



# POLY-TECH Industries

*The Formwork & Scaffolding People*



- **Steel formwork**
- **Wooden formwork**
- **Modular formwork**





## ABOUT US

**POLY-TECH** Industries, formwork and scaffolding people are involved in the realization of dream of Building Construction Industry and carry large responsibility in providing high Quality Formwork & Scaffolding Systems, which ensures the safety of all the construction site personnel. Construction Industry creates impressive and long lasting structures and we at Polytech support construction professionals in meeting these challenges with our systems, we ensure that they execute the projects in time, more safely and above all cost effectively.

**Wooden H-Beam** :- With our European Associates we have introduced light weight, versatile, durable Wooden Beam **H20, H16 & H12** with top quality Wood & **33% extra life** Product specially for Indian Construction Industry.

**Modular Formwork** :- With Our another European Associate we have introduced '**Stronger, Faster, Easier & Safer**' system for Wall, Column, Shearwall & liftwell for high rise/multistorey Products by the name "**DESTIL DUE & DESTIL MINI**" which is comprehensive international Formwork Solution.

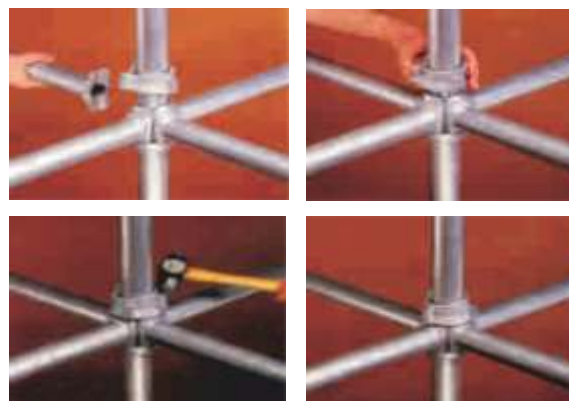




## CUPLOK SYSTEM

**POLY-TECH** CUPLOK components allows it to be used to create a huge range of access and support structures, staircase towers, circular scaffolds, loading towers and mobile towers. At the heart of the CUPLOK system is its unique node-point locking device. This enables up to four horizontals to be loosely but safely connected to the standard then locked into position with a single hammer blow. The system has No loose parts.

The locking device is formed by welded lower cup, to the standards at 500mm C/C intervals, and movable upper cup which drop over the blade ends of the horizontals and rotate to lock them firmly into place giving a positive, rigid connection. CUPLOK is faster and simpler to erect than any other scaffold system.



### → Standards (Verticals)

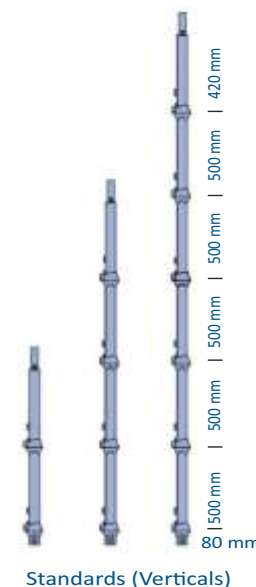
Made out of 40 NB medium/heavy class steel tubes as per IS1161/1239, bottom and top cups at 500 mm C/C intervals, securing up to four horizontal components

### → Ledger (Horizontals)

All ledgers made out of 40 NB medium/light class steel tubes as per IS1161/1239, incorporate symmetrical forged blade ends making assembly quick and simple. Horizontals locate in the bottom cups of the Verticals.



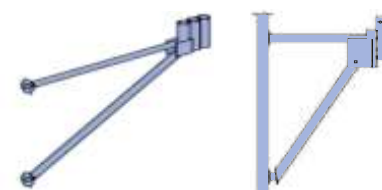
Ledger ( Horizontals )



Standards (Verticals)

### → Cantilever Frame

This bracket is designed for supporting cantilever edge slabs and incorporates Three Jack locations at centres of 1.2m, 1.25m and 1.3m. Frames are located in the cup joints.



### → Spigot Pin

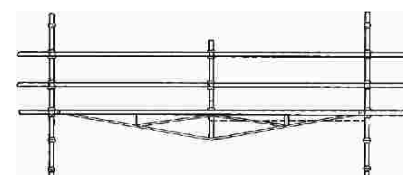
Made out of 38mm OD tube for connecting at joint of two standards (vertical). Designed to resist minor tensile forces only.



Spigot

### → Bridging ledger

The Bridging horizontal is provided to create a working space or platform when a clear span of over 2.5 mtr to 5.0 mtr is required through the main scaffold run.



### → Beam Bracket

To support drop Beams, eliminating the need of extra rows of support under the Beams Beam & Slabs. The Beam Bracket may be located on top most cup joints. Eliminates full height support to beam formwork / Slab formwork by locating on to slab/Beam support vertical, accepts standard jacks and forkheads.





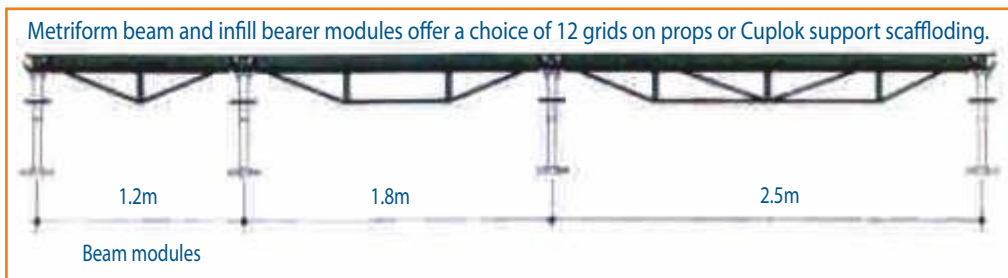
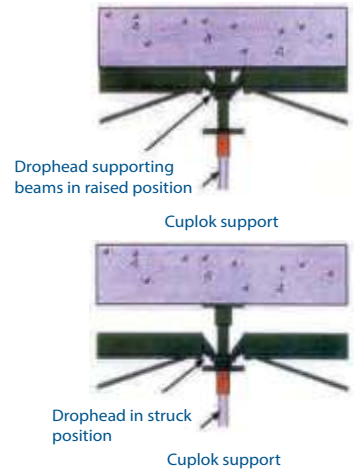
## QUICK STRIP SYSTEM

**POLY-TECH** Quick strip system is most effectively used for flat slab RCC construction. The advantage of this system is that we can de-shutter the slab formwork after 3 (Three) days of pouring of concrete without disturbing the Supports. This provision is allowed in stripping time of IS456-2000. DROPHEAD is the key component of this system and can be used over props, H-Frames & Cuplok. With today's high cost of Formwork & time constraints at project sites, it has become a very cost-effective, versatile, fast and common method of construction in industry. In general practice the conventional system formwork cannot be de-shuttered not before of pouring 14 days. This system fasten this cycle of operation, thus giving multiple use of formwork in lesser time.

### ➔ Operation Planning

**An effective cycle depends on the management of material & labour planning. A typical 9 day cycle can be achieved as follows:-**

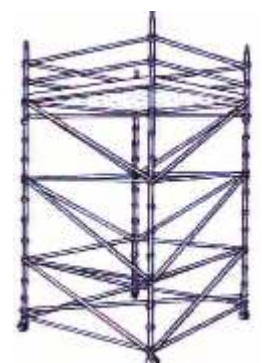
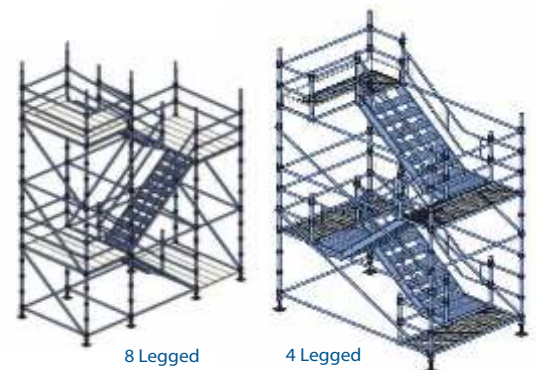
- Day 1 Commence erection of formwork.
- Day 2 Continue formwork erection and commence fixing of steel.
- Day 3 Complete formwork, continue steel fixing, commence electrical conduiting.
- Day 4 Complete steel fixing and electrical work.
- Day 5 Pour concrete.
- Day 6-8 Curing time for concrete.
- Day 9 Quick strip the formwork and start cleaning formwork for next erection



## STAIRCASE TOWER

**POLY-TECH** staircase towers provide a safe, user-friendly solution and are quick and simple to erect, stable, rigid structure designed with a key emphasis on user safety.

- 1) Wide landing platforms with steel or timber battens.
- 2) Full hand railing to stairs and landing with double guardrails.
- 3) Stairways are rigid and provided firm, non-slip treads to ensure maximum security for users.
- 4) The removal of potentially hazardous deck opening normally created by ladder access.



## MOBILE TOWER

**POLY-TECH** cuplok components can be simply erected to form either square or rectangular Mobile Towers with the addition of four castor wheels.



### COMPARISON CHART OF VARIOUS SCAFFOLDING & STAGING MATERIAL

Sr.No		CUPLOK	H-FRAME	PIPE & COUPLER
1	Scaffolding	√	√	√
2	Staging	√	√	x
3	International Standards	√	x	x
4	Erection Time	Least	Average	Maximum
5	Maintenance & Loose Parts	Least	Average	Maximum
6	Verstality/Flexibility	Maximum	Average	Minimum
7	Transportation	Minimum	Maximum	Average
8	Load Carrying Capacity	Maximum	Average	Minimum
9	Life Span	Maximum	Minimum	Average
10	Height Limitation	None	45 mtr	21mtr
11	Value of Money	Maximum	Average	Minimum
12	Labour Requirement	Semi Skill	Skilled	Skilled

## FLOOR FORMS/ SLAB FORM

**POLY-TECH** floor forms are made out of 14G/12G press bent sheet and are light in weight as compared to the conventional centering plate available in the market.



## ADJUSTER FLOOR FORM

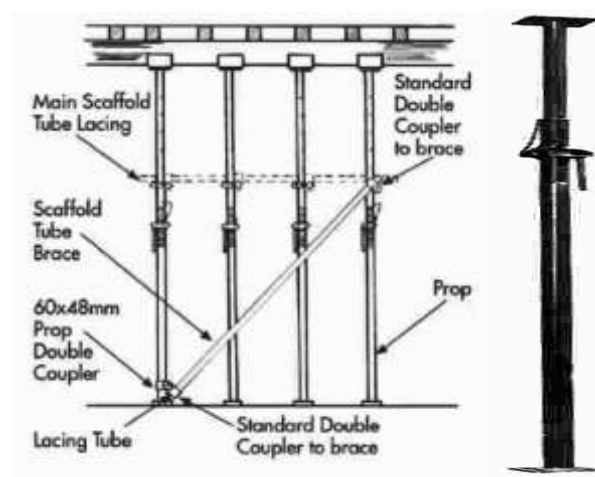
**POLY-TECH** adjuster floor forms are also the integral part of floor form, which is used to avoid unstandard slab formwork, thus eliminating use of timber in slab formwork.



## TELESCOPIC PROP

**POLY-TECH** Telescopic Prop are most ideal and economical method of support for all kind of formwork to slab, beams, walls and column. Their ability to adjust to wide range of height variation, have made them indispensable to construction industry. Inner OD = 48.3mm, Outer OD = 60.3mm, Base plate and Top U Head/Base plate

Prop Size	Height (m)		SWL (Kgs.)	
	Closed	Extended	Closed	Extended
1P	1.5	2.75	3200	2300
2P	2	3.25	3000	2200
3P	2	3.75	2900	2000
4P	3	4.75	2300	1150



**Bracing of props are required in both direction if extended beyond 3.5 mtr.**

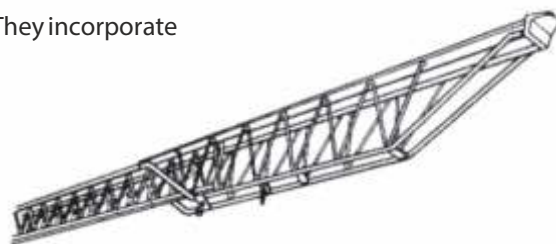
\* All systems are designed and manufactured with the user in mind.



## TELESCOPIC SPAN

Telescopic Span is result of many years of experience in construction industry. They incorporate all the features which make them indispensable to construction industry.

1. Quick and easy erection and stripping.
2. Single simple adjustment for length of span.
3. Intermediate supports eliminated.
4. Compact for storage and transport.
5. Stand rough site handling and reduce maintenance cost.



SIZE	EXTENSION	
ESO-ESI	1.75m	2.70m
SO-ESI	2.40m	3.45m
SO-SI	2.45m	4.12m
SO-LI	3.05m	4.75m
LO-SI	3.15m	4.85m
LO-LI	3.15m	5.50m

Slab Thk(mm)	Total Load Kg/m <sup>2</sup>	Permissible Clear Span for C/C			
		600mm	800mm	900mm	1150mm
100	420	5500	5000	4450	4010
125	480	5330	4660	4340	3760
150	540	5000	4350	4090	3580
200	660	4520	3950	3680	3200
250	780	4140	3650	3380	2840
300	900	3730	3400	3150	2490

LO : Long Outer  
LI : Long Inner

SO : Short Outer  
SI : Short Inner

ESO : Extra Short Outer  
ESI : Extra Short Inner

## FORMWORK ACCESSORIES

### → Adjustable Base Plate / Fork head / U-Head Jack

For use in undulating ground condition & where it is required for making up for height variations when used under/above supports. Available in 32Ø, 36Ø, variable length of 350mm & 450 mm with Adjustments by means of screw upto 275mm & 350mm respectively.



### → Right Angle / Double / Fixed Coupler Presco Type

One piece load bearing coupler used for connecting two scaffold tubes at 0 right Angle or 90 . Pressed from high grade steel, checked for distortion & slip as per IS CODE-2750-1964.



### → Swivel Coupler Presco Type

A one piece load bearing coupler for connecting any two & scaffold tubes at 0 any angle through 360°. Pressed from high grade steel and checked for distortion & slip as per / IS CODE-2750-1964.



### → Right Angle Couplers / Swivel Couplers Forged

One Piece load bearing coupler used for connecting two scaffold tubes at right angle or 900 Forged from high grade steels, checked for distortion & slip test.



### → Tripod

It is used as a support erection aid The pivoted tripod makes the erection in limited space near walls and in the corners easy. Lock design allows to fasten support with the diameter from 50 to 65 mm. working position height is 760 mm to 1 meter.

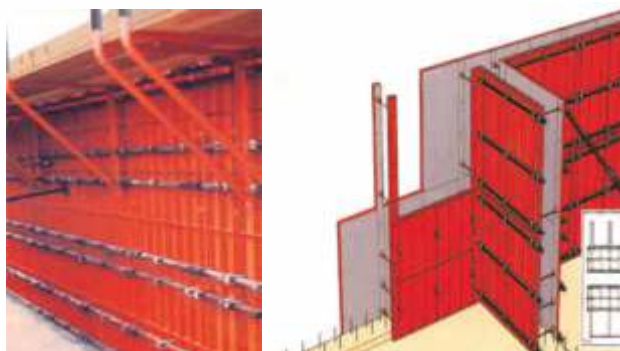




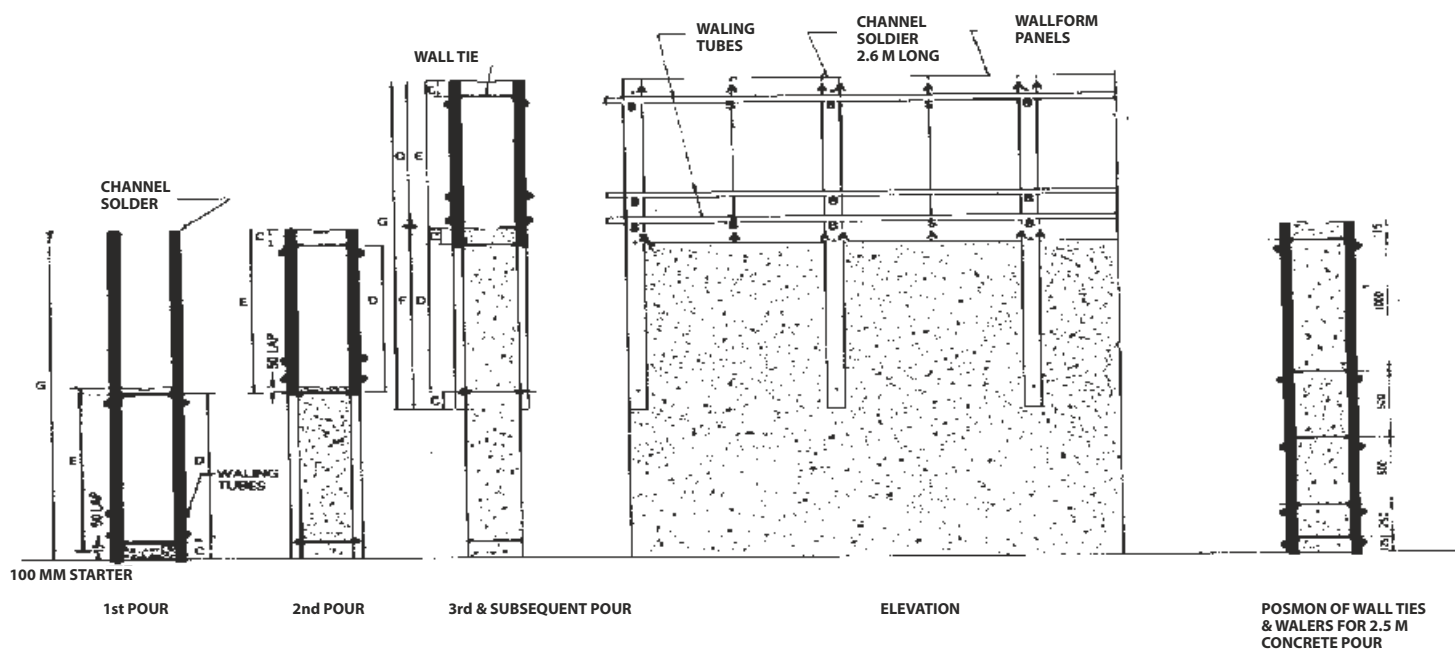
## WALL FORMWORK

### → Straight Wall

**POLY-TECH** Wall formwork is ideal for heavy and light duty multipurpose formwork and is suitable for most type of cast in situ concrete construction such as Walls, Foundation, Column, Beams, Rectangular or circular tanks, Dams, Bridges etc. Made out of 12G/10G, MS sheet with 45mm/50mm deep Angle frame, adequately stiffened with longitudinal stiffener



### → Applications



### → Wall form Accessories



Bridge Clamp



Single Clamp



Anchor Nut



Wing Nut



Tierod



Water Stoper

\* The Safety that goes into each piece of system however, cannot offset carelessness on the part of the erector or the user.





# Wooden Formwork

The Passion for Engineered Wood

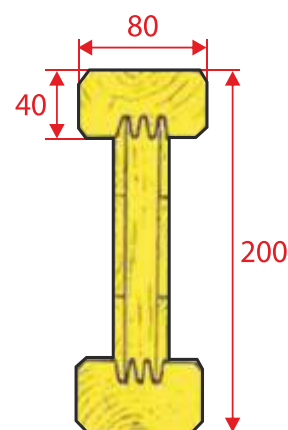




# POLY-TECH-H BEAM

<b>Wood species</b>	Spruce, fir
<b>Wood moisture</b>	12% ±2% at delivery
<b>Gluing</b>	Melamine resin-based adhesive, adhesive type I EN 301-approved for gluing of load bearing timber component
<b>Surface protection</b>	The beam is waterproofed using a water repellent color glaze
<b>Chord</b>	<ul style="list-style-type: none"> <li>☒ Made of carefully selected spruce wood</li> <li>☒ Finger-jointed, solid wood cross-sections with a dimension of 65x35/40x80 mm</li> <li>☒ Finger-jointing of the chords</li> <li>☒ Web milling on the opposing side of the core (left-sided chord surface)</li> <li>☒ Planed and chamfered to approx. 0.4 mm</li> </ul>
<b>Web</b>	<b>3-ply solid wood panel, laminated primarily showing vertical growth rings</b>
<b>Surface protection</b>	Treatment of entire beam using a water-resistant color stain
<b>Support</b>	Due to the 3-ply solid wood webs, Extra beam H20 can be cut into and supported at any length
<b>Standard lengths</b>	1.95 / 2.45 / 2.65 / 2.90 / 3.30 / 3.60 / 3.90 / 4.50 / 4.90 / 5.90 / max. 6 m
<b>Packaging</b>	The package is placed on supporting wood, protecting the formwork beams and provides simple use with forklift.

**33%**  
extra Life  
with three  
finger Joint



	H12	H16	H20
<b>Weight</b>	2.8 kg/m	3.3 kg/m	4.5 kg/m
<b>Technical specifications</b>	DIN1052-1:1988-04		
<b>Strains</b>	<b>Permissible stress values</b>		
<b>Shearing force</b>	ZUL Q = 7 kN	ZUL Q = 8.5 kN	ZUL Q = 11.0 kN
<b>Bending moment</b>	ZUL M = 2.1 kNm	ZUL M = 2.7 kNm	ZUL M = 5.0 kNm
<b>Moment of inertia</b>	EI = 97 kNm <sup>2</sup>	EI = 212 kNm <sup>2</sup>	EI = 486 kNm <sup>2</sup>
<b>Elasticity modulus</b>	E = 10,000 N/mm <sup>2</sup>	E = 10,000 N/mm <sup>2</sup>	E = 10,000 N/mm <sup>2</sup>
<b>Shearing Modulus</b>	G = 600 N/mm <sup>2</sup>	G = 600 N/mm <sup>2</sup>	G = 600 N/mm <sup>2</sup>

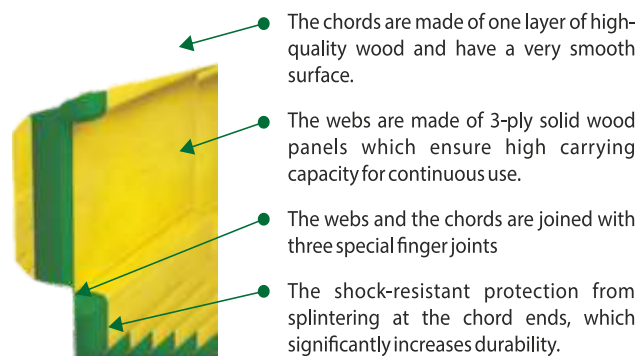
### DIN1052:2008-12 / Eurocode 5

<b>Characteristic limits</b>	V <sub>k</sub> = 15.3 kN	V <sub>k</sub> = 18.4 kN	V <sub>k</sub> = 23.9 kN
<b>of load-bearing</b>	M <sub>k</sub> = 4.4 kNm	M <sub>k</sub> = 5.9 kNm	M <sub>k</sub> = 10.9 kNm
<b>capacity</b>	R <sub>b,k</sub> = 29.4 kN	R <sub>b,k</sub> = 36.8 kN	R <sub>b,k</sub> = 47.8 kN

Dimensions and tolerances	Value			Tolerance
<b>Beam height</b>	120 mm	160 mm	200 mm	± 2 mm
<b>Chord height</b>	35 mm	35 mm	40 mm	± 0.6 mm
<b>Chord width</b>	65 mm	65 mm	80 mm	±0.8 mm / - 1.2 mm
<b>Web thickness</b>	28 mm	28 mm	28 mm	± 1 mm

## Features of H Beam +

- Beam ends and protective cap are rounded
- The entire face side is protected by the cap
- Shock proof
- High dimensional stability
- Low shrinkage
- No risk of injury
- No sticking and no steel brackets necessary to secure the protective cap
- Good mechanical properties of the protective cap at high and low temperatures
- UV stabilizer to weather
- Fixing of the cap carried out with plugs, therefore the face side is not being weakened

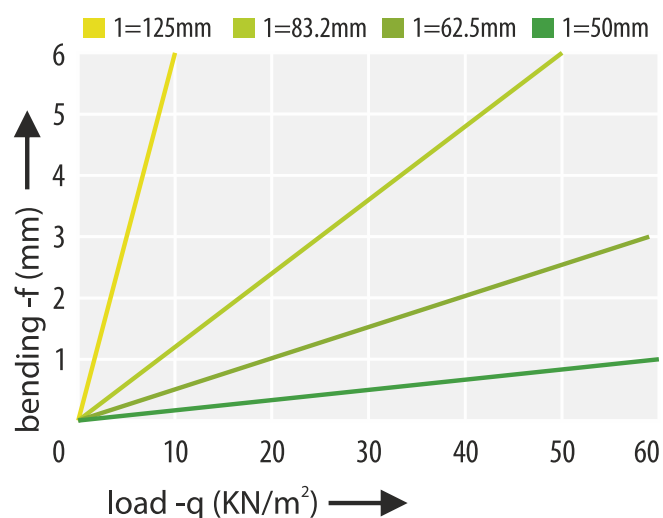




# POLY-TECH SHUTTERING PANEL

<b>Product</b>	Three ply concrete formwork panel coated with melamine resin that allows a resistant and smooth surface	
<b>Wood species</b>	Spruce, fir, mixed types permitted	
<b>Wood moisture</b>	12 % ± 2 %	
<b>Mechanical properties</b>	21 mm	27 mm
<b>Minimal value</b>	40 N/mm <sup>2</sup>	40 N/mm <sup>2</sup>
<b>Modulus of elasticity (mean value)</b>	10000 N/mm <sup>2</sup>	10000 N/mm <sup>2</sup>
<b>Weight</b>	10 kg/m <sup>2</sup>	12 kg/m <sup>2</sup>
<b>Packaging</b>	50 pcs	40pcs
<b>Formats (mm)</b>	L = 1000, 1500, 2000, 2500, 3000 W = 300 to 500	
<b>Surface protection</b>	Highly resistant melamine coating, extremely smooth surface	
<b>Edge seal</b>	Water repellent edge formwork finish, yellow	
<b>Note</b>	The calculated values with a wood moisture of 12%. With heavy moisture penetration upto fiber saturation point, the values for bending strength and flexural modulus of elasticity may be up to 30% lower	

### Bending strength chart\*



\* Optimal carrying capacity for thickness of 21 mm is achieved by support for every 300 mm, whereas for thickness of 27 mm, optimal capacity is achieved with support for every 500 mm.

The diagram shows how the panel reacts when loaded, considering the space intervals in between the supporting elements. Therefore q stands for uniform load (in KN/m<sup>2</sup> units), l stands for the space interval in between the supporting elements and f (bending) is stated in mm.

L= Span (m)	40		45		50		55		60		65		70		75	
d= depth (mm)	27	21	27	21	27	21	27	21	27	21	27	21	27	21	27	21
5 kN/m <sup>2</sup>	5	11	8	17	12	26	18	38	26	54	35	75	47	100	62	132
10 kN/m <sup>2</sup>	10	21	16	34	25	52	36	77	51	108	70	149	95	201	125	265
15 kN/m <sup>2</sup>	15	32	24	51	37	78	54	115	77	163	105	224	142	301	187	397
20 kN/m <sup>2</sup>	20	43	32	69	49	105	72	153	102	217	141	299	189	402	249	530
25 kN/m <sup>2</sup>	25	54	40	86	62	131	90	191	128	271	176	374	236	502	312	662
30 kN/m <sup>2</sup>	30	64	48	103	74	157	108	230	153	325	211	448	284	603	374	795
35 kN/m <sup>2</sup>	35	75	57	120	86	183	126	268	179	380	246	523	331	703	436	927
40 kN/m <sup>2</sup>	40	86	65	137	98	209	144	306	204	434	281	598	378	804	498	1,059

q= Load (kN/m<sup>2</sup>)  
 L= Span (m)  
 d= 21 / 27 mm  
 E= 10,000 Nmm<sup>2</sup> of Extrapanel  
 K= 0.646 Deformation factor contingent on number of fields for constant load

## → Qualities

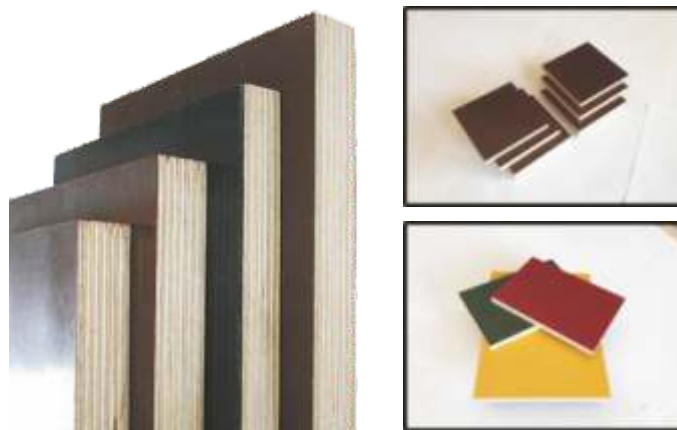
1. The Polytech Shuttering Panel shuttering panel is a high-quality 3-ply solid wood panel, made of spruce and fir wood. It consists of the layers glued crosswise with perimeter frame in the middle layer.
2. Its entire surface is protected and coated on both sides with highly resistant melamine resin, thus making it watertight and water-repelling, ensuring smooth surface of concrete constructions.
3. Edge band is also coated with a watertight cover, preventing moisture from penetrating into the middle, thus giving extra strength to the panel.
4. The important quality of our panel is its bending strength.
5. The quality of the panel fully complies with the DIN 68705 standard (this is approved by the test, made by the Slovenian National Building and Civil Engineering Institute) and is pursuant to the Austrian standard ÖNB 3023.
6. They are distinguished for their superior quality, durability and multiple use.



## PLYWOOD

TECHNICAL SPECIFICATIONS	
Dimensions	2500 x 1250 mm / 1250 x 2500 mm
Thicknesses	8/10/12/15/18/21/24/27/28/30 mm
Tolerances length / width	+/- 2 mm
Type of surface	Both sides smooth
Film surface (standard)	120 gr/m <sup>2</sup> , dark-brown
Edge protection	water resistant sealing
Wood type used	Robusta / Poplar / Birch
Class of formaldehyde emission	E1
Water resistance	WBP marking
Humidity	8-12 %
Bending strength	1.5 MN/m <sup>2</sup> (after 4 hours in boiling water) 1.35 MN/m <sup>2</sup> (after 72 hours in boiling water)
Module of elasticity	5200-4200 N/mm <sup>2</sup>
Resistance to bending	56-48 N/mm <sup>2</sup>
Abrasive strength of top	350-400 layers

Film faced Robusta/Birch Polytech Plywood is a cost effective plywood that offers excellent price/quality ratio, assuring multiple uses (min 60 to 80) when the plywood are properly handled & used.



Specification in Standard Dimension 1250 X 2500 mm				
Thickness (mm)	Numbers of layers	Weight per sheet (kg)	Weight per bundle (kg)	Pieces per bundle (nos)
8	4	12	1520	126
10	5	15	1520	101
12	6	18	1520	84
15	7 or 8	22	1520	67
18	9	26	1520	56
21	11	31	1520	48
24	12	35	1520	42
27	13	40	1520	37
28	14	41	1520	36
30	15	44	1520	34

## There are two main types of plywood:

### Birch

#### Properties

- Noted for its strength, stiffness and resistance to creep
- High impact resistance, especially suitable for heavy-duty floor and wall structures
- Hard surface, less likely to suffer damage
- Attractive visual appearance, sanded and an excellent base for further finishing

### Spruce

#### Properties

- Less dense surface than birch
- Prominent grain structure, more surface knots
- Panels are lightweight, easy to work and nail
- Reasonably good strength and stiffness properties



# COMPREHENSIVE INTERNATIONAL FORMWORK SOLUTION



## MODULAR FORMWORK

*Stronger*

*Faster*

*Easier*

*Safer*





# The formwork system DESTIL 2 / DESTIL MINI is a new system for efficient concrete construction technology.

Robust & Durable formwork.

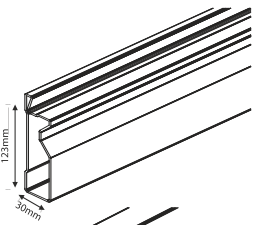
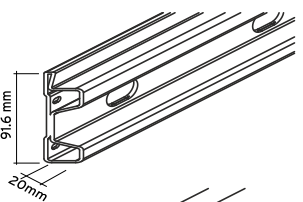

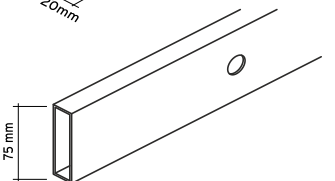
Cost & Design efficient.

Low Weight & User friendly.

Performance & Better Concrete surface.

Quality & High accuracy formwork.

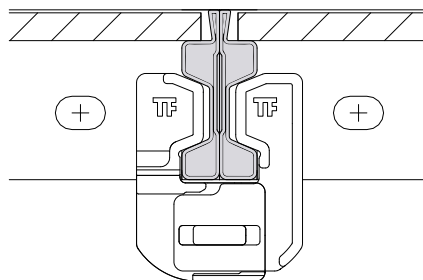
Innovative & Modular formwork.

S. No.	PARAMETERS	DESTIL 2	DESTIL MINI
1	<b>STEEL</b>	5315M types C	S355MC
2	<b>FRAME DEPTH</b>	123 MM	92 MM
	<b>Border Frame Profile</b>		
	<b>Stiffening Profile</b>		
3	<b>PLYWOOD</b>	18 mm finn quality plywood phenolic resin 220 g/m <sup>2</sup>	15 mm birch quality plywood or a plastic coated plywood that survives 3 times longer
4	<b>LOAD PRESSURE</b>	60 KN / M-70 KN/M. DIN18218	60KN/M upto H3M (no vertical stacking of panels).
5	<b>HEIGHT</b>	3000 mm/ 1500 mm	1200 mm/ 1500 mm/ 2700 mm/ 3000 mm
8	<b>WIDTH</b>	1000 mm (Max.)/ 300 mm (Min.)	900 mm (Max.)/ 300 mm (Min.)
6	<b>CRANE</b>	Mandatory	Not Mandatory
7	<b>FINISHING</b>	Powder Coating	Hot dip galvanized & powder coating

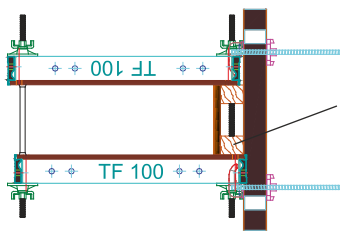
## Plywood and formwork fixing arrangement



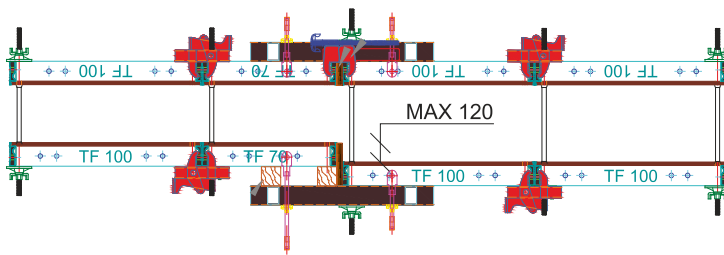
DESTIL 2



DESTIL MINI



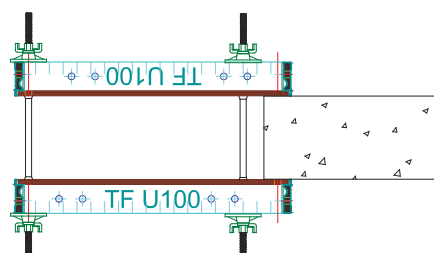
Wooden beams and wood panel on customer account



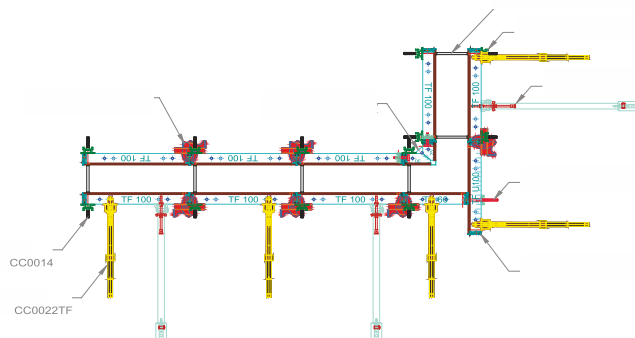
### VARIABLE WALL THICKNESS

### CLOSURE OF PARALLEL FORMWORK

(Closure using Standard Formworks, waling and stop-end tie clamp)

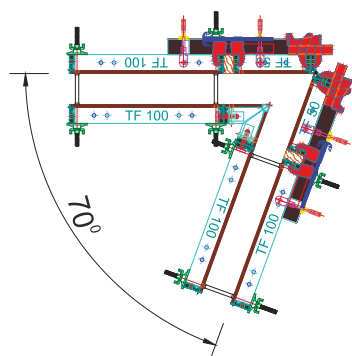


Avoids wood to drill using the universal panel

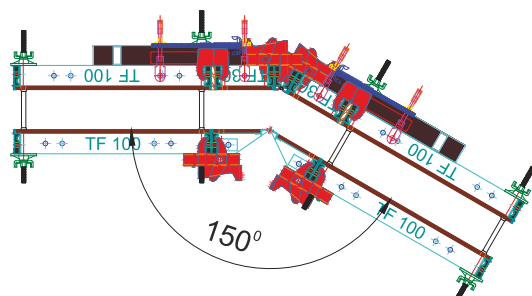


### ANGLE 90°

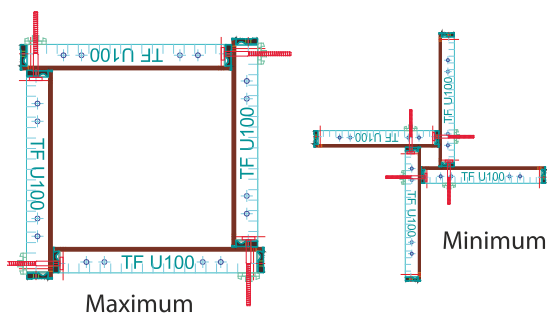
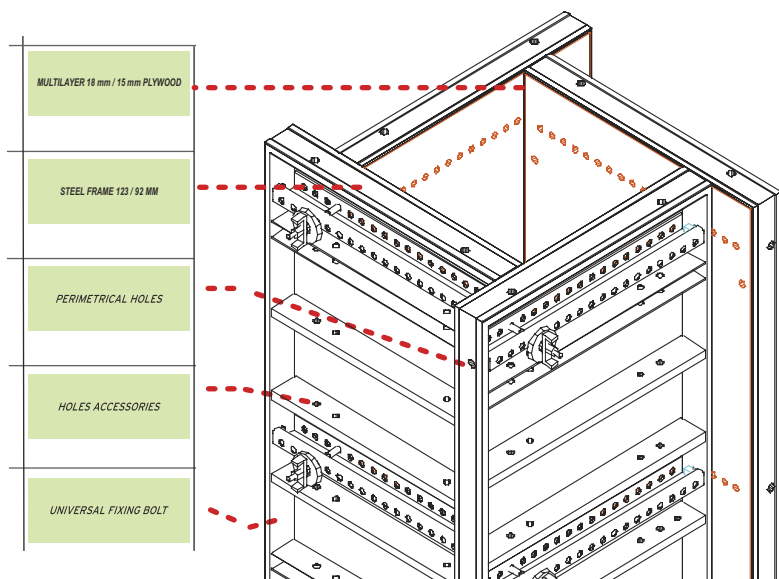
### RESTART FROM THE EXISTING WALL



### ACUTE ANGLE



### OBTUSE ANGLE



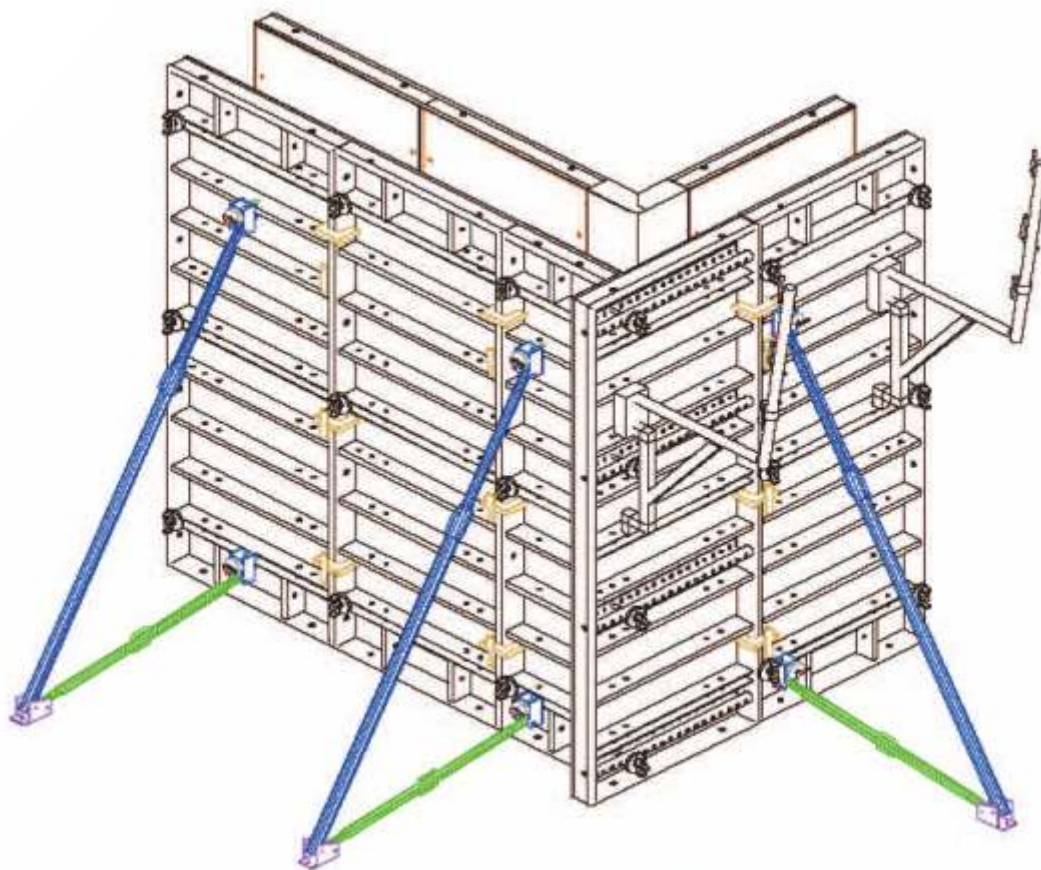
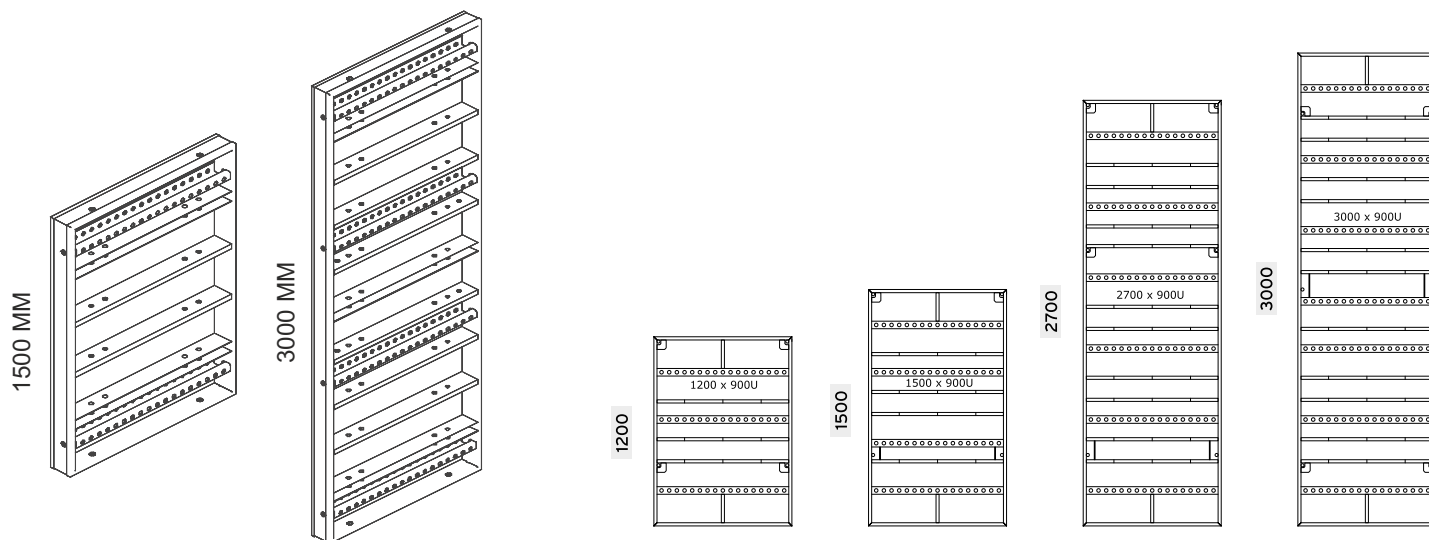
### ADJUSTABLE COLUMN FORMWORK



# UNIVERSAL FORMWORK

DESTIL 2

DESTIL MINI

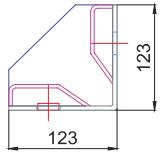
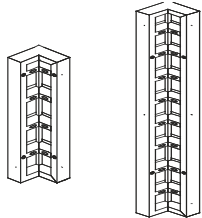




General Assembly of Modular Formwork





## ITEM LIST

<p><b>INTERNAL ANGLE</b></p>	<p>H=3000/1500(30 x 25 cm) internal angle Destil2</p>	
<p><b>EXTERNAL ANGLE</b></p>	<p>H=3000/1500(12 x 12 cm) Destil2 external angle Destil2</p>	
<p><b>HINGED INSIDE CORNER</b></p>	<p>H=3000/1500(30 x 30 cm) Hinged inside corner Destil2</p>	
<p><b>HINGED OUTSIDE CORNER</b></p>	<p>H=3000/1500 Destil2 Hinged outside corner</p>	
<p><b>QUICK ACTION CLAMP</b></p>	<p>Quick action clamp Destil2</p>	
<p><b>MULTI-FUNCTION CLAMP</b></p>	<p>Multifunction clamp</p>	
<p><b>UNIVERSAL WALING</b></p>	<p>Universal waling 0.9 m Universal waling 1.5 m</p>	
<p><b>COMPENSATION SHEET</b></p>	<p>Compensation sheet Destil2 H=3000/1500mm</p>	
<p><b>ANCHOR NUT</b></p>	<p>Articulated plate nut dia 90/100 Super plate nut dia 90/100</p>	
<p><b>UNIVERSAL FIXING BOLT</b></p>	<p>Length 200 mm / 400 mm</p>	

# POLY-TECH RECOMMENDS

## → Formwork Safety Checklist

1. The erection of formwork should be under the supervision of an experienced and competent person.
2. CHECK SAFE WORKING LOAD AND PROCEDURES FOR:
  - a) Size and type of slab panels.
  - b) Type, sizes, heights and location of vertical supports.
3. USE PRIMARY & SECONDARY RUNNER EQUIVALENT TO THE STRESS, species, grade and size as specified on the layout. Use only battens in good condition & do not splice timber battens between their supports.
4. PROVIDE PROPER FOUNDATION below base plates for the distribution of leg loads to concrete slabs or ground. Existing ground shall be level and thoroughly compacted prior to erection of supporting to prevent settlement.
5. PROVIDE GUARDRAIL SYSTEM ON ALL OPEN SIDES AND OPENINGS IN FORMWORK AND SLABS.
6. ACCESS MUST BE PROVIDED TO ALL FORMWORK SLAB LEVELS. Access ladders must extend at least three (3) feet above formwork. Restrain & secure ladders to prevent displacement.
7. IF MOTORIZED CONCRETE PLACEMENT SYSTEM IS TO BE USED, Be sure that lateral loads, vibration, and other forces have been considered and adequate precautions taken to assure stability.
8. PLAN FORMWORK TO INSURE against instability and unsupported cantilevered forms. Take all necessary precautions to avoid uplift of panels during and after construction.
9. PLAN CONCRETE POURING METHODS and sequences to insure against unbalanced loading of supporting system or uplifting of panels.
10. CHECK TO SEE THAT ALL CLAMPS, SCREWS, PINS, BRACES and all other components are in a SECURED & LOCKED IN POSITION.
11. MAKE CERTAIN THAT BASE PLATES AND TOP HEADS ARE IN FIRM CONTACT WITH THE FOUNDATION AND SUPPORTING MATERIAL.
12. USE SPECIAL PRECAUTIONS when supporting to or from sloped surfaces.
13. DO NOT PLACE ADDITIONAL TEMPORARY LOADS (such as rebar bundles) on erected formwork or poured slabs.

## → Common Causes of Formwork Failure

- Rotation of Stringers, Beam or Joists
- Defective Equipment
- Deficient Connection
- Differential Settlement
- Inadequate or Defective Bracing or Ties
- Cantilever Loading
- Single Vertical Supports
- Vibration and Impact
- Supports or Slopes or Supporting Sloping Slabs
- Excessive Rate of Placing of Concrete
- Untested or Misused Proprietary Components
- Improper Sequence of Placing of Concrete
- Unauthorized Variations/poor Work Practices
- Inadequate Design

## → Scaffold Safety Checklist

1. Scaffold should be erected under the direction of competent person.
2. All employees on or near the scaffold should be wearing hard hats.
3. Scaffold should be on proper & leveled footing.
4. Scaffold should hold two times its maximum intended load.
5. Guardrails and toeboards should be placed on all open sides.
6. All sections should be pinned or appropriately secured.
7. There should be a safe way to get on and off the scaffold, such as a ladder.
8. Front face should be within 400 mm of Scaffold.
9. Scaffold should meet electrical safety clearance distances.
10. If the scaffold is over 10 feet high, personal fall protection to be provided.
11. All scaffold loads (including tools and other equipment) kept to a minimum and removed when the scaffold is not in use or before being moved.
12. All employees removed from scaffold during high winds, rain, snow or bad weather.
13. All wheels / castors should be locked in case of mobile towers.



### The Base Of The Scaffold

If the base of scaffold is on uneven ground, make sure the scaffold is erected on adequate timber sole plates, properly bedded and levelled.



### Platforms

Make sure the platform does not contain any trip hazard or projections.



### Ladders

Where ladders are used, make sure they stand on a firm base, are securely fixed and project at least 1.0m above the landing platform.



### Guardrail and Toeboards

Always fit guard rails on working platforms above 2.0m in height to prevent accidental fall injuries.



### Overloading

Do not overload the scaffold with bricks. Remember to load the materials as close to standard as possible. If you need to stack large quantities of materials at platform level use a loading tower.



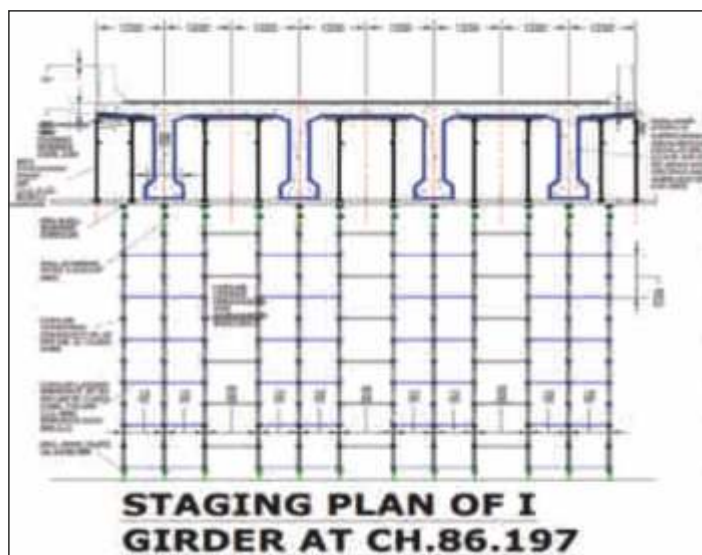
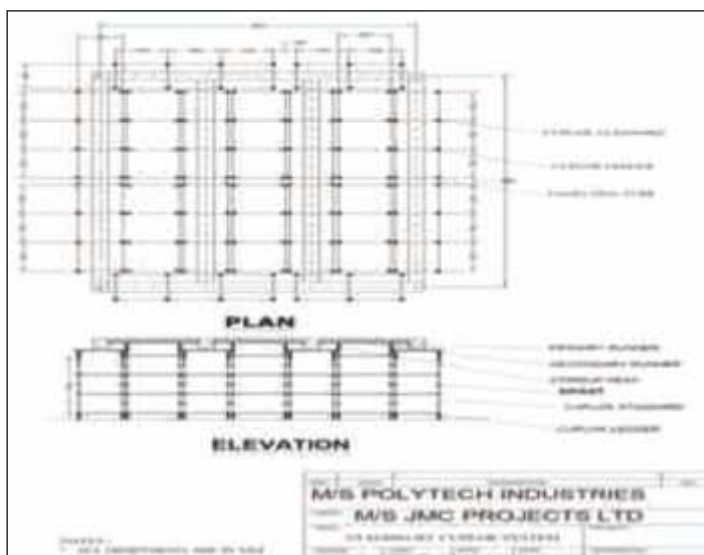
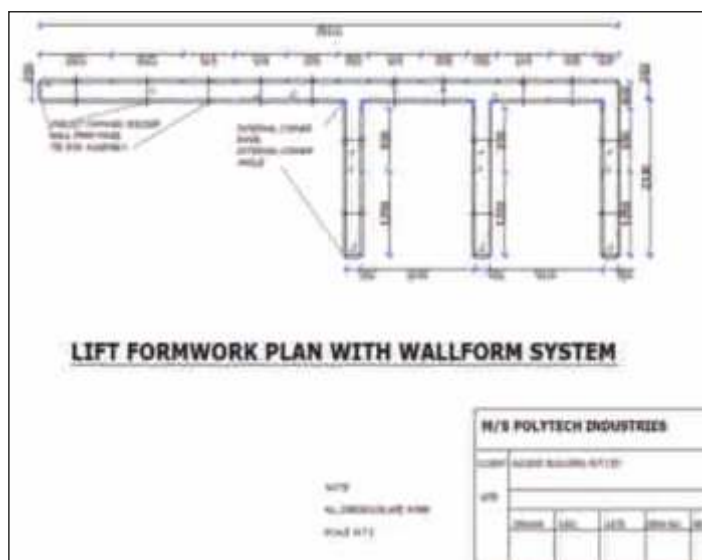
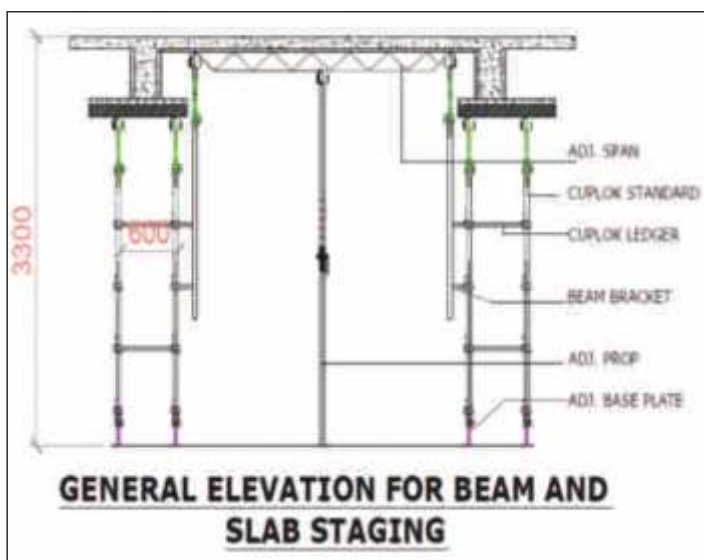
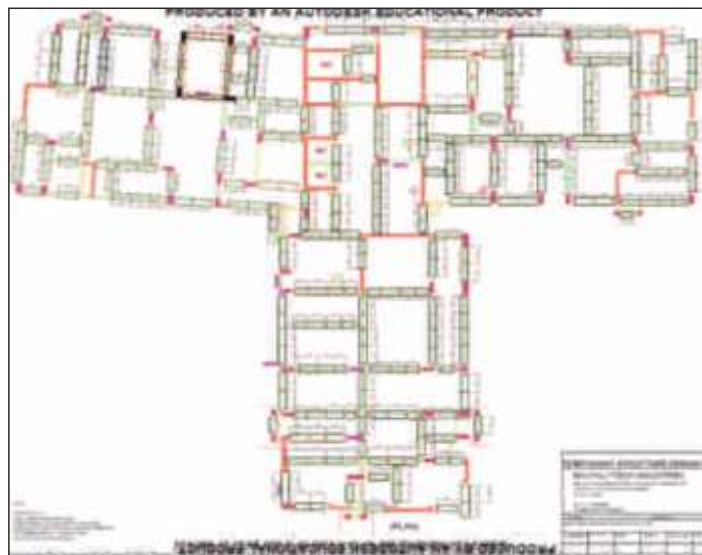
### Bracing and Tying-in

All scaffold require adequate bracing and tying-in. No ties should be removed without adequate supervision. If necessary the prior fixing of alternative ties or bracing should take place to ensure continued safety of the scaffold.



## CUSTOMISED SOLUTION & DESIGN CENTRE

Engineering expertise with vast experience of over thousands of projects aid **POLY-TECH** to provide Site-oriented planning including customised solutions for our esteemed clients.





## POLY-TECH Industries

*The Formwork & Scaffolding People*

### Head Office

802-803, Gopal Heights, D-9, Netaji Subhash Place, Pitampura, New Delhi - 110 034

Tel : 011-4729 2233/34/35/36, Fax : 011-4729 2237

E-mail: [info@polytechindustries.in](mailto:info@polytechindustries.in)

Website: [www.polytechindustries.in](http://www.polytechindustries.in)

### Works:

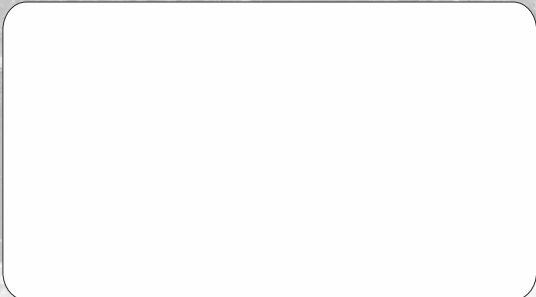
- E-59, Sonapat Industrial Area, Sonapat (Haryana) - 131 001
- M-4, Sonapat Industrial Area, Sonapat (Haryana) - 131 001

### Branch office

- Delhi & NCR • Bangalore • Hyderabad • Mumbai



**European Technology  
Associates**



**POLY-TECH DIRECT**



**CALL : 011-47292233/34/35/36**

**OR MAIL US**

**[info@polytechindustries.in](mailto:info@polytechindustries.in)**