Precast concrete technology for Affordable Housing Programs
B.T. innovation GmbH

Our business units

- Construction sites
-Precast concrete factories
- Consulting LCH Innovation

- Maxtruder
B.T. Affordable Housing Concept
B.T. Affordable Housing Concept

::: A perfect example - an output of the B.T. housing technology

MDR News 2013 - First documentary about Low Cost Housing

[Image] https://www.videolyser.de/video/11870989/640/360

MDR News 2015 - Low Cost Housing concept

[Image] https://www.videolyser.de/video/10009936/800/450
B.T. Affordable Housing Concept

::: A perfect example - an output of the B.T. housing technology

Main features:

✓ All structural elements prefabricated in butterfly battery mold
✓ A stable house with 6m x 6m made up of concrete elements
✓ 2 bedrooms, 1 living room, 1 bathroom and small kitchen, in just 36 m²
✓ Erectable in 2 hours, due to dry connection system B.T.-Spannschloss®
✓ Possibility to disassemble and move
✓ Possibility to extend or modify
✓ Light structure due to 6 cm wall thickness
✓ Transportable in containers
B.T. Affordable Housing Concept

::: Value creation

- Analysis and design
- Consulting & support
- Know-How
- Industrial manufacturing equipment
- Theoretical and practical training

B.T. innovation GmbH

Project Partners

Advantages

Value chain must be initiated and kept inside the country

- Project definition
- Project financing
- Production and assembly
- Project delivery
- Create fast, safe and affordable housing
- Local economic boom
- Local job creation
- Independent production
- Competitive advantages
References

::: BT concept around the world

The goal is to transfer the technology and know-how in order to enable the people in target countries to build their own houses using local material and human resources. In this way, highest level of value creation and job opportunities are provided inside the country.
B.T. Affordable Housing Concept

::: large panel system - Load bearing walls and floor slabs
Butterfly-Battery mold technology
Horizontal preparation & vertical production
Horizontal preparation & vertical production

::: *Butterfly technology combines the advantages of both classical production methods*

- A multi-compartment equipment to produce large concrete panels.
- High range of available variety in terms of number of cells, dimensions, heating systems, etc.
- A double sided concrete formwork in various dimensions, with a hinge between two wings to be lifted (like a butterfly!).
Horizontal preparation & vertical production

::: **Butterfly technology combines the advantages of both classical production methods**

http://www.bt-innovation.de/en/product/butterfly-battery-system/
Horizontal preparation & vertical production

::: **Butterfly technology combines the advantages of both classical production methods**

**Advantages of horizontal preparation:**
- Easy handling and positioning of fittings
- More accuracy in preparation of elements
- Compatibility with laser projection or robotic systems
- Higher flexibility in terms of product types and shapes

**Advantages of vertical production:**
- Simultaneous production of large quantity
- All sides of product formwork smooth
- Compact production with less area requirement
- Less heating/energy demand due to adjacent configuration of compartments
Horizontal preparation & vertical production

::: **Butterfly technology combines the advantages of both classical production methods**

Additional advantages, unique for Butterfly-Battery technology:

- Doubling the quantity of production compartments in a battery mold
- Fast and exact preparation of elements independent of battery mold
- Faster demolding the battery mold and removal of butterflies
- Higher flexibility in terms of dimensions and product types
Maxtruder

Tailor made solutions for the efficient production of pre-stressed concrete elements
Maxtruder

::: pre-stressed slabs, wall panels, and other precast elements

✓ a German machinery manufacturer with over 65 years of experience belongs to BT group of companies
✓ More than 300 equipment installed all over the world
✓ Possibility to combine load bearing wall system with pre-stressed roof elements
✓ In order to achieve bigger spans and save material
✓ Application in affordable housing projects with multi-storey designs

Consulting

For professional consulting services in the construction and precast concrete industry
B.T. Consulting Service

::: What we mean by consulting service

- Building systems / re-design with precast concrete panels
- Feasibility studies / Calculation of demand and required capacity
- Factory design / Plant layout
- Technical specifications, performance specifications and tender
- Realization as Consultant or General contractor
- Co-ordination and supervision of installation and start-up
- Qualification measure for managers and workers
- Process analysis / weak point analysis in production and administration
Consulting references

06/2005 – 09/2006  Loftorka (Iceland)
Design of a carousel plant for sandwich panels and solid walls
Delivery of equipment, erection and start-up of the new facility
as a General contractor

12/2006 – 01/2007  Betfor (Russia)
Process analysis and consulting, capacity increase by more than 30%

06/2008 – 02/2009  Nahas Group (Syria)
Feasibility studies for a housing project with 34,000 units

since 07/2012    Government of Kazakhstan
Officially accredited as independent consulting company
Consulting references

06/2009 – 05/2011 Royal Hashemite Court (Jordan)
Improvement of field factory
Consulting regarding building systems
Establishment of new concrete mixing technology

Germany’s biggest private owned construction and precast company

2009 General planning of a pallet circulation system for the production of solid, double and sandwich walls
2018 General planning of a production line for the manufacture of modular houses
Business Model: Co-Creation

::: creating the value together, inside the target country

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Thank you very much for your attention!

Get in contact with us