

# **GENERAL PRODUCT CATALOGUE**

**PRECAST CONCRETE EQUIPMENT**

**DESIGN  
MANUFACTURING  
&  
INSTALLATION**



**YOUR LONG TERM PARTNER**



 **Moldtech**  
PRECAST CONCRETE EQUIPMENT



## ABOUT US

At Moldtech we are at your disposal to provide innovative solutions to any kind of need in the area of moulds for the prefabricated concrete industry, ranging from a custom designed mould to the installation of fully equipped plants on turn-key basis.

Our manufacturing process is certified under ISO standard 9002 and our products comply with all European standards.

Our factory, covering more than 15.000 sqm, has the latest production technology and our workforce consists of a highly skilled and motivated production team. We have our own design department where our engineers create new products and adapt existing designs to the specific needs of our clients. In addition, as a specialised company, we have the ability to be flexible and to have close and efficient communication channels with our customers.

We offer a full service approach that begins in the design stage and covers aspects like on-site installation, test production and after-sales service. Nowadays our products are exported to 4 continents and international sales represent about 80% of our business revenue. This catalogue will give you a first idea about what we do and who we are, but we'll gladly provide you more information in order to explore possibilities of future cooperation.

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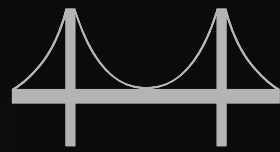
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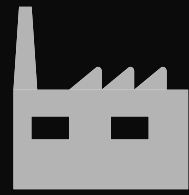
## Quality 89

## BUSINESS

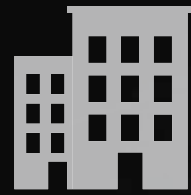
DESIGN, MANUFACTURING & INSTALLATION OF  
PRECAST CONCRETE EQUIPMENT FOR



CIVIL WORKS



INDUSTRIAL



RESIDENTIAL

A COMPANY COMMITTED WITH  
COMPETITIVENESS, DELIVERY DEADLINES & PROFESSIONAL SERVICE  
FOR TAILOR MADE PROJECTS

MOLDTECH IS A FAMILY RUN COMPANY  
ESTABLISHED IN 1986  
TO BECOME A WORLDWIDE REFERENCE IN  
THE PRECAST CONCRETE SECTOR.

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We reinvest annual profits to improve methods, knowledge  
and capacity to continuously strengthen  
the company.

# VALUE CHAIN



**MODERN FACILITIES**  
+ 15,000 SQM



**MULTIDISCIPLINARY EXPERTISE TEAM**

8,000 SQM FOR PRODUCTION  
1,500 SQM FOR CNC MACHINING



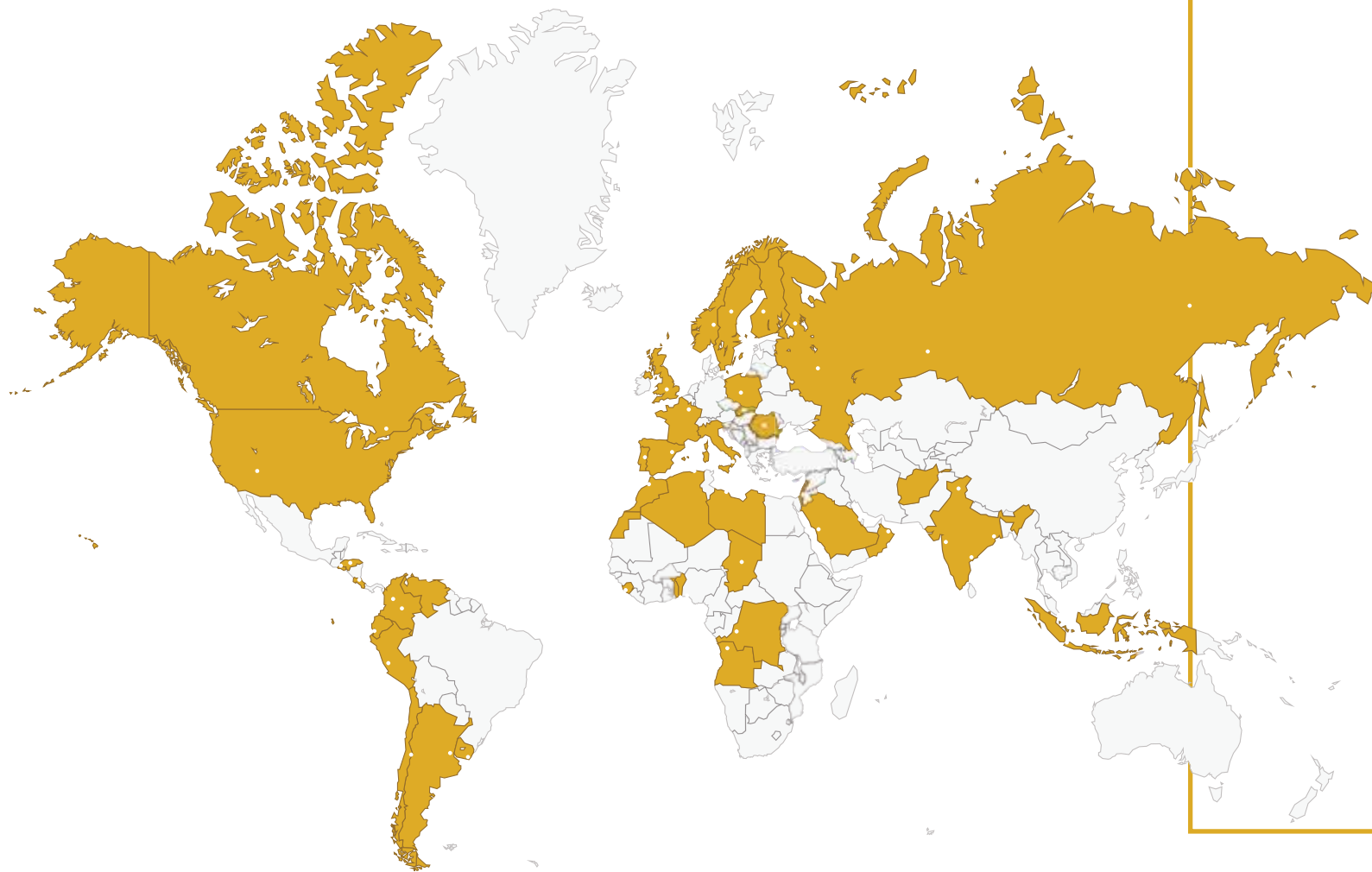
MOLDTECH DEVELOPS FLEXIBLE & COMPREHENSIVE PROJECTS TAILORED TO THE HIGHEST QUALITY, PRODUCTIVITY & SECURITY STANDARDS.

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We strive daily to serve our customers with efficacy, proactivity and proximity.

## PROJECTS

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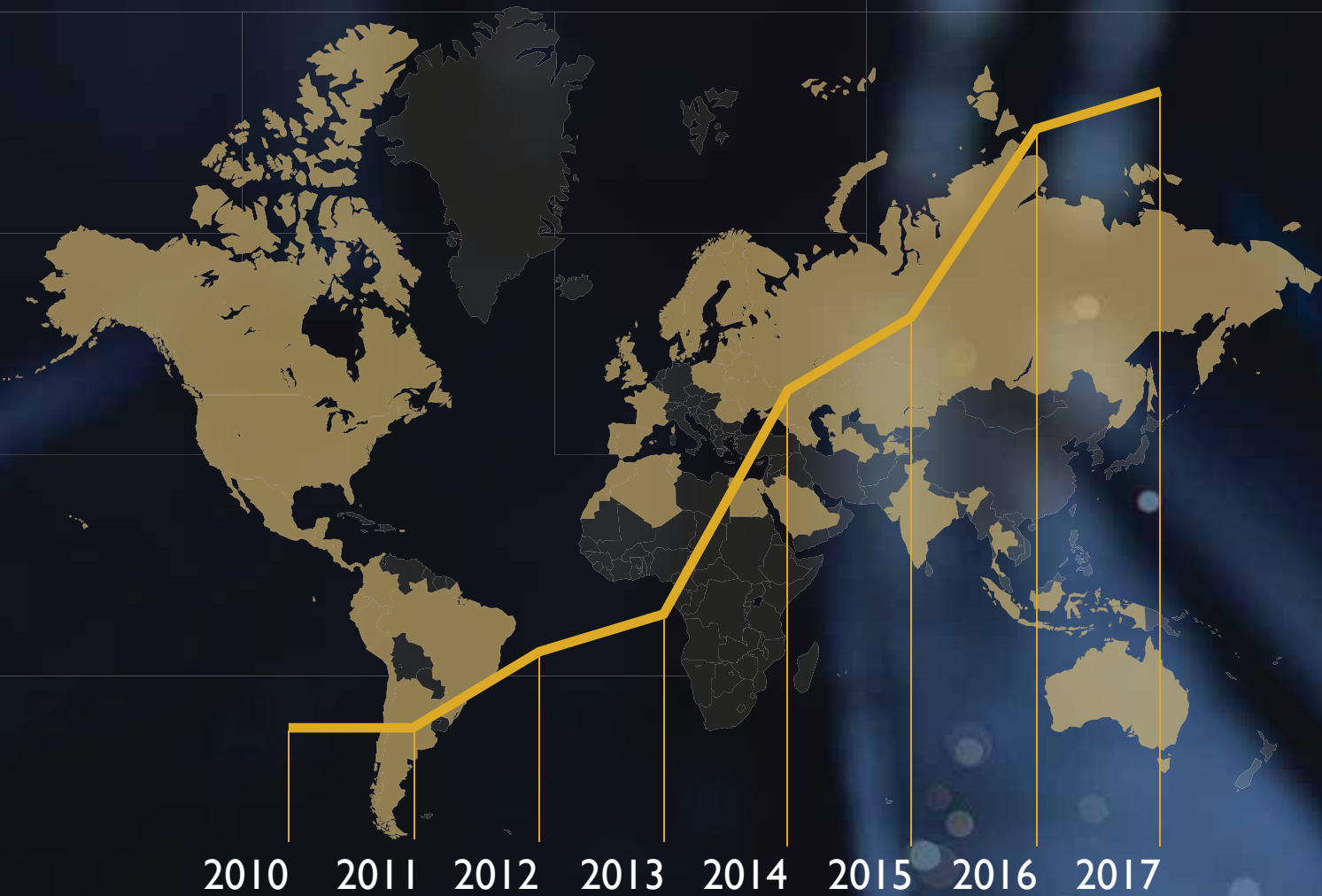
WE OFFER OUR CLIENTS ANY RANGE OF SERVICE STARTING FROM PRELIMINARY MOULD DESIGN TO COMPREHENSIVE TURN KEY PROJECTS FOR PRECAST MANUFACTURING PLANTS INCLUDING COMMISSIONING AND PERSONNEL TRAINING.

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- Fixed & mobile moulding systems
- Moulds for structural and enclosure elements
- 3D and box culvert moulds
- Special moulds for highways and drainage
- Equipment & accessories for manufacturing support
- Fully-equipped precast concrete plants

# KEY FIGURES

# OF PROJECTS

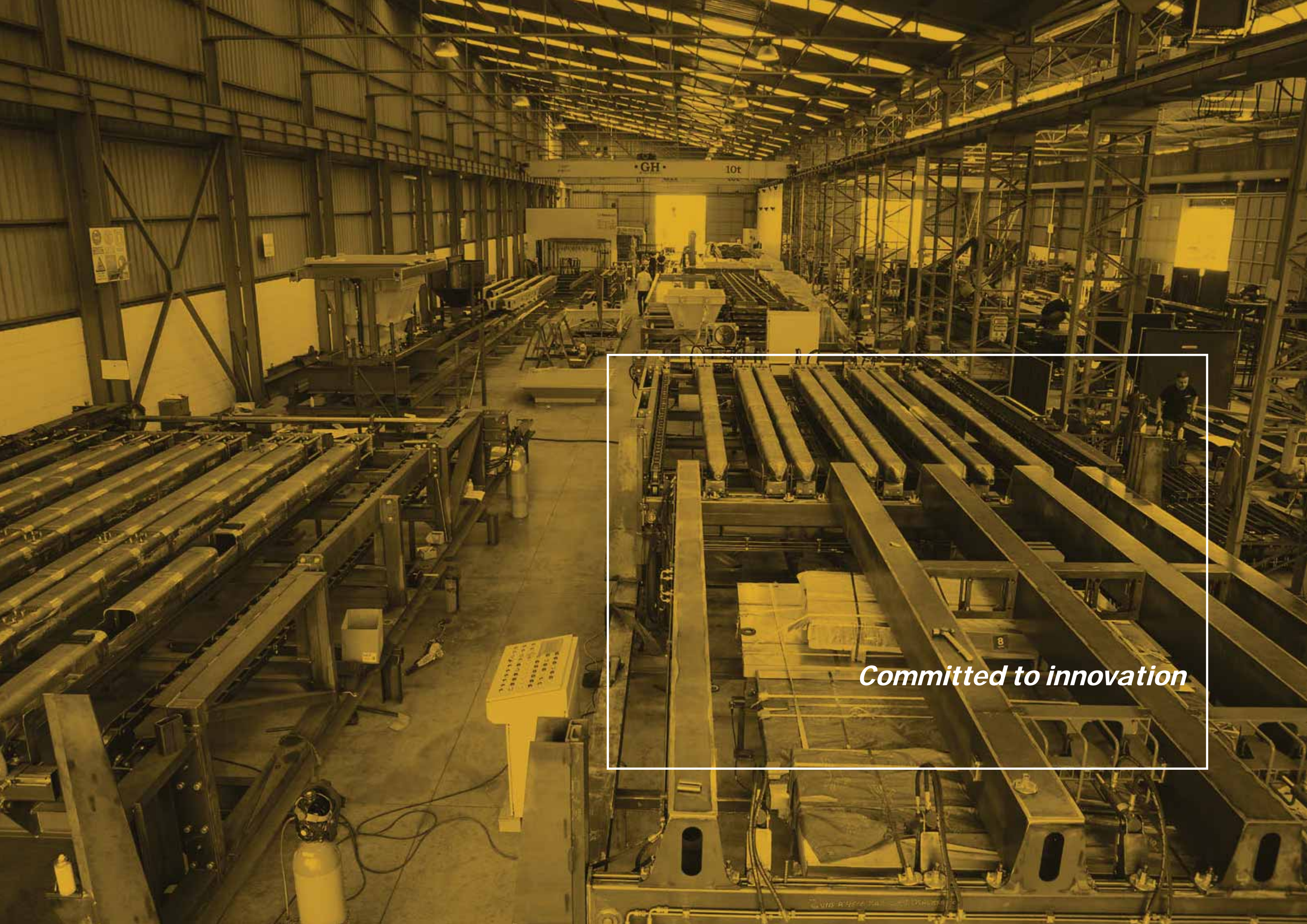


## GLOBAL RESPONSE.

MOLDTECH IS PRESENT WORLDWIDE, WITH PROJECTS OVER 4 CONTINENTS AND 80% OF INTERNATIONAL BUSINESS REVENUE.







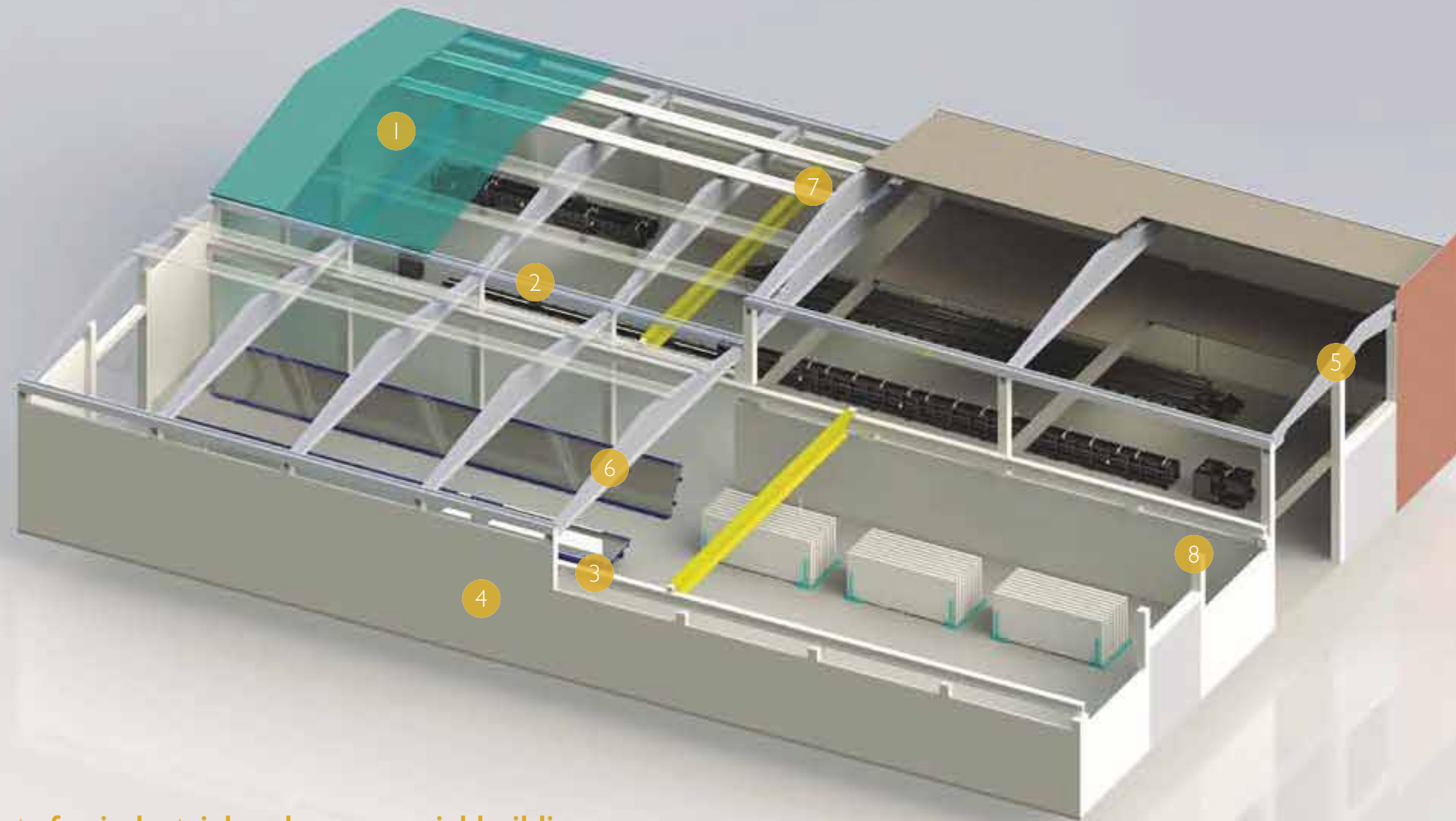
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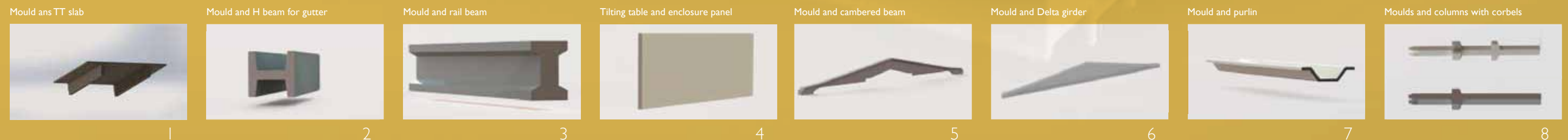
*Committed to innovation*

# INDUSTRIAL

This section describes our key equipment & moulds for the production of pre-cast concrete elements used in industrial and commercial buildings.



## Examples of precast elements for industrial and commercial buildings



Universal casting bed systems



Detail of casting bed system

The pre-stressed elements are manufactured on a universal casting bed with the sides of the mould giving shape to the desired pieces. The pre-stressed cables are retained by so-called stressing heads located at each extreme side of the bed.

The bed is used for the fabrication of any pre-stressed element for industrial, residential or civil works structure.



Casting bed for pre-stressed elements

Types of base plate systems



Changeable baseplate system



Fixed baseplate system

Tensioning heads for pit foundations

Moldtech stressing heads are designed, calculated and made according to the sections of beams and girders to be casted and to the amount of tension to be applied.

Stressing heads include safety lids to enclose the stressing grips and protect the operator. The active stressing head includes a set of hydraulic cylinders in order to perform a controlled de-tensioning operation.



Active stressing head



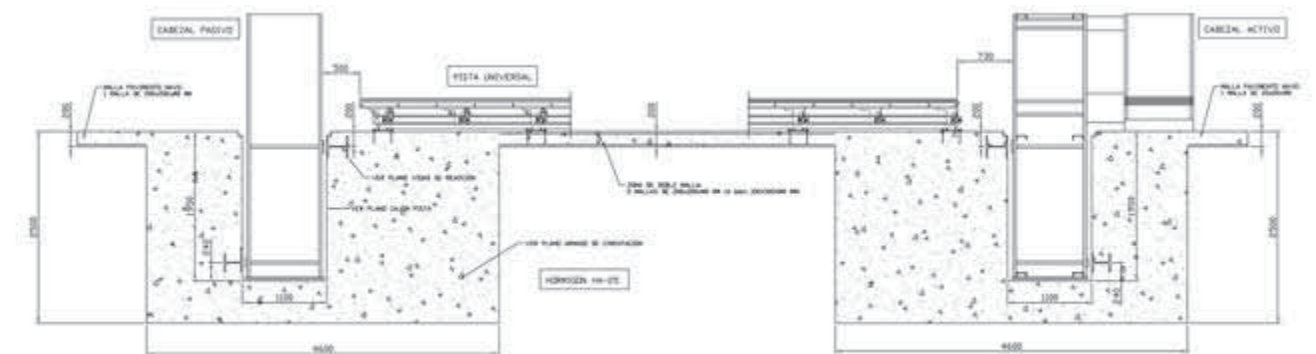
Passive stressing head



Storage boxes for tensioning strands



Safety lids



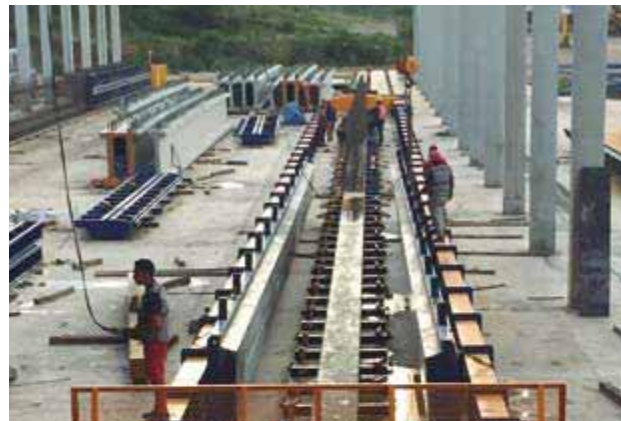
Example of pit foundations for tensioning heads

### Self-stressing steel structure

Self-stressing system whereby the prestressing force of the strands is absorbed by lateral beams in order to reduce the amount of civil works during installation. This system is more suited for casting beds of around 50 to 70 meters.



Construction of the concrete reactioning bed



Production of inverted T beam on a concrete bed



### Self-stressing concrete structure

System composed of concrete structure which absorbs the pre-stressing force, particularly suited for casting beams with large cross sections such as those used in the construction of viaducts.

This system is also recommendable for casting near to the construction site. The concrete structure is made up of individual blocks which can be easily transported elsewhere.



Production of bridge girder on a concrete bed



Construction of the concrete reactioning structure



Passive stressing head on self-supporting bed



Active stressing head on self-supporting bed

Mould sides for prestressed elements



'I' beam mould smould sides with height modulation

Moldtech manufactures mould sides for any type of beam and girder to be used with the different types of casting bed systems.

Mould sides are tailor made according to client's requirements and designs. They can be built in sectional and longitudinal modules in order to achieve different sizes and the required configuration.



Delta beam mould on self-supporting bed



Delta beam



'I' beam mould on casting bed



'I' beam as part of a building structure

Moulds sides for prestressed elements



Mould sides for TITL beam on casting bed



Production on casting bed



Prestressed support girder



Mould sides for "H" beam used as water channel



'H' girder

Mould sides for prestressed elements



Mould sides for bridge girder



Bridge girder



Ypsilon roof girders



Mould sides for Ypsilon



Mould sides for 'Omega' shaped beams and slabs

Mould sides and upper mould for 'omega' shaped elements, such as roof slabs or even 'omega' beams for viaducts. This equipment is easily integrable with facilities for the production of hollow core slabs.



### Self supporting mould for TT slabs



Self supporting TT mould for roofs or pre-slabs of industrial and commercial buildings such as parking garages.



### Production process for TT slabs



Battery moulds for prestressed joist beams



Self supporting mould for the production of prestressed joist beams.

The mould has tensioning heads and a hydraulic system in order to perform safe-detensioning of the cables.



Mould for H beam for collection of rain water





Other moulds for reinforced beams and girders



Hydraulic double mould for columns

Double moulds for making 2 columns at the same time. The mould allows different columns sections and opens and closes hydraulically. Possibility to have corbels on 3 sides.



Hydraulic double mould for columns prepared with end stoppers



Hydraulic double mould for columns prepared with reinforcement



Detail of upper corbel mould



End stopper prepared with shape for connection



### Versatile column mould

Moldtech manufactures different types of moulds for reinforced concrete columns. Simple and double moulds, hydraulically or manually operated, we can build moulds according to any client's requirement.

This mould allows incorporating corbels on the four sides of the column and at almost any position alongside its length.

The functioning of the mould is completely hydraulic.



Versatile column mould



Detail of corbel shape



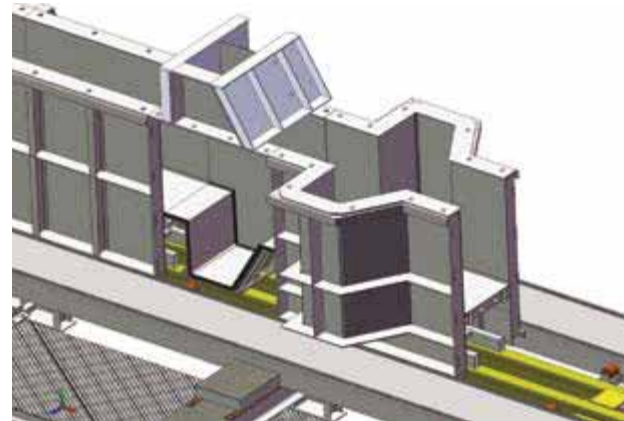
Example of column with a large amount of corbels



Versatile column mould



Columns with 2 corbels



Detail of mould section with 4 corbels

### Simple mould for columns



Hydraulic simple column mould

Simple moulds for manufacturing one column.

These moulds can be manually operated with detachable or collapsible sides or with hydraulic system to operate opening and closing movements.



Precast columns with corbels

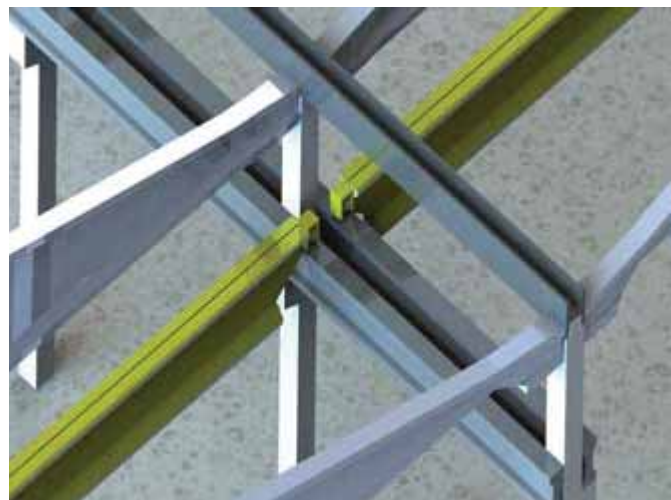
### Mould for prestressed purlins



### Use of precast columns in industrial buildings



Design of industrial building



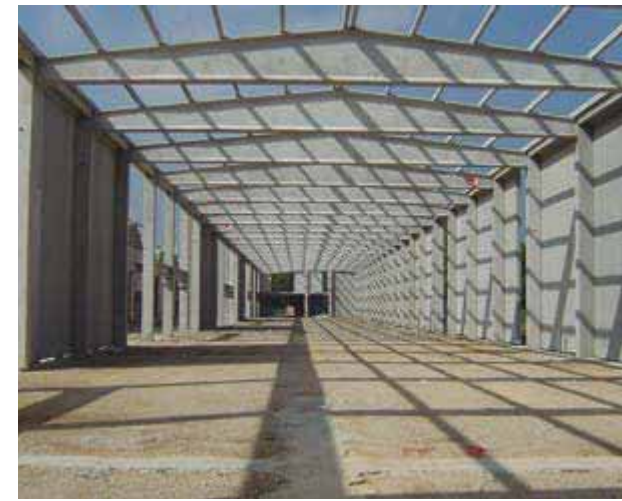
Detail of connections



Industrial building with delta beam and roof beam



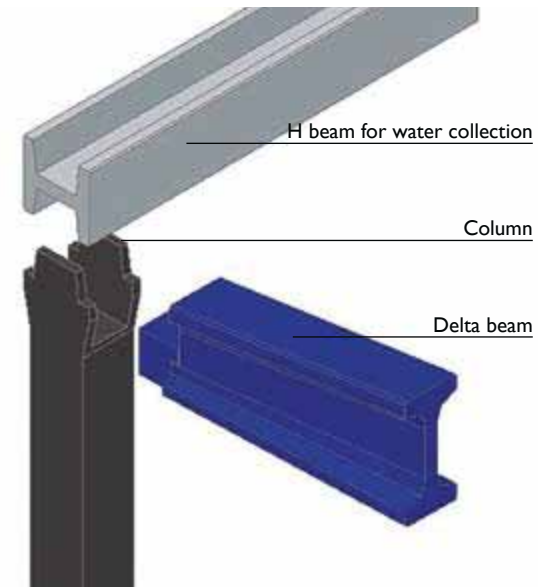
Office building



Industrial building with purlins on delta beam



Industrial building with double T slabs on top

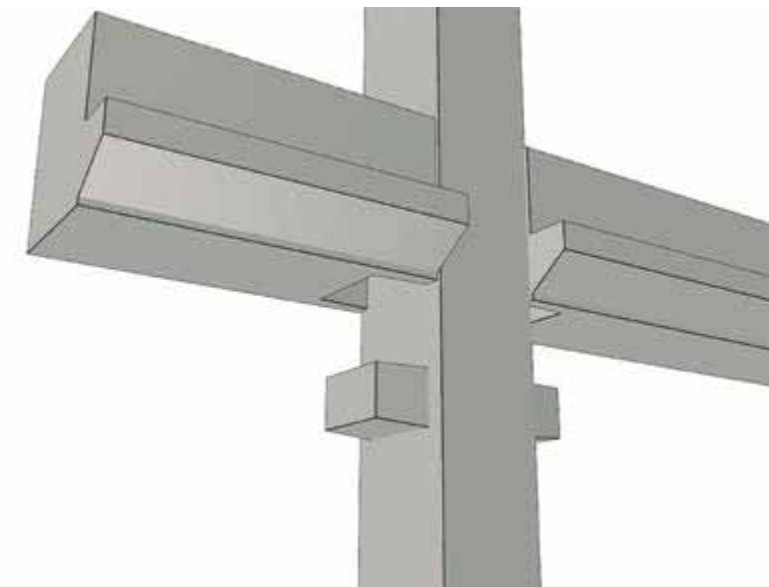


H beam for water collection

Column

Delta beam

Example of construction detail



Example of connection of column with main girder

Tilting table

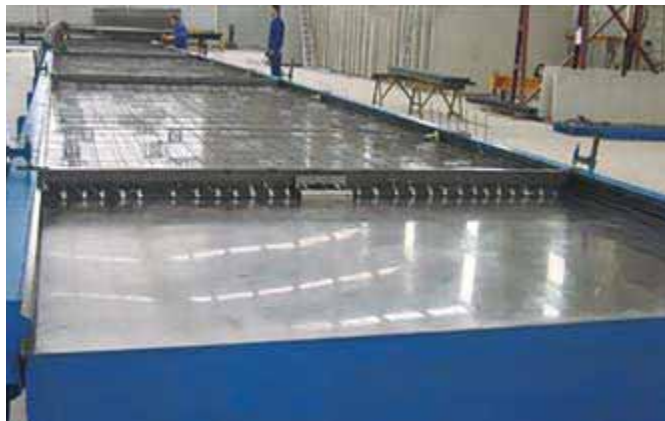


Tilting table with polished surface

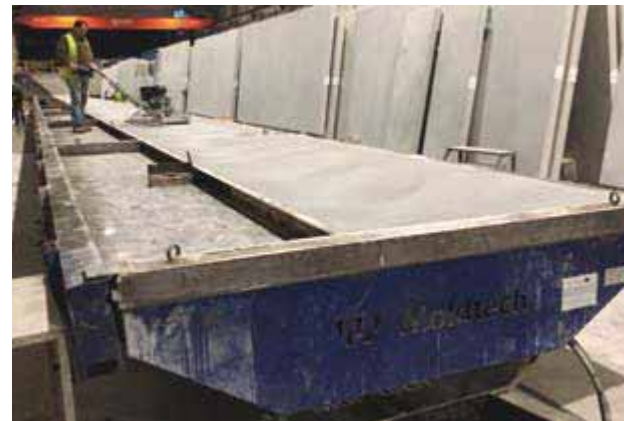


Tilting table 48m long

Tilting tables manufacture precast concrete panels which are used for the closing of industrial and public buildings. These tables are manufactured according to client's specifications and normally have two detachable or collapsible sides for manufacturing panels with a fixed height.



Tilting table prepared with magnetic shutters



Examples of precast panels



Panel with window



Industrial building with precasted panels



Panels with mirror finish

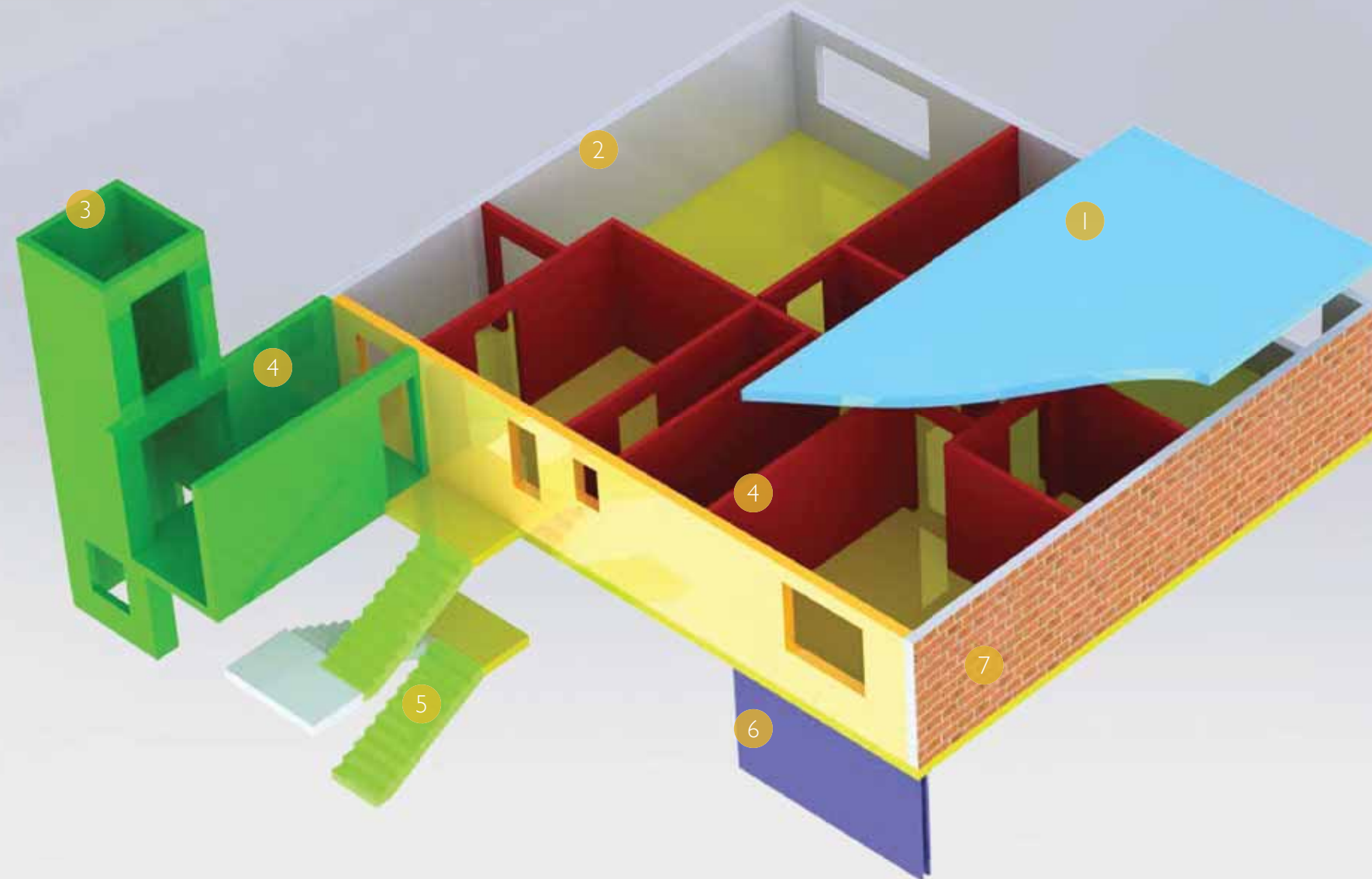
Marca	Descripción
1	0611100 (Módulo)
2	Cableado PE 3 100 A
3	06 0317 (B) Módulo cable
4	058 brida para módulo
5	074 cuna cablea 110
6	059 protección
7	057 protección
8	043 Apoyo cuna
9	068 Protección superior
10	070 Perno centrado cabeza
11	Arandela plana DIN 125 - M 24
12	Arandela girator DIN 127 B - M 24
13	Tuerca hexagonal DIN 934 - M 24 calidad 8.8
14	Placa cabeza hexagonal DIN 933 - M 24 x 70
15	Chapa cadena



*We design for living*

# RESIDENTIAL

This section describes our key equipment & moulds for the production of precast concrete elements used in residential buildings.



Example of installation with precast elements for residential buildings

Fixed table and floor slab



1

Tilting table and panel



2

3D mould and 3D element



3

Vertical battery and inner panel



4

Staircase mould and staircase



5

Mould for double walls and sandwich panel



6

Double book mould and finished panel



7

Precast installation for residential projects



India: complete installation consisting of more than 2km of moulds, for the production of precasted beams used in social housing projects



India: building construction with precasted elements



Russia: tilting tables 12 x 4 meters with fixed side



Venezuela: complete installation for the production of 3.000 precast housing units per year, using tilting tables of 15.5 x 3 meters



Residential construction projects with precast elements



Venezuela project: erection of the buildings



Venezuela project: view of finished buildings

Tilting table



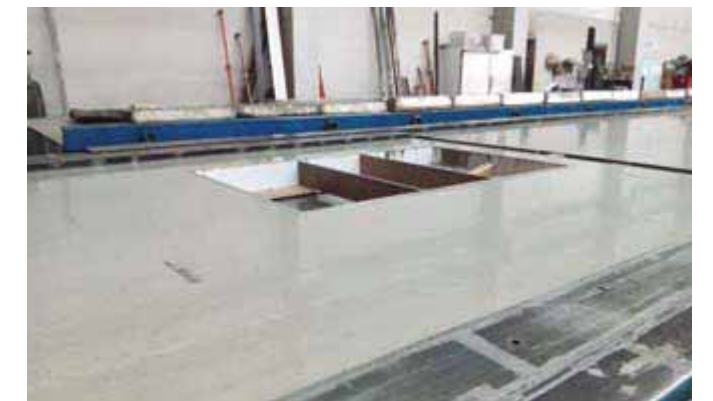
Tilting table 12 x 4.5 meters with capacity of 600 kg/m2



Tilting table with polished surface



Tilting table with heating on the floor



Detail of tilting table with polished surface

The width of these tables is normally 3.5 to 4 meters and its length depending on the specifications of the project. Many different sizes of panels (length and width) with its reinforcement can be produced on these tables, by using panel formwork.

Also it is possible to make panels of different thicknesses making these tables a very versatile production tool.



Detail of residential panel with insulation



Residential building with precast panels





Fixed tables for floor slabs



Fixed tables specially prepared for producing reinforced floor slabs and reinforced panels with short span width. This table is frequently used for social housing projects.



Fixed table with insulation tarp



Example of pre-slab for residential floor



Tables of 60 meters

Moulds for double walls



Example of installation

This mould is used for the production of sandwich-type reinforced walls with 2 concrete layers and for instance a layer of insulation material in between. Its design allows the production of panels of different thicknesses. It is widely used in basements and underground parkings. Using panel formwork it is possible to insert window and door openings.

Double book mould

This mould is a hybrid between a tilting table and a battery mould. There are 2 surfaces: one horizontal and one vertical. On the horizontal surface one could cast panels with for instance a first layer of bricks, natural stone, marble etc. and a second layer of reinforced concrete and insulation material. After casting the horizontal surface, this is tilted forming one piece with the vertical part as if it were a battery mould. The vertical part, in which previously has been placed its own reinforcement, electric circuit cables and boxes etc.. is then casted obtaining a smooth finish of the other panel surface.



Double book mould



Closed mould with side tilted



Detail of adjustable shuttering separators

< Finished panel with windows

Vertical battery mould

This mould is specially used for making panels which on both sides need a smooth finish. The size and amount of panels can be adjusted to the requirements of the client, the vibration system can be either electric or by air vibration.

A battery mould provides a high production capacity using a minimum of space.



Staircase mould

Hydraulic double mould for manufacturing 2 staircase stretches.

The height of the stairway stretches and the depth of the steps can be designed according to client's specifications and it can also manufacture a complete stretch including a landing.



Magnetic shuttering



Shuttering system with protruding reinforcement



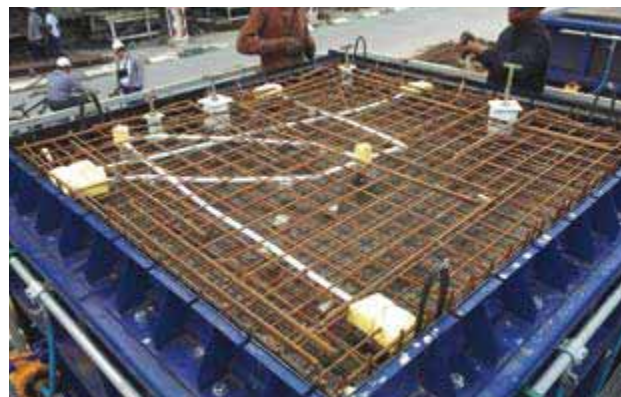
## Prefabricated bathroom units (PBU)

Mould for the manufacture of concrete elements with 3D system: casting the 4 walls and the floor in a single monolithic piece of great structural resistance.

The moulds are fully hydraulic on the outside and they have an innovative retraction system of inner walls for perfect demoulding.

180° turning devices are supplied with the moulds to the correct turning operation of the elements.

Therefore, this mould facilitates both assembly and final installation times.



## Mould for elevator shaft



Modular mould system for manufacturing drycast concrete pieces to build elevator shafts.

The size and thickness of the frame can be adjusted by inserting or removing additional segments.

This allows the mould to produce frames compatible with most elevator manufacturers.

The use of drycast concrete enable quick demoulding of the piece, which allows manufacturing a considerable number of pieces per day.



Finished piece



CE 97  
O.F. 32721

JASD

5th

GH

10t

GH

5t

GH

10



*Building future*

# CIVIL WORKS

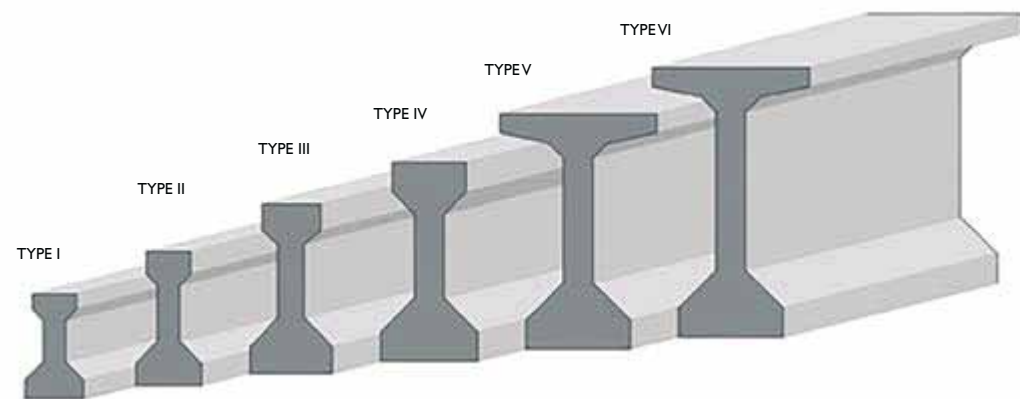
This section describes our key equipment & moulds for the production of precast concrete elements used in civil works.



### Moulds and casting bed systems for bridge girders

Moldtech manufactures moulds and casting bed systems for manufacturing any type of bridge girder according to AASHTO, CPCI, NPCAA, or any other international standard.

Please check pages 20-21 for more information regarding our casting bed systems.



Sides for bridge girder



Pre-stressed girder



Fixed table for pre-slab



Making a slab with pre-slabs in a viaduct

### Mould and casting bed system for prestressed box girder



Shuttering with protruding bars



Vibropressed dry cast box culvert mould MT20



8 to 10 box culverts per working shift

High productivity system for the production of box culverts using dry cast.

Advantages:

- One mould for sizes from 2 x 2 to 4 x 3
- Mould can be installed without previous civil works
- Possibility of using various thicknesses
- Maximum stiffness
- All functions are carried out hydraulically
- Easy transport from one production site to the next



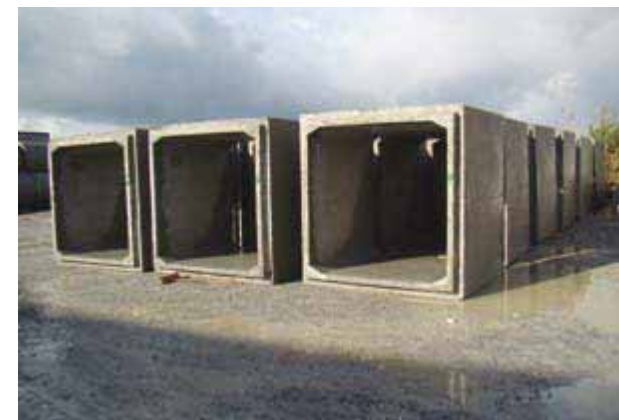
MT20 mould with hydraulic unit and control panel for electrical vibration.



MT20 baseplates, ready with reinforcement.



Precast box culvert after removing MT20 inner and outer moulds.



Precast concrete box culverts made with MT20 system.



Adjustable mould for box culvert wet cast



Manual system to manufacture wetcast box culverts. The mould allows to insert or take out panels in order to adjust the size and thickness of the pieces. It is easily operated allowing demoulding in few minutes. It allows manufacturing pieces with or without spigot joint.

With 2 sets of bases the system allows manufacturing up to 2 pieces a day. It can be easily transported and installed at the construction site.



Installation of finish product

Separators for dividing box culvert into two half frames



It is possible to insert stoppers in order to cast 2 half frames with spigot connections. This feature allows casting concrete pieces in dimensions that are easier to manipulate, store and transport.





## Mould for making large size half frames

The length of the mould can be made adjustable and can include hydraulics for opening and closing.

The bases of the mould can regulate the height of the casted element and can incorporate a spigot former.

A transversal separator can be inserted to adjust the width of the half frame.

Furthermore, the mould features a gangway, a vibration and a heating system.



Placement of half frame as highway underpass



## Turner for box culvert and pipes 90°



This turner for box culverts and pipes comes with CE marking and is designed to turn the pieces 90° to their final position.

The machine performs the movement by a hydraulic system, which is composed of cylinders and a control unit with electrical panel. The turner can be easily transported by overhead crane or forklift.



## Mould for prison cell



This machinery allows the production of elements with 4 sides plus the floor or ceiling and allows to have a seamless connection between the sides.

examples of applications are transformer stations, underground waste containers, prison cells, housing modules, toilets etc.

Advantages:

- Minimal conical inclination
- Hydraulic demoulding
- Rapid system for taking out exterior walls
- Custom made designs



## Mould for transformer station



## Mould for containers



Multi-cells mould



Mould for drainage gutter



Mould for drainage channel



Fixed table for making drainage channel covers



Mould for niches



Mould for niches



Mould for niches



Niches

Moulds for manholes and catch basins



Mould for catch basin



Mould for wing walls



Catch basin



Wing walls

Sports facilities



Mould for grandstands



Grandstands

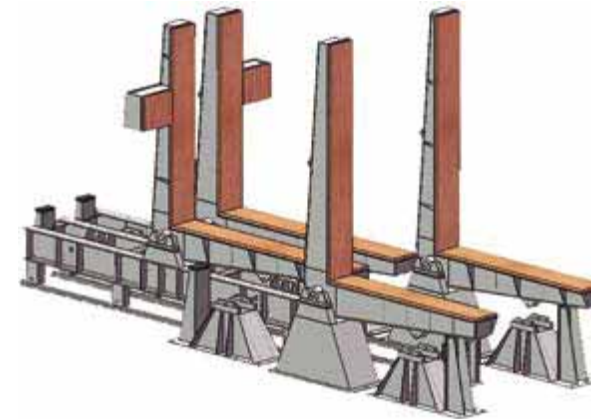
Turner 180° for 3D elements



This machine is designed to turn 3D elements by automatic movements a total of 180°.

It can turn underground containers, transformer stations and other 3D elements that are casted upside-down.

Control unit activates hydraulic telescopic cylinders which turn elements up to 40 T.



Moulds for New Jersey barriers



Moldtech designs and manufactures moulds for any type of concrete barriers and parapets. These moulds are produced in accordance to the specifications of our clients and the local legislation. We have wide experience manufacturing moulds for EN 1317-2 test approved barriers and can adapt our moulds to meet any safety requirement.



Double mould for New Jersey barrier



Detail of finished piece



Turner for New Jersey barrier



Turner for extracting and turning the New Jersey barrier. This turner can be attached to forklift truck and works autonomously by diesel generator. It comes with remote control.



Detail of turner with precast element



Mould for bridge wings



Detail of bridge wings



Machinery system for prestressed road slabs

High productivity machinery system for manufacturing reinforced and prestressed concrete slabs for highway projects.

It is a highly automated process allowing manufacturing many meters a day with very few workers.



Mould for highway retaining walls



Mould for manufacturing L shaped retaining walls for highway projects. Its functioning is similar to a tilting table.

Easy demoulding system that allows extracting and handling the pieces with a forklift.



## Carrousel system for precast concrete elements



We design and manufacture carrousel type installations for different types of reinforced precast elements like cable trays, manholes, decorative elements etc..

The carrousel moves the moulds alongside the different stations such as filling, steam assisted curing, demoulding and cleaning.

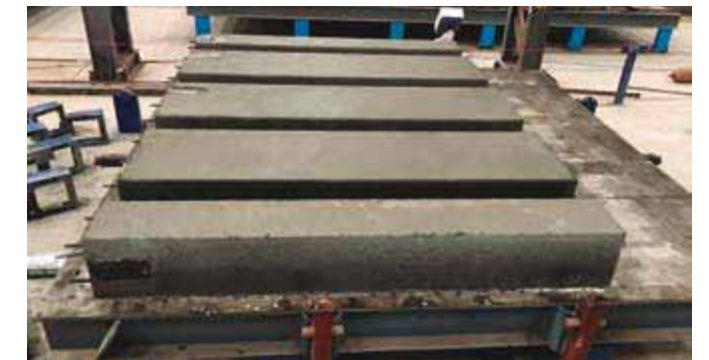
The carrousel makes it possible to manufacture large quantities of elements on a continuous basis.



Moulds ready for demoulding



Moulds at filling station



Automatic control unit



Moulds being prepared before entering filling station



*Comprehensive services*



# ACCESSORIES



Automatic equipment for panel lifting



Casting bed cleaning machine



Detail of pouring bucket ruler



Pouring bucket

## Concrete skip



Detail of the hydraulic opening



The skip is used for filling the moulds and its capacity can be designed in accordance to the requirements of the client.

It has autonomous power supply and hydraulic opening and closing of its discharge gate.

## Storage



Storage rack for panels



Storage box for tensioning strands

Automatic concrete spreader



Automatic spreader for tilting tables



Automatic machine for pouring the concrete uniformly along the tilting tables and other equipment in a quick and efficient process with the highest quality control.

The machine features automatic adjustment in order to take into account door and window spaces.

All the process is finished with maximum time and labour efficiency.

All the movements are controlled by one worker with touchscreen unit.



Lifting devices



Balance beam



Balance beam for 3D elements



Balance beam for reinforcement



Balance beam for panels



# LOGISTICS AND INSTALLATION

## Logistics

As early as in the design phase, our technical department develops the machinery taking into account the optimum logistical solution ensuring a safe transport but at the same time searching for cost savings in transport and installation costs. Depending on this analysis the machinery is sent by standard containers, "open top" containers, or directly placed at the ship or any other valid alternative.

At the moment of looking for the best supply route we use outside logistical experts who know our products and have contrasted experience in sending heavy and large machinery.

Prior to its packing and preparation for transport, all machinery is tested at our facilities and can be inspected by the client ensuring that it fulfils all the previously agreed specifications.



## Installation of the machinery

All equipment is delivered to our clients and installed ready for use. Moldtech will provide to the client with sufficient anticipation the requirements the factory should fulfil in order to have a successful installation. Moldtech can also provide assessment about factory lay-out.



All installations are carried out by our own qualified workers starting with levelling the machinery supports up to test production filling the moulds with concrete. We also can assist our clients on subjects like selection of prime materials, reinforcement, etc... Also we will instruct clients' personnel on how to perform maintenance. The equipment is formally received by our client once installation has fully been concluded and test production proves that production can take place achieving the desired standards.



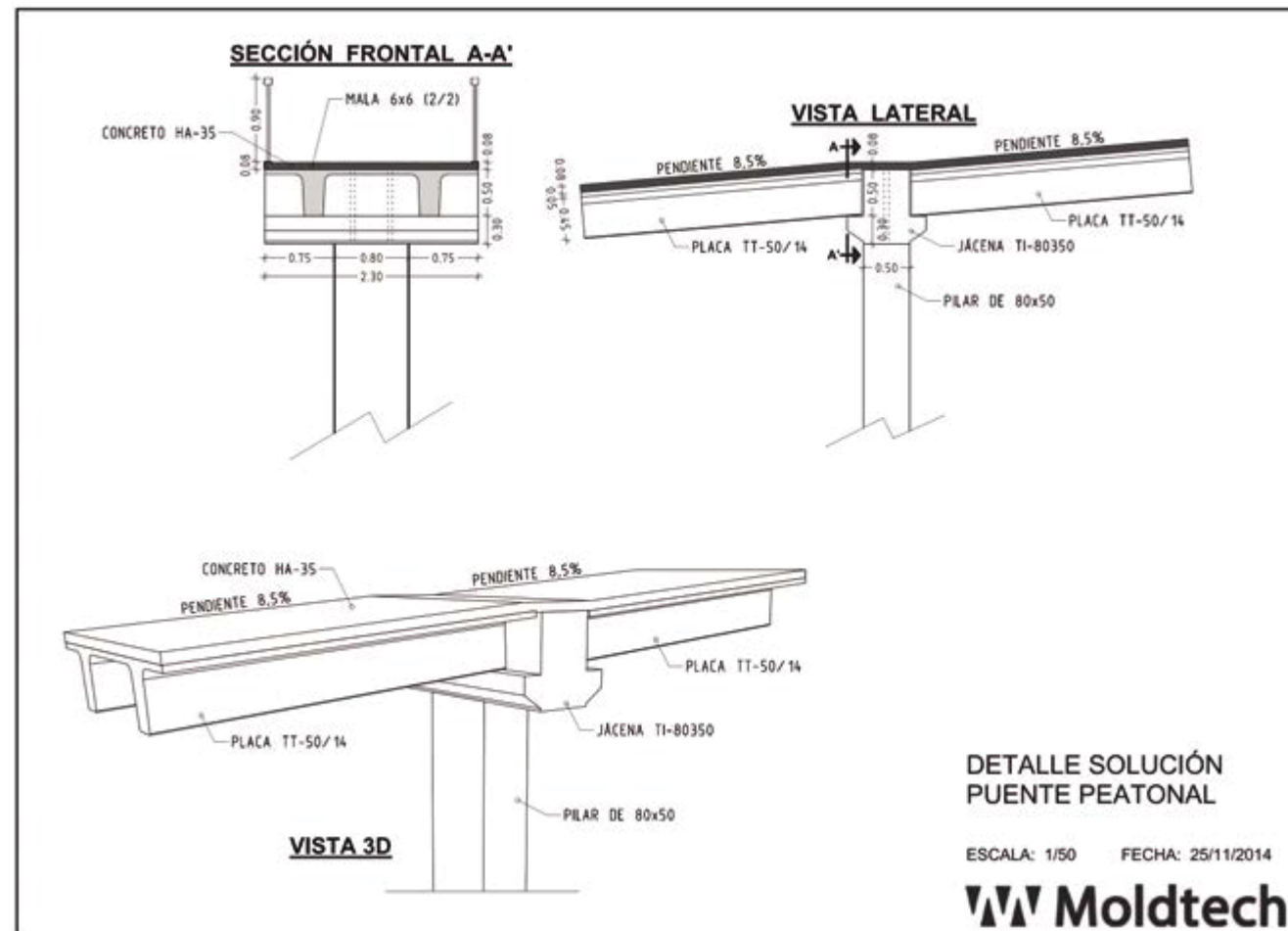
All our personnel in charge of installation will act in accordance to a work safety plan, will have all the corresponding required documentation and will be outfitted with the necessary safety equipment.

# TECHNICAL SERVICES

## Technical advisory service

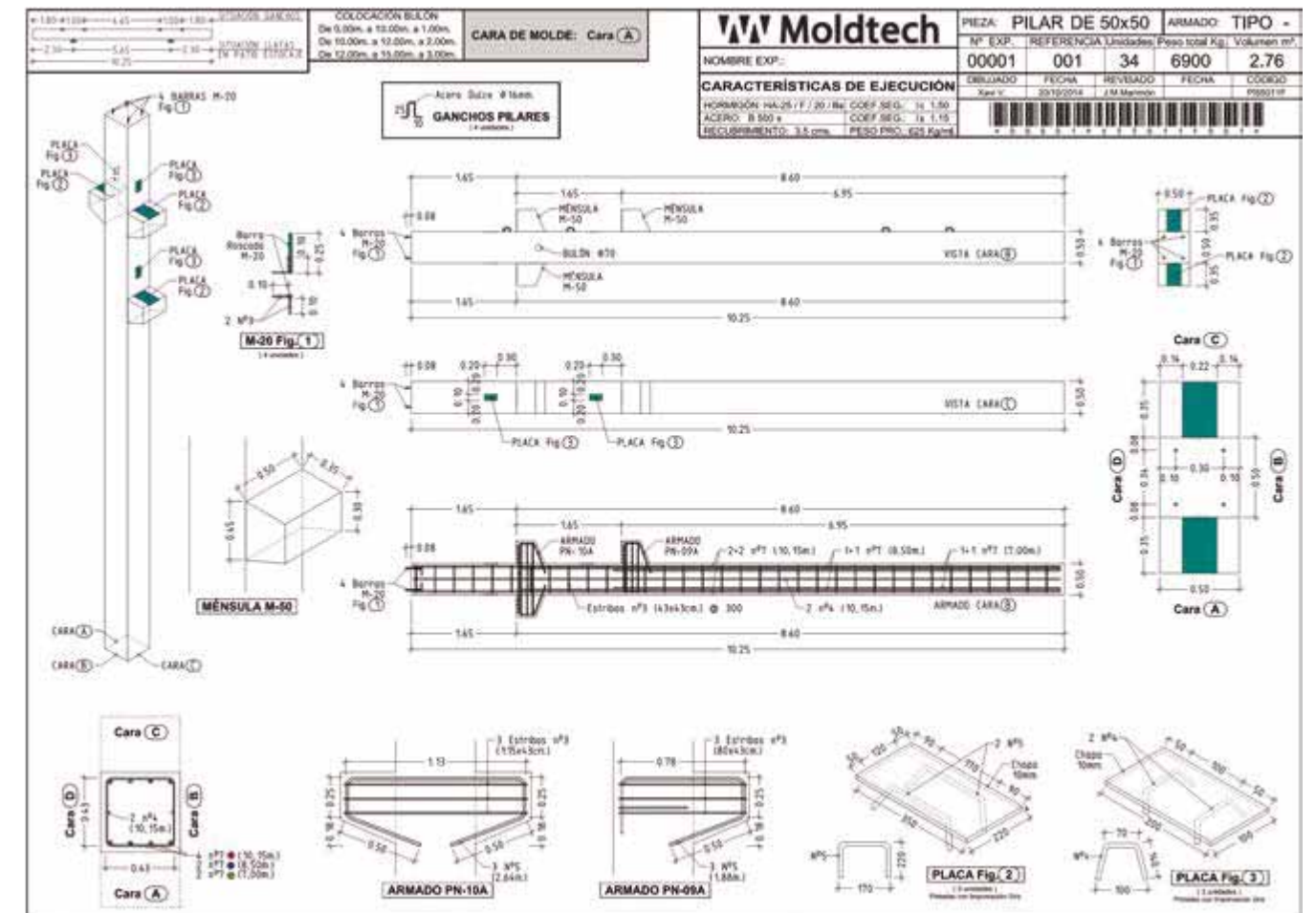
Thanks to the accumulated experience of over 30 years in the industry, Moldtech is able to offer additional services in the area of technical advice. This technical assistance can cover a variety of areas such as:

- The design and structural calculation of precast elements
- Cost price calculation of precast elements
- Factory lay-out taking into account an optimization of production flow
- Organization of work shifts at precast plant
- Job safety plans
- Design of precast buildings



Our assistance can start at the preliminary phase of a setting up a precast factory and accompany the client throughout the whole process towards starting up production.

In order to assure the quality of our services we apply the latest engineering technologies and also form strategic cooperation alliances with outside specialists.



## Expertise

At Moldtech we take special care in training our engineers, installers and technicians.

Most of them have a long time experience in the industry. They are well prepared for their tasks and will ensure all equipment will work in accordance to its expected performance.

The robust design of our equipment combined with proven technology, guarantees low maintenance costs and a minimum of working hours lost due to production interruptions.



## Technical office

Moldtech designs and develops its products by its own team of highly qualified engineers and using the latest software tools in CAD/CAM/CAE for:

- 3D design
- Structural calculations
- CNC machine-drilled and machine-welded parts
- Production control



# QUALITY

## Turn key projects

To set up a total new factory for precast concrete elements is a complicated task as many factors interact and all have to be well coordinated in order to ensure an optimum final result. This implies sourcing of different suppliers, design of factory lay-out, control of construction timetable, costs and quality to name a few.

At Moldtech, in cooperation with partners, we can provide you a global solution which include:

1. Engineering services
2. Consulting and supervision services
3. Courcing of machinery and installation
4. Automation and control
5. Start-up
6. Training
7. Quality control



A close-up photograph of a fountain pen nib, likely a Montblaster Meisterstück, positioned diagonally from the upper left towards the center. The nib is surrounded by a dense shower of bright, golden sparks that appear to be falling from the tip, creating a dynamic and celebratory atmosphere. The background is dark, making the sparks stand out prominently. The entire scene is framed by a thin, golden border.

*We design,  
develop and manufacture  
flexible projects  
tailored to each customer  
requirements.*



# Moldtech

PRECAST CONCRETE EQUIPMENT



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