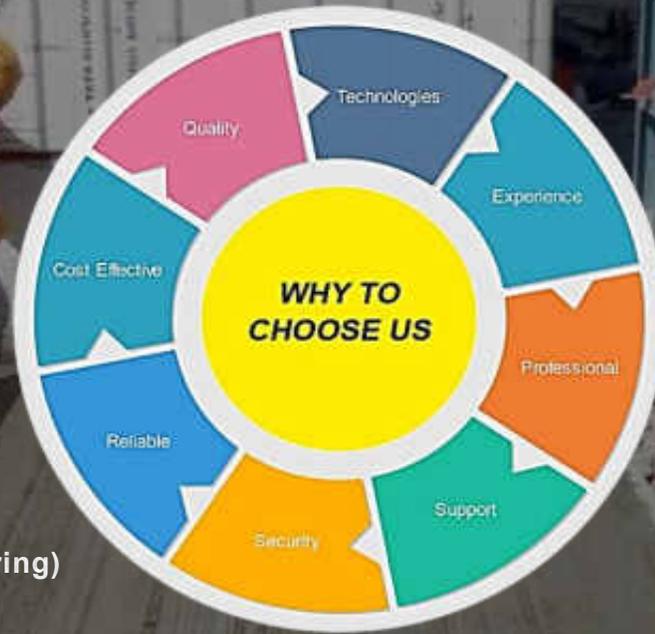


| Consulting | Concepting | Contracting |
WE CRAFT TO EXCELLENCE

CONFLOORS

Concrete Floor Technologies
An ISO 9001-2015 Certified Company





- LASER GUIDED CONCRETE SCREED FLOORING
- TRUSS SCREED FLOORING
(as per TR34 Standards, FM2, FM3/ DM1, DM2 Category Flooring)
- TRIMIX / VACUUM DEWATERED FLOORING
- STEEL FIBRE REINFORCED CONCRETE (SRFC)
- GLASS FIBRE REINFORCED CONCRETE (GFRC)
- CONCRETE POLISHING & DENSIFICATION
- STAMPED CONCRETE SYSTEM
- FLOOR COATINGS- PU/ EPOXY
- SUB-BASE PREPARATION
- FLOOR RESTORATION

“ We are specialized into Industrial/ Institutional & Commercial Flooring Solutions having more than 400 Man Years of Experience in this space. We have Designed & Developed more than 500 Million Sqft of concrete based usable surfaces in India.

Our customers know us for our commitment to quality & consistency. We are small enough to listen, and big enough to deliver. And a long list of satisfied clients is a testament to this fact.”

What We **Do...**



Performance Floors for Warehouses, Production Units, Distribution Centres

Ground floor slabs in Warehouses and Distribution Centres are integral to the efficient operation of the facility. They are the table top on which an operator runs his business. On the surface they appear to be one of the simplest parts of a structure to construct. However, this simplicity often leads to an underestimation of the design and construction requirements. A well designed and constructed floor will increase productivity, reduce maintenance of the building and increase the life of the equipment using the floor.

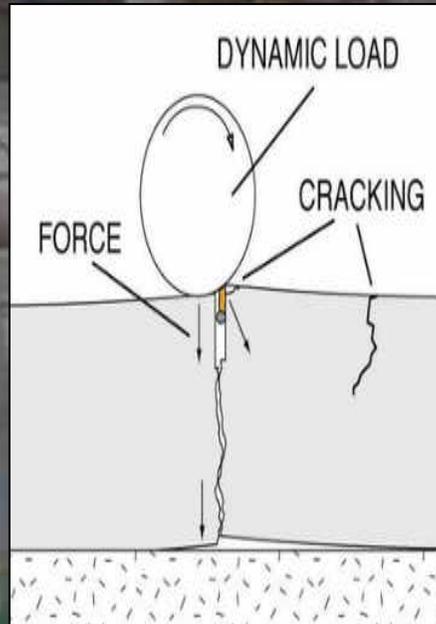
A floor design should be performance-based, and this starts with understanding the requirements of how the floor will be used. Most Floor designers will be given a brief from the warehouse owner to ensure the floor will take the imposed loads, be flat, long-lasting and aesthetically pleasing and it will be their responsibility to draw up the performance specification. The specialist flooring contractor should consider the construction methods, programme, cost and any value engineering they can bring to the design. Compromises may have to be made in developing the final design of the floor, but the result should be one that is economically designed and built to meet the performance requirements.

There are two parts to a floor design:

1. Structural Design – the ability to withstand the applied loads
2. Detailed Design – joint design and other performance requirements.

At CONFLOORS, we understand the importance and significance of the floor in warehousing/industrial sector. While designing the floor, we consider all known load factors, MHE traffic, floor impacts, floor finishing and accordingly, choose the right materials for construction of the floor so that it can serve to most of the storage goods profiles and fulfillment of all requirements. We use different types of reinforcement method in the floor slab constructions, all confirming to floor flatness and performance to international specification and standards. In addition to traditional rebar or mesh reinforcement, Steel Fibers, Glass Fibers and Polypropylene Fibers are also used by us for floor construction. Steel fiber reinforced concrete floor is comparatively cheaper and technically more suitable and in turn can be installed considerably faster than floors reinforced with traditional mesh or rebar, resulting in a high-quality and cost-effective warehouse floor. Having the right flooring in the facility ensures proper movement, stability and increases productivity. Rightly done concrete floor not only saves time and money but also reduces high recurring maintenance cost.

Importance of Industrial Floor Joints



When a material handling vehicle runs across an interruption-free floor, it can operate at its designed optimum speed and thus achieve its intended productivity rate. But when a floor has deteriorated joints, several negative effects occur: 1. Vehicle operators slow down as they approach the joints to avoid jolts. 2. The vehicle wheels get chewed up and must be replaced, resulting in vehicle downtime, maintenance, personnel time and expense, and wheel replacement costs. 3. When defects are severe, the results can be lower back distress claims by drivers, the danger of load tipping, etc. 4. As traffic continues to cross the joints, the defects grow wider and deeper, and eventually will require expensive, time-consuming repairs. When we in the concrete industry design or construct an industrial floor, we must always be cognizant that joints are part of the floor surface, and that every joint poses a potential long term problem for the facility owner or tenant. We must therefore make sure that every joint will stand up to the operations planned for the facility.

There is no “standard floor design” because each industrial floor has a variety of demands placed upon it depending on material handling vehicle types, load weights, frequency of traffic, etc.

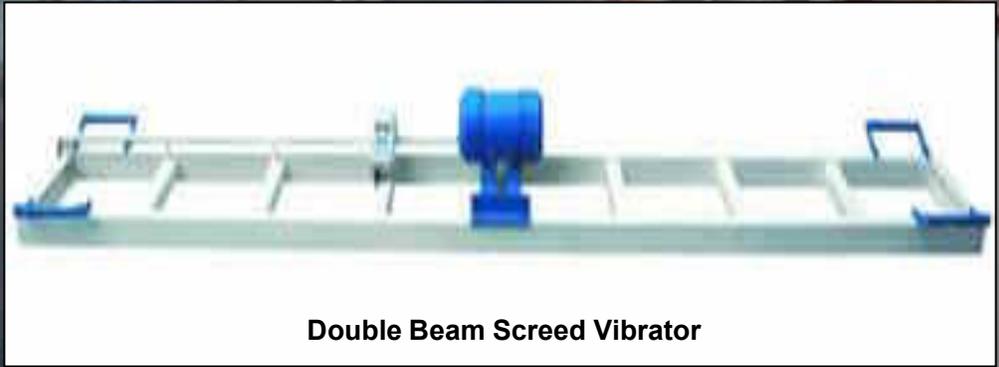
Joint Design Principle

Although we talk about floors as if they were one entity, they are not. When speaking about floors it is critical that we recognize that each floor is composed of numerous smaller floor segments, both connected and separated by joints. A 100,000 sq. ft. (9,290 sq. meters) building with 15'x15' (5mx5m) joint spacing will have approximately 400 panel segments. Proper joint design must provide the means for all these floor segments to function in unison as though they were one floor as traffic flows across the floor, while also allowing each slab to expand or contract independently when necessary. The guiding objectives in joint design must always be to provide joints that will recreate the pre-jointing continuity of the floor surface, and do so in a manner that will make the joints as durable as the floor itself. To achieve these goals joints must have the following characteristics: Joints should always be as narrow as possible to minimize their overall exposure to hard wheels. A 1/4" (6.5mm) wide joint has twice the exposure to wheel impact as a 1/8" (3 mm) joint. This width difference can be critical when joints are subjected to 4" diameter, solid wheel traffic. Joints must be created in a way that allows a subsequent joint filler to protect joint edges from wheel inflicted damage. For a filler to properly protect a joint, the joint needs to have 90° vertical walls (i.e. not “tooled”) and certain minimum width and depth dimensions may be necessary.



Truss Screenshot Vibrator

Laser Guided Concrete Screenshot Vibrator



Double Beam Screenshot Vibrator

Ride on Trowel



Power Floater



Power Trowel



Concrete Groove Cutter



Dewatering Pump

ORTHODOX FLOORING

Random Cracking

Drying shrinkage in concrete is inevitable. There are several conditions which promote "random" cracking in concrete slabs like:

- (1) Improper joint spacing
- (2) Excess water in the mix
- (3) Improper grade/thickness control
- (4) Mix not proportioned to mitigate excessive shrinkage
- (5) Saw-cut control joints not done properly or improperly timed
- (6) Poor finishing techniques
- (7) Poor curing techniques
- (8) Excessive load on the concrete

Damaged Edges

Saw cut and formed joints in an industrial concrete floor create interruptions in an otherwise seamless surface. If not properly treated and maintained, floor joints become impact points along the floor surface and deterioration of joint edges (spalling) will likely occur under even nominal material handling vehicle traffic.

Too many Joints in the floor

Open or poorly maintained joints can also present problems for proper sanitation and can harbor bacteria, insects, etc. Add to these factors the potential vibratory and wheel damage to the material handling vehicles crossing deteriorated joints and it's understandable why floor joints are typically reported as the most troublesome floor maintenance issue facility owners face in a majority of the facilities we inspect.

ENGINEERED FLOORING

Big Panel Size

Laser screed/ Truss screed technology allows construction to be done with extended construction joints hence saving on cost & time, providing better level tolerances. Output per team improves to 200sqm in case of VDF to minimum, 400sqm up to 1000sqm.

Flat Floors

- (1) Floor operation is more efficient if lift trucks operate at maximum speed.
- (2) Reduced damage to stock
- (3) Control on the general quality of floor

Surface Hardening & Densification

Using dry shake floor hardeners increases the abrasion resistance of the floor and further densifying the floor using silicate based liquid hardeners adds to the gloss of the surface & makes it dust proof.

Edge Protection

An armoured joint system protects the construction joints from heavy traffic & fork-lift movement.

Truss Screed Flooring

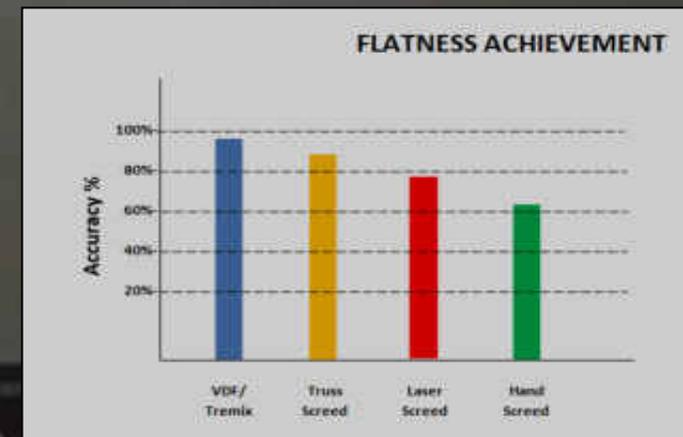
The flatness & durability are the fundamental performance requirement for a flooring and an important consideration in terms of construction aspect. The introduction of high rise forklift trucks means and requires greater attention to the flat flooring system specifications, their achievements and measurements are essential.

CONFLOORS is able to pour up to 1,500m² using **TRUSS SCREED** with each of its highly skilled installation teams to suit all ground and design conditions from VNA high tolerance floors to ASRS settlement critical facilities.

All floors are designed and constructed to The Concrete Society Technical Report 34 4th Edition published in 2013.

The floor types outlined below allow us to deliver a high quality product for the following typical applications:

- Free Movement for wide aisle racking, mezzanine installations and bulk storage
- Defined Movement for VNA racking applications, generally up to 17m lift heights
- Pile Supported floors to help limit settlement or for use on poor ground



Laser Guided Concrete Screed Flooring

For faster and flatter floors we are providing Laser-guided Concrete Screed machines with unique capability of delivering high tolerance floors with high output per day. It allows to lay concrete floors in wider bays of any size. It reduces the time, number of construction joints, and improves the flatness of floors.

The tolerances that can be achieved with these machines in free movement slabs are FM2 and FM3 in accordance with the TR34. Large pour method of construction substantially reduces the number of formed joints resulting in less chances of floor cracks from construction joints.

With the help of our walk behind laser controlled screed, 1500 sqm+ area of flooring is possible in a single day with 1 set of machine & experienced applicators depending on the steady supply of concrete at job site. It can carry out floors as per TR 34 Numbers and DIN systems, levels and flatness is achieved through sophisticated measuring systems and trained floor laying team.

Advantages of Laser Screed flooring

- Flatter floors
- More accuracy
- Faster placement
- Joint less Floor
- Fast track production
- Better quality



Super-flat VNA (Very Narrow Aisle) Floors



Floor Flatness Issues in High-Speed VNA Warehouses

Any Very Narrow Aisle warehouse floor needs to be three to four times flatter than conventional concrete floors. Therefore upon floor installation, the flatness and levelness in the future lift truck wheel tracks need to be corrected in order to improve truck rideability. There are two usual methods to address this problem: to install a self-levelling overlay (1) or to grind the high spots (2).

However, when the operation of the warehouse requires high lift truck speed (9-10 km/h) and the aisles are above 60 meter of length, even skilled contractors have difficulties to provide the desired flatness and levelness requirements, and the owner usually has to compromise as to speed and riding comfort, in other words efficiency.

For floor profile measurement purposes, all floors naturally divide themselves into two broad categories: Defined Traffic and Random Traffic.

Defined Traffic floors are those on which all vehicular traffic will be constrained by rails or guide wires to follow pre-determined, fixed wheel tracks.

Defined Traffic floors are installed in Very Narrow Aisle warehouses serviced by turret trucks. Operational efficiency in this type of warehousing is determined by the number of pallets handled per truck per hour – which ratio is determined in large part by the flatness/levelness of the wheel tracks in which the lift truck wheels must roll.

Turret truck manufacturers strive to achieve higher truck speeds, increase truck stability and reach greater rack heights to increase productivity. Without a flat and level floor on which to run, however, these efforts are worthless.

If the floor is too bumpy, the truck will shake too much and the driver won't drive the truck at top speed. More trucks will be needed to move the same number of pallets, and the anticipated advantages of the warehouse will be diminished.

Hybrid Fiber Reinforced Concrete Floors

Steel Fiber Reinforced Concrete (SFRC) is a modern composite material. By adding fibers to the concrete, a load bearing capacity similar to traditionally reinforced concrete is obtained. Compared to traditional mesh/ bar solutions, SFRC provides better crack control.

For an increasing number of applications, the load bearing resistance of SFRC allows the partial or complete substitution of traditional reinforcement. The use of SFRC technology brings major time and cost saving.

All the fibers are low carbon, cold drawn, high tensile steel wire produced using the most modern equipments. These fibers are ASTM compliant and designed to meet all performance parameters and exceed customer expectations.

Applications

- ❖ Industrial Floorings
- ❖ Ground slabs
- ❖ External Roads/ Pavements
- ❖ Composite Metal Decks
- ❖ Overlays
- ❖ Foundations
- ❖ Precast elements and structures
- ❖ Retaining walls

Advantages

- ❖ Improved crack control.
- ❖ Reduced slab costs.
- ❖ Reduced slab thickness.
- ❖ Reduced curling.
- ❖ Joint edges protected by steel profile.
- ❖ Improved ductile behavior.
- ❖ Reduced construction time.
- ❖ Simplified job site operation.
- ❖ No reinforcement placement mistakes.
- ❖ Eliminates handling of reinforcement.
- ❖ Generally no need of concrete pumping.
- ❖ Good impact resistance.
- ❖ Floor joint stability.

Mixing of steel fibers



Automatic Dosing Unit



Conveyor Belt



Manual Mixing



Various types of Fibres used in Flooring & Plastering works

Stamped Concrete



Stamped concrete, often called textured or imprinted concrete, is concrete that replicates stones such as slate and flagstone, tile, brick and even wood. Ideal for beautifying pool decks, driveways, entries, courtyards, and patios, stamped concrete is the perfect outdoor paving choice.

Recently, stamped concrete has become a popular choice for many homeowners because it offers a wide array of options when it comes to concrete pattern and concrete colors. Another factor contributing to its popularity is its price. The cost of stamped or imprinted concrete is often considerably lower than the materials it is a substitute for.

Concrete is the perfect canvas for creating a cost-effective replica of more expensive materials, without giving up a natural, authentic look. When choosing colors and patterns for your stamped cement, make sure they blend with other stone, tile or textured concrete elements at your residence. Even in complex designs with steps and fountains, patterns can be still be pressed into the concrete. Stamped concrete can also be used in conjunction with other decorative concrete elements such as exposed aggregate or acid staining. Popular patterns include running bond brick, hexagonal tile, worn rock or stone.



Herringbone used brick pattern



Ashlar slate pattern



European fan pattern



Pebble stone pattern



Random stone pattern



Medallion pattern

Sectors We Serve



COLD STORE



WAREHOUSES



CONTAINER TERMINALS



AGRO & FOOD INDUSTRY



CONCRETE ROAD & PAVEMENT



PARKING SPACES



PHARMACEUTICAL INDUSTRIES



HEAVY DUTY INDUSTRIAL FLOORS



Photo Gallery



Antariksh Logidrome, Bhiwandi

Om Kiran Warehousing, Ghaziabad

Srishti Cargo Warehouse, New Delhi Airport



SEABIRD MARINE (NYK Group), Pataudi

PATANJALI , Guwahati

Any Graphics Design, Noida



TVS Infrastructure Warehouse, Bhubaneswar

Jain Warehouse, Sonapat

PRG Electric, Sahibabad



MJ Logistics (NYK Group), Palwal

Indoswift Warehousing, Rajpura

DELHIVERY, Bilaspur

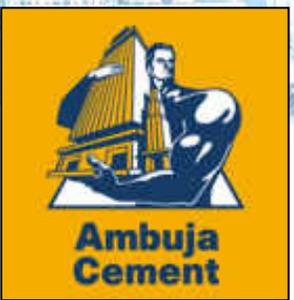
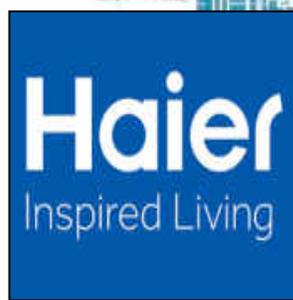
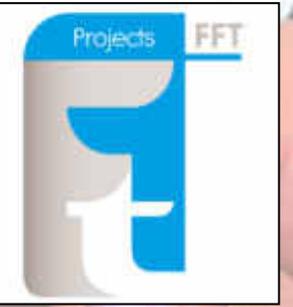


Concrete Floor Technologies

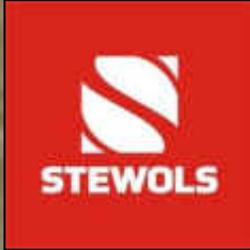
SOME OF OUR CLIENTS FROM WAREHOUSING & LOGISTICS INDUSTRY



SOME OF OUR INDUSTRIAL CLIENTS



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