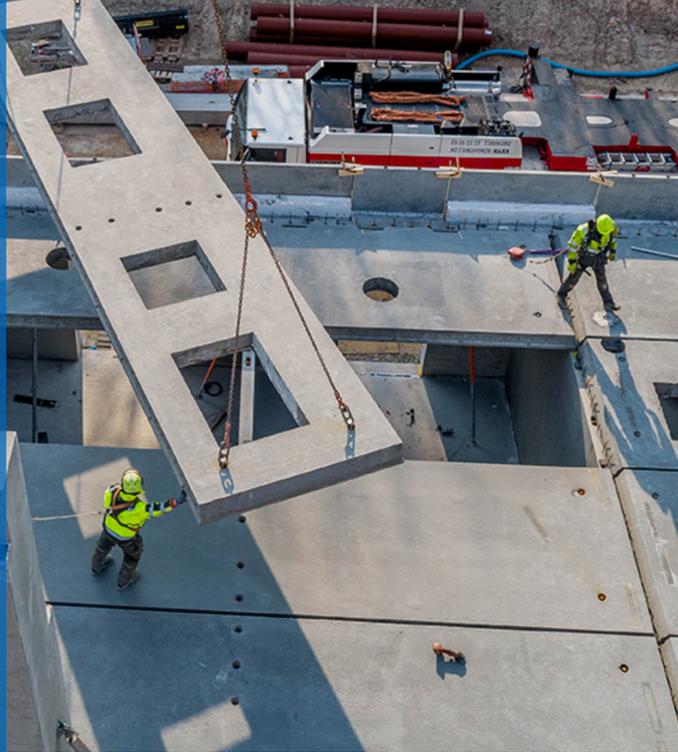


INTRODUCING T-SLAB™

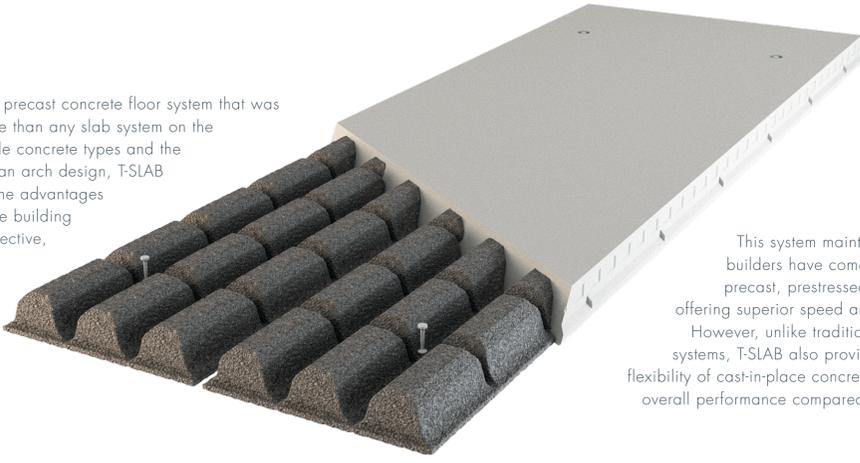
THE LATEST REVOLUTION IN PRECAST CONCRETE FLOOR SYSTEMS

Architects, engineers, and contractors are always searching for new, innovative products that can take their projects to the next level, but when it comes to floor systems, the innovation they've been seeking has been sorely lacking for some time. While the existing slab systems on the market hold a range of benefits in their own right, they also each lack something that another possesses. That means builders and designers are often forced to compromise one key capability for another, such as flexibility for speed. Put simply, floor systems have been waiting for a revolution — and Tindall is here to deliver that much-needed innovation with the Tindall Superior Lightweight All-Purpose Beam (T-SLAB).



WHAT IS T-SLAB?

T-SLAB is a unique, patented precast concrete floor system that was designed to be more versatile than any slab system on the market. By leveraging multiple concrete types and the time-tested principles of Roman arch design, T-SLAB is capable of delivering all the advantages of the industry's most effective building materials in a single, cost-effective, and 100% precast solution.



This system maintains the strength builders have come to rely on from precast, prestressed concrete while offering superior speed and performance. However, unlike traditional precast slab systems, T-SLAB also provides the hallmark flexibility of cast-in-place concrete and improved overall performance compared to hollow-core.

WHAT BENEFITS DOES T-SLAB PROVIDE?

High Strength and Low Weight	High Sound Ratings	Cost-Effective Balcony Solutions
Competitively Priced	Fire Rated at 4+ Hours	Hidden Soffit Joints
Long Spans and Multi-Span Capability	Readily Provided Embeds	Readily Provided Blockouts and Holes
Flexible Geometry	Solid Zones	Smooth-Finished Slab Bottoms
Up to 12 ft (4 m) Widths	Dapped Bearing	Requires Non-Structural Cementitious Underlayment for Leveling Only

HOW DOES T-SLAB WORK?

To understand the efficacy and innovation of this system, you must know how its two concrete types work together. T-SLABs begin with the creation of a series of super-lightweight concrete blocks or ribs. The grid that these blocks create allows prestressed reinforcement to be placed lengthwise and traditional reinforcement to be placed in the transverse direction. This will serve as the core of the T-SLAB.

Next, this lightweight concrete core is encased by high-strength, self-compacting concrete. When this happens, a series of strong arches are created by encompassing the reinforced ribs to facilitate load distribution across the full width of the slab. This design allows T-SLAB to harness the full benefit of the load-span optimization provided by prestressing. When combined with the strength that the internal arches provide, the result is a stronger slab system, one that is superior to the other available options.

Additionally, T-SLAB provides significant flexibility for interplay with other trades. Where needed, the internal lightweight concrete blocks can be omitted, making it easy to accommodate elements like holes, ducts, built-in installations, and solid zones needing additional reinforcement.

WHAT ARE THE APPLICATIONS OF THIS SYSTEM?

T-SLAB is perfect for a wide range of applications, including offices, schools, apartment buildings, medium-rise structures, and even high-rise construction. This floor system has been used successfully in Europe for more than 10 years on a variety of high-profile projects in various markets.

Another major benefit of T-SLAB is that it allows Tindall to easily convert existing designs into total precast projects. Through total precast, architects and builders gain access to a nearly endless variety of aesthetic options, architectural designs, finishes, and customization opportunities.

- Offices
- Dorms
- Schools
- Apartment Buildings
- Medium-Rise Structures
- High-Rise Constructions
- And More

LET'S TAKE A CLOSER LOOK AT SOME OF THE BENEFITS OF T-SLAB

LOW WEIGHT AND COMPETITIVE PRICE

T-SLAB was originally designed for complex residential projects that required a strong and lightweight solution. By utilizing lightweight concrete for roughly 50% of the total slab volume, T-SLABs maintain their strength and long-term performance without unnecessary weight. T-SLABs also offer a high degree of design flexibility while remaining cost-effective to produce, transport, and install.

FLEXIBLE GEOMETRY

Perhaps one of the greatest benefits of T-SLAB is its incredible design flexibility. With the ability to omit the internal lightweight concrete blocks as needed, Tindall can create unique shapes and features to meet nearly any design requirement, including fitting unusual building modules. Plus, T-SLAB can be used to provide integral balconies, further reducing costs and the need for additional work on site. Features include:

- Wet Cast Manufacturing
- Eliminates the Need for Cast-In-Place
- Round Ends
- Sharp Ends
- Flexible Angles
- Integral Balconies
- Mechanical, Electrical, and Plumbing (MEP) Accommodation

DAPPED BEARINGS

The use of dapped bearings enables T-SLAB to reduce overall construction height and total structural depth. This improves the possibilities for interior redesigns and rebuilding while offering unobstructed installation mounting during construction. As an added bonus, these bearings are also able to hide the underside of slab joints, improving overall aesthetics.

SOLID ZONES

In the past, one of the challenges of certain floor systems was the need for additional, expensive floor structures to be installed on top of the slab. T-SLAB helps eliminate this issue by making it easy to cast in a wide range of elements needed for overall construction during the production process. By omitting the lightweight concrete blocks, Tindall can create solid zones within the T-SLAB. This allows for embedded steel plates and other related items, and it also enables the slab to transfer loads through the entire structure. These zones can also be used for creating recesses for both units, full blockouts, and embeds with additional reinforcements. Examples include:

- bathroom drains
- floor heating systems
- safety rail sleeves
- electric conduits and boxes
- extra reinforcement
- standard and custom steel brackets
- large holes with added reinforcement

LONG SPANS

When it comes to choosing a floor system for a project, one of the biggest challenges is finding a product that meets the span requirements of the design. By offering fixed-end assemblies over loadbearing walls or beams, T-SLAB can deliver up to 35% longer spans than traditional slab systems, as well as multi-span capabilities. Simultaneously, T-SLAB dampens natural frequency and improves overall vibration.

UP TO 12 FT (4 M) WIDTHS

T-SLAB's significant widths benefit architects, contractors, and project owners in a variety of ways. Overall, offering 12 ft widths helps reduce total installation costs and simplify the entire construction process by requiring fewer slabs per project. This also means fewer visible joints and more flexibility for openings. With continuous slabs, crane lifts can be reduced by as much as 50–66%, enabling significantly faster installations and lowering total costs. Plus, this system makes it very simple to incorporate steel embeds and blockouts during production, helping save even more time during construction.

FIRE RATING

T-SLAB is the most fire-resistant prefabricated concrete deck in the world. To date, T-SLAB is the only floor system to provide a minimum four-hour fire resistance rating with standard office loads.

HIGH SOUND RATINGS

After rigorous testing, T-SLAB has shown impressive sound insulation capabilities. Due to the use of multiple concrete types, this system reduces sound transmission without excess mass and weight. When combined with resilient materials like sound matting under parquet floors or carpeting with padding, the impact noise reduction is even greater. If T-SLABs with thicker dimensions are chosen for a given project, the transmission ratings shown here would be even higher.

SOUND TEST RESULTS:

Slab Thickness: 12 in (305 mm)
Slab Weight: 109.5 lb/sf (535 kg/m²)
Sound Transmission Class (STC) Rating: 64
Impact Insulation Class (IIC) rating: 33

HOW DOES T-SLAB AFFECT CONSTRUCTION SCHEDULES?

When the benefits of T-SLAB come together, this floor system can help lead to significantly faster construction schedules. One of the primary reasons for this is that T-SLAB allows interior trades to access the building earlier in the process. When this slab system is leveraged for total precast structures, Tindall can reduce project schedules by months.

IS T-SLAB RIGHT FOR YOUR NEXT PROJECT?

Floor systems have been in need of a revolution for far too long. With T-SLAB, that revolution is finally here. This cutting-edge, 100 percent precast system empowers total precast designs, enables significantly faster construction schedules, and outclasses the other available options at every turn.

[LEARN MORE](#)