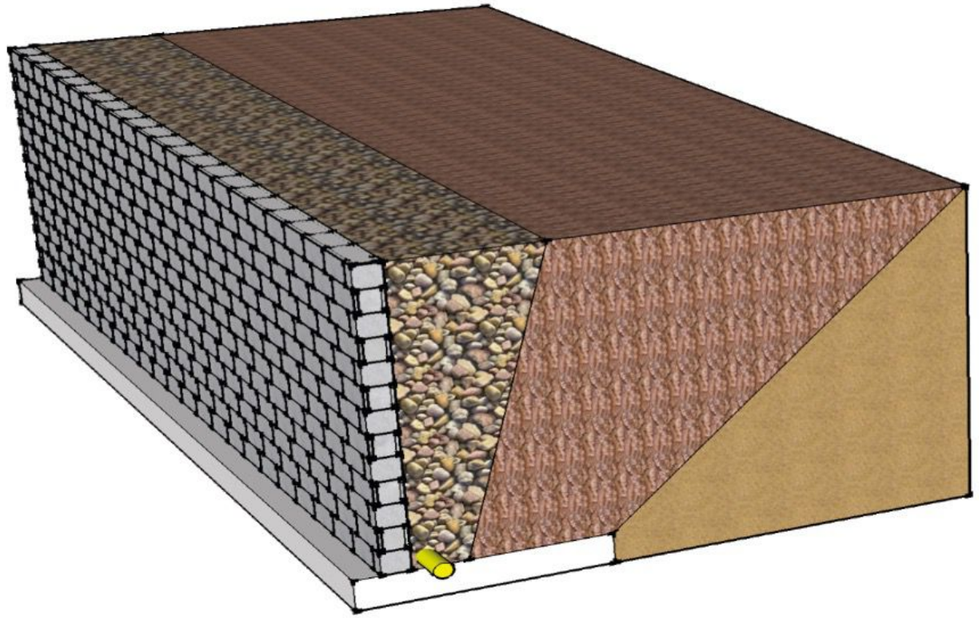
Stepoc hollow block retaining wall

Everything you need to know about a king post retaining wall in 3.5 minutes

Bob Evans

Retaining Wall Solutions



- 3m high stepoc wall constructed on a raft to form a cantilever retaining wall.

General Information

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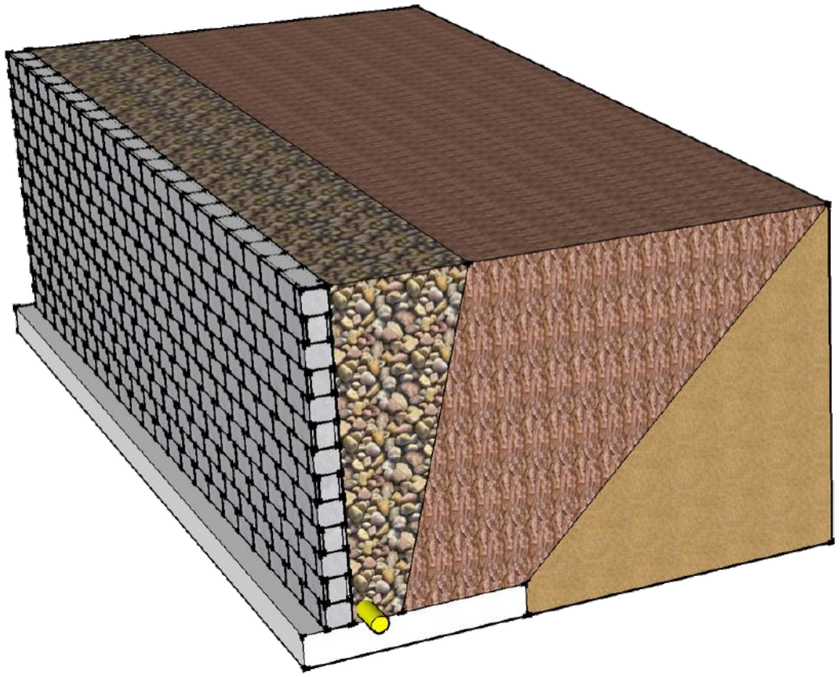
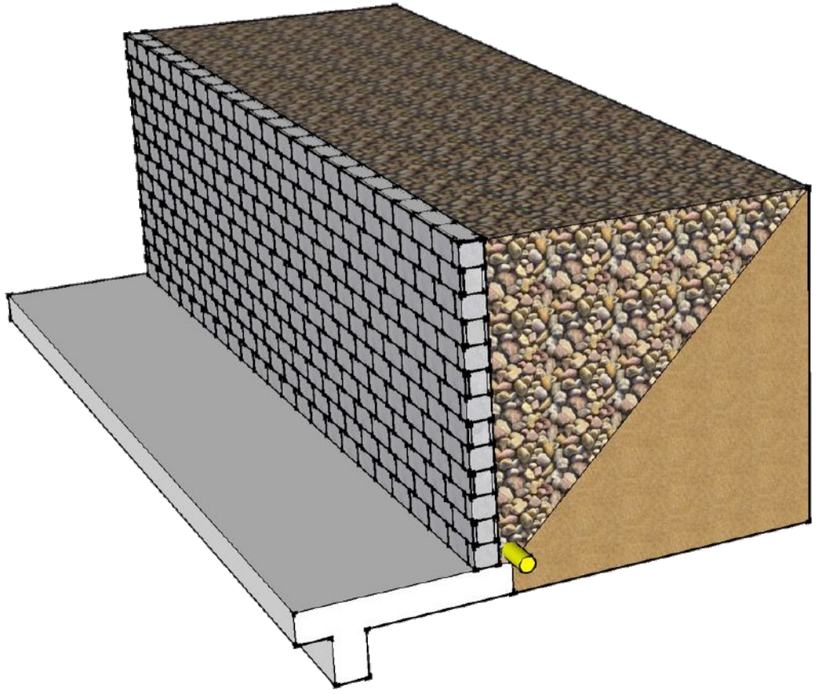


Standard



Inverted

General Information

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Stepoc wall examples

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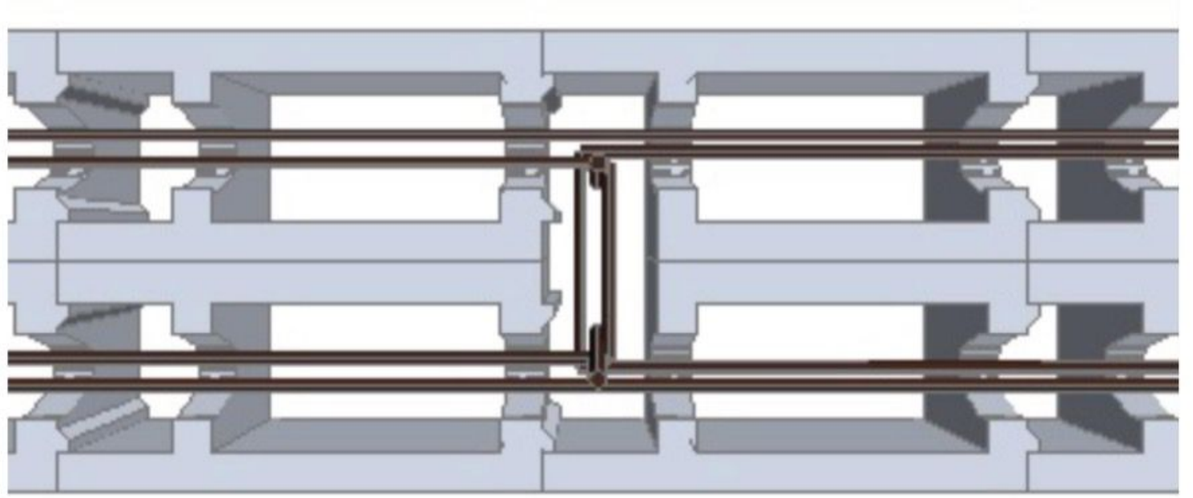

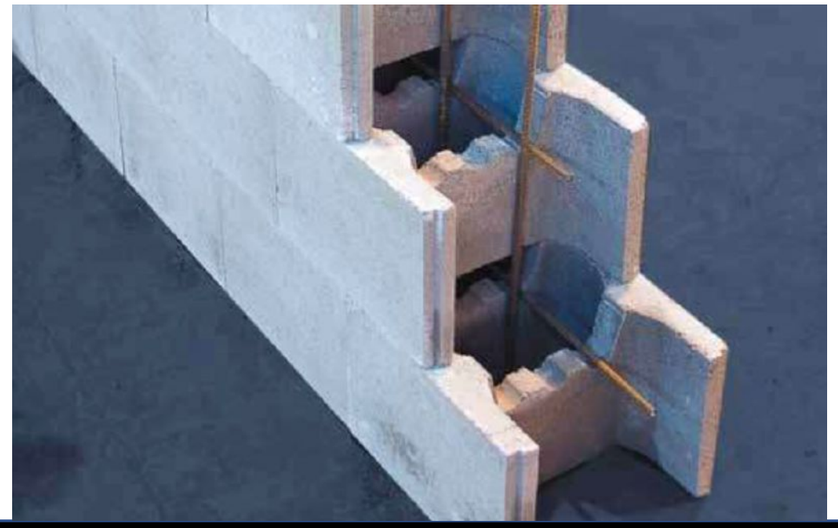

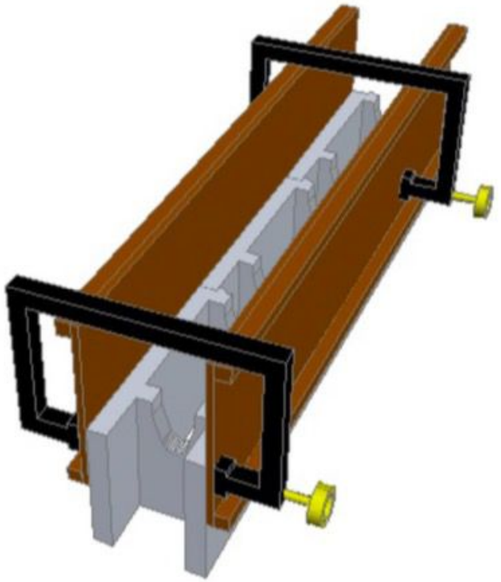

Stepoc construction details

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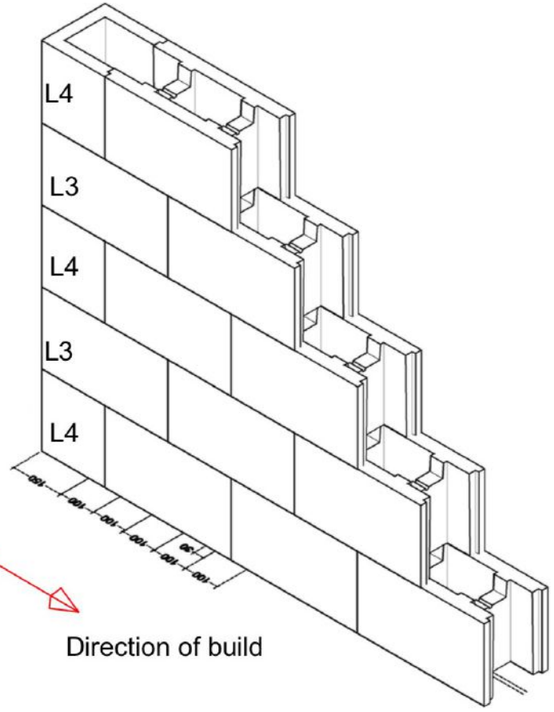
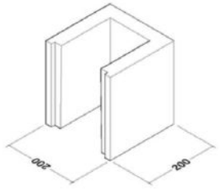




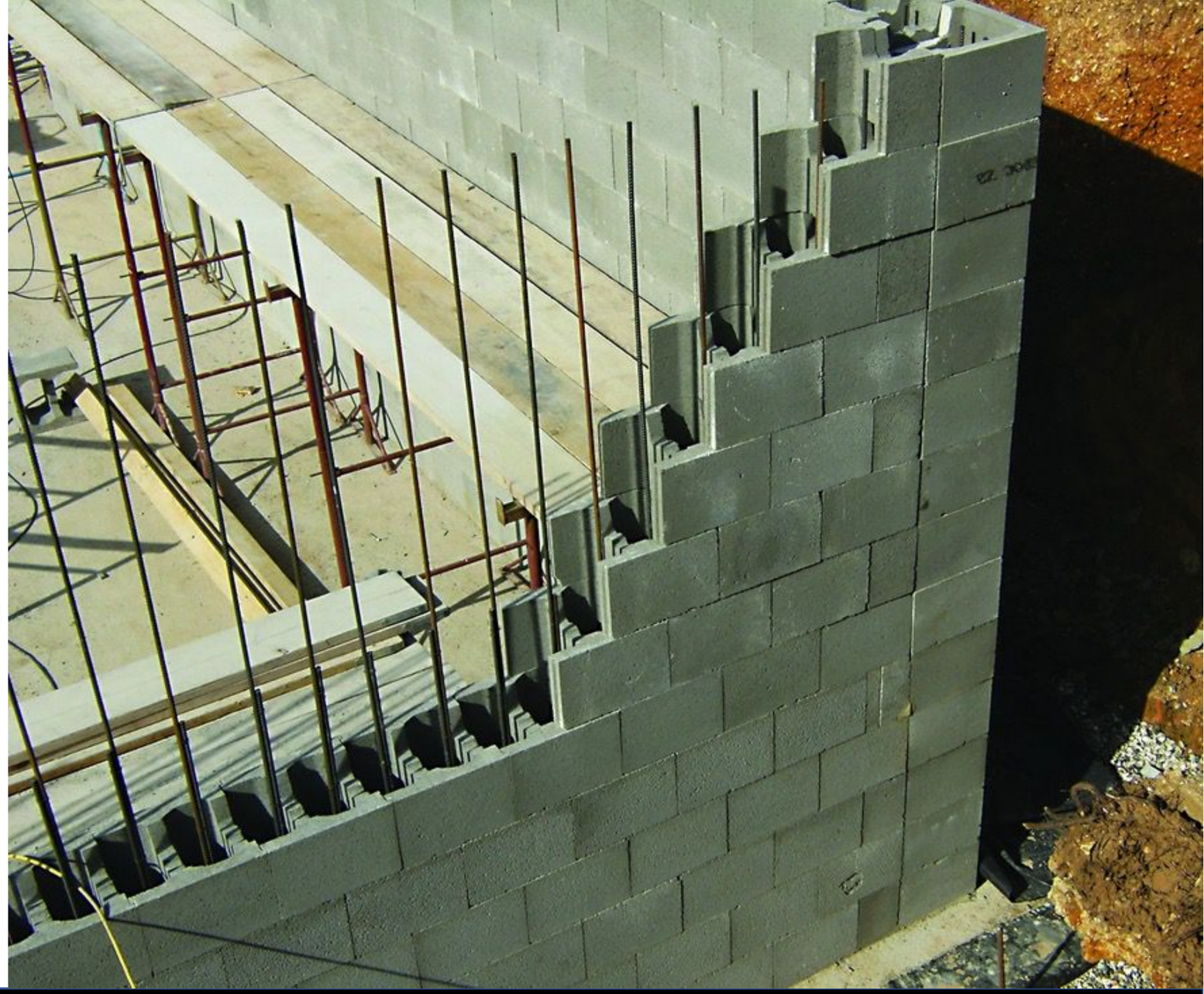
Half Length Plain End (L4)

Steel Center's

200 block 200mm c/c
256 block 133mm c/c
325 block 163mm c/c

Pour Heights

8 courses 1.8m
10 courses 2.25m
10 courses 2.25m



Stepoc construction details

Stepoc masonry design guide

Height (m)	0.9	1.35	1.8	2.25	2.7	3.15	3.6
Number of courses	4	6	8	10	12	14	16
Wall type	Step 200	Step 200	Step 200	Step 256	Step 256	Step 256	Step 325
Base width (mm)	1000	1100	1200	1250	1650	2350	2425
Base depth (mm)	200	200	250	250	300	350	350
Wall bar	10/200 6/200	10/200 6/200	16/200 6/200	10/133 6/200	12/133 6/200	20/133 6/200	12/163 6/225
Top base steel	A252	A252	A252	A393	A393	12/200 12/200	12/200 12/200
Bottom base steel	A252	A252	A252	A393	A393	12/200 12/200	12/200 12/200
Surcharge	10kn/m^2	10kn/m^2	10kn/m^2	10kn/m^2	10kn/m^2	10kn/m^2	10kn/m^2
Factor of safety	M=1.5	M=1.5	M=1.5	M=1.5	M=1.5	M=1.5	M=1.5
							

Indicative designs based upon a base material with allowable bearing pressure of **>200kPa**.

Retained material is assumed to be well graded, granular backfill with the back of wall drainage or weep holes to relieve hydrostatic pressure.

Please note All indicative information presented in this table is based upon assumed loading and ground conditions and will be subject to change following detailed, site-specific design.

Design table to give you some examples for various wall heights

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Design | Types | Case studies | Knowledge base | Contact us | Get price guide

Retaining wall design and price guide

Which retaining wall type is the most economical to build? **Download the design guide** to learn more about each retaining wall type and get a price comparison.

Design price guide | Ask a question

How much do they cost?

Retaining Wall Solutions

Our simple 3 steps
Design process

1 Step 1 - Decide on the type of retaining wall

One of the hardest things to do is to select the right retaining wall type.

Each retaining wall type has pros and cons.

Our support can help you select the right one for your requirements and budget.

2 Step 2 - Design the retaining wall

Our structural engineer is a specialist retaining wall expert. We can turn around retaining wall designs in a matter of days.

You will receive a full retaining wall report, a complete set of calculations, and a sketch showing you the design, including the material specifications.

You will also be protected by our professional indemnity insurance allowing you to sleep at night.

3 Step 3 - Use our supply chain to get the best build price

We have a comprehensive supply chain for the supply only or supply and installation of your retaining wall once it has been designed.

We can prepare material schedules and bills of quantities to give you a budget to work from.

You can save time and money trying to find suitable suppliers and contractors using our service.

Stepoc hollow block retaining wall

Bob Evans

The Next Step

- Tell us about your project.
- Complete the form.
- We are here to support you.

Retaining Wall Solutions

Hi my name is Bob Evans and today I am going to give you a quick review of a Stepoc reinforced hollow block retaining walls.

A Stepoc reinforced hollow block retaining design is a L shape cantilever

It consists of a reinforced concrete raft with started bars that are inserted into the concrete blocks. Rebar is then threaded through the blocks. Concrete is poured into the block cavity. The walls are relatively simple to build by a competent contractor.

Stepoc wall are ideal to build where access is a challenge as no heavy plant is required. The walls can be built by hand.

There are two design options, standard and inverted. The standard design is more common and more efficient. The inverted design needs a key to prevent slippage and overturning as the design does not use the mass sitting on the foundation leg.

Stepoc wall are ideal for the construction of basement walls, flood defence walls as well as standard walls.

General Information

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The first layer of blocks is laid on a bed of mortar the ensure the wall is level. The block are then laid dry.

Formwork can be positioned to add a capping.

The blocks can be doubled up for large walls.

Pour height for 200mm blocks is 8 courses or 1.8m
Pour heights for 256 and 325 blocks is 10 courses or 2.25m

The design table has been created to allow us to cost out the walls. The design uses average soil data, a 200 p/a ground bearing pressure and a 10kn surcharge. Do not use this guide for your project, please have it designed using your local soil data by a structural engineer or we can do it for you.

General Information