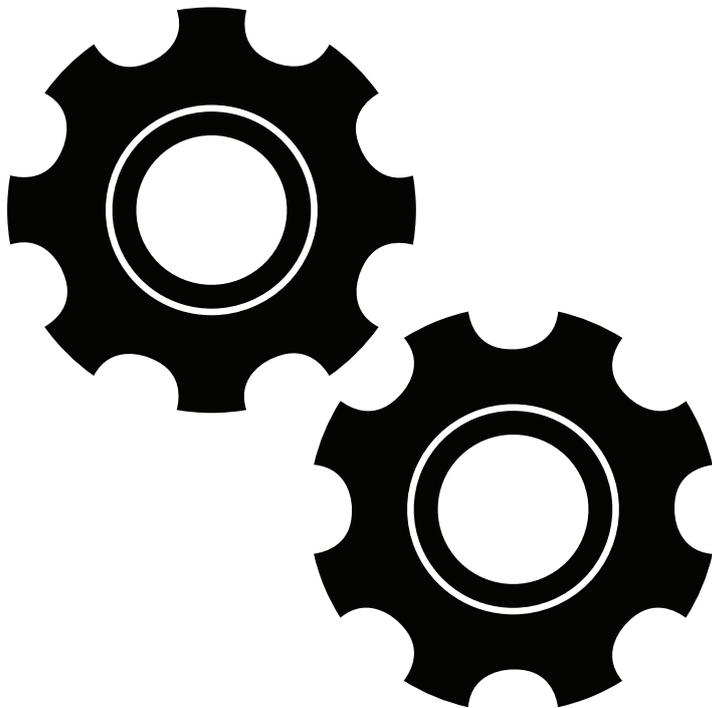


CEB-BLOCK STARTER KIT

PRODUCTION MANUAL



GENERAL

General and very detailed information about compressed earth blocks can be found on <http://www.earth-auroville.com/>. The website provides information about soil types, how to recognize good soil, how to mix, how to use an Auram 3000 CEB press, how to check quality and even more.



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For 26 years, the Auroville Earth Institute has educated and empowered people to build their own dwellings using earthen techniques. This website provides information, images, and videos about the many earthen construction techniques, particularly Compressed Stabilized Earth Block (CSEB). You can also follow our activities and sign up for training courses.

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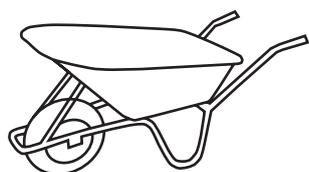
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CHAPTER ONE

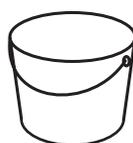
EQUIPMENT

Here is an overview of the potentially required equipment, including a short description. See your online account for more details and price quotations of these CEB equipments.

These are the basic equipments you'll need when you want to produce CEB blocks



Wheelbarrows



Buckets



Shovels

Other equipments to check quality:

- Pocket penetrometer: to check the compression quality.
- Block height gauge: to check the block height.

These are examples of machines you could use when want to produce CEB Blocks



Auram 3000 + Mould
Price: +/- \$3.000
(Excluding transport)
Made in India



Auram 4000 + mould
Price: +/- \$14.000
(Excluding transport)
Made in India



OSKAM CEB Block Making Machine
Price: \$17.000 - \$30.000
(Excluding transport)
Made in The Netherlands

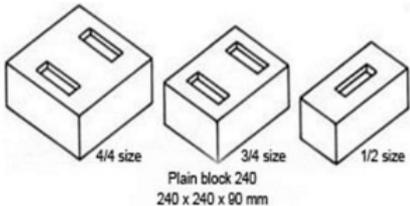


See your personal account to watch the videos

CHAPTER TWO

BLOCK SIZE

The suppliers of the CEB block machines supply different sizes and shapes of moulds. The size and shape of the block should depend on local demand. Below the most popular block size used by the Auram Presses.

BLOCK PLAIN 240			
 Use This block is used for building plain load bearing walls of 24 cm thick. It can be used up to 4 floors high. It presents the advantage of saving mortar and allowing a fast block laying.	Details Full block size (L x W x H, in mm) = 240 x 240 x 90 Net volume of material = 5.184 Litres Gross volume of block = 5.184 Litres Bearing area = 576 cm ² Practical daily productivity for the full size block = 850 Nos. Number of blocks per bag = 78	Quantities of materials per 1000 Blocks	
			Soil:
	Sand:	1.90 (m ³)	
	Cement:	12.82 (bag)	



24 x 11.5 x 9 cm
2 blocks/stroke



24 x 17.7 x 9 cm
1 block/stroke



24 x 24 x 9 cm
1 block/stroke

CHAPTER THREE

PRODUCTION VIDEOS

See your online account to watch videos and a step-by-step explanation of the production process.

Example video of the Auram 3000



Example video of the Auram 4000 and Auram mixer



See your personal account to watch the videos

Step-by-step explanation of the Auram 3000



Opening the lid of the press by pulling the handle



Automatic opening of the lid



Feeding the press with the scoop into the hopper



Sliding the hopper above the mould



Pushing back the hopper to level the soil in the mould



Closing the lid



Starting the compression, while the operator fills the scoop



Pulling down the lever, while the operator supplies the mix



Automatic opening of the lid, while the operator fills the hopper



Ejection of the block, while the operator fills the hopper



Checking the quality of compression with the pocket penetrometer (Only for the first block of every new mix)



Sliding the hopper to push the block and to fill the mix into the mould



Checking the block height with the block height gauge (Only for the first block of every new mix)



Handling the block to stack it near the press for the initial curing



Brushing time to time the table with a brush



Scraping regularly the bottom plate with the scraper



Cleaning occasionally the corners of the mould with the scraper

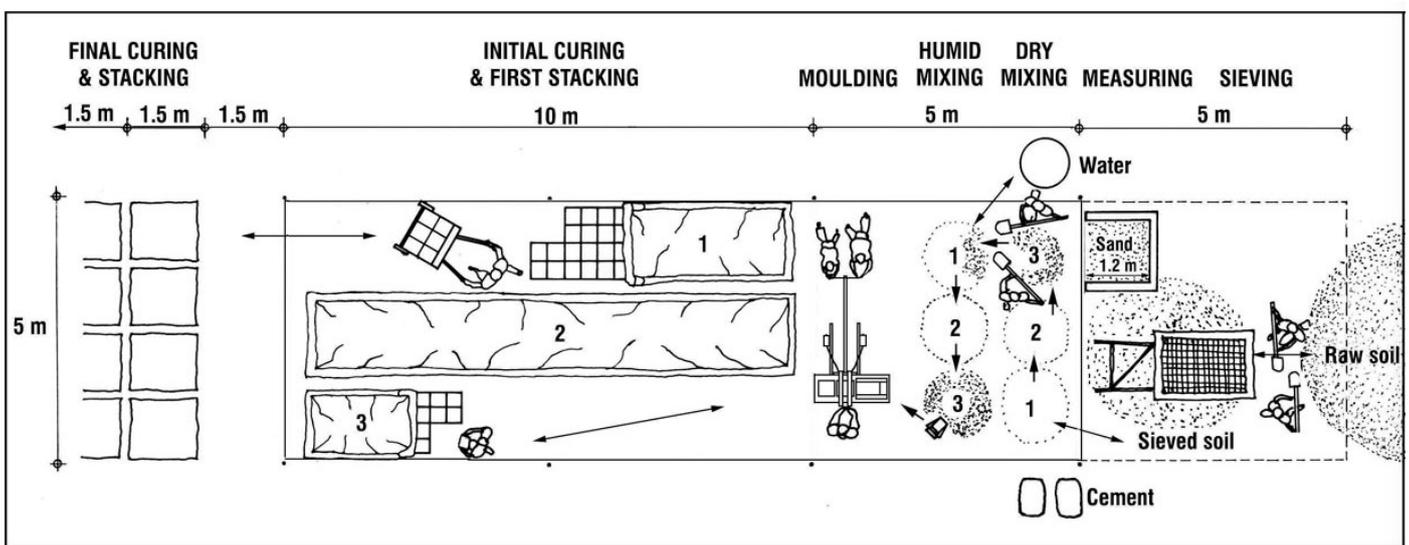


Brushing time to time the top plate with the wire brush

CHAPTER FOUR

PRODUCTION SITE

To work efficiently it is important to organize your production site in a logical way. Below you see a top view of a well organized production site.



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