



مجموعة الخوري
Al Khoori Group



الصخر للصناعات الاسمنتية
ذ.م.م
Rock Cement Industries
MEMBER OF AL KHOORI GROUP L.L.C



بسم الله الرحمن الرحيم



الصخر للصناعات الاسمنتية
Rock Cement Industries
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L.L.C

Introduction

مقدمة

Since 1996 Rock Cement Industries manufactures and supplies **Hollow/Solid/ Hourdi Concrete Blocks, Insulated Blocks & Interlocking Tiles of the very highest quality.**

Our Products, which are certified under **ISO 9001-2015, ISO 14001-2015 and ISO 18001-2007 and in-Country Value (ICV) Program** for ADNOC Group Companies, Regulations in a wide range of shapes and sizes, are made using the most up -to - date German technology.

The most prestigious **"Sheikh Khalifa Industry Award"** has been awarded to RCI for excellence in industrial practice.

Our modern factory in Mussafah, which covers an area of 450000 square feet, is equipped with the latest computer controlled hydraulic vibration production machinery operated by fully trained and experienced professional engineers and technicians.

Our daily production capacity is between 96000 blocks to 192000 blocks, depending on their size and also, 8000 M² for interlock tiles daily. This, together with our extensive storage area and fleet of well maintained trucks, enables Rock Cement Industries to render the best possible service to our customers at all times.

نتشرف أن نتقدم ونعرف لكم الصخر للصناعات الإسمنتية كمصنع حديث قائم في منطقة مصفح على مساحة 450.000 قدم مربع وقد تأسس المصنع عام 1996 حيث يركز على أحدث المعدات ذات التقنية العالية من ألمانيا الغربية والمهندسين والفنيين من ذوي الخبرة والقدرة في هذا المجال، وذلك لضمان إنتاج نوعية جيدة وكفاءة عالية من الجودة.

وتعمل الأجهزة بنظام الاهتزاز الهيدروليكي، وتتحكم برامج الكمبيوتر بجميع مراحل التشغيل ويقوم المصنع بإنتاج الطابوق الإسمنتي والطابوق العازل والبلاط المتشابك (الإنترلوك) بمقاسات وأحجام وأشكال مختلفة.

وتبلغ الطاقة الإنتاجية اليومية من سته وتسعون ألف إلى مائة واثنان وتسعون ألف طابوقة في اليوم حسب الأحجام والأنواع. أما بالنسبة إلى البلاط المتشابك فتبلغ الطاقة الإنتاجية اليومية إلى ثمانية آلاف م².

ويدعم المصنع كادر مؤهل من الموظفين وطاقة تخزينية من خلال ساحات التخزين وأسطول من السيارات لتقديم أفضل وأسرع الخدمات الممكنة.

ومما يدعم من جودة منتجات المصنع حصولنا على شهادة الجودة **ISO 9001-2015, ISO14001-2015, ISO 18001-2007 و in-Country Value (ICV) Program لمجموعة أدنوك** وكذلك جائزة الشيخ خليفة للصناعة.

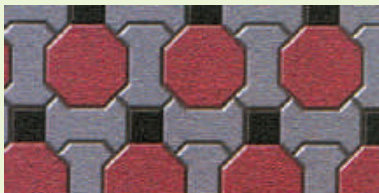
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UNI Pavers



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La Plaza Pavers



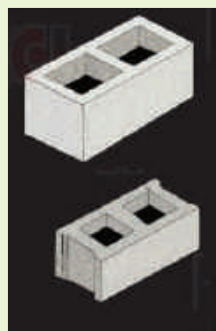
INSULATED Blocks



SOLID Blocks



HOLLOW Blocks



THROUGH HOLLOW Blocks



HOURDI Blocks

Process Control



Once the materials are arranged, the automatic production process starts. All are controlled by PLCs. The raw materials which are stored in the hoppers is weighed according to the recommended mix - parameters and fed in the lifting bucket which transfer the material to the mixer.

There the cement is added and mixed for few seconds before feeding water. Feeding of water is controlled by a highly sophisticated moisture controller to attain maximum consistency of the mix. Then the mixed material is discharged to a hopper located above the block machine.

Now the filling box moves on to the moulding box, which is resting on a steel pallet on top of the frequency controlled vibration table. The table vibrates in different frequencies to fill the material in the mould box. After a certain filling time the filling box moves back to giveaway for the compaction head to compress the material. The vibration and compaction will continue until reaching the required height for the concerned product (the average cycle time for blocks being 18 secs and 14 secs for paving tiles, capable of producing 4000 cycles per day) Then the demoulding occurs. The steel pallet with blocks, ejects from the machine to a conveyor which conveys the pallets into the stacking machine capable of storing 18 pallets. From the stacking machine the finger car (capacity 15 tons combined weight with blocks) transfers the green products to the curing chambers . There the blocks are cured for 72 hours before discharging .

The cured products which are discharged from the chambers stacked and stored in the yard. The blocks are tested according to BS6073 and the paving tiles are tested as per the specification BS 6717, to determine the compressive strength. Then the products are approved for delivery by the Q/E.



Production Steps



1- Raw Materials Storage



2- Raw Materials Feeding



3- Weighing Scale



4- Material Transport



5- Block Machine



6- Elevator / Finger Car



7- Finger Car At Lowerator



8- Finger to the Chamber



9- Curing Chamber



10- Cubing System



11- Strapping



12- Handling



13- Stock Yard



14- PLC Controlled Operating System



15- Quality Control

16- Delivery



Specifications of Concrete Paving Tiles



1. **ROCK CEMENT INDUSTRIES** manufactures concrete paving blocks in the thickness of 60mm, 80mm and 100mm. The shape, thickness and colour will be subject to the approval of the customer.
2. The following is the specification requirements of precast concrete paving blocks intended for construction of low speed roads, and industrial and other paved surfaces subjected to all categories of static and vehicular loading and pedestrian traffic.
3. The cement used in the manufacture of concrete paving blocks shall, unless stated otherwise, be Sulphate Resisting Cement which complies with the requirements of B.S 4027/ASTM-Type V if Ordinary Portland Cement be used it shall comply with the requirements of B.S 12. Ordinary Portland Cement.
4. **THE CEMENT CONTENT:** The Cement Content shall be not less than 420 Kg/Cu.M. concrete.
5. **COLOURED BLOCKS:** The coloured concrete paving blocks shall have a minimum content of inorganic pigment of 5% by weight of the Cement Content and according to manufacturer's instructions. All pigments to comply with BS-1014.
6. **AGGREGATES:** shall be crushed rock complying with BS-882 free from earth, clay, loam and soft clay. Sampling and testing in accordance with BS-812. The amount of material passing a BS 75 micron sieve in the combined aggregates when tested in accordance with BS 812 (wet sieving method), shall not exceed the following limits -
Fine aggregates : 3% by weight.
Coarse aggregates : 1% by weight.
7. **MIXING WATER:** For mixing concrete, water shall be potable and free from all sediments and dissolved or suspended matter which may be harmful to the manufacture of concrete as specified and shall be tested in accordance with BS 3148.
8. **SIZES AND TOLERANCES:** Concrete paving blocks have a work size thickness of 100mm, 80mm and 60mm and shall have a peripheral chamfer on the top edge. The maximum dimensional deviations from the stated work size are as follows:
Length : +/- 2mm Width : +/- 2mm Thickness : +/- 3mm
9. **COMPRESSIVE STRENGTH:** The compressive strength of blocks, when tested in accordance with the BS6717 Part 1, 1986, should not be less than 40N/mm² (as individual). and combination of 10 pcs interlock will be 49N/mm² as average per interlock.
10. **WATER ABSORPTION:** The concrete paving blocks when tested upon as specified in BS 1881 - the maximum limits of water absorption shall be as follows:

2% absorbed after 10 minutes
5% absorbed after 24 hours.
11. **CURING:** Adequate measures shall be taken to ensure that the blocks are properly cured before delivery to the site, and we have added advanced forced curing technology to our curing chambers to improve our block strength. we are handling blocks in packing after 24hrs of production.



Colours

Paving tiles with the following Colours will be available:



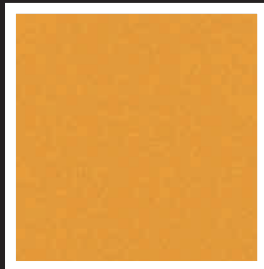
BLACK



RED



GREY



TAN



BROWN

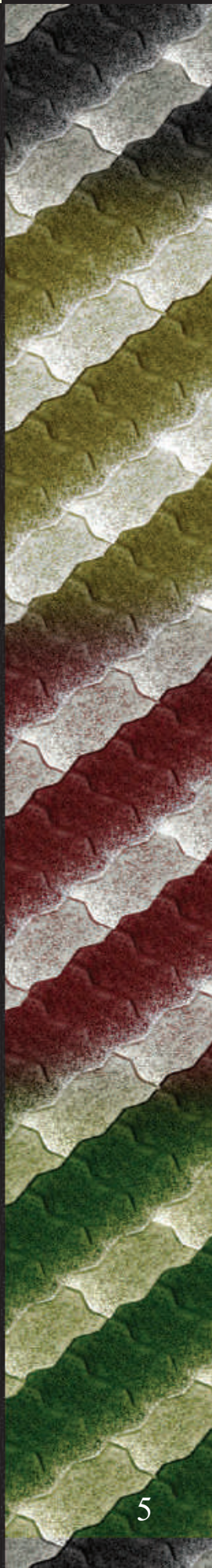


GREEN



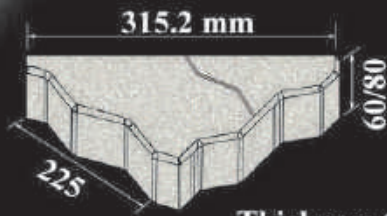
YELLOW

**N.B. The Colours shown are for presentation only,
Samples of tiles can be provided upon request.**

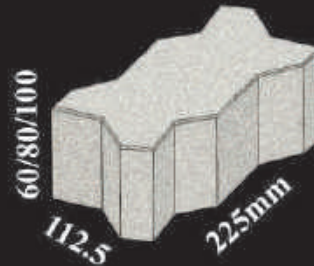




UNI Pavers

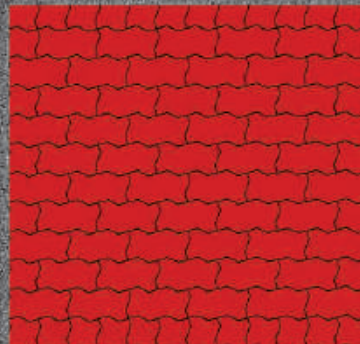
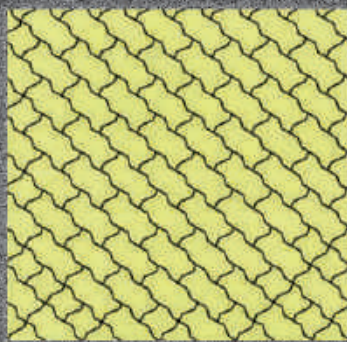


Thickness 6cm / 8cm / 10cm



UNI Starter

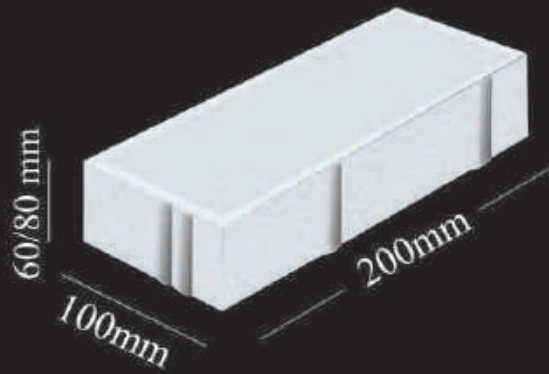
UNI Pavers



| Block Description | Weight of pcs (kg) | Pieces/M ² | M ² /Per Bundle | Bundle per Trailer | M ² /Per Trailer |
|-------------------|--------------------|-----------------------|----------------------------|--------------------|-----------------------------|
| 60mm UNI | 3.5 | 39 | 13.5 | 24 | 324 |
| 80mm UNI | 4.5 | 39 | 9.0 | 28 | 252 |
| 100mm UNI | 5.7 | 39 | 9.0 | 24 | 216 |
| 60mm UNI STARTER | 4.2 | 33 | 10.95 | 24 | 262 |
| 80mm UNI STARTER | 5.6 | 33 | 7.3 | 28 | 205 |

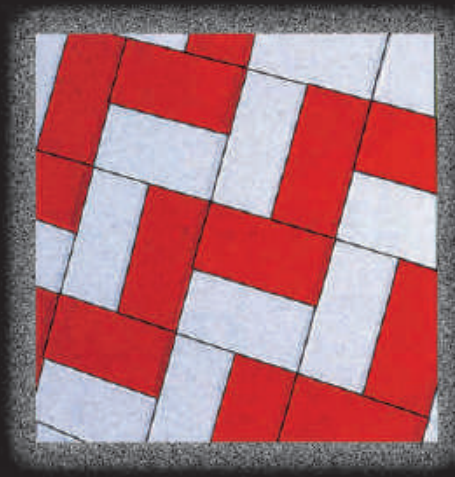
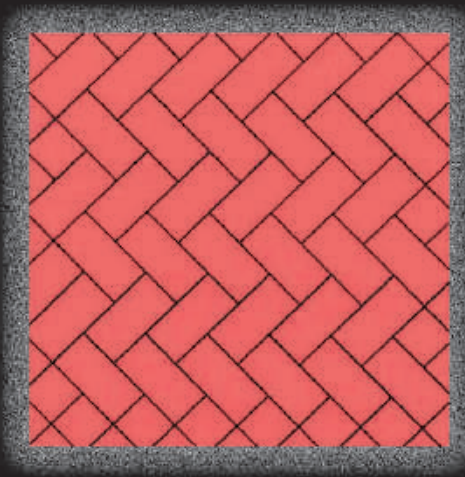


RECTANGULAR Pavers 10 x 20

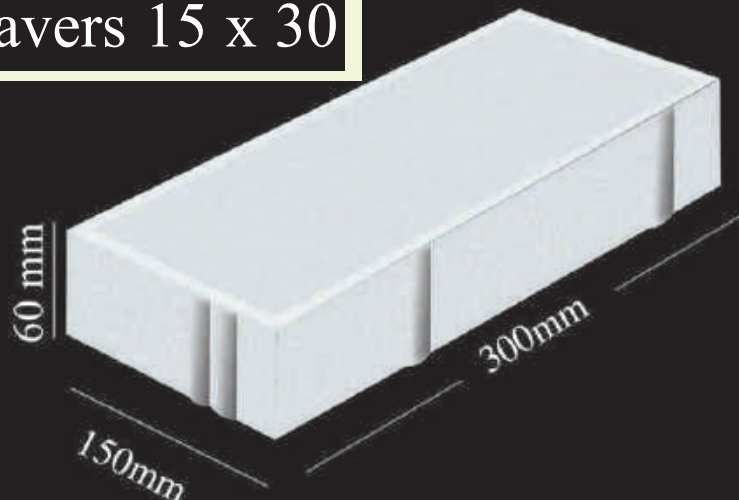


Thickness 6cm / 8cm

| Block Description | Weight of pcs (kg) | Pieces/M ² | M ² /Per Bundle | Bundle per Trailer | M ² /Per Trailer |
|------------------------|--------------------|-----------------------|----------------------------|--------------------|-----------------------------|
| 60mm RECTANGULAR 10x20 | 2.7 | 50 | 14.4 | 24 | 346 |
| 80mm RECTANGULAR 10x20 | 3.7 | 50 | 9.6 | 28 | 268 |



RECTANGULAR Pavers 15 x 30



| Block Description | Weight Per pcs (kg) | Pieces/M ² | M ² /Per Bundle | Bundle per Trailer | M ² /Per Trailer |
|------------------------|---------------------|-----------------------|----------------------------|--------------------|-----------------------------|
| 60mm RECTANGULAR 15x30 | 5.8 | 21.4 | 13.44 | 24 | 322 |

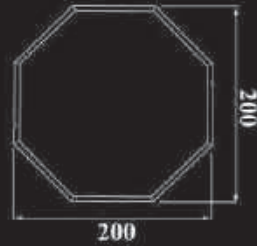


QUADRO Pavers (VARIO)



OCTAGONAL

Thickness 6cm / 8cm



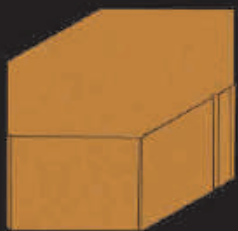
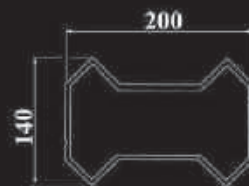
CUBE

Thickness 6cm / 8cm



I-SHAPE

Thickness 6cm / 8cm



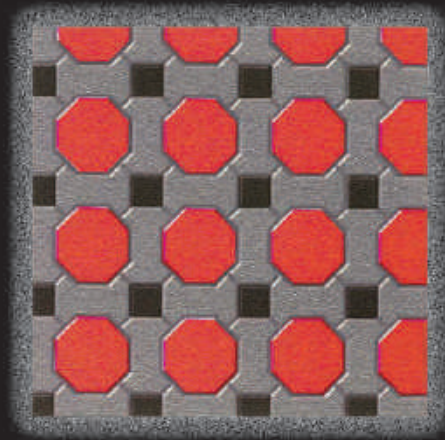
RHOMBUS

Thickness 6cm

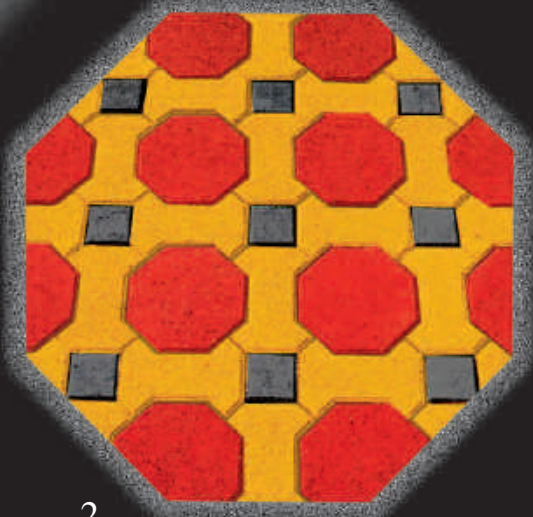


| Block Description | Weight Per pcs (kg) | Pieces/M ² | M ² /Per Bundle | Bundle per Trailer | M ² /Per Trailer |
|-------------------|---------------------|-----------------------|----------------------------|--------------------|-----------------------------|
| 60mm OCTAGONAL | 4.5 | 30 | 12 | 26 | 312 |
| 60mm CUBE | 0.8 | 156 | 12 | 24 | 288 |
| 60mm I-SHAPE | 2.6 | 48 | 13.13 | 26 | 342 |
| 60mm RHOMBUS | 2.2 | 60 | 11.5 | 26 | 299 |
| 80mm OCTAGONAL | 6.0 | 30 | 8.0 | 28 | 224 |
| 80mm CUBE | 1.0 | 156 | 8.0 | 28 | 224 |
| 80mm I-SHAPE | 3.5 | 48 | 8.8 | 22 | 193 |

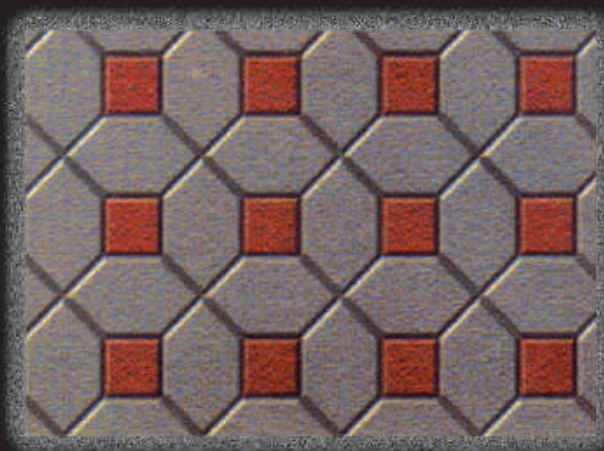
QUADRO Pavers (VARIO)



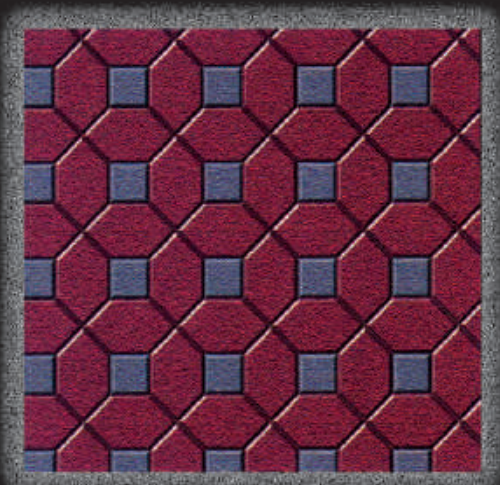
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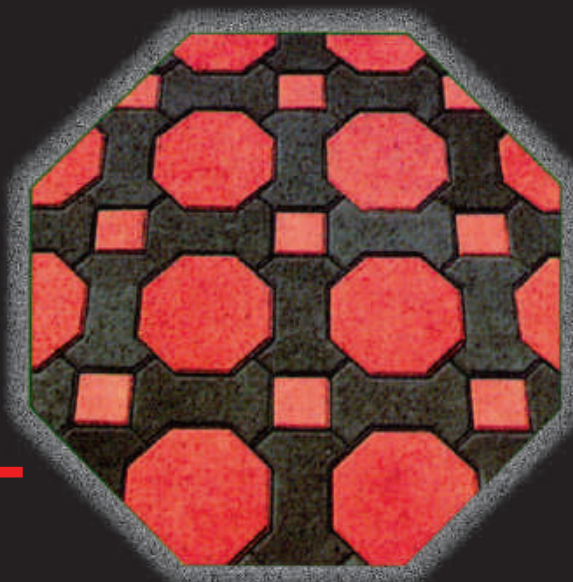
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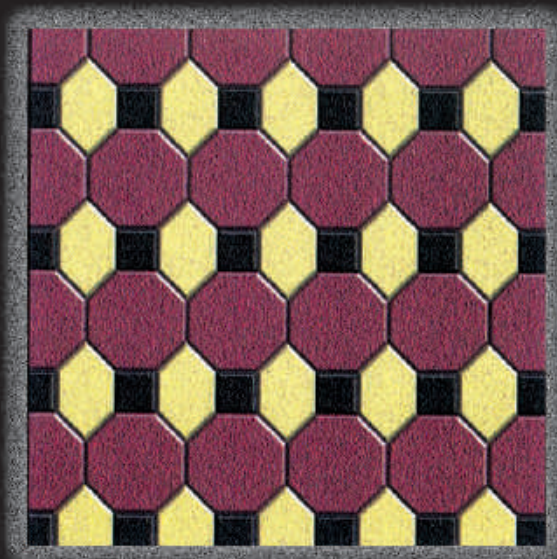
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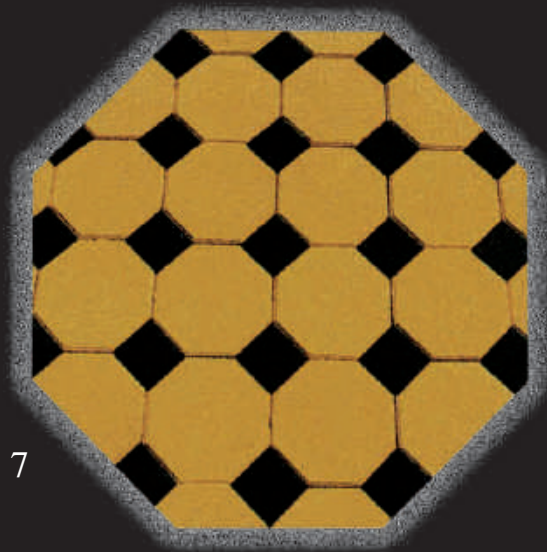
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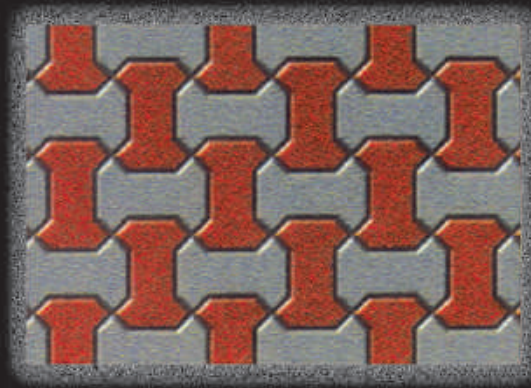
QUADRO Pavers (VARIO)



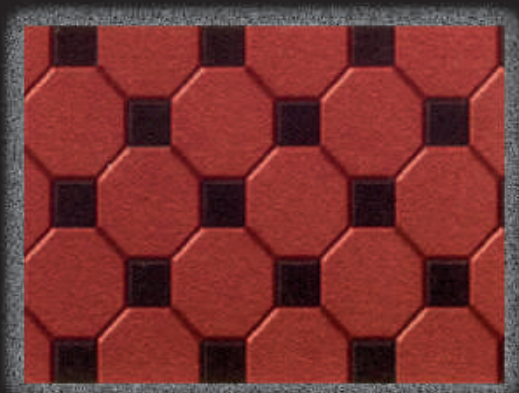
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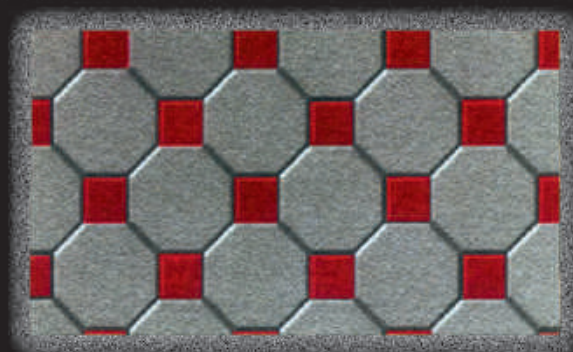
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8

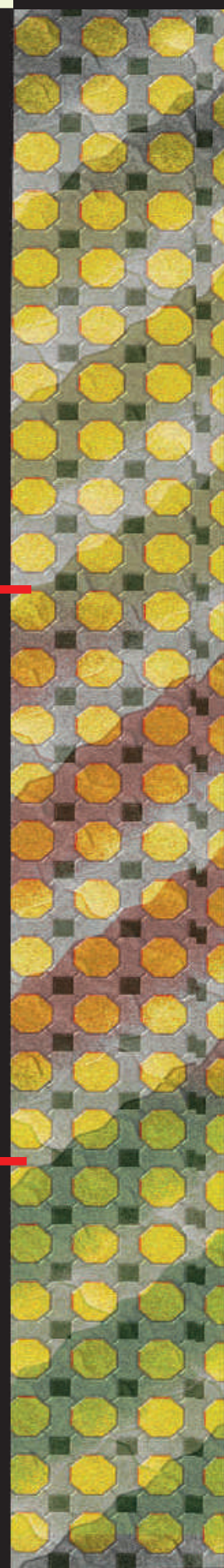


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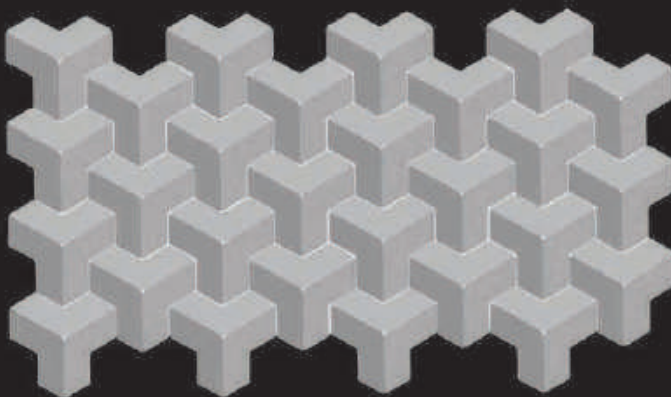
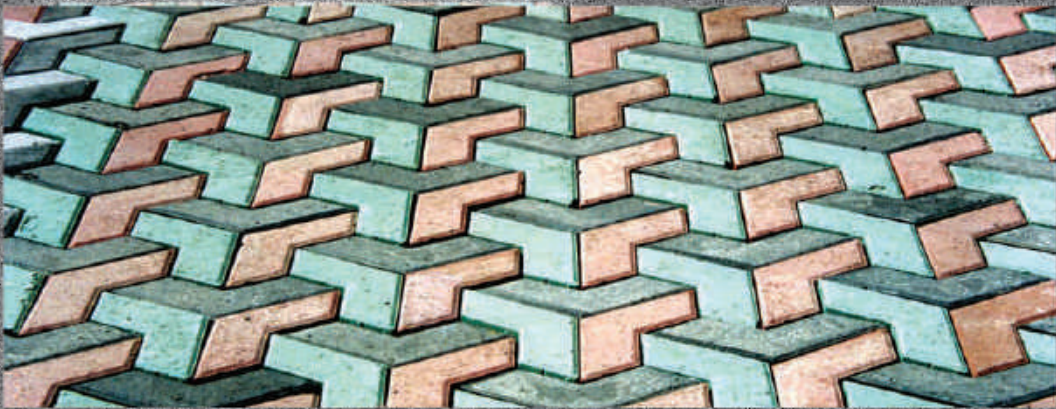
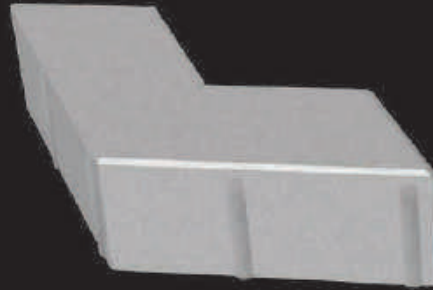
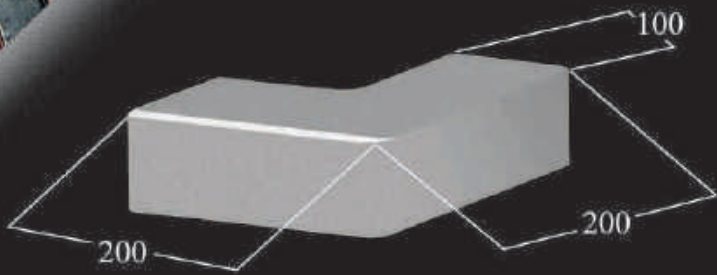
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10



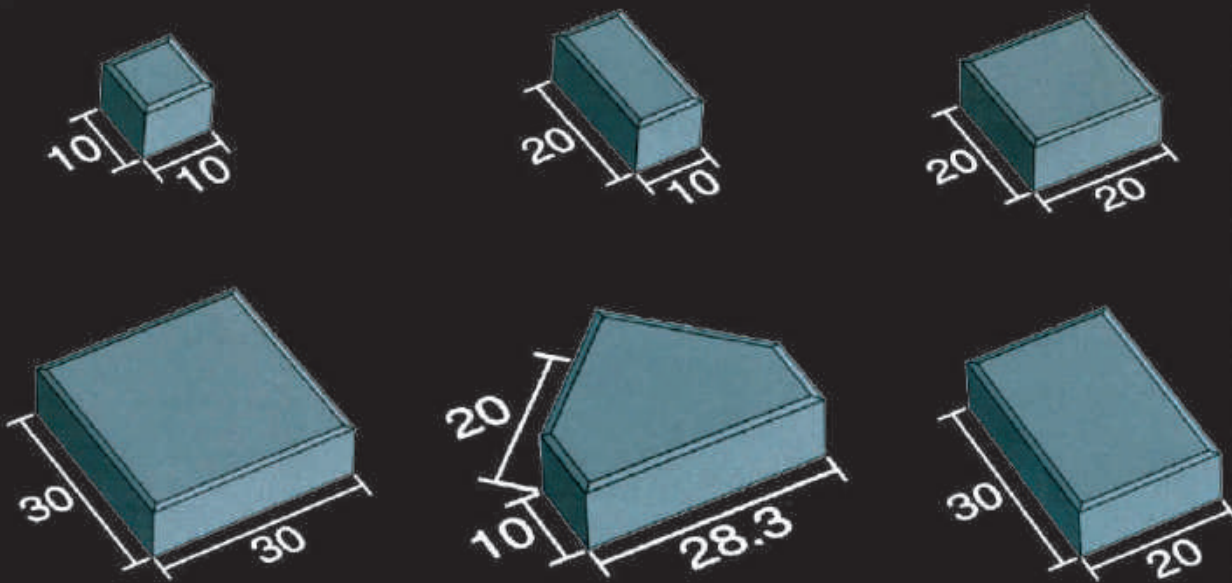


3D-V-SHAPE Pavers



| Block Description | Weight Per pcs (kg) | Pieces/M ² | M ² /Per Bundle | Bundle per Trailer | M ² /Per Trailer |
|-------------------|---------------------|-----------------------|----------------------------|--------------------|-----------------------------|
| 60mm 3D V-SHAPE | 3.4 | 40 | 9 | 30 | 270 |

La Plaza Pavers



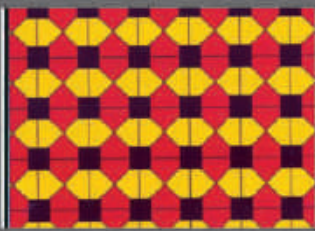
TECHNICAL DATA

| Stones(cm) | 10x10 | 10x20 | 20x20 | | 20x30 | 30x30 | Edgestone | |
|----------------------------------|-------|-------|-------|-------|-------|-------|-----------|------|
| Thickness of Stone (cm) | 6 | 6 | 6 | 8 | 6 | 6 | 6 | 8 |
| Area per Stone (cm) ² | 100 | 200 | 400 | 400 | 600 | 900 | 483 | 483 |
| Stones/m ² | 100 | 50 | 25 | 25 | 16.7 | 11.1 | 20.7 | 20.7 |
| Weight/Stone (kg) | 1.41 | 2.82 | 5.64 | 6.65 | 8.44 | 12.7 | 6.81 | 8.65 |
| M ² / Per Bundle | 13.86 | 14.40 | 14.40 | 12.00 | 14.40 | 12.96 | 12.00 | 8.00 |

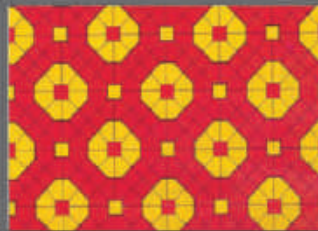
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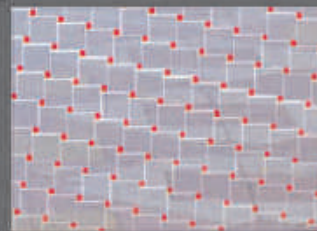
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2



3



4



5



6



7



8



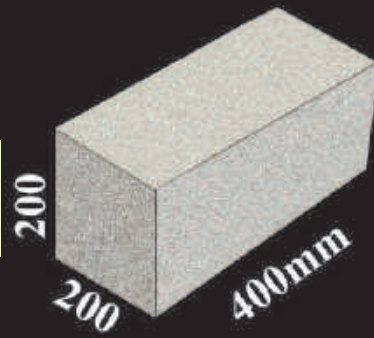
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SOLID Blocks

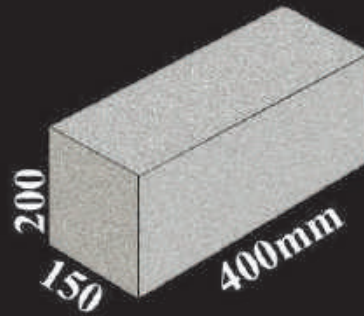
20 SB

SOLID Block 20cm (8")



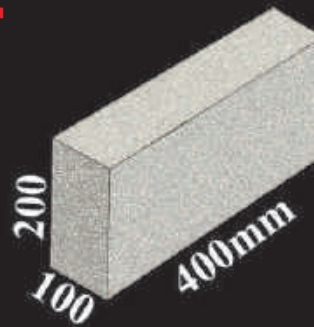
15 SB

SOLID Block 15cm (6")



10 SB

SOLID Block 10cm (4")

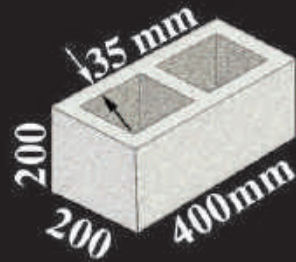


| Code | Block Description | Weight Per pcs (kg) | Pcs per Bundle | Bundle per Trailer | Pcs per Trailer |
|------|-----------------------|---------------------|----------------|--------------------|-----------------|
| 20SB | SOLID Block 20cm (8") | 35 | 48 | 28 | 1344 |
| 15SB | SOLID Block 15cm (6") | 27 | 64 | 28 | 1792 |
| 10SB | SOLID Block 10cm (4") | 16 | 88 | 25 | 2200 |

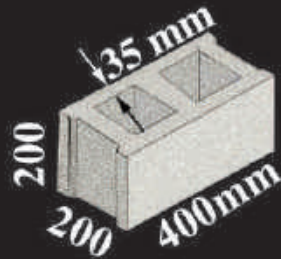


HOLLOW Blocks

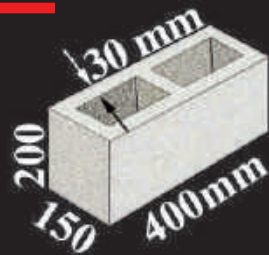
20 HB HOLLOW Block 20cm (8")



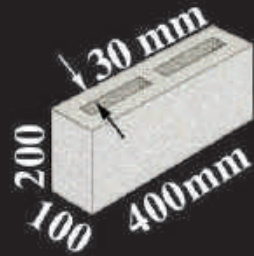
20 HBG HOLLOW Block 20cm (8")



15 HB HOLLOW Block 15cm (6")



10 HB HOLLOW Block 10cm (4")



9 HB HOLLOW Block 9cm (3.6")

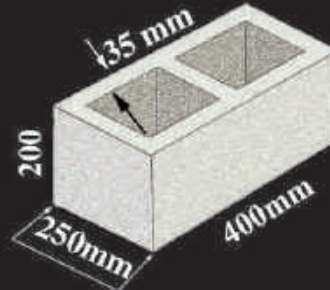


| Code | Block Description | Weight per pcs (kg) | Pcs per Bundle | Bundle per Trailer | Pcs per Trailer |
|-------|-------------------------|---------------------|----------------|--------------------|-----------------|
| 20HB | HOLLOW Block 20cm (8") | 21.5 | 72 | 28 | 2016 |
| 20HBG | HOLLOW Block 20cm (8") | 21.5 | 72 | 28 | 2016 |
| 15HB | HOLLOW Block 15cm (6") | 16.5 | 96 | 28 | 2688 |
| 10HB | HOLLOW Block 10cm (4") | 13.5 | 144 | 22 | 3168 |
| 9HB | HOLLOW Block 9cm (3.6") | 11.5 | 144 | 22 | 3168 |



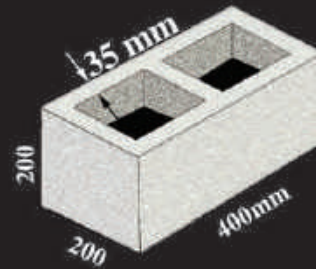
Special HOLLOW Blocks

25CM HOLLOW Block (10")



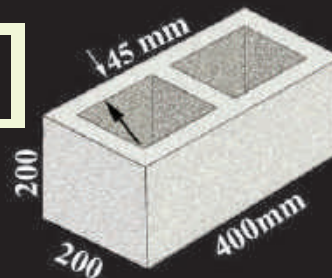
| Code | Block Description | Weight per pcs (kg) | Pcs per Bundle | Bundle per Trailer | Pcs per Trailer |
|------|-------------------------|---------------------|----------------|--------------------|-----------------|
| 25HB | HOLLOW Block 25cm (10") | 26 | 60 | 25 | 1500 |

THROUGH HOLLOW Block



| Code | Block Description | Weight per pcs (kg) | Pcs per Bundle | Bundle per Trailer | Pcs per Trailer |
|-------|--------------------------------|---------------------|----------------|--------------------|-----------------|
| 20HBT | THROUGH HOLLOW Block 20cm (8") | 20.5 | 72 | 28 | 2016 |

HOLLOW Load Bearing Block



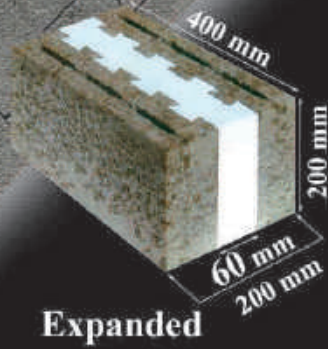
| Code | Block Description | Weight per pcs (kg) | Pcs per Bundle | Bundle per Trailer | Pcs per Trailer |
|---------|---------------------------|---------------------|----------------|--------------------|-----------------|
| 20HB-LB | HOLLOW Load Bearing Block | 25.5 | 72 | 25 | 1800 |



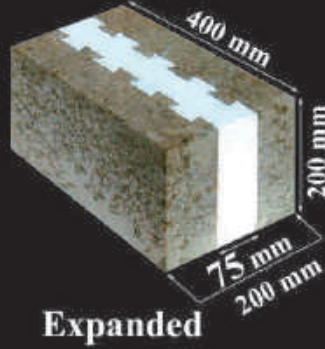
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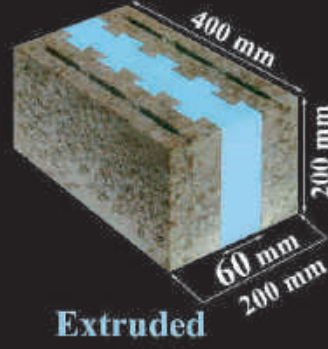
INSULATED - THERMO BLOCKS



Expanded



Expanded



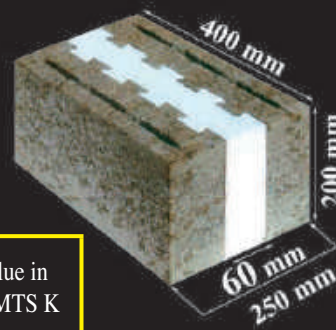
Extruded

Insulated Block 20cm (8")

| Code | Block Description | Polystyrene insert Thickness | Type of Styrene | U-Value in W/SQMTS K |
|-------------|--------------------------------|------------------------------|-----------------|----------------------|
| 20 IN 60 mm | 200mm Thermal Insulation Block | 60mm | Expanded | 0.470 |
| 20 IN 75 mm | 200mm Thermal Insulation Block | 75mm | Expanded | 0.404 |
| 20 EN 60 mm | 200mm Thermal Insulation Block | 60mm | Extruded | 0.360 |

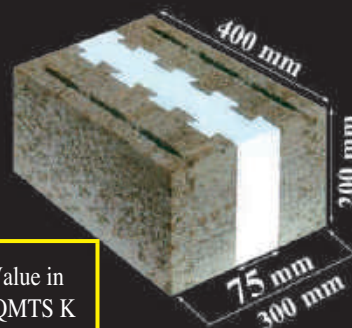
Insulated Block 25cm/60mm (10")

| Code | Block Description | Polystyrene insert Thickness | Type of Styrene | U-Value in W/SQMTS K |
|-------------|--------------------------------|------------------------------|-----------------|----------------------|
| 25 IN 60 mm | 250mm Thermal Insulation Block | 60mm | Expanded | 0.460 |



Insulated Block 30cm/75mm (12")

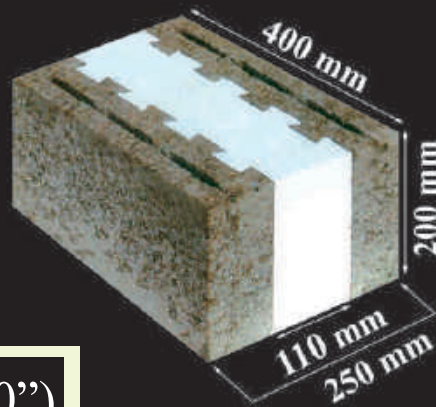
| Code | Block Description | Polystyrene insert Thickness | Type of Styrene | U-Value in W/SQMTS K |
|-------------|--------------------------------|------------------------------|-----------------|----------------------|
| 30 IN 75 mm | 300mm Thermal Insulation Block | 75mm | Expanded | 0.400 |



INSULATED - THERMO BLOCKS

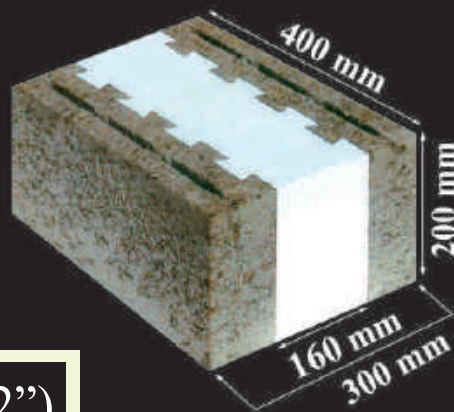


ESTIDAMA Requirement



Insulated Block 25cm/110mm (10'')

| Code | Block Description | Polystyrene insert Thickness | Type of Styrene | U-Value in W/SQMTS K | ESTIDAMA Requirement in W/SQMTS K |
|--------------|--------------------------------|------------------------------|-----------------|----------------------|-----------------------------------|
| 25 IN 110 mm | 250mm Thermal Insulation Block | 110mm | Expanded | 0.310 | 0.320 |



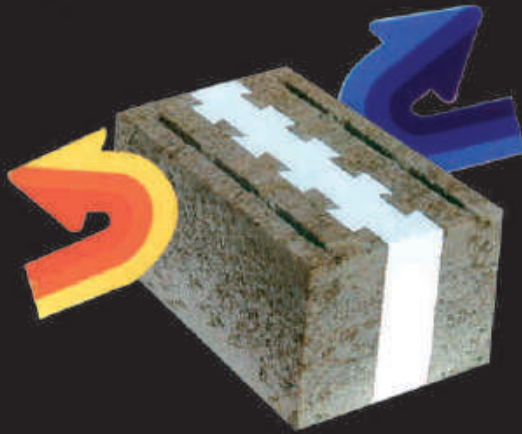
Insulated Block 30cm/160mm (12'')

| Code | Block Description | Polystyrene insert Thickness | Type of Styrene | U-Value in W/SQMTS K | ESTIDAMA Requirement in W/SQMTS K |
|--------------|--------------------------------|------------------------------|-----------------|----------------------|-----------------------------------|
| 30 IN 160 mm | 300mm Thermal Insulation Block | 160mm | Expanded | 0.220 | 0.290 |

INSULATED - THERMO BLOCKS



The u-value of building components (walls, roof, windows) is a measurement for heat transfer which passes between room and exterior and which must be replaced by cool air produced by airconditioners.

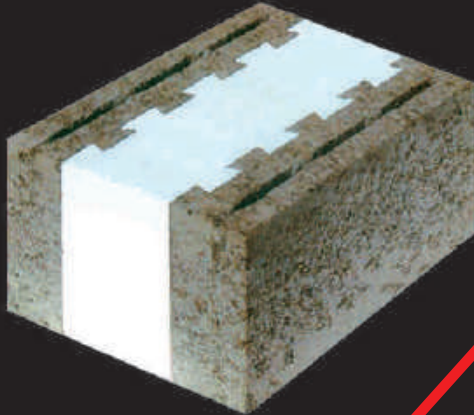


Therefore a low u-value is key to savings in A/C cost and mandatory for comfortable living conditions in summer as well as winter.

7 Convincing values for energy saving construction:

- 1 Very High Value of Thermal Transmission, 6 times less than the normal blocks.
- 2 Excellent Thermal Storage Capacity & Energy Saver.
- 3 Very Good Acoustic Properties.
- 4 High compressive strength.
- 5 Block made with Dubai Central LAB approved polystyrene inserts (60 mm , 75 mm , 110 mm ,160 mm).
- 6 All our blocks are produced with international standards and complies with Dubai Central LAB & Estidama Standards.
- 7 Half Blocks available – reduces waste.

INSULATED - THERMO BLOCKS

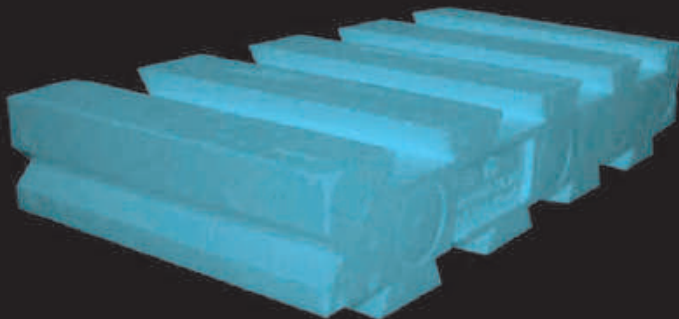


Expanded V - Groove Insert

Available in the following Sizes:

60mm - 75mm - 110mm - 160mm

With Polystyrene DENSITY (22 to 25) kg/m³



Extruded V - Groove Insert

Available in 60mm Size

With Polystyrene DENSITY 35 kg/m³

TECHNICAL DATA



HOLLOW AND SOLID BLOCKS

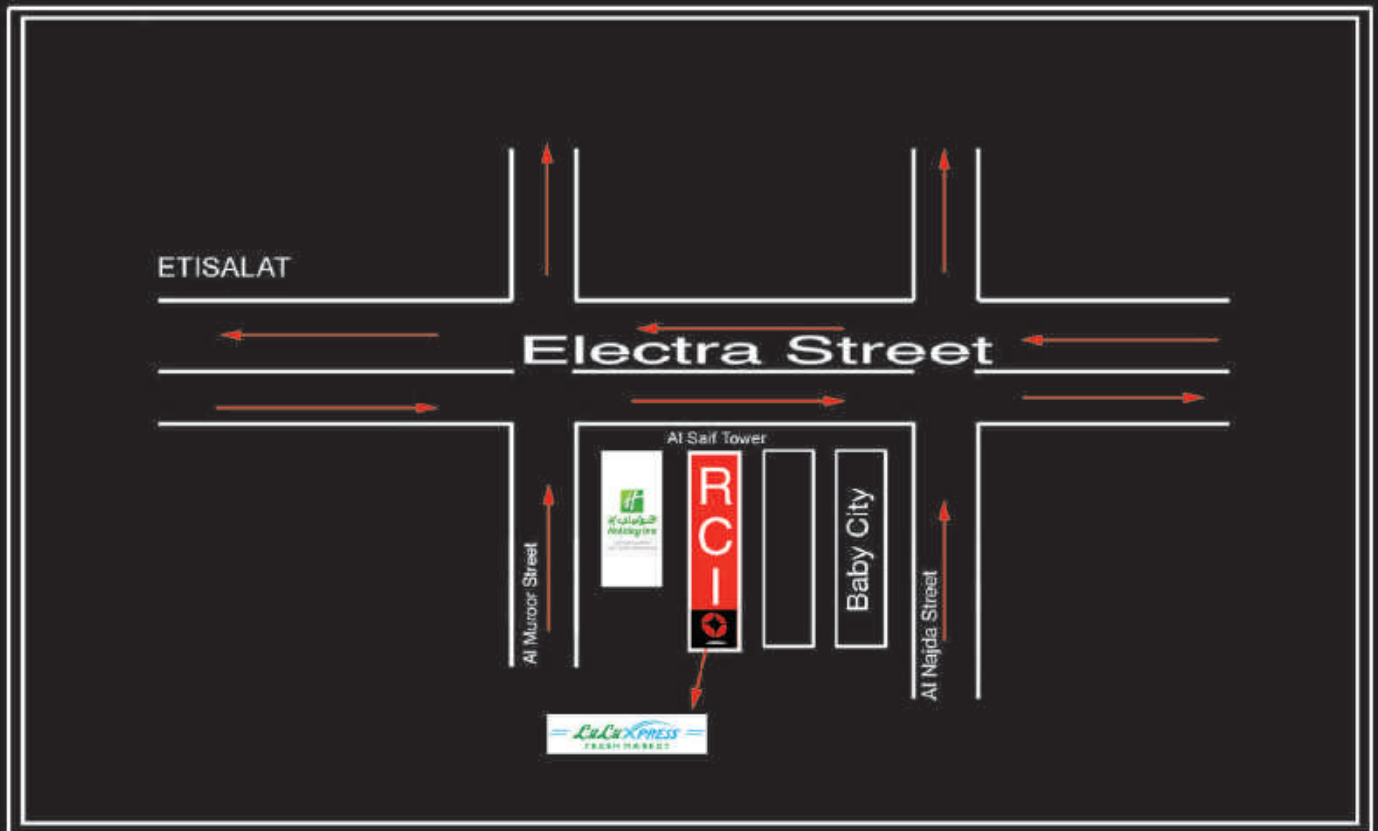
| Technical Data | 100MM HOLLOW BLOCK | 150MM HOLLOW BLOCK | 200MM HOLLOW BLOCK | 250MM HOLLOW BLOCK | 100MM SOLID BLOCK | 150MM SOLID BLOCK | 200MM SOLID BLOCK |
|----------------------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|-------------------|
| Blocks per sqmt in nos | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| Wall thickness in mm | 30mm | 30mm | 35mm | 35mm | N/A | N/A | N/A |
| Block dimension in mm(TXHXL) | 100x200x400 | 150x200x400 | 200x200x400 | 250x200x400 | 100x200x400 | 150x200x400 | 200x200x400 |
| Block weight in kgs | 13.5 | 16.5 | 21.5 | 24 | 16 | 27 | 35 |
| Compressive strength n/mmsq | 7.5 | 7.5 | 7.5 | 7.5 | 13.5 | 13.5 | 13.5 |
| u-value as block w/sqm.k | 4.975 | 4.525 | 4.329 | 4.202 | 4.167 | 3.968 | 3.802 |
| Water absorption in kgs/cubic mt | 139 | 130 | 135 | 142 | 149 | 147 | 146 |
| Density kg/cubic mts | 1863 | 1802 | 1748 | 1698 | 2345 | 2341 | 2342 |
| Acoustic in db | 51 db | 53 db | 56 db | 57 db | 53 db | 57 db | 61 db |
| Fire rating in hrs | 2 hrs | 2 hrs | 2 hrs | 2 hrs | 4 hrs | 4 hrs | 4 hrs |

INSULATED - THERMO BLOCKS

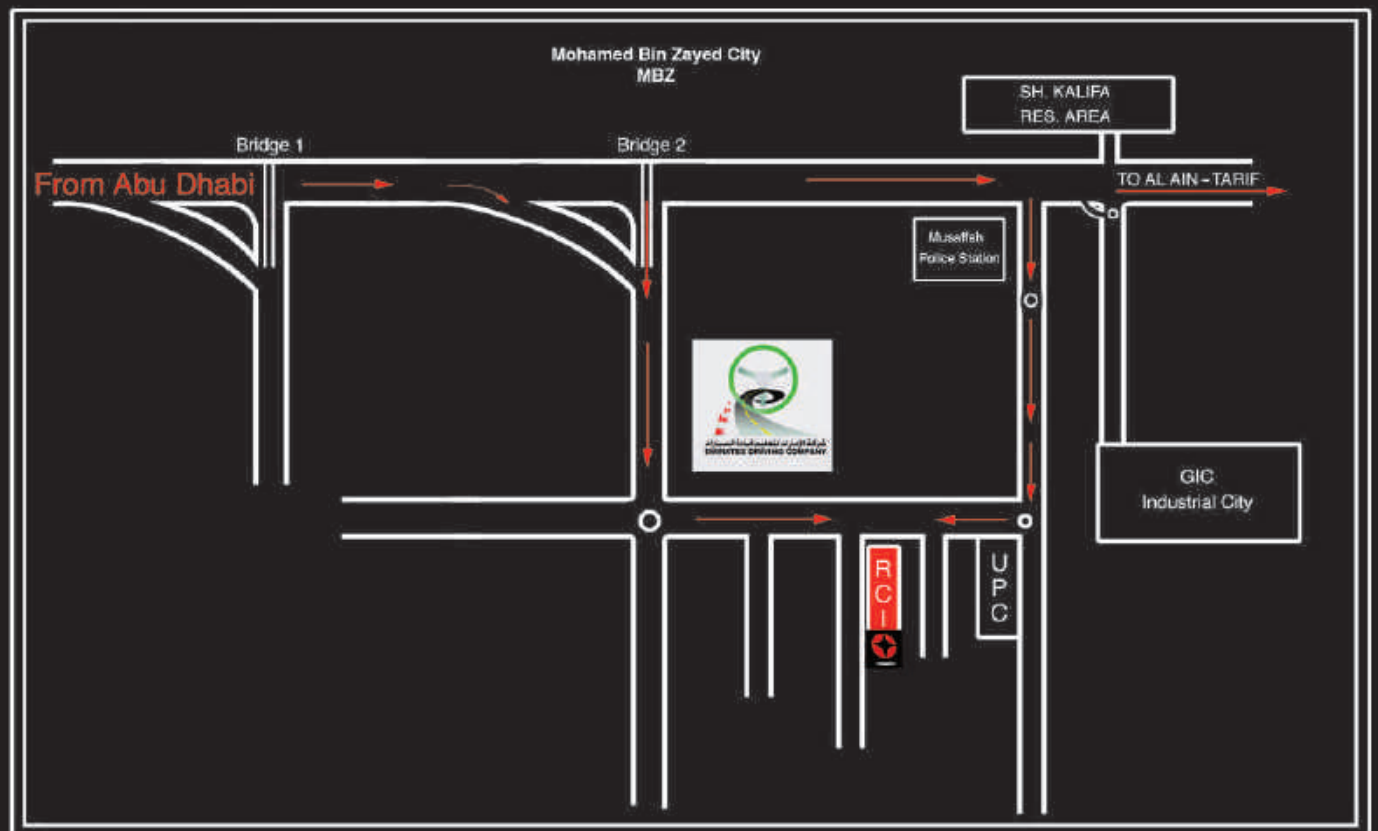
| Technical Data | 200mm with 60mm expanded polystyrene insert | 200mm with 75mm expanded polystyrene insert | 200mm with 60mm extruded polystyrene insert | 250mm with 60mm expanded polystyrene insert | 250mm with 110mm expanded polystyrene insert | 300mm with 75mm expanded polystyrene insert | 300mm with 160mm expanded polystyrene insert |
|------------------------------|---|---|---|---|--|---|--|
| Blocks per sqmt in nos | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| Wall thickness in mm | 25mm | Solid | 25mm | 27mm | 30mm | 30mm | 30mm |
| Block dimension in mm(TXHXL) | 200x200x400 | 200x200x400 | 200x200x400 | 250x200x400 | 250x200x400 | 300x200x400 | 300x200x400 |
| Block weight in kgs | 23 | 23 | 23 | 25 | 24 | 27 | 23 |
| Compressive strength n/mmsq | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 |
| u-value as block w/sqm.k | 0.470 | 0.404 | 0.360 | 0.460 | 0.310 | 0.400 | 0.220 |
| Acoustic in db | 53 db | 53 db | - | - | 54 db | - | - |
| Fire rating in hrs | 2 hrs | 2 hrs | - | - | 2 hrs | - | - |







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