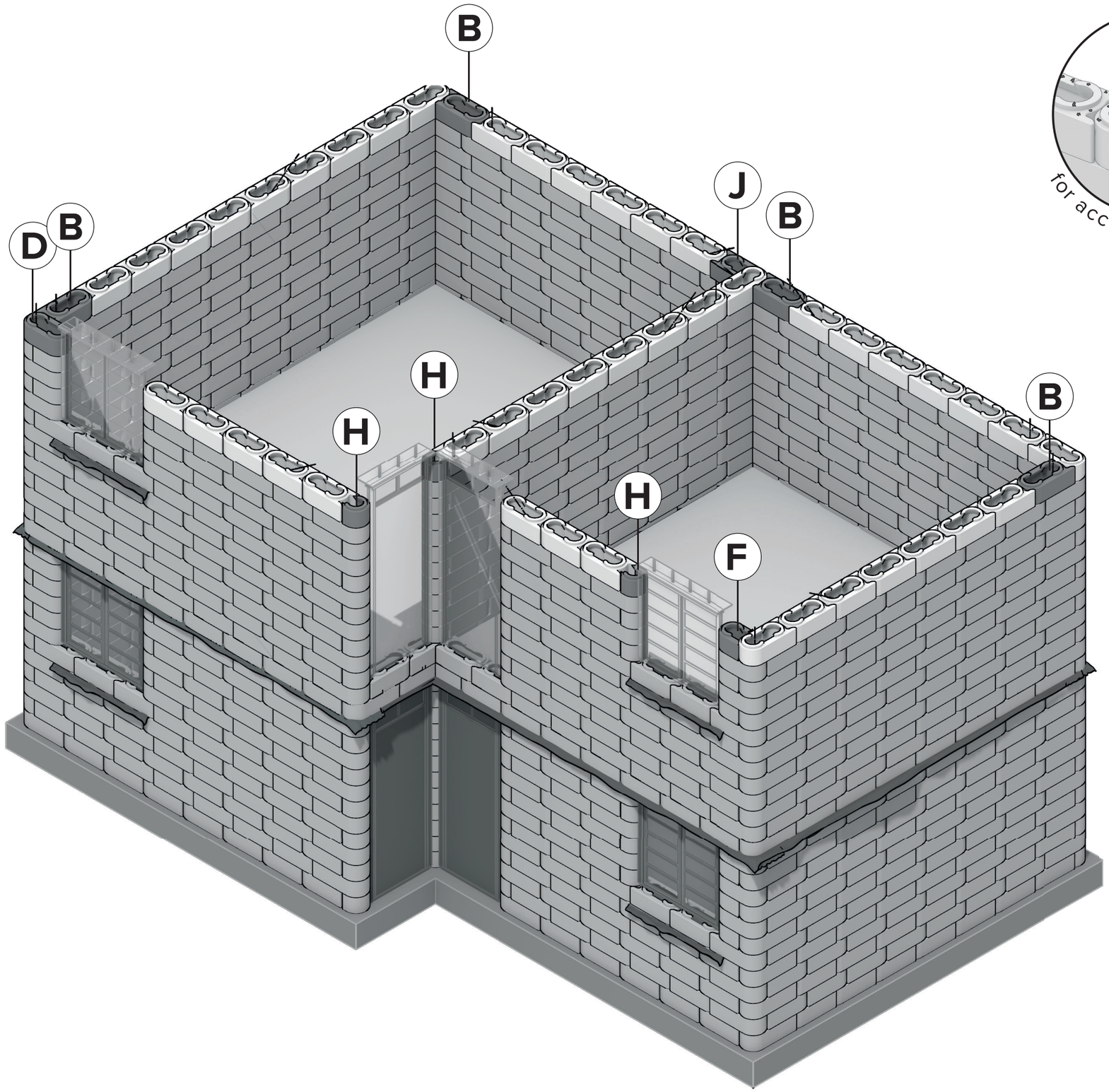
F
x1

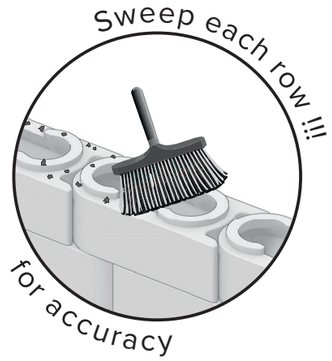


H
x3

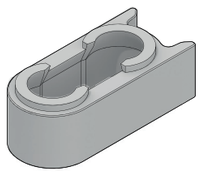


J
x1

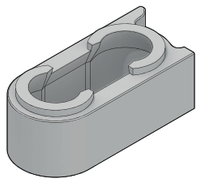




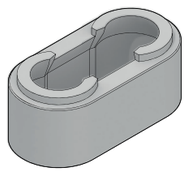
26th row



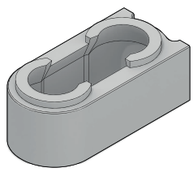
A
x46



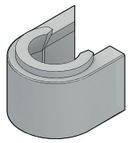
C
x3



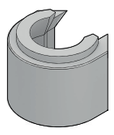
D
x1



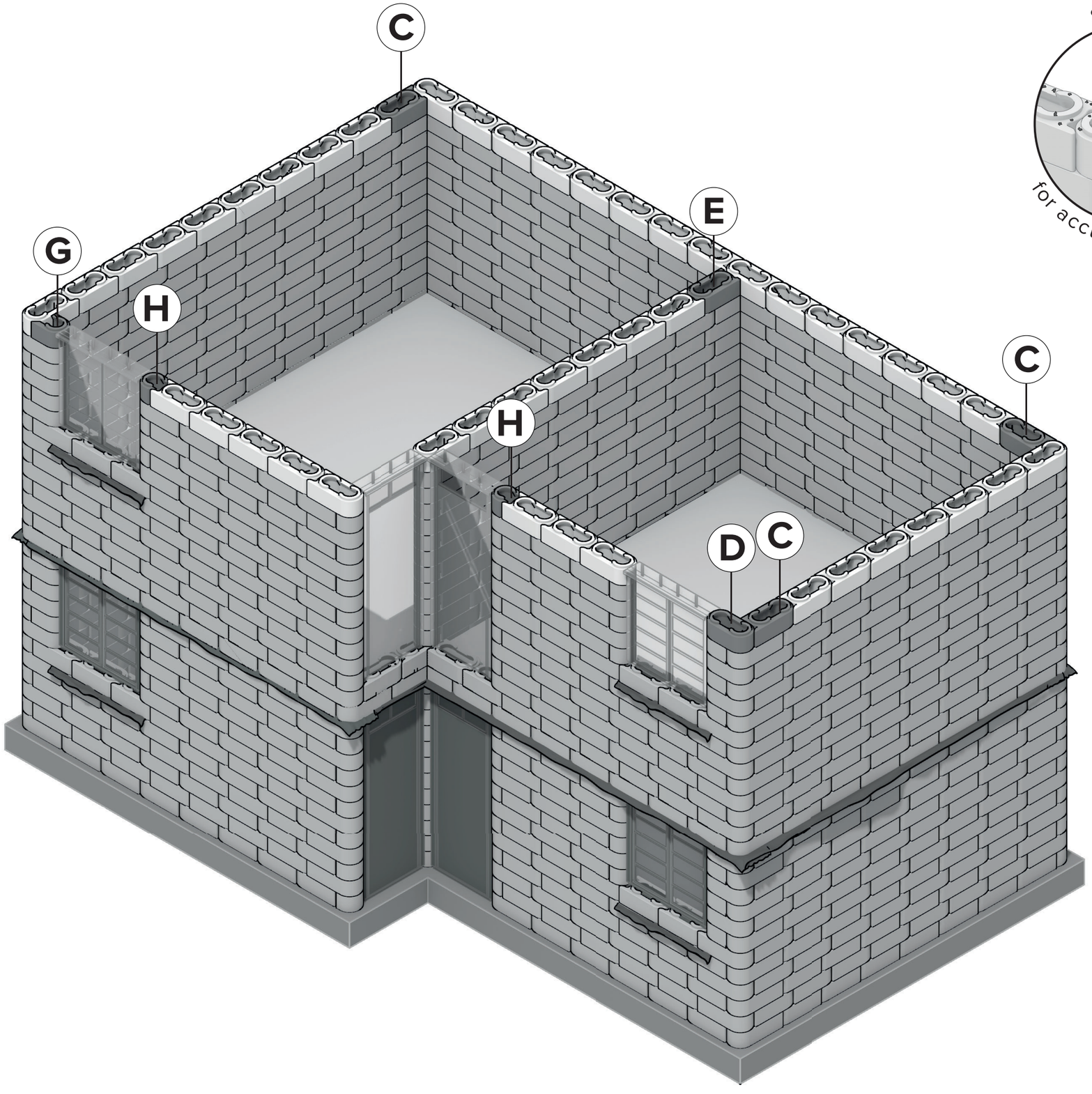
E
x1

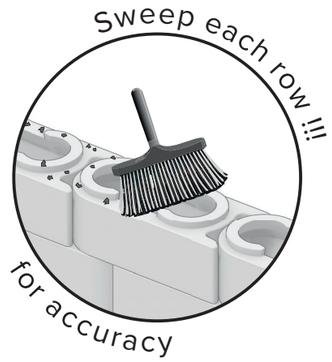


G
x1



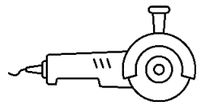
H
x2

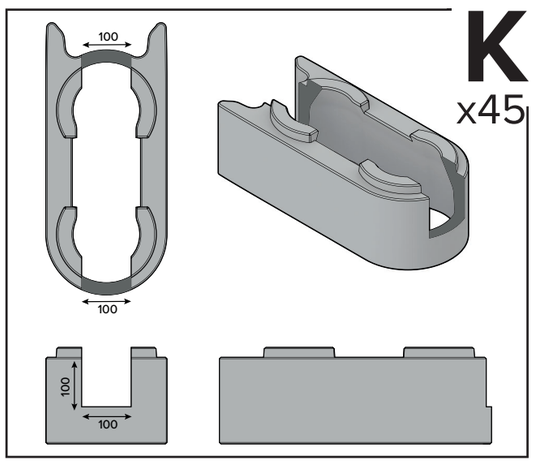


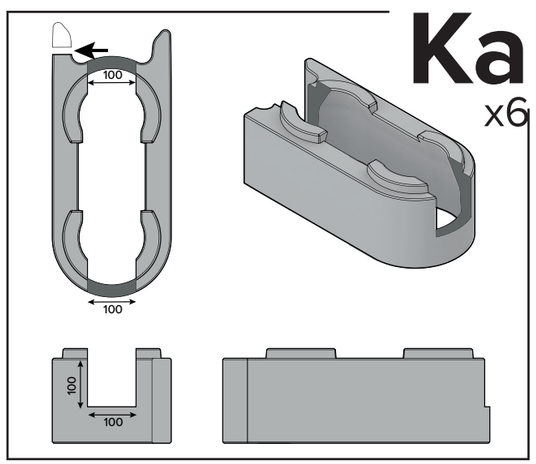


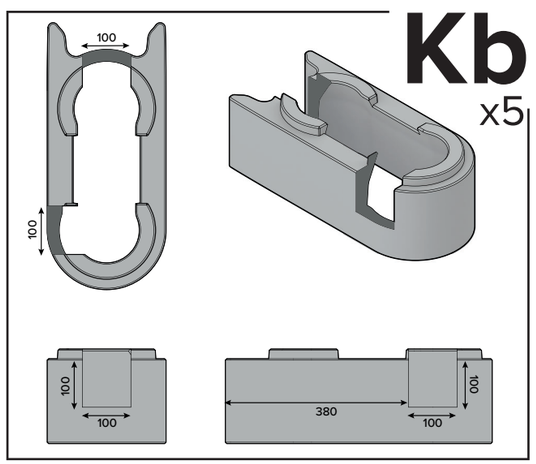
Ringbeam 2

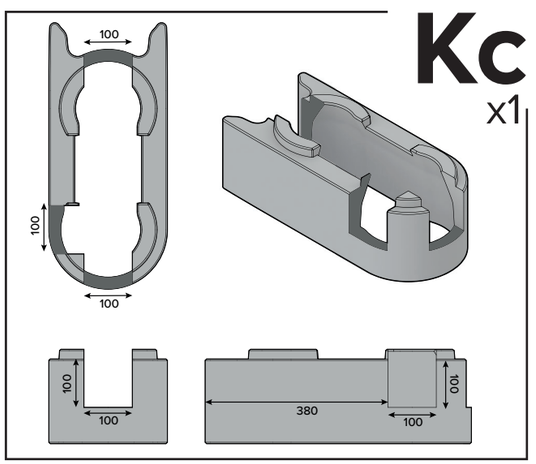
TWISTBLOCK ADJUSTMENTS

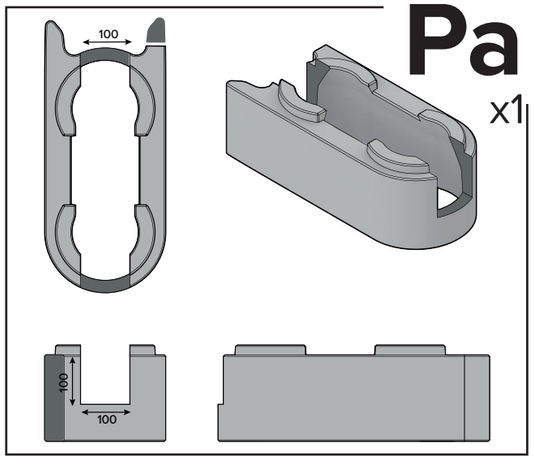


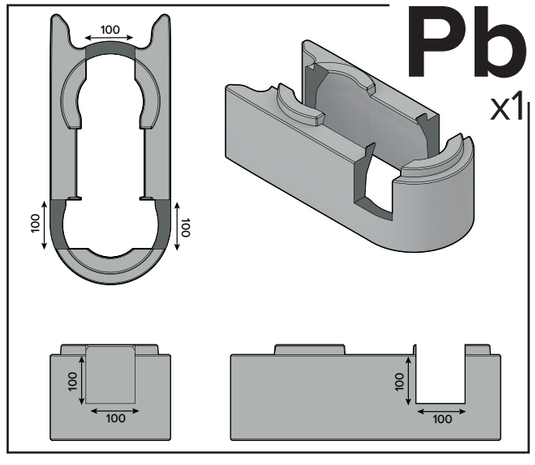


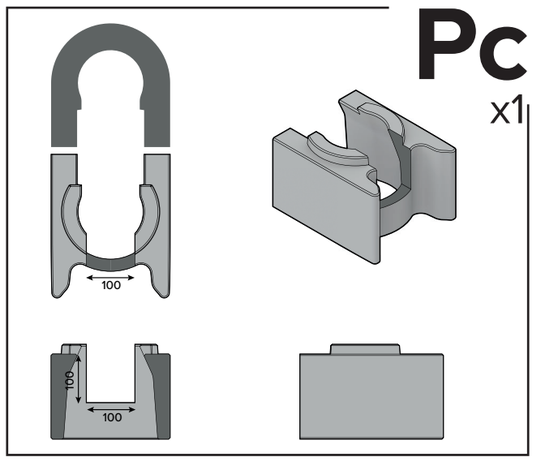






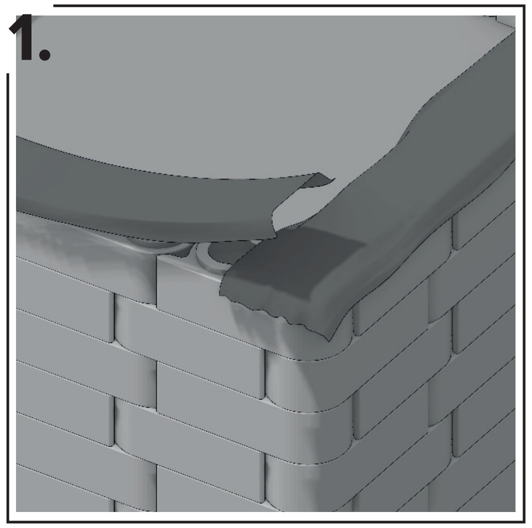






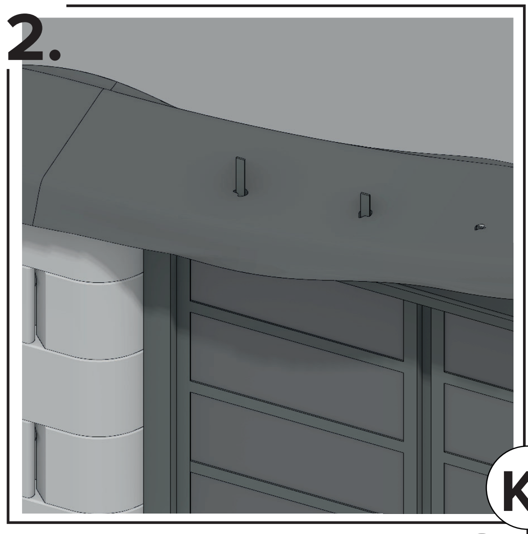
Ringbeam 2

1.

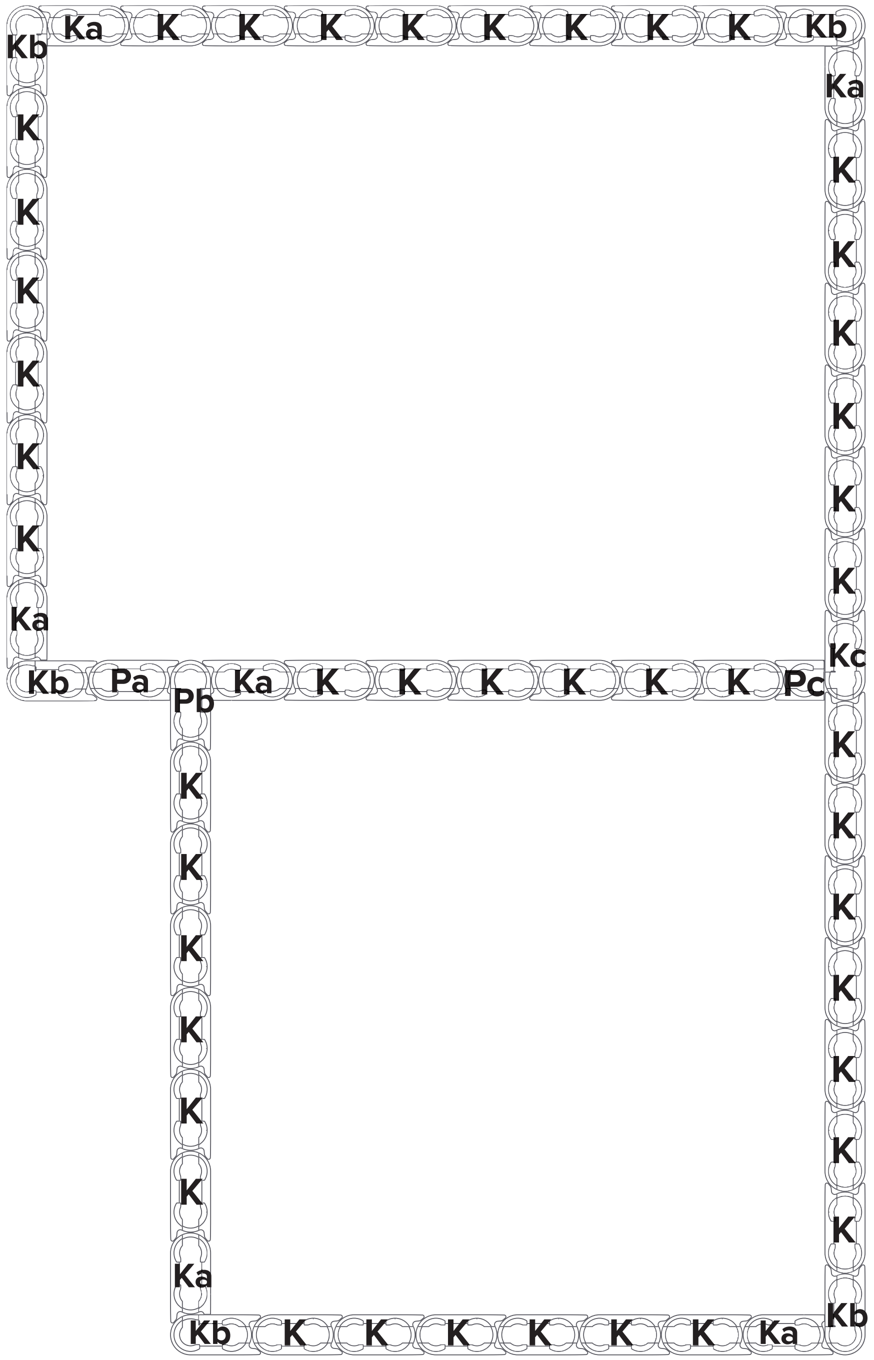


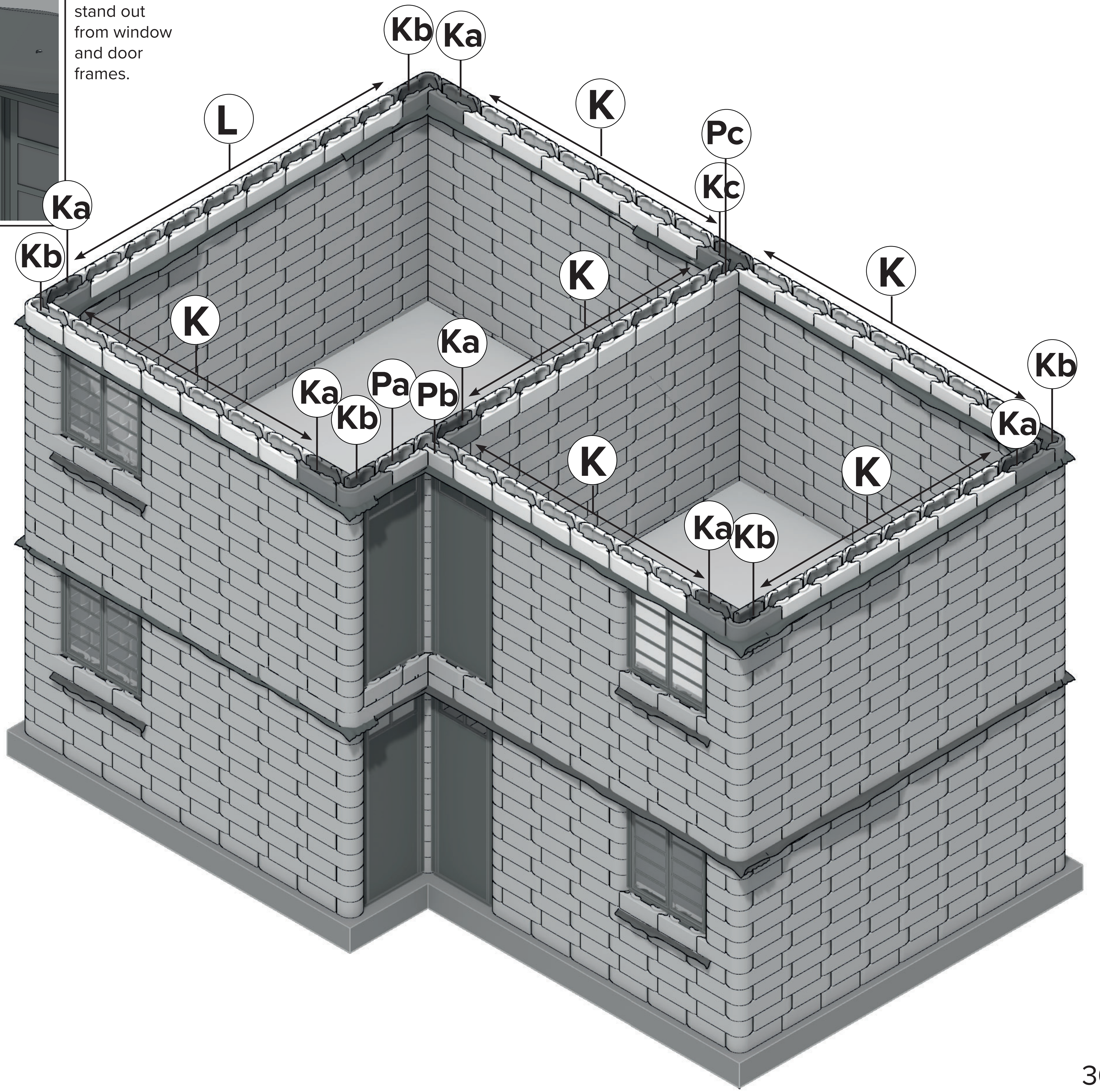
Cover the whole 12th layer with DPM foil.

2.



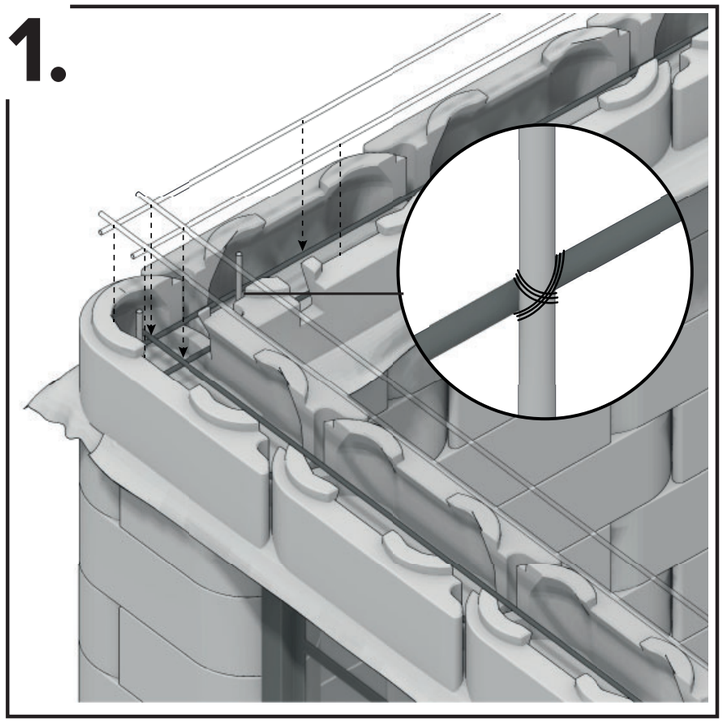
Poke holes trough the foil where hoop irons stand out from window and door frames.



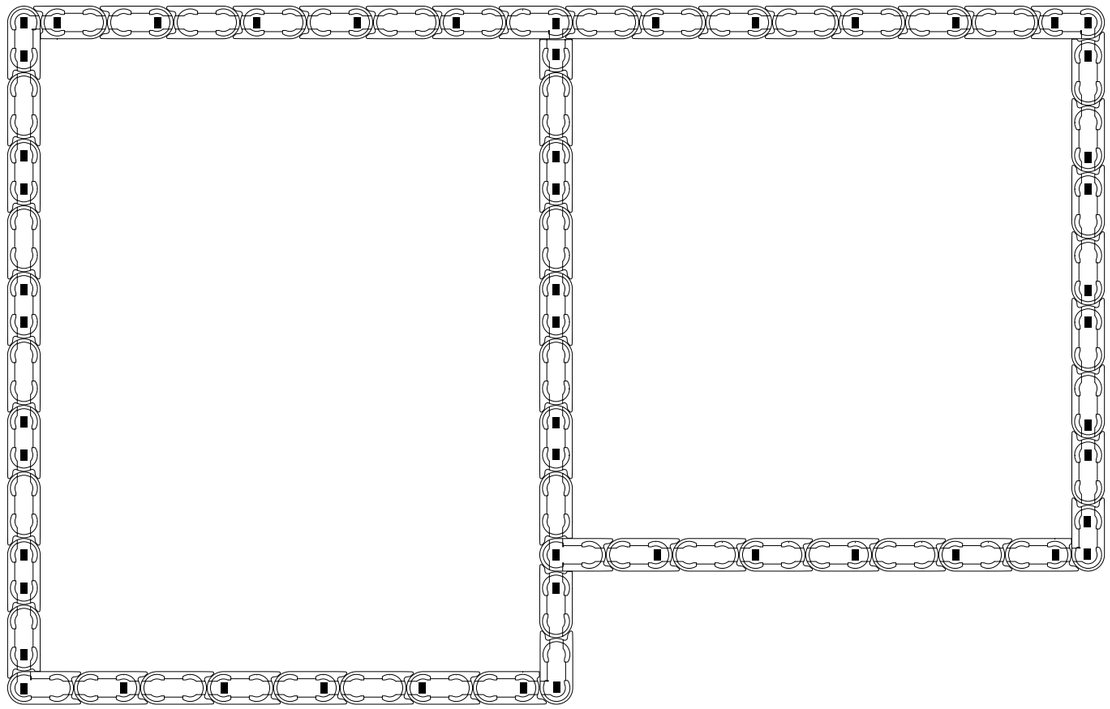


Ringbeam 2

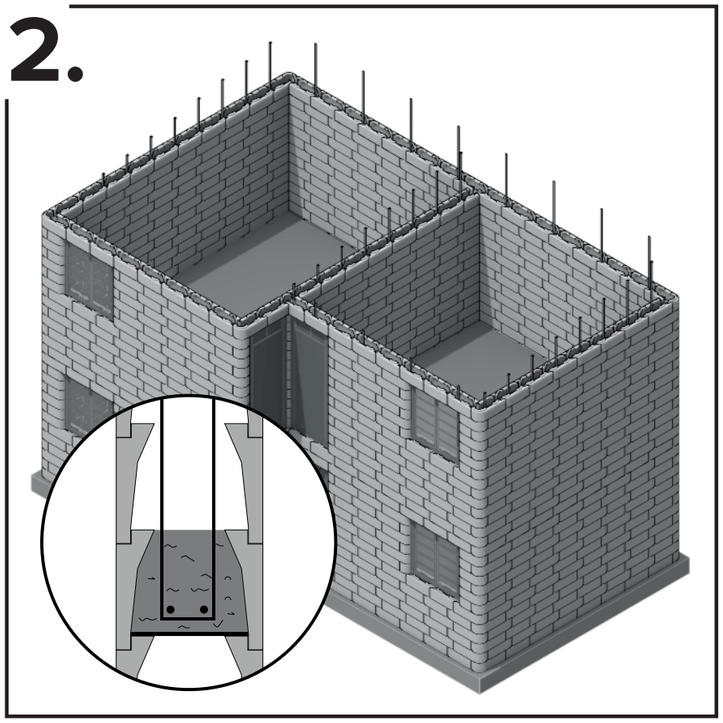
1.



Insert rebars in the channels of the TBs. Connect the rebars to the bracing of the walls with wire.

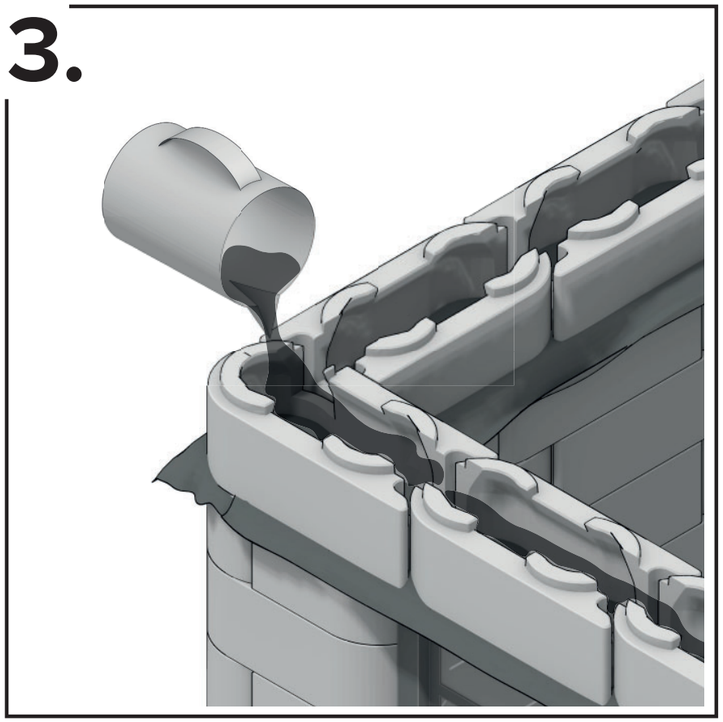


2.



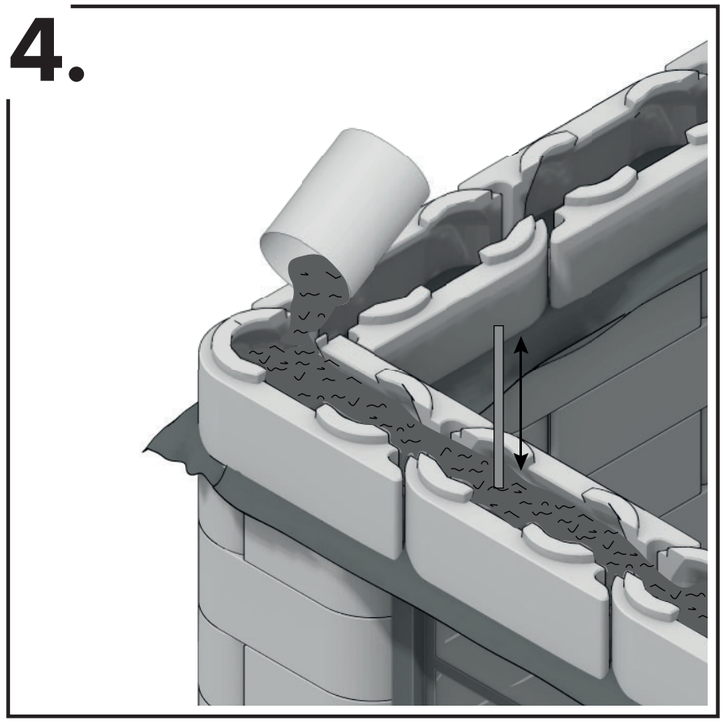
Insert hoop irons into the channels and connect them to the rebars.

3.



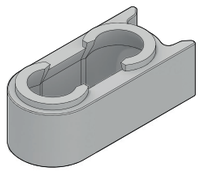
Water the inside of the TBs to ensure better binding between the blocks and the concrete.

4.

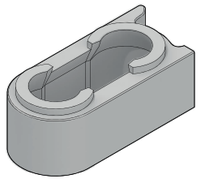


Pour concrete in and poke with stick.

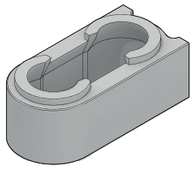
28th row



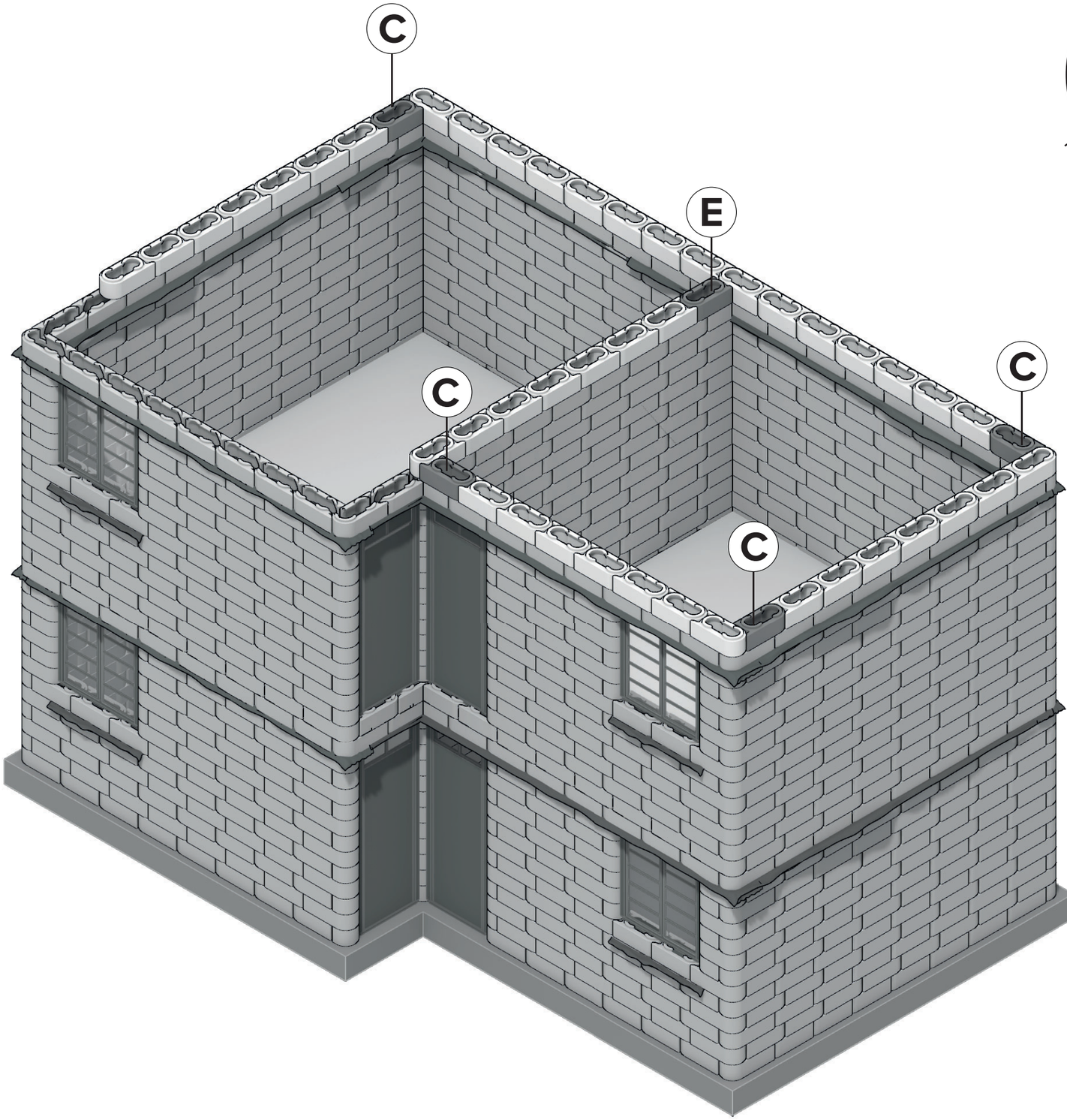
A
x43

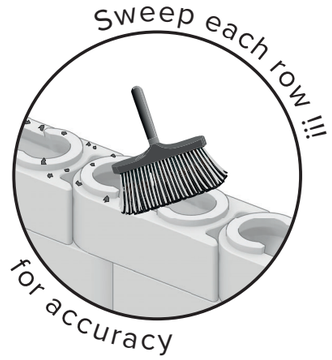


C
x4

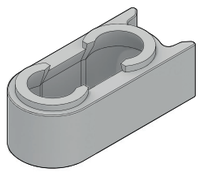


E
x1

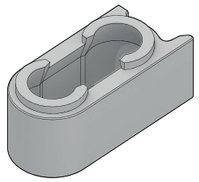




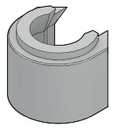
29th row



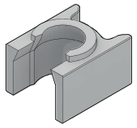
A
x31



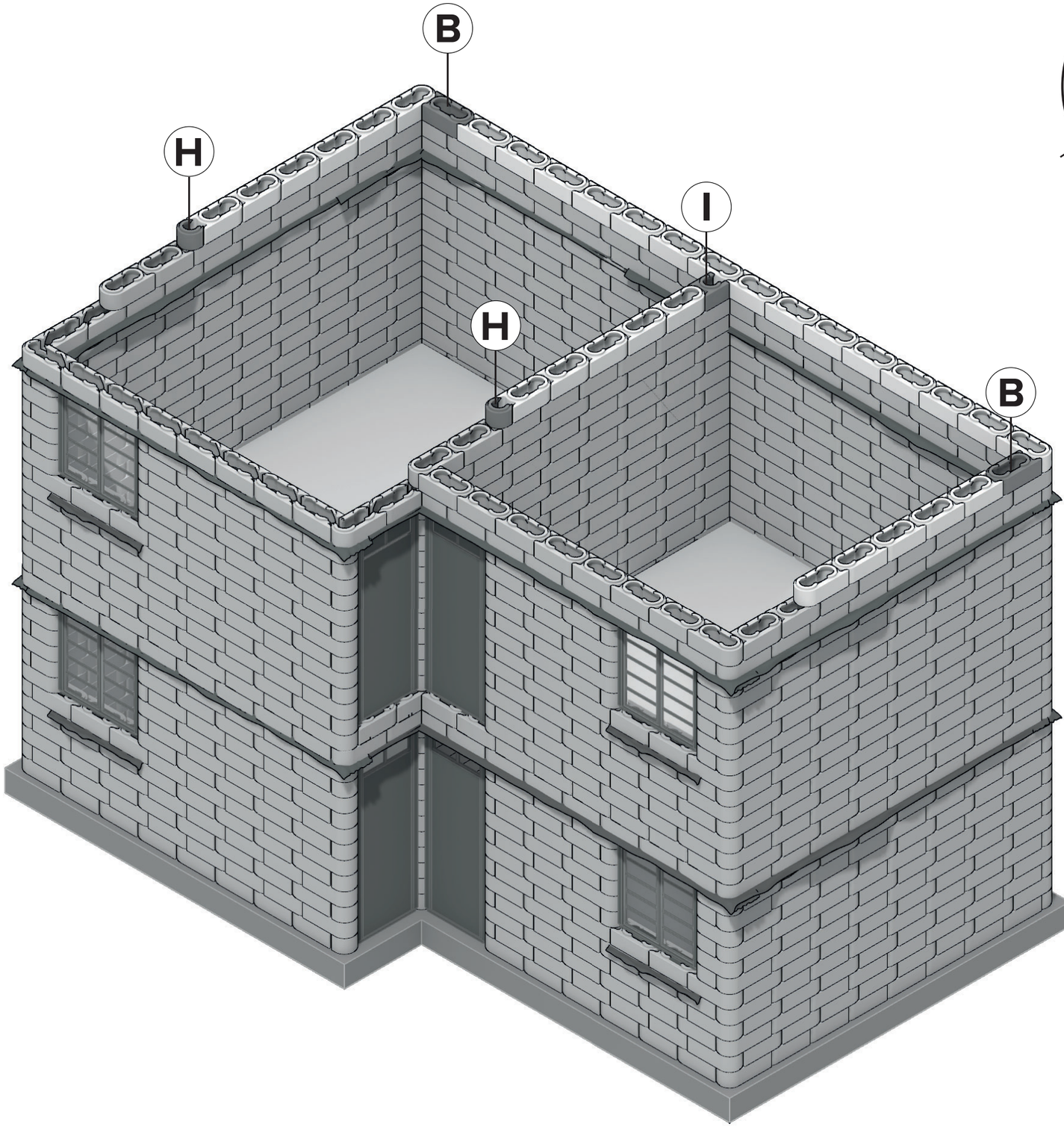
B
x2

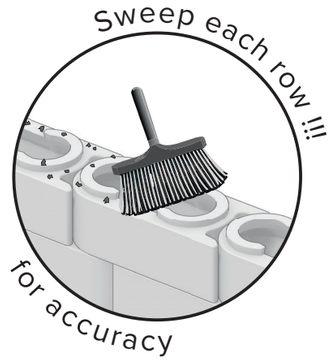


H
x2

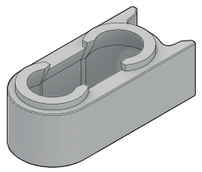


I
x1

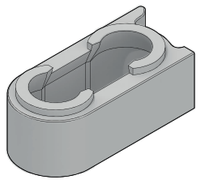




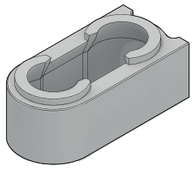
30th row



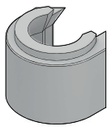
A
x25



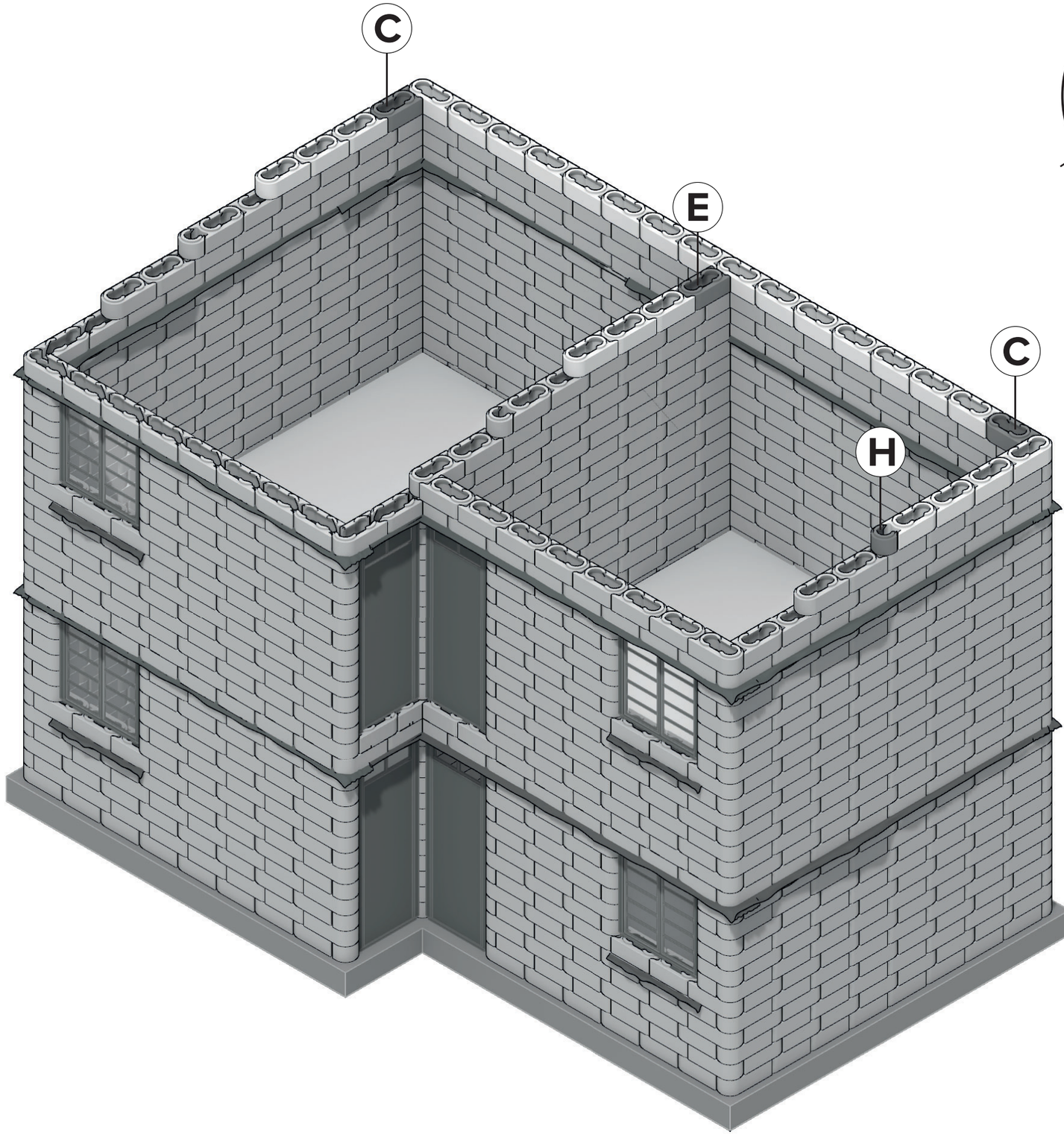
C
x2

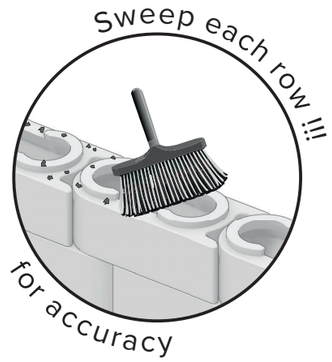


E
x1

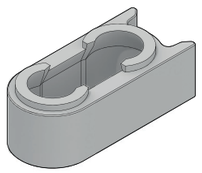


H
x1

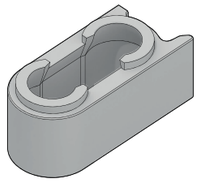




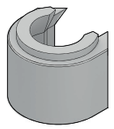
31th row



A
x19



B
x2



H
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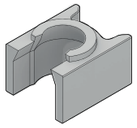

I
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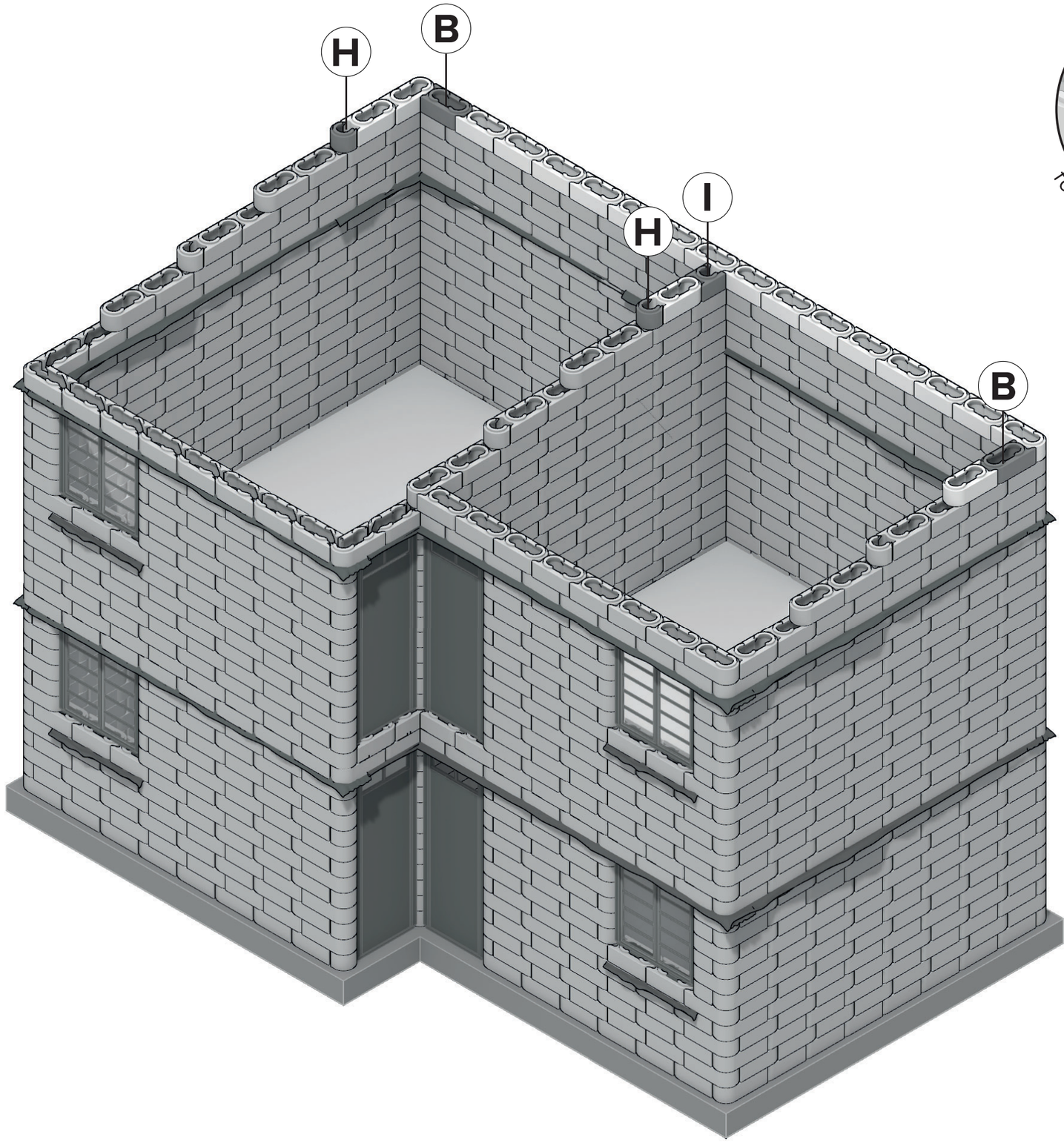
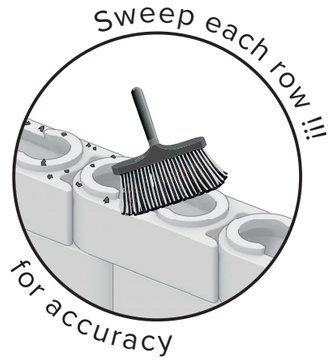
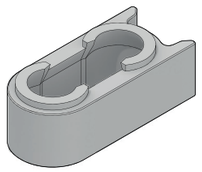
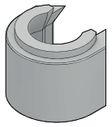




32th row



A
x16



H
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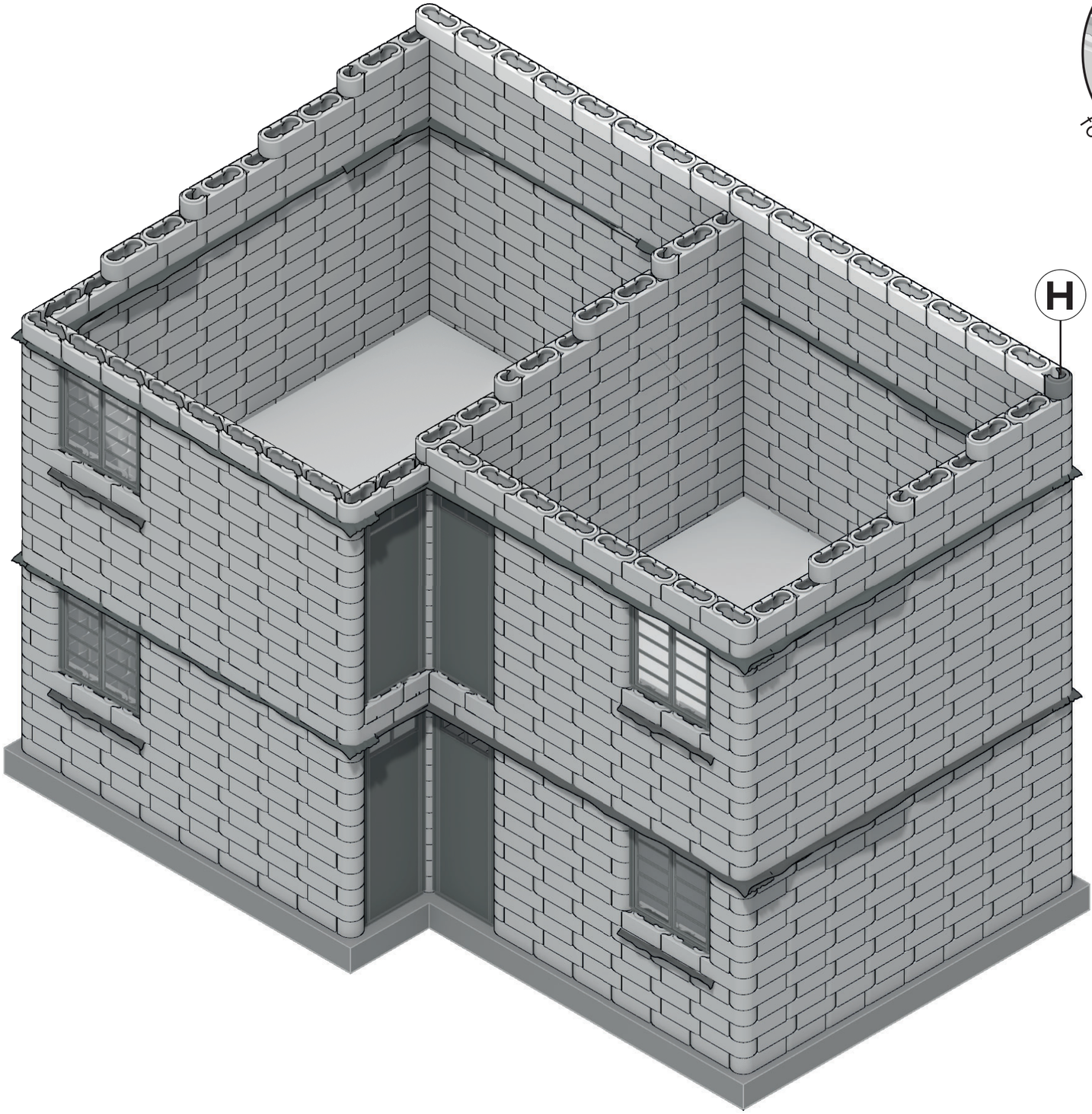
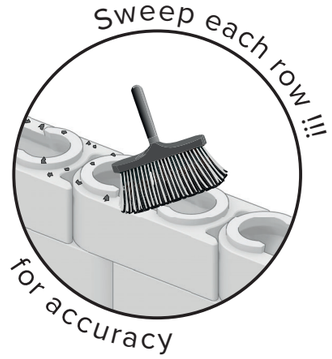
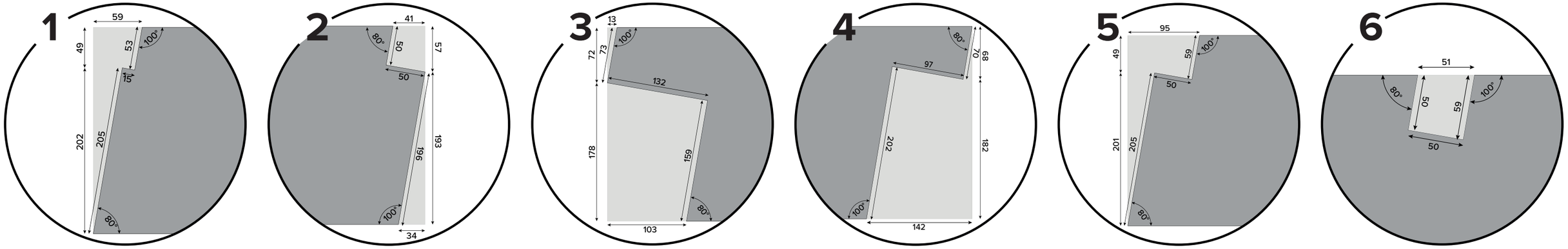




Roof Timber



a

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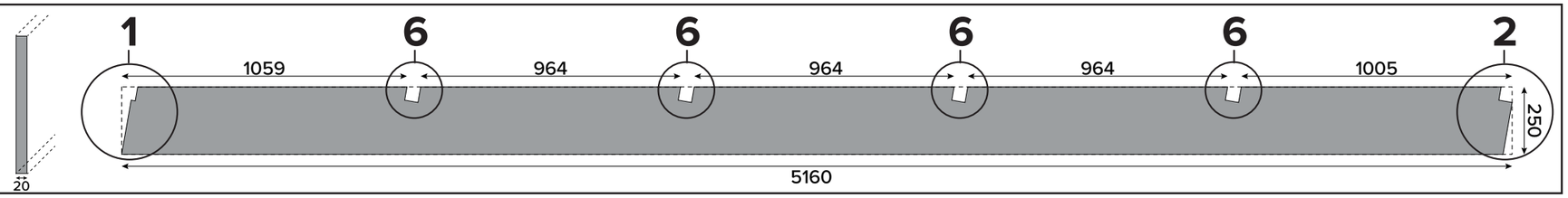

b

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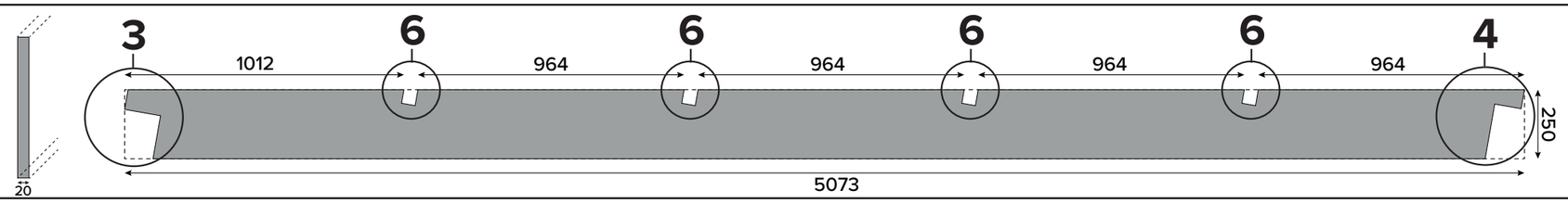
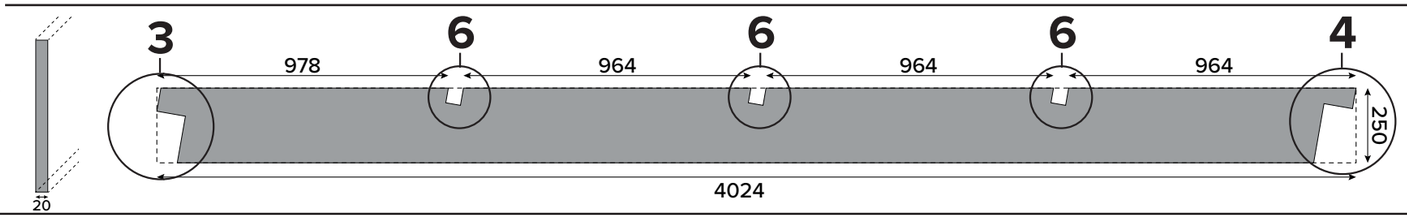


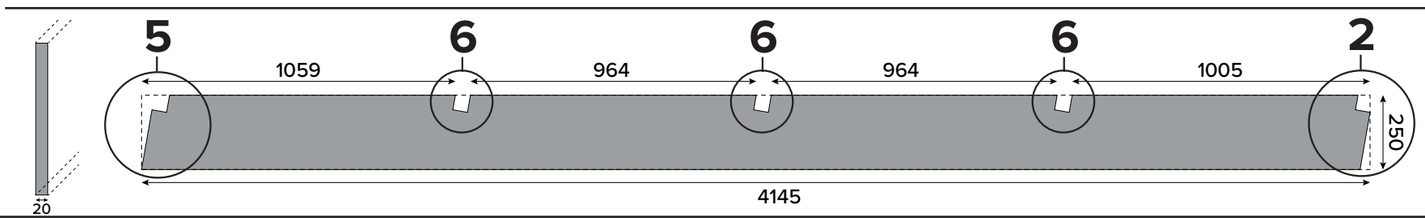
c

x2



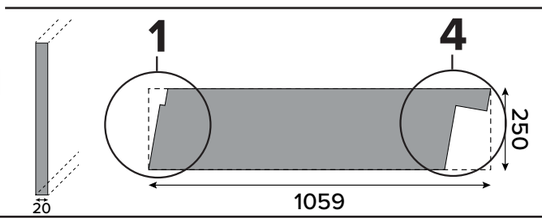
d

x1



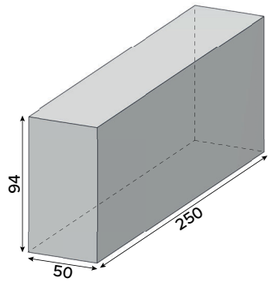
e

x1



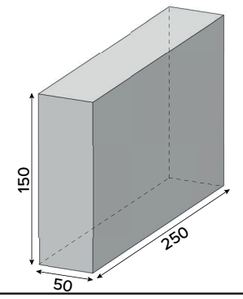
f

x14



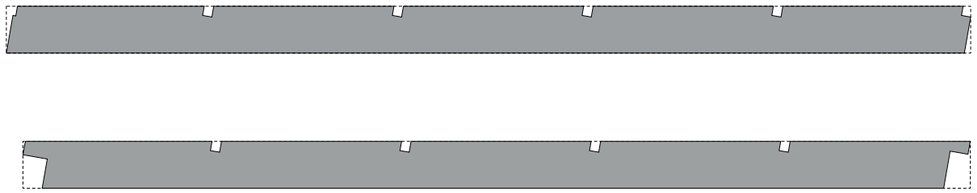
g

x14



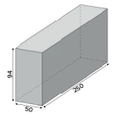
Be aware that the dimensions of the roof structure might need to be altered due to local load conditions. Please consult a local structural engineer to confirm that they are sufficient for your site.

Timber Purlin Supporter 1



a x1

b x1



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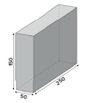
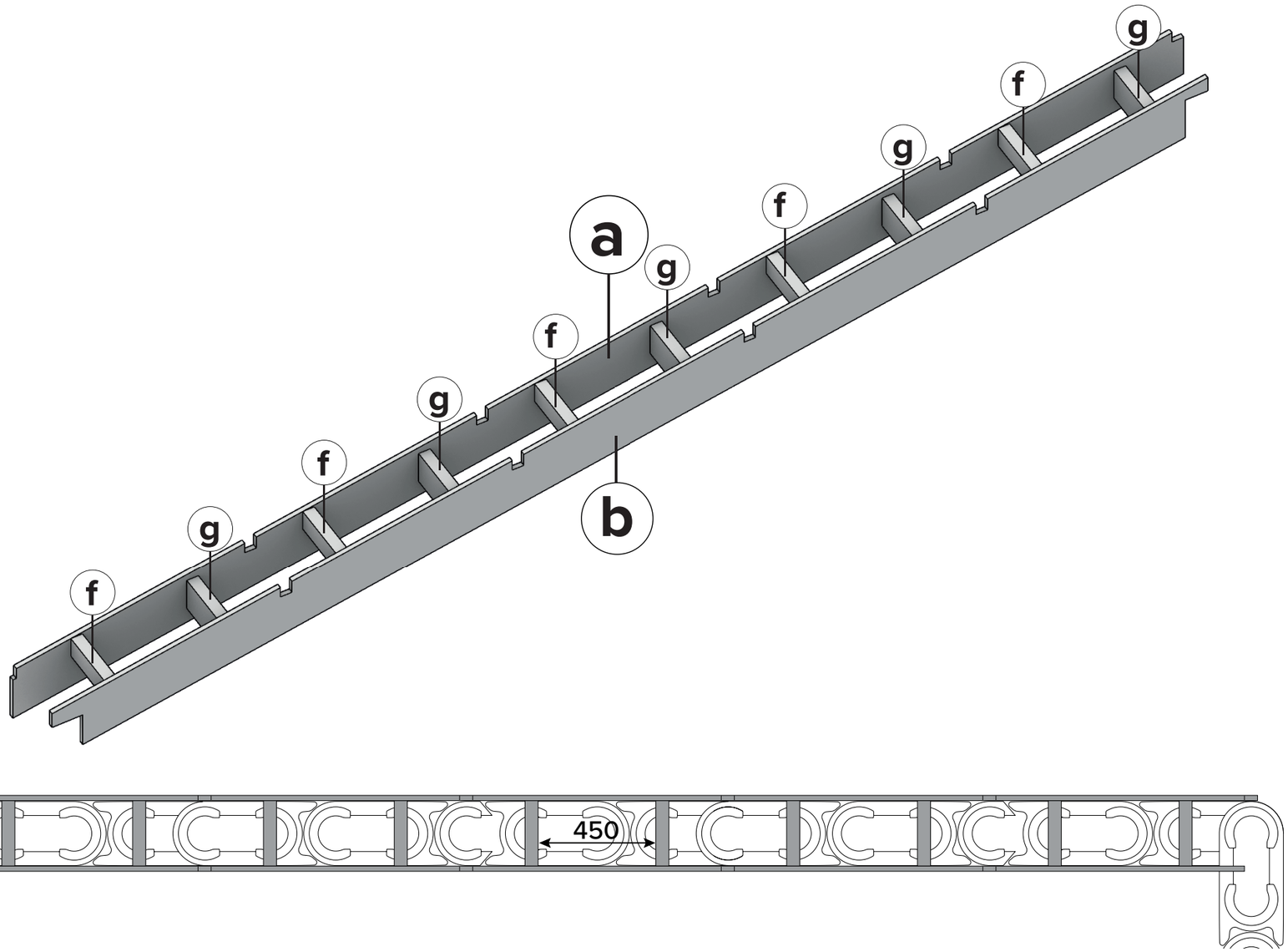
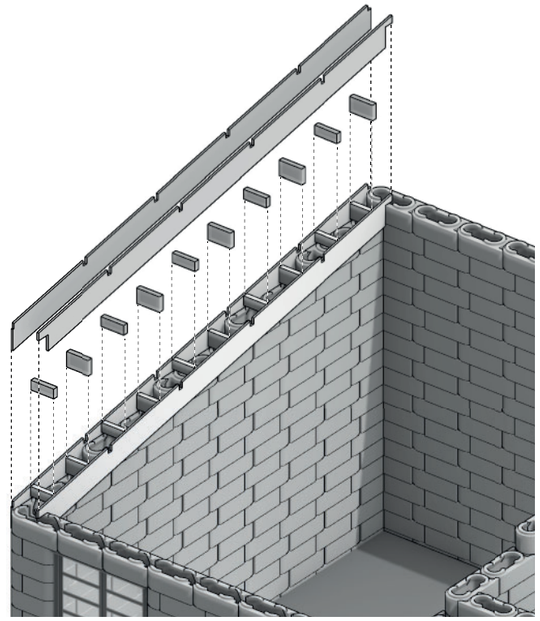


g x5

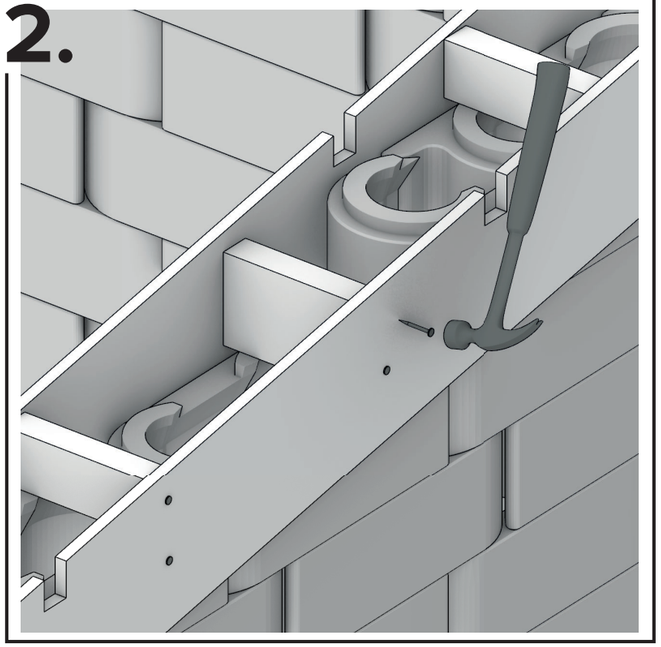


1.



Place the seperate parts of the purlin supporter on the wall and hold them in place.

2.



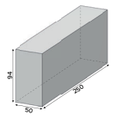
Use screws or nails to connect all parts of the purlin supporter.

Timber Purlin Supporter 2

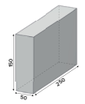
b x1

c x1

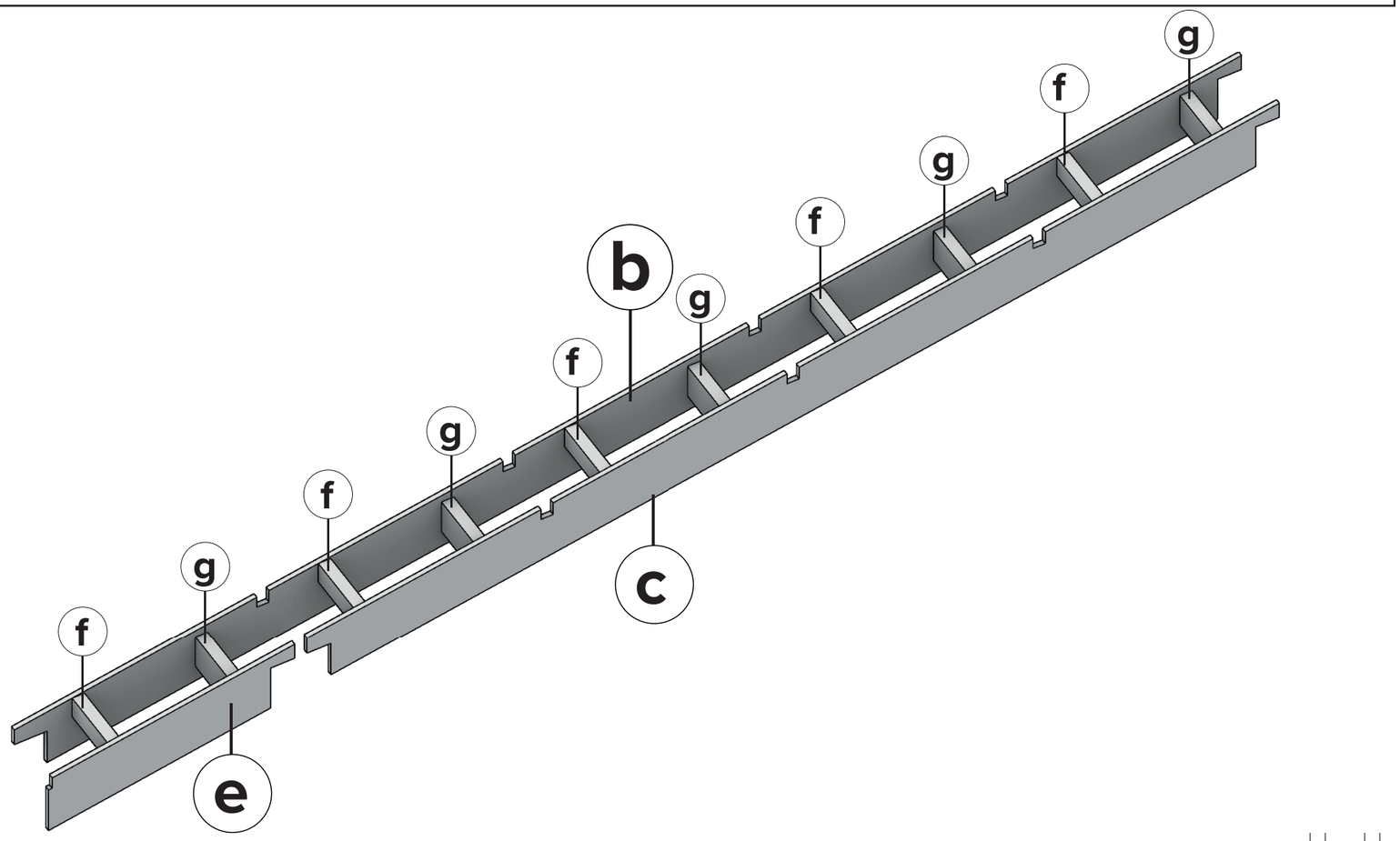
e x1

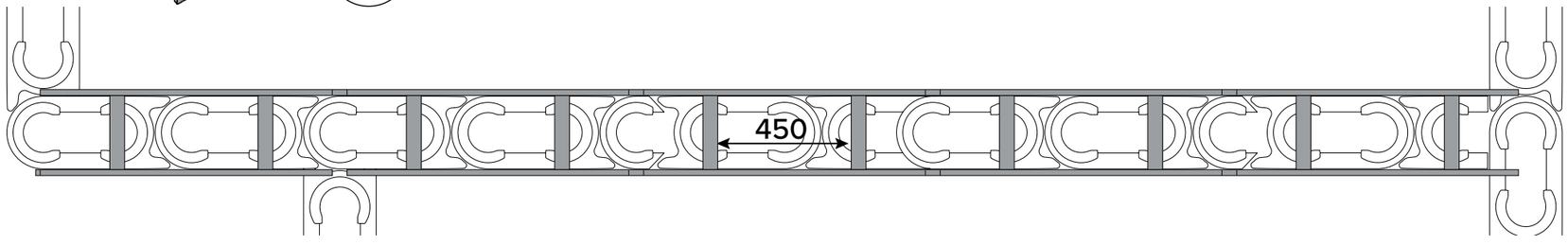


f x5

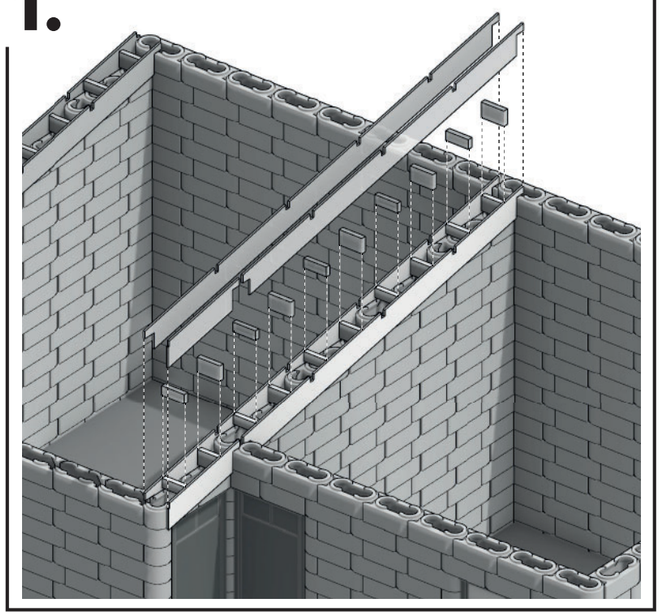


g x5



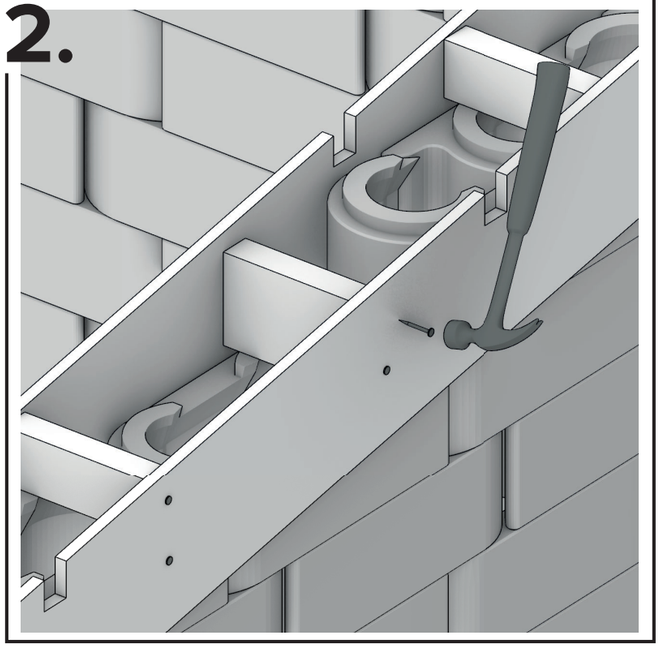


1.



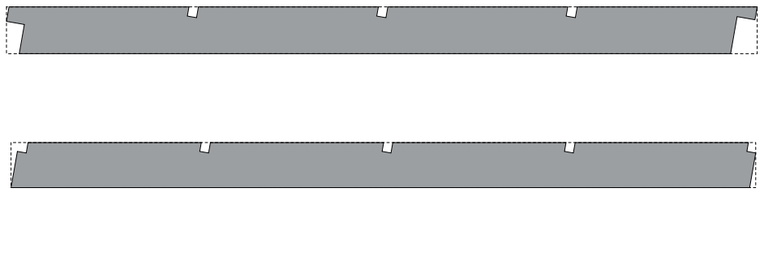
Place the seperate parts of the purlin supporter on the wall and hold them in place.

2.



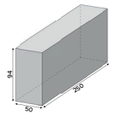
Use screws or nails to connect all parts of the purlin supporter.

Timber Purlin Supporter 3

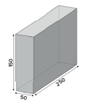


c x1

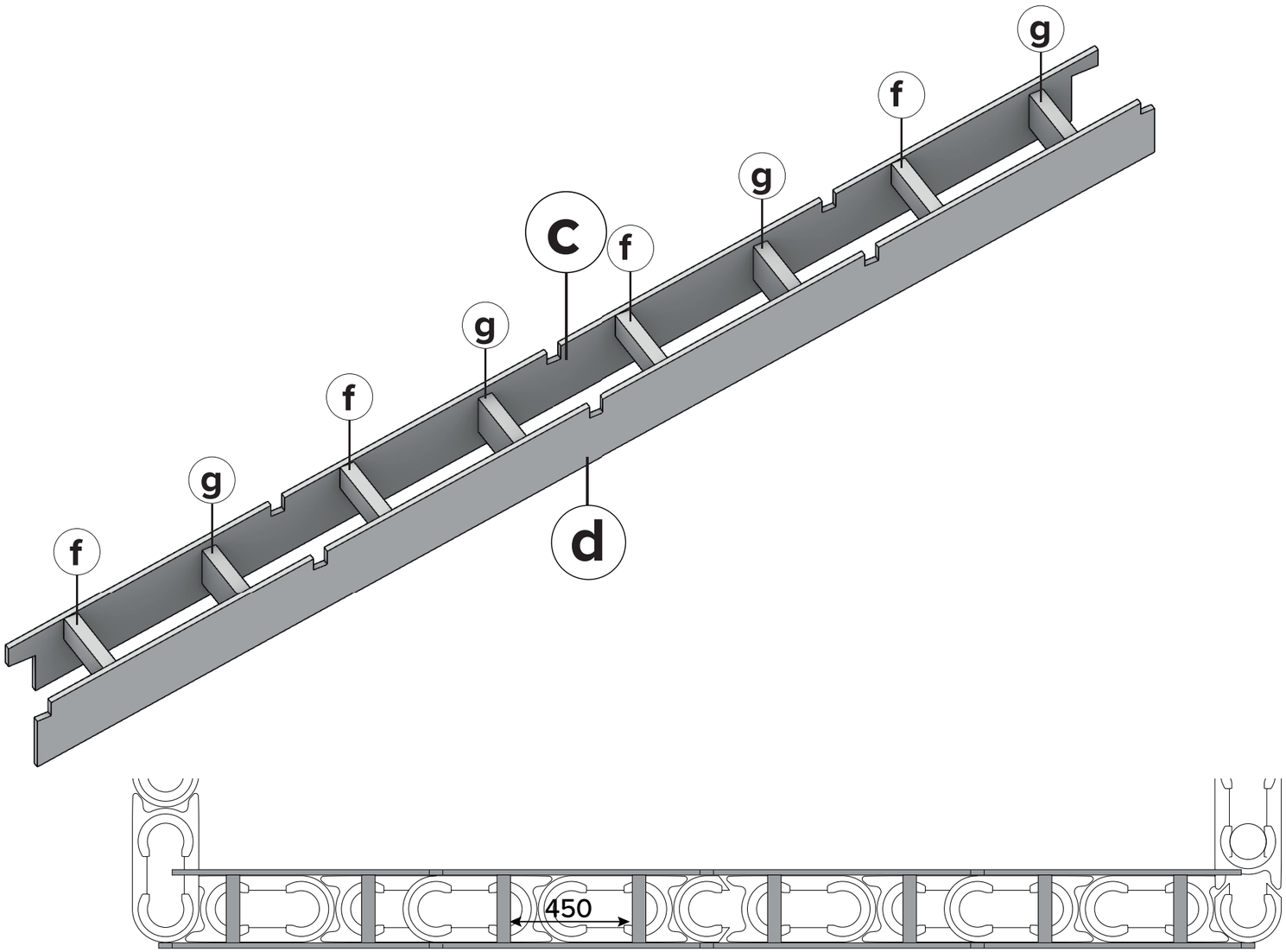
d x1



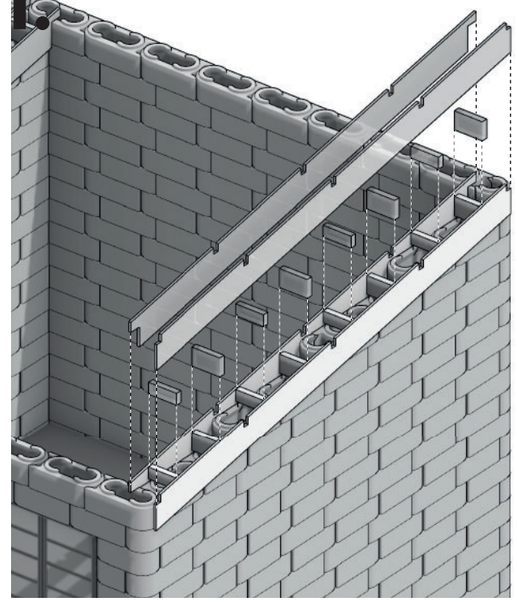
f x4



g x4

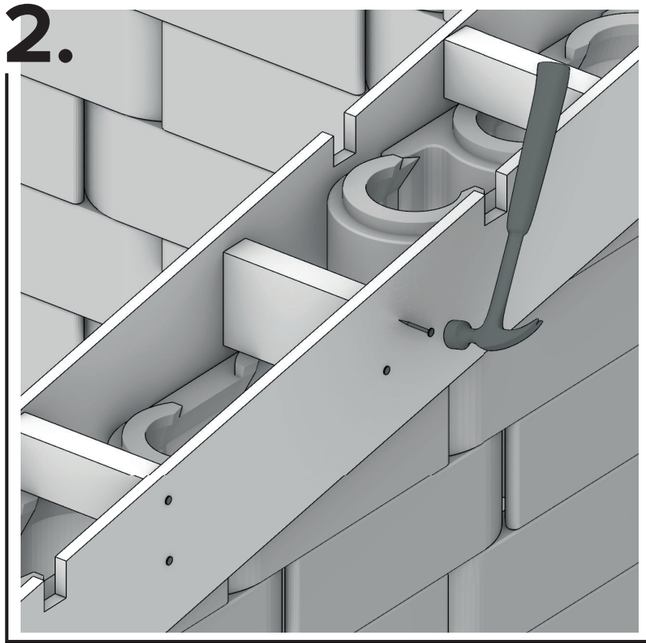


1.



Place the seperate parts of the purlin supporter on the wall and hold them in place.

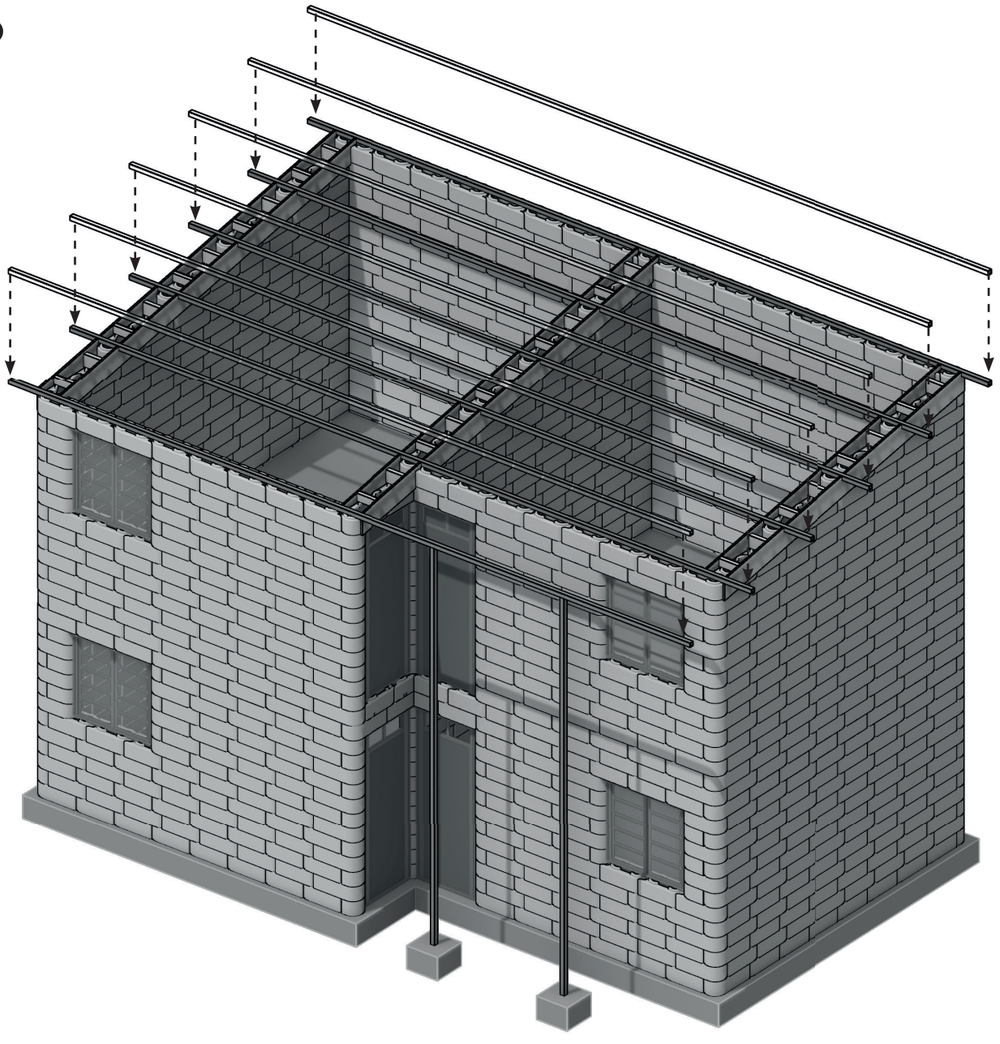
2.



Use screws or nails to connect all parts of the purlin supporter.

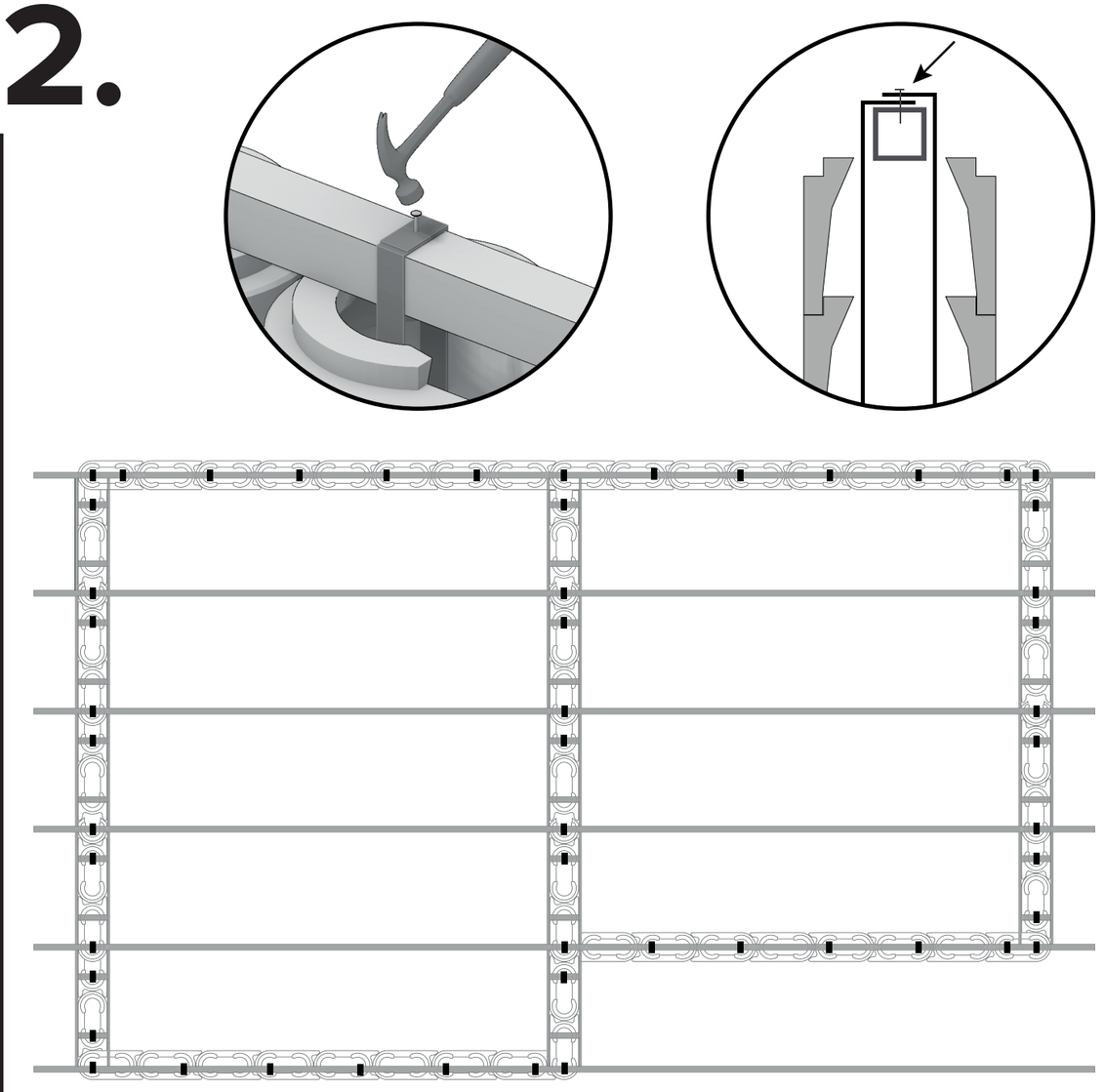
Roof construction

1.



Lay down purlins on the cut-outs on the barged boards. Connect the last purlin to the supports.

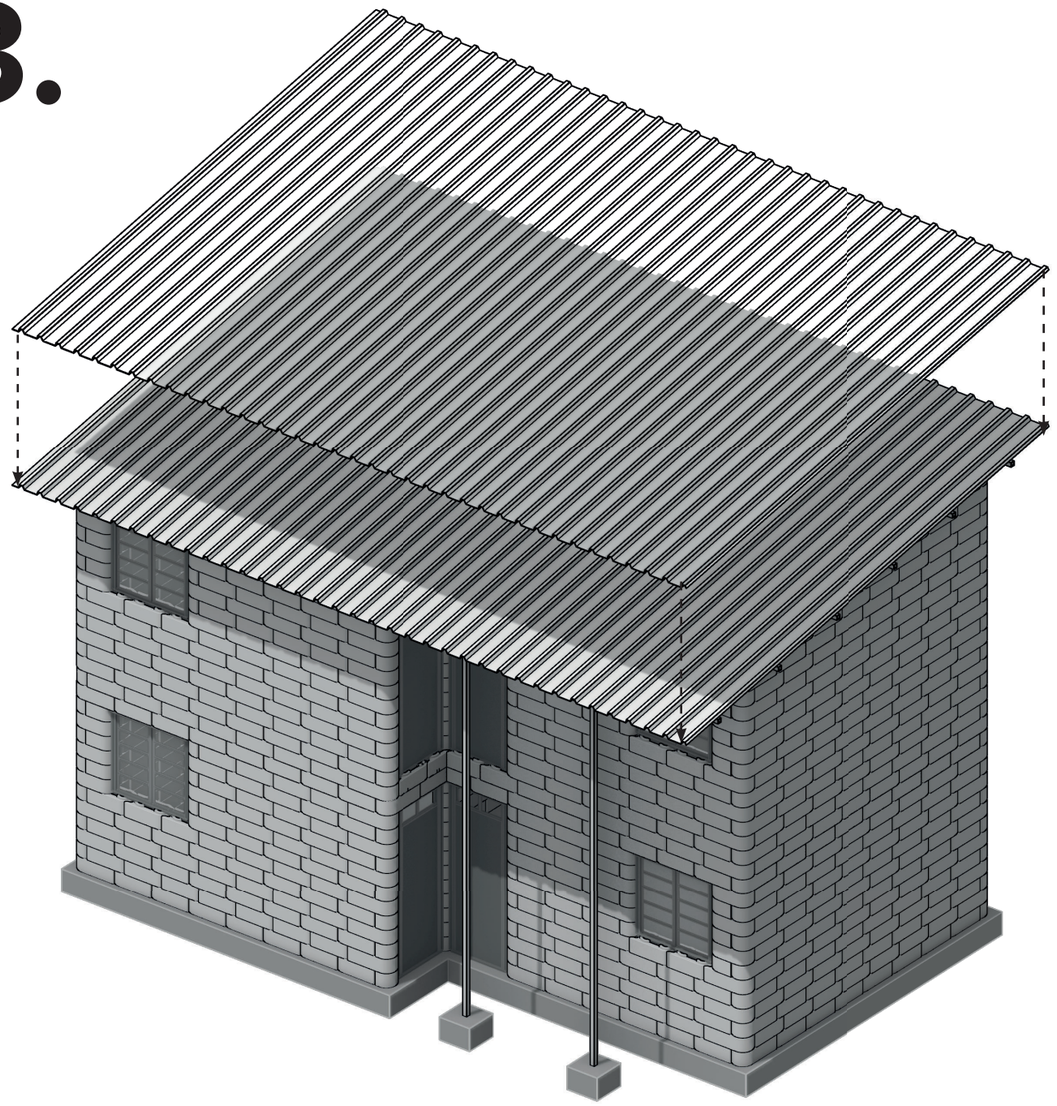
2.

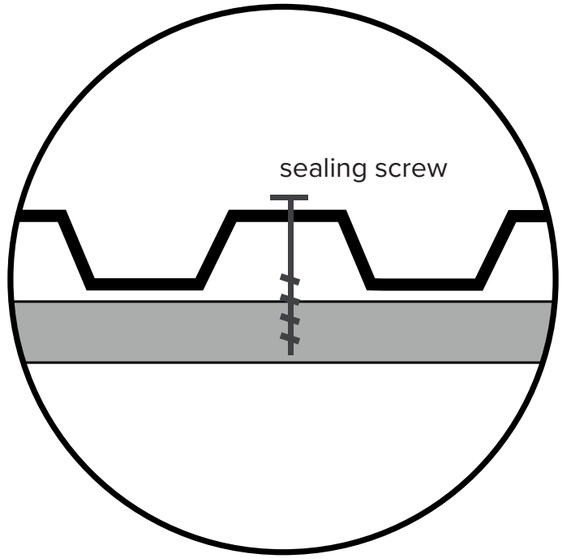


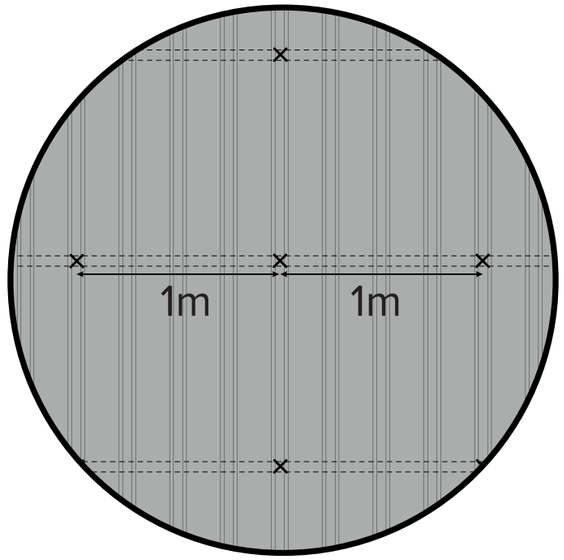
Connect the hoop irons to the bargend boards and the purlins every 75 cm.

Roof construction

3.



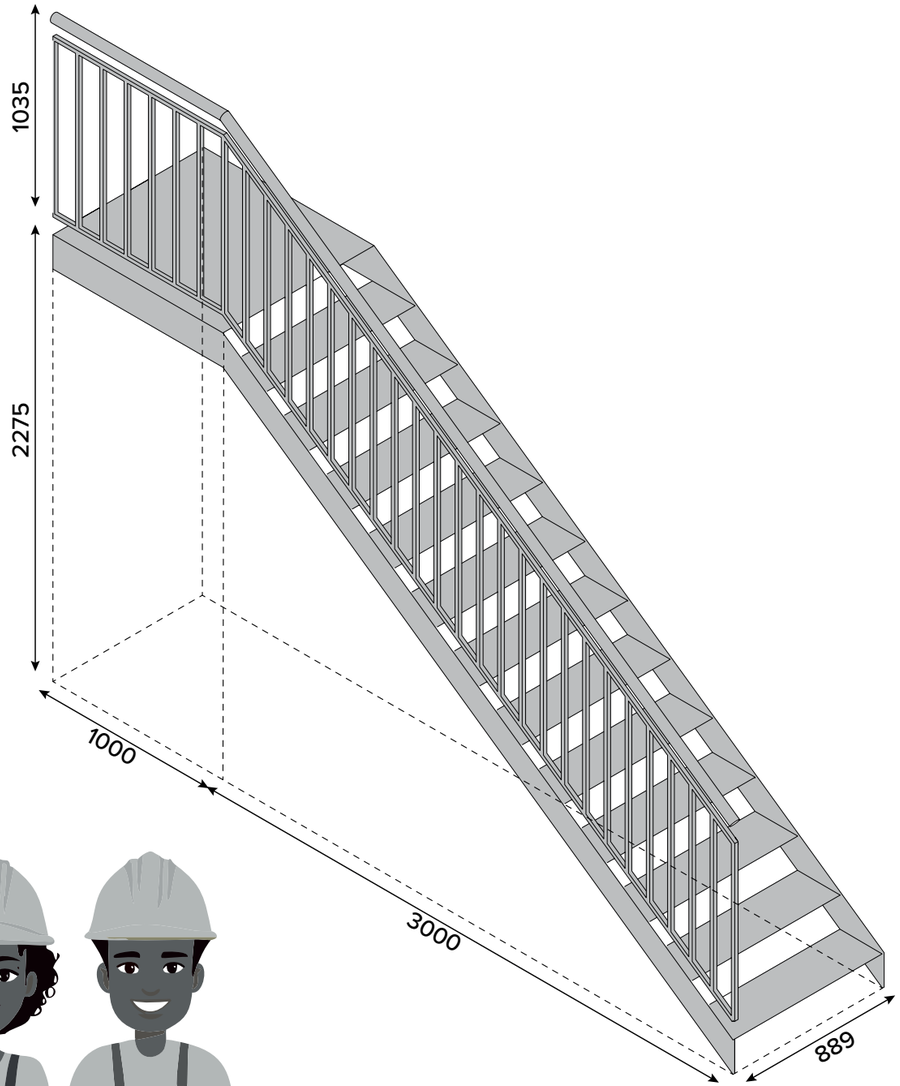




Screw down the sheet-metal roofing. Spacing of the screwing should be 1m.

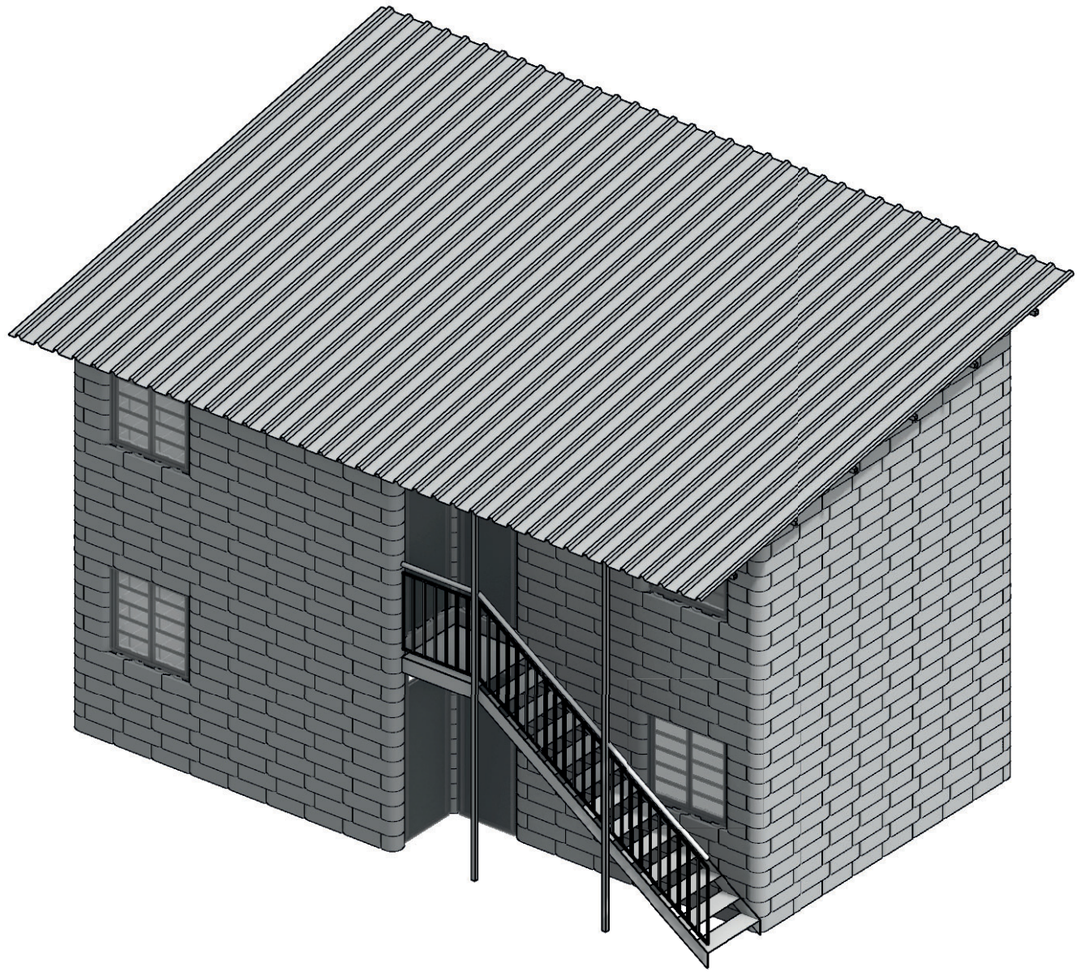
Stairs

1.



Contact local artisans to construct a stair according to your liking.

2.



Screw the stairs to the ringbeam of the house.