

PRODUCT CATALOGUE

STEEL FORMWORK SYSTEMS

Project-specific design, structural calculation, manufacturing and site assembly for tunnel formwork and precast moulds. Every unit is built to its own geometry within the 3,000 m² production area in Kahramankazan, Ankara, Türkiye.

3,000 m²

ENCLOSED PRODUCTION AREA

10+

ENGINEERING SERVICES

50+

PRODUCT GROUPS

St 37 / 52

STEEL GRADE





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COMPANY

PROJECT-SPECIFIC STEEL FORMWORK MANUFACTURING

3,000 m²ENCLOSED
PRODUCTION AREA**50+**PRODUCT
GROUPS**St 37 / 52**STEEL
GRADE**DIN 18218**CONCRETE PRESSURE
CALCULATION

ATİ Kalıp İskele operates in the engineering and manufacturing of steel formwork systems for reinforced concrete construction. Our production range falls under two main headings: **tunnel formwork systems** and **precast element moulds**.

Our production is based on project-specific manufacturing rather than stock items. Each mould is dimensioned according to the structure's geometry, the fresh concrete pressure and the intended casting cycle. The process begins at the engineering stage: fabrication starts only after dimensional survey, three-dimensional modelling and structural calculation are complete.

Cutting, bending, welding, assembly and surface treatment are all carried out within the 3,000 m²

SERVICES

DESIGN

Mould geometry, division plan and casting cycle are configured per project.

3D MODELLING

Assembly and stripping sequences are verified on the model before fabrication.

STRUCTURAL CALCULATION

Fresh concrete pressure and lifting loads are calculated; sections follow.

MANUFACTURING

Cutting, bending, welding, assembly and coating run on a single line.

SITE ASSEMBLY

First erection is carried out on site by our team, with handover training.

REVISION

Existing moulds are adapted when the project layout changes.

TECHNICAL SUPPORT

Support on stripping, maintenance and spare parts throughout service life.

DELIVERY

Shipment planning and loading are organised by us.



STEEL STRUCTURE FABRICATION



SITE ASSEMBLY



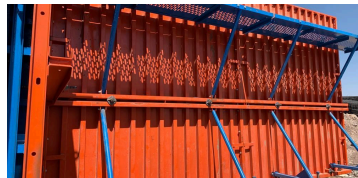
PRECAST MOULD PRODUCTION

01

TUNNEL FORMWORK SYSTEMS

Building tunnel formwork casting walls and slab in a single pour, and segmented bored tunnel formwork for tunnel lining concrete.





TUNNEL FORMWORK SYSTEMS

BUILDING TUNNEL FORMWORK

Tunnel formwork is a half-tunnel shaped steel system that completes load-bearing walls and the floor slab in **one concrete pour**. Two half units are erected facing each other: the gap between them forms the wall, the upper surface forms the slab.

In **mass housing, dormitory, hotel and barracks** projects with repetitive floor layouts it shortens structural works considerably. The majority of mass housing production in Türkiye uses this method.

Stripping is done by pulling horizontally with a tower crane; the system is lifted to the next floor as a whole. With correct maintenance a set serves **hundreds of casting cycles**.

Wall + slab in one pour

High reuse count

Fast floor cycle

Project-specific geometry

Smooth concrete finish

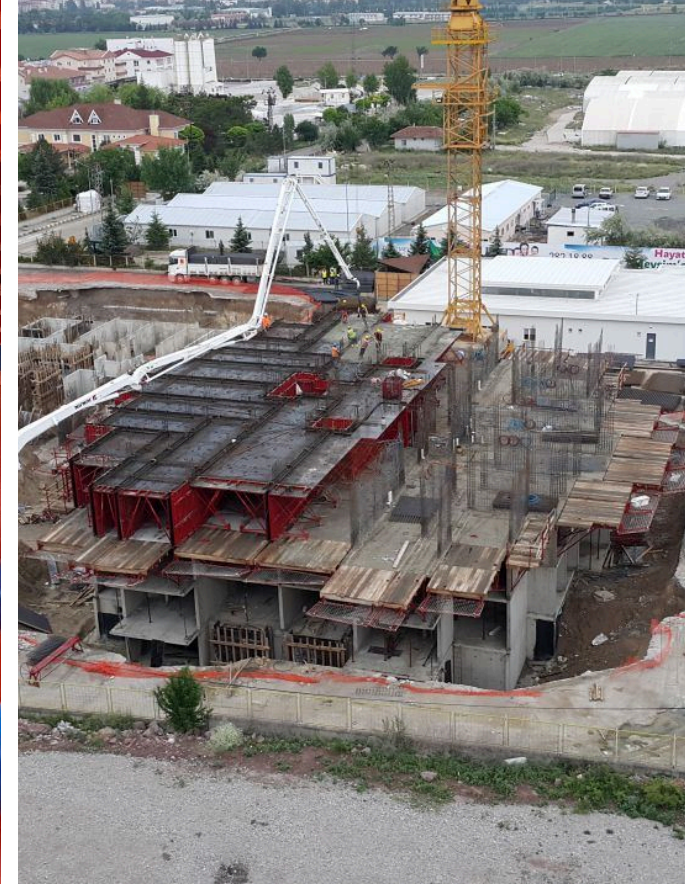
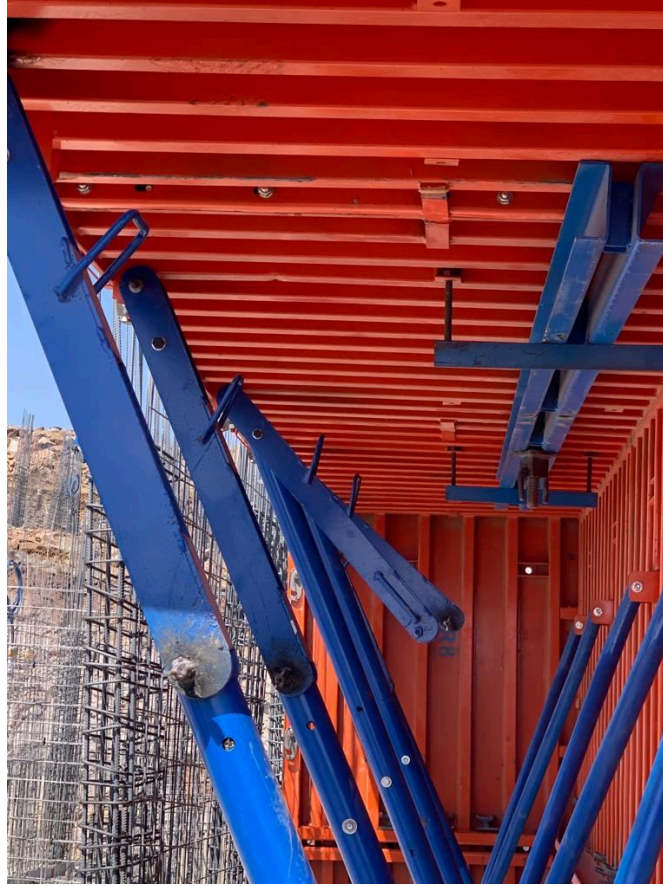
TECHNICAL SPECIFICATIONS

System type	Half tunnel — symmetrical or asymmetrical, per project
Load-bearing frame	Welded steel profile construction
Steel grade	St 37 or St 52 — selected to project requirements
Forming face	Steel sheet; thickness determined per project
Floor height	Project-specific — no standard size
Concrete pressure	Calculated to DIN 18218
Stripping method	Horizontal pull and lift by tower crane
Surface treatment	Sandblasting, epoxy primer, industrial top coat
Equipment	Working platform, handrail, external scaffold, adjustment mechanisms



BUILDING TUNNEL FORMWORK — CONTINUED

APPLICATION PHOTOGRAPHS





TUNNEL FORMWORK SYSTEMS

BORED TUNNEL FORMWORK

Bored tunnel formwork is a **segmented steel system** used to cast the concrete lining on the inner face of an excavated tunnel section. The section geometry is manufactured to match the tunnel design exactly.

The segments open and close; after casting, the form collapses away from the concrete and is advanced **on rails to the next casting bay**. This gives a continuous lining of consistent quality along the tunnel.

Applied in water tunnels, transmission lines, road and railway tunnels and mine galleries. Diameter, length and segment division are set per project.

Segmented structure

Rail-mounted travel

Circular / horseshoe

Continuous lining

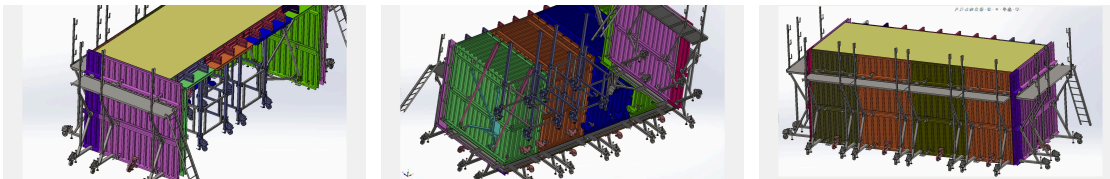
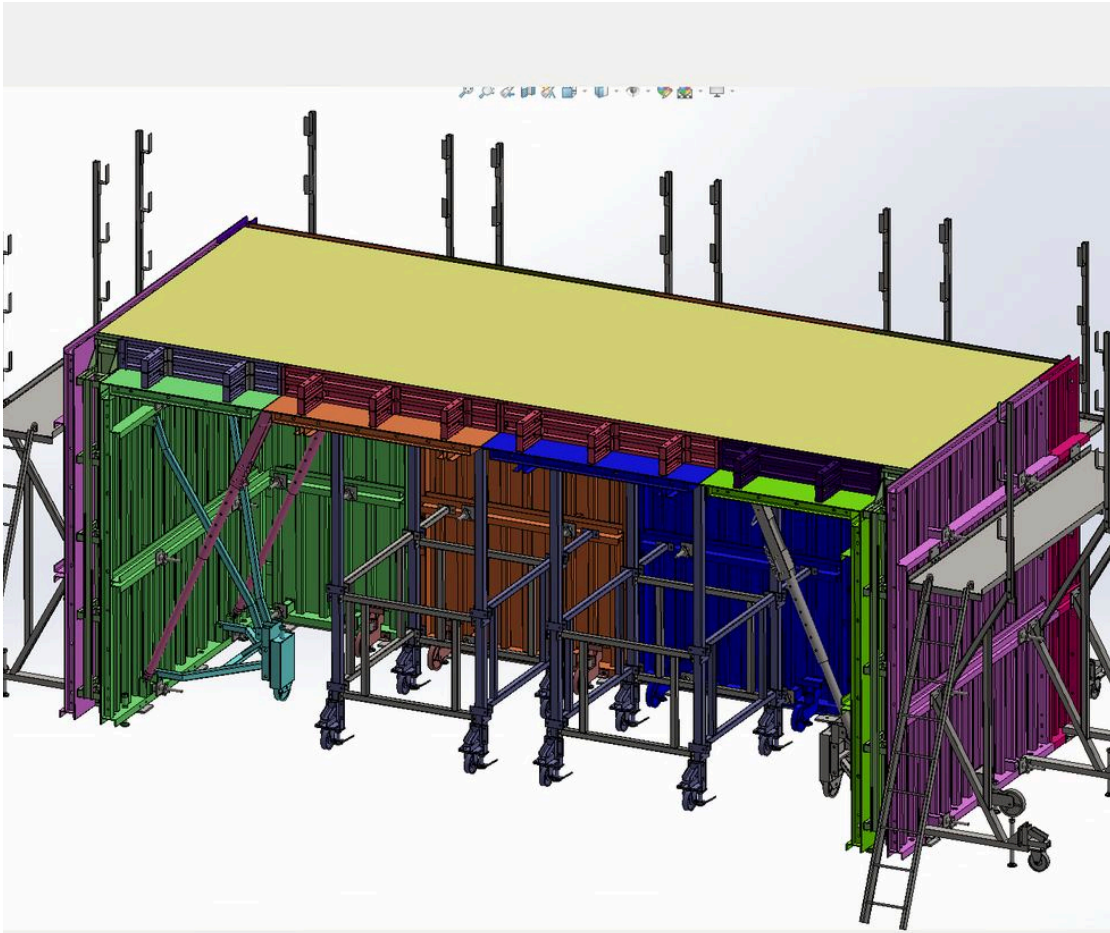
Hydraulic option

TECHNICAL SPECIFICATIONS

Section type	Circular, horseshoe or box section — per project
Structure	Segmented steel construction, collapsible
Steel grade	St 37 or St 52
Forming face	Rolled steel sheet, formed to the section curve
Diameter / span	Project-specific
Advance	Bay-by-bay travel on rail-mounted carriage
Opening mechanism	Mechanical or hydraulic — on request
Surface treatment	Sandblasting, epoxy primer, industrial top coat

BORED TUNNEL FORMWORK — CONTINUED

APPLICATION PHOTOGRAPHS



TUNNEL FORMWORK SYSTEMS

TUNNEL TYPE VILLA FORMWORK

Tunnel type villa formwork is the building tunnel system adapted to the **low-rise housing scale**. Wall and slab are completed in the same pour, shortening the cycle considerably on villa, terraced house and two to three storey estate projects.

The system travels on **wheeled carriages**. After casting, the form is released from the concrete by jacks, rolled out on its carriage and moved to the next axis. This reduces the need for a high-capacity tower crane on smaller sites.

The formwork is built on a **three-dimensional model** before fabrication: room widths, door and window openings, working platform and ladder positions are all verified before assembly.

Wall + slab in one pour

Wheeled travel

Adjustable room width

Low crane demand

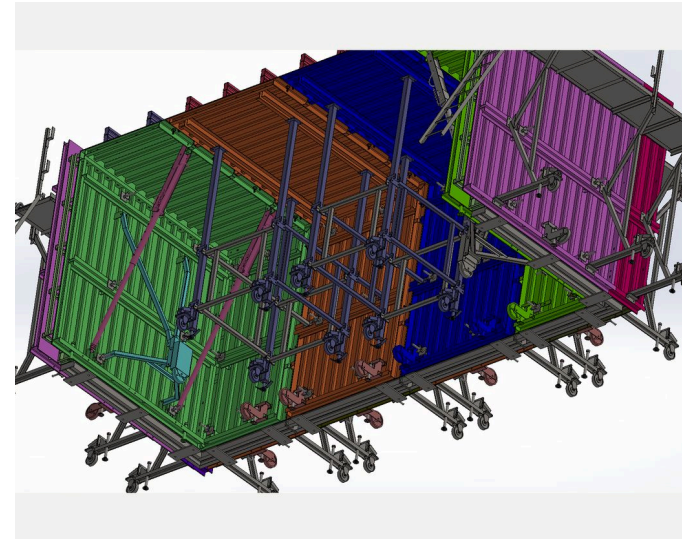
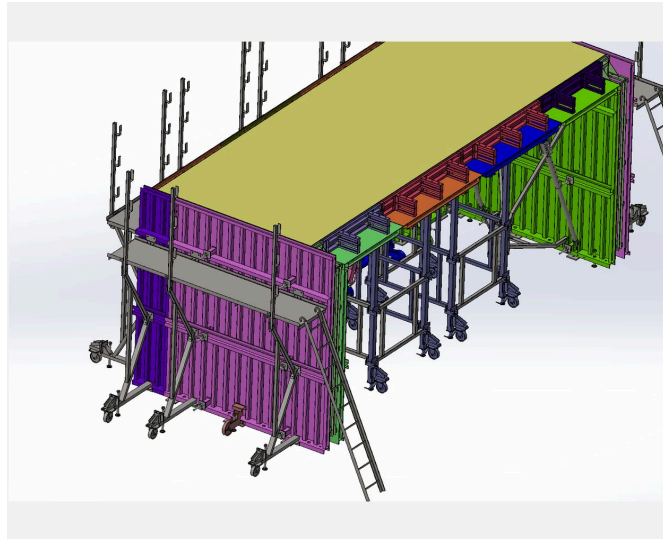
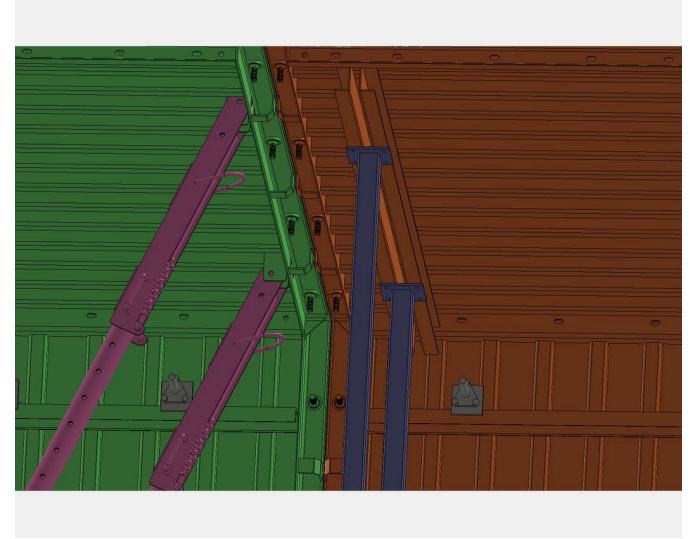
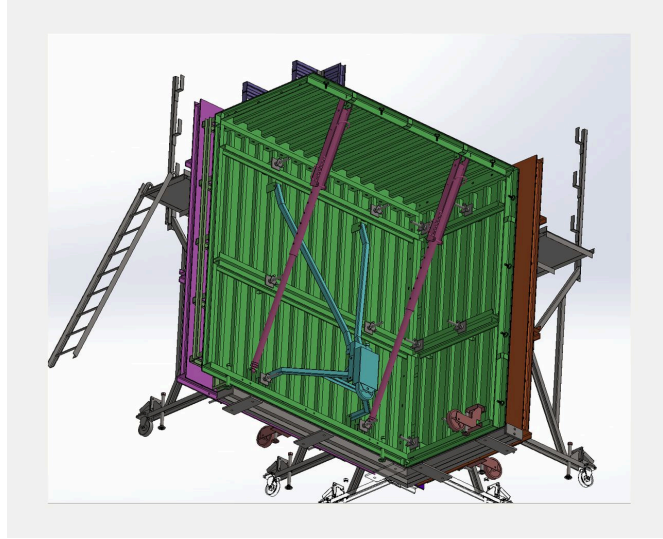
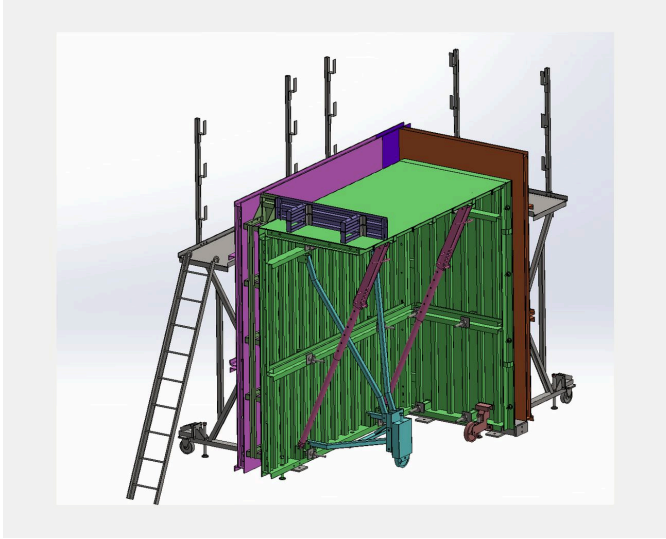
Verified on 3D model

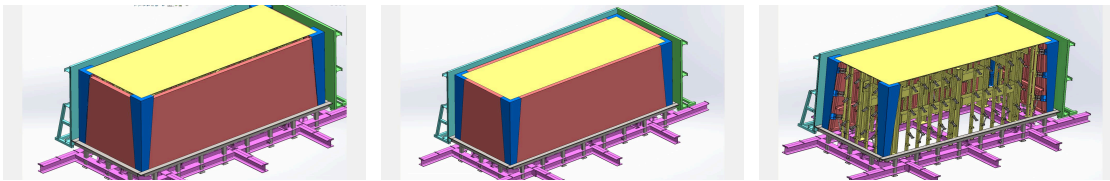
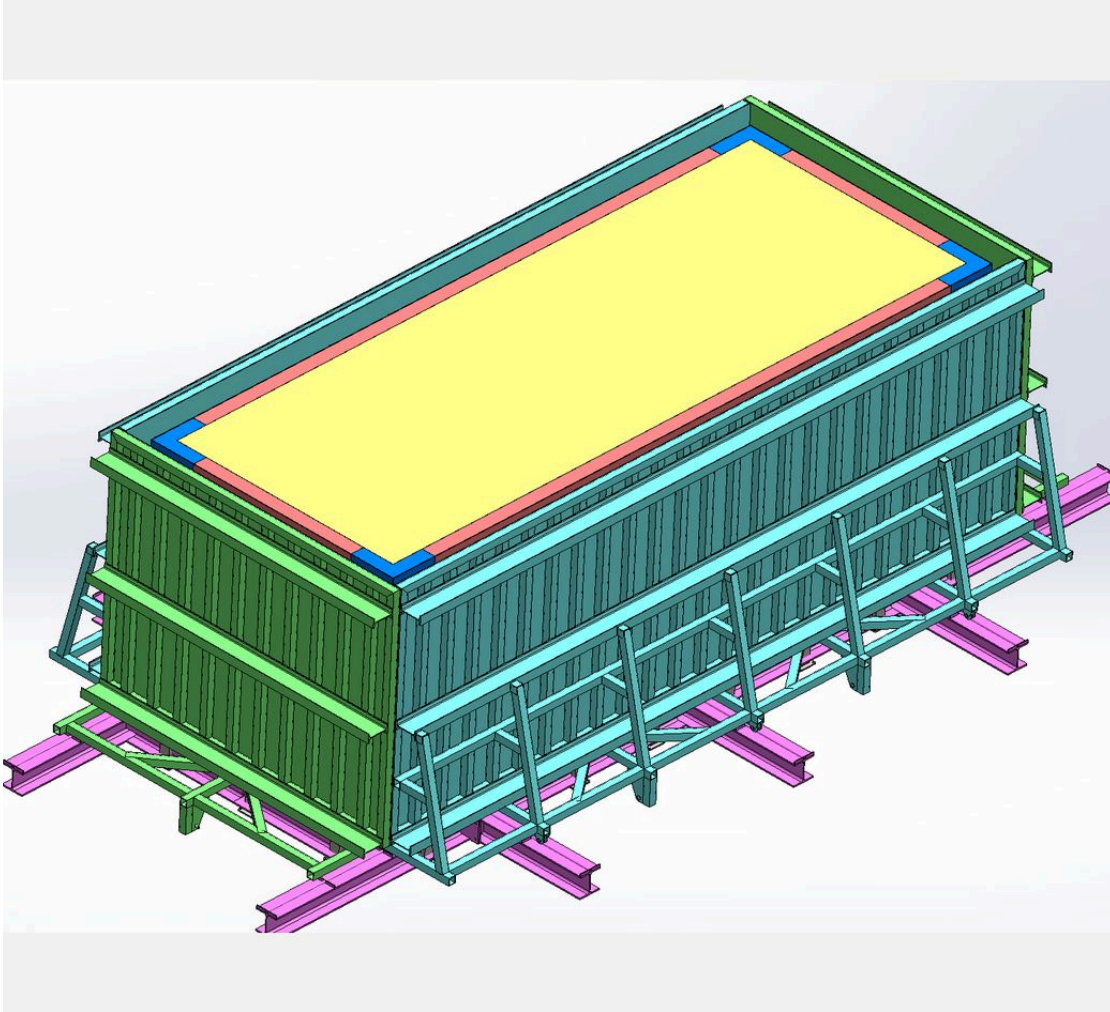
TECHNICAL SPECIFICATIONS

System type	Half tunnel — on wheeled carriages
Application	Villas, terraced houses, low-rise housing
Room width	Adjustable with filler pieces — per project
Storey height	Project specific; no standard size
Steel grade	St 37 or St 52 — per project requirement
Concrete pressure	Calculated to DIN 18218
Stripping	Released by jacks, rolled out horizontally
Equipment	Working platform, handrail, ladder, adjusting jacks
Surface treatment	Sandblasting, epoxy primer, industrial top coat

TUNNEL TYPE VILLA FORMWORK — CONTINUED

THREE-DIMENSIONAL MODEL





TUNNEL FORMWORK SYSTEMS

PAVILION TYPE VILLA FORMWORK

Pavilion type villa formwork produces the body of the structure as a **closed box section** in one piece. Four walls and the roof slab are completed in the same pour; it is used for detached pavilions, guard houses, transformer buildings and single-volume villas.

The form travels on a **rail track** laid on the ground. After casting, the side panels fold inward, the box is released from the concrete and drawn along the rails to its next position. No wide working area around the element is needed for stripping.

Because the volume changes on every project, the form is configured **specifically for the project**; internal corner angles, chamfer details and door and window boxes are resolved on the model.

Four walls + slab in one pour

Rail mounted travel

Stripping in tight space

Exposed concrete finish

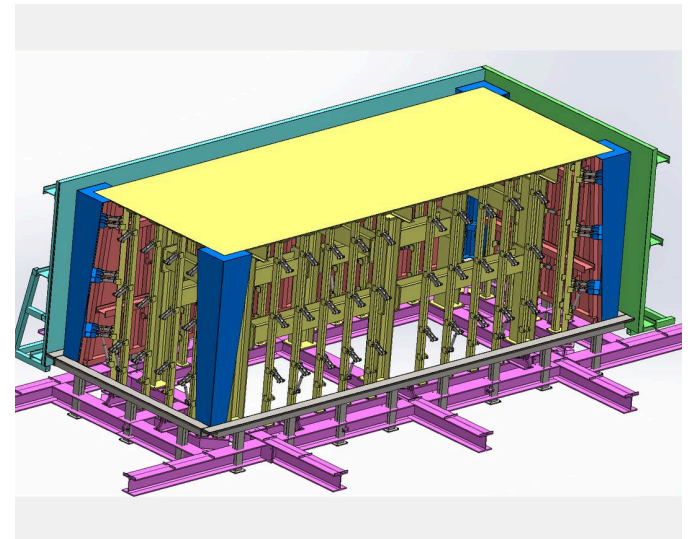
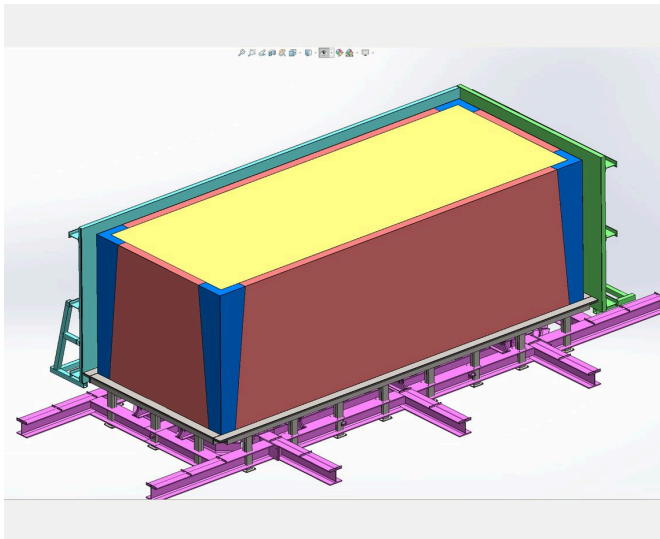
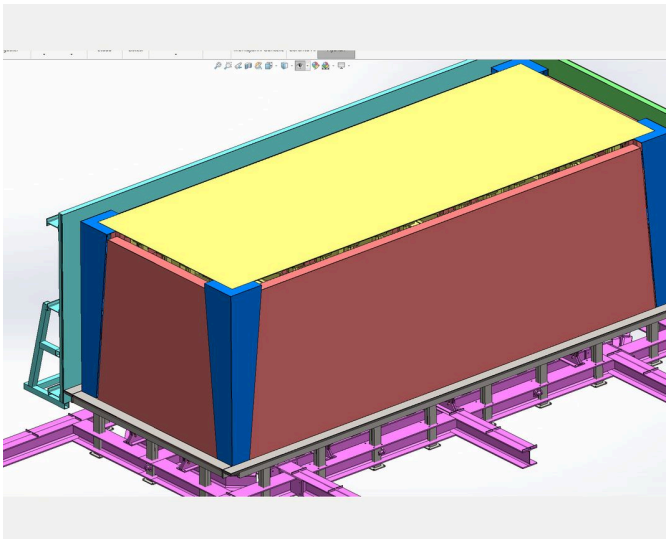
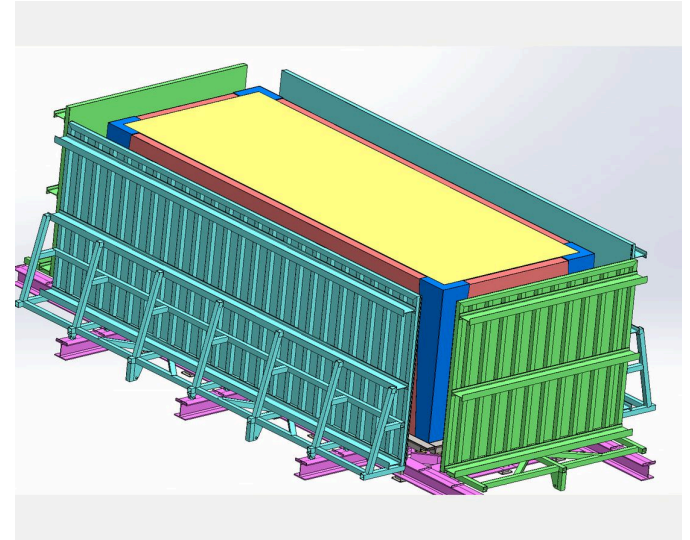
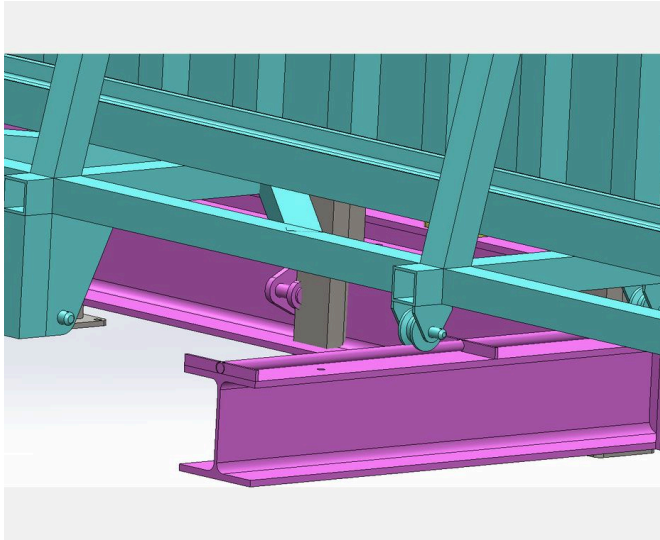
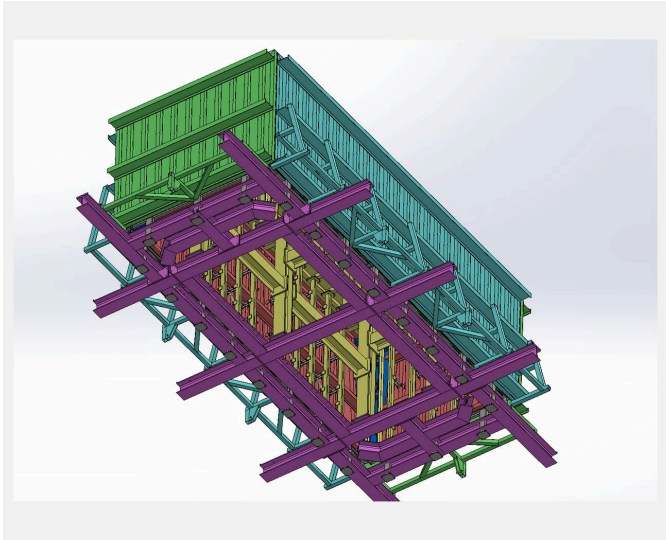
Project specific volume

TECHNICAL SPECIFICATIONS

System type	Closed box — rail mounted
Application	Pavilions, guard houses, transformer buildings, villas
Volume dimensions	Project specific — no standard size
Stripping	Side panels fold inward, drawn along rails
Steel grade	St 37 or St 52 — per project requirement
Concrete pressure	Calculated to DIN 18218
Finish	Smooth surface at exposed concrete quality
Equipment	Rail track, adjusting jacks, lifting lugs
Surface treatment	Sandblasting, epoxy primer, industrial top coat

PAVILION TYPE VILLA FORMWORK — CONTINUED

THREE-DIMENSIONAL MODEL





TUNNEL FORMWORK SYSTEMS

CLIMBING FORMWORK

Climbing formwork is lifted upward after each pour by anchoring to the previous lift. Raised by crane or hydraulic unit, it shortens cycle times on tall structures because no separate scaffold is required.

Application	Tall walls, shafts, silos, bridge piers
Lifting	By crane or hydraulic unit
Lift height	Project-specific
Equipment	Bracket platform, handrail, retraction mechanism
Concrete pressure	Calculated to DIN 18218

02

PRECAST MOULDS

Steel moulds suited to series production of precast concrete elements in factory and site environments.





PRECAST MOULDS

BEAM MOULD

Precast beam moulds are designed for series production in a factory environment. **I, T, L and rectangular sections** as well as project-specific profiles are manufactured.

Side panels open on hinges, so the cured element is released without damaging the mould and **cycle time is reduced**. Vibrator mounting points, anchor and lifting hook recesses are added to the body per project.

For prestressed production the mould is dimensioned to suit the stressing beds.

Suited to series production

Hinged side panels

Prestressed production

Project-specific section

TECHNICAL SPECIFICATIONS

Section types	I, T, L, rectangular and project-specific profiles
Body	Welded steel profile construction
Steel grade	St 37 or St 52
Side panel	Hinged opening system
Length	Project-specific
Vibration	Vibrator mounting points on the mould body
Details	Anchor, lifting hook and service opening recesses
Surface treatment	Sandblasting, epoxy primer, industrial top coat

BEAM MOULD — CONTINUED

APPLICATION PHOTOGRAPHS



PRECAST MOULDS

CULVERT MOULD

A set comprising inner and outer moulds for producing box culverts used in highway and irrigation works. The inner mould is designed to collapse after curing and release the element without damage.

Type	Box culvert, open channel — per project
Structure	Inner and outer mould set
Inner mould	Collapsible — damage-free release
Section size	Project-specific
Steel grade	St 37 or St 52



PRECAST MOULDS

TETRAPOD MOULD

Steel mould for casting tetrapod blocks used in harbour and coastal protection structures. The segmented body allows the cured block to be stripped without damage. Block weight and leg geometry are manufactured per project.

Application	Breakwaters, coastal and harbour protection
Structure	Segmented steel body, bolted joints
Block weight	Project-specific
Stripping	By separating body segments
Steel grade	St 37 or St 52



PRECAST MOULDS

BARRIER MOULD

Steel mould for producing concrete road barriers in New Jersey and project-specific profiles. Suitable for line production with opening side panels.

Profile	New Jersey and project-specific profiles
Length	Project-specific
Side panel	Opening system
Steel grade	St 37 or St 52



PRECAST MOULDS

COLUMN MOULD

Steel mould for square, rectangular and circular columns. Corbel, haunch and anchor details are built into the mould per project.

Section	Square, rectangular, circular
Height	Project-specific
Details	Corbel, haunch and anchor recesses
Steel grade	St 37 or St 52



PRECAST MOULDS

BRIDGE PIER FORMWORK

Large-section steel formwork for in-situ casting of bridge and viaduct piers. Dimensioned for high fresh concrete pressure and raised in lifts by crane or climbing system.

Application	Bridge and viaduct piers
Section	Project-specific — large section
Lifting	By crane or climbing system
Concrete pressure	Calculated to DIN 18218
Steel grade	St 37 or St 52

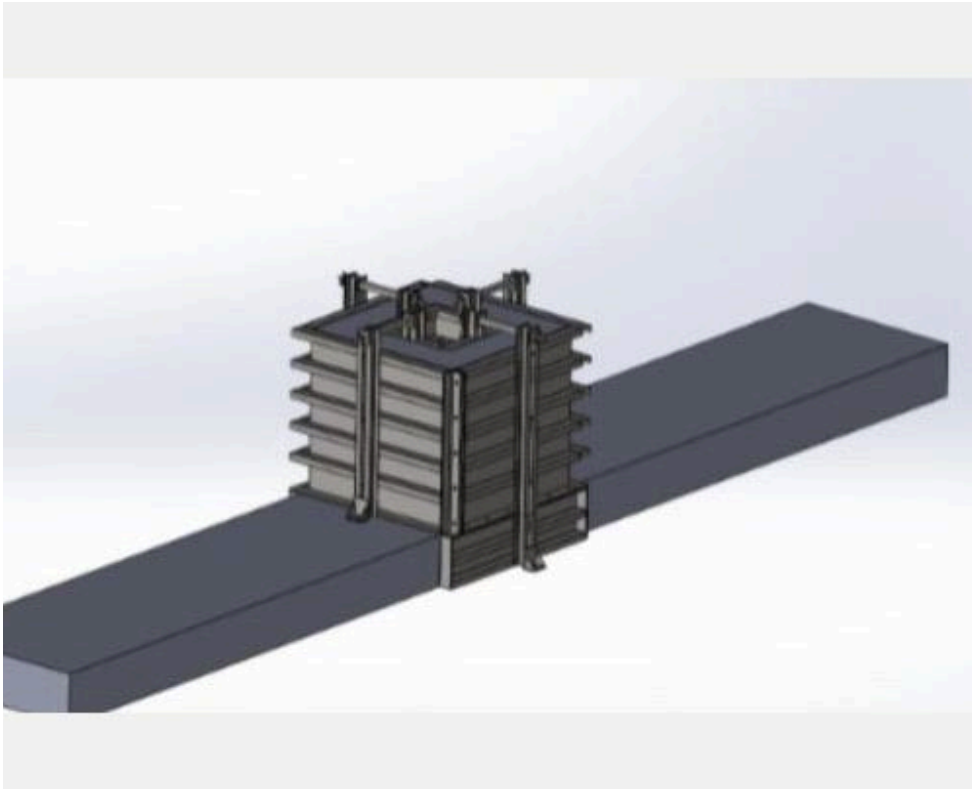


PRECAST MOULDS

PURLIN MOULD

Steel mould for producing precast purlin elements used in industrial building roofs. Designed for line production.

Application	Industrial building roof purlins
Section	Project-specific
Production	Suited to line production
Steel grade	St 37 or St 52



PRECAST MOULDS

SOCKET FOUNDATION MOULD

Steel mould for producing socket foundation elements that receive precast columns. The internal void geometry is manufactured to match the column section.

Application	Precast column socket foundation
Internal void	To match column section
Dimensions	Project-specific
Steel grade	St 37 or St 52



PRECAST MOULDS

TRANSFORMER KIOSK MOULD

Mould set for producing monolithic concrete transformer kiosks used in electricity distribution networks. Door, ventilation and cable entry openings are formed by the mould.

Application	Monolithic concrete transformer kiosk
Structure	Inner and outer mould set
Openings	Door, ventilation, cable entry
Dimensions	Project-specific
Steel grade	St 37 or St 52

**PRECAST MOULDS****BATTERY MOULD**

A battery mould casts panels in the vertical position rather than flat. Several panels are produced at once between movable compartments placed side by side, which markedly reduces the factory floor area needed for the same output.

Casting position	Vertical
Number of cells	Project-specific — multi-cavity
Face	Both panel sides are mould faces
Compartments	Movable, clamping
Heating	Heated compartments on request

03

CUSTOM FABRICATION

Non-standard moulds, steel structure fabrication, scaffolding systems and revision of existing moulds.





CUSTOM FABRICATION

CUSTOM FABRICATION & STEEL STRUCTURES

Any work outside the catalogue groups is handled under this heading: **moulds with non-standard geometry**, one-off special elements and the adaptation of existing moulds to new projects.

Steel structure fabrication is carried out at the same facility: load-bearing frames, platforms, stands, lifting and handling equipment, **scaffolding systems** and site equipment.

These works begin with design. Dimensions and the usage scenario are taken, a model is produced and the necessary structural calculations are made; fabrication starts after approval.

One-off production

Scaffolding systems

Steel structures

Mould revision

Site equipment

TECHNICAL SPECIFICATIONS

Scope	Non-standard moulds, steel structures, scaffolding systems
Approach	Design → modelling → structural calculation → fabrication
Steel grade	St 37 or St 52 — according to use
Fabrication	Cutting, bending, welding, assembly — on a single line
Surface treatment	Sandblasting, epoxy primer, industrial top coat
Revision	Adaptation of existing moulds to new geometry

PRODUCT RANGE

OTHER MOULD GROUPS WE MANUFACTURE

The groups below are also part of our production range. As site photographs are still being prepared, they appear in this edition as a list only; please contact us for technical data, dimensions and reference applications.

RETAINING WALL FORMWORK

Steel formwork for in-situ casting of cantilever and gravity retaining walls.

TEKKO PANEL FORMWORK

Modular panel system for walls and columns, sized to be handled without a crane.

LEGO BLOCK MOULD

Steel mould for producing interlocking stackable concrete blocks.

CIRCULAR WALL FORMWORK

Curved steel formwork for silos, water tanks and circular structural walls.

I-BEAM MOULD

Steel mould line for I-section precast and prestressed beams.

L-BEAM MOULD

Steel mould for L-section precast beams used on edge axes.

LT-BEAM MOULD

Mould for inverted-T / LT section beams carrying slabs from both sides.

SLAB MOULD

Production mould for TT, double-T and flat precast slab units.

ROOF TRUSS MOULD

Steel mould for industrial roof trusses and roof girders.

GUTTER MOULD

Steel mould for precast roof gutters and water collection elements.

WALL PANEL MOULD

Horizontal production mould for façade and partition wall panels.

STAIR MOULD

Steel mould for precast stair flights and landings.

Once line layout, daily output and handling method are known, a project-specific mould configuration is prepared for each group.

PRODUCT RANGE — CONTINUED

PARAPET MOULD

Steel mould for bridge, viaduct and building parapet elements.

KERB MOULD

Series production mould for road kerbs and median elements.

PIPE AND CONDUIT MOULD

Concrete pipe and conduit moulds for stormwater and sewerage lines.

GULLY MOULD

Mould for gully and grating elements used in road and yard drainage.

FOUNDATION PAD MOULD

Steel mould for precast foundation and pad elements.

IRRIGATION CHANNEL MOULD

Steel mould for irrigation channels and open channel elements.

SLEEPER MOULD

Multi-cavity production mould for reinforced concrete railway sleepers.

SHEAR PANEL MOULD

Production mould for load-bearing and partition precast shear panels.

SITE ELEMENT MOULDS

Steel moulds for retaining, boundary, landscape and site furniture elements.

Once line layout, daily output and handling method are known, a project-specific mould configuration is prepared for each group.



LET'S DISCUSS YOUR PROJECT

Share the dimensions, cycle requirements and budget of your project and we will work out the right formwork configuration with you.

ISO 9001

QUALITY MANAGEMENT SYSTEM

EN 1090

STEEL STRUCTURE FABRICATION

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