



**MÄCH**  
**DECK**



**TECHNOCRAFT GROUP**

A Quality Product by  
Technocraft Industries India Ltd.

**MODULAR DROP HEAD  
DECKING SYSTEM**

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## ABOUT US

Technocraft is a multi-product multinational group, which was established in 1972 by a group of technologists with the aim of manufacturing high precision and sophisticated products, mainly for discerning worldwide markets.

Technocraft enjoys a significant position in five main business industries viz., Formworks & Scaffolding systems, Drum Closures, Pipes & Tubes, Engineering Services and Cotton Yarn. Several products in Software and Information Technology have been added recently.

We are an ISO 9001:2000 certificate company having our head office in Mumbai (India) & overseas offices & Warehouses in Manchester (U.K.), Lodz (Poland) & Budapest (Hungary); Chicago (U.S.A.), New Orleans (U.S.A.) and China.

Technocraft is now a government recognized Foreign Trading House.

## Our Set Up:





The Technocraft family consist of more than 3000 skilled workmen, technicians and technologists all working towards the common goal of giving the best quality product to our customers, all over the world.

The manufacturing process is continuously upgraded with latest technology to yield higher productivity with improved quality product. Our manufacturing plants are located at five locations near Mumbai, India on a built up area of over 50,000 square meters and in China.

Our Exports:

The company launched a major export drive in 1977. It was recognised as an export house by government of India in 1979. The company won a number of awards for export excellence including the “Best Export Performance” by Prime Minister of India.

# MILESTONES

1972	-	Started manufacturing Drum Closures	
1979	-	Recognized as an Export House	
1980	-	Expanded Drum Closure Capacity	
1993	-	Setup its first Foreign subsidiary in UK	
1994	-	Acquired Maharashtra Steel Tubes Limited – Pipe Division	
1998	-	Setup Subsidiary in Poland	
2000	-	Setup Subsidiary in Hungary	
2000	-	Awarded the National Award for Export Excellence by Ministry of Commerce and Industry, Award Presented by then Prime Minister of India “Shri. Atal Bihari Vajpayee”	
2000	-	Started Technosoft Information Technologies India Limited Engineering Software and Design Services Company.	
2001	-	Awarded Export Excellence Award for all steel products by Engineering Export Promotion Council Maharashtra	
2003	-	Started Garmenting through - Danube Fashions Limited	
2004	-	Awarded 3 Star Export House Certificate	
2005	-	Setup a Subsidiary in Germany	
2006	-	Setup a Subsidiary in Australia	
2007	-	Got listed on the Mumbai Stock Exchange and the National Stock Exchange	
2008	-	Installation of 15MW power plant	
2009	-	Established manufacturing plant in CHINA	
2010	-	Joint Venture with Canadian company for manufacturing building formworks	
2011	-	Design & Manufacturing of custom formwork for Infrastructure Projects and Transmission & Telecom Towers	
2013	-	Acquisition of AA International Trading LLC (AAIT), USA to establish our full scale scaffold distribution in North America	
2015	-	Received start export performer Award from EEPC, India.	
2016	-	Introduce Mäch Brand of Scaffolding & Formwork Products	
2018	-	Introduce Mäch One Monolithic Form work system	



# INTRODUCTION

## Technical Services

Technocraft Industries (I) Ltd. provides services in designing of Formwork and Scaffolding products. This is done in the design department of the company. The design department receives the necessary technical information of the project in order to design the most optimum solution to use scaffolding and formwork system in accordance with the project criterion and the applicable standards.

## Product Range

Technocraft Industries (I) Ltd. has been developing new and innovative products since it started the manufacturing of scaffolding products in 1998. Now it has complete range for the Formwork solution, Scaffold Fittings, Scaffolding Systems and Frames. The Products are of International standard like BS-1139 for the TUBES & FITTINGS and BS 5975 for the FORMWORK & ACCESSORIES.

## Quality Standards

Technocraft Industries (I) Ltd implements BS and ASTM standards in the designing and production of Scaffolding and Formwork systems. Production is strictly controlled within the tolerance of these standards. All products are designed and produced by its personnel, applying the latest production methods with modern machinery. Our Quality Control team, under the supervision of mechanical engineers, is selected from long serving and experienced foreman. All products are checked during each production step and are compared with production drawings and specifications. The company is strictly bound to the concept of ISO 9001:2000 and "Total Quality Management". The application of this management system is maintained and is a part of day to day operations.

## Technical Know How

Technocraft Industries (I) Ltd is working in this field since 1998 and with our experienced technical team we have the capacity and the know how about the designing of scaffolding & formworks systems. We have in-depth knowledge about castings, Forgings, Press working and Fabrications which allows us to carry the production in the highest professional manner. Knowledge and experience over design and structural calculation work enables Technocraft Industries (I) Ltd. to provide design services to projects for Scaffolding and Formwork.

## Edge of Technocraft over others

The foremost edge we have is our strict compliance with the applicable standards or as per the customer drawings.

## Infrastructure

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Tool room with latest machineries:             <ol style="list-style-type: none"> <li>a. Electronic discharge Machine</li> <li>b. Milling Machine</li> <li>c. Shapers</li> <li>d. Lathe Machines</li> <li>e. Surface Grinders</li> <li>f. Wire Cut Machines</li> <li>g. Drill Machines</li> </ol> </li> <li>2. Mechanical Presses with the capacity of 20 tons to 200 tons</li> <li>3. Welding Machines</li> </ol> | <ol style="list-style-type: none"> <li>4. Bolt forming Headers with Threading and Trimming Machines</li> <li>5. Induction melting Furnace with the capacity of 500kgs / 350 KW of Induct on them</li> <li>6. Drop forging Hammer</li> <li>7. Complete painting unit</li> <li>8. Complete Hot Dip Galvanizing Unit</li> </ol> |
|--|--|

# INTRODUCTION TO MÄCH DECK SYSTEM

## Modular Shoring System

Mäch Deck Shoring System is a high octane, high performance engineered modular panel shoring system. Technocraft offers more erection, stripping and financial satisfaction than can never be expected from conventional shoring systems. It begins with rigid panel construction that enhances handling. The sharply honed Prop with its integrated drop-head puts you in control and helps to ensure confident erection and ease of stripping, while back-propping remains undisturbed. These advantages result in a high rate of production. The Panel and Prop with engineered automatic wind lock provide job safety with a rigid interlocking system that prevents tipping during erection even without bracing. The system is designed to withstand wind loads near hurricane force. The standard Modular Shoring System is a unique system erected from the working floor up to a height of 16'6"/5030. The system can accommodate drop bands, drop heads and it's design allows for all interruptions. This brochure will show you the simplicity of our Shoring System as well as the minimum number of components required for the erection

On a grid of 4'x8'/2400x1200 system can support 14"/355\* of concrete including live load with a safety factor of

On a grid of 6'x4'/1800x1200 system can support 22"/558\* of concrete including live load with safety factor of 3:

On a grid of 4'x4'/1200x1200 system can support 34"/863\* of concrete including live load with a safety factor of

\*Prop rating at a height of 11'6"/3505

This Modular Shoring System is an engineered modular panel shoring system which offers faster erection and stripping time than conventional shoring systems, directly increases financial return.

The rigid construction of the Panel enhances handling and durability. The Prop, with its integrated Drop-head, ensures confident assembly and ease of stripping from the floor below, while backpropping remains undisturbed.

The automatic wind lock design of the Panel and Prop prevents tipping during erection. The Modular Shoring System has resisted gale force wind loads.

The inner rod of the Assembly/Disassembly Tool (ADT) has holes to accept a locking pin for adjustment. The ADT knob is inserted into the hole in the inside strut of the panel. Once the tool is inserted, the panel is rotated (lifted) into the horizontal position and supports the panel until the Prop is installed.



# MÄCH DECK KEY FEATURES

## Slab Decking System – Key Feature

Mäch's Slab Decking System will be very effective for obtaining a 3-4 day slab cycle for a typical project. The shuttering speed clocked till date is approx 300 sq. ft. per man hour and de-shuttering at 600 sq. ft. per man hour. The panels are automatically wind locked during assembly which is very important at heights. The number of components is the lowest as compared to any system which is essential when working at great height

### Some of the key features are:

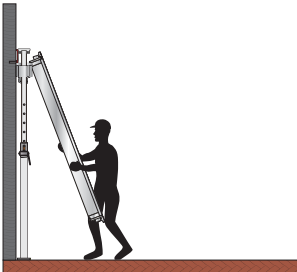
- Modular design. Mäch Deck can be easily expanded and reduced for changing slab heights and areas.
- Mäch Deck is safely erected and stripped from the floor below.
- Mäch Deck's Panels can be removed at 2000 psi or 13 MPa without disturbing props or concrete.
- Mäch Deck's Panels are wind locked automatically during assembly and this is a very important factor when using slab decking in areas prone to high winds.
- Mäch Deck can be erected in any or all of 4 directions simultaneously.
- Mäch Deck requires no "x" bracing.
- The 2 main components, Panel & Prop, automatically interlock against strong wind loads.
- Mäch Deck's heaviest component, 2400 x 1200 panel, can be carried by any 2 men.
- Mäch Deck is ACI, OSHA, NSI, SSFI, ANSI, and BSI compliant.
- Mäch Deck can erect any type of building or parking garage.
- Mäch Deck's Telescopic, Side, and End Filler Beams make shoring around columns and other interruptions easy, efficient, and cost-effective
- Mäch Deck's components are not welded.
- Mäch Deck's Components are sturdy and durable for ease of handling and longevit



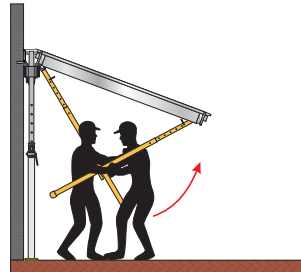
# HOW IT WORKS

## Safe, Fast, Efficient

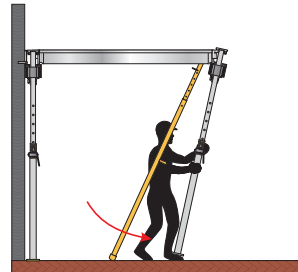
Below are the three simple steps\* to erect the our Modular Shoring System from the safety of working floor.



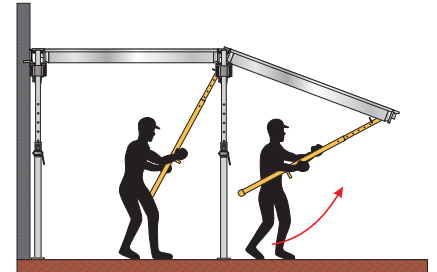
**Step 1**  
The Panel is hung on to the Prop.



**Step 2**  
The Panel is rotated (lifted) to the horizontal position and supported with the ADT.



**Step 3**  
Next the Prop is slipped into position, locking into and supporting the Panel.



Erection continues by repeating steps 1, 2, and 3.



Mäch Deck Shoring System is unique system erected from the working floor up to a height of 4050mm . With Prop Extension the system can be erected up to a height of 5050mm. For higher floors see the Pioneer System on page 10. The Shoring can accommodate drop bands, drop heads and its design allows for all interruptions.

The Prop with its integrated Drop-head ensures ease of erection and stripping, while back propping remains undisturbed. Our Prop is available 4050mm. In addition, there is a Prop Extension which, when coupled with a Prop, allows for additional height of 5050 mm.

The Panel features Fasteners which allows for the KD (knocked down) option for container shipping overseas. This also makes it a snap for qualified personnel to replace damaged components.

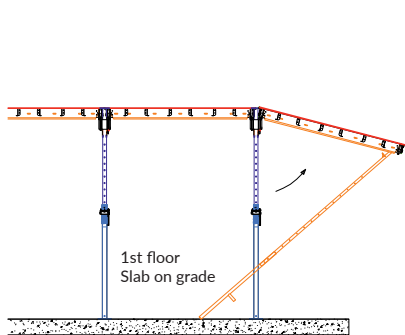




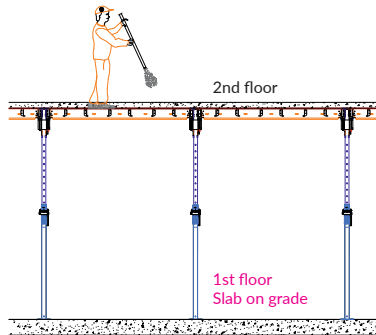
# PROCEDURES

## Shoring, Backshoring and Reshoring

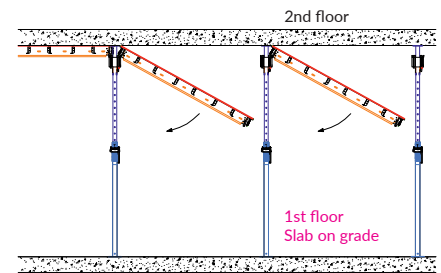
### Typical multifloor construction process



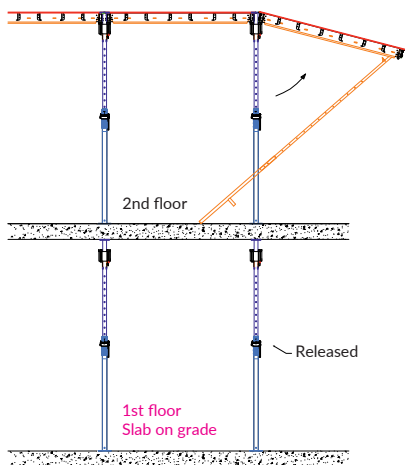
**Step 1:**  
Erect Mäch Deck Shoring System from floor slab.



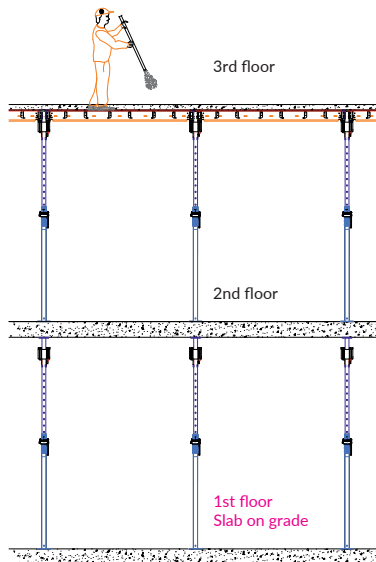
**Step 2:**  
Shoring Complete, pour second floor



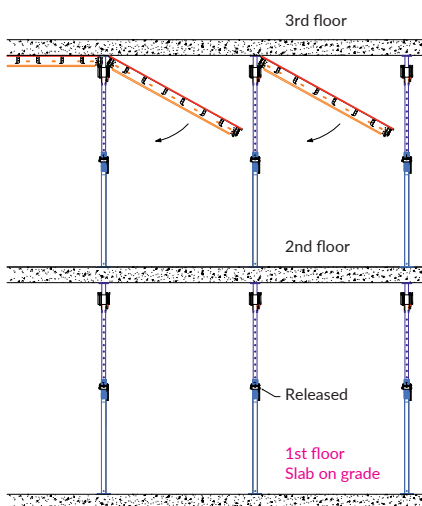
**Step 3:**  
Once Concrete Reaches 2000 psi, remove Panels. Leave Props undisturbed.



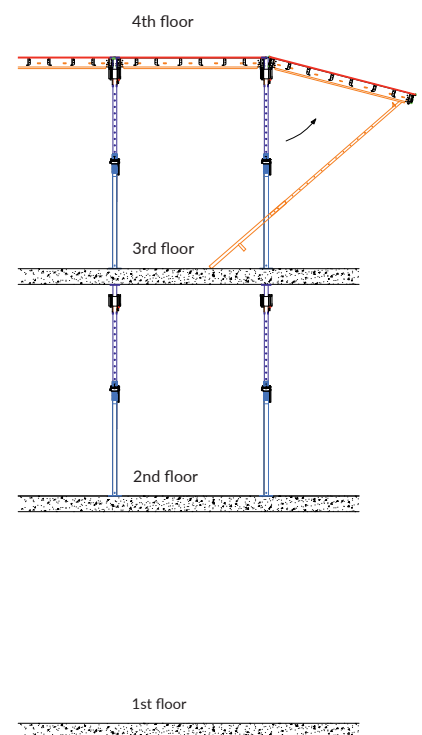
**Step 4:**  
Erect third floor with additional props. Leave Props undisturbed



**Step 5:**  
Shoring for third floor complete, pour third floor



**Step 6:**  
Once Concrete Reaches 2000 psi, remove Panels from under the floor. Leave Props Undisturbed.



**Step 7:**  
Remove Props supporting second floor and Recycle them to the third floor.



Convert the lowest level of Props from backshoring to reshoring by striking the Quick Release above the prop collar.

Release the load in the section as required by site Engineers.

Allow the floor to "Take Up" self weight then snug up the Props.

# PROP PANEL LOAD CHART

## Shoring, Backshoring and Reshoring

### Props Load Chart

#### Standard Props

Max Slab Thickness on Panels Supported At Corners Only

Prop Height	2.4 Meter X 1.2 Meter Panel	1.8 Meter X 1.2 Meter	1.2 Meter X 1.2 Meter
3.36 Meter	350 mm	570 mm	850 mm
3.66 Meter	350 mm	500 mm	810 mm
4.05 Meter	300 mm	400 mm	600 mm

#### Standard Props

Max Slab Thickness On Panels Supported At Corners and Centre Of Side Rail

Prop Height	2.4 Meter X 1.2 Meter Panel	1.8 Meter X 1.2 Meter Panel	1.2 Meter X 1.2 Meter Panel
3.36 Meter	850 mm	850 mm	n/a
3.66 Meter	810 mm	850 mm	n/a

#### Standard Props With Extensions

Max Slab Thickness On Panels Supported At Corners Only

Prop Height	2.4 Meter X 1.2 Meter Panel	1.8 Meter X 1.2 Meter Panel	1.2 Meter X 1.2 Meter Panel
4.95 Meter	200 mm	300 mm	510 mm
4.65 Meter	250 mm	390 mm	640mm
4.34 Meter	325 mm	480 mm	770 mm
4.04 Meter	350 mm	510 mm	810 mm
3.73 Meter	350 mm	560 mm	850 mm

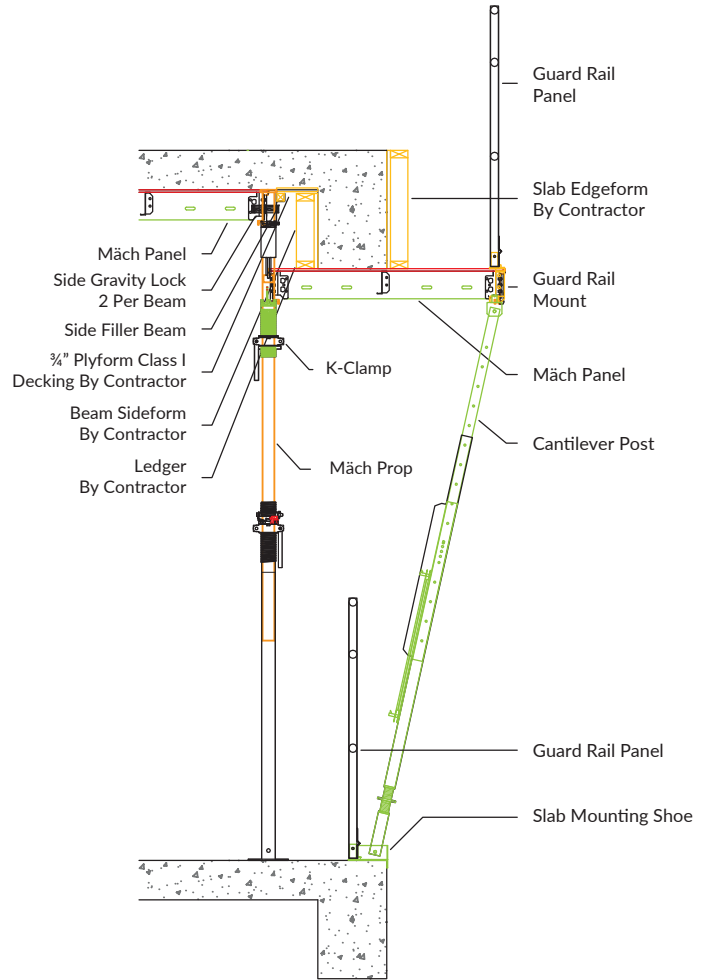
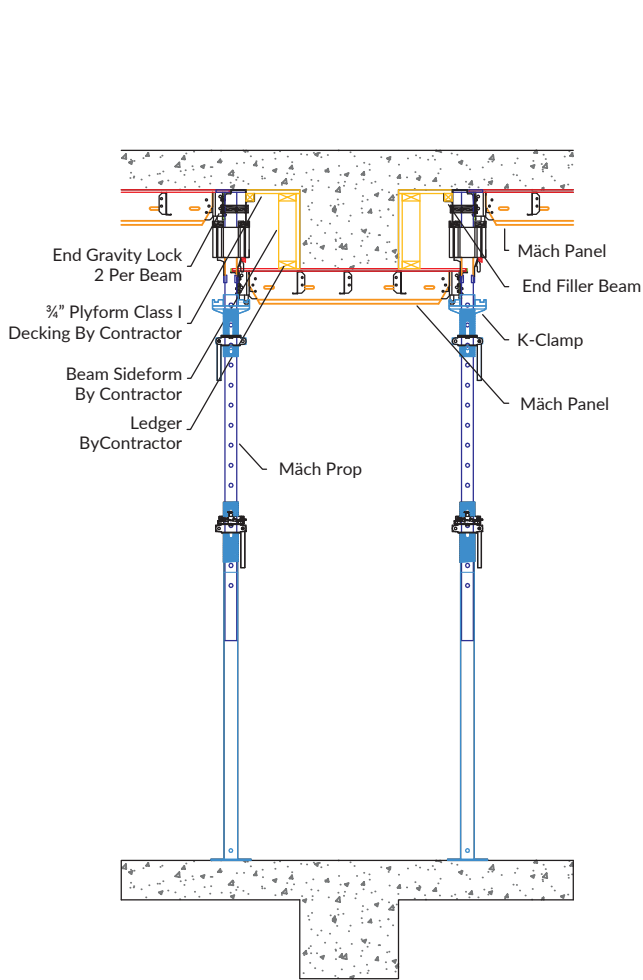
#### Standard Props With Extensions

Max Slab Thickness On Panels Supported At Corners and Centre Of Side Rail

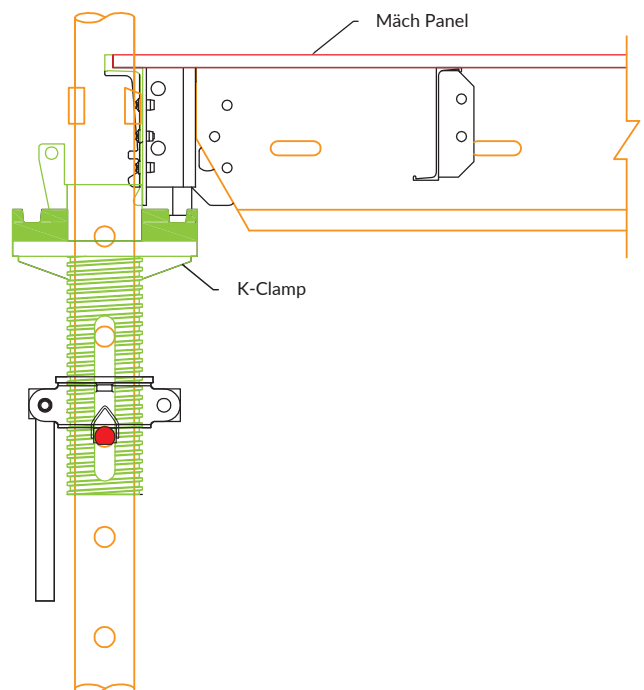
Prop	2.4 Meter X 1.2 Meter	1.8 Meter X 1.2 Meter Panel	1.2 Meter X 1.2 Meter
4.95 Meter	510 mm	850 mm	n/a
4.65 Meter	640 mm	850 mm	n/a
4.34 Meter	770 mm	850 mm	n/a
4.04 Meter	810 mm	850 mm	n/a
3.73 Meter	850 mm	850 mm	n/a

Charts Are Based On A Safety Factor Of 2.5:1 On Props and 2:1 On Panels

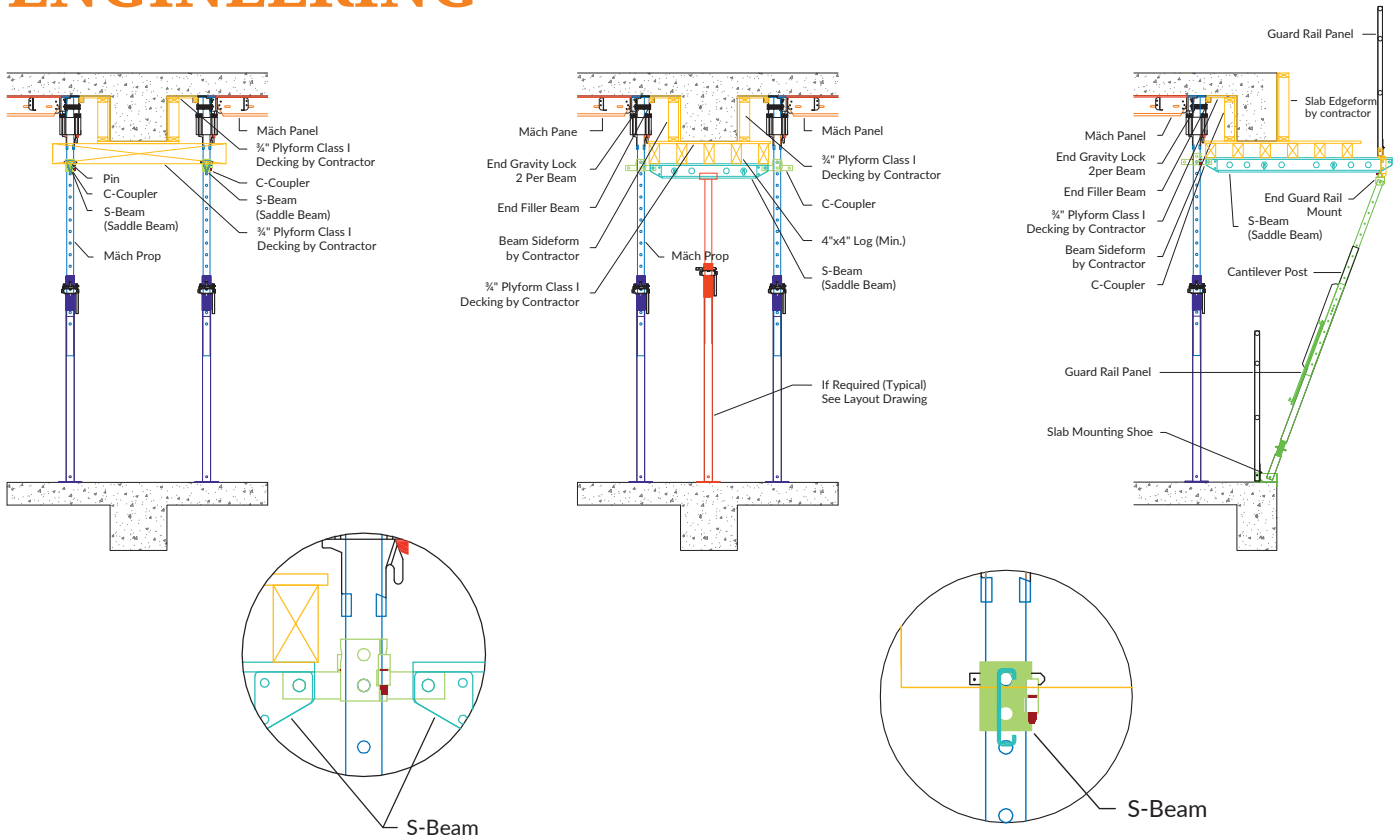
# ENGINEERING



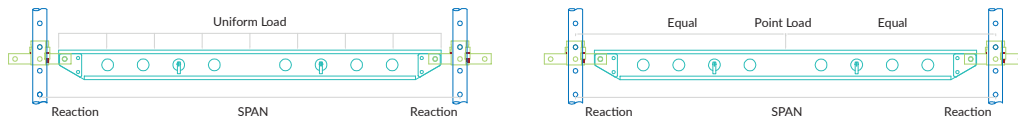
Drop Head Panel Support



# ENGINEERING



## Engineering Details - Beam



Maximum Allowable Moment = 33.2Kip Inch = 3.75kN/m  
 Maximum Reaction Coupler Mk 1 = 1225 lbs = 556 kg = 5450 N  
 Maximum Reaction Coupler MK 2 = 1800lbs = 817 kg = 7964 N

### Allowable Loads For Coupler Mark 1

Metric	Maximum	Point Load	Maximum	Uniform Load
1200	1112 kg/10.90 kn	R	927 kg/Metre	R
1800	837 kg/8.20 kn	M	618 kg/Metre	R
2400	628 kg/6.16 kn	M	463 Kg/Metre	R

### Allowable Loads For Coupler Mark 2

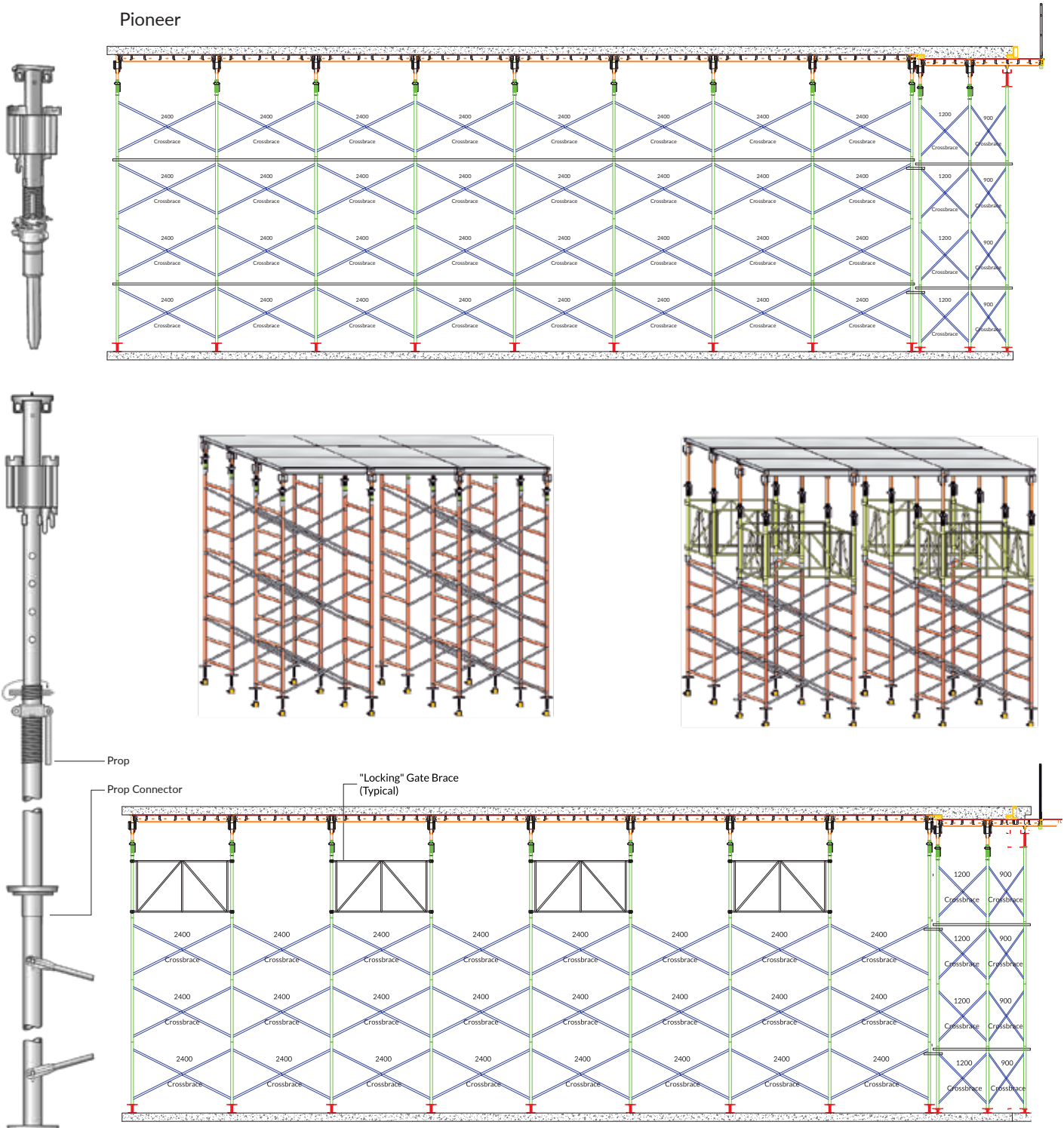
Metric	Maximum	Point Load	Maximum	Uniform Load
1200	1255 kg/12.30 kn	R	1360 kg/Metre	M
1800	837 kg/8.20 kn	M	907 kg/Metre	R
2400	628 kg/6.16 kn	M	680 Kg/Metre	R

R = Reaction Governs M = Moment Governs



# ENGINEERING

## EXTRA HEIGHT SLABS USING FRAME SUPPORT



Maximum 16" on standard 2400 X 1200 panel

# SYSTEM COMPONENTS

## Props Plugs & Tool

### ■ Props

Code	Component	Feet	Millimeter
P12	Prop	12'0"	3658
P13	Prop	13'0"	4050
PE 13	Prop Extension	4'6"	1372
PE 10	Prop Extension	3'3"	1000
PE 06	Prop Extension	2'0"	600
PE 03	Prop Extension	1'0"	300

### ■ Pioneer

Code	Component
P10	Pioneer HeadProp

### ■ Head Plate Cap

Code	Component
HPC	Head Plate Cap



# SYSTEM COMPONENTS

## Props Plugs & Tool

■ Props

Code	Component
ADT	Assembly and Disassembly Tool
ADTL	H Long Handle for ADT
SB	Stripping Bar



SB  
Stripping Bar

ADT  
Assembly  
and Disassembly Tool

**Film-Faced Plywood Panels**  
These panels are edge-sealed and with a moisture-barrier back.

■ Film-Faced Plywood Panel

Code	Component	Millimeter
P126P	Panel	1200 x 600
P186P	Panel	1800 x 600
P246P	Panel	2400 x 600
P1212P	Panel	1200 x 1200
P1812P	Panel	1800 x 1200
P2412P	Panel	2400 x 1200



# SYSTEM COMPONENTS

## Beams and Hangers

### ■ Filler Beams

Code	Component	Millimeter
EF6	End Fille	600
EF12	End Fille	1200
SF12	Side Filler	1200
SF18	Side Filler	1800
SF24	Side Filler	2400
FB3-24	Filler Bracket 2x4 3 Way	
UGL	Universal Gravity Lock	
FB2-24	Filler Bracket 2x4 2 Way	

### ■ Telescopic Beams

Code	Component	Millimeter
TSB3S	Swivel Telescopic Beam	914
TSB5S	Swivel Telescopic Beam	1524
TSB10S	Swivel Telescopic Beam	3048

### ■ Telescopic Beam Hanger

Code	Component
TBH	Telescopic Beam Hange
SFGL	Side Feeler Gravity Lock
EFGL	End Feeler Gravity Lock



End Filler Beam



Side Filler Beam



Swivel Telescopic Beam



Telescopic Beam



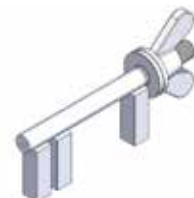
Filler Bracket 2x4 3-way



Universal Gravity Lock



Telescopic Beam Hanger



Side Feeler Gravity Lock



End Feeler Gravity Lock





# SYSTEM COMPONENTS

## Cantilever, Guard Rail & Post and Gate Brace

### ■ Cantilever



Cantilever Post

Cantilever Extension Post



Guard Rail Post Connector



Edge Mounting Shoe



End panel Connector



Side panel Connector

Code	Component
CP	Cantilever Post
CPE	Cantilever Post Extension
EMS	Edge Mounting Shoe
SGR	Slab Grab
EPC	End Panel Connector
SPC	Side Panel Connector

### ■ Guard Rail Panel and Post



Guard Rail Post



Guard Rail Panel



Gate Brace

### ■ Gate Brace

Code	Component	Millimeter
GRP	Guard Rail Post	1372
GR12	Guard Rail Panel	1200
GR18	Guard Rail Panel	1800
GR24	Guard Rail Panel	2400
GRPC-RH	Guard Rail Prop Connector RH	
GRPC-LH	Guard Rail Prop Connector LH	

Code	Component	Millimeter
GB12	Gate Brace	1200
GB18	Gate Brace	1800
GB24	Gate Brace	2400

# SYSTEM COMPONENTS

## Beams, Hangers and Braces

### S-Beams

Code	Component	Millimeter
SB4	S-Beam	1200
SB6	S-Beam	1800
SB8	S-Beam	2400
SBP	S-Beam Pin	
SBC	S-Beam Coupler c.w. Load Pin	



Gate Brace



S-Beam Coupler

### Bracing for S-Beam

Code	Component	Millimeter
SCB4	Cross Brace for S Beam	1200
SCB6	Cross Brace for S Beam	1800
SCB6	Cross Brace for S Beam	2400



Cross Brace

### Bracing for Cantilever Brace

Code	Component	Millimeter
CCB4	Cross Brace	1200
CCB6	Cross Brace	1800
CCB8	Cross Brace	2400



Safety Chain

### Safety Items

Code	Component
SC	Safety Chain
SRP	Safety Red Pin



Safety Red Pin

### AB Strip

Code	Component	Dimensions
ABS600	Architectural Bridge Strip	518.2
ABS900	Architectural Bridge Strip	818.2
ABS1200	Architectural Bridge Strip	1118.2
ABS1200S	Architectural Bridge Strip	1047.1
ABS1800	Architectural Bridge Strip	1647.1
ABS2400	Architectural Bridge Strip	2247.1



AB Strip



# OUR CLIENTELE



# AFTER SALES SUPPORT

Our customer's success is our success and undoubtedly, the customer's growth is our resultant growth.

We further extend our philosophy- "Our customer's saving is our saving"

Our sales, Management and engineering teams have experience in a wide range of Projects and Industries. We understand the changing needs of our customers when they move from one project to another. We work in close partnership with our clients in their new projects in both the development and refinement of designs, formwork planning, reuses of the existing inventory, refurbishing and redesigning as per the new requirement and to simplify the whole process and deployment of the existing Technocraft inventory, proposing the minimal requirement if any, to create cost savings on your next project.

## CONTACT US

### OVERSEAS DISTRIBUTION CENTERS

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**TECHNOCRAFT GROUP**

A Quality Product by  
Technocraft Industries India Ltd.