

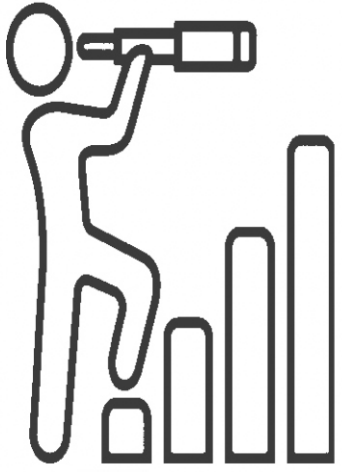
# OMKAR Techno

*Inspiring Goal.....*



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# PROFILE

## VISION

M/s. Omkar Techno is an innovative driven, engineering based manufacturing, constructions, design ,laisonning and trading company which has been delivering immense value to the construction Industry in India since its inception in 2017. The company is widely acknowledged for its value, quality commitments and strong customer focused approach. We are committed to deliver value to our business partners, associates and stake holders. We are connected with India's top constructions companies all over the India.

M/s. Omkar Techno is committed to environment protection and deeply aware of its social responsibilities and its envisions to deliver on these promises through its innovative engineering products. Our manufacturing process is clean, not generating any pollutions neither releasing any effluents.

M/s. Omkar Techno is certified by,

- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environment Management System
- ISO 45001:2018 (OH&S) Occupational Health & Safety Management System.

## THE PRODUCT RANGE

We are dealing with our own manufacturing concrete cover blocks and we are dealers of top branded cement companies, Admixtures, waterproofing and paints, Ready plaster, grouts ,blocks and block jointing mortar, slag sand and GGBS.

## ROLE OF COVER BLOCKS

### WHAT IS COVER BLOCK?

A cover block is essentially a spacer that is used to lift the rebar mesh off the ground so that concrete may flow under the rebar.

### SIZE USED IN CONSTRUCTION FIELD

In order to prevent corrosion of the rebar, it needs to be fully embedded in concrete. By code, it usually needs about 20 mm to 75 mm of coverage on all sides depends upon structure type. So, the cover block lifts the rebar up by about 20 mm to 75 mm and becomes a permanent and integral part of the poured concrete, ensuring that no part of the rebar sags and minimizes the required concrete coverage during the pouring of concrete.

## Difference Between Clear Cover, Nominal Cover and Effective Cover

### Clear Cover

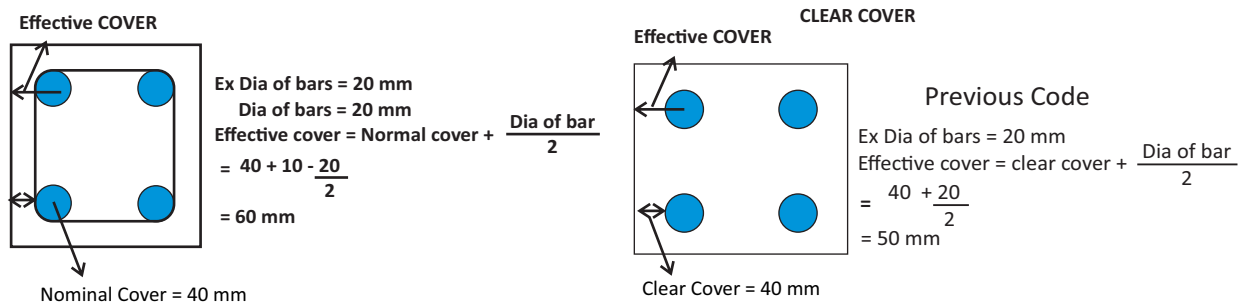
1. The clear cover is the distance from the bottom of fibre to the bottom level of the reinforcement.
2. In other words, the clear cover is the distance between concrete extreme fibre and the bottom edge of a stirrup.

### Nominal Cover

1. This is the same thing as a clear cover with a different name. This term is introduced in IS Code 456:2000.
2. According to IS Code 456:2000 section 26.4.1 nominal cover is the design depth of concrete cover to all steel reinforcements, including links (stirrups). It is the dimension used in the design and indicated in the drawings.
3. It shall be not less than the diameter of the bar.
4. Nominal cover means a clear distance between the face of concrete and the face of the main outer rebar.
5. So Nominal cover < effective cover.

### Effective Cover

1. The effective cover is the distance from the bottom of the fibre of the beam to the centre of reinforcement

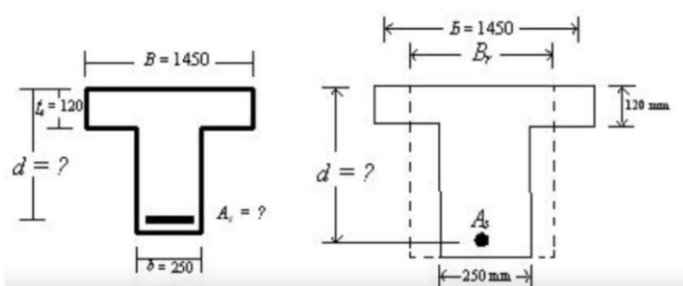


2. According IS Code 456:2000 effective cover is given as follows

Effective cover = Clear cover + (Dia of Stirrups/links) + 0.5 \* (Dia of main reinforcement bars)

### What is Effective depth?

Effective depth = overall depth-effective cover



## Type of Cover Blocks

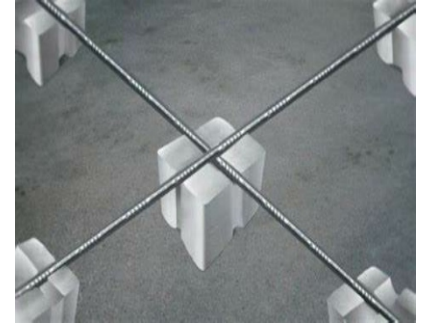
There are different types of covering blocks based on the type of material used: –

1. Concrete cover block
2. PVC Block
3. Steel cover block
4. Aluminium cover block
5. Stone cover block

## Why Cover Blocks Are Used In Reinforcement?

Cover blocks are used for the many following reasons:

1. Maintain a specified distance between the rebar & the shuttering.
2. To protect the steel reinforcement bars from environmental changes
3. Provide thermal insulation, which protects the reinforcement bars from fire.
4. Give reinforcing bars sufficient embedding to enable them to be stressed without slipping.



## Cover Block in Different Structure and Different Size of Cover Block

Sr.no	Sub Sr.no	Type	Size	Name
1	1.1	Coloumn cover	Round-30mm	C-30
	1.2		Round-40mm	C-40
	1.3		Round-40mm/18mm	C-40/18
	1.4		Round-50mm	C-50
	1.5		Round-75mm	C-75
2	2.1	Footing Cover	Footing Normal-50mm	FN-50
	2.2		Footing Medium Duty-50mm	FM-50
	2.3		Footing Heavy Duty-50 mm	FH-50
	2.4		Footing Medium Duty-75 mm	FM-75
	2.5		Footing Heavy Duty-75 mm	FH-75
3	3.1	Slab/Beam/Coloumn	Slab Cover-20mm	S-20
	3.2		Slab Cover-25mm	S-25
	3.3		Slab Cover-30mm	S-30
	3.4		Multi place Cover-40mm	M-40
	3.5		Multi size cover 20*25	M-1
	3.6		Multi size cover 20*25*40*50	M-2
	3.7		Multi size cover 30*35*40	M-3
	3.8		Multi size cover 30*40	M-4
	3.9		Multi size cover 40*45	M-5
4	4.1	Precast	Precast Cover 20mm	P-20
	4.2		Precast Cover 30mm	P-30
5	5.1	Cover Kanda	30*30*200mm	K - 1
	5.2		30*30*230mm	K - 2
	5.3		30*30*250mm	K - 3
	5.4		40*40*300mm	K - 4
	5.5		40*40*350mm	K - 5

# CONCRETE COVER BLOCKS

## Where it is used?

- Footing
- Foundation Top & Bottom
- Column
- Beam
- Slab
- Staircase
- Piling



## Material for cover block

Binders	Aggregates		Water reducer / Workability / Admixture	Bags	Water
Cement	10mm	River sand	Super plasticizer	Polypropylene bags	Construction water
Fly ash	20mm	Crushed sand	Geo polymer	Jute bags	
GGBS	40mm	Manufactured sand	Bottom Ash		
Micro silica & silica fumes	80mm	Slag sand	Silica fumes		

## CEMENT

A Cement is a binder, a chemical substance used for construction that sets, hardens, & adheres to other materials to bind them together.



### ■ Types of cement

- |                                   |                         |
|-----------------------------------|-------------------------|
| 1. Portland pozzol cement (PPC)   | 4. Quick setting cement |
| 2. Ordinary Portland cement (OPC) | 5. Low heat cement      |
| 3. Rapid hardening cement         | 6. Colored cement       |

### ■ Test conducted

- |                                |                                    |
|--------------------------------|------------------------------------|
| 1. Fineness Test of Cement     | 4. Soundness Test of Cement        |
| 2. Consistency Test of Cement  | 5. Heat of Hydration Test          |
| 3. Setting Time Test of Cement | 6. Specific Gravity Test of Cement |

### ■ Cement used for manufacturing the Concrete Cover Blocks

Portland Pozzolana cement is a blended cement produced in High-tech state of the art manufacturing facilities with carefully selected premium ingredients either by intimately blending ordinary portland cement with high reactive pozzolanic materials such as fly ash or calcined clay.

## Fly Ash

Fly ash is a byproduct from burning pulverized coal in electric power generating plants. Presently, fly ash is used in the construction industry on a large scale like in the manufacturing of Portland pozzolana cement, construction of roads etc....



## GGBS (Ground Granulated Blast-Furnace Slag)

GGBS (Ground Granulated Blast-Furnace Slag) is a byproduct of iron manufacturing which is used as a cementitious material used in concrete.



## Micro Silica & Silica Fumes

Microsilica & silica fume is an excellent admixture for concrete as it leads to better engineering properties. It reduces thermal cracking, improves durability, and increases strength.



## Fibers

Fibers are usually used in concrete to control cracking due to plastic shrinkage and to drying shrinkage. They also reduce the permeability of concrete and thus reduce bleeding of water. Some types of fibers produce greater impact, abrasion, and shatter resistance in concrete.



## Aggregate

Aggregate is granular material, such as sand, gravel, crushed stone, crushed hydraulic-cement concrete, or iron blast-furnace slag, used with a hydraulic cementing medium to produce either concrete or mortar.

### ■ Aggregate used



10mm size coarse aggregate



Crused sand for fine aggregate

## Admixture

Admixtures are natural or manufactured chemicals added to the concrete before or during mixing. The most often used chemical admixtures are air- entraining agents, water reducers, water-reducing retarders, and accelerators.



## Why use admixture?

Admixtures are used to give special properties to fresh or hardened concrete. Admixtures may enhance the workability of fresh concrete and the durability strength of hardened concrete.

## Types of Admixtures

1. Low PC
2. Mid PC
3. High PC

## Admixtures in use

**Super plasticizers :** Superplasticizers (Sps), also known as high range water reducers, are additives used in making high strength concrete. Plasticizers are chemical compounds that enable the production of concrete with approximately 15% less water content. Super plasticizers allow reduction in water content by 30% or more.

## Water

Water is the key ingredient, which when mixed with cement, forms a paste that binds the aggregate together. The water causes the hardening of concrete through a process called hydration.



## What type of water is used in concrete mixing ?

1. Potable water is generally considered satisfactory for mixing
2. The pH value of water should be not less than 6

## Bags



POLYPROPYLENE BAGS  
FOR PACKING



JUTE BAGS  
FOR CURING

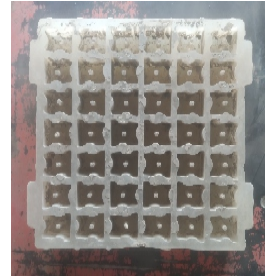
## Cover Block Moulds

### Types of Moulds

1. COVER BLOCK RUBBER MOULDS.
2. PAVER MOULD.
3. SYNTHETIC SILICONE PLASTIC MOULD.
4. PAVING BLOCK MOULD.
5. INTERLOCKING TILE MOULD.
6. INTERLOCKING BLOCK MOULD.
7. CHEQUERED TILE MOULD.
8. PLASTIC TILE MOULD

### Moulds in use

Cover Block rubber mould



### Machinery



Vibro forming table



Concrete mixer machine



Weighing machine



Slump Cone



Cube Mould

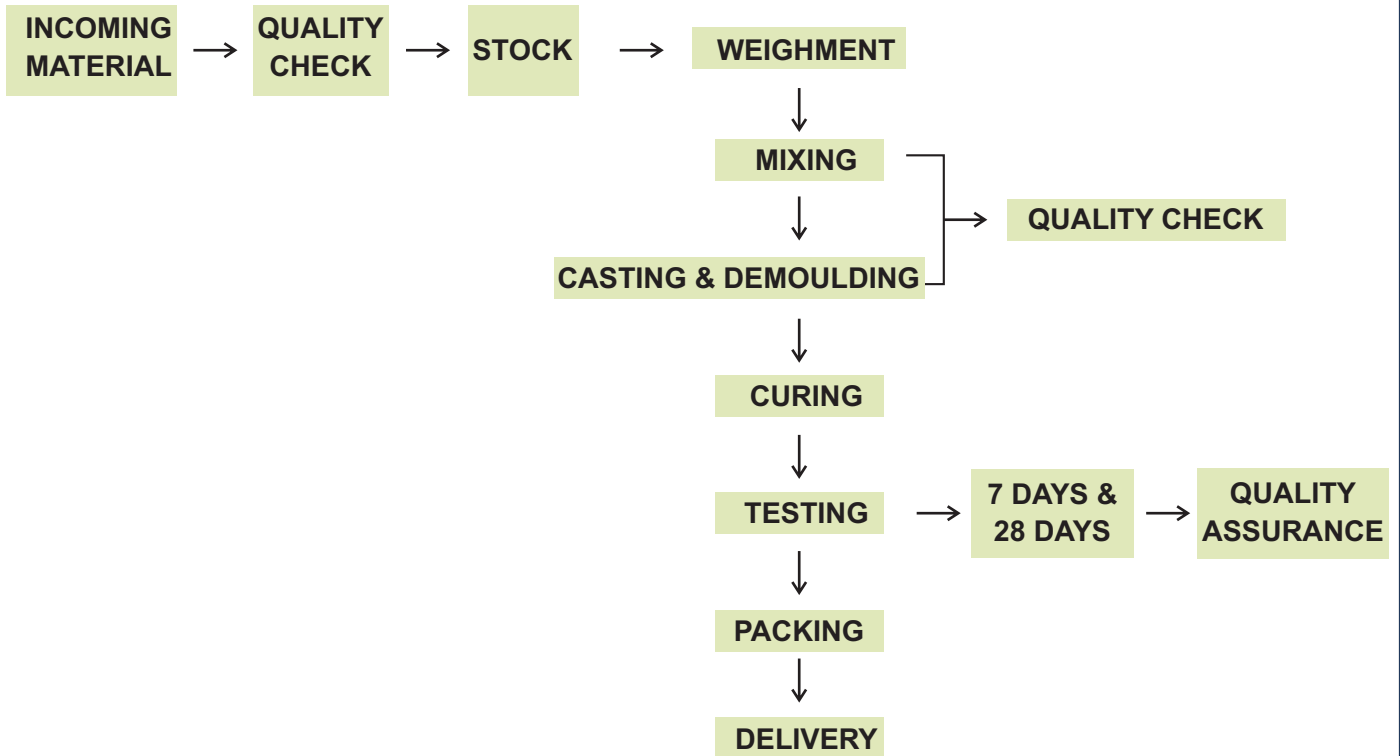


Measuring  
Cylinder 250 ml



Measuring Jug  
1 ltr.

## Process of cover block manufacturing



### Weightment

In this method, Materials are measured on the basis of weight. It is accurate method of batching.

Cement, fine aggregate, coarse aggregate and water are taken by weighing using weigh batchers.



### Mixing

Concrete mixing is the process of properly mixing the materials needed to form concrete, such as cement, sand, aggregate, water, and admixtures in a mixer.

The primary goal of concrete mixing is to make the concrete mass homogeneous and uniform in colour while maintaining the required consistency.



### Casting Steps

- Place empty mould on the vibrator machine
- Applying demoulding agent to the inside of the mould
- Pour the concrete into the moulds
- Compaction is done through the vibration
- Levelling.
- And last Placing the filled mould for setting



## ■ Demoulding

The moulds are demould next day after casting with proper safety & precaution.

The cover block pieces are accomodated safely & water is sprinkled for initial curing & then it is placed in tanks for curing



## ■ Curing

Curing is the process of maintaining satisfactory temperature and moisture conditions in concrete long enough for hydration to develop the desired concrete properties.

We have curing tank and Wet jute bags are placed on blocks for curing



## ■ Packing

The cover blocks are placed in the pp (polypropylene bags) bags with proper handling and with fixed numbers/amount in one bag.



## ■ Delivery

Suitable means of transportation is adopted for the delivery of the cover blocks

Example ( Transport tempo , etc)



## ■ Grades of concrete

- M40 (40 N/mm<sup>2</sup> @28 Days)
- M50 (50 N/mm<sup>2</sup> @28 Days)
- M60 (60 N/mm<sup>2</sup> @28 Days)



■ Product Pictures



ROUND  
25MM (C-25)



ROUND  
30MM (C-30)



ROUND  
40MM (C-40)



ROUND  
40/18 MM  
(C-40/18)



ROUND  
50MM (C-50)



ROUND  
75MM (C-75)



FOOTING  
NORMAL DUTY  
50 MM (FN-50)



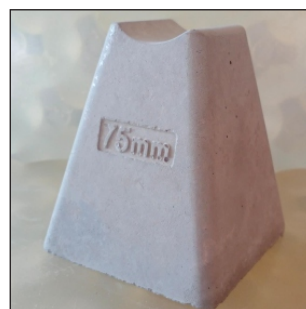
FOOTING  
MEDIUM DUTY  
50 MM (FM-50)



FOOTING  
HEAVY DUTY  
50 MM (FH-50)



FOOTING  
MEDIUM DUTY  
75 MM (FM - 75)

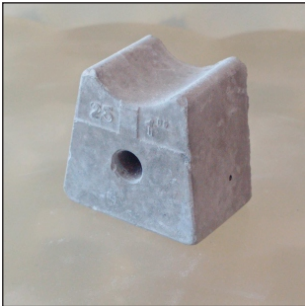


FOOTING  
HEAVY DUTY  
75 MM (FH - 75)



SLAB COVER  
20 MM  
(S-20)

■ Product Pictures



SLAB COVER  
25 MM (S-25)



SLAB COVER  
30 MM (S-30)



SLAB COVER  
40 MM (S-40)



MULTI SIZE COVER  
20/25 MM  
(M1)



MULTI SIZE COVER  
20/25/40/50 MM  
(M2)



MULTI SIZE COVER  
30/35/40 MM  
(M3)



MULTI SIZE COVER  
30/40 MM  
(M4)



MULTI SIZE COVER  
40/45 MM  
(M5)



PRECAST 20 MM  
(P - 20)



PRECAST 30 MM  
(P - 30)



KANDA COVER  
30\*30\*200MM  
(K - 1)



KANDA COVER  
40\*40\*350MM  
(K - 5)

# KERB STONE

**OMKAR TECHNO** has done pioneering work in the country to offer an extremely wide range of kerbing and allied products of International standards in quality design and finishes.

## WHAT IS A KERB STONE ?

- Kerb stone refers to a horizontal concrete or stone block used to edge and separate sidewalks, driveways, and roads from the adjacent landscaped or grassed areas. It serves as a barrier to prevent vehicles and pedestrians from encroaching on the green space while also enhancing the visual appeal of the surrounding area. Kerb stones come in a variety of shapes, sizes, and material, including concrete, natural stone, and granite, and can be customised to match the design and style of a specific property or area. They are widely used in urban development, commercial and residential landscaping, and road construction projects.



## FUNCTIONS / BENEFITS OF KERB STONES

- *Kerbs serve several functions, not limited to the following :*
- Provide additional strength to the edge of the carriageway
- Provide a demarcation line between roads and footway and deter traffic from mounting on the footway, thereby ensuring safety of the pedestrians.
- Prevent vegetation from encroaching on to the roads.

Kerb stone can be effectively used in pedestrian areas, domestic drives, public, private & commercial footways.

## TYPES OF KERB STONES

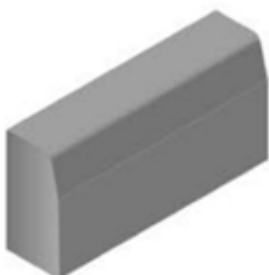
- *There are four basic profile to the most common road kerbs used:*

**HALF BATTER (HB):** Most frequently used shape, for deflection of traffic and safety of pedestrians.

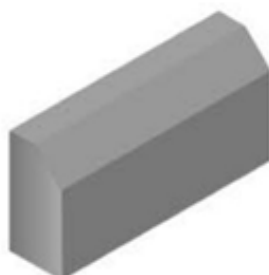
**BULL NOSE (BN):** To provide access to vehicles from carriageways to an access point across the carriageway.

**SQUARE(SQ):** Used as flush kerbs, to provide restrains at FFL.

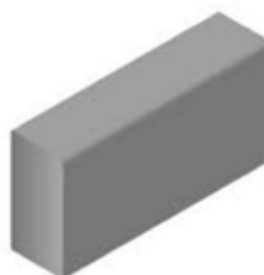
**SPLAY(SP):** To allow traffic to climb over the footway.



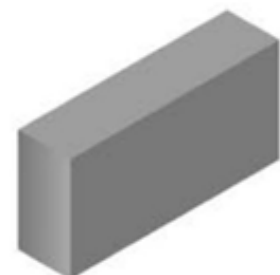
**HALF BATTER (HB)**



**SPLAY(SP)**



**BULL NOSE (BN)**



**SQUARE(SQ)**

## HALF BATTER

Half Batter is the most elegant and commonly used profile of kerbs. This is the profile of choice when a footpath is provided adjacent to the carriageway helps deflect the traffic back on to the carriage way and protects pedestrians.

## BULL NOSE

Bull nose profile access to vehicles from carriageways to a private driveway or an access point across pedestrian footpath crossing. These allow for vehicles and wheelchairs to cross over very easily.

## SQUARE

The square profile is typically used as flush kerbing, embedded completely in the ground, with only the top surface visible. These kerbs help provide restrains for both the footpath as well as the carriageways and are useful in very low traffic areas.

## SPLAY

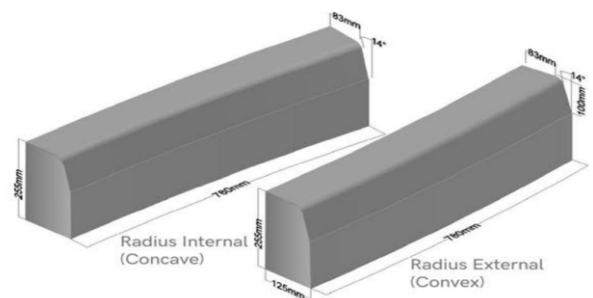
The purpose of the splay profile kerbs is to allow access to vehicular traffic over them. These are typically used to give access to demarcated parking spaces or where vehicles may need to climb on to verges to ease in emergencies.

## ACCESSORY KERBS

Accessory kerbs handle transitions from one from one type of kerb to another, drops in footways, provide for radiuses and turning in roads. These are all necessary to obtain detailed design solutions.

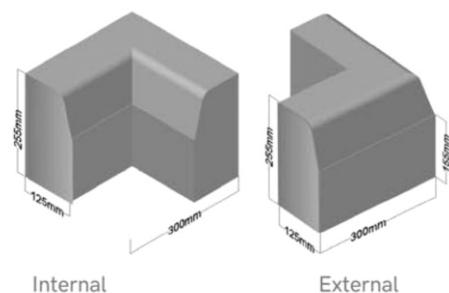
## RADIUS KERBS

Radius kerbs are available in various radii in concave and convex shapes with a half batter profile and a similar pimple finish to match the other road kerbs.



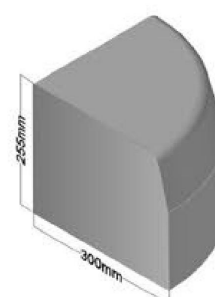
## ANGLE KERBS

Angle kerbs help provide kerbing treatment details for several road features such as dividers, pedestrian safety bays, parking spaces and the like.



## QUADRANT KERBS

Quadrant kerbs are used when a neat finish on a curved edging is needed. They can be used stand alone or in a combination with straight kerbs



# PAVER BLOCK

## WHAT IS A PAVER BLOCK?

Paver blocks are small blocks used in pavements and sometimes, in walls and pillars too. Available in variety of colours, sizes and patterns, these interlocking blocks are laid to form a pavement. As they seamlessly join each other, they are strong with less chances of breakage. Paver blocks are one of the most sought-after exterior pavement applications as they look good and are easy to walk on.



## PURPOSE / BENEFITS OF PAVER BLOCKS

- Paving blocks are suitable for heavy duty applications due to their long lasting performance that allows them to sustain heavy weights and withstand braking and shearing pressure.
- It is also known as interlocking paver blocks, and it has been widely used in many nations for a long time.
- As it is a specialized problem-solving method for creating pavement in locations where conventional paving techniques are less durable because of numerous operational and environmental restrictions.
- Interlocking paver blocks that are properly planned and produced perform brilliantly when utilized in conditions where conventional methods are less effective due to a range of geological, traffic, environmental, and operational limitations.
- Paving blocks do not need special maintenance as compared to concrete and asphalt surfaces.

## TYPES OF PAVER BLOCKS

### CONCRETE PAVER BLOCKS

*Available in many colours, concrete blocks come in both, smooth and rough surfaces.*

- They are mostly used in places that support heavy load.
- They are the preferred choice when it comes to constructing a pavement.
- Concrete blocks are mass manufactured to standard sizes. Hence they can be easily interchanged.
- They are more suitable in heavy duty works and also can be applied at heavy areas.
- They come in various colours. The colours typically come from metallic oxide.
- Concrete paver blocks are the most preferred choice for laying of



### CLAY PAVER BLOCKS

- Clay pavement blocks are often referred to as cobbles or bricks.
- The common shape of these blocks is that of a rectangular brick, while special shapes can be created for particular needs.
- These blocks are generally available as typical rectangular brick shaped.
- Clay blocks are available in natural colour only.
- These blocks are mostly used for walls or pillars.



## TYPES OF PAVER BLOCKS BASED ON PATTERN AND USE

### REGULAR PAVER BLOCKS

These types of paver blocks are interlocked or packed with each other having no gaps at joints.



### PERMEABLE PAVER BLOCKS

As the name suggests they allow water to drain in between them. Permeable paver blocks are used in gardens, pathways, backyards etc where there is no vehicular traffic.



## TYPES OF PAVER BLOCKS BASED ON SHAPES & LOCKING

### TYPE-A

These types of paver blocks have plain edges on all the faces. They do not interlock with each other.



TYPE-A

### TYPE-B

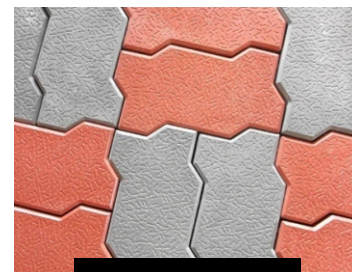
They have alternate plain faces & curved edges. Type B paver blocks can be paved in a define pattern.



TYPE-B

### TYPE-C

All faces have curved edges to interlock with each other on all the sides. Type c paver block can be paved in any pattern



TYPE-C

## TYPES OF PAVER BLOCKS BASED ON THICKNESS AND GRADE

SR. NO.	GRADE DESIGNATION	COMPRESSIVE STRENGTH AT 28 DAYS IN /mm <sup>2</sup>	TRAFFIC CATEGORY	RECOMMENDED THICKNESS OF PAVER BLOCK IN mm	AREA OF USE
1	M30	30	NON TRAFFIC	50	PUBLIC GARDENS, PATHWAYS ETC.
2	M35	35	LIGHT TRAFFIC	60	SHOPPING PLAZA, RAMPS, CAR PARKS, FARM HOUSE, HOUSING COMPLEX.
3	M40	40	MEDIUM TRAFFIC	80	CITY ROAD, SMALL AND MEDIUM MARKET.
4	M50	50	HEAVY TRAFFIC	100	BUS TERMINALS, INDUSTRIALS COMPLEXES, FACTORY FLOORS, SERVICE STATIONS, INDUSTRIALS PAVEMENTS
5	M55	55	VERY HEAVY TRAFFIC	120	CONTAINER TERMINALS, PORTS, DOCKYARDS AIRPORT PAVEMENTS, BULK CARGO HANDLING AREAS.

### M/s Omkar Techno Products

Sr. No	Products	Brand 1	Brand2
1	Cement	M/s ACC Limited	M/s Wonder Cement
2	GGBS	M/s JSW Green Cement India Pvt Ltd	
3	Admixture	Asian Paints	
4	Water Proofing Material		
5	Paints		
6	Pipes and Fittings		
7	Ready Plaster	ACC Limited	M/s Ultraplant
8	Block Joint Material	ACC Limited	M/s Ultraplant
9	Grout	ACC Limited	Asian Paint
10	AAC Blocks	M/s Aerocon /ACC Limited	Godrej /Magicrete
11	Tile Adhesive	ACC Limited	M/s Ultraplant
12	Ceramic /Tiles	M/s Naveen Tiles Ltd	
13	G.I Binding Wire	Omkar Techno	Perfect Binding Wire
14	M.S Binding Wire	Omkar Techno	TATA Steel
15	Steel	Tata Steel	Bhagwati Steel
16	Plywoods / Doors	Green Ply	
18	PVC Cover Blocks	Omkar Techno	
19	Concrete Cover Blocks		
20	Kerbs Stone & Paver Block		

### M/s OMKAR TECHNO SERVICES

A	<b><u>Structral Design</u></b> Residential commertial Buildings, Chemical plant,Steel structures.
B	<b><u>Ready Mix Batching Plant</u></b> 1. Setup and production 2. Operation and Manintance.
C	<b><u>Excavation/Levelling</u></b> All kinds of Excavation we are doing by own as well with our co-partners
D	<b><u>Civil Contract</u></b> 1. With material Contract 2. Labour Contract
E	<b><u>Government Contract</u></b> 1. Road Job 2. Mega city job
F	<b><u>Property/Land Deal</u></b> Lease/rent/sell

## SOME PRESTIGIOUS PROJECTS



L & T COASTAL ROAD PROJECT



L & T CIDCO PROJECT



PIRAMAL MAZGAON PROJECT



BG SHIRKE IIT DHARWAR



NIT GOA



VASHI CREEK BRIDGE



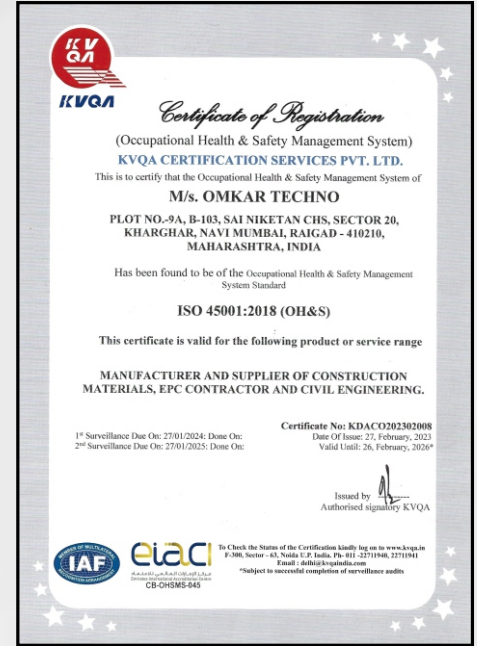
NAVI MUMBAI INTERNATIONAL AIRPORT



TUNNEL PROJECT

## OUR MAJOR CUSTOMER





## ISO CERTIFIED



## AWARD & RECOGNITION

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