



# LIGHTWEIGHT - HOLLOW CONCRETE — BLOCKS

## Introduction

There are various options available in cement concrete blocks for masonry purpose. Every type has its own merits and demerits. Those who want lightweight walling units having density between 650 to 900 Kg/m<sup>3</sup>, they can use CLC or AAC blocks. Unfortunately, the quality of CLC and AAC blocks manufactured in India by some of the manufacturers is not up to mark due to lack of subject knowledge, proper machines and technology. Unhealthy price war is also responsible sometimes. The major disadvantage in poor quality lightweight blocks is that of too high Water absorption. In AAC blocks, the density is reduced by introducing air voids in the concrete. Unfortunately, the uncontrolled air passages are long and inter-connected absorbing too much of water (30-40%) by capillary action and holding it for a long period of time to ultimately damage paints and furniture later.

We, at Nishu, have successfully reduced such problems by introducing Lightweight Hollow Blocks (LHB) where lightness is attained by (1) hollow passage and (2) using lightweight aggregates. This technology allows to reduce water absorption to a safer level keeping other advantages of AAC unchanged. In the manufacturing of LHB, we use Lightweight concrete + Lightweight aggregates + Regular aggregates.

## Physical properties of LHB

LHB Types	Dimension (mm)	Dry Weight (Kg)	Minimum Compressive Strength (Mpa) (At 28 days)	Effective Water Absorption (%)	Dry Density Kg/m <sup>3</sup>	Pieces per MT
LHB 90	90X190X390	6.0	2.5	12.5	850	167
LHB 125	125X190X390	8.1	2.5	12.0	850	124
LHB 140	140X190X390	8.8	2.5	11.5	850	114
LHB 190	190X190X390	11.6	2.5	11.0	850	86

## Major advantages of LHB

- 1) It is a green product as fly ash is used
- 2) Better Sound insulation and Fire resistance
- 4) Transportation cost and consumption of cement & steel are reduced due to low density
- 5) The hollow passage can be used for concealed service lines

