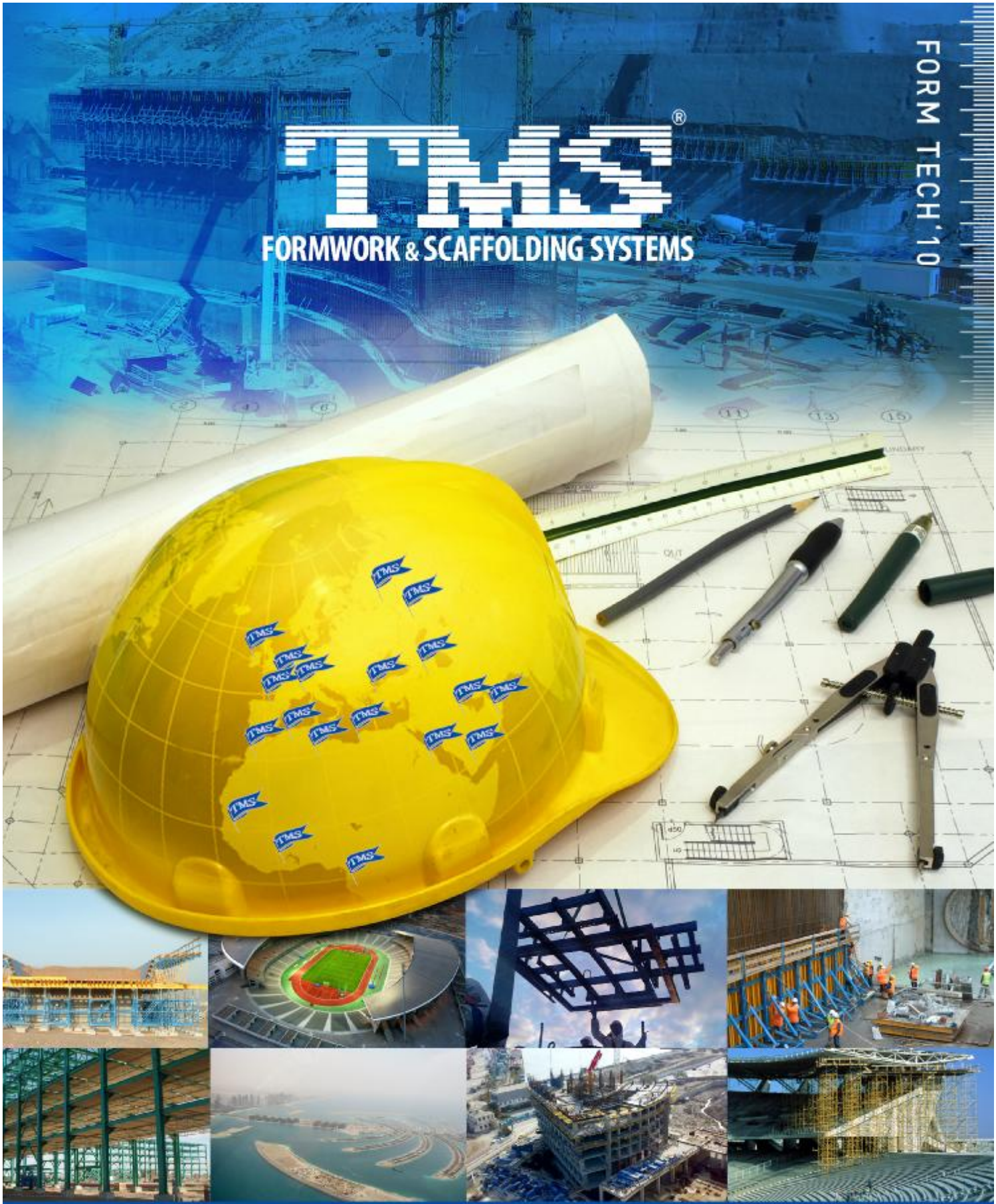
FORM TECH'10

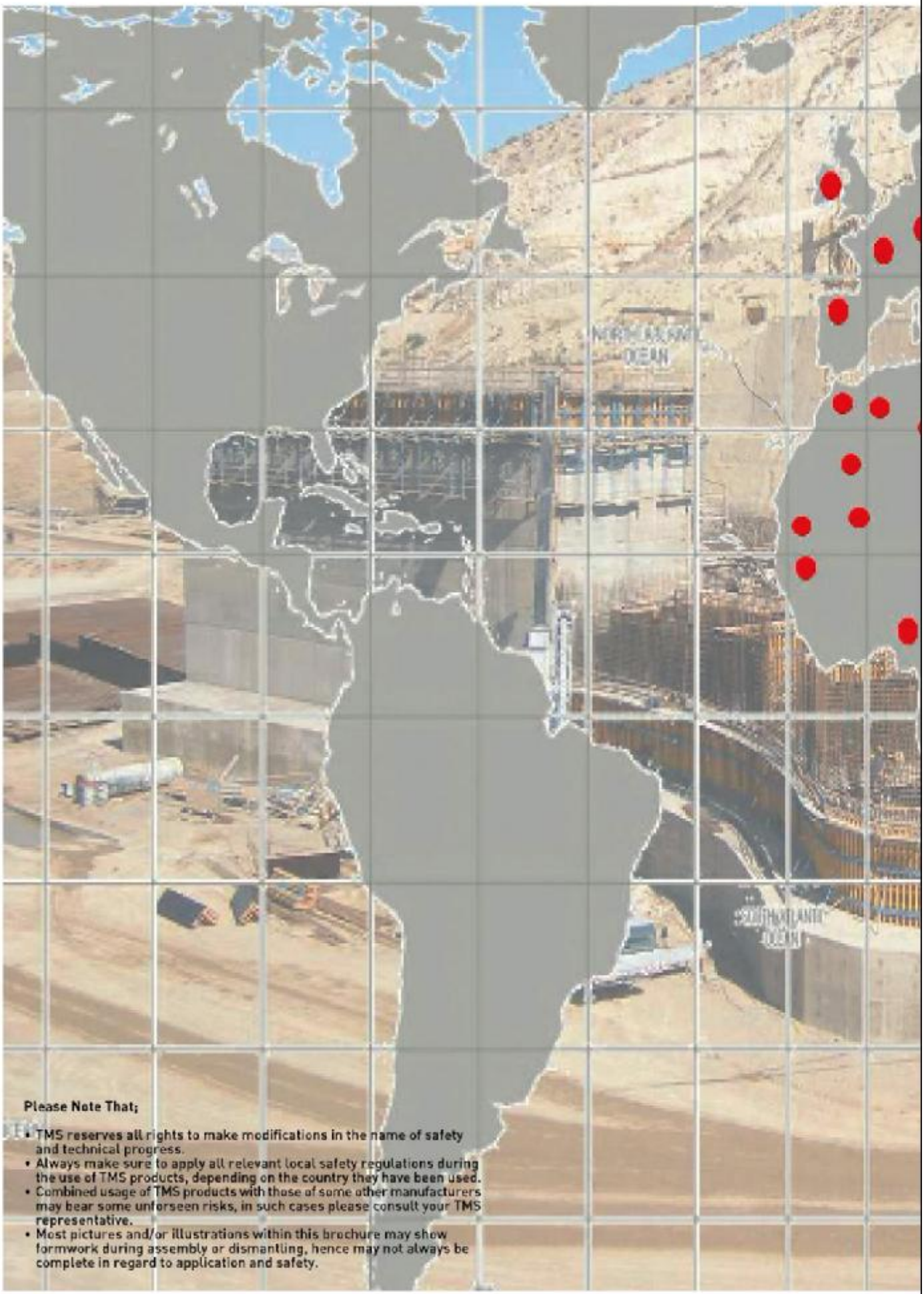
TMS®

FORMWORK & SCAFFOLDING SYSTEMS



DEPENDABLE, VERSATILE, FAST AND ECONOMICAL

since 1973



Please Note That;

- TMS reserves all rights to make modifications in the name of safety and technical progress.
- Always make sure to apply all relevant local safety regulations during the use of TMS products, depending on the country they have been used.
- Combined usage of TMS products with those of some other manufacturers may bear some unforseen risks, in such cases please consult your TMS representative.
- Most pictures and/or illustrations within this brochure may show formwork during assembly or dismantling, hence may not always be complete in regard to application and safety.

TMS®

FORMWORK & SCAFFOLDING SYSTEMS

INDEX

TMS as Your Partner

With FormTech'10 we kindly would like to take this opportunity to introduce our latest innovative products and services, which we believe are highly for the interest and benefit to our valuable customers.

It would not be an overestimation if we claim the concrete as being the major material shaping our contemporary civilization. The new era, concentrates on the international urge for building much higher, complicated and architecturally attracting concrete landmark structures, especially at record construction times. This new trend in constructing, challenges the formwork industry for much safer, stronger and faster solutions in forming and shoring.

With our strong engineering background, we take these challenges as a prospect for firing up our progressive innovation endeavor. Correspondingly, every new TMS product or service comes out with some innovative details, intensifying our customer satisfaction.

Fascinating, state of the art new buildings arise through the creative architectural imaginations, and nearly all of them intend to surpass the previously erected ones at height, size or complication. Even industrial architecture and relatively regular projects have much higher benchmarks in quality and appearance. As TMS, our aim is to cope well with all these engineering and planning challenges prior to the execution of the construction work and dial in the most cost efficient solution through optimization with the help of our wide and innovative product range.

As a family owned company having a history back to 1973, we stick by the professional attitudes and continuously invest in our core business with the cutting edge production technologies and intensive R&D studies. Hence, we are capable of introducing innovative new products with highest quality available. TMS has a complete and highly advanced product range together with a sophisticated engineering team enhancing our position of being a partner to construction people all around the world.

Kubilay Tüfekçi,
Managing Director

Kubilay Tüfekçi,
Managing Director

Cemil Tüfekçi,
Founder

Kubilay Tüfekçi, Managing Director

Işılay Tüfekçi Karabay,
Finance Director

Ceyda Derguti Tüfekçi
Sales Director

Salih İbişoğlu,
Production Director

Tuğrul Tüfekci,
Business Development Director

Head Office Team

Administrative Production Team

Board of Directors

Sales Team

Business & Administrative Team

T.C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Marka No : 2003 15619
Çeşidi : Ticaret

TMS

Marka Sahibi : TÜFEKÇİOĞLU MÜHENDİSLİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ
Ülkesi : TÜRKİYE CUMHURİYETİ
Adresi : 0-100 Kanaşular Köyü Çayırcımla Mevkii 01320 Çukurova İçesi KOCAELİ
Kurdu : 09
Bişiteşlir.

TÜRK PATENT ENSTİTÜSÜ

SGS

Certificate TR/00/0030

TMS TÜFEKÇİOĞLU MÜHENDİSLİK SANAYİ TİCARET LTD. ŞTİ.

ISO 9001:2008

The scope of registration appears on page 2 of this certificate.

SGS

A PIZ

TÜV AUSTRIA

PRÜFBEFUND

über die Konformitätsbewertung gemäß Richtlinie 98/37/EG
about conformity assessment according directive 98/37/EC

TÜV-AP/MM/1008-08018

Anfragegeber: Ingenieurbüro EKB
Hersteller: TMS-FORMWORK
Art des Produktes: Leitschienensystem
Typ: VBW3-Kletterbock 1000 kg

Beschreibung: Heben in Gefahrenzone, bestehend aus Trägern zur formschlüssigen Aufnahme von Bauteilen, mit beidseitigen Sicherungsblechen, und einem Ring zum Einhängen eines Standard-Hebelhaken.

Prüfgrundlagen: DIN-Richtlinie Maschinen 98/37/EG in der geänderten Fassung (zwischen MRV, BGB), 3001-884, DIN ISO 1 BGB, EN 13155.

Prüfungen:
- Prüfung der technischen Unterlagen auch auf Berechnung, Zeichnungen
- Prüfung der Risikoanalyse gem. DIN EN ISO 14121-1
- prüftechnische Funktions- und Belastungsprüfungen, Prüfbericht PT 08-453
- Prüfung der Betriebsanleitung

Bemerkungen: –

Ergebnis:
Die Prüfungen/Untersuchungen dies aus Produktbezogenen Übereinstimmung mit den Prüfgrundlagen. Gemäß diesen Prüfbefunden ist das vorgelegte PF-Produkt und die technische Dokumentation.

Für Produkte Übereinstimmender Bauart (Serienfertigung) stellen zusätzlich die Prüfbericht Bedingungen erfüllen, sofern herstellerseitige Maßnahmen zur Gewährleistung der Übereinstimmung getroffen sind.

Ausstellungsdatum: Wien, am 27.01.2009

Prüfstelle: Maschinen, Heben und Fördertechnik, Maschinen- und Baustellensicherheit

Prüfer: Dipl.-Ing. R. Schädlbauer

SGS

Certificate TR/00/0030, enlarged

TMS TÜFEKÇİOĞLU MÜHENDİSLİK SANAYİ TİCARET LTD. ŞTİ.

ISO 9001:2008

Design, production and sales of formwork and scaffolding systems.

Factory: 0-100 Kanaşular Köyü Çayırcımla Mevkii, Çayırcımla, Kocaeli, Turkey

T.C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Marka No : 2007 21052 - Tüzel

SIMPEX

Marka Sahibi : TÜFEKÇİOĞLU MÜHENDİSLİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ
TÜRKİYE CUMHURİYETİ
D-100 Karayolu Üzeri Uzuntarla Mevkii 41320
Uzuntarla İzmit KOCAELİ

Emtiaa : 06
Dişlidodlu.

Markaların Korunması Hakkında 556 Sayılı Kanun Hükümlerde Kararnamenye göre 20/04/2007 tarihinden itibaren 10 (ON) YIL müddetle tescil edilmiştir.

Kamuz KARAMANOĞLU
Enstitü Başkanı a.
Markalar Daireci Başkanı

TÜRK PATENT ENSTİTÜSÜ

T.C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Marka No : 2007 21054 - Tüzel

VINC'I

Marka Sahibi : TÜFEKÇİOĞLU MÜHENDİSLİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ
TÜRKİYE CUMHURİYETİ
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Uzuntarla İzmit KOCAELİ

Emtiaa : 06
Dişlidodlu.

Markaların Korunması Hakkında 556 Sayılı Kanun Hükümlerde Kararnamenye göre 20/04/2007 tarihinden itibaren 10 (ON) YIL müddetle tescil edilmiştir.

Enstitü Başkanı a.
Markalar Daireci Başkanı

TÜRK PATENT ENSTİTÜSÜ

T.C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Marka No : 2007 21055 - Tüzel

REX

Marka Sahibi : TÜFEKÇİOĞLU MÜHENDİSLİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ
TÜRKİYE CUMHURİYETİ
D-100 Karayolu Üzeri Uzuntarla Mevkii 41320
Uzuntarla İzmit KOCAELİ

Emtiaa : 06
Dişlidodlu.

Markaların Korunması Hakkında 556 Sayılı Kanun Hükümlerde Kararnamenye göre 20/04/2007 tarihinden itibaren 10 (ON) YIL müddetle 28/03/2008 tarihinde tescil edilmiştir.

Kamuz KARAMANOĞLU
Enstitü Başkanı a.
Markalar Daireci Başkanı

TÜRK PATENT ENSTİTÜSÜ

T.C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Marka No : 2007 2009 - Tüzel

HAND'I

Marka Sahibi : TÜFEKÇİOĞLU MÜHENDİSLİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ
TÜRKİYE CUMHURİYETİ
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Emtiaa : 06
Dişlidodlu.

Markaların Korunması Hakkında 556 Sayılı Kanun Hükümlerde Kararnamenye göre 20/04/2007 tarihinden itibaren 10 (ON) YIL müddetle tescil edilmiştir.

Enstitü Başkanı a.
Markalar Daireci Başkanı

TÜRK PATENT ENSTİTÜSÜ

T.C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Marka No : 2008 05884 - Ticaret

SCAFFAST

Marka Sahibi : TÜFEKÇİOĞLU MÜHENDİSLİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ
TÜRKİYE CUMHURİYETİ
D-100 Karayolu Üzeri Umutsela Mevkii 41320
Çayırova İzmit KOCAELİ

Emtiaa : 06
Bağlıdır.

Markaların Korunması Hakkında 556 Sayılı Kanun Hükümlerine Kararnamenye göre 15/11/2008 tarihinden itibaren 05 YIL müddetle 29/09/2009 tarihinde tescil edilmiştir.

Kanun KUMBASAR
Enstitü Başkanı a.
Marka Daire Başkanı

TÜRK PATENT ENSTİTÜSÜ

T.C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Marka No : 2007 21651 - Ticaret

EKO-FORM

Marka Sahibi : TÜFEKÇİOĞLU MÜHENDİSLİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ
TÜRKİYE CUMHURİYETİ
D-100 Karayolu Üzeri Umutsela Mevkii 41320
Çayırova İzmit KOCAELİ

Emtiaa : 06
Bağlıdır.

Markaların Korunması Hakkında 556 Sayılı Kanun Hükümlerine Kararnamenye göre 20/04/2007 tarihinden itibaren 05 YIL müddetle 05/11/2008 tarihinde tescil edilmiştir.

Enstitü Başkanı a.
Marka Daire Başkanı

TÜRK PATENT ENSTİTÜSÜ

T.C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Marka No : 2007 21651 - Ticaret

MULTIX

Marka Sahibi : TÜFEKÇİOĞLU MÜHENDİSLİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ
TÜRKİYE CUMHURİYETİ
D-100 Karayolu Üzeri Umutsela Mevkii 41320
Çayırova İzmit KOCAELİ

Emtiaa : 06
Bağlıdır.

Markaların Korunması Hakkında 556 Sayılı Kanun Hükümlerine Kararnamenye göre 20/04/2007 tarihinden itibaren 05 YIL müddetle tescil edilmiştir.

Kanun KUMBASAR
Enstitü Başkanı a.
Marka Daire Başkanı

TÜRK PATENT ENSTİTÜSÜ

T.C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Marka No : 2006 22401 - Ticaret

TMT

Marka Sahibi : TMT TÜFEKÇİOĞLU MAKİNA VE TİCARET LİMİTED ŞİRKETİ
TÜRKİYE CUMHURİYETİ
D-100 Karayolu Üzeri Umutsela Mevkii İzmit KOCAELİ

Emtiaa : 19
Bağlıdır.

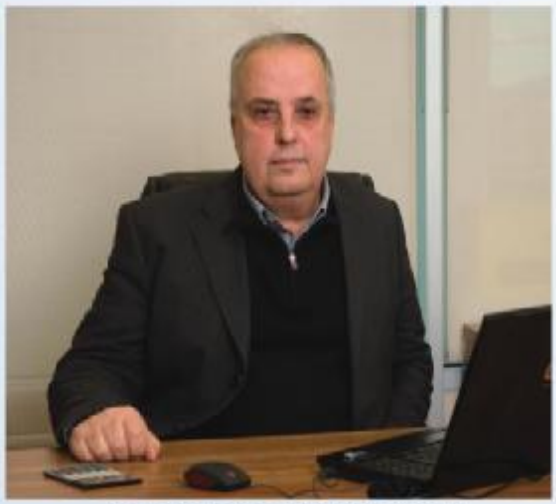
Markaların Korunması Hakkında 556 Sayılı Kanun Hükümlerine Kararnamenye göre 15/05/2006 tarihinden itibaren 05 YIL müddetle tescil edilmiştir.

Enstitü Başkanı a.
Kanun KUMBASAR
Marka Daire Başkanı

TÜRK PATENT ENSTİTÜSÜ

TMS IZMIT PLANT

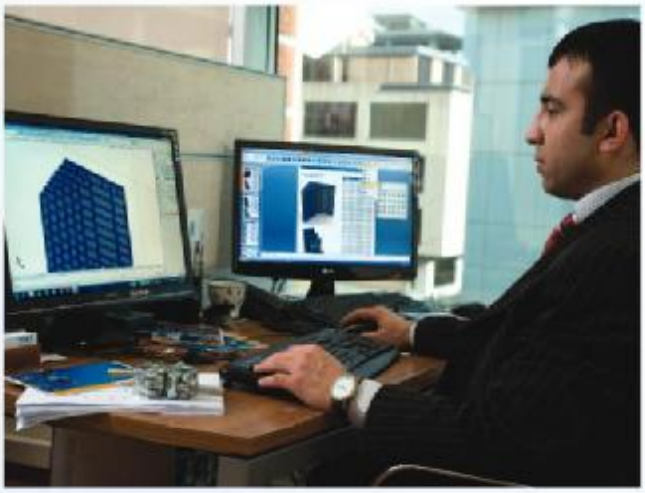
Sunay Özmen, Technical Manager



Cihat Kocabay, Tendering Manager

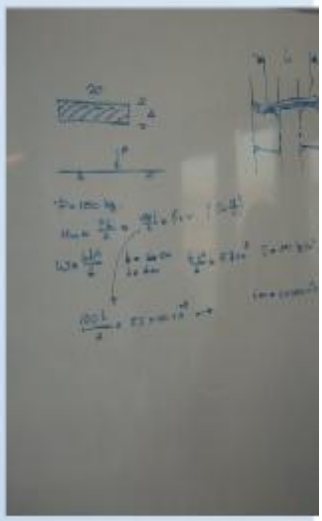
Arnold Schnepf, Asst. Technical Manager

Kıvanç Kalfa, Asst. Tendering Manager



TMS SUPERVISORS AT JOB-SITE

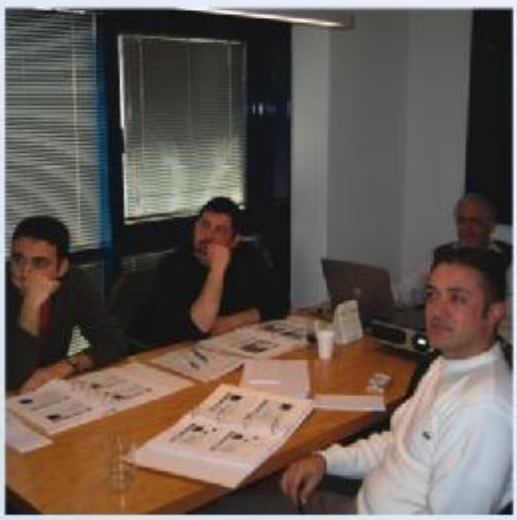
TMS TECHNICAL TRAINING ACTIVITIES










EXHIBITIONS, INTERNATIONAL

LAUNCHING OF VINC'I AT BAUMA' 07 IN MUNICH, GERMANY

15. ANTREPRENOR & ROMTHERM 2008, ROMANIA

PROJECT QATAR 2008, QATAR

KIOGE 2008, KAZAKHSTAN

INTERIORS & BUILDEX 2009, OMAN

MOSBUILD 2009 MOSCOW, RUSSIA

PROJECT QATAR 2009, QATAR

LIBIA BUILD 2009, LIBIA

SAUDI BUILD 2009, SAUDI ARABIA

BAKU 2009, AZERBAIJAN

EXHIBITIONS, TURKEY

YAPEX BUILD 2007 ANTALYA, TURKEY

BETON BUILD 2008 ISTANBUL, TURKEY

ANKOMAK BUILD 2008 ISTANBUL, TURKEY

TURKEY BUILD 2008 ISTANBUL, TURKEY

TURKEY BUILD 2009 ISTANBUL, TURKEY

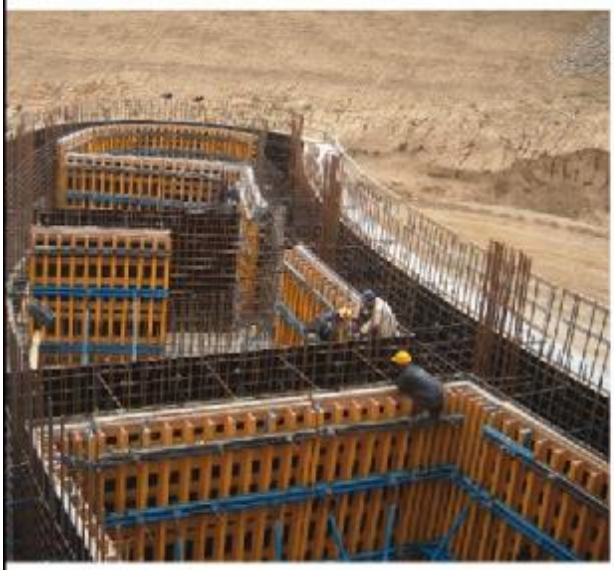
TURKEY BUILD 2009 ISTANBUL, TURKEY

















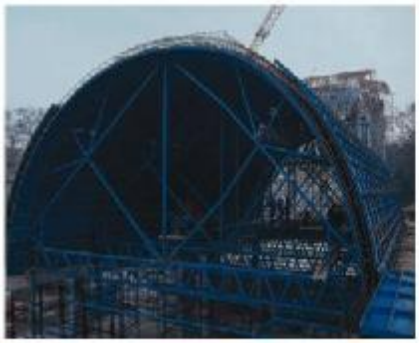










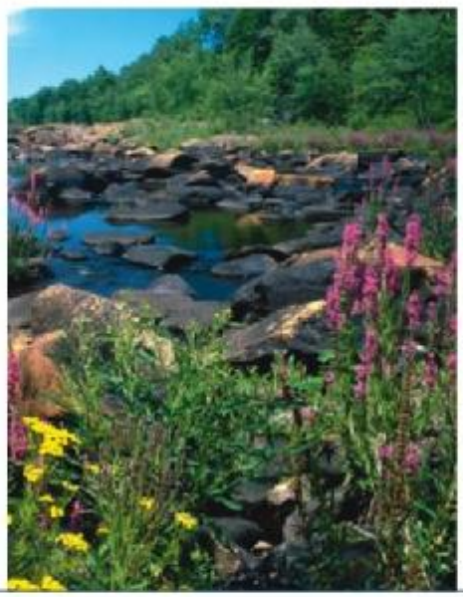












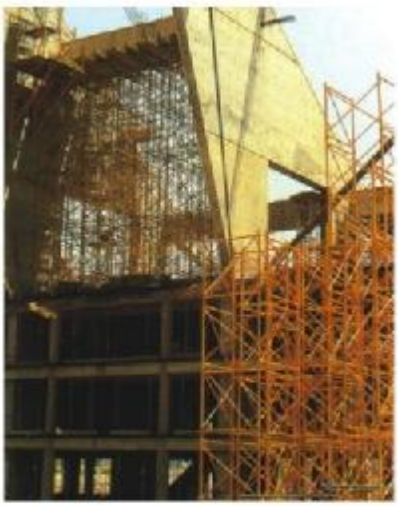

ISTANBUL OLYMPIC STADIUM, TURKEY

"ISTANBUL OLYMPIC STADIUM" project undertaken by CAMPENON BERNARD, SAE and TEKFEN.

Istanbul Olympic Stadium ready for the games

Istanbul Olympic Stadium retaining walls & mega-structure walls at civil works, SIMPEX Wall Formwork.

Span of Piers is 196 m's.



Istanbul Olympic Stadium mega-structure rack beam shorings, MKH 150 System.

MK-H 150 Working Platforms.

FORMULA 1 ISTANBUL PARK, TURKEY

"FORMULA 1" Istanbul takes its part at the world-wide mega-show with the "ISTANBUL PARK", Project was as fast as its name stands for. Undertaken by EVREN INSAAT.

The first Formula 1 race has just started.

SIMPEX Wall Formwork.

KD 100 Shoring System at Pit Area.

Adapazarı Natural Gas Cogeneration Power Plant,TR

Adapazarı and Gebze Natural Gas Co-generation Power Plant, project undertaken by BEJV, BECHTEL-ENKA J.V.

Adapazarı & Gebze Natural Gas Co-generation Plant ClimbeX® Self Climbing System.

Cooling Towers subcontracted by KALEMCI.

ClimbeX® Self Climbing System of the cooling towers at upper stages

Palm Jumeirah Shoreline Housing Project, DUBAI

Illustration for "PALM JUMEIRAH" project.

"PALM JUMEIRAH" project being realized.

Palm Jumeirah Shoreline
Housing Project at
Dubai, U.A.E.
Project undertaken by BAYTUR.

Shoreline Housing's near to completion, BAYTUR.

The fast and flexible SLABFLEX Shoring
System at the artificial Palm Island's

KMW, Kashagan Main Works Project, KAZAKHSTAN

KMW, Kashagan Main Works Project, undertaken by GATE, bears thousands of kilometers of pipe-racks to receive suspended scaffolding.

Multi-level platforms for Kashagan Main Works at Atyrau, KAZAKHSTAN.

As simple as it gets for safe and easy erection and dismantling. A neat job-site shows it all.

Custom made Pipe-Rack Suspended Scaffolding for GATE.

Hand-railing for safe work and fall-protection.

Safe and reliable access is a must for all works, but safety conditions are even more stringent at industrial works, STAIR TOWER's are pictured.

KIB, Kashagan Industrial Buildings, KAZAKHSTAN

Kashagan Industrial Building at Atyrau, KAZAKHSTAN.

Being located at North-East of the Caspian Sea, where significant Oil Reserves are residing, ensures massive projects at Atyrau. KIB, namely Kashagan Industrial Buildings, undertaken by GATE is one of them.

SIMPEX Wall Formwork with TRK 160 Climbing Systems

Fire-Station Building.

MKH 150 Scaff & Shoring elements at facade works.

Metropolis Project Moscow, RUSSIA

Some Illustrations about "Metropolis Project"

Metropolis will be a highly praised meeting point at Moscow either for leisure, shopping or business.

Simpex Column Formwork System.

With the Shopping Mall, Office Building and Apartment facilities at the "Metropolis Project" Moscow will welcome a new landmark.

Metropolis a shopping and business center at Moscow undertaken by ENKA.

MKH 150 Table Forms at erection stage.

Esentai Tower Project Almaty, KAZAKHSTAN

"ESENTAI TOWER" is going to be a significant landmark with its Apartments, JW Marriot Hotel, Office Space and Ballrom facilities at Almaty, KAZAKHSTAN. This tower has a real presence with its 162m height at Almaty skies. Project has been undertaken by ENKA.

Some Illustrations about "Esentai Tower Project"

Early stages of the tower.
Two sets of MKH Table Forms speed-up the progress.

Blue City Project Muscat, OMAN

A 15 billion USD mega project for OMAN, aiming a contemporary new city near Muscat with 32 sqkm area and 250.00 population. Phase 1 has been awardad to AECO, an equal share JV between Greek AKTOR and Turkish ENKA.

Depending on the height and type of building , a combination of MK-H 150 Table Form Slabflex and Flexdeck Systems are applied for the slabs.

A combination of SIMPEX Wall Formwork and VINC'I 80 Column Formwork has been used during construction.

Gelincik Hotel Project Krasnadarski, RUSSIA

A Five Star Hotel project in Gelincik, Krasnadarski, Russian Federation.

VINC'I 80 Wall Formwork and Slabflex Slab System as been used in this 70.000 sqm project.

Baku Port Baku, AZERBAIJAN

A premium project at Baku with a beautiful Caspian Seaview .

VINC'I 70 Wall Formwork has been used for all complicated walls.

Al Khail Road RTA 842-2 Bridge, DUBAI

Two new junctions over Al Khail Road has been constructed for easing up the heavy traffic load. Each junction consists of two 200m long bridges and 600m long ramps for heavy trucks.

MK-H 150 Shoring System together with Multix adjustable waling System.

Cheliff Dam Project, ALGERIA

Cheliff Dam Project, ALGERIA

Cheliff Project is a Water Dam with 300.000 cubic meter of concrete in ALGERIA. Project has been undertaken by MNG INSAAT.

TMS Simpex Multix, Roundex,TR-K 250 D Single Sided Climbing has been used.

BAB Trablous Project Tripoli, LIBIA

A premium office, shopping mall and hotel project in Tripoli, LIBIA with 330.000 sqm usable area.

MK-H 150 Shoring and Simpex Wall Formwork has been used for the project.

UMUR's Warehouse Project Istanbul, Turkey

A technological warehouse project in Istanbul. VİNC'I 80 Wall and Column Formwork at 11.20m height. Multix RAM single sided braces and TRK 250 D climbing brackets are used against existing insulation walls.

Exceeding your expectations

K1 yellowplan is the concrete formwork panel of the Mayr-Melnhof Kaufmann Group. It is used where maximum quality, durability and a perfect concrete finish are required.

The K1 yellowplan is manufactured at the Reuthe factory in Bregenzerwald, Austria and delivered on time to your subsidiary or - upon request - directly to the construction site.

The legendary K1 yellowplan has been produced for over 50 years. From the outset the new process was regarded as a true pioneering success. The K1 yellowplan has been manufactured on an industrial production line since the 80s. Even today the unique quality and high stability of this 3-ply formwork panel is still impressive.

At a glance

- Almost no splits thanks to the narrow lamella widths used for the edge-glued outer panels, not even after multiple uses.
- The special PU-edge seal prevents the penetration of moisture and adherence of concrete sludge on the edge of the panel.
- The entire surface is fully sanded and coated with a resistant melamine resin. This results in a fine concrete pore structure which is responsible for the unique appearance of the concrete.
- Thanks to the continuous intermediate layers, the longitudinal edges do not wear out, not even as a result of heavy mechanical strains.

Many areas of application

- Ceiling formworks
- Wall formworks
- Bridge formworks
- Tunnel formworks
- Special formworks
- Scaffolding
- Working platforms

Fact on formwork panels:

Wood types

- Spruce / Fir

Thicknesses

- 21 mm
- 27 mm

Formats

- Up to 600 x 200 cm

Product standard

- According to Austrian standard B 3023

Surfaces

- Seamlessly sanded surfaces
- Resistant melamine coating
- PU edge seal

Technical specifications

Product

- 3-ply solid wood panel made of high grade spruce laminations with melamine coating
- Pursuant to Austrian standard B 3023 "Solid wood panels"

Types of wood

- Spruce, fir, a mixture of wood species permitted

Glueing

- Veneer board 100 (AW 100) pursuant to Austrian standard B 3023

Wood moisture

- Approximately 12% +/- 3% at the time of delivery

Layout

- Manufactured as jumbo format panels; smaller formats are cut to exact specifications from jumbo formats
- Locked, glued crosswise
- Fully enclosed, laminated top and intermediate layers, no concealed edge bands
- Top layers predominantly showing vertical growth rings, no clamps
- seamlessly glued intermediate layer, ensures that the longitudinal edges do not tear off
- Seamlessly sanded
- Resistant melamine coating
- Water repellent edge seal

Standard formats

- Length x width in cm

100 x 50		
150 x 50		
200 x 50	100	
250 x 50	100	
300 x 50	100	

Jumbo formats

- Length x width in cm

400 x 50	100	150	200
500 x 50	100	150	200
600 x 50	100	150	200

Thicknesses

- 21 and 27 mm

Surface quality

- Seamlessly sanded surfaces
- Resistant melamine coating of approximately 130 g per m2 and side

Edge seal

- Water repellent formwork edge finish
- PU edge seal

Weight

- 21 mm: approx. 10.5 kg/m²
- 27 mm: approx. 12.5 kg/m²

Packaging

- Packages: 50 pieces of 21 mm and 40 pieces of 27 mm thickness
- Delivered suitable for the construction site, protected by integrated supporting timber
- Upon request, the pakkages will be wrapped in plastic foil. A surcharge applies.
- The package units for jumbo formats are subject to arrangement

Dimensional tolerances

pursuant to Austrian standard B 3023

Thicknesses	21 and 27 mm	+/- 1 mm
Lengths	100 ≤ 250 cm	+/- 1 mm
	300 ≤ 600 cm	+/- 2 mm
Widths	50 ≤ 200 cm	+/- 1 mm
Longitudinal curvature	100 ≤ 300 cm	+/- 1 mm
	301 ≤ 600 cm	+/- 1,5 mm
	Widths of < 50 cm	+/- 1 ‰

Permissible tensions

Minimum value pursuant to Austrian standard B 3023

Thicknesses	Bending strength	Bending modulus E
21 mm	40 N/mm²	8.000 N/mm²
27 mm	35 N/mm²	7.200 N/mm²

Description of quality

Kaufmann K1 concrete formwork panels are manufactured in accordance with Austrian standard B 3023 "solid wood panels, 3-ply concrete formwork panels – types and requirements":

I. Quality specifications for the outer layers of 3-ply concrete formwork panels

Lamella widths

minimum: 30 mm
maximum: 45 mm

Wood types

Spruce (picea), fir (abies): a mixture of wood types is permitted

Edge finish of the lamella

Parallel or conically sawn and sharp-edged. Little wane is permitted on the side facing the intermediate layer, provided they do not extend over the entire length

Surface

The top layers must be smooth (GL) or textured (STR) prior to surface tempering. The individual small boards of the top layer need to be arranged tightly next to one another. Isolated seams up to 500 mm in length and 1 mm in width are permitted, if they are filled in with the surface coating

Plugs

Plugs may be used for repairing wooden defects. The plugs must be carefully processed and glued well. Plug size: max. 40 mm in diameter. A maximum of 15 plugs is permitted per m² and side

Glueing

Glueing between the top and intermediate layers must be in accordance with the requirements outlined in section 4.4

Knots

Knots up to 20 x 40 mm are permitted; healthy, intergrown knots up to 40 x 80 mm. Isolated knot holes up to 5 mm in diameter are permitted (up to 10 mm for type STR)

Discolouration, fungal infestation

Discolouration up to a maximum of 20 % of the surface per side is permitted. Decay is not permitted

Compression wood

Strips of light compression wood are permitted

Splits

Splits with a maximum gradient of 1:10 to 1 mm in width and up to 500 mm in length are permitted. They must be filled in with the surface coat (with the exception of type STR)

Pitch pockets

Pitch pockets up to a max. of 5 x 50 mm are permitted (for type STR: max. 10 x 100 mm)

Ring shake

Not permitted

Insect infestation, worm holes

Insect infestation is not permitted; isolated small worm holes are permitted

II. Quality specifications for the intermediate layer of 3-ply concrete formwork panels

Width

Maximum width of strips or lamellas: 50 mm

Wood types

Spruce (picea), fir (abies), pine (pinus), larch (larix): a mixture of wood types is permitted

Edge finish

The edges are virtually sharp-edged at the ends and at the long side of the panels. Isolated rough edges up to 5 mm are permitted in the covered areas

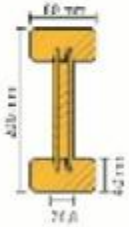
Discolouration, fungal infestation

Discolouration is permitted, decay is not permitted

HT 20 PLUS TIMBER BEAMS

Product	Formwork timber beam, glued, solid-wall I-joist beams
Wood types	Spruce, fir, a mixture of wood types is permitted
Wood moisture	12% +/- 3% at the time of delivery
Weight	4,6 kg/m
Gluing	Melamine resin-based adhesive, Adhesive Type I acc. to EN 301 approved for gluing load-bearing timber components.
Chords	• Made of carefully selected class S 10 spruce wood according to DIN 4074 • Finger-jointed, solid wood cross-sections with a dimension of 80 x 40 mm • Finger-jointing of the chords according to DIN 68140-1 • Web milling on the opposing side of the core (left-sided chord surface) • Planed and chamfered to approx. 0,4 mm
Webs	3-ply solid wood panel, laminated primarily showing vertical growth rings.
Design	Technical approval certificate Z-9.1-146 in conjunction with DIN 1052 or Eurocode 5 and EN 12812 apply for the design of the HT 20plus formwork beams.
Surface protection	The complete beam is waterproofed using a water-repellent colour glaze.
Supports	Thanks to the 3-ply solid wood webs, HT 20plus formwork beams can be cut into and supported at any lengths.

Dimensions tolerances



Dimensions [1]	HT 20 plus	Tolerances[2]
Beam height	200 mm	+/- 2,0 mm
Chord height	40 mm	- 1,5%
Chord width	80 mm	- 1,5%
Web thickness	76,8 mm	+/- 0,5 mm

[1] *These values apply at a wood moisture content of 12%*

[2] *According to technical approval certificate Z-9.1-146*

Material properties

Properties	DIN 1052-1:1988-04	DIN 1052:2008-12 / Eurocode 5
Strains	Permissible stress values	Characteristic limits of load bearing capacity
Shear force	zul Q = 1,0 kN	V_k = 23,9 kN
Bending moment	zul M = 5,0 kNm	M_k = 10,9 kNm
Support	-	$R_{k,y}$ = 47,8 kN
Section modulus [1]	W_y = 46 cm³	
Geometrical moment of inertia [1]	I_y = 4,61 cm⁴	
Modulus of elasticity	E = 13.000 N/mm²	
Shear modulus	G = 420 N/mm²	

[1] *The values of the section modulus and the geometrical moment of inertia apply to new or used concrete formwork beams. An analogously increased factor of safety needs to be added for recovery work beams.*

Standard lengths 2,45 / 2,90 / 3,30 / 3,60 / 3,90 / 4,50 / 4,90 / 5,90 m / max. 10,8 m length

Package units

Standard package
60 pieces each

Container package
100 pieces each

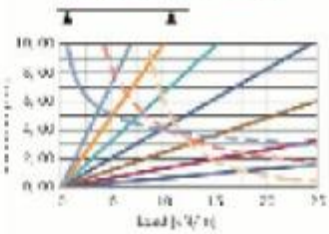
Packaging The packages are delivered suitable for the construction site and protected by integrated supporting timber.

Permissible distances between main beams and supports

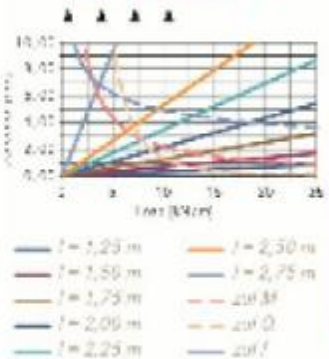
- Max. deflection: l / 500
- Live load: 1,5 kN / m² or 20 % of concrete weight
- Permissible carrying force of the supports: min. 22 kN
- Technical specifications: Permissible moment: ~ 5,0 kNm; Permissible shear force V ~ 11,0 kN

		Table 1: Crossbeams Distance between crossbeams 'a'				Table 2: Main beams Selected distance between main beams								
		0,50	0,625	0,667	0,75	1,00	1,25	1,50	1,75	2,00	2,25	2,50	3,00	3,50
Floor thickness cm	**Total load** kN / m²	**Max. permissible support width of the crossbeam = distance between main beams**				**Max. permissible support width = distance between supports**								
10	4,35	3,67	3,40	3,33	3,20	2,91	2,70	2,48	2,29	2,14	2,02	1,92	1,69	1,51
12	4,87	3,47	3,22	3,15	3,03	2,76	2,56	2,34	2,17	2,03	1,91	1,81	1,61	1,79
14	5,39	3,32	3,07	3,00	2,89	2,62	2,43	2,22	2,06	1,93	1,81	1,66	1,36	1,17
16	5,91	3,[illegible]7	2,94	2,83	2,77	2,52	2,33	2,12	1,97	1,84	1,65	1,49	1,24	1,06
18	6,43	3,06	2,85	2,77	2,67	2,42	2,25	2,04	1,89	1,76	1,62	1,37	1,14	0,98
20	6,95	2,95	2,74	2,68	2,58	2,34	2,15	1,96	1,81	1,68	1,41	1,27	1,06	0,90
22	7,47	2,86	2,66	2,60	2,50	2,27	2,07	1,89	1,46	1,47	1,31	1,18	0,98	0,84
24	7,99	2,79	2,59	2,53	2,43	2,21	2,00	1,83	1,67	1,38	1,23	1,10	0,92	0,79
26	8,51	2,72	2,52	2,47	2,37	2,16	1,94	1,77	1,46	1,29	1,15	1,03	0,86	0,74
28	9,03	2,66	2,46	2,41	2,32	2,10	1,88	1,62	1,39	1,22	1,08	0,97	0,81	0,70
30	9,6[illegible]	2,59	2,41	2,36	2,27	2,04	1,82	1,58	1,31	1,14	1,02	0,92	0,76	0,65
35	11,17	2,47	2,29	2,24	2,16	1,89	1,68	1,41	1,16	0,98	0,88	0,79	0,66	0,56
40	12,73	2,36	2,19	2,15	2,05	1,75	1,53	1,16	0,99	0,86	0,77	0,69	0,58	0,49
45	14,29	2,27	2,11	2,06	1,96	1,64	1,24	1,03	0,86	0,77	0,68	0,62	0,51	0,44
50	15,85	2,20	2,03	1,95	1,85	1,39	1,11	0,93	0,79	0,69	0,62	0,56	0,46	0,40
55	17,41	2,13	1,92	1,86	1,68	1,26	1,01	0,84	0,72	0,63	0,56	0,51	0,42	0,36
60	18,97	2,06	1,84	1,74	1,55	1,16	0,93	0,77	0,65	0,58	0,52	0,46	0,39	0,33
65	20,53	1,97	1,71	1,61	1,43	1,07	0,86	0,71	0,61	0,54	0,48	0,43	0,36	0,31
70	22,09	1,90	1,59	1,49	1,33	1,00	0,80	0,66	0,57	0,50	0,44	0,40	0,33	0,28
75	23,65	1,84	1,49	1,40	1,24	0,93	0,74	0,62	0,53	0,47	0,41	0,37	0,31	0,27
80	25,21	1,75	1,40	1,3[illegible]	1,16	0,87	0,70	0,58	0,50	0,44	0,39	0,35	0,29	0,25
85	26,77	1,64	1,31	1,23	1,10	0,82	0,66	0,55	0,47	0,41	0,37	0,33	0,27	0,23
90	28,33	1,56	1,24	1,16	1,04	0,78	0,62	0,52	0,44	0,39	0,35	0,31	0,26	0,22
95	29,89	1,47	1,18	1,10	0,98	0,74	0,59	0,49	0,42	0,37	0,33	0,29	0,25	0,21
100	31,45	1,40	1,12	1,05	0,93	0,70	0,56	0,47	0,40	0,35	0,31	0,28	0,23	0,20

Single span beam

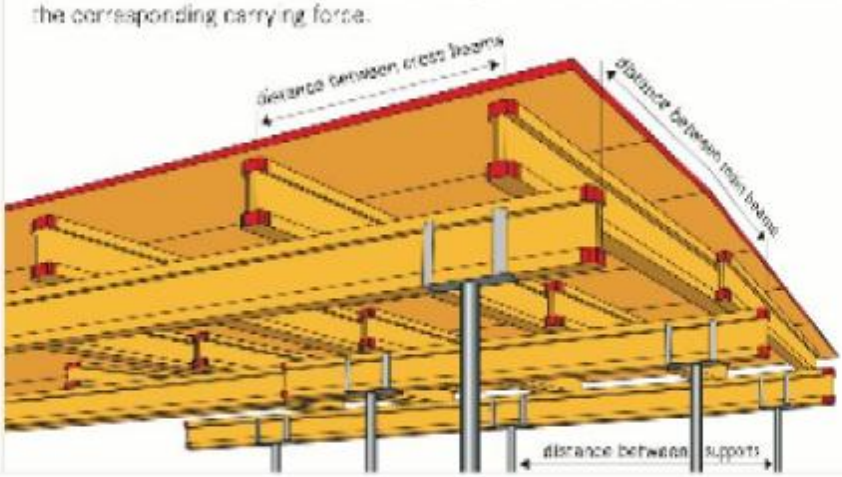


Multispan beam



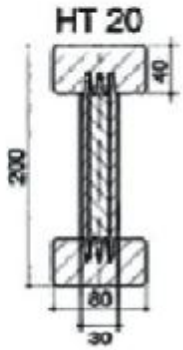
Example of calculation: Floor thickness: 20 cm, distance between crossbeams: 75 cm; we are looking for the distance between the main beams and the supports.

The permissible distance between main beams according to **table 1 = 2,58 m.** The identical or next smaller distance between main beams in **table 2 = 2,5 m.** Look for the permissible distance between supports in table 2, read downwards in column ≤2,50 m and sideways in row ≤20 cm + floor thickness, the result is **1,27 m.** Caution! Examine the supports to ensure the corresponding carrying force.

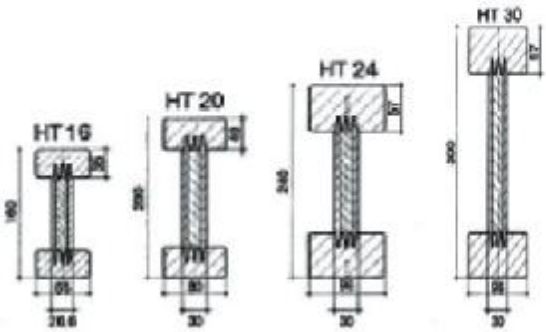


HT 20 PLUS TIMBER BEAMS

HT 20 Plus Shuttering Beam Technical Data	
Admissible moment of bending M [kNm]	5,0
Admissible shear force Q [kN]	11,0
Moment of inertia Jy [cm4]	4613
Moment of resistance Wy [cm3]	461
Weight	4,6 kg/m
Flange width	80 mm
Flange depth	40 mm
Web thickness	30 mm



Standard Length	Weight kg	Item No
2,45 mm	11,76	010 020 0245
2,90 mm	13,92	010 020 0290
3,30 mm	15,84	010 020 0330
3,60 mm	17,28	010 020 0360
3,90 mm	18,72	010 020 0390
4,20 mm	20,16	010 020 0420
4,50 mm	21,60	010 020 0450
4,90 mm	23,52	010 020 0490
5,90 mm	28,52	010 020 0590



Shuttering Beams Technical Data								
Depth	Admissible moment of bending M [kNm]	Admissible shear force Q [kN]	Moment of inertia Jy [cm4]	Moment of resistance Wy [cm3]	Weight [kg/m]	Flange width [mm]	Flange depth [mm]	Web tickness [mm]
HT 16	2,7	7,5	2000	251	3,2	55	35	26,6
HT 20	5,0	11,0	4613	461	4,6	80	40	30,0
HT 24	8,5	11,5	9600	800	6,8	96	57	30,0
HT 30	12,0	15,0	19503	1278	7,8	96	57	30,0
HT 36	16,0	16,0	30156	1675	8,8	96	57	30,0

HT 20 PLUS TIMBER BEAMS

HT 20 stock at
Formula 1 project.
Istanbul, TURKEY

KAUFMANN HT 20 plus THE CONCRETE SHUTTERING BEAM WITH THE UNIQUE AND TRUE, TRADEMARK PROTECTED END REINFORCEMENT

- Made of high-quality plastic - Shock proof
- Frost resistant - Accurate slits therefore
- Effective protection against splintering of boom ends
- Considerably extended longevity
- No risk of injury caused by splintering boom ends
- No reduction of end support surface

KAUFMANN HT 20 plus GERÇEK MARKA TESCİLLİ BAŞLIK KORUMASI OLAN AHŞAP KİRİŞ

-Yüksek kaliteli plastik koruma başlığı -Darbeye dayanıklı, Donmaya dayanıklı,Hassas kanallar -Kiriş başlarının çatlamasına ve yarılmasına karşı korumalı
-Uzun ömürlü
-Kiriş uçlarının yarılmasından dolayı yaralanma riski yaratmaz
-Uç noktalarda taşıma yüzeyi ve kesiti azaltılmamıştır.

HT 20 beam under snow, Moscow, RUSSIA

Steel Beam ST 150

Product Over view

- **Weight** G = 5,2 kg/m
  +Wood Ledge G = 0,7 kg/m²

- **Permissible Moment**
  34% higher than wooden beam HT 20
  100% higher than Aluminium beam 120
  even 95% of the moment of the HT 24

➡ Values are consistent, since no water uptake

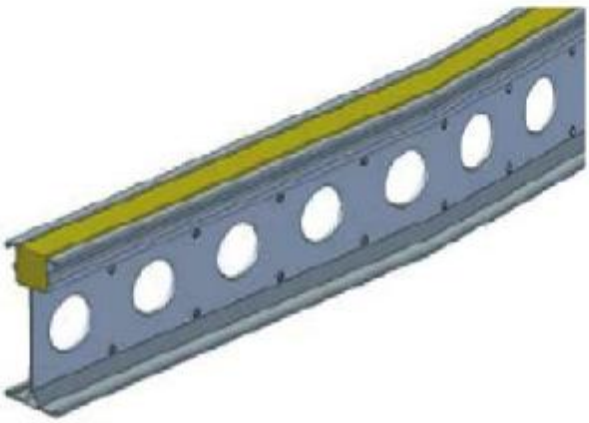
- **High permissible shear force Q=25 kN** (HT 20=11 kN / HT 24 = 14kN)

  Allows significantly greater load conduction into the support
  ➡ with 50 kN permissible support force - interesting for falsework

- Systematic connection with standard parts "clamp"
  + accesories for slab formwork, table forms and wall formwork

- **Easy to store and transport because of low volume 150 x 65 mm**

  40% Volume reduction compared to HT 20



Max. Moment	=	M = 6,7 kNm
Perm. Shear force	=	Q = 25 kN
Moment of internia	=	I = 232 cm⁴ / ExJ = 487 kNm²
Weight	=	G = 5,9 kg/m*)

Standard lenght : 240 / 300 / 360 cm

*) Incl. wooden ledge

ST 150 Slab Formwork - Flex Method

Accesories: U-Head / Support Head / Clamp / Table Head

- Easy to stack - easy to transport

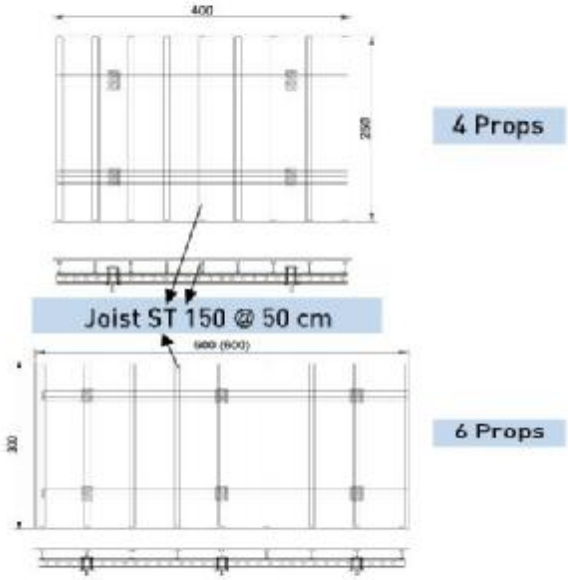
Slab Formwork Tables With ST 150

SLAB FORMWORK ST 150 / PROP 20 KN

LOAD TABLE ST150 SLAB FORMWORK WITH D20 PROPS												
Slab thickness [cm]	Total Load w / Live load [kN/m²]	Perm. load area / prop [m²]	Joist distance [cm]	Perm. prop distance c [m] for D 20 and selected Girder distance [m] *) depending on the room geometry								
max. Spacing of girders b [m]				1,20		1,50		1,80		2,10		2,40
12	4,90	4,10	50	2,40		2,40		2,10		1,80		1,50
14	5,40	3,70	50	2,40		2,10		1,80		1,50		1,50
16	5,90	3,40	50	2,40		2,10		1,80		1,50		1,20
18	6,40	3,10	50	2,10		2,10		1,80		1,50		1,20
20	7,00	2,90	50	2,10		1,80		1,50		1,20		1,20
22	7,50	2,70	50	2,10		1,80		1,50		1,20		1,00
24	8,00	2,50	50	1,80		1,80		1,50		1,20		1,00
26	8,50	2,40	50	1,80		1,50		1,20		1,00		1,00
28	9,00	2,20	50	1,80		1,50		1,20		1,00		0,80
30	9,60	2,10	50	1,80		1,50		1,20		1,00		0,80
32	10,00	2,00	50	1,50		1,20		1,00		0,80		0,80
34	10,60	1,90	40	1,50		1,20		1,00		0,80		0,80
36	11,20	1,80	40	1,50		1,20		1,00		0,80		0,70
38	11,90	1,70	40	1,20		1,00		0,80		0,80		0,70
40	12,70	1,60	40	1,20		1,00		0,80		0,70		
50	15,90	1,30	40	1,00		0,80		0,70				

SLAB FORMWORK ST 150 / PROP 30 KN

LOAD TABLE ST 150 SLAB FORMWORK WITH E30 PROPS												
Slab thickness [cm]	Total Load w / Live load [kN/m²]	Perm. load area / prop [m²]	Joist distance [cm]	Perm. prop distance c [m] for E 30 and selected Girder distance [m] 2 x ST 150 as Girder (check moment) *) depending on the room geometry								
max. Spacing of girders b [m]				1,20		1,50		1,80		2,10		2,40
12	4,90	6,10	50	2,40		2,40		2,40		2,40		2,40
14	5,40	5,60	50	2,40		2,40		2,40		2,40		2,10
16	5,90	5,10	50	2,40		2,40		2,40		2,40		2,10
18	6,40	4,70	50	2,40		2,40		2,40		2,10		1,80
20	7,00	4,30	50	2,40		2,40		2,40		2,10		1,80
22	7,50	4,00	50	2,40		2,40		2,10		1,80		1,50
24	8,00	3,80	50	2,40		2,40		2,10		1,80		1,50
26	8,50	3,50	50	2,40		2,40		1,80		1,50		1,50
28	9,00	3,30	50	2,40		2,10		1,80		1,50		1,20
30	9,60	3,10	50	2,40		2,10		1,50		1,50		1,20
32	10,00	3,00	50	2,40		1,80		1,50		1,20		1,20
34	10,60	2,80	40	2,10		1,80		1,50		1,20		1,20
36	11,20	2,70	40	2,10		1,50		1,20		1,20		1,00
38	11,90	2,50	40	1,80		1,50		1,20		1,20		1,00
40	12,70	2,40	40	1,80		1,50		1,20		1,00		1,00
50	15,90	1,90	40	1,50		1,20		1,00		0,80		0,80



EXAMPLES:

1. **400 x 250 cm = 10 m²**
   Ø 1 Girder ST 150
   Ø 4 x Props 20 kN
   ØUp to 22 cm Thickness
2. **400 x 250 cm = 10 m²**
   Ø 2 Girder ST 150
   Ø 4 x Props 30 kN
   ØUp to 40 cm Thickness
3. **500 x 300 cm = 15 m²**
   Ø 1 Girder (2 x 270)
   Ø 6 x Props 20 kN
   ØUp to 18 cm Thickness
4. **500 x 300 cm = 15 m²**
   Ø 1 Girder (2 x 270)
   Ø 6 x Props 30 kN
   ØUp to 36 cm Thickness
5. **600 x 300 cm = 18m²**
   Ø 2 Girder ST 150 / 300
   Ø 6 x Props 30 kN
   ØUp to 30 cm Thickness

PROPS ACCORDING TO EN 1065

Max. load per Prop [kN]

Extension length [cm]	N 1 acc. DIN	D25 acc. EN	N3 acc. DIN	D35 acc. EN	G7 acc. DIN	D45 acc. EN	N1 acc. DIN	E30 acc. EN	G4 acc. DIN	E40 acc. EN
WEIGHT	15,7	12,2	19,4	18,1	35,4	25	15,7	16,8	28,2	25
150	30,0						30,0			
160	30,0						30,0			
180	30,0						30,0			
200	26,0	20 kN	30,0				26,0			
220	21,5		28,9				21,5			
240	18,1		24,3				18,1	30 kN	35,0	
250	16,6		22,4				16,6		35,0	
260	15,4		20,7	20 kN			15,4		35,0	
280			17,9						31,4	
300			15,6		35,0				27,3	
320			13,7		32,2				24,0	30 kN
340			12,1		28,5				21,3	
350			11,4		26,9	20 kN			20,1	
360					25,5				19,0	
380					22,9				17,0	
400					20,6				15,4	
420					18,7					
450					16,3					
460					15,6					
480					14,3					
500					13,2					
Description acc. EN 1065	B30	D25	B35	D35	C50	D45	B25	E25	C40	E40

Slab Formwork Tables With ST 150

TECHNICAL DATA SHEET

G = 5.9 kg/m (incl. Timber Insert)
Mmax = 6.7 kN/m
Qmax = 25 kN
I = 232 cm^4
L = 240 cm / 300 cm / 360 cm

LOADING UP TO 50 kN with 1 Joist

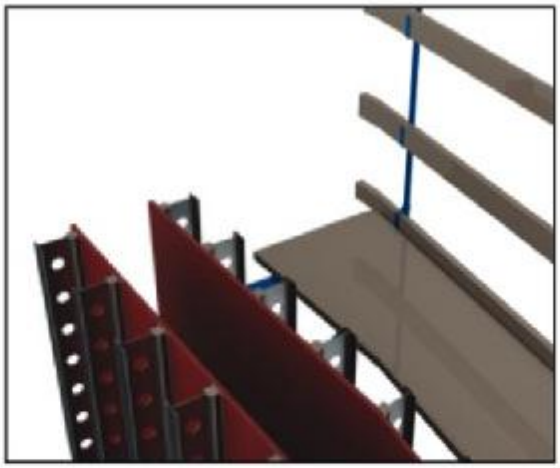
E . I = 487 kN/m^2
E = 210.000.000 kN/m^2

PLYWOOD

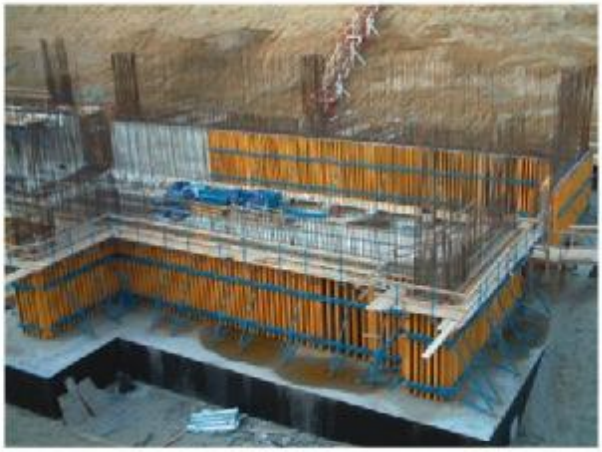
ST 150 SPACING

40 kN/m^2		60 kN/m^2		80 kN/m^2	
18mm	21mm	18mm	21mm	18mm	21mm
37	43	30	34	26	30

Calculation for max. ST 150 Spacing = 45 cm



SIMPEX® WALL FORM



SIMPEX İLE HIZLI VE ÇOK YÖNLÜ KALIPLAMA KOLAYLIĞI

TMS SIMPEX Perde ve Kolon Kalıplarının farklı yükseklik ve kesitlere kolay adapte edilebilir olması, vinç ile kullanılan sistemler arasında ayrıcalıklı bir konuma sahip olmasını sağlamıştır. Sistemi oluşturan düşey KAUFMANN HT20plus Ahşap Kirişlerin ve YK çelik kuşaklarının ara mesafeleri değiştirilerek yüksek beton basınçlarına ve beton döküm hızlarına göre sistemi dizayn etmek mümkündür. Villalar, Konut Projeleri, Yüksek Yapılar, Endüstriyel İnşaatlar, Yol Projeleri, Arıtma Tesisleri, Enerji Projeleri gibi birbirinden çok farklı karakterdeki yapı ve inşaatlar SIMPEX sisteminin esnekliği sayesinde kolayca kalıplanabilir. Sistem TMS TRK tırmanma iskeleleri ve şaft platformları ile tırmandırılabildiği gibi TMS CLIMBEX® hidrolik tırmanır sisteme de adapte edilebilmektedir. SIMPEX sisteminin getireceği kolaylıklar;

- Az parçayla çok iş,
- Ön montaj, kurum ve şakule alma kolaylığı,
- Farklı panellerin bir araya getirilerek daha büyük panoların deplase edilebilmesi,
- Kamalarla sabitlenen panoların arasından beton sızmasının önlenir olması,
- Ahşap kiriş, çelik kuşak ve saplama mesafeleri değiştirilerek istenen dayanımların elde edilebilmesi.
- Eğri yüzlü perdelerin bile sistemle kalıplanabilir olması.

SIMPLE AND FLEXIBLE FORMING APPLICATIONS WITH SIMPEX

TMS SIMPEX is a perfect choice for walls and columns at any height and even with complicated floor plans. Residential Buildings from Condominiums to High Rises, Industrial Construction either Waste Water Treatment or Power Plants can easily be formed by SIMPEX. System can climb with TMS climbing brackets and shaft platforms.

SIMPEX is also applicable to CLIMBEX® hydraulic climbing system. What makes SIMPEX so popular is its design features;

- Very few items to worry about,
- Ease of erection, adaptability and alignment,
- Variety in panel sizes, possibility in gang forming,
- Flexibility in tie and timber beam spacing allows for higher design loads,
- Even slight curvatures are possible with it.

USTAY BAKU Project

BAB Trablus AVM Project LIBIA

Cheliff Dam Project ALGERIA

Fi Tower Istanbul TURKEY

Blue City Project OMAN

Simpex delivers the smooth surface finish of plywood, together with the strengths of HT 20 timber beams and steel walers

SIMPEX® WALL FORM

SIMPEX Formwork at an industrial job-site in KAZAKHSTAN.

A SIMPEX Shaft Formwork at a shopping mall Project in Moscow

Access laddders and working platforms with SIMPEX.

Concrete weight blocks for anchoring the push-pull props.

TRK 160 Climbing System with lower lever suspended partially mounted

Slight curvetures with SIMPEX at Cheliff Dam

Pre-assembled panels at TMS Workshop.

Standard panels can be easily adapted for almost every dimension with variable plywood infills and extended waler connectors.

Climbing scaffold head

The strong wedge design provides necessary tension through the slotted waler connectors for leak-proof joints, while simultaneously aligning the panels

Corner-shoe detail for angular corner tensioning

HT 20 End Clamp application provides additional rigidity at outer HT 20's on panels.

Standart Panel Connection Procedure

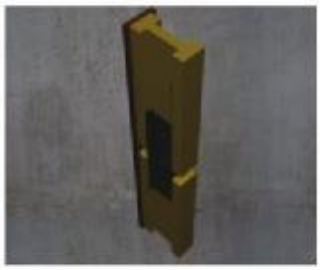
i-Place the waler connector centrally by the use of a wedge.

ii- On one side- preferably on the heavier panel – place the wedge to the slot nearest to the joint.

iii- Put another wedge on the same waler to the farthest possible slot and hammer both wedges down while the centering wedge remains in place.

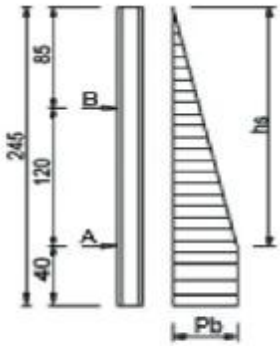
iv- After securing the wedges at one side, remove the centering wedge and place it to the first slot on the other waler. This wedge should be hammered down for tight panel joints.

v- The final step is hammering down the four the wedge, again at the farthest possible slot for providing the locking action at the panel joints.

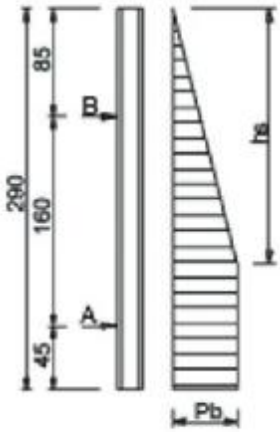
Panels can stacked on top of each other with the easy to use HT 20 Extension splice Plates.

HT 20 Plus Girder



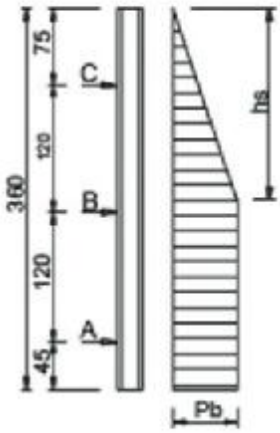
Formwork height 2.50 m

Concrete pressure (kN/m²)	30	40	50	60	70
Girder spacing (cm)	63	48	42	41	
Max. spann deflection (mm)	0.43	0.43	0.35	0.29	
Max. cantilever deflection (mm)	0.15	0	0	0.06	
Wailer load B (kN/m)	28	29	29	28	
Wailer load A (kN/m)	29	39	46	50	



Formwork height 3.00 m

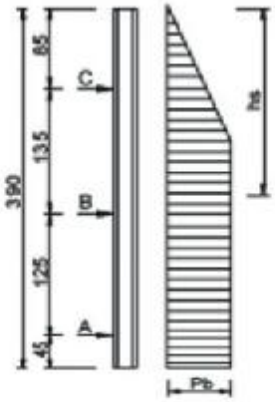
Concrete pressure (kN/m²)	30	40	50	60	70
Girder spacing (cm)	47	35	29	26	26
Max. spann deflection (mm)	1.54	1.56	1.45	1.28	1.17
Max. cantilever deflection (mm)	0	0	0	0	0
Wailer load B (kN/m)	35	38	40	39	39
Wailer load A (kN/m)	37	50	60	69	73



Formwork height 3.60 m

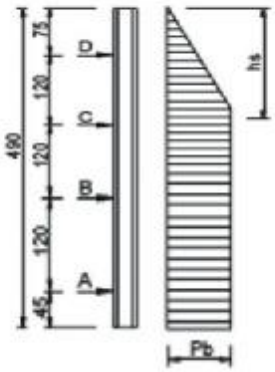
Concrete pressure (kN/m²)	30	40	50	60	70
Girder spacing (cm)	56	44	36	31	27
Max. spann deflection (mm)	0.31	0.26	0.29	0.32	0.29
Max. cantilever deflection (mm)	0	0.1	0.06	0.05	0.09
Wailer load C (kN/m)	21	21	21	20	20
Wailer load B (kN/m)	39	50	57	61	62
Wailer load A (kN/m)	31	41	52	62	72

HT 20 Plus Girder



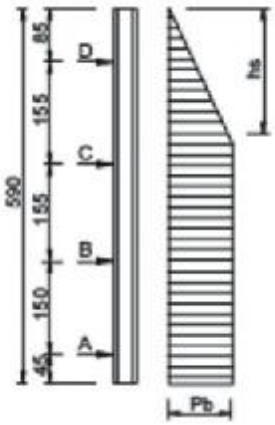
Formwork height 4.00 m

Concrete pressure (kN/m²)	30	40	50	60	70
Girder spacing (cm)	52	3	33	28	26
Max. spann deflection (mm)	0.41	0.42	0.36	0.32	0.37
Max. cantilever deflection (mm)	0.32	0.08	0.05	0.05	0.11
Wailer load C (kN/m)	30	32	32	31	31
Wailer load B (kN/m)	41	55	66	74	77
Wailer load A (kN/m)	31	41	52	63	74



Formwork height 5.00 m

Concrete pressure (kN/m²)	30	40	50	60	70
Girder spacing (cm)	60	44	35	29	25
Max. spann deflection (mm)	0.26	0.26	0.26	0.25	0.25
Max. cantilever deflection (mm)	0.85	0.45	0.38	0.38	0.35
Wailer load D (kN/m)	29	30	30	29	29
Wailer load C (kN/m)	36	48	57	62	64
Wailer load B (kN/m)	37	49	62	75	87
Wailer load A (kN/m)	31	41	51	62	72



Formwork height 6.00 m

Concrete pressure (kN/m²)	30	40	50	60	70
Girder spacing (cm)	44	33	27	22	19
Max. spann deflection (mm)	0.71	0.73	0.64	0.62	0.61
Max. cantilever deflection (mm)	0	0	0	0	0
Wailer load D (kN/m)	32	34	35	35	34
Wailer load C (kN/m)	48	65	79	89	95
Wailer load B (kN/m)	48	64	80	97	114
Wailer load A (kN/m)	34	45	56	67	78

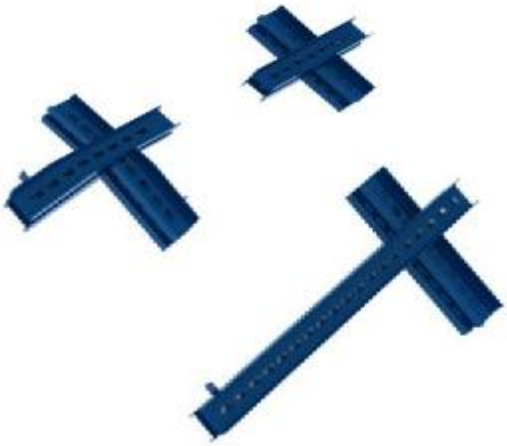
The following maximum section properties and support forces are assumed :

perm. Q =	11 kN	(permissible shear force),
perm. M =	5 kNm	(permissible bending moment),
perm. B =	22 kN	(permissible reaction force when supported at joint under continuous formwork girder, ie inside support of continuous girders, outside support of continuous girders with cantilever section);

WALERS

ITEM	ITEM NO	WEIGHT
YK-S 95	030 031 00095	20,90 kg
YK-S 120	030 031 00120	26,40 kg
YK-S 145	030 031 00145	31,90 kg
YK-S 195	030 031 00195	42,90 kg
YK-S 245	030 031 00245	53,90 kg
YK-S 295	030 031 00295	64,90 kg

INNER CORNER WALER



ITEM	ITEM NO	WEIGHT
YK-T 50x50	030 031 00505	20,24 kg
YK-T 60x60	030 031 00606	24,64 kg
YK-T 60 x120	030 031 00612	37,84 kg

WALER CONNECTOR

ITEM	ITEM NO	WEIGHT
YK-B 90	030 031 00609	9,60 kg
YK-B 100	030 031 00610	10,40 kg
YK-B 120	030 031 00612	12,95 kg
YK-B 150	030 031 00615	15,45 kg

ARTICULATED WALER CONNECTOR

ITEM	ITEM NO	WEIGHT
YK-M 90	030 031 00619	9,85 kg
YK-M 100	030 031 00620	10,70 kg
YK-M 120	030 031 00622	13,30 kg
YK-M 150	030 031 00625	15,90 kg

SimpeX® Wall Form

HT-P 20 CRANE HOOK

HT-P 20 BEAM EXTENSION SPLICE PLATE

ITEM	ITEM NO	WEIGHT
VK-S	030 030 00170	4,30 kg
HE-S	030 030 00110	8,00 kg
HE-H	030 030 00115	5,80 kg

FILLER PANEL PRESSURE PLATE

STOP-END SPANNER

ITEM	ITEM NO	WEIGHT
YK-P	030 030 00120	1,60 kg
YK-U	030 030 00130	3,75 kg

HT-P20 BEAM CLAMP

HT-P20 END CLAMP

ITEM	ITEM NO	WEIGHT
HK-D	004 130 00010	0,80 kg
HB-D	004 030 00040	0,72 kg

CORNER SHOE

WEDGE "CAST"

ITEM	ITEM NO	WEIGHT
KP-D	004 130 00060	2,70 kg
KA-D	004 130 00050	0,84 kg

STRIP PLATE

ITEM	ITEM NO	WEIGHT
ST-P 100	030 030 02100	10,65 kg

CATWALK BRACKET SIMPEX TYPE

ITEM	ITEM NO	WEIGHT
BD-K 75 S	030 030 00150	7,50 kg

ACCESS LADDER W/ GUARD

ITEM	ITEM NO	WEIGHT
PL-M 250	030 028 05250	21,20 kg
PL-M 300	030 028 05300	42,50 kg
PL-M 350	030 028 05350	50,60 kg
PL-M 400	030 028 05400	68,35 kg
PL-M 500	030 028 05500	84,10 kg

PANEL LIFTING BEAM

PLYWOOD SCREW

ITEM	ITEM NO	WEIGHT
VK-T 600	030 030 00660	245 kg
VI-D 0560	004 106 00560	0,004 kg

STRIP CORNER PANEL

ITEM	ITEM NO	WEIGHT
ST-C 100	030 030 01100	22,96 kg

MultiX® Wall Form

MULTIX WALL FORMWORK
MULTIX, is a versatile plywood faced formwork system with vertical HT 20plus timber beams and sequentially drilled and slotted multi-purpose NPU 120 steel walers. System includes walers, splice plates, HT20 clamps, wedges, tie-rods, corner shoes, crane-hooks, concreting catwalks, double push-pull-props, removable anchors.

MULTIX IS A VERSATILE AND MULTI PURPOSE WALING SISTEM, miscellaneous applications such as climbing brackets, Single Sided Concreting RAM brackets, Pier Head trusses are possible by the MULTIX walers

MULTIX PERDE KALIBI
MULTIX Perde Kalıp sistemi çok amaçlı kullanıma yönelik özel çok delikli MULTIX kuşak sistemi ile oluşturulan plywood yüzeyli, düşey HT 20 takviyeli bir sistemdir. Perdelerde yatay kuşak, yatay kuşak bağlantı elemanı, HT20 adaptörü, kama, tie-rod, köşe pabucu, vinç kulbu, beton döküm konsolları, çiftli push-pull-prop, sistem dahilindedir.

MULTIX ÇOK YÖNLÜ ÇOK AMAÇLI BİR KALIP SİSTEMİDİR, perde kalıbı için kullanılan çok delikli NPU 120 kuşaklarla perde yatay kuşağı, tekyüz perde dayaması, köprü başlık traversi, tünel kalıbı, hidromekanik sistemler v.s. ihtiyaçlarda çok yönlü kullanım özelliği vardır.

MULTIX WALERS

ITEM	ITEM NO	WEIGHT
MK-S 100	030 034 00100	13,30 kg
MK-S 245	030 034 00245	32,59 kg
MK-S 295	030 034 00295	39,24 kg
MK-S 600	030 034 00600	79,80 kg

MULTIX WALER CONNECTOR

MULTIX ARTICULATED WALER CONNECTOR

ITEM	ITEM NO	WEIGHT
MK-B 100	030 034 01010	10,40 kg
MK-B 120	030 034 01012	12,50 kg
MK-B 150	030 034 01015	15,60 kg
MK-M 100	030 034 01110	10,60 kg
MK-M 120	030 034 01112	12,70 kg

MULTIX WALER CORNER CONNECTOR

ITEM	ITEM NO	WEIGHT
MK-K	030 034 01150	8,10 kg
MK-P	030 134 00910	0,30 kg

MULTIX WALER CONNECTOR PIN

HT-P 20 CRANE HOOK

HT-P 20 BEAM EXTENSION SPICE PLATE

ITEM	ITEM NO	WEIGHT
VK-S	030 030 00170	4,30 kg
HE-S	030 030 00110	8,00 kg
HE-H	030 030 00115	5,80 kg

MultiX® Wall Form

STRIP PLATE

ITEM	ITEM NO	WEIGHT
ST-P 100	030 030 02100	10,65 kg

FILLER PANEL PRESSURE PLATE

STOP-END SPANNER

ITEM	ITEM NO	WEIGHT
YK-P	030 030 00120	1,60 kg
YK-U	030 030 00130	3,75 kg

HT-P20 BEAM CLAMP

HT-P20 END CLAMP

ITEM	ITEM NO	WEIGHT
HK-D	004 130 00010	0,80 kg
HB-D	004 030 00040	0,72 kg

CORNER SHOE

WEDGE "CAST"

ITEM	ITEM NO	WEIGHT
KP-D	004 130 00060	2,70 kg
KA-D	004 130 00050	0,84 kg

STRIP CORNER PANEL

ITEM	ITEM NO	WEIGHT
ST-C 100	030 030 01100	22,96 kg

CATWALK BRACKET SIMPEX TYPE

ITEM	ITEM NO	WEIGHT
BD-K 75 S	030 030 00150	7,50 kg

ACCESS LADDER W/ GUARD

ITEM	ITEM NO	WEIGHT
PL-M 250	030 028 05250	21,20 kg
PL-M 300	030 028 05300	42,50 kg
PL-M 350	030 028 05350	50,60 kg
PL-M 400	030 028 05400	68,35 kg
PL-M 500	030 028 05500	84,10 kg

PANEL LIFTING BEAM

ITEM	ITEM NO	WEIGHT
VK-T 600	030 030 00660	245 kg

PLYWOOD SCREW

ITEM	ITEM NO	WEIGHT
VI-D 0560	004 106 00560	0,004 kg

RoundeX Circular Wall Form

FLEXY CURVES ALL AROUND

TMS ROUNDEX challenges Circular Water Tanks, Silos, Car Park Ramps, Pools and even architecturally complex curvatures. Continuous adjustability provides you not only the adaptability of formwork from structure to structure, but also changing radii within the same structure is possible, thinking about helical, parabolic or even curvatures changing from convex to concave within the same structure. Panels can easily be adapted to any radii without any re-assembly and panel to panel connection is simply done by panel clips. System can climb with TMS climbing brackets and shaft platforms.

ROUNDEX AYARLANABİLİR EĞRİ YÜZLÜ KALIP SİSTEMİ KALIP PANOLARINI DEĞİŞTİRMEDEN ÇAP DEĞİŞTİRME KOLAYLIĞI

TMS ROUNDEX ile Dairesel Su Tankları, Silolar, Otopark Rampaları, Havuzlar, Karmaşık Mimarili Eğrisel Yüzeyli Yapılar sorun olmaktan çıkıyor. Minimum 1.2 m yarıçaptan başlayarak sınırsız ayarlanabilir eğri yüzeyli kalıplar, aynı proje içinde farklı çaplara uyarlamayı kolaylaştırdığı gibi, kalıpların daha sonraki projelere de kolayca uyum sağlayabilir olmasıyla büyük avantajlar sağlamaktadır. Sistem TMS Tırmanma Konsolları ve Şaft Platformları ile uyum içinde tırmandırılabilmektedir

TMS ROUNDEX, an adjustable formwork system for radii larger then 1.2 m forming circular structures, especially the ones with varying radii have always been costly, if not difficult from the contractors view point.

ROUNDEX CIRCULAR WALL FORM

TMS Roundex is a radially adjustable formwork system designed especially for sewage plants, water tanks, car park ramps, silos, pools and even the most complex architectural circular walls.

Starter application with ROUNDEX

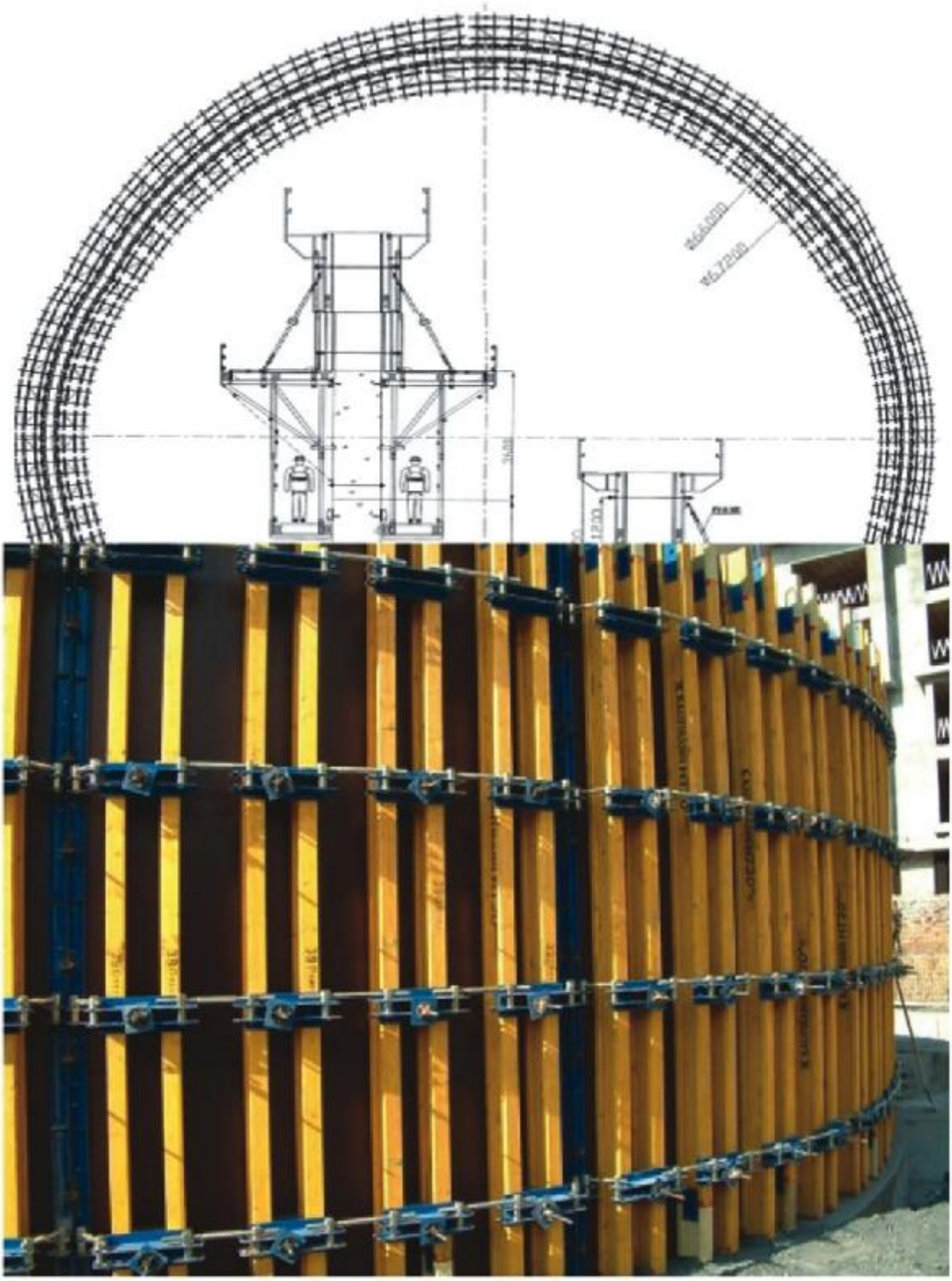
Pictured you can see an h=5m ROUNDEX Circular Wall Formwork with tri-tube heavy-duty push-pull props.

Roundex panels can climb with TMS-TRK Climbing Scaffolds.

Connection between the Roundex panels are easy with the Combi panel-locks

Roundex panels are assembled with plywood, HT 20 timber beams, special walers and the push-pull type spindles between them.

RoundeX Circular Wall Form



TMS Roundex is radially adjustable formwork system designed especially for sewage plants, water tanks, car park ramps, silos, pools and even the most complex architectural circular walls.

RT-K WALER

BRIDGING WALER

ITEM	ITEM NO	WEIGHT
RT-K 46	030 031 00070	7,65 kg
RT-K 80	030 031 00080	12,10 kg
YK-R	030 031 00060	37,55 kg

PUSH-PULL SPINDLE

BRINGING WALER PIN

ITEM	ITEM NO	WEIGHT
RA-G 25	004 130 00225	2,60 kg
RA-G 50	004 130 00250	3,45 kg
RK-P	030 131 00063	1,00 kg

RP-T ROUNDEX PANEL PROFILE

ITEM	ITEM NO	WEIGHT
RP-T 245	030 031 08245	20,80 kg
RP-T 290	030 031 08290	24,65 kg
RP-T 330	030 031 08330	28,05 kg
RP-T 360	030 031 08360	30,60 kg
RP-T 390	030 031 08390	33,15 kg
RP-T 420	030 031 08420	35,70 kg
RP-T 450	030 031 08450	38,25 kg
RP-T 490	030 031 08490	41,65 kg

HT-P 20 CRANE HOOK

HT-P 20 BEAM EXTENSION SPLICE PLATE

ITEM	ITEM NO	WEIGHT
HE-S	030 030 00110	8,00 kg
HE-H	030 030 00115	5,80 kg
VK-S	030 030 00170	4,30 kg

RoundeX Circular Wall Form

CATWALK BRACKET SIMPEX TYPE

ITEM	ITEM NO	WEIGHT
BD-K 75 S	030 030 00150	7,50 kg

VINC'I PANEL LOCK "TU-T 80"

ITEM	ITEM NO	WEIGHT
TU-T	030 180 00110	4,90 kg

ACCESS LADDER W/ GUARD

ITEM	ITEM NO	WEIGHT
PL-M 250	030 028 05250	21,20 kg
PL-M 300	030 028 05300	42,50 kg
PL-M 350	030 028 05350	50,60 kg
PL-M 400	030 028 05400	68,35 kg
PL-M 500	030 028 05500	84,10 kg

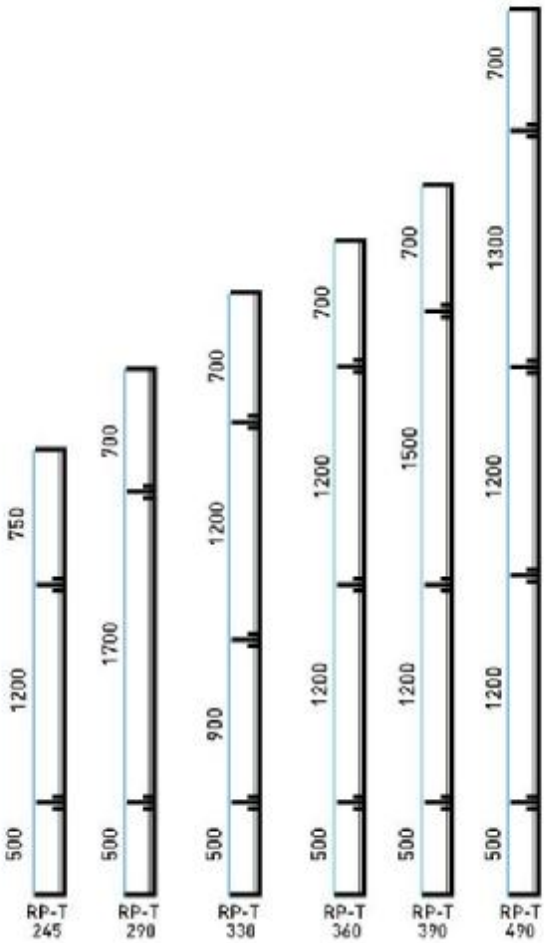
PLYWOOD BOLT

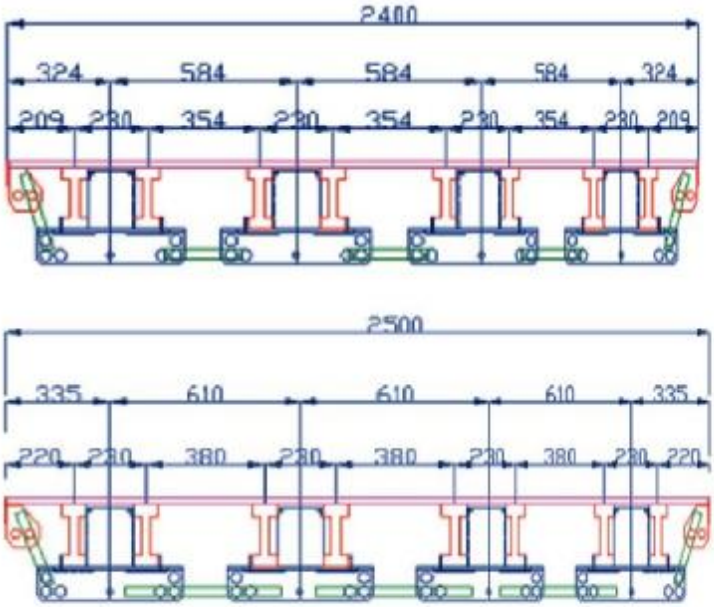
PLYWOOD SCREW

"R" PIN

ITEM	ITEM NO	WEIGHT
CV-S M6x30	004 106 00630	0,004 kg
VI-D Ø5x60	004 106 00560	0,004 kg
GP-R 450	004 130 00240	0,003 kg

RoundeX Circular Wall Form





VINC'I® 80 WALL FORM

VINC'I 80 WALL FORMWORK

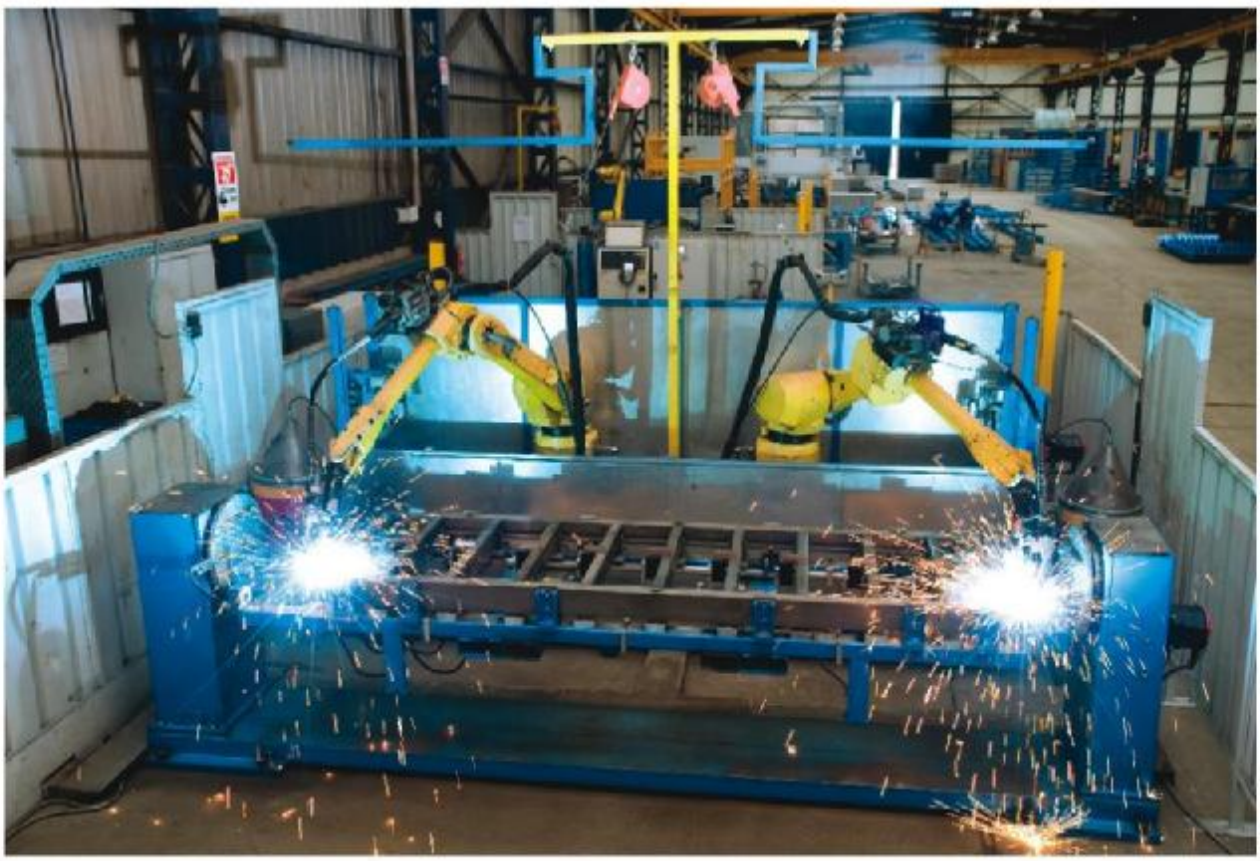
VINC'I is a steel frame formwork system composed of high strength rectangular tube profiles, which could be easily combined with patented dial type REX panel locks. The steel frame profiles are designed to be able to connect at any point with the other panel. Panel facing is the plastic coated Birch Plywood namely WISA-Form Elephant (delivered by UPM), providing higher durability and longer life.
Panel widths are 30, 45, 60, 75, 90, 120, 240cm. whereas the heights are chosen as 330, 300, 270, 180, 150 and 120cm. The panel corners bear solid steel pieces which gives extra stiffness while also delivering strong inserts for levering and lifting holes for handling. Only the solid corner would double the panel life against similar systems.
REX formwork lock could be applied to any point on the frame profiles as well as transversals. REX can be fixed or released by the help of a hammer easily whether the lock is positioned high or low on the panel without necessitating the worker to climb on the panel or bend over extremely. The conical holes for DW15 tie-rods on panel are so positioned that formwork bears 80 kN/m² concrete pressure.
The formwork system consist of VINC'I panels, Rex VINC'I locks, SAH tie-rods, VINC'I crane hooks, VINC'I type cat-walk brackets, double push-pull props and accessories. (WISA-Form Elephant Facing is standard)

VINC'I 80 PERDE KALIBI

VINC'I Perde ve Kolon Sistemi panoları kapalı torsiyona mukavim çelik çerçevelerden oluşmuş olup enlemeler kutu profillerden yapılmıştır. VINC'I panolar plastik yüzeyli plywood WISA-Form Elephant kaplıdır. Çelik çerçeve profili elemanın istenilen her çerçeve noktasında bir diğeri ile bağlantısını temin edecek şekilde tasarlanmıştır.

Pano genişlikleri 30, 45, 60, 75, 90, 120, 240 cm ve yükseklikleri ise 330, 300, 270, 180, 150,120 cm olarak seçilmiştir. Bütün panoların köşeleri masif olup bir yandan çerçeveyi sağlamlaştırmakta ve diğer yandan da panonun, bir levye veya insaat demiri ile yer değiştirmesini sağlamaktadır. Bunun dışında bu köşelerdeki delikler kolay ve çabuk nakliye için kullanılmaktadır.
Kalıp kavraması REX her enlemeye ve çerçevenin enine boyuna herhangi bir noktasına yerleştirilebilir ve bir çekiç darbesiyle açılır veya kapatılabilir. Panolarda konik olarak açılmış ankraj delikleri DW15'lik tie-rod kullanımı için uygun olup 80 kN/m²'ye kadar beton basıncını karşılamaktadır.
Perdeler VINC'I panolar, REX VINC'I kilit, Dywidag tie-rod, VINC'I vinç kulbu, tipi beton döküm konsolları, çiftli itme-çekme tipi payanda ve pabuçlarından oluşmaktadır.

Fully Automated Fixtures and Robotic Welding has been applied for VINC'I production.

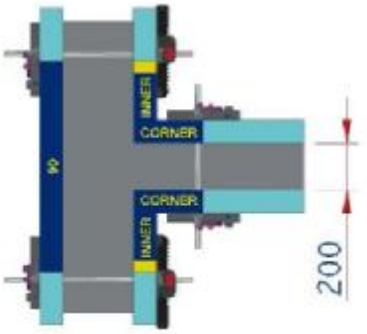


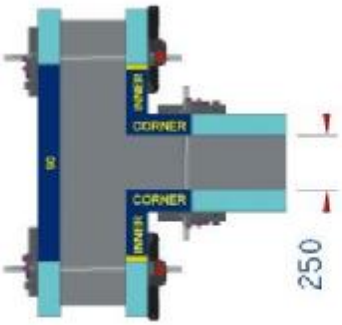
VINC'I® 80 WALL FORM

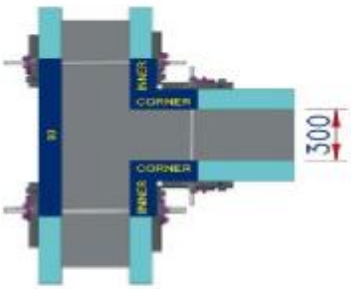
The VINC'I Panel Formwork is a crane set modular panel formwork system for use in civil engineering projects having a wide range of applicability in constructing of industrial, infrastructural and residential buildings.
A complete formwork set including the accessories weighs about 72 kg/m². The admissible load bearing capacity according to DIN EN 18202 Tab. 3, Line 7 for fresh concrete pressure is of 80 kN/m²
It should be noted that whenever used frame-work components are applied, the load bearing capacity and/or related deflections may deviate up to 20% from design calculations.
The high load bearing capacity of VINC'I panel formwork ensures faster concreting times. It is practically possible to concrete up to a 4.5 m/h rate of placing according to DIN EN 18218 (no retarder, t ≥ 5 °c).
The panels are either provided with 18 mm UPM WISA Form Elephant –i.e. a long life all birch plywood panel with polymer facing- or 20 mm LaminaeX AL PP –i.e. consisting of polypropylene and aluminum- forming face, both facing materials are fixed to the panel frames by flat-head rivets. In the frame the forming face is sealed with silicone for additional protection.
Examples shown are mostly standard applications which occur in practice most frequently. When using our products internationally, the regulations of the local professional associations of the respective country should have been observed.
It should be noted that what is shown on the following pages are assembly illustrations for demonstration purposes. In order to express the details in the illustrations more effectively, the safety aspects may not always been taken into full consideration.
Please adhere to these technical instructions together with full safety measures when applying the VINC'I Formwork, as any deviation requires an additional static calculation and evidence.
Only faultless material should have been used, damaged items should be avoided. Please make sure to apply only original TMS spare parts for any replacement.

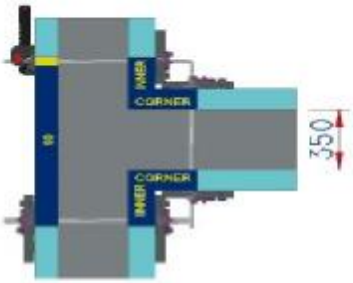
P.S. The panel locks – i.e. REX & CONTI – should never be lubricated.

"T" WALL CONNECTION DETAIL

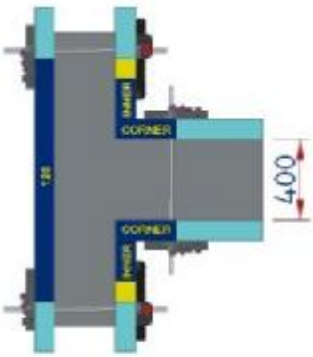


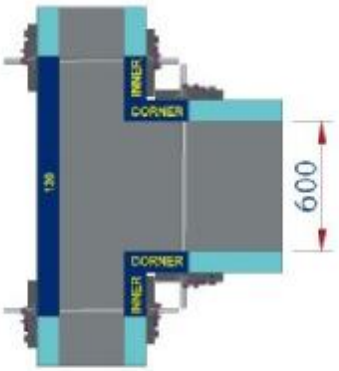


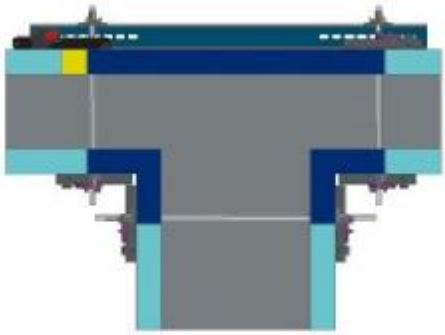




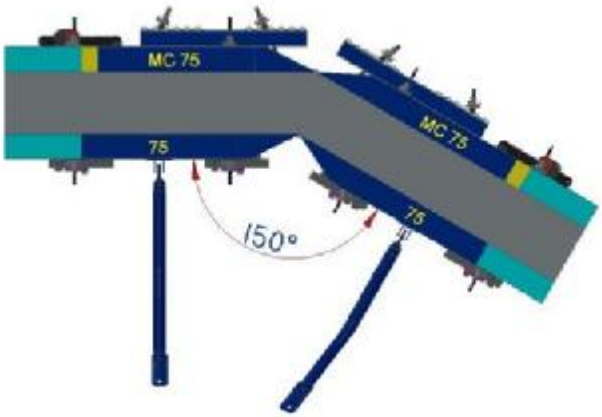
For T-Wall applications connection is provided by using two inside corners. Varying wall thicknesses could be compensated by means of timber fillers. When applying two or more panels at the straight wall side, where tie-rod anchoring is not possible a waler should be used for additional stiffening.



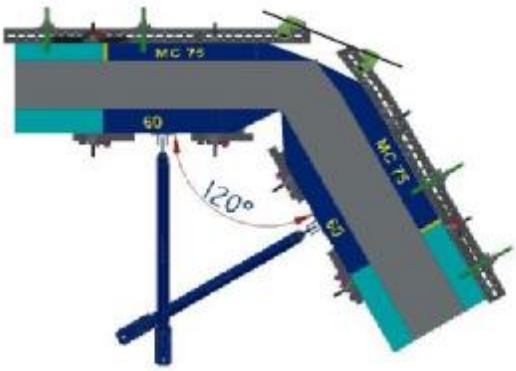


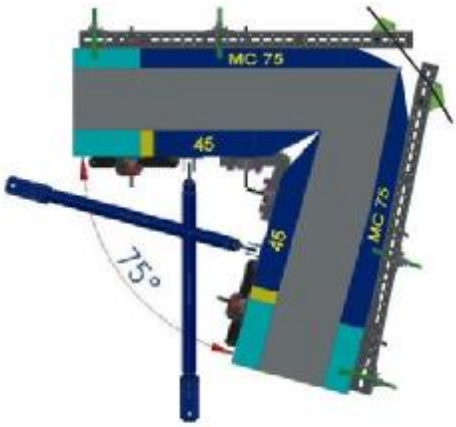


ARTICULATED CORNER DETAIL



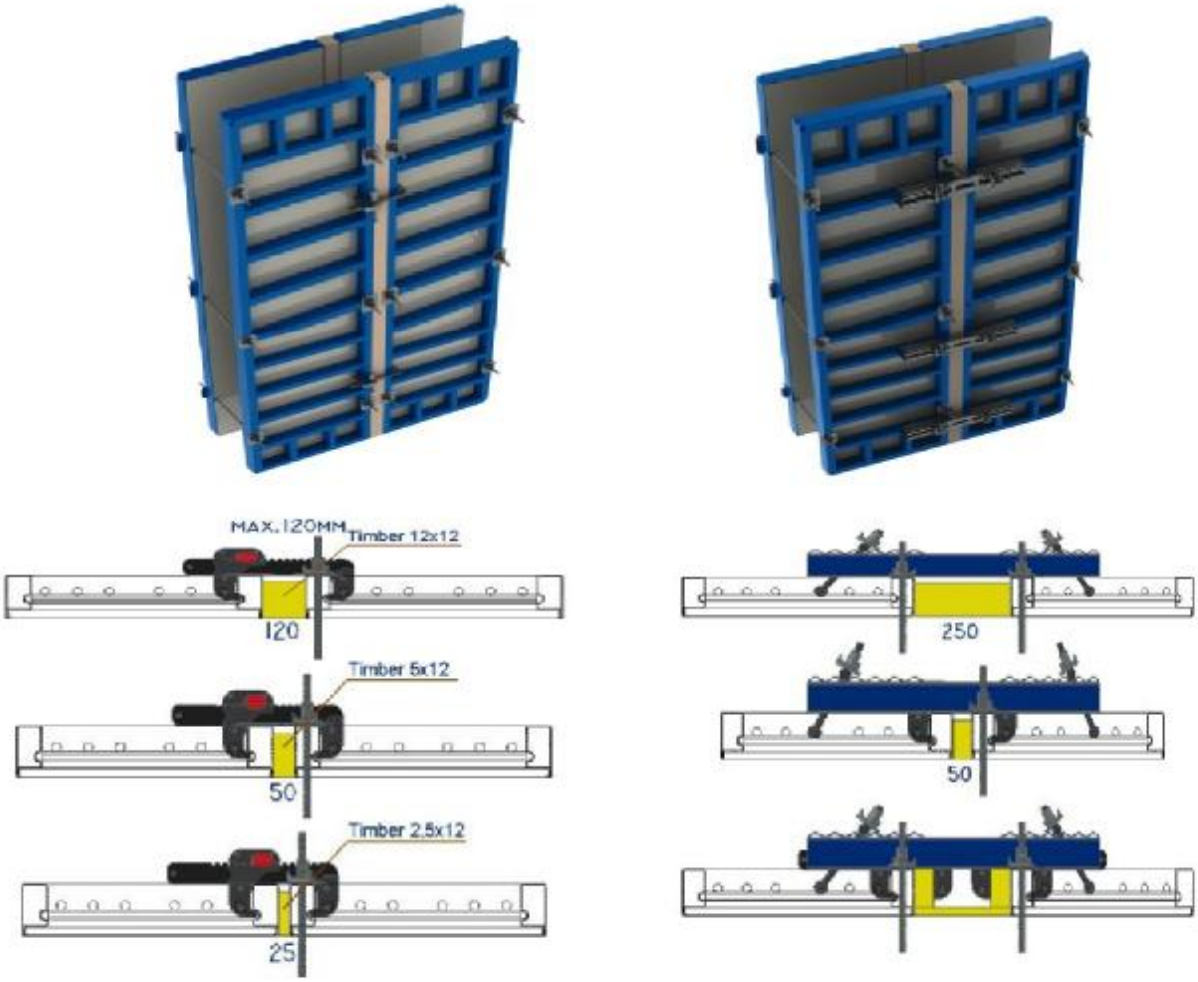
VINC'I PANEL LOCK QTY's		
h (cm)	OUTER	INNER
270	6 pc	4 pc
300	6 pc	4 pc
330	7 pc	5 pc
360	7 pc	6 pc
390	8 pc	7 pc
420	9 pc	7 pc
450	9 pc	8 pc
480	9 pc	8 pc
510	10 pc	9 pc
540	10 pc	9 pc
570	11 pc	9 pc
600	12 pc	10 pc
630	12 pc	10 pc
660	12 pc	10 pc





Angled corners are formed by using hinged inside and outside corners. Walers should be applied to the outside corner assembly in order to provide accurate alignment and correct load distribution. When timber fillers are used for compensation, panel connection should be done by CONTI locks. Adjustment range: 75° to 180°

PANEL - TIMBER CONNECTION

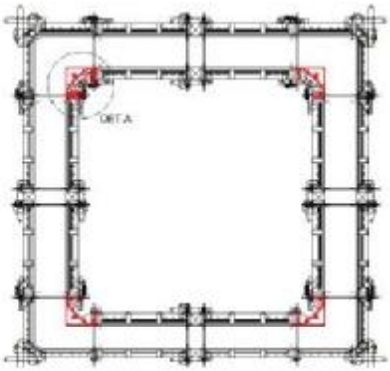


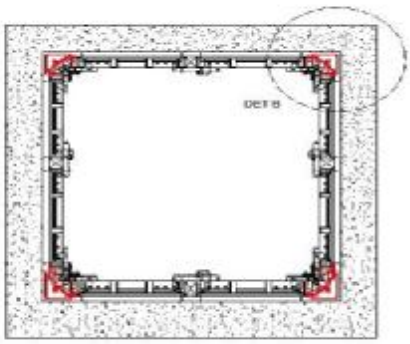
Timber Fillers
The compensation of length differences up to 12 cm is made with timber fillers together with VRS-20 and CONTI locks. If necessary the bracing of these areas must be made with walers.

Temporary Timber Panel Applications
Regular 5x10cm timber beams could be applied together with a forming facing to compensate different dimensions and/or irregular shaped problem areas. A forming face should be cut to the exact size and the timber profiles should be fixed to the periphery, if necessary intermediate cross timbers could be applied in order to strengthen the forming face. These temporary timber backed panels are connected to the adjacent panels either by TUT-80 or CONTI locks.

PS.When compensating such length differences in the vicinity of the outside corners or stop ends the vertical tensile force has always to be taken into consideration.

INNER SHAFT FORMWORK

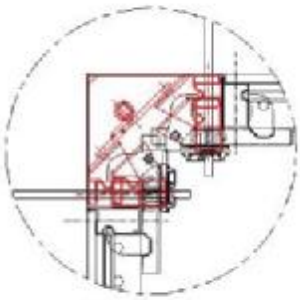




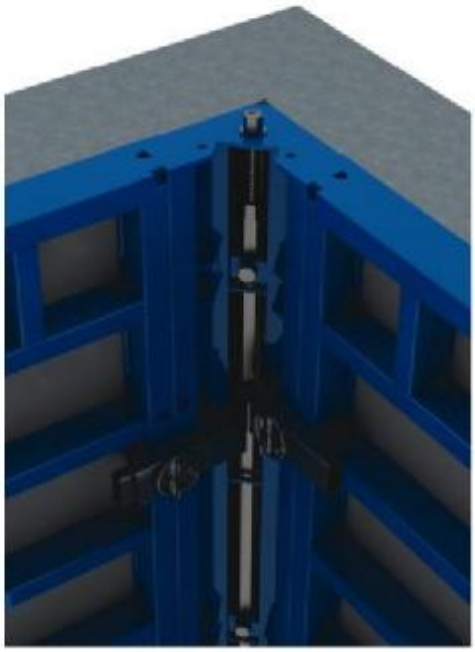
The various shaft dimensions could be formed with standard panels and, when necessary, retractable inner corners are available for easy dismantling at tight areas. For length compensations timber and/or VINC'I strip plate applications are possible.

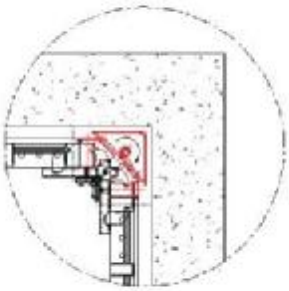
In order to form the inner formwork at smaller cross section shafts, either screw operated retractable corners could be applied or regular inner corners could be used together with the standard strip plates. With either assembly a contraction of the complete inner formwork could be provided for easy striking. Dismantling can start after the ties and alignment rails are removed, with the regular inner corners the inner formwork is contracted by means of push-pull props while the panels could slide over the strip plates respectively. For retractable corners, stripping is easy as using a ratchet at the top of the special corners which retract or open up with the rotation of the mechanism. Then the cranes are ready to lift the complete inner core and remove it to the next place of application. If foldable inner shaft platforms are used the platform could also be displaced together with the formwork at one crane strike.

The CONTI lock also connects VINC'I 80 to VINC'I 70 formwork. The continious clamping ability of CONTI offers a wide range of combinations, as shown in the illustrations. As a principle it is always recommended to start the formwork assembly at the corner.



DET A





DET B

TRANSPORTING OF HORIZONTALLY STACKED PANELS

When unloading the truck and/or displacing horizontally stacked panels on the construction site, take care to use the appropriate crane slings together with the special VINC'I lifting attachments.

FORM FACINGS

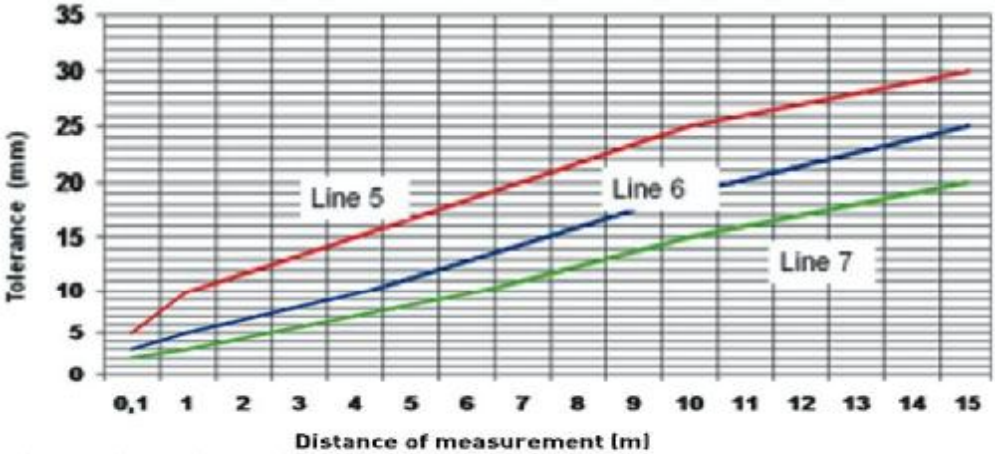
The state of the art composite polymer form facing material namely LaminaeX which is made of polypropylene and aluminum, has proved to be superior to the regular plywood with respect to working life, load bearing capacity, nailing and repairing ability. The jobsite advantages could briefly be explained as greatly reduced cleaning effort, minimum use of release agent, and high quality smooth concrete surfaces.
The other facing material option is an ingeniously developed form facing material namely WISA-Form Elephant which is an all birch forming plywood having a special wood impregnated polymer layer at the forming face, hence providing considerably enhanced working life and nailing ability. The jobsite advantages are reduced cleaning effort and release agent, as well as high quality smooth concrete surfaces.
The LaminaeX forming face could be recycled in order to reproduce new forming faces. Hence, protecting the environment.

REX LOCK

The Patented REX assembly lock allows the easy connection of two panels while simultaneously aligning the formwork.
No matter if the panels are assembled side by side or on top of each the REX lock can be attached tightly on the frame at any position required. The REX lock pulls together the panels and while aligning them with only a couple of hammer blows. REX lock could be easily attached with one hand as for standard application at horizontal and / or vertical panel connection only two assembly locks per 270 cm and 300 cm panels will be sufficient, while for 330 cm panels three locks are required.

VINC'I® 80 WALL FORM

Please note for stacking the panels higher than 2 panels further measures should be applied for safe working. The conical tie-rod sleeves could take DW 15 and DW 20 tie-rods. These sleeves are welded inside the panel frame and are protruding from profiles till the forming face for additional protection to the forming face, hence avoiding tear and wear on the facing material while the tie-rods are pushed through the anchor sleeves.



		5	6	7	(m)	1 1
120x270	constant Konstant 80kN/m²	80	80	80	125.6	0.62
120x559	constant Konstant 80kN/m²	80	80	80	96.8	0.80
120x559	Hydrostatic max. Hydrostatisch max. 82.5kN/m²	82.5	82.5	82.5	85.6	0.76
240x270	constant Konstant 70kN/m²	70	70	70	113.4	0.62
240x559	constant Konstant 80kN/m²	80	80	80	96.4	0.85
240x559	Hydrostatic max. Hydrostatisch max. 82.5kN/m²	82.5	82.5	82.5	85.4	0.76

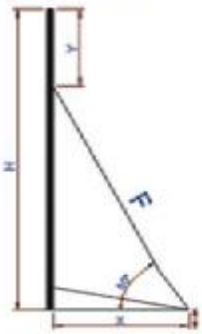
The static calculations for formwork structure of VINC'I fulfills all requirements of GSV (Giteschuzverband Betonschalungen) according to DIN 18202 TAB. 3 Line 7 with a load bearing capacity of 80 kN/m² and max. 3 mm deflection. (The only exception is the 240x270 panel with 2 anchor points providing 70 kN/m according to Line 7)

VINC'I ASSEMBLY LOCK "CONTI"

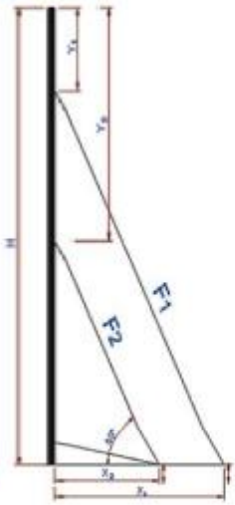
PUSH-PULL PROPS

Formwork height h [m]	picture 1							picture 2	
	3.0	4.0	5.0	6.0	7.0	8.0		9.0	10.0
Allowable prop spacing [m]	3,53	2,73	2,19	1,82	1,58	1,42		1,32	1,15
Actual prop load at [kN]	9,70	9,70	9,80	9,80	9,80	9,60	F_1	6,40	7,80
maximum prop spacing							F_2	6,50	5,90
Actual kicker load at [kN] maximum prop spacing	2,10	2,30	2,20	2,20	2,30	2,60		1,80	1,60
x = Top connection [m]	1,00	1,20	1,50	1,80	2,00	2,00	y_1	1,50	1,80
point from top of formwork							y_2	4,50	5,50
y = Dist. of base plate [m]	1,15	1,62	2,02	2,42	2,89	3,46	x_1	4,30	4,73
from front of formwork							x_2	2,60	2,60

Picture 1



Picture 2



Applying Push-Pull Props

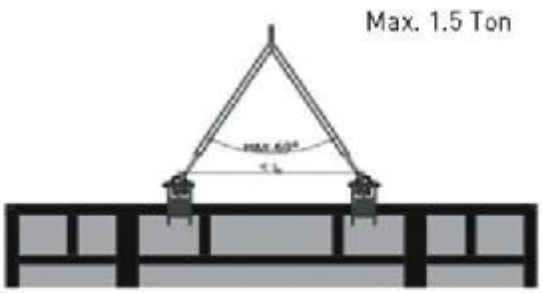
The push-pull props could be attached to the panels at the 3-holed inner profiles together with the special prop head delivered together with the system. Upper and lower push-pull props are fixed together to the double acting foot plate. Suggested distances between push-pull props for alignment of formwork ≤4.00 m height is max. 2.50 m, in order to resist wind loads.

CRANE HOOK

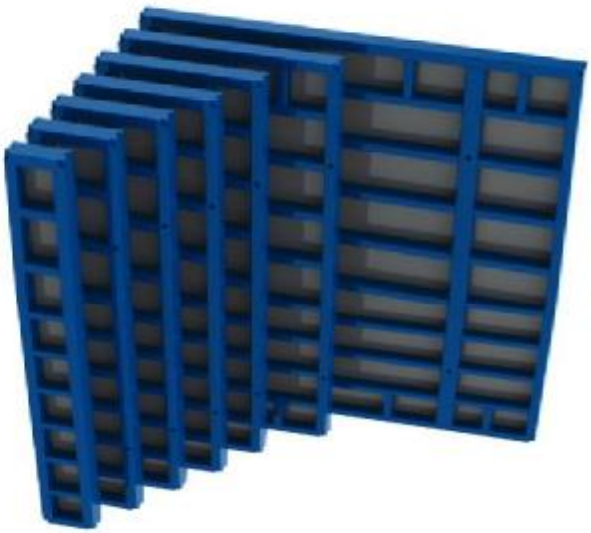
The admissible load of a VINC'I crane hook is 15 kN. Operating the crane hook is quite simple, open the spring loaded safety lever as far as possible.Then position the crane hook on to the panel profile until the cross bar engages completely in the profile groove, let the safety lever back in order to lock the crane hook while lifting large size panel units, take care that each crane hook is attached so that the crane hook touches an inner side profile avoiding any slipping.

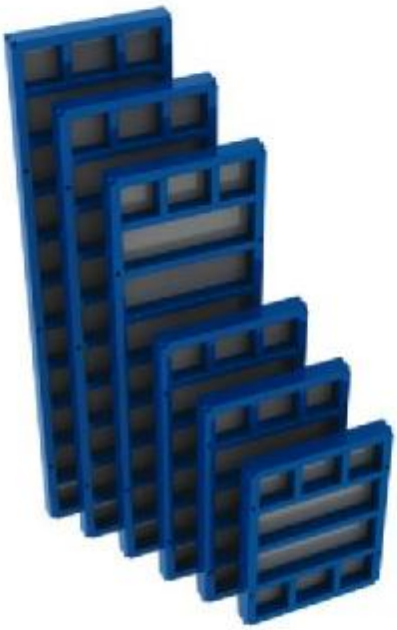
Testing for Safety
The crane hooks are critical items for safety and should be regularly checked, especially before using them at a new project / job-site. It should be noted that, when the permissible load of the crane hook is exceeded the material could have been strained resulting a permanent deformation. Make sure to avoid using such crane hooks, while safe application can no longer be assured.

Checking Criteria for Crane Hooks
In case the measurement indicated in the supplied drawing exceeds 67 mm from either side of the hook, the crane hook should be replaced immediately. The local safety rules of the country where the crane hooks are being used must strictly be obeyed. For further details please refer to the Crane Hook Manual.
In order to provide additional rigidity and safety when raising and lowering stacked and / or ganged panel sets, walers could be mounted at the panel joints. While transporting panels horizontally, the crane hook must be attached near the transverse profile in order to avoid any slipping.



VINC'I 80 STANDART PANELS
"Elephant Surface"





ITEM		ITEM NO	WEIGHT
VS-S	30 x 120	030 083 20312	34,90 kg
VS-S	45 x 120	030 083 20412	42,80 kg
VS-S	60 x 120	030 083 20612	54,30 kg
VS-S	75 x 120	030 083 20712	62,00 kg
VS-S	90 x 120	030 083 20912	73,00 kg
VS-S	120 x 120	030 083 21212	91,70 kg
VS-S	30 x 150	030 083 20315	42,20 kg
VS-S	45 x 150	030 083 20415	57,80 kg
VS-S	60 x 150	030 083 20615	65,00 kg
VS-S	75 x 150	030 083 20715	74,20 kg
VS-S	90 x 150	030 083 20915	86,80 kg
VS-S	120 x 150	030 083 21215	108,70 kg
VS-S	30 x 180	030 083 20318	49,60 kg
VS-S	45 x 180	030 083 20418	60,80 kg
VS-S	60 x 180	030 083 20618	75,70 kg
VS-S	75 x 180	030 083 20718	86,60 kg
VS-S	90 x 180	030 083 20918	100,70 kg
VS-S	120 x 180	030 083 21218	125,70 kg
VS-S	30 x 270	030 083 20327	73,00 kg
VS-S	45 x 270	030 083 20427	89,70 kg
VS-S	60 x 270	030 083 20627	110,50 kg
VS-S	75 x 270	030 083 20727	126,70 kg
VS-S	90 x 270	030 083 20927	146,20 kg
VS-S	120 x 270	030 083 21227	181,80 kg
VS-S	240 x 270	030 083 22427	397,70 kg
VS-S	30 x 300	030 083 20330	79,20 kg
VS-S	45 x 300	030 083 20430	97,10 kg
VS-S	60 x 300	030 083 20630	119,00 kg
VS-S	75 x 300	030 083 20730	139,00 kg
VS-S	90 x 300	030 083 20930	156,60 kg
VS-S	120 x 300	030 083 21230	194,20 kg
VS-S	240 x 300	030 083 22430	427,40 kg
VS-S	30 x 330	030 083 20333	86,50 kg
VS-S	45 x 330	030 083 20433	106,00 kg
VS-S	60 x 330	030 083 20633	129,60 kg
VS-S	75 x 330	030 083 20733	148,40 kg
VS-S	90 x 330	030 083 20933	170,40 kg
VS-S	120 x 330	030 083 21233	211,30 kg
VS-S	240 x 330	030 083 22433	466,40 kg

VINC'I® 80 WALL FORM

VINC'I 80 INNER CORNER ELEMENT

"Steel Surface"

ITEM	ITEM NO	WEIGHT
SI-K 120	030 085 01012	47,35 kg
SI-K 150	030 085 01015	57,20 kg
SI-K 180	030 085 01018	67,05 kg
SI-K 270	030 085 01027	96,60 kg
SI-K 300	030 085 01030	106,45 kg
SI-K 330	030 085 01033	116,60 kg

VINC'I 80 INNER CORNER ELEMENT

"Elephant Surface"

ITEM	ITEM NO	WEIGHT
SI-K 120	030 085 21012	39,95 kg
SI-K 150	030 085 21015	47,90 kg
SI-K 180	030 085 21018	55,90 kg
SI-K 270	030 085 21027	79,80 kg
SI-K 300	030 085 21030	87,80 kg
SI-K 330	030 085 21033	96,00 kg

VIN'C 80 ARTICULATED INNER CORNER ELEMENT

ITEM	ITEM NO	WEIGHT
SM-K 120	030 085 04012	45,90 kg
SM-K 150	030 085 04015	56,30 kg
SM-K 180	030 085 04018	66,60 kg
SM-K 270	030 085 04027	97,80 kg
SM-K 300	030 085 04030	108,20 kg
SM-K 330	030 085 04033	118,60 kg

E-Z STRIP CORNER PANEL

ITEM	ITEM NO	WEIGHT
SV-K 120	030 085 03012	86,30 kg
SV-K 150	030 085 03015	103,20 kg
SV-K 180	030 085 03018	120,10 kg
SV-K 270	030 085 03027	175,60 kg
SV-K 300	030 085 03030	192,50 kg
SV-K 330	030 085 03033	209,40 kg

VINC'I 80 OUTER CORNER ELEMENT

ITEM	ITEM NO	WEIGHT
SD-K 120	030 085 02012	20,20 kg
SD-K 150	030 085 02015	23,50 kg
SD-K 180	030 085 02018	28,80 kg
SD-K 270	030 085 02027	40,90 kg
SD-K 300	030 085 02030	46,20 kg
SD-K 330	030 085 02033	49,60 kg

VINC'I 80 STRIP PLATE

ITEM	ITEM NO	WEIGHT
SS-P 120	030 085 08012	16,20 kg
SS-P 150	030 085 08015	20,20 kg
SS-P 180	030 085 08018	24,20 kg
SS-P 270	030 085 08027	36,20 kg
SS-P 300	030 085 08030	40,20 kg
SS-P 330	030 085 08033	44,20 kg

VINC'I WALER (80 cm)

VINC'I 80 SPANNER ELEMENT

ITEM	ITEM NO	WEIGHT
SC-K	030 180 00250	9,85 kg
SC-E	030 180 00255	1,75 kg

VINC'I SPANNER BRACKET

PROP HEAD PLATE (Vinc'i 80 Type)

ITEM	ITEM NO	WEIGHT
SC-A	030 180 00294	3,70 kg
PV-S	030 112 00080	3,20 kg

VINC'I 80 SPANNER BRACKET

VINC'I 80 MULTI PANEL LOCK

ITEM	ITEM NO	WEIGHT
ST-Y	030 180 00298	2,50 kg
SM-K	030 180 00290	4,15 kg

VINC'I® 80 WALL FORM

VINC'I PANEL LOCK "REX 80"

VINC'I PANEL LOCK "CONTI"

ITEM	ITEM NO	WEIGHT
SR-K	030 180 00100	4,75 kg
CN-T	004 135 00240	6,00 kg

VINC'I PANEL LOCK "SP-K 20"

VINC'I PANEL LOCK "TU-T 80"

ITEM	ITEM NO	WEIGHT
SP-K	030 180 00120	5,00 kg
TU-T	030 180 00110	4,90 kg

CRANE HOOK "VINCI 80 TYPE"

PANEL LIFTING DEVICE

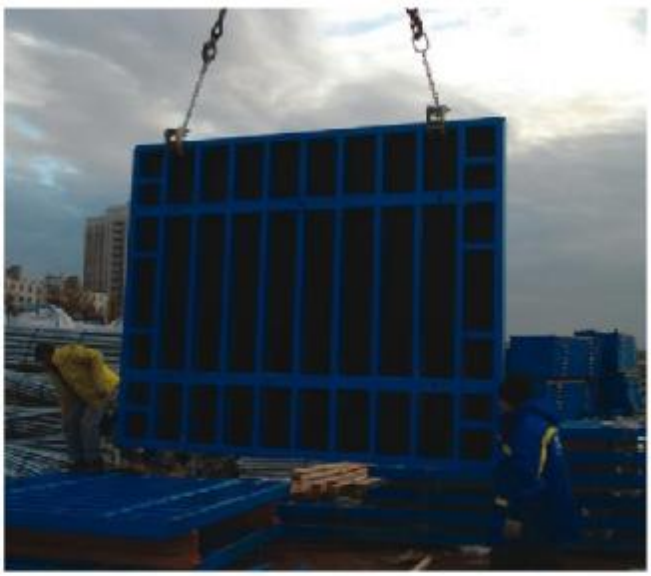
ITEM	ITEM NO	WEIGHT
SK-V	030 180 00155	11,50 kg
SY-K	030 180 00303	3,15 kg

CAT-WALK BRACKET VINC'I 80

BD-K 80 VS

BD-K 100 VS

ITEM	ITEM NO	WEIGHT
BD-K 80 VS	030 080 00180	13,20 kg
BD-K 100 VS	030 080 00210	11,30 kg
GA-S 4810	030 097 04810	3,65 kg
GA-S 4811	030 097 04811	3,90 kg
GA-S 4812	030 097 04812	4,20 kg



VINC'I® 70 WALL FORM

VINC'I 70 WALL FORMWORK

VINC'I 70 is a Wall Formwork System for foundations, beam and basement walls composed of high strength steel frame panels having state of the art production quality and highly versatile accessories providing ease of applicability and significantly reduced labor. The main element heights are 330 cm, 300 cm, 270 cm, 180 cm, 150 and 120 cm. The panel widths are 30,45, 60,75,90,120 and 240 where the Column - Panels (75 cm width) have integrated anchor holes with 5 cm intervals. All panels have 12 cm depth. They can be connected with VINC'I 80 Panels easily.

The panels consists of torsionally stiff, high strength flat profile frames with lateral closed profiles which are adding on the general stiffness of the panels. The panel facing material is either a modern and long lasting 20mm thick LaminaeX , polypropylene plates strengthened with Aluminum sheets or a long life 18mm UPM WISA - Form Birch plywood. Through the frame profile it is possible to apply the lock at any required position. Either vertical or horizontal, it is possible to continuously shift the panels against each other without limiting the locking possibilities. The universally applicable innovative panel lock "REX" provides leak proof joints together with alignment action and with the eccentric it is much safer and simpler to use. It is possible to put the lock on any lateral profile, either vertical or horizontal at any position on the frame.

The frames are powder coated after grid-blasting against corrosion. This special coating provides ease of cleaning while avoiding adhesiveness against concrete. The static calculations for formwork structure of VINC'I 70 fulfills all requirements of GSV (Güteschutzverband Betonschalungen) according to DIN 18202 TAB.3 Line 7 with a load bearing capacity of 70 kN/m² and max. 3 mm deflection. The formwork system could be used at; foundations, walls, columns, retaining walls, containers, shafts and all other steel reinforced concrete structures.
The anchor holes are suitable to DW 15 tie-rods and have load bearing capacities of 70 kN/m²

All panels have solid steel corner pieces strengthening the panel structure and acting as strong leverage points.

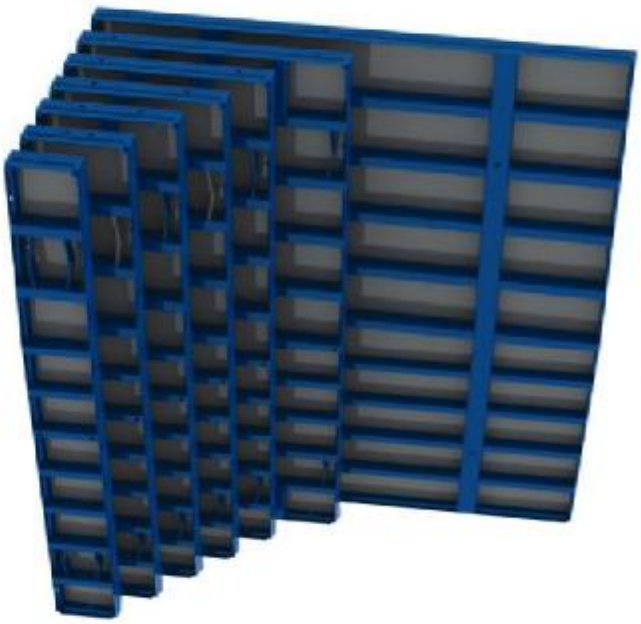
VINC'I® 70 WALL FORM

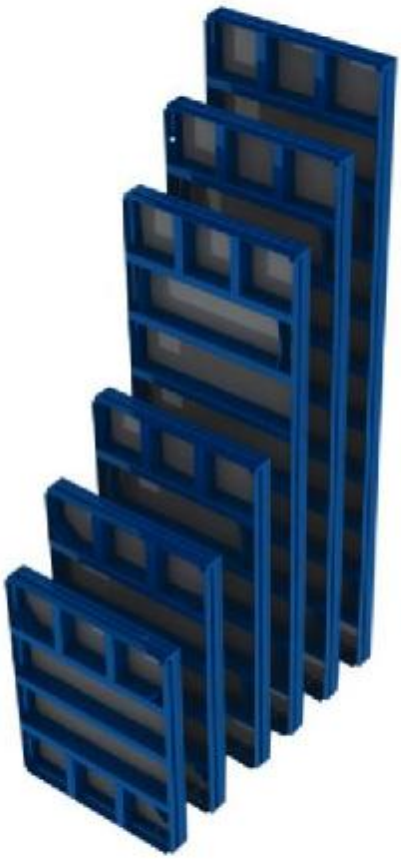
VINC'I 70 PERDE KALIBI

VINC'I 70 Perde Sistemi panoları özel şekillendirilmiş, burulmaya mukavim yüksek dayanımlı yassı çelik çerçevelerden oluşmuş olup enlemeler kutu profillerden yapılmıştır. VINC'I panolar plastik yüzeyli plywood UPM Elephant kaplıdır. Çelik çerçeve profili elemanın istenilen her çerçeve noktasında bir diğeri ile bağlantısını temin edecek şekilde tasarlanmıştır.

Pano genişlikleri 30, 45, 60, 75, 90, 120, 240 cm ve yükseklikleri ise 330, 300, 270, 180, 150,120 cm olarak seçilmiştir. Bütün panoların köşeleri masif olup bir yandan çerçeveyi sağlamlaştırmakta ve diğer yandan da panonun, bir levye veya inşaat demiri ile yer değiştirmesini sağlamaktadır.
Kalıp kavraması REX her enlemeye ve çerçevenin enine boyuna herhangi bir noktasına yerleştirilebilir ve bir çekiç darbesiyle açılır veya kapatılabilir. Panolarda açılmış ankraj delikleri DW15' lik tie-rod kullanımı için uygun olup 70 KN/m^2'ye kadar beton basıncını karşılamaktadır. Perdeler VINC'I panolar, REX kilit, Dywidag/SAH tie-rod, VINC'I vinç kulbu, VINC'I tipi beton döküm konsolları, çiftli itme - çekme tipi payanda ve pabuçlarından oluşmaktadır.

VINC'I 70 STANDART PANELS
"Plywood Surface"





ITEM		ITEM NO	WEIGHT
VY-S	30x120	030 073 10312	27,60 kg
VY-S	45x120	030 073 10412	33,95 kg
VY-S	60x120	030 073 10612	42,60 kg
VY-S	75x120	030 073 10712	48,50 kg
VY-S	90x120	030 073 10912	57,15 kg
VY-S	120x120	030 073 11212	71,80 kg
VY-S	30x150	030 073 10315	33,25 kg
VY-S	45x150	030 073 10415	41,05 kg
VY-S	60x150	030 073 10615	51,00 kg
VY-S	75x150	030 073 10715	58,15 kg
VY-S	90x150	030 073 10915	68,10 kg
VY-S	120x150	030 073 11215	85,25 kg
VY-S	30x180	030 073 10318	41,10 kg
VY-S	45x180	030 073 10418	50,35 kg
VY-S	60x180	030 073 10618	61,55 kg
VY-S	75x180	030 073 10718	70,05 kg
VY-S	90x180	030 073 10918	81,25 kg
VY-S	120x180	030 073 11218	100,85 kg
VY-S	30x270	030 073 10327	58,20 kg
VY-S	45x270	030 073 10427	71,65 kg
VY-S	60x270	030 073 10627	86,70 kg
VY-S	75x270	030 073 10727	99,00 kg
VY-S	90x270	030 073 10927	114,00 kg
VY-S	120x270	030 073 11227	141,30 kg
VY-S	240x270	030 073 12427	323,70 kg
VY-S	30x300	030 073 10330	63,85 kg
VY-S	45x300	030 073 10430	78,80 kg
VY-S	60x300	030 073 10630	95,10 kg
VY-S	75x300	030 073 10730	108,60 kg
VY-S	90x300	030 073 10930	124,95 kg
VY-S	120x300	030 073 11230	154,75 kg
VY-S	240x300	030 073 12430	356,80 kg

VINC'I® 70 WALL FORM

VINC'I 70 INNER CORNER ELEMENT

"Steel Surface"

ITEM	ITEM NO	WEIGHT
YI-K 120	030 075 01012	38,15 kg
YI-K 150	030 075 01015	46,60 kg
YI-K 180	030 075 01018	55,05 kg
YI-K 270	030 075 01027	80,40 kg
YI-K 300	030 075 01030	88,85 kg

VINC'I 70 INNER CORNER ELEMENT

"Plywood Surface"

ITEM	ITEM NO	WEIGHT
YI-K 120	030 075 21012	30,25 kg
YI-K 150	030 075 21015	36,70 kg
YIK-180	030 075 21018	43,15 kg
YI-K 270	030 075 21027	62,50 kg
YI-K 300	030 075 21030	69,00 kg

VINC'I ARTICULATED INNER CORNER ELEMENT

ITEM	ITEM NO	WEIGHT
YM-K 120	030 075 04012	45,90 kg
YM-K 150	030 075 04015	56,30 kg
YM-K 180	030 075 04018	66,60 kg
YM-K 270	030 075 04027	97,80 kg
YM-K 300	030 075 04030	108,20 kg

E - Z STRIP CORNER

ITEM	ITEM NO	WEIGHT
YV-K 120	030 075 03012	86,30 kg
YV-K 150	030 075 03015	103,20 kg
YV-K 180	030 075 03018	120,10 kg
YV-K 270	030 075 03027	175,60 kg
YV-K 300	030 075 03030	192,50 kg

VINC'I 70 OUTER CORNER ELEMENT

ITEM	ITEM NO	WEIGHT
YD-K 120	030 075 02012	20,10 kg
YD-K 150	030 075 02015	23,50 kg
YD-K 180	030 075 02018	28,80 kg
YD-K 270	030 075 02027	40,80 kg
YD-K 300	030 075 02030	46,20 kg

VINC'I 70 STRIP PLATE

ITEM	ITEM NO	WEIGHT
YS-P 120	030 075 08012	12,70 kg
YS-P 150	030 075 08015	15,90 kg
YS-P 180	030 075 08018	19,00 kg
YS-P 270	030 075 08027	28,40 kg
YS-P 300	030 075 08030	31,50 kg

VINC'I WALER (80 cm)

VINC'I 70 SPANNER ELEMENT

ITEM	ITEM NO	WEIGHT
YC-K	030 170 00250	9,85 kg
YC-E	030 170 00255	1,75 kg

VINC'I 70 STOP END SPANNER

PROP HEAD PLATE (Vinc'i 70 Type)

ITEM	ITEM NO	WEIGHT
YC-A	030 170 00294	3,55 kg
PV-Y	030 112 00070	1,80 kg

VINC'I® 70 WALL FORM

VINC'I PANEL LOCK "REX 70"

VINC'I 70 MULTI PANEL LOCK

ITEM	ITEM NO	WEIGHT
YR-K	030 170 00100	3,15 kg
YM-K	030 170 00290	3,70 kg

VINC'I PANEL LOCK "YP-K 20"

VINC'I PANEL LOCK "TU-T 70"

ITEM	ITEM NO	WEIGHT
YP-K 20	030 170 00120	4,35 kg
TU-T 70	030 170 00110	4,45 kg

CRANE HOOK "VINC'I 70 TYPE"

VINC'I 70 SPANNER BRACKET

ITEM	ITEM NO	WEIGHT
YK-V	030 170 00150	7,10 kg
YT-Y	030 170 00303	2,50 kg

CAT-WALK BRACKET VINC'I 70

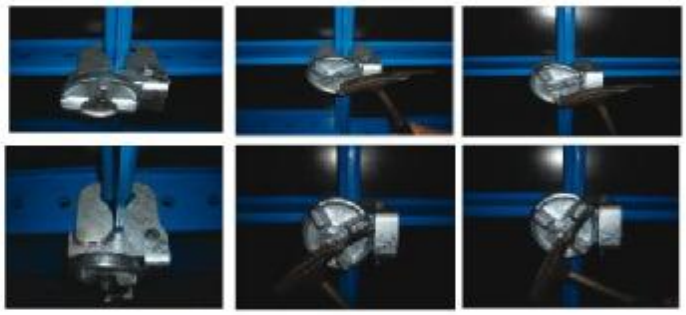
BD-K 80 VS

BD-K 100 VS

ITEM	ITEM NO	WEIGHT
BD-K 80 VY	030 070 00180	13,20 kg
BD-K 100 VY	030 070 00210	11,30 kg
GA-S 4810	030 097 04810	3,65 kg
GA-S 4812	030 097 04812	4,20 kg

TMS FORMWORK LOCK "REX"

User friendly application with dial type eccentric – wedging, allowing all hammering actions to take place at the dial and on the panel face. Not like ordinary wedges as hammering at the top and bottom of wedges.
i.e. no need for climbing on the panel for setting the upper lock or limited hammering space at lower locks.
Acts as an alignment-lock with the applicability on the lateral profiles, also providing continuity and homogeneous load distribution.
Not like the simple wedge lock, which could only be used between the lateral profiles.
Provides alignment together with sealed panel locking at once.



HAND'I® 40 WALL FORM

HAND'I 40 WALL FORMWORK

HAND'I 40 System Formwork is developed for foundations, beams and walls on lower parts of construction. The steel frame profiles are made with the latest high technology. Easy and simple connection systems allows less workmanship.

Panel widths are 30, 45, 60, 75 cm and the heights are chosen as 270, 240, 180, 150, 120cm. All corners of the elements are solid steel which protect and stiffen the frames as well as allowing the replacement of the elements with simple levers.

The frame of the elements are made of specially formed high tensile boxed flat steel which bares the formwork face at top and the Rex clamp in the middle with its special groove. Lateral beams are rectangular profile type and placed for a min. deflection of formwork facing.

HAND'I 40 formwork design is made according GVS [Güteschutzverband Beton Schalung] DIN 18202 TAB. 3 Line 7 and max. 3 mm deflection for 40 kN/m² fresh concrete pressure according DIN 18218. Anchor holes are suitable for DW15 tie-rods up to 40 kN/m² concrete pressure by plywood face.

HAND'I 40 PERDE KALIBI

HAND'I Temeller, kirişler, çok yüksek olmayan perdeler için geliştirilmiş bir kalıp sistemidir.

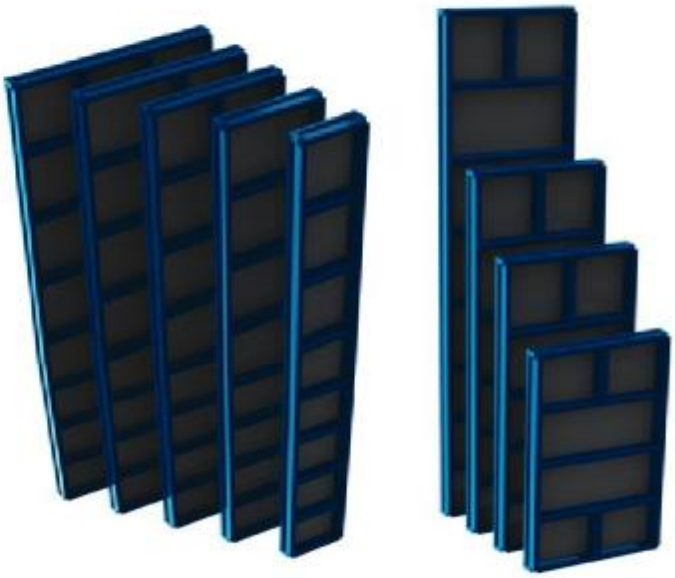
En modern lazer kaynaklı üretim sistemi ile oluşturulmuş çelik çerçeveli panolar, basit ve çabuk parça bağlantı sistemi ile işçilikten önemli ölçüde tasarruf sağlamaktadır.

Pano genişlikleri 30, 45, 60, 75 cm ve yükseklikleri ise 270, 240, 180, 150, 120 cm. olarak seçilmiştir. Bütün panoların köşeleri masif olup bir yandan çerçeveyi sağlamlaştırmakta ve diğer yandan da panonun, bir levye ile yer değiştirmesini sağlamaktadır.

Panoların çerçevesi, özel bükümlü kutulaştırılmış yassı çelik profil olup, bir yandan kalıp yüzüne mesnet oluşturmakta bir yandan da özel girintisi ile çelik kavramayı tutmaktadır. Enleme profilleri özel kutu profil olup, kalıp yüzünün sehimini en iyi şekilde karşılayacak şekilde yerleştirilmiştir. Kalıp yüzeyi olarak UPM WISA FORM plywood kullanılmıştır.

HAND'I kalıp tasarımı GSV ye göre ve [Güteschutzverband Beton Schalungen] DIN18202 Tablo 3 Paragraf 7 ye göre ve 40 kN/m2 beton basıncında max eğilme 3 mm. ile sınırlanacak şekilde yapılmıştır. Burada beton basıncı olarak DIN 18218 deki "taze beton basıncı" esas alınmıştır. Kalıp yüzeyine açılmış olan ankraj delikleri, DW 15'lik tie-rod kullanımı için uygun olup 40 kN/m² ye kadar kalıp basıncını karşılamaktadır

HAND'I 40 STANDARD PANELS
"Plywood Surface"



ITEM		ITEM NO	WEIGHT
HK-S	30x120	030 043 10312	18,50 kg
HK-S	45x120	030 043 10412	23,15 kg
HK-S	60x120	030 043 10612	29,40 kg
HK-S	75x120	030 043 10712	33,75 kg
HK-S	90x120	030 043 10912	40,05 kg
HK-S	30x150	030 043 10315	22,55 kg
HK-S	45x150	030 043 10415	28,20 kg
HK-S	60x150	030 043 10615	35,35 kg
HK-S	75x150	030 043 10715	41,70 kg
HK-S	90x150	030 043 10915	47,85 kg
HK-S	30x180	030 043 10318	26,60 kg
HK-S	45x180	030 043 10418	33,25 kg
HK-S	60x180	030 043 10618	41,30 kg
HK-S	75x180	030 043 10718	47,55 kg
HK-S	90x180	030 043 10918	55,65 kg
HK-S	30x270	030 043 10324	35,80 kg
HK-S	45x240	030 043 10424	44,85 kg
HK-S	60x240	030 043 10624	55,30 kg
HK-S	75x240	030 043 10724	63,90 kg
HK-S	90x240	030 043 10924	74,30 kg

HAND'I 40 INNER CORNER ELEMENT

"Steel Surface"

ITEM	ITEM NO	WEIGHT
HI-K 120	030 045 01012	33,05 kg
HI-K 150	030 045 01015	40,50 kg
HI-K 180	030 045 01018	47,95 kg
HI-K 240	030 045 01024	62,85 kg

HAND'I 40 INNER CORNER ELEMENT

"Plywood Surface"

ITEM	ITEM NO	WEIGHT
HI-K 120	030 045 11012	24,10 kg
HI-K 150	030 045 11015	29,30 kg
HI-K 180	030 045 11018	34,50 kg
HI-K 240	030 045 11024	44,85 kg

HAND'I® 40 WALL FORM

HAND'I 40 OUTER CORNER ELEMENT

ITEM	ITEM NO	WEIGHT
HD-K 120	030 045 02012	13,20 kg
HD-K 150	030 045 02015	16,70 kg
HD-K 180	030 045 02018	19,70 kg
HD-K 240	030 045 02024	26,10 kg

HAND'I 40 STRIP PLATE

ITEM	ITEM NO	WEIGHT
HS-P 120	030 045 08012	11,75 kg
HS-P 150	030 045 08015	14,70 kg
HS-P 180	030 045 08018	17,50 kg
HS-P 240	030 045 08024	23,10 kg

HAND'I 40 WALER

HAND'I 40 SPANNER ELEMENT

ITEM	ITEM NO	WEIGHT
HC-K	030 140 00250	7,45 kg
HC-E	030 140 00255	1,75 kg

HAND'I 40 PANEL LOCK "TU-T 40"

HAND'I 40 PANEL LOCK "HP-K 20"

ITEM	ITEM NO	WEIGHT
TU-T 40	030 140 00110	3,40 kg
HP-K 20	030 140 00120	2,90 kg

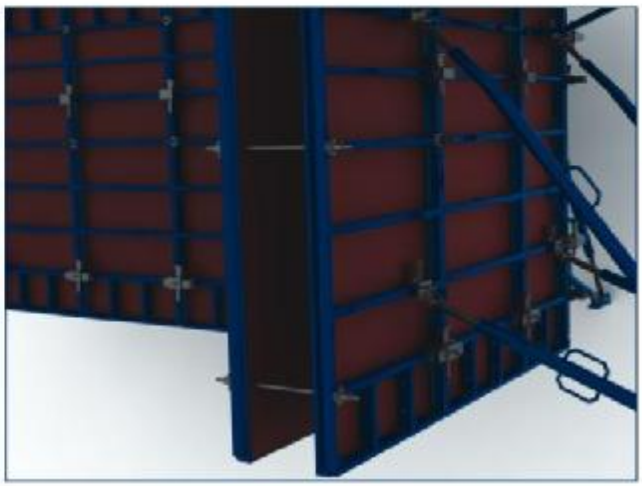
CRANE HOOK "HAND'I 40 TYPE"

PROP HEAD PLATE (HAND'I 40 Type)

ITEM	ITEM NO	WEIGHT
HV-K	030 140 00150	6,50 kg
PH-K	030 112 00040	2,10 kg

CAT-WALK BRACKET HAND'I 40

ITEM	ITEM NO	WEIGHT
BD-K 80 H	030 040 00180	9,35 kg



COMBINATION OF THE STRENGTH OF STEEL AND THE FAIR FACINGOF PLYWOOD

COMBI is a hand set panel formwork having the plywood facing embedded in steel frame. Panels are lightweight for manual handling, but can be ganged to each other for crane handling. Panel connections are easy with panel clips. Panel sides have every 5cm interchangeable holes and slots for clip connections, providing continuous adjustability for panels especially useful at irregular ground conditions. Up to 40 kN/m2 system can be used without any walers, for higher walls and design loads. COMBI is perfect for foundation works, small housing projects, retaining walls etc. especially where cranes are not available or are out of reach. System can climb with TMS climbing brackets and shaft platforms.

COMBI HAFİF PANO SİSTEMİ ÇELİK ÇERÇEVELİ PLYWOOD YÜZEYLİ PANO SİSTEMİ

COMBI Hafif Pano Sistemi elle kullanılabilir bir sistem olmasına rağmen, panolar bir araya getirilerek vinç kullanımına uygun büyük panolar halinde deplase edilebilir. Panolar kolay kullanılabilir pano kilitleri ile bir araya getirilmektedir. Pano kenarlarında her 5 cm' de bir sırasıyla yuvarlak ve uzun delikler yer almaktadır. Böylece panolar olası zemin bozukluklarından etkilenmeden kolayca bir araya gelir. COMBI, vinç kullanımının düşünülmediği villa ve konut projeleri, temel ve istinat duvarı işlerinde verimliliği artırır. Sistem TMS Tırmanma Konsolları ve Şaft Platformları ile uyum içinde tırmandırılabilmektedir

COMBI PANELS

ITEM	ITEM NO	WEIGHT
CP-S 30x100	030 023 13010	12,50 kg
CP-S 30x120	030 023 13012	15,00 kg
CP-S 30x150	030 023 13015	18,40 kg
CP-S 40x100	030 023 14010	17,25 kg
CP-S 40x120	030 023 14012	20,50 kg
CP-S 40x150	030 023 14015	25,35 kg
CP-S 50x100	030 023 15010	19,30 kg
CP-S 50x120	030 023 15012	22,95 kg
CP-S 50x150	030 023 15015	28,35 kg
CP-S 60x100	030 023 16010	21,35 kg
CP-S 60x120	030 023 16012	25,45 kg
CP-S 60x150	030 023 16015	31,30 kg
CP-S 70x100	030 023 17010	23,40 kg
CP-S 70x120	030 023 17012	27,90 kg
CP-S 70x150	030 023 17015	34,25 kg

COMBI INNER CORNER

ITEM	ITEM NO	WEIGHT
CI-K 25x20x100	030 023 19110	18,05 kg
CI-K 25x20x120	030 023 19112	21,50 kg
CI-K 25x20x150	030 023 19115	26,50 kg
CI-K 25x25x100	030 023 19210	19,10 kg
CI-K 25x25x120	030 023 19212	22,70 kg
CI-K 25x25x150	030 023 19215	28,05 kg
CI-K 30x25x100	030 023 19410	20,15 kg
CI-K 30x25x120	030 023 19412	23,95 kg
CI-K 30x25x150	030 023 19415	29,55 kg
CI-K 30x30x100	030 023 19510	21,15 kg
CI-K 30x30x120	030 023 19512	25,20 kg
CI-K 30x30x150	030 023 19515	31,00 kg
CI-K 40x25x100	030 023 19710	22,20 kg
CI-K 40x25x120	030 023 19712	26,45 kg
CI-K 40x25x150	030 023 19715	32,50 kg

GLOBAL PANELS
"Heavy Duty Type"

ITEM	ITEM N0	WEIGHT
GP-A 30x100	030 021 03010	15,45 kg
GP-A 30x120	030 021 03012	18,60 kg
GP-A 30x150	030 021 03015	23,00 kg
GP-A 40x100	030 021 04010	21,90 kg
GP-A 40x120	030 021 04012	26,25 kg
GP-A 40x150	030 021 04015	32,65 kg
GP-A 50x100	030 021 05010	25,00 kg
GP-A 50x120	030 021 05012	29,95 kg
GP-A 50x150	030 021 05015	37,25 kg
GP-A 60x100	030 021 06010	28,10 kg
GP-A 60x120	030 021 06012	33,70 kg
GP-A 60x150	030 021 06015	41,80 kg
GP-A 70x100	030 021 07010	31,20 kg
GP-A 70x120	030 021 07012	37,45 kg
GP-A 70x150	030 021 07015	46,40 kg

GLOBAL INNER CORNER
"Heavy Duty Type"

ITEM	ITEM N0	WEIGHT
GI-A 25x20x100	030 021 09110	23,45 kg
GI-A 25x20x120	030 021 09112	28,10 kg
GI-A 25x20x150	030 021 09115	34,95 kg
GI-A 25x25x100	030 021 09210	25,00 kg
GI-A 25x25x120	030 021 09212	29,95 kg
GI-A 25x25x150	030 021 09215	37,25 kg
GI-A 30x25x100	030 021 09410	26,55 kg
GI-A 30x25x120	030 021 09412	31,85 kg
GI-A 30x25x150	030 021 09415	39,50 kg
GI-A 30x30x100	030 021 09510	28,10 kg
GI-A 30x30x120	030 021 09512	33,70 kg
GI-A 30x30x150	030 021 09515	41,80 kg
GI-A 40x25x100	030 021 09710	29,65 kg
GI-A 40x25x120	030 021 09712	35,50 kg
GI-A 40x25x150	030 021 09715	44,10 kg

COMBI OUTER CORNER

ITEM	ITEM NO	WEIGHT
CD-K 100	030 023 00010	6,70 kg
CD-K 120	030 023 00012	8,05 kg
CD-K 150	030 023 00015	10,05 kg

FILLER PLATE PROFILE

ITEM	ITEM NO	WEIGHT
PT-L 15x100	030 028 01510	5,65 kg
PT-L 15x120	030 028 01512	6,70 kg
PT-L 15x150	030 028 01515	8,40 kg
PT-L 18x100	030 028 01810	5,65 kg
PT-L 18x120	030 028 01812	6,70 kg
PT-L 18x150	030 028 01815	8,40 kg
PT-L 21x100	030 028 02110	5,65 kg
PT-L 21x120	030 028 02112	6,70 kg
PT-L 21x150	030 028 02115	8,40 kg

STOP-END PANEL

ITEM	ITEM NO	WEIGHT
CA-E 20x120	030 023 00212	16,95 kg
CA-E 20x150	030 023 00215	21,20 kg
CA-E 25x120	030 023 00252	19,30 kg
CA-E 25x150	030 023 00255	24,15 kg
CA-E 30x120	030 023 00312	21,65 kg
CA-E 30x150	030 023 00315	27,05 kg

WALER

ITEM	ITEM NO	WEIGHT
CK-P 100	030 025 00010	11,00 kg
CK-P 120	030 025 00012	13,20 kg
CK-P 150	030 025 00015	16,50 kg
CK-P 180	030 025 00018	19,80 kg
CK-P 200	030 025 00020	22,00 kg
CK-P 220	030 025 00022	24,20 kg
CK-P 250	030 025 00025	27,50 kg

Combi & Global Modular Form

PANEL LOCK "CAST"

PIN & WEDGE LOCK

ITEM	ITEM NO	WEIGHT
PK-D 8	004 131 00008	0,54 kg
PK-D 10	004 131 00010	0,54 kg
PK-M	004 131 00020	0,17 kg

SPANNER BOLT

CRANE HOOK "Panel Type"

ITEM	ITEM NO	WEIGHT
PC-P	030 012 00010	1,80 kg
VK-P	030 010 01150	1,70 kg

SUPPORTING BRACE

CAT-WALK BRACKET "Panel Type"

ITEM	ITEM NO	WEIGHT
GP-T 60	030 013 00806	16,40 kg
GP-T 80	030 013 00808	18,50 kg
GP-T 100	030 013 00810	22,20 kg
GP-T 120	030 013 00812	25,60 kg

ITEM	ITEM NO	WEIGHT
BD-K 65 P	030 010 01165	6,80 kg

SOLDIER PANEL TYPE

ITEM	ITEM NO	WEIGHT
AS-P 100	030 025 00110	11,50 kg
AS-P 120	030 025 00112	13,70 kg
AS-P 150	030 025 00115	17,00 kg
AS-P 180	030 025 00118	20,40 kg
AS-P 200	030 025 00120	22,60 kg
AS-P 220	030 025 00122	24,80 kg
AS-P 250	030 025 00125	28,25 kg
AS-P 280	030 025 00128	31,55 kg
AS-P 300	030 025 00130	33,80 kg

"R" PIN

PIN

ITEM	ITEM NO	WEIGHT
PI-M	004 131 00230	0,18 kg
GP-R 325	004 131 00250	0,003 kg

TMS GLOBAL PROVES THE STRENGTH OF STEEL UNDER REPETETIVE USE AND ABUSE

GLOBAL is a lightweight steel faced handset panel formwork system. Panels can be ganged to each other for crane handling. Panel connections are easy with panel clips. Panel sides have every 5 cm interchangeable holes and slots for clip connections, providing continuous adjustability for panels especially useful at irregular ground conditions. System can be used with walers and solders, for higher walls and design loads up to 50 kN/m2. GLOBAL is highly appreciated at foundation works, small housing projects, retaining walls etc. specifically where repetitive uses are common and crane handling not available. System can climb with TMS climbing brackets and shaft platforms.

GLOBAL HAFİF PANO SİSTEMİ ÇELİK YÜZEYLİ PANOLAR

GLOBAL Çelik Yüzeyli Hafif Pano Sistemi elle kullanılabilir bir sistem olmasına rağmen, panolar bir araya getirilerek vinç kullanımına uygun büyük panolar halinde deplase edilebilir. Panolar kolay kullanılabilir pano kilitleri ile bir araya getirilmektedir. Pano kenarlarında her 5 cm' de bir sırasıyla yuvarlak ve uzun delikler yer almaktadır. Böylece panolar olası zemin bozukluklarından etkilenmeden kolayca bir araya gelir. GLOBAL, vinç kullanımının düşünülmediği villa ve konut projeleri, temel ve istinat duvarı işlerinde verimliliği artırır. Sistem TMS Tırmanma Konsolları ve Şaft Platformları ile uyum içinde tırmandırılabilmektedir.

SimpeX® Column Form

SIMPEX® COLUMN FORM

SIMPLE AND FLEXIBLE FORMING APPLICATIONS WITH SIMPEX

TMS SIMPEX is a perfect choice for walls and columns at any height and even with complicated floor plans. Residential Buildings from Condominiums to High Rises, Industrial Construction either Waste Water Treatment or Power Plants can easily be formed by SIMPEX. System can climb with TMS climbing brackets and shaft platforms. SIMPEX is also applicable to CLIMBEX® Hydraulic Climbing System. What makes SIMPEX so popular is its design features;

- Very few items to worry about,
- Ease of erection, adaptability and alignment,
- Variety in panel sizes, possibility in gang forming,
- Flexibility in tie and timber beam spacing allows for higher design loads.

SIMPEX KOLON KALIPLARI İLE HIZLI VE ÇOK YÖNLÜ KALIPLAMA KOLAYLIĞI

TMS SIMPEX Kolon Kalıplarının farklı yükseklik ve kesitlere kolay adapte edilebilir olması, vinç ile kullanılan sistemler arasında ayrıcalıklı bir konuma sahip olmasını sağlamıştır. Sistemi oluşturan düşey KAUFMANN HT-20 Plus Ahşap Kirişlerin ve YK çelik kuşaklarının ara mesafeleri değiştirilerek yüksek beton basınçlarına ve beton döküm hızlarına göre sistemi dizayn etmek mümkündür. Villalar, Konut Projeleri, Yüksek Yapılar, Endüstriyel İnşaatlar, Yol Projeleri, Arıtma Tesisleri, Enerji Projeleri gibi birbirinden çok farklı karakterdeki yapı ve inşaatlar SIMPEX sisteminin esnekliği sayesinde kolayca kalıplanabilir. Sistem TMS TRK tırmanma iskeleleri ve şaft platformları ile tırmandırılabildiği gibi TMS CLIMBEX hidrolik tırmanır sisteme de adapte edilebilmektedir. SIMPEX sisteminin getireceği kolaylıklar;

- Az parçayla çok iş,
- Ön montaj, kurum ve şakule alma kolaylığı,
- Farklı panellerin bir araya getirilerek daha büyük panoların deplase edilebilmesi,
- Kamalarla sabitlenen panoların arasından beton sızmasının önlenir olması,
- Ahşap kiriş, çelik kuşak ve saplama mesafeleri değiştirilerek istenen dayanımların elde edilebilmesi.
- Eğri yüzlü perdelerin bile sistemle kalıplanabilir olması.

COLUMN WALER

ITEM	ITEM NO	WEIGHT
YK-L 93 x 93	030 031 00093	40,92 kg
YK-L 113x113	030 031 00113	49,72 kg
YK-L 133x133	030 031 00133	58,52 kg

HT-P 20
CRANE HOOK

HT-P 20 BEAM
EXTENSION SPLICE PLATE

ITEM	ITEM NO	WEIGHT
VK-S	030 030 00170	4,30 kg
HE-S	030 030 00110	8,00 kg
HE-H	030 030 00115	5,80 kg

HT-P 20
BEAM CLAMP

HT-P 20
END CLAMP

ITEM	ITEM NO	WEIGHT
HK-D	004 130 00010	0,80 kg
HB-D	004 130 00040	0,72 kg

CORNER SHOE

WEDGE "CAST"

ITEM	ITEM NO	WEIGHT
KP-D	004 130 00060	2,70 kg
KA-D	004 130 00050	0,84 kg

PLYWOOD
SCREW

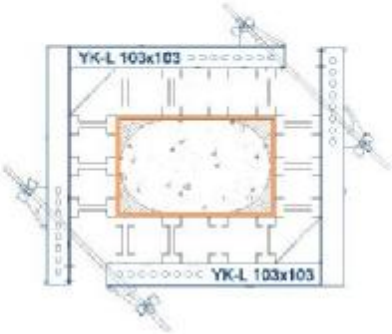
ITEM	ITEM NO	WEIGHT
VI-D Ø6x60	004 106 00560	0,004 kg

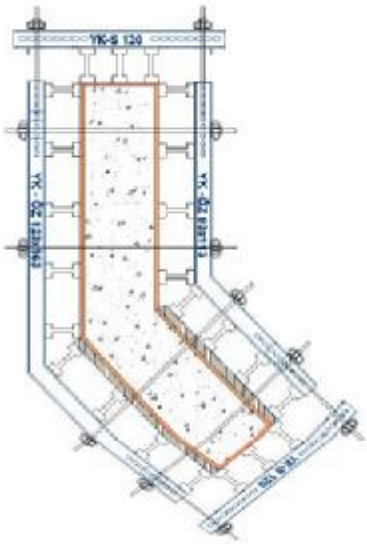
CATWALK BRACKET SIMPEX TYPE

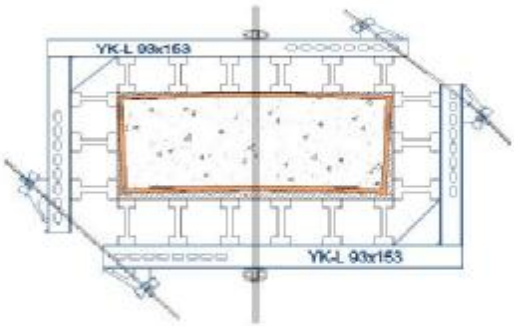
ITEM	ITEM NO	WEIGHT
BD-K 75 S	030 030 00150	7,50 kg

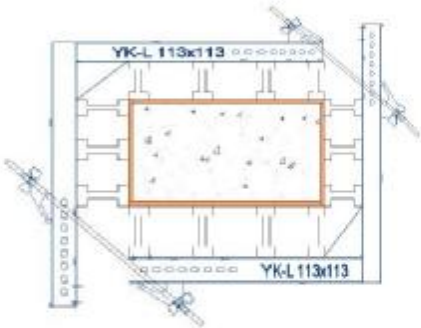
ACCESS LADDER W / GUARD

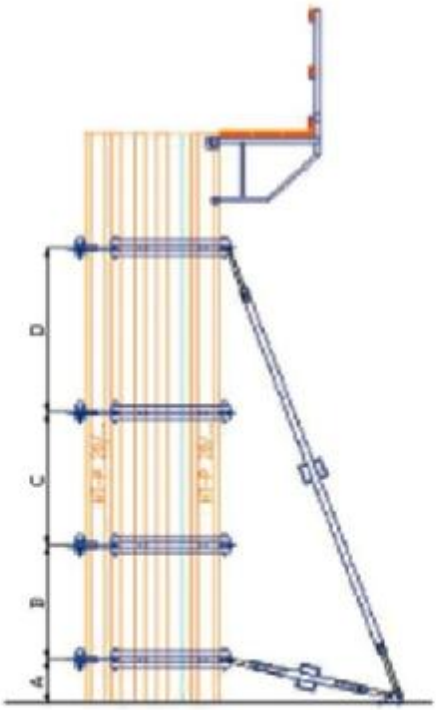
ITEM	ITEM NO	WEIGHT
PL-M 250	030 028 05250	21,20 kg
PL-M 300	030 028 05300	42,50 kg
PL-M 350	030 028 05350	50,00 kg
PL-M 400	030 028 05400	68,35 kg
PL-M 500	030 028 05500	84,10 kg











Form Height	A	B	C	D	E
245	40	130			
290	40	130			
330	40	80	100		
360	40	110	120		
390	40	110	120		
490	35	90	105	130	
590	35	90	90	105	130

Column Width	20-30	40-50	60-80	90-110	120-130
No= HT 20' s/side	2	3	4	5	6

MULTIX® COLUMN FORM

MULTIX COLUMN FORMWORK
MULTIX, is a versatile plywood faced formwork system with vertical HT 20 Plus timber beams and sequentially drilled and slotted multi-purpose NPU 120 steel walers. System includes walers, splice plates, HT 20 clamps, wedges, tie-rods, corner shoes, crane-hooks,concreting catwalks, double push-pull props, removable anchors.

MULTIX IS A VERSATILE AND MULTI PURPOSE WALING SISTEM, miscellaneous applications such as climbing brackets, Single Sided Concreting RAM brackets, Pier Head trusses are possible by the MULTIX walers

MULTIX KOLON KALIBI
MULTIX Kolon Kalıp Sistemi çok amaçlı kullanıma yönelik özel çok delikli MULTIX kuşak sistemi ile oluşturulan plywood yüzeyli, düşey HT 20 takviyeli bir sistemdir. Kolonlarda yatay kuşak, yatay kuşak bağlantı elemanı, HT 20 adaptörü, kama, tie-rod, köşe pabucu, vinç kulbu, beton döküm konsolları, çiftli itme – çekme tipi payanda sistem dahilindedir.

MULTIX ÇOK YÖNLÜ KALIP SİSTEMİDİR, kolon kalıbı için kullanılan çok delikli NPU 120 kuşaklarla perde yatay kuşağı, tek yüz perde dayaması, köprü başlık traversi, tünel kalıbı, hidromekanik sistemler v.s. ihtiyaçlarda çok yönlü kullanım özelliği vardır.

MULTIX WALERS

ITEM	ITEM NO	WEIGHT
MK-S 100	030 034 00100	13,30 kg
MK-S 245	030 034 00245	32,59 kg
MK-S 295	030 034 00295	39,24 kg
MK-S 600	030 034 00600	79,80 kg

MULTIX WALER CONNECTOR

MULTIX ARTICULATED WALER CONNECTOR

ITEM	ITEM NO	WEIGHT
MK-B 100	030 034 01010	10,40 kg
MK-B 120	030 034 01012	12,50 kg
MK-B 150	030 034 01015	15,60 kg
MK-M 100	030 034 01110	10,60 kg
MK-M 120	030 034 01112	12,70 kg

MULTIX WALER CORNER CONNECTOR

ITEM	ITEM NO	WEIGHT
MK-K	030 034 01150	8,10 kg
MK-P	030 134 00910	0,30 kg

MULTIX WALER CONNECTOR PIN

HT-P 20 CRANE HOOK

HT-P 20 BEAM EXTENSION SPLICE PLATE

ITEM	ITEM NO	WEIGHT
VK-S	030 030 00170	4,30 kg
HE-S	030 030 00110	8,00 kg
HE-H	030 030 00115	5,80 kg

MultiX® Column Form

STRIP PLATE

ITEM	ITEM NO	WEIGHT
ST-P 100	030 030 02100	10,65 kg

FILLER PANEL PRESSURE PLATE

STOP-END SPANNER

ITEM	ITEM NO	WEIGHT
YK-P	030 030 00120	1,60 kg
YK-U	030 030 00130	3,75 kg

HT-P 20 BEAM CLAMP

HT-P 20 END CLAMP

ITEM	ITEM NO	WEIGHT
HK-D	004 130 00010	0,80 kg
HB-D	004 130 00040	0,72 kg

CORNER SHOE

WEDGE "CAST"

ITEM	ITEM NO	WEIGHT
KP-D	004 130 00060	2,70 kg
KA-D	004 130 00050	0,84 kg

STRIP CORNER PANEL

ITEM	ITEM NO	WEIGHT
ST-C 100	030 030 01100	22,96 kg

CATWALK BRACKET SIMPEX TYPE

ITEM	ITEM NO	WEIGHT
BD-K 75 S	030 030 00150	7,50 kg

ACCESS LADDER W/ GUARD

ITEM	ITEM NO	WEIGHT
PL-M 250	030 028 05250	21,20 kg
PL-M 300	030 028 05300	42,50 kg
PL-M 350	030 028 05350	50,60 kg
PL-M 400	030 028 05400	68,35 kg
PL-M 500	030 028 05500	84,10 kg

PLYWOOD SCREW

ITEM	ITEM NO	WEIGHT
VI-D 0560	004 106 00560	0,004 kg

VINC'I® 80 COLUMN FORM

VINC'I COLUMN FORMWORK

VINC'I is a steel frame formwork system composed of high strength rectangular tube profiles, which could be easily combined with column panel locks. The steel frame profiles are designed to be able to connect at any point with the other panel. Panel facing is the plastic coated Birch Plywood namely WISA-Form Elephant (delivered by UPM), providing higher durability and longer life. Panel widths are 75, 90,105 and 120cm. whereas the heights are chosen as 330, 300, 270, 180, 150 and 120cm. The panel corners bear solid steel pieces which gives extra stiffness while also delivering strong inserts for levering and lifting holes for handling. Only the solid corner would double the panel life against similar systems.

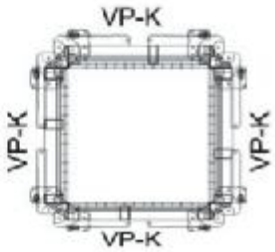
VINC'I KOLON KALIBI

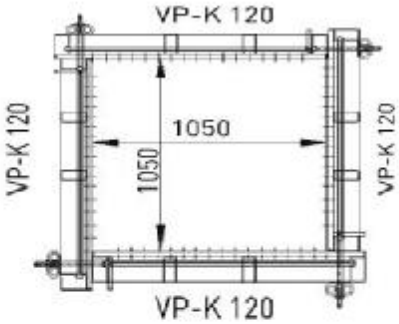
VINC'I Kolon Sistemi panoları kapalı torsiyona mukavim çelik çerçevelerden oluşmuş olup enlemeler kutu profillerden yapılmıştır. VINC'I panolar plastik yüzeyli plywood Elephant kaplıdır. Çelik çerçeve profili elemanın istenilen her çerçeve noktasında bir diğeri ile bağlantısını temin edecek şekilde tasarlanmıştır.

Pano genişlikleri 75, 90, 105 ve 120 cm ve yükseklikleri ise 330, 300, 270, 180, 150, 120 cm olarak seçilmiştir. Bütün panoların köşeleri masif olup bir yandan çerçeveyi sağlamlaştırmakta ve diğer yandan da panonun, bir levye veya inşaat demiri ile yer değiştirmesini sağlamaktadır. Bunun dışında bu köşelerdeki delikler kolay ve çabuk nakliye için kullanılmaktadır.

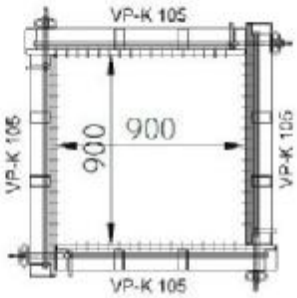
VINC'I® 80 COLUMN FORM

COLUMNS WITH OUTSIDE CORNERS
Columns with a side length of up to 90 cm and a concreting height of up to 420 cm can be formed using standard panels and outside corners. All columns with greater dimensions require an additional bracing.

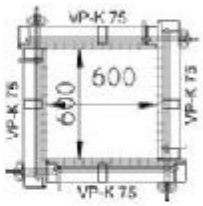




MAX 105x105
MIN 20x20

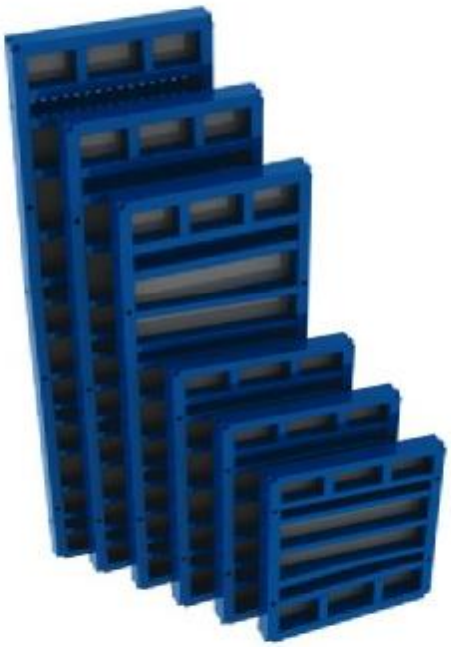


MAX 90x90
MIN 20x20



MAX 60x60
MIN 20x20

VINC'I 80 COLUMN PANELS
"Elephant Surface"



ITEM		ITEM NO	WEIGHT
VS-K	75 x 120	030 082 20712	75,20 kg
VS-K	90 x 120	030 082 20912	89,20 kg
VS-K	105 x 120	030 082 21012	99,80 kg
VS-K	120 x 120	030 082 21212	113,70 kg
VS-K	75 x 150	030 082 20715	87,55 kg
VS-K	90 x 150	030 082 20915	103,00 kg
VS-K	105 x 150	030 082 21015	115,20 kg
VS-K	120 x 150	030 082 21215	136,55 kg
VS-K	75 x 180	030 082 20718	106,50 kg
VS-K	90 x 180	030 082 20918	125,00 kg
VS-K	105 x 180	030 082 21018	140,30 kg
VS-K	120 x 180	030 082 21218	165,80 kg
VS-K	75 x 270	030 082 20727	149,90 kg
VS-K	90 x 270	030 082 20927	174,70 kg
VS-K	105 x 270	030 082 21027	196,25 kg
VS-K	120 x 270	030 082 21227	231,40 kg
VS-K	75 x 300	030 082 20730	162,65 kg
VS-K	90 x 300	030 082 20930	188,95 kg
VS-K	105 x 300	030 082 21030	212,05 kg
VS-K	120 x 300	030 082 21230	250,10 kg
VS-K	75 x 330	030 082 20733	174,90 kg
VS-K	90 x 330	030 082 20933	202,90 kg
VS-K	105 x 330	030 082 21033	227,50 kg
VS-K	120 x 330	030 082 21233	268,25 kg

VINC'I® 80 COLUMN FORM

VINC'I 80 WALER

VINC'I 80 SPANNER ELEMENT

ITEM	ITEM NO	WEIGHT
SC-K	030 180 00250	9,85 kg
SC-E	030 180 00255	1,75 kg

VINC'I 80 COLUMN LOCK

VINC'I 80 MULTI PANEL LOCK

ITEM	ITEM NO	WEIGHT
SK-K	030 180 00280	2,75 kg
SM-K	030 180 00290	4,15 kg

VINC'I PANEL LOCK "REX VINC'I"

VINC'I PANEL LOCK "CONTI"

ITEM	ITEM NO	WEIGHT
SR-K	030 180 00100	4,75 kg
CN-T	004 135 00240	6,00 kg

VINC'I PANEL LOCK "SP-K 20"

VINC'I PANEL LOCK "TU-T80"

ITEM	ITEM NO	WEIGHT
SP-K	030 180 00120	5,00 kg
TU-T 80	030 180 00110	4,90 kg

PROP HEAD PLATE (Vinc'i 80 Type)

ITEM	ITEM NO	WEIGHT
PV-S	030 112 00080	3,20 kg

CRANE HOOK "VINCI 80 TYPE"

PANEL LIFTING DEVICE

ITEM	ITEM NO	WEIGHT
SK-V	030 180 00155	11,50 kg
SY-K	030 180 00303	3,15 kg

CAT-WALK BRACKET VINC'I 80

BD-K 80 VS

BD-K 100 VS

ITEM	ITEM NO	WEIGHT
BD-K 80 VS	030 080 00180	13,20 kg
BD-K 100 VS	030 080 00210	11,30 kg
GA-S 4810	030 097 04810	3,65 kg
GA-S 4811	030 097 04811	3,90 kg
GA-S 4812	030 097 04812	4,20 kg

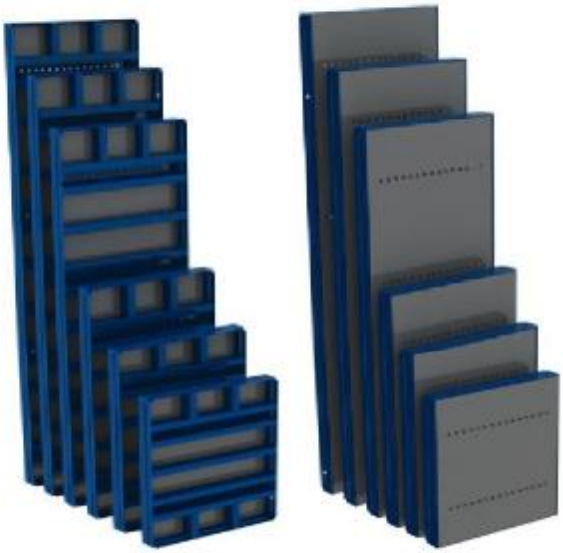
VINC'I® 70 COLUMN FORM

VINC'I 70 is a Column Formwork composed of high strength steel frame panels having state of the art production quality and highly versatile accessories providing ease of applicability and significantly reduced labor. The main element heights are 330 cm, 300 cm, 270 cm, 180 cm, 150 and 120 cm. The panel widths are 75, 90 and 105 where the panels have integrated anchor holes with 5 cm intervals to be connected with VINC'I 70 Column Lock. All panels have 12 cm depth.

The panels consists of torsionally stiff, high strength flat profile frames with lateral closed profiles which are adding on the general stiffness of the panels. The panel facing material is either a modern and long lasting 20 mm thick LaminaeX , polypropylene plates strengthened with Aluminum sheets or a long life 18mm UPM WISA -Form Birch plywood.

The frames are powder coated after grid-blasting against corrosion. This special coating provides ease of cleaning while avoiding adhesiveness against concrete.The static calculations for formwork structure of VINC'I 70 fulfills all requirements of GSV | Güteschutzverband Betonschalungen | according to DIN 18202 TAB.3 Line 7 All panels have solid steel corner pieces strengthening the panel structure and acting as strong leverage points.

VINC'I 70 COLUMN PANELS "Elephant Surface"



ITEM		ITEM NO	WEIGHT
VY-K	75x120	030 072 20712	55,35 kg
VY-K	90x120	030 072 20912	64,80 kg
VY-K	105x120	030 072 21012	69,75 kg
VY-K	75x150	030 072 20715	64,95 kg
VY-K	90x150	030 072 20915	75,70 kg
VY-K	105x150	030 072 21015	81,35 kg
VY-K	75x180	030 072 20718	76,75 kg
VY-K	90x180	030 072 20918	88,85 kg
VY-K	105x180	030 072 21018	95,20 kg
VY-K	75x270	030 072 20727	113,10 kg
VY-K	90x270	030 072 20927	130,35 kg
VY-K	105x270	030 072 21027	140,10 kg
VY-K	75x300	030 072 20730	119,75 kg
VY-K	90x300	030 072 20930	138,20 kg
VY-K	105x300	030 072 21030	148,70 kg

VINC'I 70 COLUMN LOCK

VINC'I 70 MULTI PANEL LOCK

ITEM	ITEM NO	WEIGHT
YK-K	030 170 00280	2,45 kg
YM-K	030 170 00290	3,70 kg

VINC'I PANEL LOCK "REX 70"

VINC'I PANEL LOCK "TU-T 70"

ITEM	ITEM NO	WEIGHT
YR-K	030 170 00100	3,15 kg
TU-T 70	030 170 00110	4,45 kg

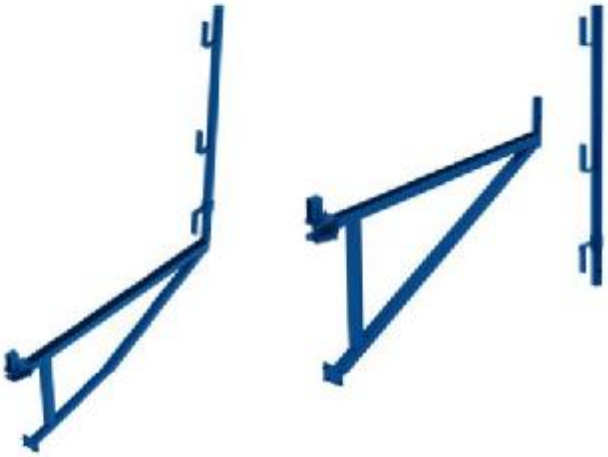
VINC'I PANEL LOCK "YP-K 20"

CRANE HOOK "VINC'I 70 TYPE"

ITEM	ITEM NO	WEIGHT
YP-K 20	030 170 00120	4,35 kg
YK-V	030 170 00150	7,10 kg

VINC'I® 70 COLUMN FORM

CAT-WALK BRACKET VINC'I 80



ITEM	ITEM NO	WEIGHT
BD-K 80 VY	030 070 00180	13,20 kg
BD-K 100 VY	030 070 00210	11,30 kg
GA-S 4810	030 097 04810	3,65 kg
GA-S 4812	030 097 04812	4,20 kg

VINC'I 80 WALER

VINC'I 70 SPANNER ELEMENT

PROP HEAD PLATE (Vinc'i70 Type)

ITEM	ITEM NO	WEIGHT
YC-K	030 170 00250	9,85 kg
YC-E	030 170 00255	1,75 kg
PV-Y	030 112 00070	1,80 kg

VINC'I 70 KOLON KALIBI

VINC'I 70 Kolon Sistemi panoları özel şekillendirilmiş, burulmaya mukavim yüksek dayanımlı yassı çelik çerçevelerden oluşmuş olup enlemeler kutu profillerden yapılmıştır. VINC'I panolar plastik yüzeyli plywood VISA-Form UPM Elephant kaplıdır. Çelik çerçeve profili elemanın istenilen her çerçeve noktasında bir diğeri ile bağlantısını temin edecek şekilde tasarlanmıştır.
Pano genişlikleri 75, 90, 105 cm ve yükseklikleri ise 300, 270, 180, 150, 120 cm olarak seçilmiştir. Bütün panoların köşeleri masif olup bir yandan çerçeveyi sağlamlaştırmakta ve diğer yandan da panonun, bir levye veya inşaat demiri ile yer değiştirmesini sağlamaktadır.
Kalıp kavraması Rex panoların düşeyde bağlantısını sağlar ve çerçevenin herhangi bir noktasına yerleştirilebilir ve bir çekiç darbesiyle açılır veya kapatılabilir. Panolarda açılmış ankraj delikleri DW15'lik tie-rod kullanımı için uygun olup 70 kN/m²'ye kadar beton basıncını karşılamaktadır.

VINC'I® 70 COLUMN FORM

VINC'I SYSTEM WALL & COLUMN FORMWORK

- Dismantling , cleaning and mounting of VINC'I type formwork needs only 0,25 man/hours per m2
- VINC'I type formwork system does not need a first erection at job site .
- Named as " Modular" small surfaces can be covered at once. Can be used even by large surfaces in ganged form.
- Element connection will be made with the help of Rex Locks by 3 meters height only 2 Rex Locks will be used.
- VINC'I type formwork system can be used at job site immediately after arrival. Elements are ready to work with. A first erection is not necessary.
- The static calculations for formwork structure of VINC'I fulfills all requirements of GSV (Güteschutzverband betonschalungen) according to DIN 18202 TAB. 3 Line 7 with a load bearing capacity of 70 kN/m2 and max. 3mm deflection.

Inclined Columns are possible with VINC'I 70

HAND'I® 40 COLUMN FORM

HAND'I 40 COLUMN FORMWORK

HAND'I 40 Column Formwork System is developed for smaller columns. The steel frame profiles are made with the latest high technology. Easy and simple connection systems allows for less workmanship.

Panel width is75cm and the heights are chosen as 240, 180, 150, 120cm. All corners of the elements are solid steel which protect and stiffen the frames as well as allowing the replacement of the elements with simple levers.

The frame of the elements are made of specially formed high tensile boxed flat steel which bares the formwork face at top and the Rex clamp in the middle with its special groove. Lateral beams are rectangular profile type and placed for a min. deflection of formwork facing.

HAND'I 40 formwork design is made according GVS (Güteschutzverband Beton Schalung) DIN 18202 TAB. 3 Line 7 and max. 3mm deflection for 40 kN/m2 fresh concrete pressure according DIN 18218.

Anchor holes are suitable for DW15 tie-rods up to 40 kN/m² concrete pressure by plywood face.

HAND'I 40 KOLON KALIBI

HAND'I 40 Kolon Kalıbı çok yüksek olmayan kolonlar için geliştirilmiş bir kalıp sistemidir. En modern lazer kaynaklı üretim sistemi ile oluşturulmuş çelik çerçeveli panolar, basit ve çabuk parça bağlantı sistemi ile işçilikten önemli ölçüde tasarruf sağlamaktadır.Pano genişliği 75 cm ve yükseklikleri ise 240, 180, 150, 120 cm. olarak seçilmiştir. Bütün panoların köşeleri masif olup bir yandan çerçeveyi sağlamlaştırmakta ve diğer yandan da panonun, bir levye ile yer değiştirmesini sağlamaktadır. Panoların çerçevesi, özel bükümlü kutulaştırılmış yassı çelik profil olup, bir yandan kalıp yüzüne mesnet oluşturmakta bir yandan da özel girintisi ile çelik kavramayı tutmaktadır. Enleme profilleri özel kutu profil olup, kalıp yüzünün sehimini en iyi şekilde karşılayacak şekilde yerleştirilmiştir. Kalıp yüzeyi olarak UPM WISA-Form plywood kullanılmıştır. HAND'I kalıp tasarımı GSV ye göre ve (Güteschutzverband Beton Schalungen) DIN18202 Tablo 3 Paragraf 7 ye göre ve 40 kN/m2 beton basıncında max eğilme 3 mm. ile sınırlanacak şekilde yapılmıştır. Burada beton basıncı olarak DIN 18218 deki "taze beton basıncı" esas alınmıştır. Kalıp yüzeyine açılmış olan ankraj delikleri, DW 15'lik tie-rod kullanımı için uygun olup 40 kN/m²'ye kadar kalıp basıncını karşılamaktadır

HAND'I COLUMN PANELS
"Plywood Surface"

ITEM		ITEM NO	WEIGHT
HK-K	75x120	030 042 10712	42,40 kg
HK-K	75x150	030 042 10715	49,35 kg
HK-K	75x180	030 042 10718	56,20 kg
HK-K	75x240	030 042 10724	76,80 kg

HAND'I 40 WALER

HAND'I 40 SPANNER ELEMENT

HAND'I 40 COLUMN LOCK

ITEM	ITEM NO	WEIGHT
HC-K	030 140 00250	7,45 kg
HC-E	030 140 00255	1,75 kg
HK-K	030 040 00280	2,75 kg

HAND'I 40 PANEL LOCK "TU-T 40"

HAND'I 40 PANEL LOCK "HP-K 20"

ITEM	ITEM NO	WEIGHT
TU-T 40	030 140 00110	3,40 kg
HP-K 20	030 140 00120	2,90 kg

CRANE HOOK "HAND'I 40 TYPE"

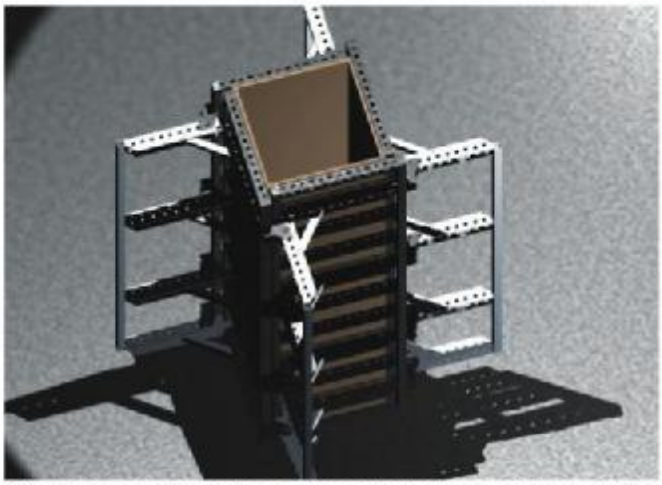
PROP HEAD PLATE (HAND'I 40 Type)

ITEM	ITEM NO	WEIGHT
HV-K	030 140 00150	6,50 kg
PH-K	030 112 00040	2,10 kg

CAT-WALK BRACKET HAND'I 40

ITEM	ITEM NO	WEIGHT
BD-K 80 H	030 040 00180	9,35 kg

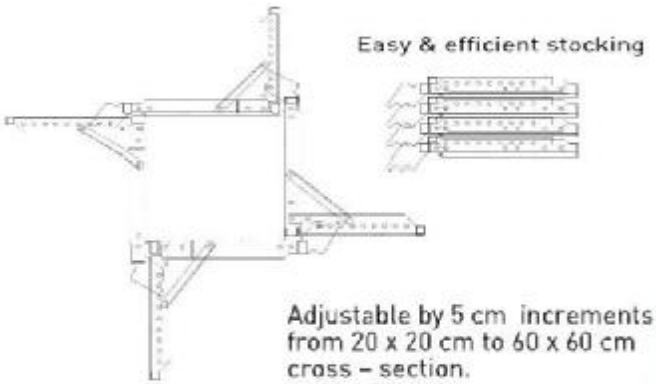
KARRO ADJUSTABLE COLUMN FORM



A foldable and roll able column formwork system, which can be displaced with single crane lift.

KARRO ADJUSTABLE COLUMN FORMWORK

KARRO Adjustable Column Formwork System is developed for relatively smaller columns of widespread construction sites. The steel frame profiles are made with the latest technology. Easy and simple connection details allows for reduced workmanship and fast erection periods.
Panel widths are suitable for max. 60x60 cm column cross sections and the heights are chosen as 300, 250, 120cm. All corners of the elements are solid which protected stiffen the frames as well as allowing the replacement of the elements with simple re-bars or levers. The frame of the panels are made of specially formed flat iron which bares the formwork face, lateral beams are omega type and are placed for a min. deflection of formwork face. Anchor holes are suitable for DW 15 tie-rods up to 60 kN/m² concrete pressure by plywood face.



KARRO AYARLANABILIR KOLON KALIBI

KARRO çok yüksek olmayan kolonlar için geliştirilmiş kolay taşınabilir bir kalıp sistemidir. En modern uygulama sistemi ile oluşturulmuş çelik çerçeveli panolar, basit ve çabuk parça bağlantı sistemi ile işçilikten önemli ölçüde tasarruf sağlamaktadır.
Pano genişlikleri max. 60 x 60 cm kolon kesiti ve yükseklikleri ise 300, 250 ve 120 cm. olarak seçilmiştir.
Bütün panolarda katlanır arka destekler mevcuttur ve dökümden sonra bu desteklere tekerlek bağlanarak yatay deplasman sağlanabilmektedir.
Bütün panoların köşeleri masif olup bir yandan çerçeveyi sağlamlaştırmakta ve diğer yandan da panonun, bir levye veya inşaat demiri ile yer değiştirmesini sağlamaktadır
Panoların çerçevesi, özel bükümlü bir yassı çelik profil olup, bir yandan kalıp yüzüne mesnet oluşturmakta bir yandan da özel girintisi ile çelik kavramayı tutmaktadır. Enleme profilleri omega tipi olup, kalıp yüzünün sehimini en iyi şekilde karşılayacak gibi yerleştirilmiştir. Kalıp yüzeyi olarak plastik kaplı plywood VISA-Form Elephant kullanılmıştır. Kalıp yüzeyine açılmış olan ankraj delikleri, DW 15'lik tie-rod kullanımı için uygun olup 60 kN/m² ye kadar kalıp basıncını karşılamaktadır

KARRO ADJUSTABLE COLUMN FORM

KARRO PANEL

ITEM	ITEM NO	WEIGHT
KR-R 60x50	030 026 46005	21,26 kg
KR-R 60x250	030 026 46025	94,15 kg

CAT-WALK BRACKET "Karro Type"

HAND RAIL POST

SAFETY RAILING

ITEM	ITEM NO	WEIGHT
BD-K 60 K	030 026 46160	6,80 kg
GA-S	030 097 04810	3,65 kg
KR-U	030 026 46168	6,10 kg

KARRO COLUMN LOCK

SHIFTING WHEEL

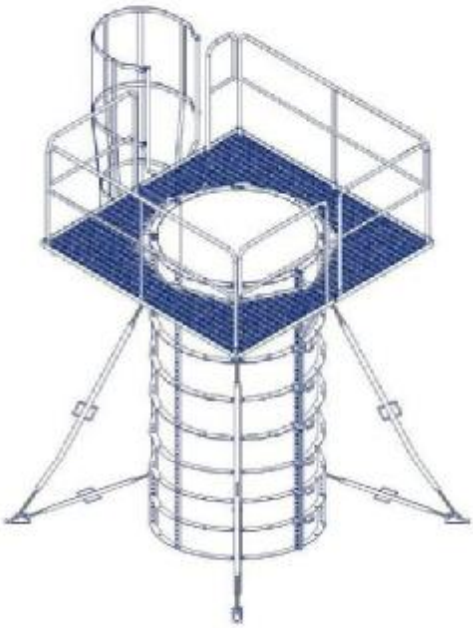
ITEM	ITEM NO	WEIGHT
KK-R	030 026 46110	2,90kg
KR-Y	030 026 46140	9,40 kg

PIN

"R" PIN

ITEM	ITEM NO	WEIGHT
PI-M	004 131 00230	0,18 kg
GP-R 325	004 131 00250	0,003 kg

Circular Column Form



LONG LASTING STEEL FACED CIRCULAR COLUMN FORMWORK FOR REPETETIVE USES

Various diameters from 40 cm to 200 cm and heights up to 12m are possible. Two halve shells to be connected by panel locks and strong ties if needed. High pouring rates, hence high pressures are sustainable. Three sets of double push-pull props for each circular column formwork are used for easy vertical alignment.

DAİRESEL KOLON KALIBI DAYANIKLI ÇELİK YÜZEY İLE YÜKSEK TEKRAR SAYILARI

Ø40 cm' den başlayarak Ø 200 cm' ye kadar farklı çap ve 12 m yüksekliğe kadar tek seferde döküm imkanı. Dairesel kolon kalıbını oluşturan iki yarım kanat pano kilitleri ve özel bağlantı elemanları ile bir araya getirilir. Bu sayede yüksek beton döküm hızları ve yüksek beton basınçlarına mukavemet sağlanmış olur. Sistem COMBI, GLOBAL, GLOBAL MD ve GLOBAL HD ile de uyum içinde kullanılabildiği için dairesel uçlu viyadük kolon kalıplarında da uygulanabilmektedir. Düşey şakul ve doğrusallığın ayarlanabilmesi için kolon başına üç set çiftli itme–çekme tipi payanda uygulanmaktadır.

Circular Column Formwork around structural steel columns of a high-rise building at Moscow City, for fire-proofing the critical columns.

CIRCULAR COLUMN FORMWORK

ITEM	ITEM NO	WEIGHT
DK-K Ø40x50	030 028 50405	39,00 kg
DK-K Ø40x100	030 028 50410	78,30 kg
DK-K Ø40x125	030 028 50412	89,80 kg
DK-K Ø40x150	030 028 50415	104,75 kg
DK-K Ø40x200	030 028 50420	149,95 kg
DK-K Ø40x250	030 028 50425	176,35 kg
DK-K Ø40x300	030 028 50430	202,70 kg
DK-K Ø50x50	030 028 50505	44,20 kg
DK-K Ø50x100	030 028 50510	88,80 kg
DK-K Ø50x125	030 028 50512	102,15 kg
DK-K Ø50x150	030 028 50515	119,70 kg
DK-K Ø50x200	030 028 50520	169,35 kg
DK-K Ø50x250	030 028 50525	200,30 kg
DK-K Ø50x300	030 028 50530	231,10 kg
DK-K Ø60x50	030 028 50605	49,45 kg
DK-K Ø60x100	030 028 50610	99,25 kg

ITEM	ITEM NO	WEIGHT
DK-K Ø60x125	030 028 50612	114,50 kg
DK-K Ø60x150	030 028 50615	134,65 kg
DK-K Ø60x200	030 028 50620	188,80 kg
DK-K Ø60x250	030 028 50625	224,20 kg
DK-K Ø60x300	030 028 50630	259,50 kg
DK-K Ø70x50	030 028 50705	54,70 kg
DK-K Ø70x100	030 028 50710	109,70 kg
DK-K Ø70x125	030 028 50712	126,80 kg
DK-K Ø70x150	030 028 50715	149,60 kg
DK-K Ø70x200	030 028 50720	208,25 kg
DK-K Ø70x250	030 028 50725	248,15 kg
DK-K Ø70x300	030 028 50730	287,95 kg
DK-K Ø80x50	030 028 50805	59,90 kg
DK-K Ø80x100	030 028 50810	120,15 kg
DK-K Ø80x125	030 028 50812	139,15 kg
DK-K Ø80x150	030 028 50815	164,55 kg
DK-K Ø80x200	030 028 50820	227,65 kg
DK-K Ø80x250	030 028 50825	272,05 kg
DK-K Ø80x300	030 028 50830	316,35 kg
DK-K Ø100x50	030 028 51005	72,70 kg
DK-K Ø100x100	030 028 51010	145,75 kg
DK-K Ø100x125	030 028 51012	169,65 kg
DK-K Ø100x150	030 028 51015	201,50 kg
DK-K Ø100x200	030 028 51020	275,95 kg
DK-K Ø100x250	030 028 51025	331,65 kg
DK-K Ø100x300	030 028 51030	387,30 kg
DK-K Ø120x50	030 028 51205	83,15 kg
DK-K Ø120x100	030 028 51210	166,65 kg
DK-K Ø120x125	030 028 51212	194,35 kg
DK-K Ø120x150	030 028 51215	231,35 kg
DK-K Ø120x200	030 028 51220	314,80 kg
DK-K Ø120x250	030 028 51225	379,50 kg
DK-K Ø120x300	030 028 51230	444,10 kg

Circular Column Form

PANEL LOCK "CAST"

PIN & WEDGE LOCK

CIRCULAR COLUMN LOCK

ITEM	ITEM NO	WEIGHT
PK-D 8	004 131 00008	0,54 kg
PK-D 10	004 131 00010	0,54 kg
PK-P	004 131 00020	0,17 kg
KK-D	030 028 00210	1,80 kg

CRANE HOOK "Panel Type"

EYE-BOLT

ITEM	ITEM NO	WEIGHT
VK-P	030 010 01150	1,70 kg
VK-M 16	004 130 00395	0,40kg

CAT-WALK BRACKET "Panel Type"

ITEM	ITEM NO	WEIGHT
BD-K 65 P	030 010 01165	6,80 kg

CONCRETING PLATFORM

ITEM	ITEM NO	WEIGHT
PL-K 200x200	030 028 05020	89,00 kg
PL-K 220x220	030 028 05022	104,20 kg
PL-K 240x240	030 028 05024	117,85 kg

ACCESS LADDER W / GUARD

ITEM	ITEM NO	WEIGHT
PL-M 250	030 028 05250	21,20 kg
PL-M 300	030 028 05300	42,50 kg
PL-M 350	030 028 05350	50,60 kg
PL-M 400	030 028 05400	68,35 kg
PL-M 500	030 028 05500	84,10 kg

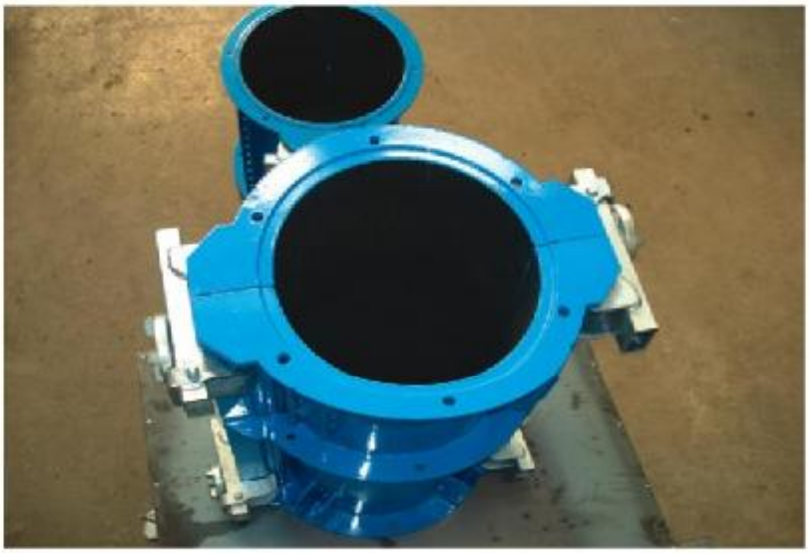
PIN

"R" PIN

ITEM	ITEM NO	WEIGHT
PI-M	004 131 00230	0,18 kg
GP-R 325	004 131 00250	0,003 kg

Circular Column Formwork with wheeled carrier where crane access is not possible.

CIREX® COLUMN FORM



CIREX CIRCULAR COLUMN FORMWORK

CIREX is a steel faced circular column formwork system composed of high strength rectangular tube VINC'I 80 profiles, which could be easily combined with patented dial type REX panel locks. The steel frame profiles are designed to be able to connect at any point with the other panel, depending on the height of the column and respective concrete pressure the quantity of the locks could be dialed in. The upper and lower flanges are self centering tapered laser cut plates, providing a state of the art surface finish. Panel facing is steel providing higher durability and longer life. CIREX could be easily combined to VINC'I Wall and Column Systems for concreting piers or similar round ended columns. Various diameters and heights and even custom sizes are available for the system.

CIREX DAİRESEL KOLON KALIBI

CIREX Dairesel Kolon Sistemi panoları düşeyde torsiyona mukavim VINC'I çelik profillerden oluşmuş olup, kalıp alt ve üst flanşları kendiliğinden merkezleme özelliğine sahip pahlı ve lazer kesimli saçlardan meydana gelmektedir. CIREX panolar plastik çelik yüzeyli olup uzun ömürlüdür. Düşey çelik çerçeve profili elemanın istenilen her çerçeve noktasında bir diğeri ile bağlantısını temin edecek şekilde tasarlanmıştır. Kalıp yüksekliği ve beton basıncına uygun olarak kilit sayısının artırılması mümkündür. CIREX dairesel panoları yuvarlak kenarlı perde kolonlar oluşturulabilmesi için VINC'I perde kolon sistemi ile birebir uyumludur. Muhtelif kesit ve ebatlarda ve hatta özel imalat panolar mevcuttur.

CIRCULAR COLUMN FORMWORK

ITEM	ITEM NO	WEIGHT
CK-K Ø40x120	030 028 20412	144,22 kg
CK-K Ø40x270	030 028 20427	266,24 kg
CK-K Ø50x120	030 028 20512	162,36 kg
CK-K Ø50x270	030 028 20527	302,34 kg
CK-K Ø60x120	030 028 20612	180,50 kg
CK-K Ø60x270	030 028 20627	338,44 kg
CK-K Ø70x120	030 028 20712	199,11 kg
CK-K Ø70x270	030 028 20727	375,01 kg
CK-K Ø80x120	030 028 20812	217,40 kg
CK-K Ø80x270	030 028 20827	411,59 kg
CK-K Ø100x120	030 028 21012	253,68 kg
CK-K Ø100x270	030 028 21027	483,79 kg

VINC'I PANEL LOCK "REX 80"

EYE-BOLT

ITEM	ITEM NO	WEIGHT
SR-K	030 180 00100	4,75 kg
VK-M 16	004 130 00395	0,40 kg

CAT-WALK BRACKET "Panel Type"

ACCESS LADDER W / GUARD

ITEM	ITEM NO	WEIGHT
BD-K 65 P	030 010 01165	6,80 kg
PL-M 250	030 028 05250	21,20 kg
PL-M 300	030 028 05300	42,50 kg
PL-M 350	030 028 05350	50,60 kg
PL-M 400	030 028 05400	68,35 kg
PL-M 500	030 028 05500	84,10 kg

CONCTRETING PLATFORM

PIN

"R" PIN

ITEM	ITEM NO	WEIGHT
PL-K 200x200	030 028 05020	89,00 kg
PL-K 220x220	030 028 05022	104,20 kg
PL-K 240x240	030 028 05024	117,85 kg
PI-M	004 131 00230	0,18 kg
GP-R 325	004 131 00250	0,003 kg

Push-Pull Props For All Systems

"1" SERIES

PROP CODE	WEIGHT (Kg)	WORKING RANGE min. mm	max. mm	TUBE DIA. (mm)	TUBE LENGHT (mm)	SPINDLE DIA. (mm)
PY-S 131	8,70	910	1550	Ø48 x 2.5	850	Ø35 x 400
PY-S 161	9,50	1210	1850	Ø48 x 2.5	1150	Ø35 x 400
PY-S 201	11,80	1560	2400	Ø48 x 2.5	1500	Ø35 x 500
PY-S 251	13,20	2060	2900	Ø48 x 2.5	2000	Ø35 x 500
PY-S 301	14,60	2560	3400	Ø48 x 2.5	2500	Ø35 x 500
PY-S 351	16,00	3060	3900	Ø48 x 2.5	3000	Ø35 x 500

"2" SERIES

PROP CODE	WEIGHT (Kg)	WORKING RANGE min. mm	max. mm	TUBE DIA. (mm)	TUBE LENGHT (mm)	SPINDLE DIA. (mm)
PY-S 132	10,30	910	1550	Ø60 x 2.5	850	Ø35 x 400
PY-S 162	11,30	1210	1850	Ø60 x 2.5	1150	Ø35 x 400
PY-S 202	13,80	1560	2400	Ø60 x 2.5	1500	Ø35 x 500
PY-S 252	15,60	2060	2900	Ø60 x 2.5	2000	Ø35 x 500
PY-S 302	17,40	2560	3400	Ø60 x 2.5	2500	Ø35 x 500
PY-S 352	21,10	3060	3900	Ø60 x 3,0	3000	Ø35 x 500
PY-S 402	23,20	3560	4400	Ø60 x 3,0	3500	Ø35 x 500

"3" SERIES

PROP CODE	WEIGHT (Kg)	WORKING RANGE min. mm	max. mm	TUBE DIA. (mm)	TUBE LENGHT (mm)	SPINDLE DIA. (mm)
PY-S 133	15,20	910	1550	Ø76 x 3,0	850	Ø35 x 400
PY-S 163	16,80	1210	1850	Ø76 x 3,0	1150	Ø35 x 400
PY-S 203	20,00	1560	2400	Ø76 x 3,0	1500	Ø35 x 500
PY-S 253	22,70	2060	2900	Ø76 x 3,0	2000	Ø35 x 500
PY-S 303	25,40	2560	3400	Ø76 x 3,0	2500	Ø35 x 500
PY-S 353	28,10	3060	3900	Ø76 x 3,0	3000	Ø35 x 500
PY-S 403	32,00	3560	4400	Ø76 x 3,0	3500	Ø38 x 500
PY-S 453	34,70	4060	4900	Ø76 x 3,0	4000	Ø38 x 500
PY-S 503	37,40	4560	5400	Ø76 x 3,0	4500	Ø38 x 500

"4" SERIES

PROP CODE	WEIGHT (Kg)	WORKING RANGE min. mm	max. mm	TUBE DIA. (mm)	TUBE LENGHT (mm)	SPINDLE DIA. (mm)
PY-S 134	22,90	910	1550	Ø89 x 3,0	850	Ø35 x 400
PY-S 164	25,40	1210	1850	Ø89 x 3,0	1150	Ø35 x 400
PY-S 204	30,30	1560	2400	Ø89 x 3,0	1500	Ø38 x 500
PY-S 254	34,80	2060	2900	Ø89 x 3,0	2000	Ø38 x 500
PY-S 304	38,70	2560	3400	Ø89 x 3,0	2500	Ø38 x 500
PY-S 354	42,90	3060	3900	Ø89 x 3,0	3000	Ø38x 500
PY-S 404	47,10	3560	4400	Ø89 x 3,0	3500	Ø38 x 500
PY-S 454	51,30	4060	4900	Ø89 x 3,0	4000	Ø38 x 500
PY-S 504	55,50	4560	5400	Ø89 x 3,0	4500	Ø38 x 500
PY-S 554	59,60	5060	5900	Ø89 x 3,0	5000	Ø38 x 500
PY-S 604	63,80	5560	6400	Ø89 x 3,0	5500	Ø38 x 500

"6" SERIES

PROP CODE	WEIGHT (Kg)	WORKING RANGE min. mm	max. mm	TUBE DIA. (mm)	TUBE LENGHT (mm)	SPINDLE DIA. (mm)
PY-S 136	27,70	950	1550	□100 x 6,0	850	Ø38 x 400
PY-S 166	32,70	1250	1850	□100 x 6,0	1150	Ø38 x 400
PY-S 206	40,50	1600	2400	□100 x 6,0	1500	Ø38 x 500
PY-S 256	49,00	2100	2900	□100 x 6,0	2000	Ø38 x 500
PY-S 306	57,50	2600	3400	□100 x 6,0	2500	Ø38 x 500
PY-S 356	80,60	3100	3900	□100 x 6,0	3000	Ø38x 500
PY-S 406	74,50	3600	4400	□100 x 6,0	3500	Ø38 x 500
PY-S 456	83,00	4100	4900	□100 x 6,0	4000	Ø38 x 500
PY-S 506	91,50	4600	5400	□100 x 6,0	4500	Ø38 x 500
PY-S 556	100,00	5100	5900	□100 x 6,0	5000	Ø38 x 500
PY-S 606	108,50	5600	6400	□100 x 6,0	5500	Ø38 x 500

PUSH-PULL PROPS FOR ALL SYSTEMS

PUSH-PULL PROPS
Heavy Duty

PROP CODE	WEIGHT (Kg)	WORKING RANGE min. mm	max. mm	TUBE DIA. (mm)	TUBE LENGHT (mm)	SPINDLE DIA. (mm)
PY-A 500	40,10	4590	5400	Ø34 x 2.5	4500	Ø35 x 500
PY-A 600	46,30	5590	6400	Ø34 x 2.5	5500	Ø35 x 500
PY-A 700	62,20	6590	7400	Ø42 x 2.5	6500	Ø35 x 500
PY-A 800	71,40	7590	8400	Ø42 x 2.5	7500	Ø38 x 500
PY-A 1000	101,30	9590	10400	Ø48 x 2.5	9500	Ø38 x 500
PY-A 1200	198,40	11590	12400	Ø48 x 3,0	11500	Ø38x 500
PY-A 1400	225,00	13590	14400	Ø48 x 3,0	13500	Ø38x 500

Push-Pull Props For All Systems

STD. PUSH-PULL PROP "Ø48mm 1 Series"

ITEM	ITEM NO	WEIGHT
PY-S 131	030 012 01131	8,70 kg
PY-S 161	030 012 01161	9,50 kg
PY-S 201	030 012 01201	11,80 kg
PY-S 251	030 012 01251	13,20 kg
PY-S 301	030 012 01301	14,60 kg
PY-S 351	030 012 01351	16,00 kg

STD. PUSH-PULL PROP "Ø60mm 2 Series"

ITEM	ITEM NO	WEIGHT
PY-S 132	030 012 01132	10,30 kg
PY-S 162	030 012 01162	11,30 kg
PY-S 202	030 012 01202	13,80 kg
PY-S 252	030 012 01252	15,60 kg
PY-S 302	030 012 01302	17,40 kg
PY-S 352	030 012 01352	21,10 kg
PY-S 402	030 012 01402	23,20 kg

STD. PUSH-PULL PROP "Ø76mm 3 Series"

ITEM	ITEM NO	WEIGHT
PY-S 133	030 012 01133	15,20 kg
PY-S 163	030 012 01163	16,80 kg
PY-S 203	030 012 01203	20,00 kg
PY-S 253	030 012 01253	22,70 kg
PY-S 303	030 012 01303	25,40 kg
PY-S 353	030 012 01353	28,10 kg
PY-S 403	030 012 01403	32,00 kg

STD. PUSH-PULL PROP "Ø89mm 4 Series"

ITEM	ITEM NO	WEIGHT
PY-S 134	030 012 01134	22,90 kg
PY-S 164	030 012 01164	25,40 kg
PY-S 204	030 012 01204	30,30 kg
PY-S 254	030 012 01254	34,80 kg
PY-S 304	030 012 01304	38,70 kg
PY-S 354	030 012 01354	42,90 kg
PY-S 404	030 012 01404	47,10 kg

Push-Pull Props For All Systems

STD. PUSH-PULL PROP "□ 100mm 6 Series"

ITEM	ITEM NO	WEIGHT
PY-S 136	030 012 01136	27,70 kg
PY-S 166	030 012 01166	32,70 kg
PY-S 206	030 012 01206	40,50 kg
PY-S 256	030 012 01256	49,00 kg
PY-S 306	030 012 01306	57,50 kg
PY-S 356	030 012 01356	66,00 kg
PY-S 406	030 012 01406	74,50 kg

HEAVY DUTY PUSH-PULL PROP

ITEM	ITEM NO	WEIGHT
PY-A 500	030 012 02050	40,10 kg
PY-A 600	030 012 02060	46,30 kg
PY-A 700	030 012 02070	62,20 kg
PY-A 800	030 012 02080	71,40 kg
PY-A 1000	030 012 02100	101,30 kg

TELESCOPIC TYPE PROP

ITEM	ITEM NO	WEIGHT
PY-D 122	030 012 03622	6,80 kg
PY-D 152	030 012 03652	8,35 kg
PY-D 222	030 012 03662	11,95 kg
PY-D 282	030 012 03682	15,05 kg
PY-D 412	030 012 03692	20,90 kg

EXTENDABLE PROP

ITEM	ITEM NO	WEIGHT
PY-T 400	030 012 03740	25,20 kg
PY-T 500	030 012 03750	32,30 kg
PY-T 600	030 012 03760	39,40 kg
PY-T 700	030 012 03770	46,50 kg

Push-Pull Props For All Systems

PROP BASE PLATE "YK-S Type"

PROP BASE PLATE "Std. Type"

ITEM	ITEM NO	WEIGHT
PP-Y	030 112 00014	1,65 kg
PP-S	030 112 00002	2,45 kg

PROP HEAD PLATE "HT-P Type"

PROP HEAD PLATE "PANEL Type"

ITEM	ITEM NO	WEIGHT
PP-H	030 012 00018	1,10 kg
PP-P	030 012 00010	1,50 kg

PROP HEAD PLATE "VINC'I 70 Type

PROP HEAD PLATE "VINC'I 80 Type

ITEM	ITEM NO	WEIGHT
PV-Y	030 112 00070	2,80 kg
PV-S	030 112 00080	3,20 kg

PIN

"R" PIN

ITEM	ITEM NO	WEIGHT
PI-M 1610	004 131 00230	0,18 kg
GP-R	004 131 00250	0,003 kg

Single Sided Brace Frame

RAM SINGLE SIDED SUPPORT FRAMES
MULTIX sequentially drilled and slotted multi-purpose NPUsteel walers have also been used in this application. RAM frames provide a strong backing when concrete has to be poured against an existing wall or when a single sided formwork is required. The VINC'I and SIMPEX Wall Formwork could also be applied together with the RAM single sided support frames. Walls of up to 3.50 m can be formed with the support frame RAM 300 and walls of up to 10 m can be realized with the support frame RAM 450 and related height extensions.

RAM TEK YÜZ GÖNYE PAYANDA SİSTEMİ
MULTIX'in çok amaçlı kullanıma yönelik özel çok delikli NPU kuşak sistemi burada da kullanılmaktadır. Tek yüz perde dökümünde RAM Gönye Payanda Sistemi zeminden destek alarak gerekli dayanımı sağlamaktadır. RAM, SİMPEX ve VINC'I sistemlerimizle birlikte kullanılabilmekte olup RAM 300 ile 3.5m, RAM 450 ve eklentileri ile 10m yüksekliğe kadar tek yüzlü beton dökümü yapılabilmektedir.

BRACE FRAME RA-M 200 HD

ITEM	ITEM NO	WEIGHT
RA-M 200 HD	030 013 03210	489,00 kg
RA-M 200	030 013 03200	338,00 kg

BRACE FRAME
RA-M 200

BRACE FRAME RA-M 300

ITEM	ITEM NO	WEIGHT
RA-M 300	030 013 03300	291,00 kg
RA-M 150	030 013 03150	179,20 kg

BRACE FRAME
RA-M 150

Single Sided Brace Frame

BRACE FRAME RA-M 450

ITEM	ITEM NO	WEIGHT
RA-M 400	030 013 03400	632,00 kg
RA-M 450	030 013 03450	597,50 kg

BRACE FRAME RA-M 400

"T" SPANNER

SPANNER "HD"

ITEM	ITEM NO	WEIGHT
TT-K	030 110 01315	2,75 kg
YT-K	030 010 01325	4,40 kg

RA-M ANCHOR BAR

WALER ADAPTER

ITEM	ITEM NO	WEIGHT
PC-M	030 013 03550	7,70 kg
KB-E	030 013 03060	1,65 kg

TMS - SELFCLIMBING SYSTEM CLIMBEX

The TMS Selfclimbing System Climbex is a hydromechanically driven lifting appliance. In conjunction with special scaffolds connected to it, it can be used for lifting formwork or other loads, as well as wind protection shield.

One of the biggest advantages is the independence of a crane, through the use of hydromechanical components.

Further advantages are:
- The system is guided to the construction during the climbing process.
- Secured climbing up to a wind speed of about 70 km/h.
- Big platforms, variably adjustable in it's size and shape according to the building geometry.
- Arbitrary height of the pouring sections up to 4.5 m.
- Refinishing of the concrete surfaces can be made easily from the suspended platforms.

CALCULATED WIND LOADS

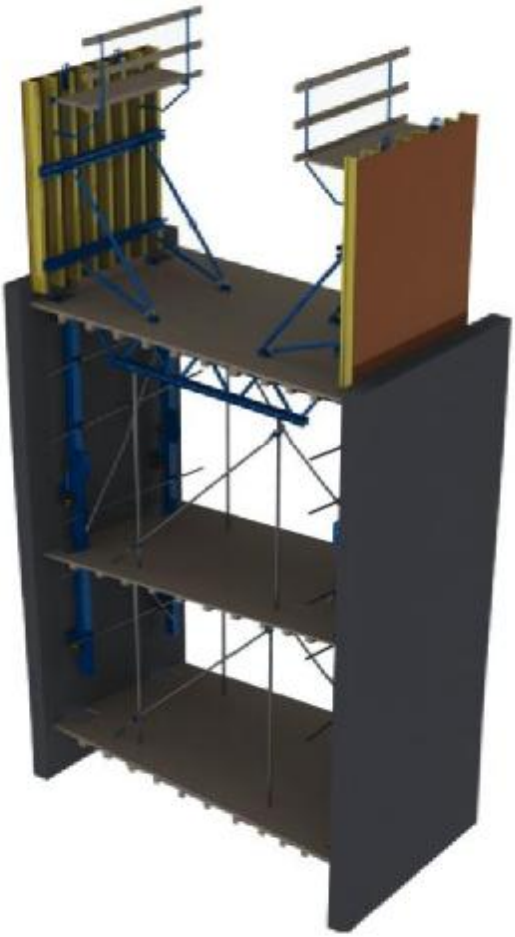
max. 165 km/h (CLIMBEX fixed to the structure)
max. 70 km/h during climbing process

Live loads:
- 300 kg/m2 for platform level 0
- 150 kg/m2 for platform level +1 and -1
- 75 kg/m2 for platform level -2

When performing the structural design calculations for the CLIMBEX hydraulically system two different load situations must be considered on the construction site.
- The loads in the statically anchored state, in which all the actual building operations are carried out.
- The loads occurring during climbing (especially the max. allowable wind load of about 70 km/h).

Hydraumechanical CLIMBEX® bolt mechanism.

Gear driven Mechanical Formwork carrier



CLIMBEX® Platform applications.

UPPER VERTICAL PROFILE CLIMBEX

ITEM	ITEM NO	WEIGHT
CT-R 250	030 016 11625	115,25 kg

LOWER VERTICAL PROFILE CLIMBEX

ITEM	ITEM NO	WEIGHT
CT-R 425	030 016 11647	217,20

VERTICAL PROFILE FORMWORK

ITEM	ITEM NO	WEIGHT
AS-C	030 016 05240	89,90

FORMWORK CARRIAGE

ITEM	ITEM NO	WEIGHT
TK-A	030 016 05220	44,30

HORIZONTAL PROFILE CLIMBEX

ITEM	ITEM NO	WEIGHT
TK-K	030 016 05210	58,70 kg

HANDRAIL

ITEM	ITEM NO	WEIGHT
TK-D	030 016 05260	17,65 kg

HANDRAIL TO HORIZONTAL PROFILE CONNECTOR

ITEM	ITEM NO	WEIGHT
TK-S	030 016 05263	6,30 kg

SUPPORT FOR HT 20

ITEM	ITEM NO	WEIGHT
HT-S	030 016 05250	4,30 kg

CONNECTOR BETWEEN HORIZONTAL AND VERTICAL CLIMBEX PROFILE

ITEM	ITEM NO	WEIGHT
KB-P	030 016 05230	6,70 kg

DISTRIBUTED PROFILE CLIMBEX

ITEM	ITEM NO	WEIGHT
SB-K	030 016 05253	25,90 kg

STRUT FOR MAIN PLATFORM

ITEM	ITEM NO	WEIGHT
KD-D	030 016 0290	31,95 kg

SUSPENDED VERTICAL BACK PROFILE

ITEM	ITEM NO	WEIGHT
OP-A	030 016 05270	74,85 kg

HORIZONTAL PROFILE FOR PLATFORM -1

ITEM	ITEM NO	WEIGHT
OT-K	030 016 05280	28,30 kg

VERTICAL BACK PROFILE

ITEM	ITEM NO	WEIGHT
AA-D	030 016 05330	32,15

STRUT FOR PLATFORM-1

ITEM	ITEM NO	WEIGHT
OD-D	030 016 05295	18,65 kg

HORIZONTAL PROFILE FOR PLATFORM -2

ITEM	ITEM NO	WEIGHT
AP-K	030 016 05350	17,35 kg

ADJUSTABLE SPINDLE

ITEM	ITEM NO	WEIGHT
EA-D	030 016 05275	18,45 kg

EXTENSION PROFILE FOR SUSPENDED PLATFORM-2

ITEM	ITEM NO	WEIGHT
AA-I	030 016 05335	12,10 kg

POURING CONSOLE

ITEM	ITEM NO	WEIGHT
BD-K 250	030 016 02518	15,60 kg

CONNECTOR FOR POURING CONSOLE

ITEM	ITEM NO	WEIGHT
CT-E 250	030 016 02520	10,50 kg

SUSPENSION SHOE

ITEM	ITEM NO	WEIGHT
BK-B	030 016 05010	9,20 kg

CLIMBING CARRIAGE

ITEM	ITEM NO	WEIGHT
CB-K	030 016 05020	36,40 kg

MOVEABLE HYDRAULIC UNIT

ITEM	ITEM NO	WEIGHT
HD-S	004 008 05020	18,60 kg

UPPER HYDRAULIC UNIT

ITEM	ITEM NO	WEIGHT
CK-K	030 016 05050	9,50 kg

CONNECTOR FOR POURING CONSOLE

ITEM	ITEM NO	WEIGHT
CT-E 250	030 016 02520	10,50 kg

SUSPENSION SHOE

ITEM	ITEM NO	WEIGHT
BK-B	030 016 05010	9,20 kg

CLIMBING CARRIAGE

ITEM	ITEM NO	WEIGHT
CB-K	030 016 05020	36,40 kg

MOVEABLE HYDRAULIC UNIT

ITEM	ITEM NO	WEIGHT
HD-S	004 008 05020	18,60 kg

UPPER HYDRAULIC UNIT

ITEM	ITEM NO	WEIGHT
CK-K	030 016 05050	9,50 kg

CLIMBING SCAFFOLD

TRK 160-240 CLIMBING SCAFFOLDS

In order to form higher walls, pillars, piers, stair and lift shafts the climbing scaffold TRK 160 or TRK 240 could be safely used together with our formwork systems such as, the VINC'I, SIMPEX, MULTIX, HAND'I etc. The formwork could be placed easily on both systems. Both systems bear wind connection, lower level platforms etc. The TRK 240 system provides extra solution for retracting the formwork with its chart system and lateral and/or vertical fine adjustment is possible with additional accessories. For further info, please refer to the relevant technical literature.

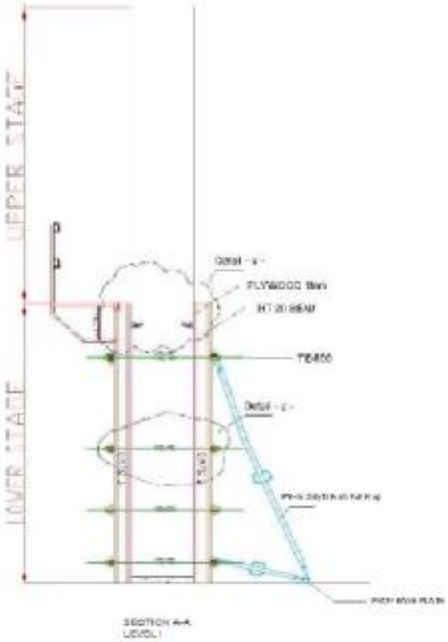
TRK 250 D MULTIX SINGLE SIDED CLIMBING SCAFFOLDS

This system consists of MULTIX main items together with specialized accessories for anchoring, vertical and lateral fine adjustment, inclined climbing etc. Please refer to detailed manuals for further info.

TRK 160-240 TIRMANMA KONSOLLARI
Yüksek perde, kolon, şaft v.b. yapılarda TRK 160 ve TRK 240 tırmanma konsollarımız VINC'I, SIMPEX, MULTIX, HAND'I v.b. kalıp sistemlerimiz ile birlikte güvenle kullanılabilmektedir. Her iki sistemde de rüzgar bağlantısı, alt sepet v.b. uygulamalar mümkündür. TRK 240 tırmanma konsolu kolay hareket ettirilen araba sistemi, yatay ve düşey hassas ayar mekanizması gibi opsiyonel özelliklere de sahiptir.

TRK 250 D BARAJ TİPİ TIRMANMA GRUBU Tırmanma Konsolu sisteminde, TRK 250D ana elemanı baraj tipi, TR-B 250 DS başlığı, TR-P 250 özel pimi, TRK korkuluğu, TR-S 250 D sepeti, TR-C 250 D itme-çekme sistemi, TK-I 250 ince ayar sistemi, KA-E 420 konik ankraj elemanı, KA-E 250 konik ankraj elemanı, MULTIX özel asker elemanı, MULTIX asker bağlantı pabucu, rüzgâr gergi halatı ve bağlantı elemanları, T-tipi çektirme, bağlantı boruları, boru kelepçesi kapsam dâhilindedir.

Climbing Scaffold



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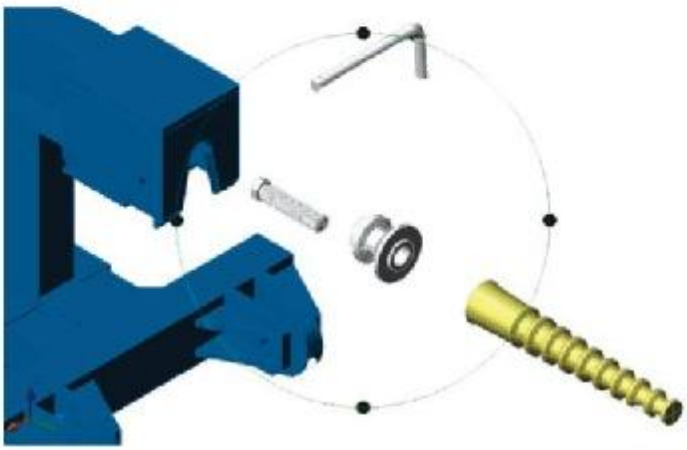

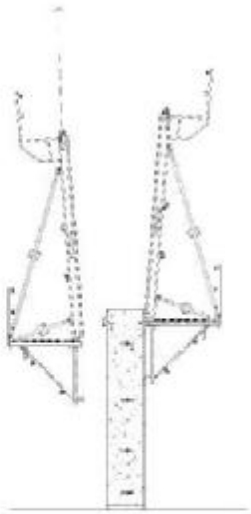

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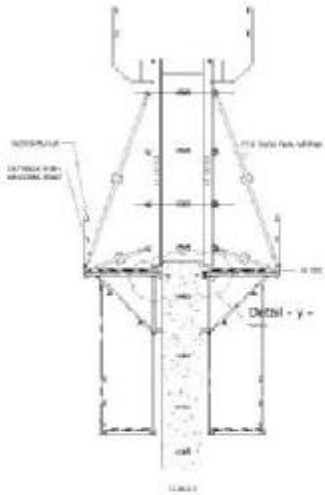

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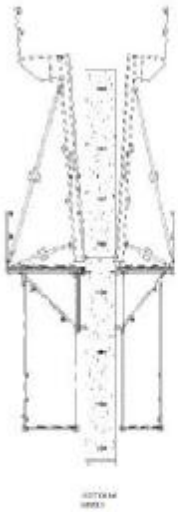

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CLIMBING SCAFFOLD 160

ITEM	ITEM NO	WEIGHT
TR-K 100	030 016 01000	24,50 kg
TR-K 120	030 016 01200	28,00 kg
TR-K 160	030 016 01600	39,00 kg

CLIMBING SCAFFOLD 100/120

CLIMBING SCAFFOLD 240

ITEM	ITEM NO	WEIGHT
TR-K 240	030 016 02400	118,00 kg
TR-K 250	030 016 02500	135,90 kg

CLIMBING SCAFFOLD 250
SINGLE - SIDED

CLIMBING SCAFFOLD

FORMWORK PUSH-PULL CARRIER 240

ITEM	ITEM NO	WEIGHT
TK-K 240	030 016 02405	41,30 kg

FORMWORK PUSH-PULL CARRIER 250

ITEM	ITEM NO	WEIGHT
TK-K 250	030 016 02505	40,85 kg

CLIMBING SCAFFOLD SUSPENSION HEAD 160

ITEM	ITEM NO	WEIGHT
TK-B 160	030 016 01603	3,80 kg
TK-P 160	030 016 01609	0,40 kg

CLIMBING SCAFFOLD SUSPENSION HEAD 240

ITEM	ITEM NO	WEIGHT
TK-B 240	030 016 02403	2,85 kg

CLIMBING SCAFFOLD 250

ITEM	ITEM NO	WEIGHT
TK-B 250	030 016 02503	2,95 kg

VERTICAL FINE ADJUSTMENT

SOLDIER BRACKET

ITEM	ITEM NO	WEIGHT
TK-I 240	030 016 02407	3,85 kg
AB-P 250	030 016 02508	10,60 kg

SUSPENDED PLATFORM 160/240

ITEM	ITEM NO	WEIGHT
TK-S 160	030 016 01606	21,40 kg
TK-S 240	030 016 02406	21,50 kg
TK-S 250	030 016 02506	45,30 kg

SUSPENDED PLATFORM 250

CARRIER PIN

SOLDIER PIN

PROP PIN

ITEM	ITEM NO	WEIGHT
TK-P 250	030 016 02509	0,70 kg
TK-P 250	030 016 02510	0,85 kg
TK-P 250	030 016 02511	0,45 kg

CATWALK BRACKET

CATWALK TILT BRACKET

ITEM	ITEM NO	WEIGHT
BD-K 250	030 016 02518	15,60 kg
CT-E 250	030 016 02520	10,50 kg

PROP SHOE

ITEM	ITEM NO	WEIGHT
PP-M	030 016 02530	3,40 kg

Climbing Scaffold

SOLDIER

ITEM	ITEM NO	WEIGHT
AS-S 200	030 031 00820	44,65 kg
AS-S 220	030 031 00822	49,12 kg
AS-S 250	030 031 00825	55,65 kg
AS-S 280	030 031 00828	62,33 kg
AS-S 300	030 031 00830	66,65 kg

HAND RAIL POST

HAND RAIL POST STD

ITEM	ITEM NO	WEIGHT
CT-K 250	030 016 02522	4,45 kg
GA-S 4810	030 097 04810	3,60 kg

TR-K GUY WIRE SPANNER ITEMS

ITEM	ITEM NO	WEIGHT
TK-G	030 016 02550	11,15 kg

REMOVABLE CONICAL ANCHOR

ANCHOR KEY

ITEM	ITEM NO	WEIGHT
KA-E 140	004 025 00114	0,75 kg
KA-E 200	004 025 00120	1,40 kg
KA-E 250	004 025 00125	1,65 kg
KA-E 280	004 025 00128	2,95 kg
KA-E 320	004 025 00132	3,40 kg
KA-E 360	004 025 00136	3,80 kg
KA-E 430	004 025 00143	5,45 kg

PANEL SPANNER

ITEM	ITEM NO	WEIGHT
PC-B	030 010 0110	1,80 kg

SHAFT PLATFORM BEAM

ITEM	ITEM NO	WEIGHT
SK-P 100x200	030 031 10200	42,40 kg
SK-P 120x200	030 031 12200	50,50 kg
SK-P 120x270	030 03112270	68,15 kg
SK-P 120x330	030 03112330	83,30 kg
SK-P 140x390	030 031 14390	117,00 kg
SK-P 140x420	030 031 14420	126,00 kg

PAWL PIN

MULTIX CONNECTOR

SHAFT PLATFORM PAWL

ITEM	ITEM NO	WEIGHT
SP-P 2025	030 031 20255	0,76 kg
SP-P 1615	030 031 20265	0,26 kg
SP-B	030 031 20150	7,30 kg

BOX-OUT

GIRDER SUPPORT

ITEM	ITEM NO	WEIGHT
SP-R	030 031 20220	1,80 kg
SP-T	030 031 20275	2,70 kg

SUSPENDED PLATFORM

ITEM	ITEM NO	WEIGHT
SP-S	030 031 20300	46,40 kg

THE FLEXIBLE SOLUTION FOR SLABS

SLABFLEX is highly versatile with its capability to be designed for every floor plan and slab thickness. The system consists of very few items; KAUFMANN HT 20 Plus Timber Beams, Props, Forkheads and Tripods. Timber Beams are light, easy to handle, yet capable for extensive spans. TMS Props are available for various heights and load bearing capacities. The Forkheads provides the continuously variable adaptability, while safely holding one or two HT 20 Plus timber beams in place. Since the Tripods support the formwork system to be self standing during set-up and stripping, they reduce the labor required during erection and dismantling.

SLABFLEX ÇOK YÖNLÜ, KULLANIŞLI DÖŞEME KALIBI

SLABFLEX hemen her projede döşeme planına kolayca uygulanabilecek, değişen döşeme kalınlığı ve yüklere göre mahya, ızgara aralıkları ve Teleskobik Dikme sıklığı ayarlanabilen, kullanımı son derece esnek Döşeme Kalıbı Sistemidir. Sistemi oluşturan ana elemanlar, KAUFMANN HT 20 Plus ahşap kirişler, TMS TD ve TDX serisi Teleskobik Dikmeler ve Üçayak (tripod) sehpalardır. TD ve TDX dikmeler 270cm'den 600 cm'ye kadar farklı açınım boylarına ve farklı dizayn yüklerine göre taşıma kapasitesine sahiptir. Dikme üstlerine yerleştirilen Dört Yollu Başlık' lar HT 20'leri özellikle bindirme noktalarında güvenli bir şekilde tutmaktadır.Tripod' lar sistem elemanlarının gerek kurum gerekse söküm aşamalarında, kendi kendini ayakta tutmasını sağladıklarından bu aşamalarda işgücü ihtiyacını azaltmakta, projeye hız ve ekonomi getirmektedir.

TELESCOPIC PROPS "U" HEAD

ITEM	ITEM NO	WEIGHT
TD-U 301	010 015 01301	12,70 kg
TD-U 351	010 015 01351	14,15 kg
TD-U 401	010 015 01401	15,95 kg
TD-U 302	010 015 01302	13,50 kg
TD-U 352	010 015 01352	15,20 kg
TD-U 402	010 015 01402	17,00 kg
TD-U 303	010 015 01303	14,50 kg
TD-U 353	010 015 01353	16,20 kg
TD-U 403	010 015 01403	18,35 kg
TD-U 453	010 015 01453	20,00 kg

TELESCOPIC PROPS "FLAT HEAD"

ITEM	ITEM NO	WEIGHT
TD-D 301	010 015 02301	12,55 kg
TD-D 351	010 015 02351	14,00 kg
TD-D 401	010 015 02401	15,80 kg
TD-D 302	010 015 02302	13,35 kg
TD-D 352	010 015 02352	15,05 kg
TD-D 402	010 015 02402	16,85 kg
TD-D 303	010 015 02303	14,35 kg
TD-D 353	010 015 02353	16,05 kg
TD-D 403	010 015 02403	18,20 kg
TD-D 453	010 015 02453	19,85 kg

PROP EXTENDER

ITEM	ITEM NO	WEIGHT
TD-Z 50	010 015 01050	3,22 kg
TD-Z 60	010 015 01060	3,64 kg
TD-Z 75	010 015 01075	4,27 kg
TD-Z 100	010 015 01100	5,33 kg

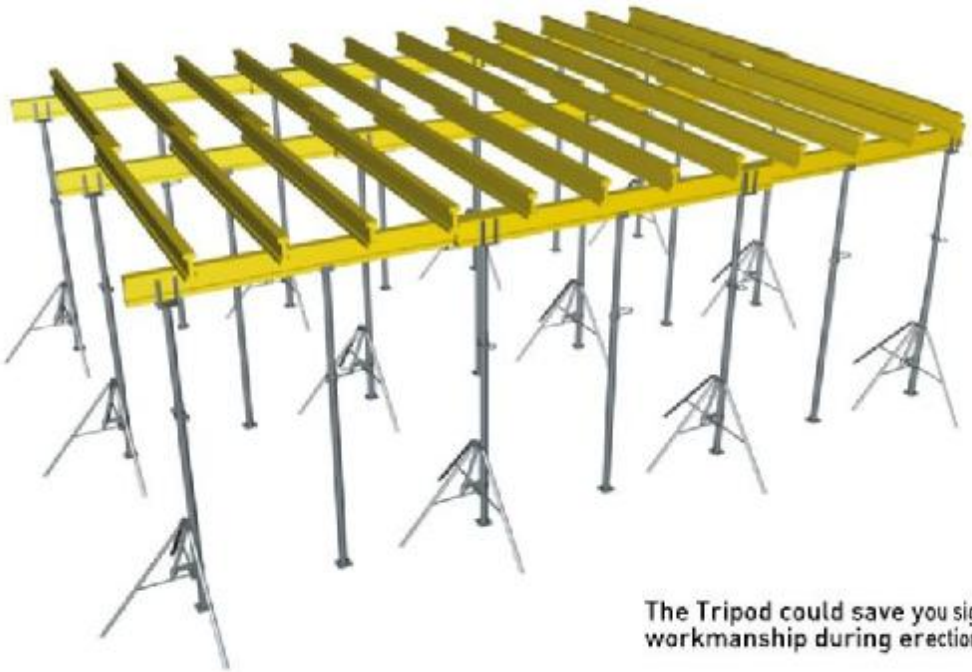
FORK HEAD

"U" HEAD
Beam Type

ITEM	ITEM NO	WEIGHT
DY-B	010 015 00110	3,40 kg
TD-O	010 015 00114	2,30 kg

TRI-POD

ITEM	ITEM NO	WEIGHT
TD-P	010 015 00130	9,60 kg
TD-P	010 015 00135	11,50 kg



The Tripod could save you significant workmanship during erection

Shoreline Housing Project at Palm Jumeirah, DUBAI U.A.E, BAYTUR

Larger soffit areas are possible with multi-frame tables.

THE MKH SYSTEM BEARS TABLE FORMS HEAVY DUTY SHORING TOWERS AND ACCESS STAIR TOWERS ALL IN ONE

The MKH System provides, fast stripping and re-locating times especially for large area slabs, high load bearing capacities even at very high slabs, main structural items for safe access stair towers. Unlimited variations in table sizes, floor plans and load bearing capacities are possible with only a few system components. Assembly is quick and straight forward with easy to use snap locks. System can be crane handled for faster relocating etc.

MKH SİSTEM ELEMANLARI İLE MASA KALIBI, AĞIR YÜK İSKELESİ VE MERDİVEN KULESİ OLUŞTURULABİLMEKTEDİR

MKH Sistemi, Masa Kalıbı olarak kurulduğunda hızlı devir periyotları sağlarken, müstakil taşıyıcı kule veya mütemadi döşeme iskelesi kurumlarında yüksek taşıma kapasitesi ile (60 kN/ayak) yüksek ve ağır döşeme kalıbı ihtiyaçlarına cevap vermektedir. MKH Sistemi, ayrıca son derece emniyetli Merdiven Kulesi sisteminin de ana elemanlarını oluşturmaktadır. MKH sistem elemanları ile çok farklı boyutlarda Masa Kalıbı oluşturmak, değişken döşeme alanlarına ve taşıma kapasitelerine uygun dizaynlar yapmak mümkündür. İskele kurumu dilli pimlerle son derece basit ve hızlı olarak yapılabilmektedir. Değişken döşeme yüksekliklerine adaptasyon modül ilave ve eksiltmeleri ile kolayca yapılabilirken, işin hızını artırmak için MKH Masa ve Kuleleri vinç ile deplase edilebilmektedir.

Table around column-heads, for the recessed soffit height.

Blue City Project Muscat, OMAN

Alassa Project LIBIA

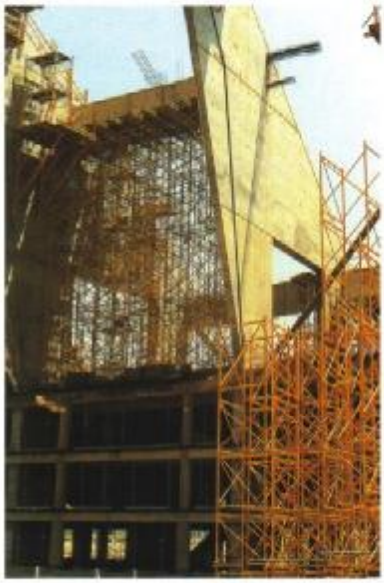
"Nakhichevan Airport" project has been completed with MKH 150 Tables in record time, by ERENPORT

Table Lifting Fork.

MKH 150 tables flying at Dubai sky's with table lifting fork.

Table Lifting Fork in use at "Gold & Silver Towers - aka Au & Ag Towers - Project" Dubai, U.A.E., BAYTUR

BAYTUR job-site at Dubai,U.A.E

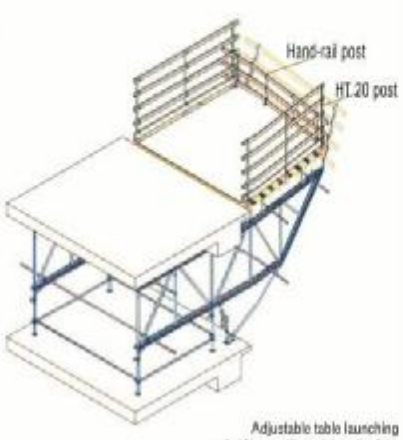


Istanbul Olympic Stadium mega-structure rack beam shorings, MKH 150 system

MKH Shoring Frames used as access scaff at the massive foundation job of a high-rise building at Almaty, by ENKA

Eye-bolts, ready lifting the table panels

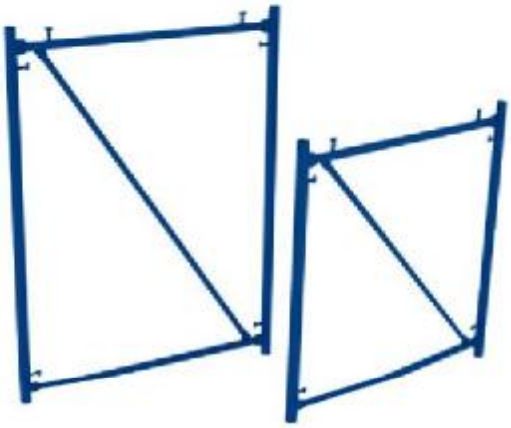
Table Forms



Adjustable table launching platform with peripheral safety.

Primary & Secondary Beam fixing brackets for stable table forming

MK-H SHORING FRAME



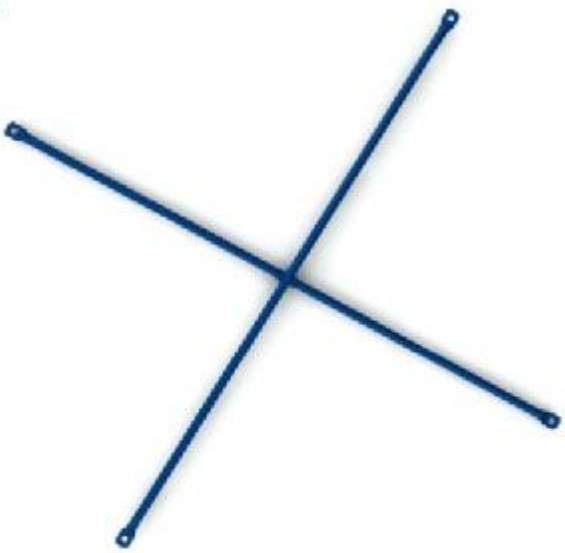
ITEM	ITEM NO	WEIGHT
MK-H 150x120	010 015 01512	22,00 kg
MK-H 150x150	010 015 01515	25,50 kg
MK-H 150x180	010 015 01518	28,25 kg
MK-H 150x200	010 015 01520	30,60 kg

MK-H SHORING FRAME W / ACCESS LADDER

EXTENSION FRAME

ITEM	ITEM NO	WEIGHT
MK-M 150x120	010 015 01612	22,35 kg
MK-M 150x150	010 015 01615	26,05 kg
MK-M 150x200	010 015 01620	32,45 kg
MK-U 150x150	010 015 01530	14,10 kg

SET OF DIAGONAL BRACING



ITEM	ITEM NO	WEIGHT
MK-K 150 x 120	010 015 02115	3,45 kg/ad
MK-K 150 x 150	010 015 02415	3,75 kg/ad
MK-K 200 x 120	010 015 02120	4,35 kg/ad
MK-K 150 x 200	010 015 02915	4,40 kg/ad
MK-K 200 x 150	010 015 02420	4,55 kg/ad
MK-K 200 x 200	010 015 02920	5,10 kg/ad
MK-K 250 x 120	010 015 02125	5,25 kg/ad
MK-K 250 x 150	010 015 02425	5,45 kg/ad
MK-K 250 x 200	010 015 02925	5,90 kg/ad

Table Forms

HORIZONTAL BRACING

ITEM	ITEM NO	WEIGHT
MK-Y 150	010 015 02015	3,05 kg
MK-Y 200	010 015 02020	4,00 kg
MK-Y 250	010 015 02025	5,00 kg

FORK HEAD STD.

ARTICULATED FORK HEAD

ITEM	ITEM NO	WEIGHT
DY-B	010 015 00110	3,40 kg
MD-M	010 015 03420	3,55 kg

MK-H SPINDLE

SPINDLE LIFTING HOOK

MK-H SPINDLE NUT

ITEM	ITEM NO	WEIGHT
MA-M Ø48x600	004 113 04860	3,20 kg
MA-M Ø48x800	004 113 04880	4,26 kg
MA-M Ø48x1000	004 113 04910	5,30 kg
MA-M Ø48x1200	004 113 04912	6,35 kg
MA-M Ø48x1500	004 113 04915	7,95 kg
MA-S	004 113 05048	1,10 kg
MM-A	010 115 03450	0,25 kg

MK-H FRAME CONNECTOR

MK-H BASE PLATE

ITEM	ITEM NO	WEIGHT
MK-E	010 015 01600	0,46 kg
MA-T	010 015 03350	1,50 kg

HT-P 20 CLAMPING PLATE w/LIFTING NUT

ITEM	ITEM NO	WEIGHT
HT-S	010 015 03500	2,10 kg

LIFTING ROD

GIRDER RAFTER PLATE

ITEM	ITEM NO	WEIGHT
VA-N	010 015 03520	0,70 kg
MI-S	010 015 03550	0,15 kg

MK-H TABLE LIFTING FORK

ITEM	ITEM NO	WEIGHT
MT-K	010 015 03600	465,00 kg
MT-K	010 015 03603	590,00 kg
MT-K	010 015 03606	735,00 kg

MK-H TABLE SHIFTING WHEEL

ITEM	ITEM NO	WEIGHT
MY-S	010 015 03570	6,25 kg

PIN

"R" PIN

ITEM	ITEM NO	WEIGHT
PI-M 1610	004 131 00230	0,18 kg
GP-R	004 131 00250	0,003 kg

KD 100 Shoring Tower

ANYHEIGHT ANY SLAB THICKNESS, QUICK & SIMPLE

Since KD100 System is free standing, high load bearing capacities are possible by varying the distances between the towers. The system is very simple and quick to assemble, put the jack screws under the frame and just start stacking the "H" items on top of each other, without any snap locks or cotter pins. System diagonals are available for extra rigidity, especially when the towers are prone to lateral loads such as high wind loads etc. System can easily be fixed together for crane handling by the diagonals and jack screw holders.

KD 100 İLE HEMEN HER YÜKSEKLİKTE ve KALINLIKTA DÖŞEME TAŞITILABİLMEKTEDİR

KD 100 Kule Dikmeler 49 kN /ayak gibi yüksek taşıma kapasiteleri ile son derece mukavemetli ve stabildir. KD 100 Sistemi tek başına dengeli durabilen müstakil kulelerden oluştuğu için kule aralarını proje gereğince ayarlamak mümkündür. Sistemin kurumu, ayar millerinin üzerine yerleştirilen çerçeve elemana modüler "H" elemanların istiflenmesi ile son derece basit olarak uygulanabilmekte ve normal kurum esnasında herhangi bir pim, kilit v.s. gerektirmemektedir. Döşeme kalınlığı, yüksekliği ve iskele sisteminin rüzgar yüklerine maruz kalması gibi durumlarda sistem çapraz elemanları ile desteklenerek taşıma kapasitesinin arttırılması mümkün olmaktadır. Sistem Çaprazlarının kullanılması halinde tüm bir kuleyi vinç ile kaldırarak güvenli bir şekilde deplase etmek mümkündür. Bu yöntem uygulama hızını artırmak adına önemli bir avantaj sağlamaktadır.

With the load bearing capacity - i.e. 49,6 kN/leg at h=5,5m - of the system, bracings between the towers are minimal, allowing for significant distances between the towers even under thick slabs.

KD 100 Shoring Tower

System is very cost effective with its simpmlicity and flexibility in application. A range from light to heavy and high slabs can easily be supported with KD 100.

KD 100 Shoring Tower

KD 100 items can be stocked easily

KD 100 BASE / HEAD FRAME

ITEM	ITEM NO	WEIGHT
KD-T 100	010 016 00105	18,30 kg

"H" FRAME

ITEM	ITEM NO	WEIGHT
KD-H100	010 016 00100	7,25 kg

DIAGONAL BRACING

ITEM	ITEM NO	WEIGHT
KD-C 100	010 016 00110	2,57 kg

BASE SPINDLE

ITEM	ITEM NO	WEIGHT
AA-M Ø35x500	010 012 00505	4,30 kg
AA-M Ø35x600	010 012 00506	4,90 kg
AA-M Ø35X750	010 012 00507	5,85 kg
AA-M Ø38x500	010 012 00805	4,90 kg
AA-M Ø38x600	010 012 00806	5,65 kg
AA-M Ø38x750	010 012 00807	6,80 kg

KD 100 Shoring Tower

"U" HEAD SPINDLE

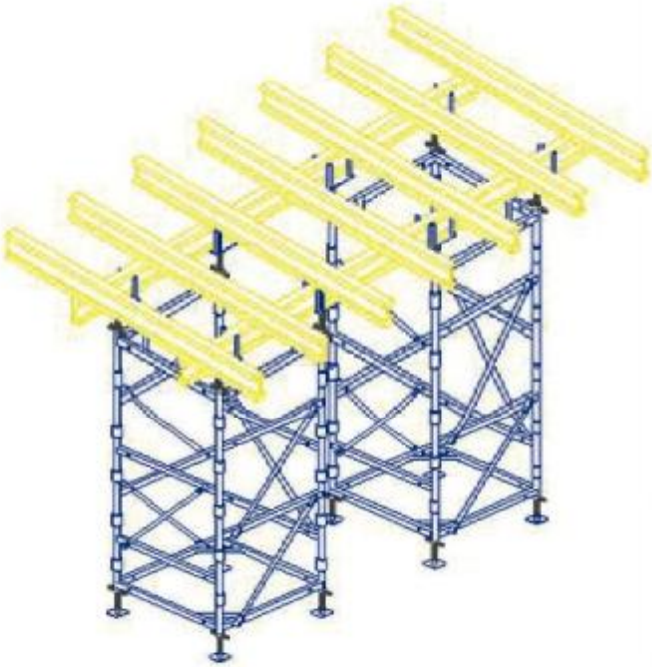
ITEM	ITEM NO	WEIGHT
UA-M Ø35x500 U	010 012 01505	4,45 kg
UA-M Ø35x600 U	010 012 01506	5,10 kg
UA-M Ø35x750 U	010 012 01507	6,05 kg
UA-M Ø38x500 U	010 012 01805	5,10 kg
UA-M Ø38x600 U	010 012 01806	5,85 kg
UA-M Ø38x750 U	010 012 01807	6,95 kg

FORK HEAD SPINDLE

ITEM	ITEM NO	WEIGHT
UA-M Ø35x500 D	010 012 02505	6,65 kg
UA-M Ø35x600 D	010 012 02506	7,30 kg
UA-M Ø35x750 D	010 012 02507	8,25 kg
UA-M Ø38x500 D	010 012 02805	7,30 kg
UA-M Ø38x600 D	010 012 02806	8,05 kg
UA-M Ø38x750 D	010 012 02807	9,15 kg

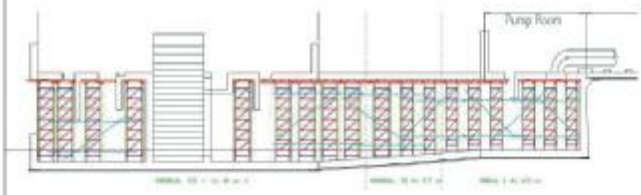
COUPLER

ITEM	ITEM NO	WEIGHT
BK-D 15 15 D	004 121 01515	1,05 kg
BK-D 15 15 S	004 121 01516	1,05 kg
BK-S 15 20 D	004 120 01520	1,15 kg
BK-S 15 20 S	004 120 01521	1,15 kg
BK-S 20 20 D	004 120 02020	1,20 kg
BK-S 20 20 S	004 120 02021	1,20 kg



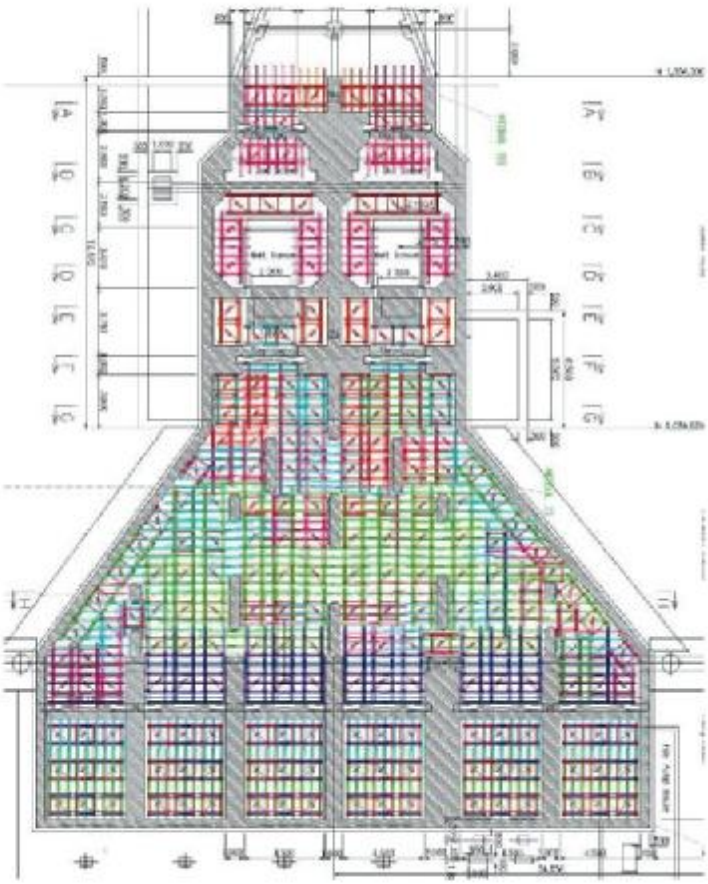
KD 100 SHORING TOWERS, versatile, fast and durable

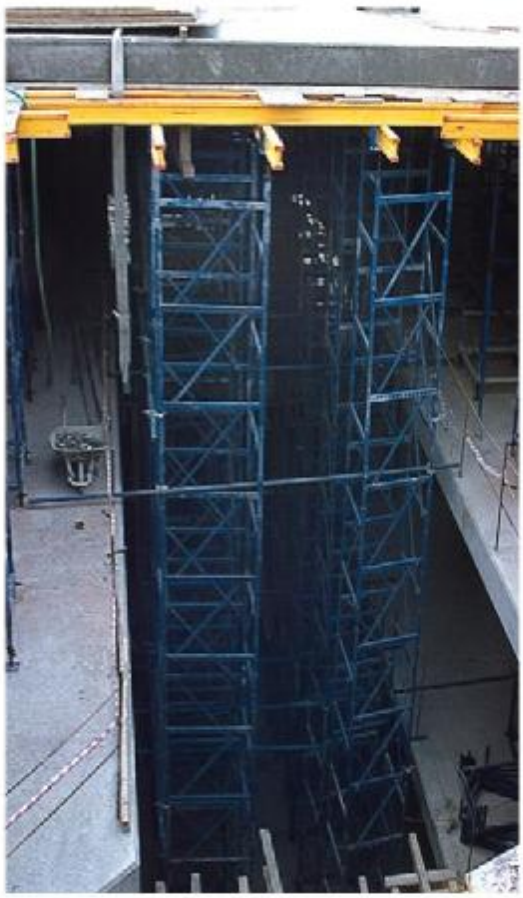
KD 100 shoring towers user friendly with five components. Shoring towers can be easly adapted at any height.



Sea-water intake structure cross-section with KD100 shoring application

Sea-water intake Building at "Arzew/Algeria Desalination and Power Project" by TAISEI - ALARKO





FLEX DECK®

FLEXDECK TABLE FORMS

Flex Deck is a very versatile and flexible system with easy adaptability to changing slab requirements. Formwork facing is freely placed plywood, while primary and secondary girders are HT20 timber beams. Shoring system consist of TDX series adjustable props with special FlexDeck heads which will be connected to the main beams of the table with help of its wedge and can be dismantled with one hammer chop. For squeezed openings such as beams and parapets a tiltable head version is also available.

FLEXDECK MASA KALIBI

Flex Deck Masa Kalıbı 4.9m yüksekliğe kadar olan döşemelerde oldukça kullanışlı ve hızlı bir döşeme sistemidir. Ana ve tali mahyalarda HT 20 kullanılır ve mahyalar kendi aralarında da özel elemanlarla sabitlenir. Ana mahyaları dikmelere bağlayan özel başlıklar sayesinde sistem güvenle kullanılır. Kiriş ve parapet arasına sıkışmış dar açıklıklardan masaları çıkartabilmek için özel katlanır başlık da vardır.

FLEX PROP HEAD STD.

FIXED PROP HEAD HD.

ITEM	ITEM NO	WEIGHT
FL-B SD	010 015 00505	10,30 kg
FL-B HD 1	010 015 00510	18,65 kg

FOLDABLE PROP HEAD HD.

ITEM	ITEM NO	WEIGHT
FL B-HD 2	010 015 00515	24,95 kg

TELESCOPIC PROPS

ITEM	ITEM NO	WEIGHT
TD-D 303	010 015 02303	14,35 kg
TD-D 353	010 015 02353	16,05 kg
TD-D 403	010 015 02403	18,20 kg
TD-D 453	010 015 02453	19,85 kg
TX-D 304	010 015 02304	19,40 kg
TX-D 354	010 015 02354	21,50 kg
TX-D 404	010 015 02404	24,20 kg

JOIST BRACKET

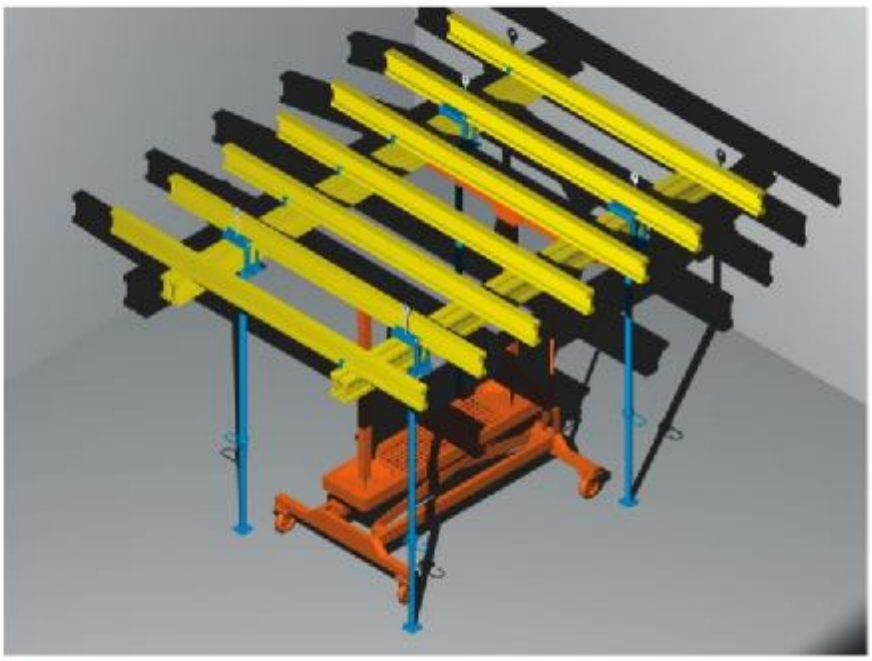
GIRDER RAFTER PLATE

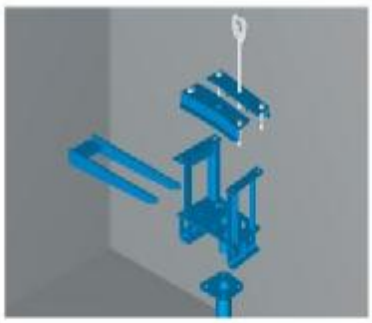
LIFTING ROD

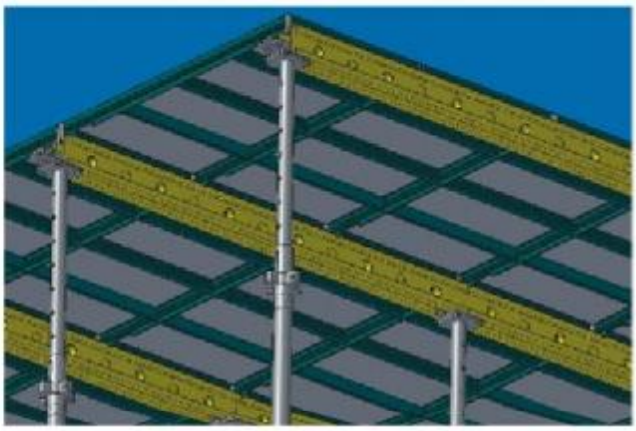
ITEM	ITEM NO	WEIGHT
MI-S	010 015 03550	0,15 kg
VA-N	010 015 03520	0,70 kg
FL-J	010 015 00530	6,15 kg

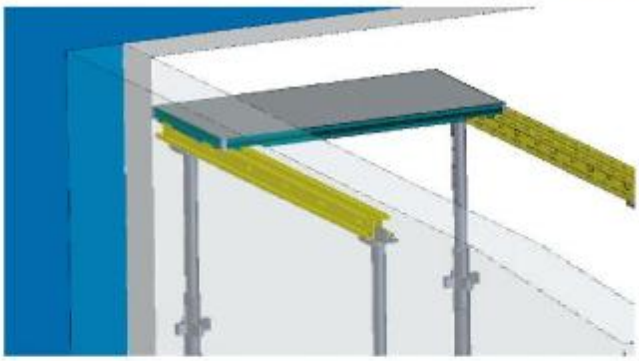
FLEXDECK TROLLEY

ITEM	ITEM NO	WEIGHT
FL-A	010 015 00555	385,00 kg





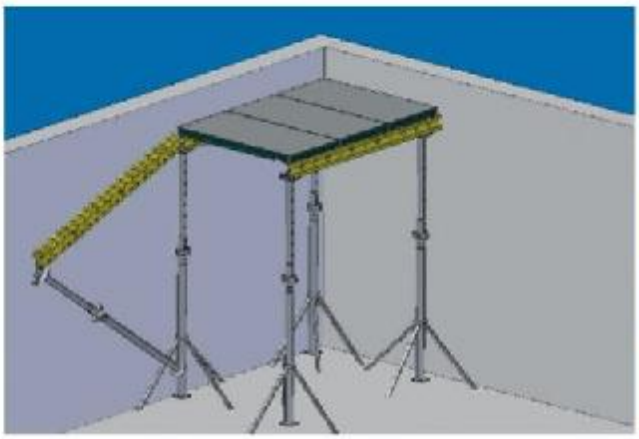


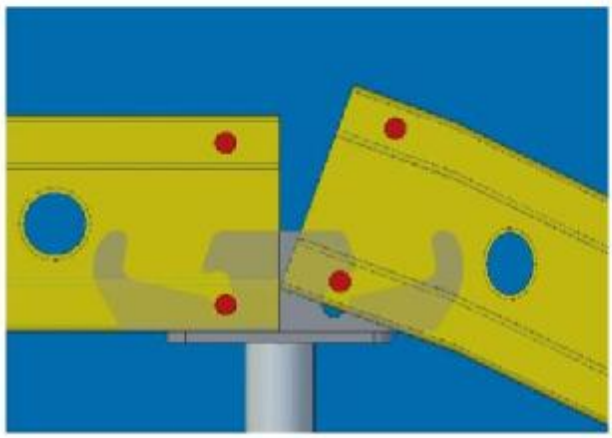


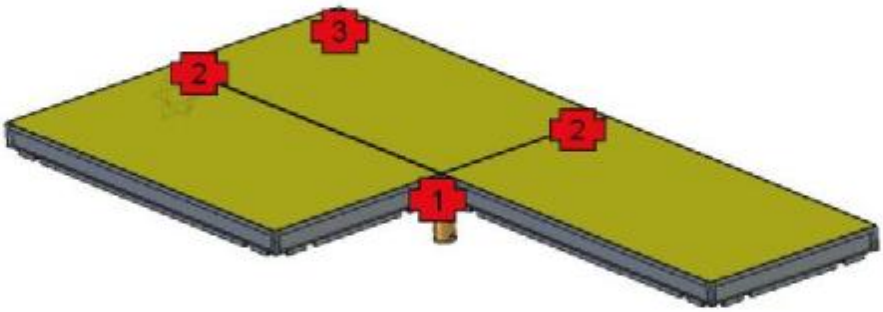
TMS SLAB DEX

The system allows with only few parts a wide range of different slab formwork systems, to adapt optimally to the construction site, e.g. for each construction project and any floor plan the most appropriate and economical method whether residential or large areas. The design of the entire system has been carried out so that up to 30 cm thick slabs can be formed with the standard parts in compliance with the deflections to DIN 18202 line 7.

For this system the prop load is always less than 20 kN. For the beginning of the setting of the formwork in a corner and for the compensation ranges no additional support is required. The elements consists of special steel profiles with a 10 mm thick LaminaeX plate, 60 x 120 panel <16 kg.







DEX SLAB PANELS
"Laminaex Surface"

ITEM	ITEM NO	WEIGHT
DD-P 30x60	030 019 30306	5,90 kg
DD-P 30x120	030 019 30312	10,15 kg
DD-P 60x120	030 019 30612	15,25 kg

DEX BEAMS

ITEM	ITEM NO	WEIGHT
DM-E 120	030 019 00120	11,60 kg
DM-E 180	030 019 00180	17,10 kg

TELESCOPIC PROPS

ITEM	ITEM NO	WEIGHT
TD-D 303	010 015 02303	14,35 kg
TD-D 353	010 015 02353	16,05 kg
TD-D 403	010 015 02403	18,20 kg
TD-D 453	010 015 02453	19,85 kg
TX-D 304	010 015 02304	19,40 kg
TX-D 354	010 015 02354	21,50 kg
TX-D 404	010 015 02404	24,20 kg

DEX PANEL CROWN

BEAM HEAD

ITEM	ITEM NO	WEIGHT
DP-B	030 019 00020	2,50 kg
DM-B	030 019 00040	1,60 kg

STRONG NODES WITH CAPTIVE ROTATING CUPS

KUP'A is a birdcage type scaffolding for medium duty scaffolding and shoring requirements. Captive rotating cups secure the transoms and ledgers i.e. up to four components per node-firmly by hammering. Vertical connections are made by means of spigots i.e. fixed spigots in access scaffolding, removable ones in shoring applications-incorporating provisions for locking pins if required. System would also provide a firm basis for applications such as Drop-Head Shoring System, Access Platforms, Ladder Towers, Mobile Platforms, and Spectator Tribunes etc.

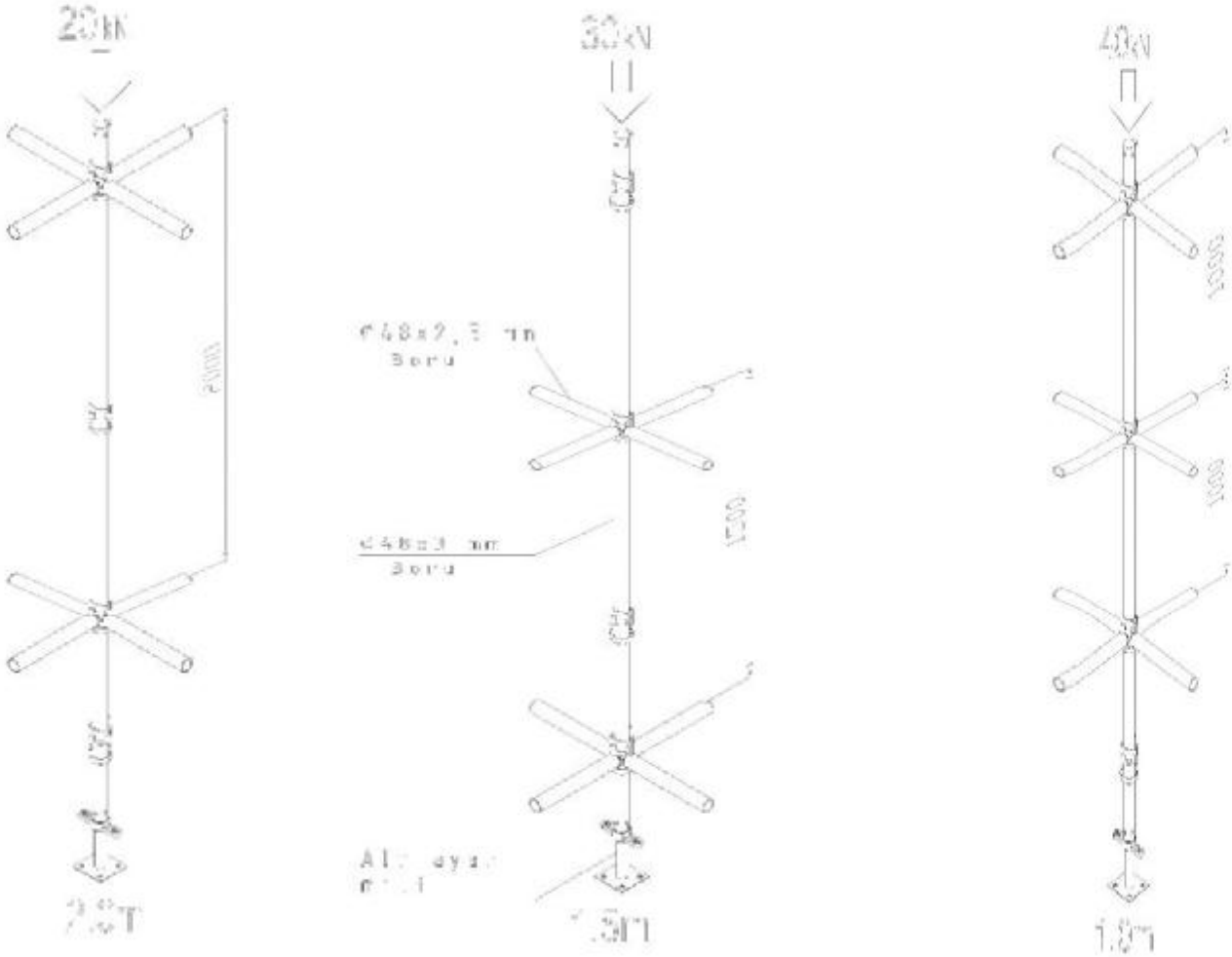
KUP'A İSKELE
GÜÇLÜ DÜĞÜM NOKTALARI OLAN BİR İSKELE SİSTEMİ

TMŠ KUP'A güçlü düğüm noktaları ve ihtiyaca göre sıklığı ayarlanabilir yatay bağlantı detayları ile gerek cephe iskelesi gerekse kalıp iskelesi olarak şantiyenizde güvenle kullanılabilecek çok yönlü örme iskele sistemidir. Döner kavrayıcı kupalar (çanaklar) kısa ve uzun yatay kolları küçük bir çekiç darbesi ile moment alabilecek şekilde sıkıca bağlamaktadır. Düşey eklemeler sökülebilir, kolay geçen ve pimlenmeden de yerinde durabilen ekleme elemanları ile sağlanmaktadır. KUP'A sistemi, düşer başlıklı döşeme kalıplarının, Çalışma Platformlarının, Merdiven kulelerinin, Gezer iskelelerin, seyirci tribünlerinin de alt iskelesi olarak kullanılabilmektedir.

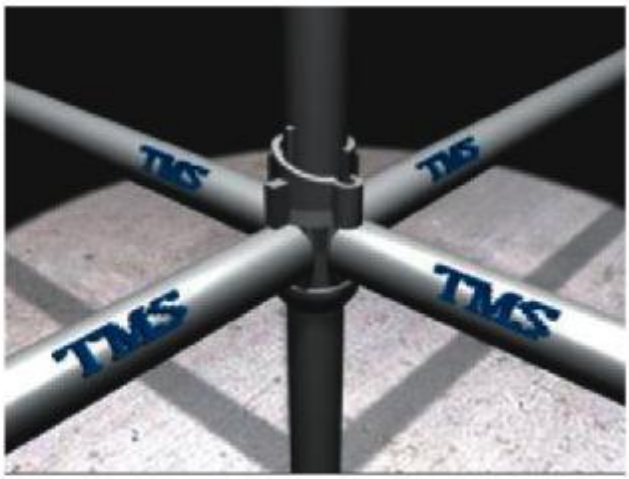
Being used as work scaffold at the back of SIMPEX wall formwork.

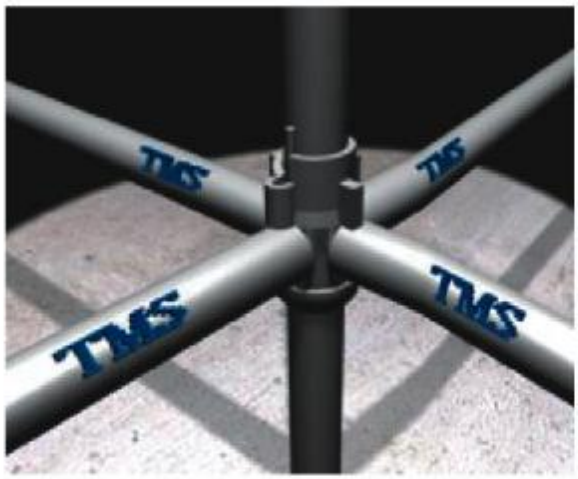
Tri-fold safety with toe-guards and two level handrails.

Load Bearing Capacities according to vertical distances of horizontal ledgers / transoms



One hammer punch is enough for fixing four ledgers / transoms at the same time





KUP'A STANDARDS

ITEM	ITEM NO	WEIGHT
KP-A 100	010 017 00100	4,65 kg
KP-A 150	010 017 00150	7,00 kg
KP-A 200	010 017 00200	9,30 kg
KP-A 250	010 017 00250	11,65 kg
KP-A 300	010 017 00300	13,85 kg

KUP'A LEDGER & TRANSOM

KUP'A BEAM BRACKET

ITEM	ITEM NO	WEIGHT
KP-Y 80	010 017 01080	2,60 kg
KP-Y 100	010 017 01100	3,15 kg
KP-Y 120	010 017 01120	4,05 kg
KP-Y 150	010 017 01150	4,60 kg
KP-Y 200	010 017 01200	6,00 kg
KP-Y 250	010 017 01250	7,40 kg
KP-Y 300	010 017 01300	8,85 kg

ITEM	ITEM NO	WEIGHT
KP-K 25	010 017 01525	6,20 kg
KP-K 50	010 017 01550	7,50 kg

KUP'A STANDARDS CONNECTOR

ITEM	ITEM NO	WEIGHT
KP-E	010 017 01680	0,46 kg

BASE SPINDLE

ITEM	ITEM NO	WEIGHT
AA-M Ø35x500	010 012 00505	4,30 kg
AA-M Ø35x600	010 012 00506	4,90 kg
AA-M Ø38x500	010 012 00805	4,90 kg
AA-M Ø38x600	010 012 00806	5,65 kg
AA-M Ø38x750	010 012 00807	6,80 kg
AA-M Ø38x500b	010 013 00805	2,85 kg
AA-M Ø38x600b	010 013 00806	3,15 kg
AA-M Ø38x750b	010 013 00807	3,70 kg

FORK-HEAD SPINDLE

"U" HEAD SPINDLE

ITEM	ITEM NO	WEIGHT
UA-M Ø35x500D	010 012 02505	6,65 kg
UA-M Ø35x600D	010 012 02506	7,30 kg
UA-M Ø38x500D	010 012 02805	7,30 kg
UA-M Ø38x600D	010 012 02806	8,05 kg
UA-M Ø38x750D	010 012 02807	9,15 kg
UA-M Ø35x500 U	010 012 01505	4,45 kg
UA-M Ø35x600 U	010 012 01506	5,10 kg
UA-M Ø38x500 U	010 012 01805	5,10 kg
UA-M Ø38x600 U	010 012 01806	5,85 kg
UA-M Ø38x750 U	010 012 01807	6,95 kg
UA-M Ø38x500 bU	010 013 01805	3,00 kg
UA-M Ø38x600 bU	010 013 01806	3,15 kg
UA-M Ø38x750b U	010 013 01807	3,70 kg

TENSION EQUIPMENT

COMPRESSION EQUIPMENT (SPACER) 25 cm

ITEM	ITEM NO	WEIGHT
IS-B	010 021 00132	3,70 kg
KB-D	010 017 01670	2,05 kg

COUPLER

ITEM	ITEM NO	WEIGHT
BK-D 15 15 D	004 121 01515	1,05 kg
BK-D 15 15 S	004 121 01516	1,05 kg
BK-S 15 20 D	004 120 01520	1,15 kg
BK-S 15 20 S	004 120 01521	1,15 kg
BK-S 20 20 D	004 120 02020	1,20 kg
BK-S 20 20 S	004 120 02021	1,20 kg

DROP HEAD

KICKER HOLDER

ITEM	ITEM NO	WEIGHT
DB-A	010 029 00050	4,10 kg
IS-T	010 021 00145	0,44 kg

DROP HEAD PRIMARY BEAM

ITEM	ITEM NO	WEIGHT
DB-K 100	010 029 00110	9,92 kg
DB-K 120	010 029 00112	12,00 kg
DB-K 150	010 029 00115	14,20 kg
DB-K 180	010 029 00118	17,00 kg
DB-K 200	010 029 00120	18,47 kg
DB-K 250	010 029 00125	22,75 kg

DROP HEAD SECONDARY BEAM

ITEM	ITEM NO	WEIGHT
DB-M 100	010 029 00210	3,75 kg
DB-M 120	010 029 00212	4,38 kg
DB-M 150	010 029 00215	5,35 kg
DB-M 170	010 029 00217	6,00 kg

STEEL PLATFORM

KUP'A ACCESS BRACKET W / LADDER

ITEM	ITEM NO	WEIGHT
KL-B 215	010 020 02115	9,70 kg
KL-B 220	010 020 02120	12,30 kg
KL-B 225	010 020 02125	14,50 kg
KL-B 315	010 020 03115	12,30 kg
KL-B 320	010 020 03120	15,20 kg
KL-B 325	010 020 03125	18,35 kg
KL-B 415	010 020 04115	14,50 kg
KL-B 420	010 020 04120	17,85 kg
KL-B 425	010 020 04125	21,60 kg

ITEM	ITEM NO	WEIGHT
KP-C	010 017 01660	23,85 kg

Beam Brackets

BEAM BRACKETS

Laterally and vertically adjustable Beam Brackets are available within TMS product line. Beam Bracket HD is a heavy duty system with adjustable chassis developed for rather heavy and sizeable beams. HT 20 Beam Side Bracket is also a sturdy solution for beams. Prop Type Beam Bracket is for relatively smaller beams. Slab Stop Ends are a fast solution for slab peripheries. Easy and simple connection details allows for reduced workmanship and fast erection periods.

AYARLANABİLİR KİRİŞ KALIBI

Kesitte ayarlanabilir kiriş kelepçeleri özellikle çok tekrarlanan farklı ebat ve tiplerdeki kirişlerin kalıplanmasını kolaylaştırmaktadır. Beam Bracket HD şaseli yapısı ile büyük kirişler için ideal bir çözümdür. HT 20 Beam Side Bracket ise HT20'ye kolayca geçiyor olması ile şase gerektirmeden kolay kullanım özellikleri sunmaktadır. Dikme Tipi Kiriş başlığı ise daha hafif kirişler için çözümler sunmaktadır. Döşeme alınlarının kolay ve hızlı kalıplanmasını sağlayan Stop End sistemi ise işçilikten önemli ölçüde tasarruf sağlamaktadır.

BEAM BRACKET HD.

ITEM	ITEM NO	WEIGHT
AK-C	010 015 08200	30,20 kg

PROP TYPE BEAM BRACKET

ITEM	ITEM NO	WEIGHT
AK-T	010 015 08010	15,50 kg

HT20 BEAM SIDE BRACKET

BEAM STRUT

SLAB STOP END

ITEM	ITEM NO	WEIGHT
AK-A	010 015 08100	10,65 kg
AK-P	010 015 08410	4,90 kg
AK-B	010 015 08130	4,25 kg

SCAFFAST®

The frame type scaffold SCAFFAST 75/100 by TMS complies with BS EN 12810, as well as BS EN 12811. The standard model SCAFFAST 75/100 scaffold can be used as a work scaffold within the load category 3 per BS EN 12811 (200 kg/m2). The erection height for the standard model is 24.5 m. For scaffolds higher than 24.5 m a static calculation could be supplied, if necessary. Mobile scaffold and platforms could also be erected by using the SCAFFAST 75/100 system components.

The most important product feature for SCAFFAST 75/100 scaffolding is the innovative design details providing the highest possible safe erection conditions for users. SCAFFAST 75/100 ensures to erect the both handrails, toe-guards and platforms from the lower platform level. So that, a safely workable platform complete with side protection prior to begin working on the upper level has been provided. Hence, there is no need for special erection instruments and the possible risk of failing in safety harness applications has been considerably reduced. Having four different bay lengths, ranging from 1.25 to 2.5 m, the SCAFFAST 75/100 scaffold system is very flexible. The scaffold width from axis to axis is 0.75m and 1.00m respectively for SCAFFAST 75 and SCAFFAST 100. By the use of scaffold brackets, the scaffold width can be increased and adjusted to meet different requirements for specific applications. All steel components are hot-dip galvanized and/or powder coated while all timber items are weather treated, ensuring a long life together with high safety standards. Many components and accessories are common with SCAFFAST 75/100 and other TMS scaffolds.

It is strictly suggested to keep this instruction manual available on job-sites where SCAFFAST 75/100 scaffolds are being used and to be studied thoroughly before erection. Only qualified and/or certified personnel, who is familiar to the SCAFFAST 75/100 erection manual may assemble, modify, dismantle and use the scaffold.

Swivel Coupler
(Forged)

Right Angle Coupler

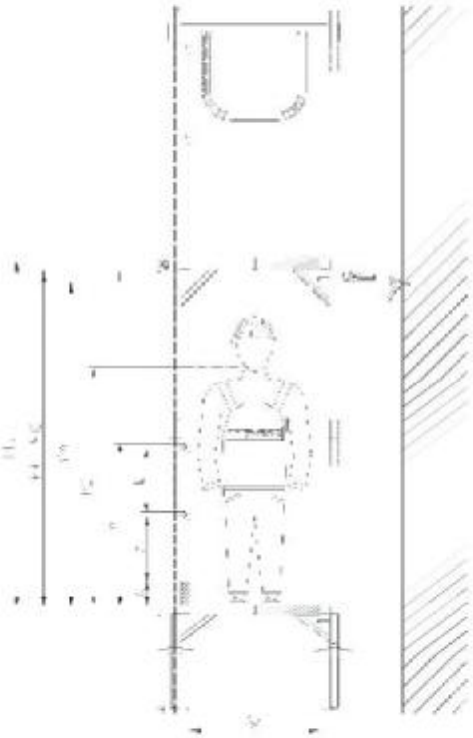


Table 1 - Width classes for working areas

Width class	W (EN 12811-1) in m	Width as Measured	Conforming	Non Conforming
W 06	0,6 ≤w <0,90	0,6m	√	

Table 2 - Headroom classes

Height Class	Between working areas (EN 12811-1)	Height as Measured	Conforming	Non Conforming
H2	h1a ≥ 1,90 m	1,99m	√	
	h1b ≥ 1,90 m	1,90m	√	
	h2 ≥1,75 m	1,76m	√	
	h3 ≥1,90 m	1,94m	√	

Table 3 - Dimensions for vertical side protection with one intermediate guardrail (Ref. Figure 3)

Height Class	Dimensions for vertical side protection (EN 12811-1)	Dimensions as Measured	Conforming	Non Conforming
a	1m	1m	√	
b	≤470mm	390mm	√	
c	<470mm	400mm	√	
d	≤150mm	150mm	√	

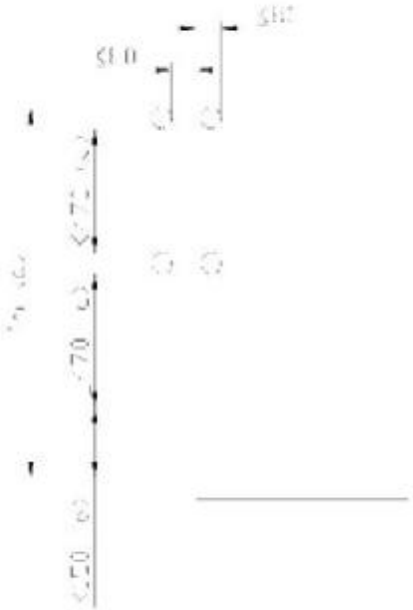


Figure 3 - Dimensions for vertical side protection with one intermediate guardrail

Scaffold EN 12810 -- 3N -- SW06/250 -- H2 -- A -- LA

Service load class: 2kN/m2, Load Class **(3)**
drop tests on platform : without drop test **(N)**
System width class: w=75cm, bay L=250cm,**(SW06)**
Headroom class: h1=193cm, h2=175.8cm,**(H2)**
(A) without cladding; (B) with cladding see Table 1 (LA) with ladder; (ST) stairs or (LS) both: see Table 1
The ScaffFast scaffold to be of load class 3, system width at least 0,6 m and less than 0,9 m bay length 2,5 m, headroom between working areas and transom or tie member > 1,90 m, with cladding, with ladder access.

STANDARD FRAME

STARTER FRAME

PEDESTRIAN ACCESS FRAME

ITEM	ITEM NO	WEIGHT
SF-A 75	010 021 00610	18,70 kg
SF-A 75 Y	010 021 00611	13,70 kg
SF-A 100	010 021 00620	19,65 kg
SF-A 100 Y	010 021 00621	14,65 kg
SF-A	010 021 00630	26,80 kg

HORIZONTAL LEDGER

ITEM	ITEM NO	WEIGHT
SF-Y 125	010 021 00640	2,07 kg
SF-Y 150	010 021 00642	2,45 kg
SF-Y 200	010 021 00644	3,25 kg
SF-Y 250	010 021 00646	4,05 kg
SF-Y 300	010 021 00648	4,84 kg

DIAGONAL BRACING

ITEM	ITEM NO	WEIGHT
SF-C 125	010 021 00650	3,80 kg
SF-C 150	010 021 00652	4,03 kg
SF-C 200	010 021 00654	4,55 kg
SF-C 250	010 021 00656	5,15 kg
SF-C 300	010 021 00658	5,78 kg

HOOK TYPE TIE EQUIPMENT

PARAPET-TIE EQUIPMENT

COMPRESSION EQUIPMENT (SPACER) 25 cm

ITEM	ITEM NO	WEIGHT
SF-B 75	010 021 00665	3,95 kg
SF-B 100	010 021 00667	4,65 kg
IS-B	010 021 00132	3,70 kg
KB-D	010 017 01670	2,05 kg

SCAFFOLDING FIXING TUBE

ITEM	ITEM NO	WEIGHT
BR-U	002 012 04832	3,55 kg/mt

NARROW SIDE GUARDRAIL

TOEBOARD FRAME CONNECTOR

ITEM	ITEM NO	WEIGHT
SF-K 75	010 021 00675	4,10 kg
SF-K 100	010 021 00677	4,90 kg
SF-T	010 021 00679	0,18 kg

ADJUSTABLE BASE SPINDLE

SWIVEL COUPLER

RIGHT ANGLE COUPLER

ITEM	ITEM NO	WEIGHT
AA-M Ø35x500	010 012 00505	4,30 kg
BK-D 1,5x1,5 S	004 121 01516	1,05 kg
BK-D 1,5x1,5D	004 121 01515	1,05 kg

STEEL PLATFORM

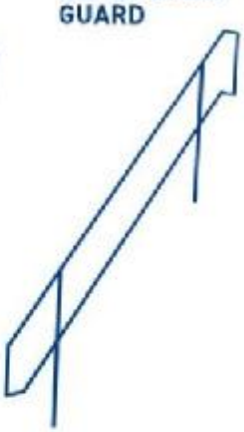
ACCESS DECK w / LADDER

ITEM	ITEM NO	WEIGHT
KL-P 312	010 020 13112	11,00 kg
KL-P 315	010 020 13115	12,30 kg
KL-P 320	010 020 13120	15,20 kg
KL-P 325	010 020 13125	18,35 kg
KL-P 330	010 020 13130	21,50 kg
MP-P 625	010 020 16025	39,00 kg

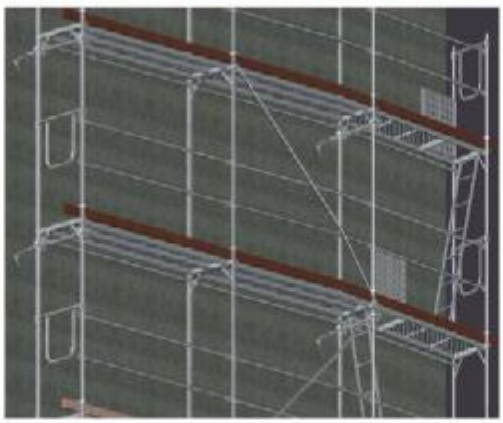
FACADE SCAFFOLD STAIR

INNER STAIR GUARD

OUTER STAIR GUARD



ITEM	ITEM NO	WEIGHT
SF-M	010 021 00260	62,20 kg
MI-K	010 021 00265	8,75 kg
MD-K	010 021 00270	13,50 kg



STAIR TOWER

SAFE ACCESS TO ANY HEIGHT

TMS offers the MKH system as for the basis for medium to heavy duty Stair Tower applications. MKH type stair towers are extremely strong and stable for access stair needs to high structures. The stairs and platforms are from specially perforated steel for slip free and safe usage. All Staircase and landing platforms are double guard-railed, together with toe-boards at the outer circumference of the platforms. There are also Stair Tower applications for KUP'A, KAM'A and Facade Scaffolding systems. Please always keep in mind that tying and bracing of the stair towers affects the permissible height to which a tower can be erected.

MERDİVEN KULELERİ YÜKSEKLERE GÜVENLE ERİŞMEK

TMS orta ve ağır iş amaçlı Merdiven Kulesi İhtiyaçları için güvenilirliği ve çok amaçlılığı kanıtlanmış MKH sistemini baz olarak kullanmaktadır. MKH Merdiven Kuleleri güçlü ve dengeli yapısı ile ister viyadük gibi yüksek bir yapıya ulaşmak, isterse derin bir metro şaftına inmek için kullanılsın bu noktalara ulaşmakta uluslararası kabul görmüş standartlarda güvenli bir kullanım sunmaktadır. Bütün basamak ve sahanlıklar özel olarak perfore edilmiş saçtan kaymaz bir yüzey sunmaktadır. Her konumda çift sıra güvenlik korkulukları ve tekmelik mevcuttur. KUP'A, KAM'A ve Cephe İskelesi sistemleri ile birlikte kullanılabilen merdiven uygulamaları da ürünlerimiz arasındadır. Her zaman, merdiven kulesinin sağlam bir yapıya güvenli bir şekilde bağlandığından emin olmalıyız. Bu konuda sistem ile birlikte sunulan kullanım detayları ve uygulama çizimlerine sadık kalınmalıdır.

STAIR TOWER ITEM LIST

Max. Soffit Height	(m)		4,70	6,20	7,70	9,20	10,70	12,20	13,70	15,20	16,70	18,20	19,70	21,00	22,70
TOWER HEIGHT	(m)		6,00	7,50	9,00	10,50	12,00	13,50	15,00	16,50	18,00	19,50	21,00	22,50	24,00
Poz No	Weight (kg)	Remarks	Quantity												
1	25,50	MKH 150 / 150	8	10	12	14	16	18	20	22	24	26	28	30	32
2	0,37	MKH Frame Connector	12	16	20	24	28	32	36	40	44	48	52	56	60
3	0,26	Pin	28	36	44	52	60	68	76	84	92	100	108	116	124
4	1,30	Ø48 x 600 Spindle	4	4	4	4	4	4	4	4	4	4	4	4	4
5	1,50	Base Plate	4	4	4	4	4	4	4	4	4	4	4	4	4
6	84,75	MKH Stair	3	4	5	6	7	8	9	10	11	12	13	14	15
7	23,82	Landing Platform	1	1	1	1	1	1	1	1	1	1	1	1	1
8	4,96	Hand Rail Post	6	8	10	12	14	16	18	20	22	24	26	28	30
9	7,26	Hand Rail	3	4	5	6	7	8	9	10	11	12	13	14	15
10	6,28	Landing Platform Hand Rail	2	2	2	2	2	2	2	2	2	2	2	2	2
11	6,14	Diagonal Bracing Single	5	8	11	14	17	20	23	26	29	32	35	38	41
12	12,28	Diagonal Bracing Double	1	1	1	1	1	1	1	1	1	1	1	1	1
13	5,38	Horizontal Bracing 270	9	11	13	15	17	19	21	23	25	27	29	31	33
14	3,04	Horizontal Bracing 150	7	9	11	13	15	17	19	21	23	25	27	29	31
15	5,20	Upper Landing Post	1	1	1	1	1	1	1	1	1	1	1	1	1
16	3,45	Upper Lifting Standard	2	2	2	2	2	2	2	2	2	2	2	2	2
17	3,45	Upper Landing Diagonal	3	3	3	3	3	3	3	3	3	3	3	3	3
18	0,85	Custom Couplers	2	2	2	2	2	2	2	2	2	2	2	2	2

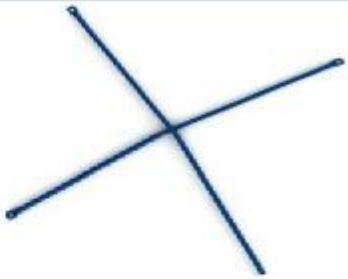
MK-H SHORING FRAME

ITEM	ITEM NO	WEIGHT
MK-H 150x150	010 015 01515	25,50 kg

MK-H FRAME CONNECTOR

ITEM	ITEM NO	WEIGHT
MK-E	010 015 01600	0,46 kg

DIAGONAL BRACING "DOUBLE"



ITEM	ITEM NO	WEIGHT
KC-C 110x270	010 015 03855	12,50 kg

DIAGONAL BRACING "SINGLE"

ITEM	ITEM NO	WEIGHT
KC-T 110x270	010 015 03850	6,15 kg

HORIZONTAL BRACING

ITEM	ITEM NO	WEIGHT
KY-E 270	010 015 03860	5,40 kg
KY-E 150	010 015 3865	3,04 kg

HAND-RAIL POST

ITEM	ITEM NO	WEIGHT
KK-K	010 015 03830	4,95 kg

Stair Tower

MK-H

HAND-RAIL

ITEM	ITEM NO	WEIGHT
KL-M	010 015 03820	84,75 kg
KM-K	010 015 03840	7,25 kg

LANDING PLATFORM

LANDING PLATFORM HAND-RAIL

ITEM	ITEM NO	WEIGHT
KU-P	010 015 03825	23,80 kg
KU-K	010 015 03845	6,30 kg

MK-H SPINDLE

MK-H SPINDLE NUT

SPINDLE LIFTING HOOK

BASE PLATE

ITEM	ITEM NO	WEIGHT
MA-M Ø48x600	004 113 04860	3,20 kg
MA-M Ø48x800	004 113 04880	4,26 kg
MA-M Ø48x1000	004 113 04910	5,30 kg
MA-M Ø48x1200	004 113 04912	6,35 kg
MA-M Ø48x1500	004 113 04915	7,95 kg
MA-S	004 113 05048	1,10 kg
MM-A	010 115 03450	0,25 kg
MA-T	010 015 03350	1,50 kg

UPPER LIFTING STANDARD

UPPER LANDING POST

ITEM	ITEM NO	WEIGHT
UK-A	010 015 03885	3,45 kg
UK-D	010 015 03880	5,20 kg

CUSTOM COUPLER

PIN

"R" PIN

ITEM	ITEM NO	WEIGHT
KL-O	010 015 03889	0,85 kg
PI-M 1610	004 131 00230	0,18 kg
GP-R	004 131 00250	0,003 kg

MOBILE PLATFORM

Detachable safety guards for ladders and mobile platforms are available.

SAFE MOBILITY AT HEIGH PLATFORMS

TMS has a wide range of mobile platforms depending on loading and height considerations. Platforms are mostly based on proven systems such as MKH, KUP'A, KAM'A or light duty items. Working platform can be formed using either a scaffolding board or batten type decking. Stairs or ladders are available for most applications. The maximum height of free standing mobile towers used internally is 3½ times the minimum base dimension. For free standing towers used externally, the maximum height must not exceed 3 times the minimum base dimension. For heights greater than the free standing maximum, stabilizers are available for certain applications. Weighting the base of the tower or tying the tower to a rigid structure is also possible, but should be done carefully. Please always lock the castor wheels before use and never move the tower with men and/or material on it.

GEZER İSKELE GÜVENLE HAREKET ETTİRİLEN ÇALIŞMA PLATFORMLARIDIR

TMS Gezer İskeleleri hemen her ihtiyaca cevap verecek şekilde, farklı yükseklik ve çalışma şartlarına göre geniş bir ürün yelpazesine sahiptir. Gezer İskeleler, sağlamlığı ve güvenilirliği kanıtlanmış MKH, KUP'A ve KAM'A gibi standart ürün temellerine oturtulmuştur. BS 5973'te gezer iskelelerin güvenli kullanımı için öngörülen maksimum yükseklikler, kapalı yerlerde kullanılırken en kısa taban kenarının 3½ katı, açık alanlarda kullanıldığında ise en kısa taban kenarının sadece 3 katı olarak tanımlanmıştır. Daha yüksek kurumlar için denge artırıcı kollar sisteme eklenebilmektedir. NOT : Lütfen kullanım öncesi tekerlek frenlerinin kilitlendiğinden emin olalım ve hiçbir zaman üzerinde insan ve malzeme olan iskeleleri hareket ettirmeyelim.

MOBIL PLATFORM ITEM LIST

Mobile Soffit Height (m)			3,20	4,70	6,20	7,70	9,20	10,70	12,20
Working Height (m)			5,00	6,50	8,00	9,50	11,00	12,50	14,00
Poz No	Weight (kg)	Remarks	Quantity						
1	22,40	Mobil Platform Frame	4	6	8	10	12	14	16
2	57,47	Chassis w/Teleskopic Stabiliz....	1	1	1	1	1	1	1
3	3,74 4,57 5,44	Diagonal Brace (Ø 34 x 2,5) 150 1920 mm 200 2342 mm 250 2791 mm	8	12	16	20	24	28	32
4	3,11	Handrail Post Ø48x2,5	4	4	4	4	4	4	4
5	2,36	Ledger Guard Rail Ø27x2,5	4	4	4	4	4	4	4
6	2,36 3,11 3,87	Transom Guard Rail 150 1500 mm 200 2000 mm 250 2500 mm	4	4	4	4	4	4	4
7	17,66 22,37 27,68	Steel Platform 150 43 150 200 43 200 250 43 250	3	3	3	3	3	3	3
14	0,10	M 12 Wing Nut	16	24	32	40	48	56	64
15	0,11	M 10 x 70 Bolt & Nut (Diagonal)	4	6	8	10	12	14	16
16	0,07	M 10 x 20 Bolt, Nut & Washer (Castor Wheel)	16	16	16	16	16	32	32
17	0,15	Ø12 Pin & "R" Pin	4	4	4	4	4	4	4

MOBILE PLATFORM FRAME

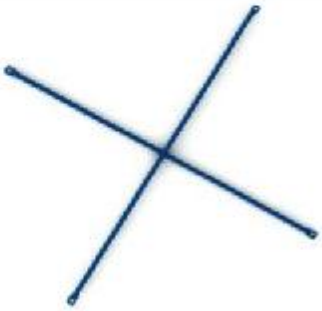
STABILIZER WING
w / CASTOR WHEEL

ITEM	ITEM NO	WEIGHT
MP-T 150x150	010 020 07515	22,50 kg
MP-T 200x150	010 020 07520	26,90 kg
MP-D 100	010 020 07580	18,35 kg
MP-D 125	010 020 07582	21,05 kg
MP-D 150	010 020 07585	23,95 kg

MOBILE PLATFORM CHASSIS

ITEM	ITEM NO	WEIGHT
MP-S	010 020 07530	57,45 kg

SET OF DIAGONAL BRACING



ITEM	ITEM NO	WEIGHT
MP-C 150	010 020 07535	3,75 kg
MP-C 200	010 020 07540	4,55 kg
MP-C 250	010 020 07545	5,45 kg

HORIZONTAL BRACING

ITEM	ITEM NO	WEIGHT
MP-K 150	010 020 07565	2,35 kg
MP-K 200	010 020 07570	3,10 kg
MP-K 250	010 020 07575	3,85 kg

HAND RAIL POST

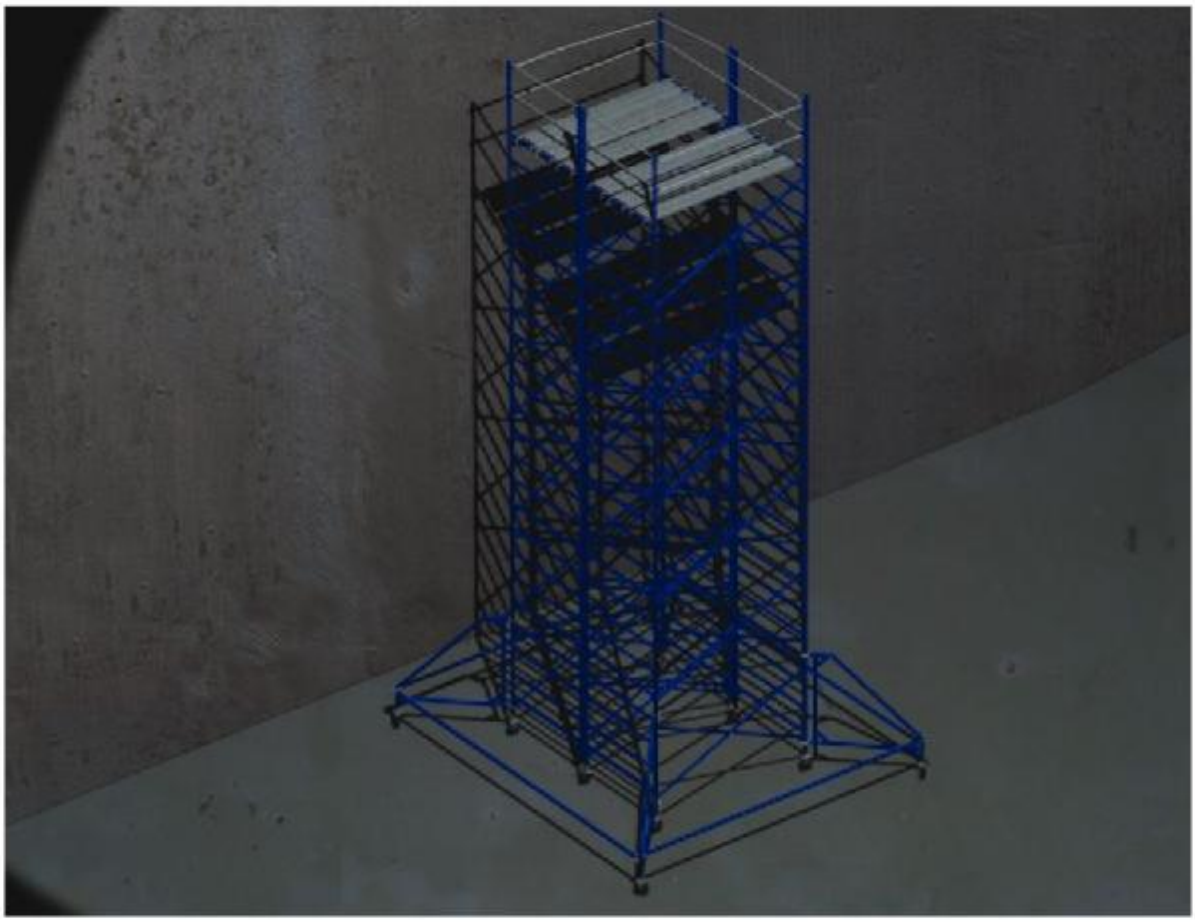
PIN

ITEM	ITEM NO	WEIGHT
MP-R	010 020 07560	3,35 kg
PI-M 1216	010 020 07599	0,13 kg

Mobile Platform

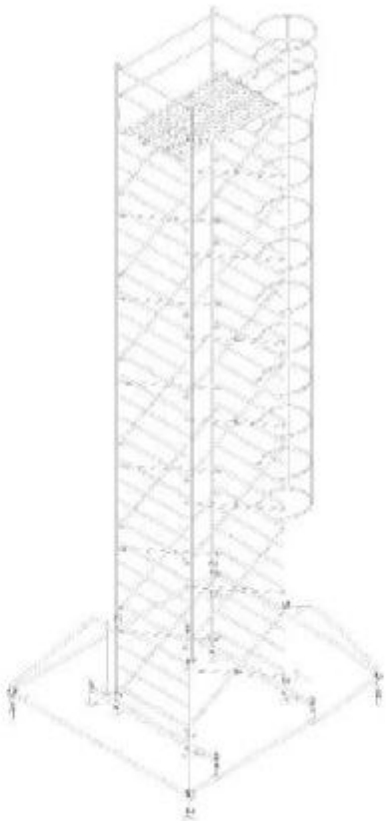
STEEL PLATFORM

ITEM	ITEM NO	WEIGHT
KL-B 215	010 020 02115	9,70 kg
KL-B 220	010 020 02120	12,30 kg
KL-B 225	010 020 02125	14,50 kg
KL-B 315	010 020 03115	12,30 kg
KL-B 320	010 020 03120	15,20 kg
KL-B 325	010 020 03125	18,35 kg
KL-B 415	010 020 04115	14,50 kg
KL-B 420	010 020 04120	17,85 kg
KL-B 425	010 020 04125	21,60 kg



According to BS 5973 the height of a mobile platform cannot exceed 3 times the minimum base width at open air, in closed areas the maximum height could be 3,5 times the min. Width of the base.

Mobile Platforms could be ganged together for lange area platform needs.



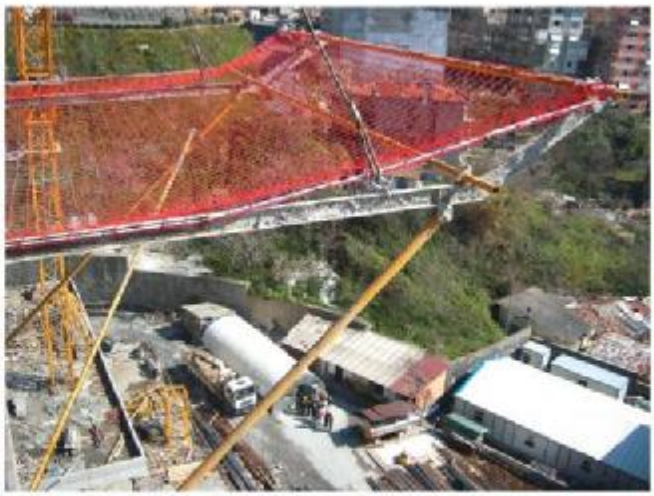
SAFEGUARD®

The SAFEGUARD Fall Protection Net Fan system absorbs the fall energy and retains the falling materials or men within the system by design. The Fall Protection Net Fans provide not only an effective fall-arrest system for the workforce, but also protect the pedestrians and workers underneath from falling objects and debris.
The Fall Protection Net Fan system consists of two nets with different spec's; the 10 x 10 cm energy absorbing net acts for fall arresting, while the fine mesh net catches the small particles and debris from falling.
The system is available in two standard lengths, 4 m and 6 m, with a projection of 3-4 m from the building.

While nets with larger diameter ropes and larger meshes serves for fall-protection,another layer with thin but tight meshes could stop falling tools, debris etc.

SAFEGUARD®

SAFEGUARD Çevre Güvenlik Sistemi düşme enerjisini absorbe ederek düşen cisim ve insanları sistemin içinde tutar.
Sistem sadece şantiyede yüksekte çalışanlarının işgüvenliği etkin bir şekilde korumakla kalmaz, düşen küçük cisimleri veya inşaat artıklarını da tutarak bina altında çalışanların veya yayaların da güvenliğini sağlar.
Koruma sistemi farklı özelliklerde iki ağ içerir; 10 x 10 cm gözlü enerji emici ağ yakalama görevini yerine getirirken, ince gözlü file ağ küçük parçaları ve inşaat artıklarını tutar.
Sistem 4 ve 6m boylarda, 3 ve 4m çıkma mesafelerinde standart elemanlardan oluşur.



Standard safety Platforms could be ganged and crane handled

Supervising at job-site

Light duty aplication available for various beam and slab combination

SAFE GUARD FOLDABLE FRAME

ITEM	ITEM NO	WEIGHT
GB-S	030 097 24060	71,20 kg

SAFETY NET CANTILEVER BEAM w / SLAB CLAMP

ITEM	ITEM NO	WEIGHT
GB-D 200	030 097 23005	22,60 kg
GB-K 200	030 097 23015	20,25 kg

SAFETY NET CANTILEVER BEAM w / WALL ATTACHMENT

SAFETY NET CANTILEVER BEAM w / PARAPET CLAMPS

ITEM	ITEM NO	WEIGHT
GB-P 200	030 097 23025	44,60 kg

HAND-RAIL POST

ITEM	ITEM NO	WEIGHT
GA-S 3410	030 097 03410	2,65 kg
GA-S 3411	030 097 03411	2,85 kg
GA-S 4210	030 097 04210	3,15 kg
GA-S 4211	030 097 04211	3,40 kg
GA-S 4212	030 097 04212	3,65 kg
GA-S 4810	030 097 04810	3,60 kg
GA-S 4811	030 097 04811	3,90 kg
GA-S 4812	030 097 04812	4,20 kg

HAND-RAIL POST

HAND-RAIL POST w / BASE PLATE

ITEM	ITEM NO	WEIGHT
GA-S 8010	030 097 08010	3,70 kg
GA-S 8011	030 097 08011	4,00 kg
GA-S 8012	030 097 08012	4,25 kg
GA-D 42 10	030 097 14210	4,00 kg
GA-D 42 11	030 097 14211	4,25 kg
GA-D 42 12	030 097 14212	4,50 kg
GA-D 48 10	030 097 14810	4,45 kg
GA-D 48 11	030 097 14811	4,70 kg
GA-D 48 12	030 097 14812	5,00 kg

HT-P TYPE HAND-RAIL POST BASE HD.

HT-P TYPE HAND-RAIL POST BASE STD.

ITEM	ITEM NO	WEIGHT
GE-S 42 00	030 097 20142	4,55 kg
GE-S 48 00	030 097 20148	4,65 kg
GE-S 42 00	030 097 20042	1,90 kg
GE-S 48 00	030 097 20048	2,00 kg

SAFETY NET CANTILEVER

ITEM	ITEM NO	WEIGHT
GB-A 300	030 097 24330	51,10 kg
GB-A 600	030 097 24360	75,80 kg

BASE SUPPORT

ITEM	ITEM NO	WEIGHT
GB-B	030 097 02430	9,50 kg

ATTACHMENT TUBE

ITEM	ITEM NO	WEIGHT
BR-U	002 112 06036	4,55 kg / mt

COUPLER

ITEM	ITEM NO	WEIGHT
BK-D 15 15 D	004 121 01515	1,05 kg
BK-D 15 15 S	004 121 01516	1,05 kg
BK-S 15 20 D	004 120 01520	1,15 kg
BK-S 15 20 S	004 120 01521	1,15 kg
BK-S 20 20 D	004 120 02020	1,20 kg
BK-S 20 20 S	004 120 02021	1,20 kg

PIN

"R" PIN

ITEM	ITEM NO	WEIGHT
PI-M 1610	004 131 00230	0,18 kg
GP-R	004 131 00250	0,003 kg

SITE PERIPHERAL PANELS UPON REQUEST

ITEM	ITEM NO	WEIGHT
GA-P	030 097 29010	17,50 kg
GP-P	030 097 29015	42,00 kg

Pipe-Rack Scaffolding (Industrial)

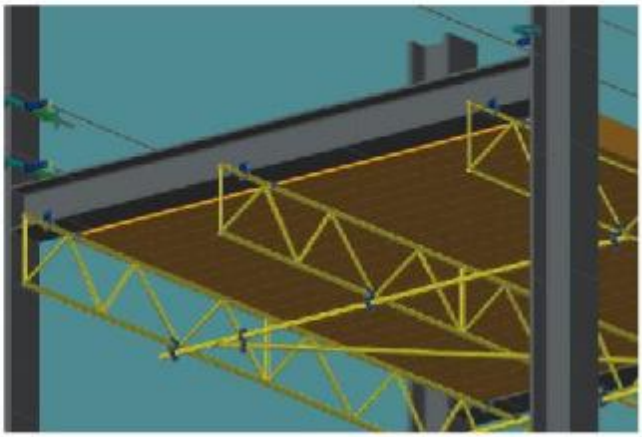
Multi-level suspended scaffolding at Pipe work at suspended platforms. Pipe-Rack structures.

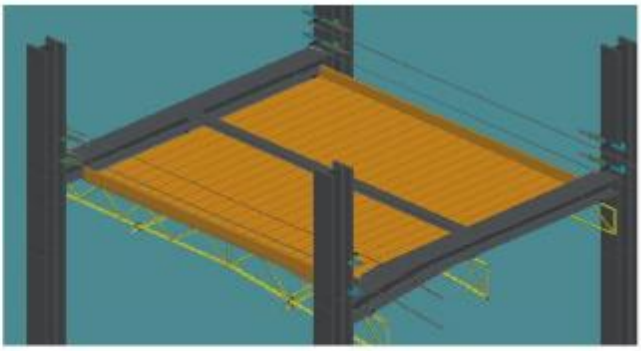
Pipe work at suspended platforms.

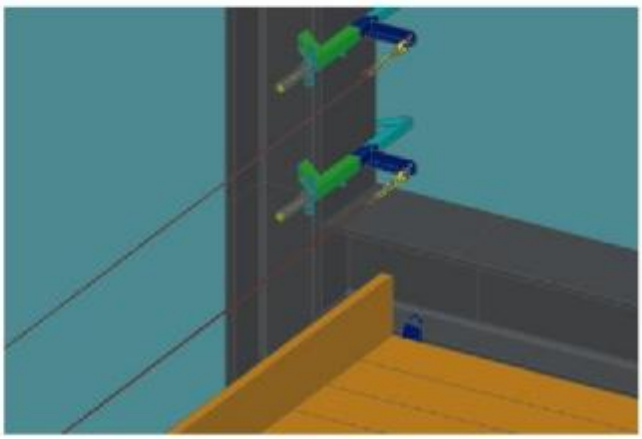
Industrial scaffolding and access applications are being designed according to case-specific requirements.

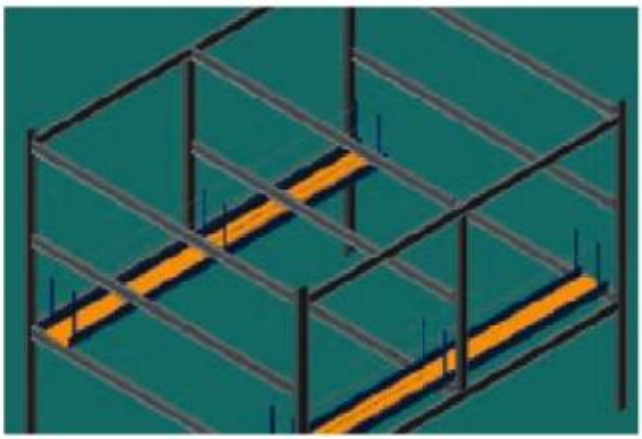
Stair towers provide a safe access with their stable platform and anti-slip stairs.

Pipe-Rack Scaffolding (Industrial)









Pipe-Rack Scaffolding (Industrial)

Swivel Coupler
(Forged)

Right Angle Coupler

Unit Beams & Scaff Tubes

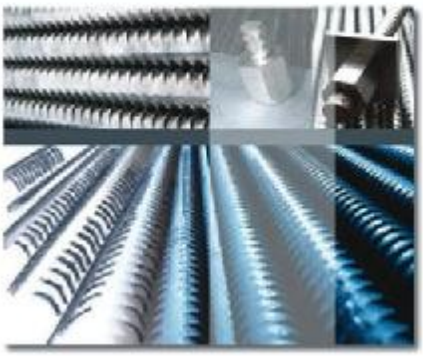
Grav-Lock Coupler

Safety Wire Holder

Having more than 35 years of experience in formwork and scaffolding business, TMS provides intelligent system solutions, creative ideas with convincing details and highly efficient products. Our industrial scaffolding solutions assure competitive measures, hence success to our clients. You can count on TMS as a reliable partner even for your most complicated scaffolding problems, while still keeping the systems as simple and economical as possible. Bearing ISO 9001:2008 in design and production and providing certified materials and equipment, we can guarantee the reliable safety for your specific jobs.

Pipe-Rack suspended scaffolding is one of the scopes where we excell in safe and reliable, yet economical systems solutions. Tube & Coupler solutions according to BS 5973 or equivalent with EN74 Class A or B couplers are as simple as it gets. You can also choose from the variety of more productive and systemized standard production items for Scaffolding, Stair Towers, Mobile Platforms, Fall Protection and Safety items.

TIE-ROD



ITEM	ITEM NO	WEIGHT
TR-D Ø17x1000	004 017 03100	1,44 kg
TR-D Ø17x1500	004 017 03150	2,16 kg
TR-O Ø 17x1000	004 017 01100	1,46 kg
TR-O Ø17X1500	004 017 01150	2,19 kg
TR-O Ø17X2000	004 017 01200	2,92 kg

TIE-ROD NUT

ITEM	ITEM NO	WEIGHT
TR-S Ø17/70	004 117 03007	0,47 kg
TR-S Ø17/90	004 117 02009	0,51 kg

WATER STOP

ITEM	ITEM NO	WEIGHT
ST-B	004 030 00080	0,39 kg

WATER STOP FLANGE TYPE

ITEM	ITEM NO	WEIGHT
ST-F	004 030 00070	0,50 kg

HOOK DOWEL

DOWEL

DROP IN ANCHOR

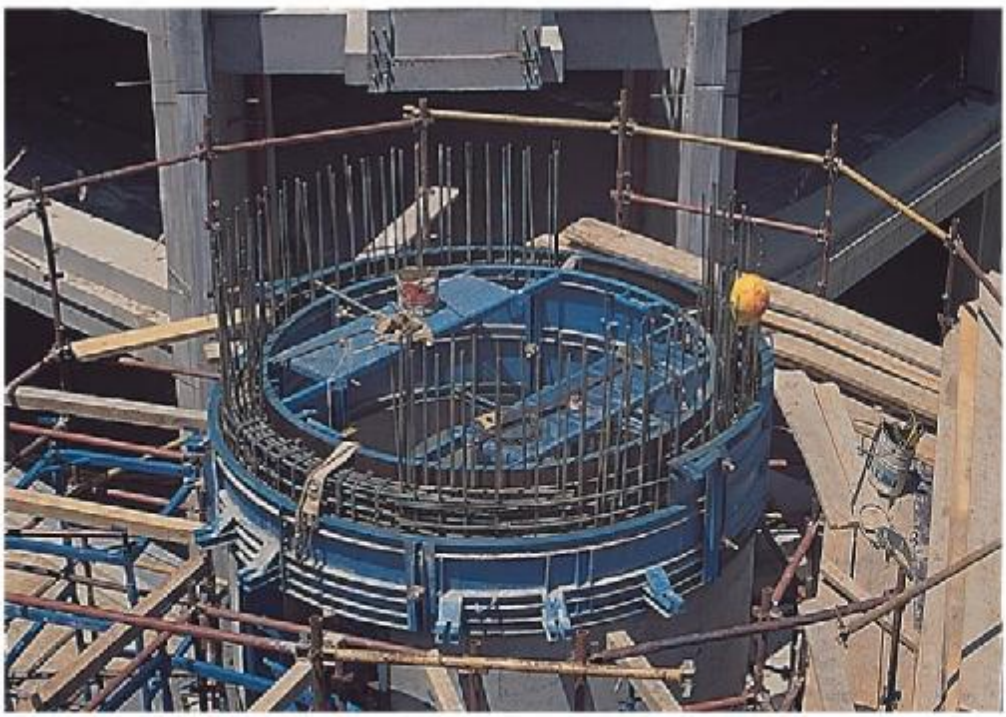
ITEM	ITEM NO	WEIGHT
CE-D Ø16	004 107 60316	0,21 kg
CA-D Ø16	004 107 60416	0,17 kg

JUST EXPRESS YOUR NEEDS, WE WILL BE THERE WITH OUR FORMWORK ENGINEERING TEAM TO SUPPORT YOU

Concreting extra ordinary structures, challenging buildings, architectural imaginations, they can only come true if you have the right formwork for them. Free up your imaginations, don't worry we will be there to form them.

ÖZEL KALIPLAR
İHTİYAÇLARINIZA ÖZEL TASARLANMIŞ KALIPLAR

Sıra dışı yapılar,iddialı binalar,zorlayıcı mimariler;ancak mühendisliği çözülmüş doğru kalıplarla hayat bulabilir.İster endüstriyel bir projenin karmaşık detaylar içeren teknik yapısı olsun,isterse sıra dışı mimari çizgileri olan bir bina projesi, tasarım grubumuz sizlere en iyi ve en ekonomik çözümleri bulmak için hazırdır.



Precast Concrete Cabinet Decking Formwork

Column / Pier Head Formwork

Socket foundation formwork for precast column application

Hydraulic Climbing Formwork for cooling towers

Column head forms eases out the slab formwork application arounds the columns. Where the thin slabs require punching shear reinforcement heads.

Battery form for precast concrete piles.

Precast peripheral wall formwork for self compacting concrete.

PRECAST FORMS

SIZE AND SHAPE DOES NOT MATTER

Even if it is a large span pre-stressed bridge beam or a complicated radial stair, any size or any architecturally challenging structure is possible with our pre-cast forms. All projects will be custom tailored for project requirements, client needs, and A tie-less precast formwork optimized for frequent uses and varying application, while the hole dimensions etc.

PREKAST KALIPLARI BOYUT VE ŞEKİL SINIRLAMASI OLMAKSIZIN HEMEN HER PREKAST ELEMANI ÜRETEBİLECEK KALIPLARDIR

Büyük açıklıklı öngerdirmeli köprü kirişleri ve büyük ebatlı kutu menfezlerden başlayarak, karmaşık yapılı döner merdivenlere, hassas tekstürlü dekoratif elemanlara kadar her prekast eleman kullanım kolaylığı dikkate alınarak, yüksek tekrar sayılarına dayanabilecek şekilde tamamen sizlerin ihtiyaçlarına göre tasarlanıp üretilmektedir. Proje gereklerine göre değişen tip ve ebatlarda hesaba katılarak mevcut kalıpların en optimum şekilde kullanımı dizayn kriterlerimizin başında gelmektedir.

Precast Box-Culvert Forms
Rabigh, SAUDI ARABIA,
TEKFEN

A tie-less precast formwork application, while the whole system has been designed for single sided concrete pressures.

Precast Concrete Container
for Electrical applications
ELİMSAN

Prestressed
concrete beam
Formwork

Precast Forms

Precast Concrete Panel Forms
LIBIA - STFA

Box Culvert

EITHER TO BE A HIGHWAY UNDERPASS OR AN INJECTION TUNNEL FOR A DAM PROJECT,BOX CULVERT FORMS ARE BEING WIDELY USED IN TODAYS INFRASTRUCTURAL CONSTRUCTIONS

Depending on the project requirements, type of usage, repetitive cycles, and variations in dimensions etc. the formwork designs may change, but in every case the target is to reach fast and economical concreting, since such structures play a critical role in following phases of the project in general. The facing material can either be plywood or steel, and even the formwork can be for in-situ usage or pre-cast concreting.

Derivation Tunnel Formwork

KUTU MENFEZ KALIPLARI OTOYOL MENFEZLERİNDEN BARAJ ENJEKSİYON TÜNELLERİNE KADAR ÇOK FARKLI BOYUT VE KESİTLERDE KUTU MENFEZLER İÇİN KALIPLAR

Proje şartlarına bağlı olarak, kullanım şekli, tekrar sayıları, değişen kesit ve boyutlar, tekli veya çoklu döküm ihtiyaçları gibi faktörler dikkate alınarak, kalıp tipi, yüzey malzemesi, mekanik veya hidrolik deplasman unsurları, işi hızlandırıcı erken söküm olanakları tasarım aşamasında çözülmektedir. Her durumda amacımız, projenin ileri fazlarını etkileyen altyapı elemanlarının olabildiğince hızlı, sorunsuz ve ekonomik olarak imalatını sağlamaktır.

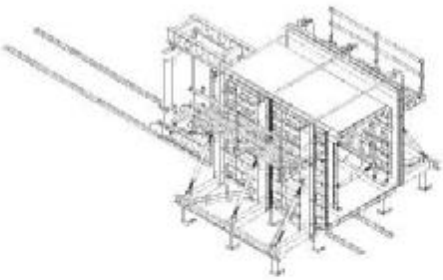
Injection Tunnel Formwork

Custom Box-Culvert formwork by using standard formwork elements, highly adjustable, highly flexible and still re-usable for other forming purposes.

Steel, adjustable box-culvert forms

Hamzali HES box-culverts
MNG - MAPA

Drainage box-culvert at ALGERIA

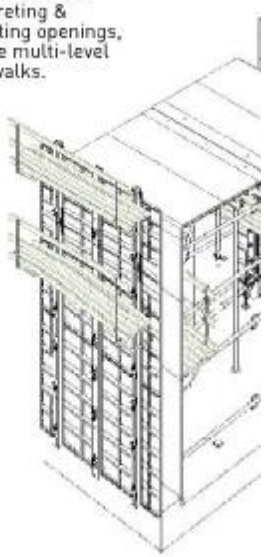


Precast Box-Culvert Formwork with movable inner formwork carrier.

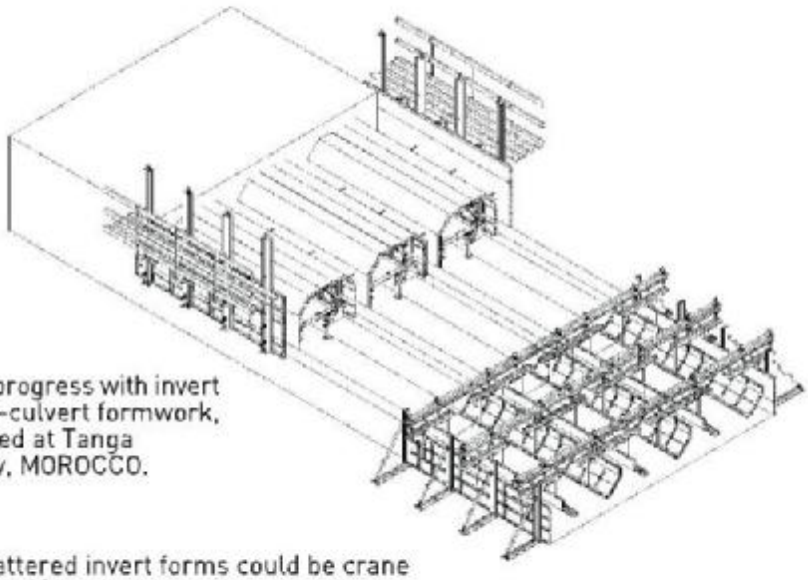
Box Culvert

Invert formwork being pre-checked at TMS workshop

Large-size box-culvert application with multi-level concreting & vibrating openings, hence multi-level cat-walks.

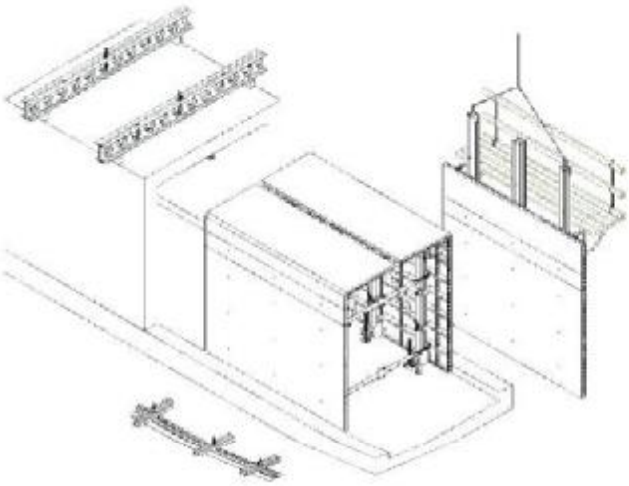


Invert formwork speeds-up the box-culvert production and improves the final precision and quality, especially with the built-in features like water-stop holders, alignment & leveling adjustment etc.

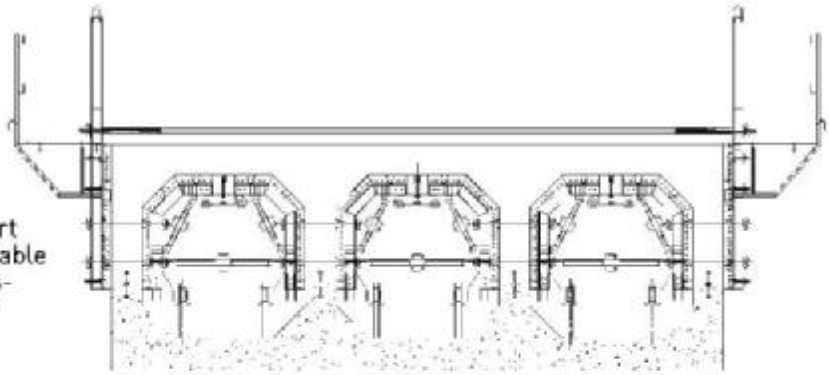


Typical progress with invert and box-culvert formwork, as applied at Tanga Highway, MOROCCO.

Battered invert forms could be crane lifted in groups.



Typical re-shoring application without interfering the progress of the box-culvert formwork.



Battered box-culvert application with variable inner & outer cross-section, quantity of lanes etc.

WISA®-FORM ELEPHANT

WISA®-FORM ELEPHANT

WISA-Form Elephant is a WPC coated special plywood for use in formwork systems where high requirements are set on the concrete surface and the number of reuses.

Base board
Birch plywood made solely from birch (hardwood) veneers bonded together in a special construction.

Bonding
Phenolic resin cross-bonded weather resistant glueing according to EN 314-2/ class 3.

Surface and edges
Face: 1,6 mm light grey special plastic coating.
Reverse: Dark brown phenolicfilm 220 g/m² moisture barrier (customer logofilm possible).
Optional: Special plastic coating on both sides.
Special edge sealing.

Thicknesses

Nominal thickness (mm)	Number of plies	Min. thickness (mm)	Max. thickness (mm)	Weight (kg/m²) (MC 10%)
18	11	17.1	18.1	13.7
21	13	19.0	20.9	15.6

Panel size
Maximum size: 1525 x 3660 mm. Sizes at customer's request.

Reuses
Typical number of reuses is likely to be in the range of >100 times. However, this will vary according to many different factors including good site practice, required concrete finish, amount of care taken when compacting the concrete, handling and storage of the forms, type and quality of release agent.

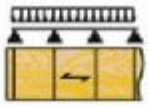
Design data

Mechanical properties of WISA-Form Elephant, in standard thicknesses, special construction, moisture content 10 ± 2%.

Nominal thickness (mm)	Mean modulus of elasticity bending (N/mm²)		Characteristic strength bending (N/mm²)	
	Em0	Em-	fm0	fm-
18	6838	10 662	27.4	49.4
21	6522	10 978	26.1	49.7

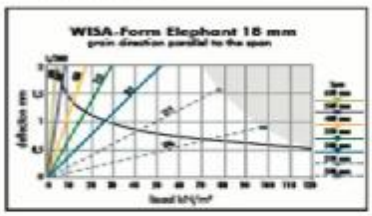
Face grain parallel to the span (I I)

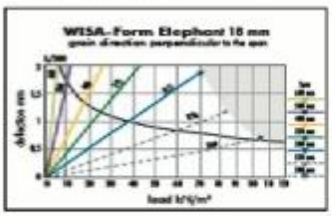
grain direction of surface veneers

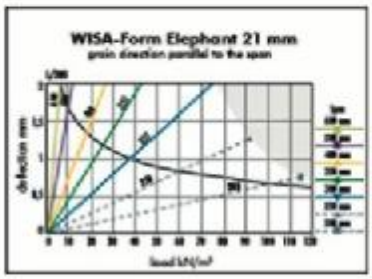


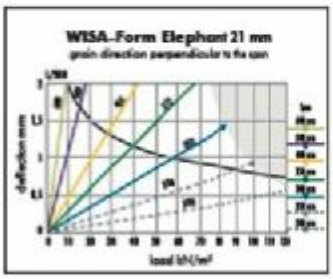
Face grain perpendicular to the span (I –)

grain direction of surface veneers







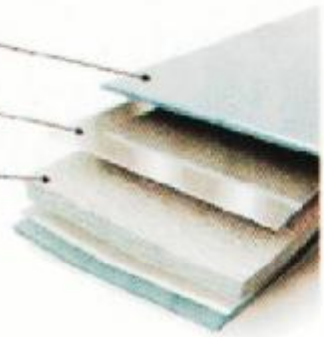


Moisture content 27 %, short term loading
Partial safety factor for the material is 1.3. Partial safety factor for the loads is 1.2.
Deflection limit L/300 of the span
Support width is not taken into account in calculations

Instructions for use
See "Site guidance note for WISA-Form plywood" available from UPM.

laminaex - The High End Forming Panel

- **Assembling:**
  - Thermoplastic coating
  - Aluminium or glass-fiber
  - Foamed thermoplastic core



- Endless production process

Properties of laminaex

Durable

- *> 1000 uses*
- *Cost-effective*
- *Constant rigidity*
- *Constant concrete surface and less reworking*

Properties of laminaex

Resistant

- *No water absorption*
- *No swelling*
- *Constant panel thickness*
- *Chemical resistant*
- *Resistant to weather and climate*
- *Resisitant against microorganisms*

Properties of laminaX

Easy

- *Nailing, Sawing, Screwing,*
- *Less demand on seperating agents*
- *High pressure cleaning – up to 500 bar*
- *Durable repair*

Properties of laminaX

Clean

- *Environmental friendly handling - less seperating agent!*
  → high quality concrete surface
- *Environmental friendly cleaning*
- *100 % Recycling ability*

laminaX Types

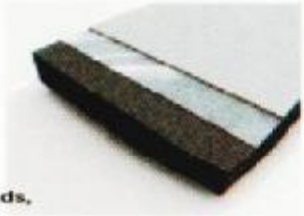
- **Laminaex GM PP**
  Polypropylene foam with fibreglass layers and PP-coating

- Thickness: 6 – 12,5 mm
- Width: 1200, 800 mm
- Length: up to 4000 mm

- **Formwork for slab, circular formwork, boundary plates on playgrounds**

*lamina*X Types

- **Laminaex AL PP**
  Polypropylene foam with aluminium and PP-coating



- Thickness: 13 - 23 mm
- Width: 920 mm, 1260 mm, 1370 mm
- Legth: up to 4000 mm

- **Wall formworks – for high concrete loads, Circular wall fromwork**

Benefits of *lamina*X for construction

- **→ Because of its durability Laminaex is particularly suitable for rental parks**

- Extended durability
- Easy cleaning
- Can be worked like a wooden plate
- Easy and durable repair
- Resistant against microorganisms

- > 1000 uses !!
- high-pressure cleaning - up to 500 bar
- no targets for new damages

Benefits of *lamina*X for construction

→ Because of ist physical and chemical characteristics LaminaeX is appropriate to fair faced concrete

- Constant high quality surface
- Constant grooves
- Constant rigidity
- Les use of seperating agent
- Easy cleaning

- Less reworking on concrete surface
- constant thickness of the panel
- less seperating agent – better concrete surface
- high productivity

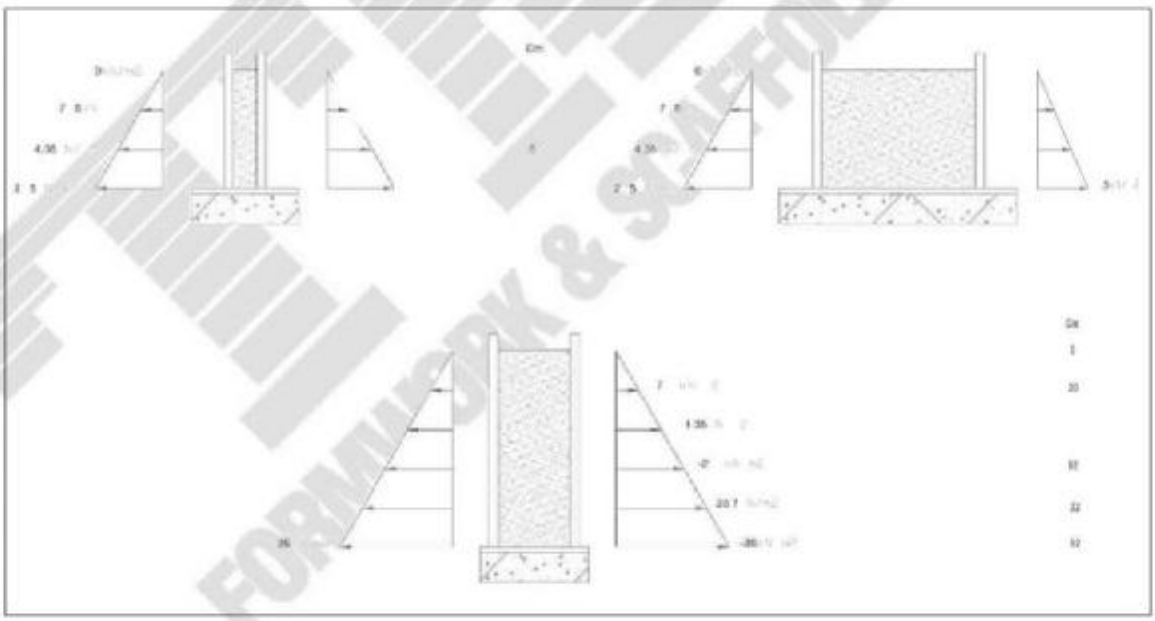
UNDERSTANDING CONCRETE PRESSURES AND LOADS ON FORMWORK

Designing and building formwork effectively requires a basic understanding of how concrete behaves as it exerts pressure on formwork.

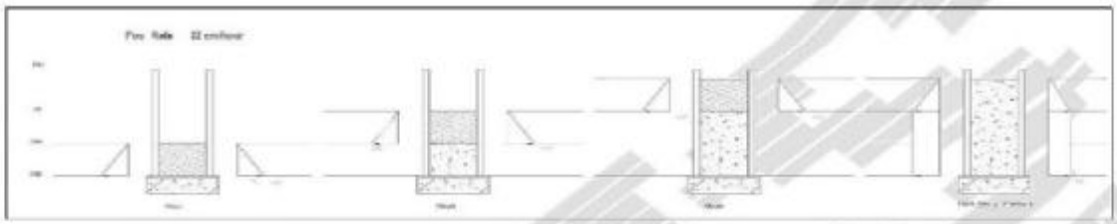
Lateral concrete pressure is affected by:

1) **Height of poor**
2) **Pour rate**
3) **Weight of concrete**
4) **Temperature**
5) **Type of cement**
6) **Vibration**
7) **Concrete slump (water – cement ratio)**
8) **Chemical additives.**

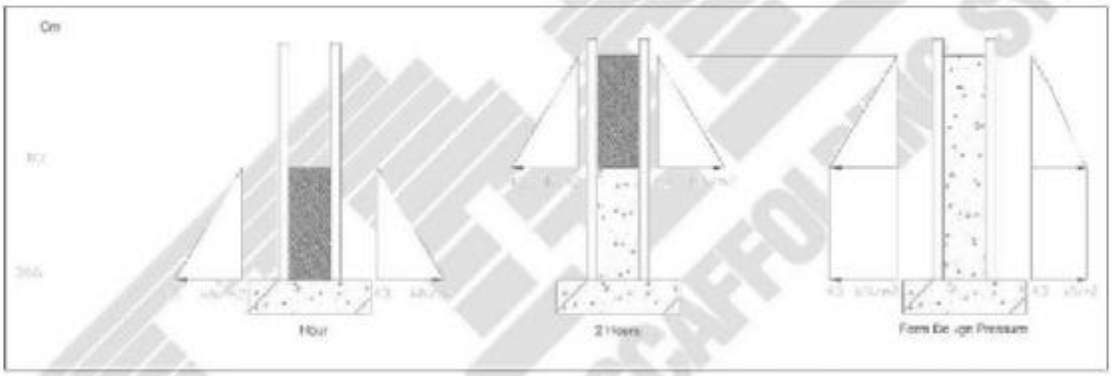
1) Height of poor: Before concrete hardens, it acts like a liquid and pushes against the forms the way water presses against the walls of a storage tank. The amount of pressure at any point on the form is directly determined by the height and weight of concrete above it. **Pressure is not affected by the thickness of the wall.**



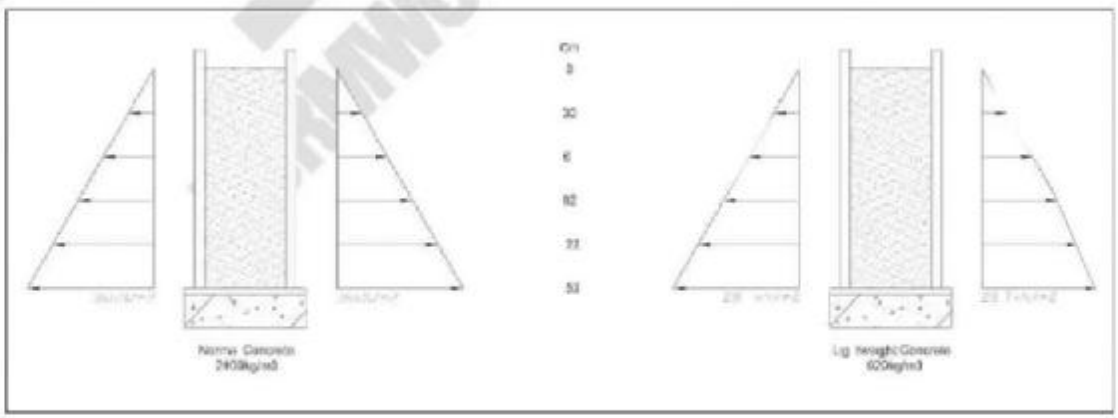
2) Pour rate: Concrete pressure at any point on the form is directly proportional to the height of liquid concrete above it. If concrete begins to harden before the pour is complete, the full liquid head will not develop and the pressure against the forms will be less than if the pour were completed before any of concrete hardened. Once concrete hardens it cannot exert more pressure on the forms even though liquid concrete continues to be placed above it. The following diagrams for a 365 cm wall illustrate how form pressure varies when the pour rate is increased from 122 cm to 183 cm. For ease of explanation, it is assumed that concrete hardens in one hour (typically) at 21°C. This will cause the form pressures shown on these diagrams to differ slightly from ACI recommended pressures.



When the pour rate is increased to 183 cm/hour the pressure also increases.



3) Weight of Concrete: Pressure exerted against the forms is directly proportional to the unit weight of concrete. Light weight concrete will exert less pressure than normal weight concrete.



4) Temperature: The time it takes concrete to harden is influenced greatly by its temperature. The higher the temperature of the concrete, the quicker it will harden. Most formwork designs are based on an assumed average air and concrete temperature of 21°C. At low air temperatures, the hardening of concrete is delayed and you need to decrease your pour rate or heat your concrete to keep the pressure against the formwork from increasing. Ideally, concrete should be poured at temperatures between 16°C and 38°C. Outside this temperature range there is often insufficient moisture available for curing. If adequate water for curing is not available or freezes, the strength of the concrete will suffer.

5) Type of Cement: The cement type will influence the rate at which concrete hardens. A high early strength concrete will harden faster than normal concrete and will allow a faster pour rate. When using a cement which alters the normal set and hardening time, be sure to adjust the pour rate accordingly.

6) Vibration: Internal vibration consolidates concrete and causes it to behave like the pure liquid previously discussed. If concrete is not vibrated , it will exert less pressure on the forms. ACI recommended formulas for form pressures may be reduced 10% if the concrete is spaded rather than internally vibrated. Re-vibration and external vibration result in higher form loads than internal vibration. These types of vibration require specially designed forms.

7) Concrete Slump: When concrete has very low slump, it acts less like a liquid and will transmit less pressure. ACI formulas for form pressure are based on a slump of 4" or less.
When using concrete with a slump greater than 4", the formwork should be designed to resist full liquid head.

8) Chemical additives: When using chemical additives – i.e. retarders, plasticizers, etc. – make sure to refer to the vendors application data.

ACI FORM PRESSURE FORMULAS

ACI recommended working formulas take into account the variables mentioned above and recognize that concrete does not act exactly like the pure liquid form described. They are based on experimental data and are believed practical. The tables shown in the form design section of this catalog are based on these formulas.

WALLS

$p = 150 + \frac{9000R}{T_F}$ for R not exceeding 7 ft./hr.

$p = 150 + \frac{43,400}{T_F} + \frac{2800R}{T_F}$ for R at 7 to 10 ft./hr.

When R is less than 10 ft./hr., the form pressure "p" should not exceed 150h or 2000 psf, whichever is less.

p = 150h for R greater than 10 ft./hr.

COLUMNS

$p = 150 + \frac{9000R}{T_F}$

Maximum of 3000 psf or 150h, whichever is less.

p = Form Pressure
R = Pour Rate (ft./hr.)
T_F = Concrete Temperature in Forms (°F)
h = Height of pour (feet)

METRIC (SI UNITS)

WALLS

$P_s = 7.2 + \frac{786R_M}{T_C+17.8}$ for R_M less than 2m/hr.

$P_s = 7.2 + \frac{1156}{T_C+17.8} + \frac{244R_M}{T_C+17.8}$ for R_M from 2 to 3 m/hr.

In either case P_s should not exceed 95.8 kPa or 23.5 h_M whichever is less.

$p_M = 23.5\,h_M$ R_M greater than 3 m/hr.

COLUMNS

$P_s = 7.2 + \frac{786R_M}{T_C + 17.8}$ maximum of 144kPa or 23.5h_M whichever is less.

where P_s = Form Pressure (kPa)
R_M = Pour Rate (m/hr)
T_C = Concrete Temperature in Forms (°C)
h_M = Height of pour (m)

CONCRETE PRESSURES ACCORDING TO DIN 18218

For calculating concrete pressure

$$P_{max} = G.C_2 . K_T (0{,}48 . V + 0{,}74) \text{ in } (kN/m^2)$$

or

For calculating rate of placing

$$V_{perm} = \frac{2{,}08.p}{G.C_2.K_T} - 1{,}54 \text{ in } (m/h)$$

Cross-section coefficient
not taken into account

Additive coefficient
$C_2 = 0{,}065.T_V + 1$
(T_V = retarder in h)

Temperature coefficient
$K_T = \frac{145-3.T}{100}$
(T = concrete temperature)

Range of validity

- Consistency K2/K3
- $5^0C \leq T \leq 30^0C$
- for $C_2 > 1{,}0$: $K_T \geq 1{,}0$

(i.e. no reduction of concrete pressure when using concrete additives and in the case of concrete temperatures of more than + 15^0C)

- $P_{max} \leq 80kN/m^2$ for walls
- $P_{max} \leq 100kN/m^2$ for columns
- Independent of concreting height H

CONCRETE PRESSURES ACCORDING TO CIRIA*-REPORT 108

For calculating concrete pressure

$$P_{max} = G\,(C1\sqrt{V} + C_2.\,K_T\sqrt{H - C_1\sqrt{V}} \qquad \text{in}(kN/m^2)$$

or

$$P_{max} = G.H \text{ (the smaller value is decisive)} \qquad \text{in}(kN/m^2)$$

For calculating the rate of placing

$$V_{perm} = \left(\frac{2\frac{P}{G} - C_2^2K_2^2 - C_2.K_T\sqrt{C_2^2K_2^2 + 4(H - \frac{P}{G})}}{2.C_1} \right)$$

Cross-section coefficient

$C_1 =$ 1,0 for walls

1,5 for columns
(Cross-section designated
as columns if both edge lengths
are smaller than 2,0m)

Additive coefficient

$C_2 =$ 0,30 for normal concrete

0,45 for concrete with retarder

Temperature coefficient

$$K_T = \frac{36}{T+16}$$

Range of validity

- independent of consistency
- $5^0C \leq T \leq 30^0C$
- no limit for reduction of concrete pressure when using additives and in the case of concrete temperatures of more than + 15^0C
- $P_{max} \leq 90kN/m^2$ for walls
- $P_{max} \leq 166kN/m^2$ for columns
- Dependent on concreting height H

* **CIRIA :** Construction Industry Research and Information Association

NOTES on Formulas and Parameters ;

Comparison of formulas for the calculation of the max. concrete pressure
The different formulas for the design of concrete pressures of DIN and CIRIA can be easily compared by choosing an identical set of variables.

Cross-section coefficient C_1
For small ground-plan cross-sections the vibrator can exert a relatively high force on the formwork. The effective depth of the vibrator increases the vibration of the formwork with the result that the concrete pressure also increases. In addition to this the pouring and vibration zones are usually at the same point thus increasing the liquid head and consequently the pressure. The CIRIA Report 108 distinguishes between the cross-section of columns and walls.

Additive coefficient C_2
The formulas cover all standard types of concrete up to an aggregate size of 40mm. The concrete pressure increases with the use of additives, e.g. retarders and plasticizers. The measurement of CIRIA on different sites have shown that the consistency of the concrete does not influence the concrete pressure considerably. Where extremely low slump concrete is specified the added vibration needed to ensure reinforcement, encasement and concrete compaction also results in increased concrete pressure. The DIN standards taken this variation into account. The additive coefficient takes into account pressure increases resulting from the use of retarders.

Temperature coefficient KT (°C)
Concrete pressure is directly related to temperature and must always be considered. This factor examines the rigidity of concrete at different temperatures. In Europe concreting temperatures are generally between +5°C and + 30°C, but still most pressure tables are based on an average concrete temperature of + 15°C.

Specific weight G(kN/m³)
The specific weight of normal concrete is generally accepted as $25kN/m^3$. This value is based on the design tables. Light-weight or heavy concrete varies according to the individual specific design. For concreting below water the following is valid; $G = 25 - 9,81 = 15kN/m^3$.

Vertical concreting height H (m)
According to CIRIA and our own experience the concreting height is one of the most important factors. The DIN standard does not take into account this factor resulting in an underestimation of concrete pressures.

Rate of placing V(m/h)
The rate of placing is perhaps the most important factor relating to concrete pressure. The rate of placing is defined as the vertical rise of concrete within the formwork per hour. Lengthy pauses between layers of concrete must be avoided as CIRIA has stated (in contrast to DIN) that the relation between rate of placing and the obtained concrete pressure is not linear.

Excluded factors
The permeability of the form-facing was ignored as after only a few uses the reduction of the pore pressure of permeable form-facing is negligible. The roughness of the formwork is unimportant providing the concrete has not stiffened and is acting as a liquid. The concrete should be poured from a relatively low height to avoid locally increased concrete pressures due to shock from falling liquid concrete. The formulas are based on compaction with standard internal vibrators and not with external vibrators which cause a further increase in concrete pressure due to the vibration of the formwork. Too much vibration modifies the curve of concrete pressure considerably.

TMS' s Word About Safety

High productivity depends on safety; an accident, no matter how minor, causes job delays and inefficiency, running up costs.
That's why TMS, in the design of its systems and products, makes, as one of its primary concerns, the safety of those people who will be working with and near the equipment. Every product is designed with safety in mind, and is subjected to testing to be certain that it will perform as intended with appropriate safety allowances. Factory-built systems, such as these, provide predictable strengths, thereby minimizing the uncertainty that often surrounds "handmade", "job-shop" and "job-built" equipment.

As a result, when used properly, TMS products are your best assurance of a safe operation. To insure proper use, we have published product application guides. We recommend that all construction personnel who will be involved, directly or indirectly, with the use of this product, be familiar with the contents of this guide.

As a concerned participant in the construction industry, TMS Corporation also recommends that regular safety meetings be held, prior to starting the forming operation, and regularly throughout the concrete placement and form stripping and erection operations.
TMS personnel will be happy to assist in these meetings, with discussions of safe use of the equipment, and other formal safety information.

In addition to the above meetings, all persons involved with the construction should be familiar and in compliance, with the applicable government regulations, codes and ordinances, as well as the industry safety standards developed and published.

Since field conditions vary, and are beyond the knowledge and control of TMS, safe and proper use of this product is, and must be, the responsibility of the user.

Job Safety Analysis and Method Statements

Job safety analyses detail the sequence of work, the equipment to be used at each stage, the hazards to be controlled, the precautions to be taken and the responsibilities of persons involved.

Job safety analyses are a basis for and form part of the method statements for the work. They shall be communicated to everyone involved in the activity at the kick-off meeting, and they shall be used to supervise and monitor the work itself.

Changes or problems which occur during the work itself should be continuously assessed by the work supervisor and work teams, e.g. by applying the Three Whats;

~ What can go wrong ?
~ What can cause it to go wrong ?
~ What can be done to prevent it going wrong

Ladders and movable platforms

Ladders higher than 2,5m will have surrounding cages. In case of hatchway covering is not available, ladders will protrude min. 1m to the upper decking.
All ladders shall be properly maintained.
They shall be inspected before use and any observed defect remedied at once. Ladders which are found in an unsafe condition shall immediately be destroyed.
Movable work platforms used in construction include Rolling Towers, Lift Platforms, Cradles and Man Baskets. They shall be maintained to industry standards. They shall only be operated by competent qualified operators.

Scaffolds

The Contractor shall manage the safe erection, inspection and use of scaffolds, in line with the provided method statements and application guides.

He shall appoint a scaffolding supervisor to ensure materials are to the correct standard, that subcontractor scaffolding personnel are competent, to inspect scaffolds on-site and to monitor implementation of the system.

The Contractor shall also ensure that rolling and tower scaffolds are well controlled. In particular scaffolds with a height greater than three times the minimum base dimension shall be braced with outriggers or tied off while being used. Castor brakes shall be locked when not in motion and towers shall be free of men, material and equipment before being moved.

Only authorised scaffolders shall erect all scaffolds. Unauthorised modification of scaffolds, removal of bracing - toe boards and similar from scaffolds are prohibited.
Scaffolding materials (poles / planks / clamps / etc.) shall be inspected before and after use and any observed defect remedied at once. Any material in an unsafe condition shall be destroyed immediately.

Fall protection

Falls from height are the most common fatal accidents in construction. The risk of falls can be reduced by careful planning of work at height, including provision of safe access and fall protection.

All work areas, walkways and platforms which are more than 1 metre above ground level or the platform below will be provided with solid guard rails –i.e 5x10 timber or dia 48mm tubes-both upper and intermediate. In most cases a toe-board would be delivered with the system.

When working outside complete platforms a safety harness and lanyard shall be worn and clipped on. Safety belts are insufficient as falls can cause abdominal injuries.

This applies to scaffolders formwork team, and steel erectors in particular.

The Contractor shall set up a procedure to control the modification of scaffolds and the removal of grating from staircases and platforms

Guard rails, platforms and barricades

Signs and barricades shall be provided to protect all workers and the public from injury.

All work areas, walkways, platforms, etc. elevated 1 m. or more, whether permanent or temporary, are to encompassed by an approved guard-rail (with upper + intermediate rail + toe board) securely fastened and are to provide safe, sturdy surfaces maintaining to approved load.

Floor openings shall be temporarily securely covered rather than identified by guard rails or ropes/wires. With steel deckings –i.e. scaffold steel deckings, gratings etc.- a hatchway cover will come as part of the systems.

Special attention is required to the temporary removal and subsequent installation of permanent ladders, grating and handrails.

False work

False work is any temporary structure used to support a permanent structure during its erection. A qualified engineer shall be nominated who co-ordinates all major temporary work schemes. Design briefs including material inspection, foundation and erection checklists shall be arranged.

Work on or over water

Life jackets or buoyancy aids, as detailed below, shall be worn for all work on, over or near water where there is a significant risk of a fall into water.

. For work on complete platforms a buoyancy aid shall be worn

. For construction of platforms or work on incomplete platforms over water, an inherently buoyant or self-inflating life jacket shall be worn

. Life jackets shall be designed to turn and support a floating unconscious wearer face-up.

Lifting operations

Crane operation, banking, slinging and signalling shall be performed by competent persons, who have been assessed and authorised by the Contractor. Crane banksmen, riggers and signallers shall wear distinctively coloured safety helmets or clothing.

Lifting gear

Lifting gear consists of wire or webbing slings, chains, lifting lugs, shackles etc.

The Contractor shall set up a procedure for inspecting all lifting gear when it is brought onto site and periodically afterwards. It shall include identification of each item with its safe working load, colour coding and maintaining records of inspections.