



# Concrete Blocks



Technical Data	
Building element	Wall
Size	Various sizes
Mixing ratio	1 cement : 6-8 aggregate
Cement used per m <sup>3</sup>	250 - 300kg
Resistance to earthquakes	Very good
Resistance to typhoons	Very good
Resistance to rain	Very good
Resistance to insects	Very good
Climatic suitability	All climates
Stage of experience	Widely used method
Production costs per m <sup>2</sup>	Rp. 55,000
Durability	Approx. 30 years

## Short Description

Concrete block construction has gained importance and has become a valid alternative to fired clay bricks. The essential ingredients of concrete are cement, aggregate (sand, gravel) and water. Concrete blocks are produced in a large variety of shapes and sizes. They can be produced manually or with the help of machines.

Most commonly used concrete blocks are sized:

Length: 40cm (half blocks: 20cm)

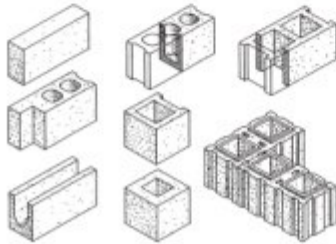
Height: 20cm

Width: 8/10/15/20cm

ArCii uses the sizes 14,5 x 29 x 14cm, 14,5 x 14,5 x 14cm (width x length x height)

Solid blocks have no cavities, or- according to US standards- have no voids amounting to not more than 25% of the gross cross-sectional area.

Hollow blocks are the most common type of concrete blocks, having one or more holes that are open at both sides. The total void area can amount to 50% of the gross cross-sectional area.



## Advantages

### Technical advantages

#### Solid blocks:

- High compressive strength, resistance to weathering, impact and abrasion
- Capability of being moulded into components of any shape and size
- Good fire resistance up to about 400°C
- Rapid construction
- Very good stability

#### Hollow blocks:

- Can be made larger than solid blocks
- Are lighter in weight
- Construction of walls is easy and quick
- The voids can be filled with steel bars and concrete, achieving high earthquake resistance
- The air space provides good thermal insulation
- The cavities can be used for electrical installation and plumbing

### Economic advantages

- Production can be started with little capital.
- Less working time required for brick laying work with concrete blocks.
- Less mortar consumption
- Generally, production costs of concrete blocks are slightly lower than of fired bricks.



Caption:

Description:

Dimensions: 427 x 600

aperture: 0

credit:

camera:

caption:

created\_timestamp: 0

copyright:

focal\_length: 0

iso: 0

shutter\_speed: 0

title:

orientation: 0

