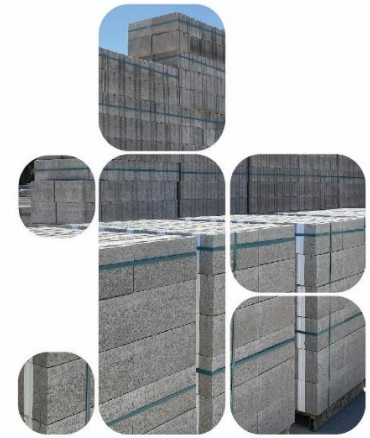




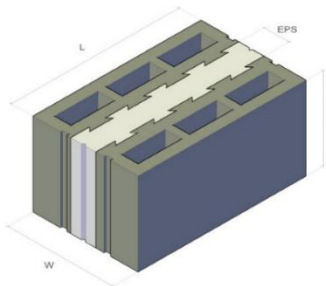
Technical Data Sheet

REGULAR & LIGHTWEIGHT DOUBLE HOLLOW BLOCKS with EPS
20x20x40 with EPS 4cm – 25x20x40 with EPS 6cm

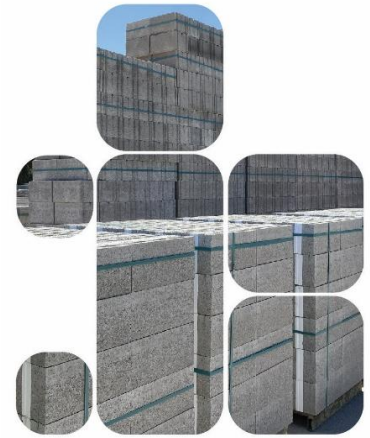
Sibline **Double-Hollow Block with EPS** insert is a non-load-bearing concrete masonry unit available in both lightweight and normal densities, designed for internal partitioning and external walls. It is intended to replace the double "mono walls". It is produced with an automatic press in accordance with EN 771-3, Category D1. The block strength can be adjusted according to the Engineer's requirements. Several compressive strengths can be achieved for a given density.

It is manufactured using a proprietary mix design containing Portland cement, silica sand, limestone aggregates and lightweight materials, including pumice (natural lightweight aggregate) and non-toxic flame-retardant expanded polystyrene (EPS).

Sibline lightweight Double-Hollow Blocks with EPS insert are available in densities of **1200** and **1400 kg/m³**, while Sibline Regular Double-Hollow Blocks with EPS are available in a density of **2200 kg/m³**.



Dimensions in cm			
Width (W)	Height (H)	Length (L)	EPS
20	20	40	4
25	20	40	6



Technical Data Sheet

REGULAR & LIGHTWEIGHT DOUBLE HOLLOW BLOCKS with EPS
20x20x40 with EPS 4cm – 25x20x40 with EPS 6cm

The EPS insert is a stable high density (32 kg/m³) non-toxic fire-retardant expanded polystyrene with a K-value of 0.034 W/(m.K) which is equivalent to extruded polystyrene without having its disadvantages in terms of toxicity.

Sibline Hollow Blocks have successfully passed the two-hour fire resistance test in accordance with EN 1364 standards. The EPS used is a non-toxic, flame-retardant (FR-grade) expandable polystyrene produced using a reactive flame-retardant agent, with no additive agent used.

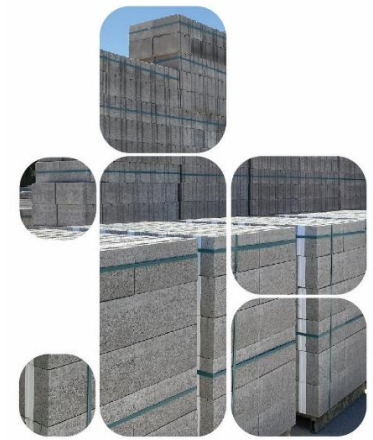
Sibline works exclusively with EPS producers that comply with EN RAR 2006 standards, particularly regarding the HBCDD concentration, which remains below 0.7%. The EPS used is free from HFCs, CFCs, and HCFCs, unlike extruded polystyrene (XPS), which is commonly used in Lebanon.

In addition, the global warming potential (GWP) of Sibline EPS is less than 5, as Pentane is used as the blowing agent. Pentane is not classified by the European Union as a substance hazardous to human health or the environment. By comparison, the typical GWP of XPS is around 1300 due to the use of HFCs as blowing agents.

One of the key advantages of this lightweight block is its low U-value compared to other construction materials, which helps reduce energy consumption throughout the building's lifetime. Its low water absorption and low permeability make it an ideal choice for external walls and for applications where there is a risk of condensation due to temperature gradients.

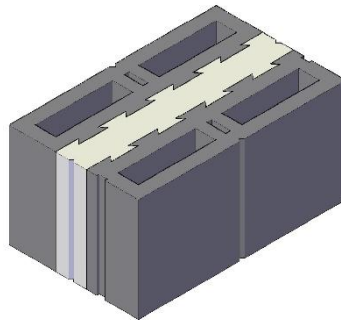
Technical Data Sheet

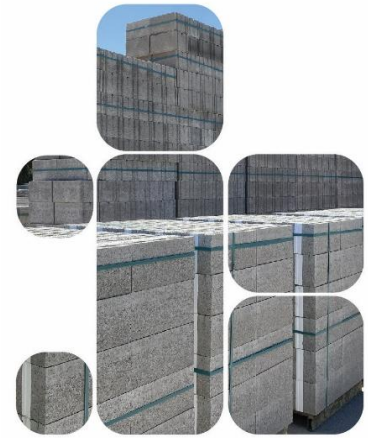
REGULAR & LIGHTWEIGHT DOUBLE HOLLOW BLOCKS with EPS
20x20x40 with EPS 4cm – 25x20x40 with EPS 6cm



Sibline Double-Hollow Block is much easier to cut using a saw or hammer compared to regular cementitious blocks.

The Double-Hollow blocks with widths of 20 and 25 cm are delivered with a certain percentage of “split” blocks, which can be easily separated into two pieces on-site without the need for a hammer or saw.



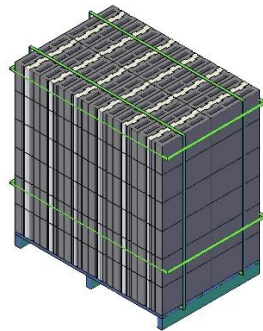


Technical Data Sheet

REGULAR & LIGHTWEIGHT DOUBLE HOLLOW BLOCKS with EPS
20x20x40 with EPS 4cm – 25x20x40 with EPS 6cm

Double Hollow 20x20x40cm with EPS 4cm

Logistics



Pallet		EURO / 2-way entry / steel		
Pallet dimensions ($W_p \times L_p \times H_p$)	cm	80 x 120 x 8		
Pallet weight	kg	20		
Typical strapping	-	2 longitudinal / 2 transversal		

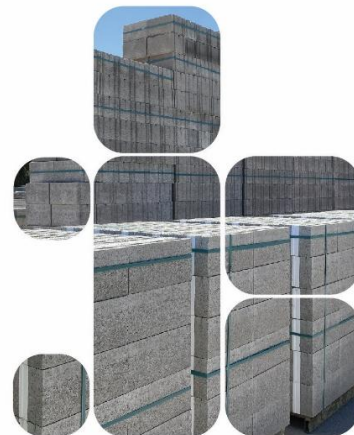
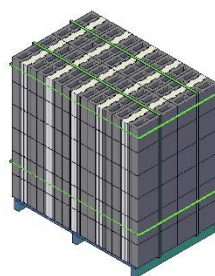
Net dry density (kg/m ³) ¹		1200	1400	2200
Typical block weight ²	kg	12.4	14.4	22
gross dry density ³	kg/m ³	775	900	1,375
blocks per pallet	pieces	72	72	72
weight of one pallet loaded (incl. pallet) ⁴	kg	913	1,057	1,604
height of one pallet loaded (incl. pallet)	cm	130	130	130
pallets per 12 m length trailer ⁵	pallets	27	27	27
pallets per 4.12 m length truck (Hino type) ⁵	pallets	6	6	6
blocks per 12 m length trailer	pieces	1,944	1,944	1,944
blocks per 4.12 m length truck (Hino type)	pieces	432	432	432

Technical Data Sheet

REGULAR & LIGHTWEIGHT DOUBLE HOLLOW BLOCKS with EPS
20x20x40 with EPS 4cm – 25x20x40 with EPS 6cm

Double Hollow 25x20x40cm with EPS 6cm

Logistics



Pallet		EURO / 2-way entry / steel		
Pallet dimensions ($W_p \times L_p \times H_p$)	cm	80 x 120 x 8		
Pallet weight	kg	20		
Typical strapping	-	2 longitudinal / 2 transversal		
Net dry density (kg/m ³) ¹		1200	1400	2200
Typical block weight ²	kg	13	15.1	23
gross dry density ³	kg/m ³	650	755	1,150
blocks per pallet	pieces	60	60	60
weight of one pallet loaded (incl. pallet) ⁴	kg	800	926	1,400
height of one pallet loaded (incl. pallet)	cm	130	130	130
pallets per 12 m length trailer ⁵	pallets	27	27	27
pallets per 4.12 m length truck (Hino type) ⁵	pallets	6	6	6
blocks per 12 m length trailer	pieces	1,620	1,620	1,620
blocks per 4.12 m length truck (Hino type)	pieces	360	360	360

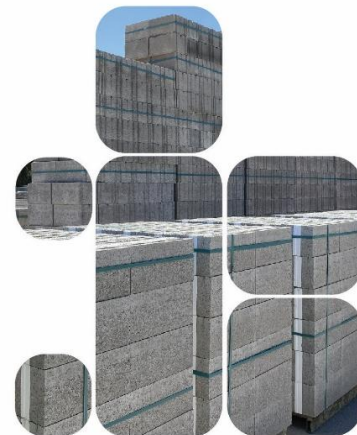
1. **Net dry density** is the oven-dry density of the lightweight concrete used to manufacture the blocks

2. **Typical block weight** is the average weight of several oven-dry blocks measured in accordance with **BS EN 771-3**.

3. **Gross dry density** is calculated by dividing the oven-dry block weight by its gross volume (m³)

4. Values are based on oven-dry weights.

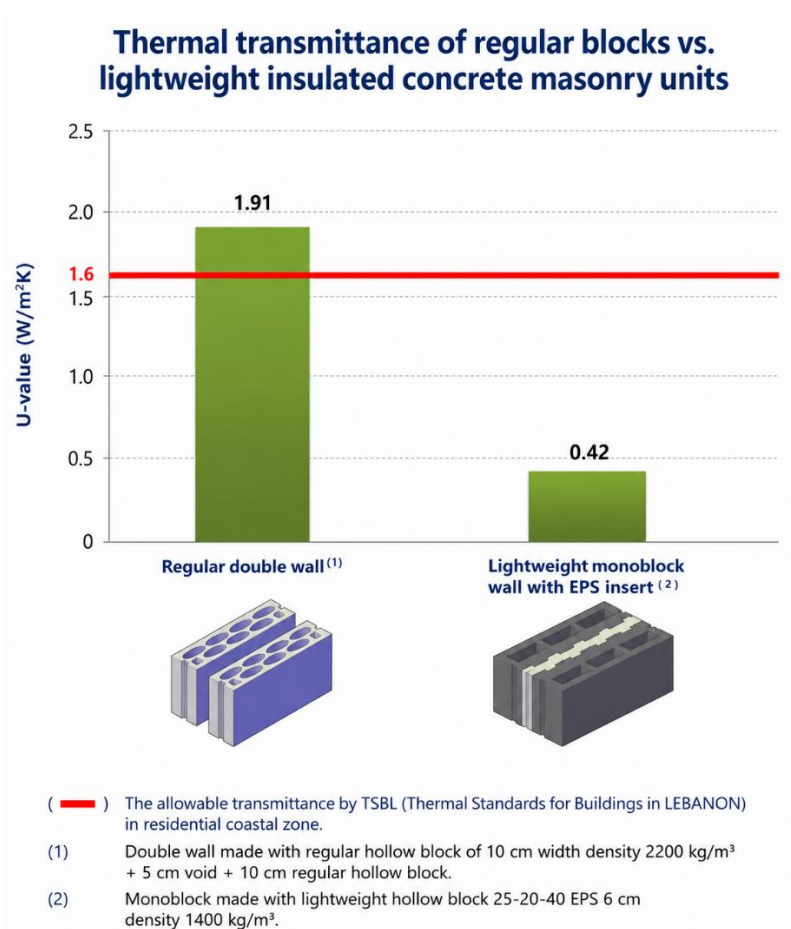
5. The indicative maximum number of pallets is based on full loads using either a 12 m flatbed trailer or a 4.12 m flatbed Hino truck. For further details, please contact us



Technical Data Sheet

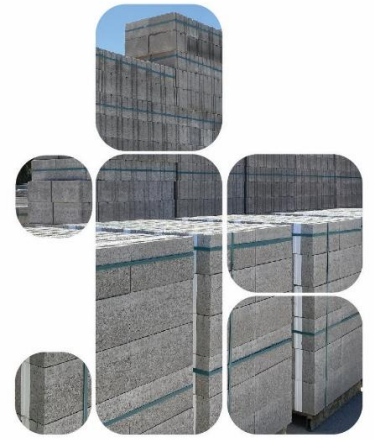
REGULAR & LIGHTWEIGHT DOUBLE HOLLOW BLOCKS with EPS
20x20x40 with EPS 4cm – 25x20x40 with EPS 6cm

The graph below compares the performance of Sibline Lightweight Double-Hollow Blocks with that of conventional cementitious double-hollow blocks. The U-values have been calculated in accordance with ACI 122R-14 and are expressed in W/m^2K .



Technical Data Sheet

REGULAR & LIGHTWEIGHT DOUBLE HOLLOW BLOCKS with EPS
20x20x40 with EPS 4cm – 25x20x40 with EPS 6cm



Fair Face Double Hollow Block with EPS

Sibline Fair Face Double Hollow Block with EPS is a non-loadbearing concrete masonry unit for internal partitioning or external walls; it is produced with normal weight concrete (density 2200 Kg/m³). It is produced in accordance with EN 771-3:2011 category D1 and ASTM C129 for concrete masonry units.

The block strength can be adjusted to the requirements of the Engineer. It is produced with a proprietary mix design containing silica sand, Portland cement, and special additives.

Sibline Fair Face Double Hollow Blocks with EPS are successfully passing the two hours fire test as per EN 53436, EN 1363, and EN 1364 standards ⁶. Moreover, Sibline Fair Face Double Hollow Block with EPS are successfully passing the two hours fire test based on ASTM E119.

The application of Sibline Fair Face Hollow Block is in no way different from the application of any other masonry block. To ensure a better performance of the wall and that no efflorescence showing on its surface, we recommend the following:

- The use of a waterproofing agent in the masonry mortar. This should ensure water tightness in the mortar and hence prevent efflorescence from showing on the surface.
- The application of a sealant or a water-repellent surface protector on the finished walls. This should provide a protective coating for the finished walls against exposure to external water sources such as rain.

⁶. A two-hour fire EN 1364 Certificate is available for a 10 cm Lightweight Hollow block with density 1400 kg/m³. A copy of the certificate can be sent upon request.

General comment: As part of Sibline continuous improvement process, Sibline keeps the right to change the dimensions and weights without prior notice. Please contact us prior to designing to get the latest specifications.

