



Concrete technology
for a CONCRETE future



PLANTS & MACHINERY
for THE PRODUCTION of PRE-STRESSED ELEMENTS

WiTech Company profile

Witech, was born in Milan, Italy, in 1970 and since then it has been in the field of prefabrication and construction in Italy and abroad.

In many years of experience on site, we have specialized in the design and construction of machines for making **hollow core slab and pre-stressed concrete products** and developing new technologies for the production of pre-stressed concrete products.



We are like a tailor... we make the right system according to customer needs.

Mr. Silvio Perego CEO of Witech Company

The wide range of products and the high level of customization that Witech can offer are able to develop any project related to the production of concrete, and the world of prefabrication.

Our company offers expertise and technologies developed in more than 45 years of work, always trying to offer the best product and best suited to the needs of the most demanding customers.



Advantage of pre-stressed Hollow Core Slab - HCS



CONCRETE SAVING

Thanks to the voids, the concrete consumption decreases. It is not necessary to increase the structural thickness, since the hollow-core slabs stiffness is very high.

STEEL SAVING

By the pre-stressing process and using strands or harmonic steel wires as reinforcement, the steel consumption decreases.

LABOUR SAVING

The process for the hollow-core slabs production is now so modern and automated, that it requires less than 40% of labour in comparison with the labour necessary for the production of massive slabs.

HIGH QUALITY

You will have a first-class product.

Advantage of Hollow core slab application



LOWER WEIGHT

Better for the structural buildings

HIGHER SPAN

It reduces the number of supports

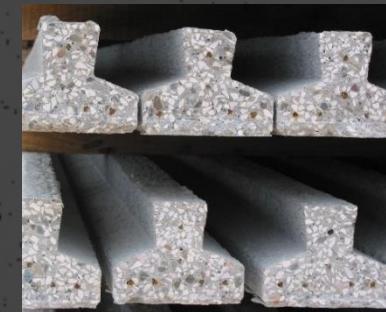
DIFFERENT SPANS

Possibility of using longer spans, and shorter spans in the same jobsite

DIMENSIONAL PRECISION

Save time during assembling the production process it's easy and more rapid.

Pre-stressed elements can be produced thanks WiTech technology



WiTech classic plant for Hollow Core Slab production



- Single or multistressing abutments
- Strand spacers
- Casting beds for HCS
- Exit bridge
- Dispatcher machine
- Slipformer or Extruder machines
- LWP machine
- Cutting saw
- Carrier for plastic covering
- Lifting beam with clamp
- Transport wagon for HCS
- Overhead bucket gantry
- Concrete Shuttle full automatic

Witech single stressing abutments



For the single stressing of the strands.

They consist in a strong steel structure and have to be assembled into the anchors of the casting bed where stressing strands are fixed.

The device is conceived for the distribution of the required pre-stressing strands, for bottom and upper strands of :

- Hollow-core slabs
- T beams
- Double T beams
- Lintels
- Vineyard post
- Cover Double T slab
- and other similar elements.

Witech multi-stressing abutments



Multi-stressing,

built up of an heavy steel structure (passive end) to be assembled into the anchors of the casting beds, where the stressing strands are settled. On the opposite end (active end) the stressing and DE tensioning system are situated.

The stressing cylinders are built for casting beds and can bear a pulling force of 200/250/300/400 ton. This system allowed to salvage the strands.



The timing for stressing the strand is around 2/3 minutes. This system is recommended when it is necessary to use many strands

Witech casting beds



The casting bed consists of a construction of rolled steel profiles, with a surface plate of a special straight rolled and polished high-quality steel sheet, thick 8 mm.

On both boards of the casting bed the steel profiles are mounted, which serve as moulding elements for the lower edges of the slabs, as well as travelling rails for the slipformer or extruder machines and other equipment.

In the casting beds sections are including also the heating pipes.

The bed is delivered in 12 m long sections, moulding surfaces are treated with the special agent for protection from the damages during transport.

Protective cage for operator during the stressing phase is included.

Witech exit-bridge and strand spacers



The exit bridges are needed to use the full length of the casting beds during the production.

The exit bridges are special metal bridges for the correct exit of the machines at the end of the casting bed.



The strand spacer are used to keep the pre-stressing strands in the right position and are adjustable by height.

They are build with strong steel and are mounted at the beginning of casting beds.

Witech Dispatcher

The DISPATCHER machine is used for unwinding and transporting of all the reinforcement strands simultaneously.

The machine is composed of a robust frame of rolled steel profiles, the carriage travels on the casting beds by means of 4 drive wheels, providing a better adhesion with the rails.

The carriage is equipped with electric motors for running at double speed for both ways, forward and back.

During the first travel, the machine cleans the bed and removes the residual waste by means of a rotating brush.

During the second travel, the pre-stressing strands are transported and unwound.

During the last travel the strands are lifted, by means of special hooks, and oil is sprayed by pressure on the casting bed.



Witech casting machines



WI-EXTRUDER

With Wi-extruder, Witech has implemented new solutions for the improvement of this type of casting machines.

Witech WI-extruder casting machine it is perfect for a high quality of pre-stressed hollow core slab production in different cross sections.



WI-FORMER

With the new Wi-Former casting machines, we looked for the highest level of technology possible to ensure our customers an excellent quality of the products.

Witech WI-Former it is perfect for a production of different type of concrete products, like: Hollow core slab, T-beams, Lintels, Double T slab, light wall panels, Poles.



Witech Light Wall Panel Machine - LWP



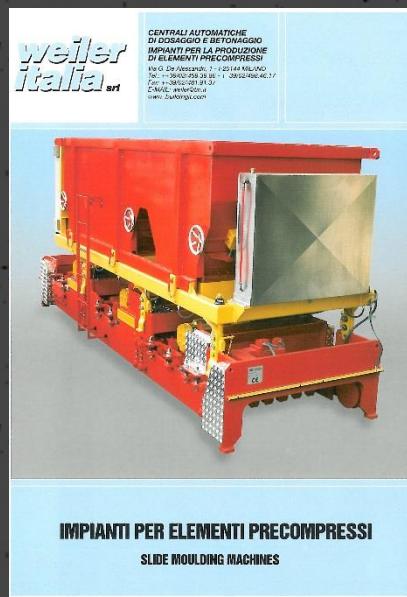
Witech LWP light wall clay panel machine, casting machine for manufacturing of non-load bearing, precast partition wall panels.

This clay panels are perfect for the partition wall in the precast buildings, the transportation and installation, are very easy and are also very fast and cheap compare the classic block for wall.

The Witech LWP machine is assembly for SLIPFORMER casting machine, with the same silo and two different assembly, the customer can produce Hollow Core Slab and Light Wall Clay Panel.



History of WiTech casting machines



Witech Cutting saw



The Witech cutting machine is designed for making the most used types of cuts of the pre-stressed hollow-core slabs, and other elements with max height 500 mm,

The saw travels on the casting beds' rails by means of 4 wheels, two of them are drive wheels, with electric drive with brushless motors.

The machine has the following features:

Adjustable travelling speed

Hydraulically driven blade with adjustable speed

Cutting blade cooling system

Hand-operated and full-automatic cutting cycle

DIGITAL LASER POINTER



Witech carrier for plastic covering



Witech CARRIER for Plastic Covering

This machine unwinds and winds the cover sheets on the elements travelling on casting beds rails.

Witech carrier for plastic covering is using to keep the temperature during the maturation phase, avoiding water evaporation of concrete elements.



Witech lifting beam with clamps



Witech Lifting beam for concrete elements complete with automatic clamps for the Hollow Core Slab slabs and for Light Wall Panels

The LIFTING BEAM It's a special equipment's needs for the lifting of the concrete elements from the casting bed in the right way and following the safety rules



WiTech special formworks



WiTech special FORMWORKS

WiTech has specialized in the production of molds, vertical batteries and tilting tables built according to the needs and specifications of the customer.

All formworks are equipped with vibration system and aging and the entire automatic hydraulic needed. On customer request, we can also realize formwork full manual.

The Witech molds can produce columns, beams, and girders in double slope, dividing panels, electrical cabinets, stairs, blocks ventilation and more.



Witech automatic line for foundation poles



WiTech has specialized in the production of automatic and manual plants for the production of foundation POLES. It is equipped with an automatic system for distribution of the concrete in the formworks which are provided with heating system and automatic vibration.

Alternatively can be supplied only formwork system without automatic distribution of concrete.



Witech concrete transportation

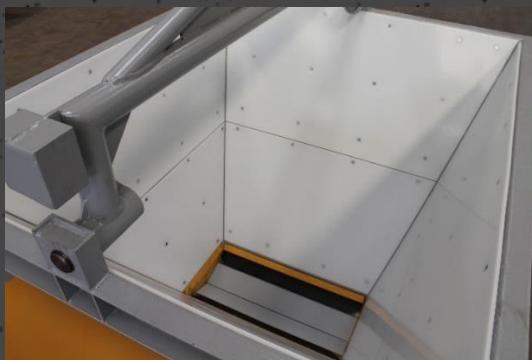


WITECH CONCRETE BUCKET

To transport concrete from the batching and mixing plant to the casting point by means of a crane.

The bucket is made of steel plate construction equipped with double sector gates, electrical driven, automatic opening with remote control

The bucket is made also with and internal wear protection.



Witech concrete transportation

WITECH CONCRETE SHUTTLE

It's a full automatic system to transport concrete from Mixing & batching plat to casting machine or casting crane, consists of the solid steel structure, travels on the double rails along the straightway routes.

The shuttle is equipped with the remote switches for opening/closing, two more remote safety switches for opening/closing, two limit switches for variating travelling speed. Remote control for discharge and slow speed.



Witech concrete transportation



WITECH CASTING CRANE

It is a half-portal type crane and it serve as intermediate concrete storage between the concrete transport line (shuttle) and the casting machine or moulds.

In the casting crane system, concrete is batched in the casting machines hoppers full automatically without any operator, and this system is perfect for save time during the casting operations.



Witech mixing & batching plant

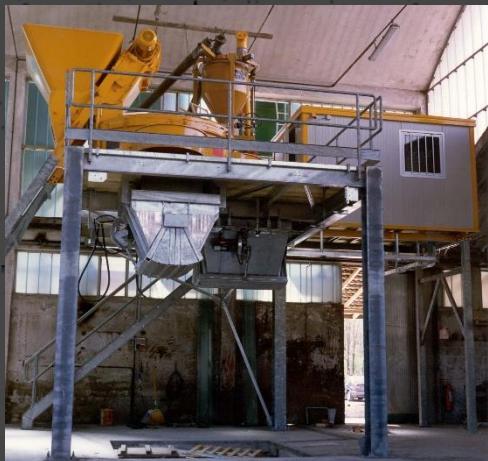


WITECH MIXING AND BATCHING PLANTS

Witech is specialized in the project and production also of mixing and batching plants, with high technological level, as well as in the reconstruction and modernization of the existing mixing and batching plants following the client's requirements.

The Witech M&B plants are made in accordance of customer needs and are suitable for ready mix and prefabrication concrete.

Witech mixing and batching plants are designed according to the specific climatic conditions.



WiTech mixers PW & OW



Planetary PW, have been specially studied for the production of concrete for the use in the precast industry, the Witech planetary mixers main features are, perfect and smooth mixture in the shortest time, high productivity at constant mixing quality, long-lasting use at low operational costs.

Twin shaft mixers OW, are specially made for the production of great amount of concrete and the main features are, high-speed mixing, quick discharge, low-cost production and quality of the mixing batch.



Concrete Technology **CONCRETE Future**

Our society is sure that it is really possible to meet every requirement; for this reason our staff is always seeking for some new valid methods, in order to favor its research for a better productivity.



Thank you for your attention