

MAX ALUMINIUM FORMWORK







INNOVATIVE DESIGN ASSURING QUALITY EXCELLENT SERVICE

UNIMAX INTERNATIONAL





Mr. Rajesh Sharma CMD



Mr. Nitin Sharma MD

We embarked on a Mission Journey 28 years ago in 1989 with a vision to provide the best of the global technologies for Indian Construction Industry. It may be easier to stick to the conventional construction methods, while the industry has glittered with glorious changes the world over. We took this challenge by adopting through our innovative greener techniques to develop an indigenous, yet affordable and viable, import substitute for the Indian Construction Industry, of course, beneficial to the urban environment.

The Max formwork has been consistently striving to work towards the requirement of its customers while bringing the innovative solutions with the emerging trends in the construction industry with its experienced and dedicated personnel at its R & D center. We believe there is always an opportunity to bring automation and better system such as Robots, improvised welding system and new technologies from other developed industrial countries. With the same vision, we are soon going to introduce Stir Fabrication Welding Techniques to Indian Construction Industry which is being used by the Aerospace Industry globally that will set the benchmark in India.

We also think beyond tall buildings hence considering the future of construction development which gives us a wider perspective and fresh ideas when it comes to design the living spaces such as condos, skyscrapers, skylines and office spaces being built in major cities around the world.

Architects and designers have given us exciting ideas which will define the way we live and the kind of living that the next generation will experience. More importantly, as these buildings are constructed, experts should ensure that every material and every action taken in the construction process will minimize the hazards of environmental damages and that's where MAX Formwork has expertise to bring the Innovative Solution at your doorstep to change the future of construction Industries.

MAX GROUP OF COMPANIES

UNIMAX INTERNATIONAL

MAX INDUSTRIES

MACO OVERSEAS

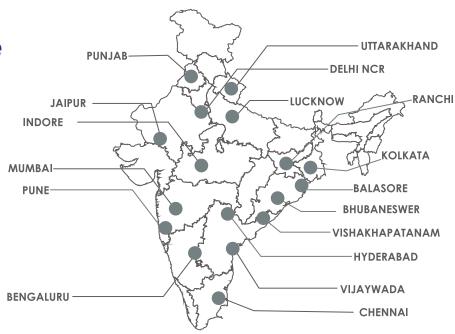
UNIMAX SCAFFOLDING

MAX SCAFFOLDING SYSTEM

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PAN India Presence of MAX Group



Max Group Factories

Plant No 1 - Plot No. 1&10, Sector 7, SIDCUL, Integrated Industrial Estate Rudrapur, Uttarakhand (India)

Plant No 2 - 1291-92, HSIIDC, Industrial Area, Rai, Sonipat, Haryana (India)

Plant No 3 - 1293-94, HSIIDC, Industrial Area, Rai, Sonipat, Haryana (India)

Company Milestones

We believe in kaizen, hence continuous learning helps us to adopt the best industry practices to provide best of the services to our customers. It has been a great journey while providing State-of-the-art services to various customers while setting up standards for the Industry with our best practices developed over a period of time.

1989	Establishment of Max Group
1990	Starting of Forging and casting of scaffolding components
1993	Starting Export of Scaffolding components to Middle East
1997	Starting of manufacturing Steel Formwork system
2004	Establishment of hiring division of Formwork material in India
2009	Developed Max Aluminium Formwork system
2010	Establishment of Mass Aluminium Formwork Production system for monthly capacity of 20,000 Sqm
2011	Completion of First formwork order of 11,000 Sqm Aluminium Formwork system
2012	Completion of second plant for the manufacturing of different Formwork system
2014	Developed MaxDeck Formwork system
2015	Developed MaxTable Formwork system
2016	Initiated R&D on automatic climbing system
2019	Protection Screen for highrise structures
2020	Introduction of Robotic Welding & Automation



About us

Unimax International is an established environment friendly organization in Aluminium Formwork System serving the construction industry with updated and customized solutions.

An ISO 9001:2015 certified company having two state-of-the-Art manufacturing units each in Sonipat, Haryana as well as in Pantnagar, Uttarakhand are well supported by in-house Research & Development activities.

Unimax with continuous innovations using latest technology and System, highly professional project support team committed to provide Formwork System which is not only of high quality but also enables our client to achieve faster slab cycles at competitive prices. We expertise in designing the Formwork system by using high end software such as Staad, Revit and AutoCAD to meet our specific requirement. Today our satisfied clients include some of the reputed corporate builders Developers, and Construction Companies. As a reflection of our Quality, after Sales Services and Customer support, we have been able to retain our client's faith in getting their repeated orders.





Max Aluminium Formwork is hand – set panelized Formwork system in which slab, Beam, Column and walls can be casted at one go which can make the unit a composite structure. Specially designed easy to handle Pre engineered light weight Aluminium Forms. Rapid construction of multiple units of repetitive type structure is done by semiskilled labor. The number of Props defined by the system ensures safety and quick assembly.

Why should you Choose Max Aluminium Formwork System



Salient Features of Max Aluminium Formwork

Latest International Technique	We use latest software for designing and drawing such as Staad pro, Revit and Autocad which gives real time design solution as compared to old conventional designing method. We take utmost care for the safety of Formwork and structure in our designs.
High end Finishing	Since Components of Max Aluminium System are manufactured from extruded Aluminium alloy hence tolerances in the dimension are not more than 2mm. The smooth surface of Aluminium gives excellent concrete finish hence plaster activity could be avoided.
Easy Erection	Easy assembly and zero assembly error makes the system fast due to which there is reduction in the timings of slab cycle.
Reduced slab Cycle and faster completion	By using Max Aluminum formwork all shear walls, columns, core walls, slab and beams can be cast together resulting in less days of slab cycle.
Crane free movement	Due to the lighter weight of the components the formwork can be shifted from one floor to another manually without using the crane.
Less inventory and economical	In MaxAluminum Formwork system slab and beam can be stripped after three days (Based on the concrete strength) leaving behind the props head together with the Prop. Walls and Columns can be deshuttered after Twenty four hours. Early stripping of Max Formwork reduces inventory and parts handling due to which there is the great reduction in cost.
Saving Human Labour	Due to the replacement of blockwork with RC wall in the structure no labor is required for blockwork and plastering.
Safety of Workers	The stripping system allows parts to be recovered without falling down contributing to the workers' safety. The number of the props defined by the system ensures the quick and safe assembly.
High repetition and durability	Since all the components of Max Aluminium are getting manufactured by using state-of-the-art technology and very high quality of the Aluminium alloy 6061 has been used. Due to the high tensile strength of the alloy it yields after very high repetition (250 times).
No requirement of Scaffolding	The brackets provided at the outer periphery of the structure ensures the safety of the workers and eliminate the requirement of outer facade scaffolding.
Quality and testing	Each and every component of Max Aluminium Formwork system has been tested in the state of the art laboratory at IIT Chennai. With our R&D department continuously researching for newer and better products we will maintain our leading position as leader of the Aluminium Formwork system against our competitor.
Good resale value	The resale value of Aluminium is much higher than that of Steel.
Eco-Friendly	Max Aluminium Formwork is all Aluminium and 100% wood free which gives the superior finish to the concrete.

System Advantages

Comparison Between Conventional Shuttering and Aluminium Shuttering

S.No.	Characteristics	Max Aluminium Formwork	Conventional Formwork
1	Material	Engineered Aluminium alloy	Plywood, Timber, MS
			Sheet
2	Cycle Time	7-9 Days	13-18 Days
3	Able to Pour walls ,Column, Beam and	Possible	Not Possible
	Slab at one lift		
4	Strike Slab formwork without disturbing	Possible	Not Possible
	the Props		
5	Eliminates the requirement of Block work and Plaster	Possible	Not Possible
6	Requirement of Crane	Not Required	Not Required
7	Requirement of Skilled worker	Not Required	Required
8	Recycle Value of the Materials	Very High	Low
9	Safety at the periphery	Outer Brackets integrated	Scaffolding is required
		with the system eliminates	at the outer Periphery of
		the requirement of	the structure
		Scaffolding	
10	Environmental Friendly	Yes	No
11	Cost Effective	Economical	No
		Short construction period does reduce the durations of the project Which facilitates fast delivery	
		Reduces the over heads cost by 40% Less waste in site construction support system is simple and clean.	



System Advantages

We use Aluminium alloy 6061 for the manufacturing of our Panels. Aluminium alloy 6061 is one of the most extensively used of the 6000 series aluminum alloys. It is a versatile heat treatable extruded alloy with medium to high strength capabilities. 6061 is a precipitation-hardened aluminium alloy, containing magnesium and silicon as its major alloying elements.

Key Properties

Typical properties of aluminum alloy 6061 include:

- Ÿ High strength
- Ÿ Good toughness
- Ÿ Good surface finish
- Ÿ Excellent corrosion resistance to atmospheric conditions
- Ÿ Good corrosion resistance to sea water
- Ÿ Can be anodized
- Ÿ Good weld ability
- **Ÿ** Good workability
- Ÿ Widely available

Applications

Typical applications for aluminum alloy 6061 include:

- Ÿ Aircraft and aerospace components
- **Ÿ** Marine fittings
- **Ÿ** Transport
- **Ÿ** Bicycle frames
- Ÿ Camera lenses
- Ÿ Driveshafts
- Ÿ Electrical fittings and connectors
- **Ÿ** Brake components
- Ÿ Valves
- Ÿ Couplings

Chemical Compositions of 6061					
Component	Wt. %	Component	Wt. %	Component	Wt. %
Al	95.8 - 98.6	Mg	0.8 - 1.2	Si	0.4 - 0.8
Cr	0.04 - 0.35	Mn	Max 0.15	Ti	Max 0.15
Cu	0.15 - 0.4	Other, each	Max 0.05	Zn	Max 0.25
Fe	Max 0.7	Other, Total	Max 0.15 2		

Mechanical Properties of 6061						
Material	List	Unit	Values	Used		
	Density	Kg/m³	2710			
Aluminium	Ultimate Tensile stress	Мра	265	Used as a stiffener for Wall		
6061-T6	Yield stress	Мра	235	and Slab Panel and for Main		
	Young's Modulus	Мра	68900	and End Beam		

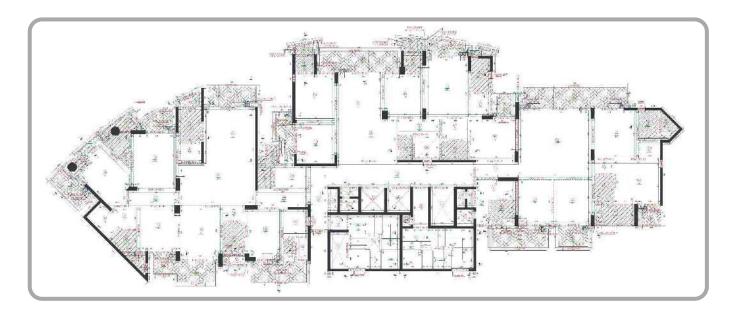
Mechanical Properties of Steel					
Material	List	Unit	Values	Used	
	Density	Kg/m³	7850		
Mild Steel	Tensile stress	Мра	220-250	Used for Props	
Fitta Steet	Allowable Bending stress	Мра	132	•	
	Young's Modulus	Мра	200,000		

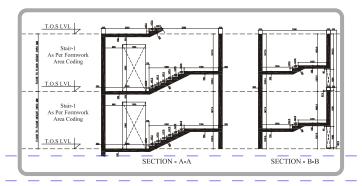
Technical Competency and Design Solution

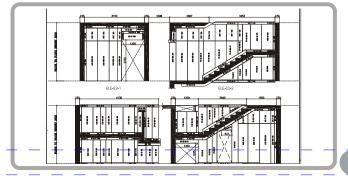
At Maxformwork our first and foremost motto is the satisfaction of our esteemed customers. In order to achieve that, we make it sure that we understand the needs and requirement of our customers in every respect and provide with the **best possible and cost effective solution** to them across the Industry vertical and that's the way of our working. This is the reason why we are one of the reputed manufacturers and suppliers of Aluminium formwork system. Due to our unmatched quality and constant site support we get the repeat orders from our clients. Max Formwork offers wide range of services starting from Formwork AutoCAD drawing Staad model of design, Deshuttering calculation, Reproping calculation/ Backproping calculation and consultancy services emphasizing on residential and commercial building.



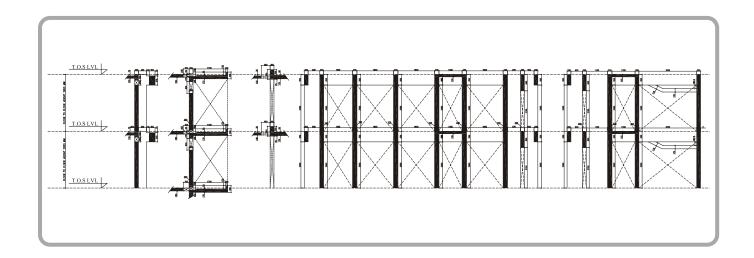


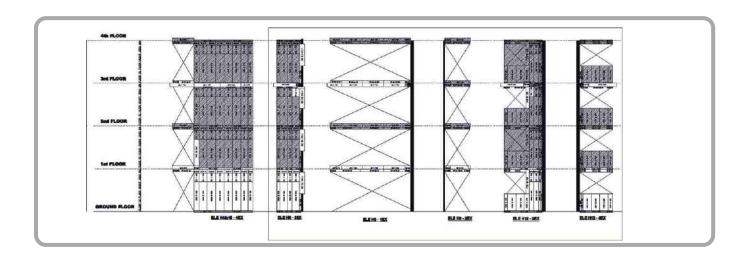


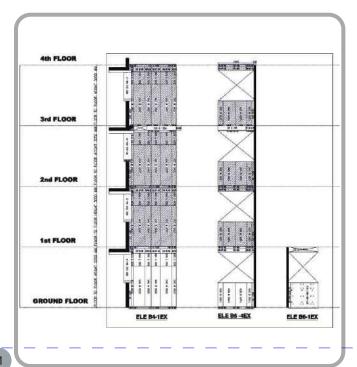


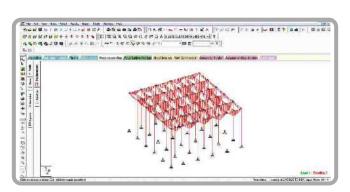


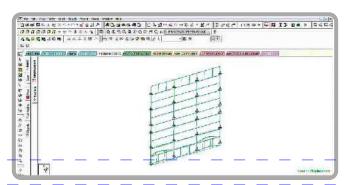
Technical Competency and Design Solution















Closed Staircase



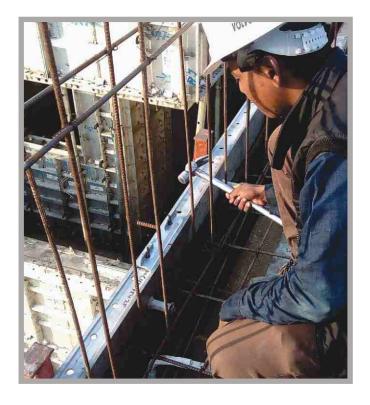
Circular Column



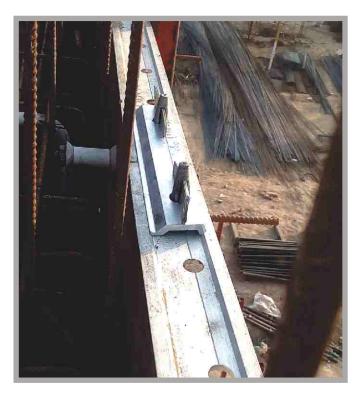
Rectangular Column



Retaining Wall

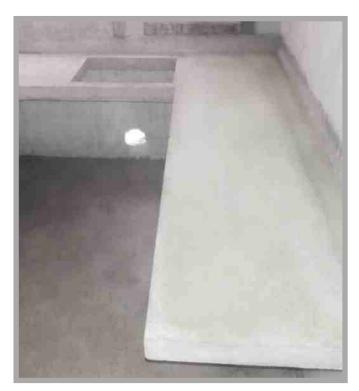


Cornice in Formwork

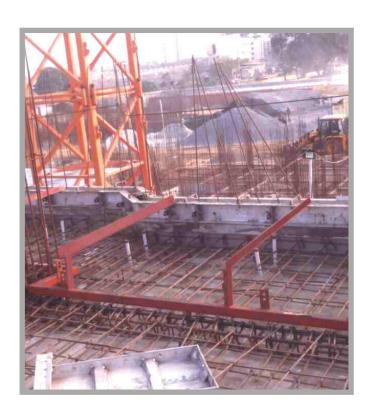


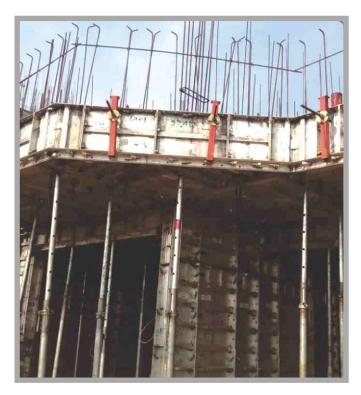
BKS Kicker Alignment





Kitchen Slab





Balcony Sunken Profile





Slab Attached Bracket





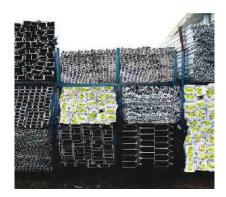
Wall Attached Bracket

Manufacturing Capacity



Max Formwork systems yearly produce 2,20,000 Sqm at Aluminium Formwork facility located in Rudrapur, India. We observe the utmost care of the quality and timely delivery by using advanced machines, skilled manpower and latest technology software used by the best of the Industries across the globe.

Manufacturing Process



Raw Material Stacking



Checking of Raw Material



Project Planning Control room

Manufacturing Process



Cutting of Sections by Automatic Angular Cutting Machine



Hole Punching by PLC control Automatic machine



Robotic Welding of Panels



MIG Welding of Special Profile



Sheet Cutting Process by CNC Machine



CNC Machine for special Profile



Quality Checking



Quality Standard Room



Coating Process



Stacking of Materials

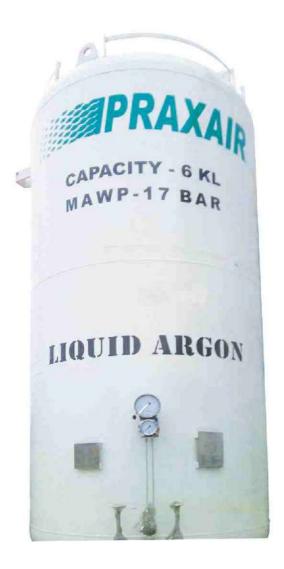


NDT Check of Welding



Testing of Product at IIT Chennai

Quality Assurance



We use basically two types of welding in our product.

GMAW

GMAW stands for gas metal arc welding. This is also commonly referred to as metal inert gas welding, or MIG welding. In GMAW the electrode is a roll of wire which the welder feeds out of a 'gun' to the work piece. The speed of wire could be controlled, so that long welds could be achieved without stopping to replace a rod. The gun also feeds out an inert gas such as Argon to displace oxygen at the weld site. This is a clear welding and there is no slag to chip away.

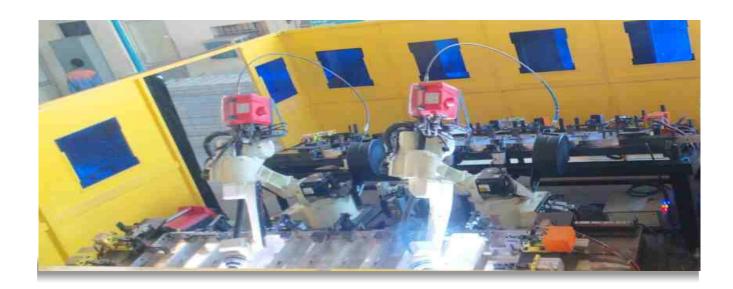
TIG Welding

TIG stands for tungsten inert gas welding. Like GMAW, TIG welding uses a tank and inert gas to shield the weld. In both GMAW the electrode is consumed by heat and becomes part of the weld. TIG stands out in that the tungsten electrode carries the arc, but is not consumed. Tungsten withstands the heat of welding. It is usually reserved for specialized types of welds. It is used at the corner portions of our panels.

As explained above in both type of welding, Argon gas has been used for protecting the weld from oxygen. We use 99.99% argon gas which we purchase from Praxair the USA based company.



Quality Assurance



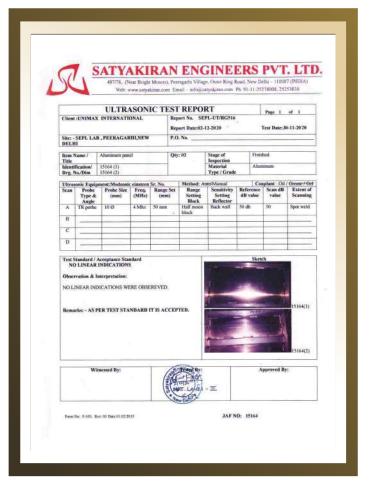
The Robotic machines give us the seamless welding with excellent quality.



We check the quality welds in-house first with digital gauges. It includes visual inspection and measuring throat thickness, length of weld and leg length.

Apart from that we also conduct NDT test on our weld for reassuring the quality.





NDT certificate of Welding

Mockup At Plant



Setting of Wall Panel



Setting of Slab Panel



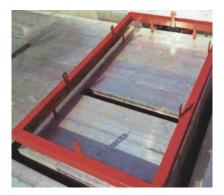
Checking of Slab Corner



Fixing of Waler in Column



Fixing of Waler in Wall



Fixing of Toilet Sunken Portion



Fixing and Alignment of Balcony



Fixing of Door Spacer



Fixing of BKS for Kikcer Alignment

Mockup and Room wise packing 100% mockup at our plant is backbone of our Formwork system. We make sure that not even a single hole should be drilled at site. All the alignments and fitment is getting checked at the mockup. Apart from that we do room wise packing of our components. The slab and wall components packed in the different pallets which gives the ease of installation.

Support at Site





We at Maxformwork strictly believe in safety and quality first. Our competent site engineers make it possible at our different project sites. We train the site engineers, foremen and supervisors regarding the efficient and safe use of our formwork system. We also depute our site engineers for the first two pours so that they could personally supervise the work until the site team gets comfortable and proficient with the system.







Material	Aluminium 6061 - T6
Specifications	600(W)X2400(H)
	500(W)X2400(H)
	450(W)X2400(H)
	300(W)X2400(H)



Deck rance			
Material	Aluminium 6061 - T6		
Specifications	1200(L)X600(W)		
	1200(L)X500(W)		
	1200(L)X400(W)		





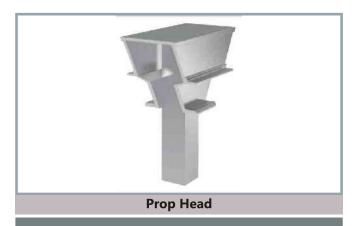




Connection between two wall panel.







Used to join the beams together (Middle beam or End beam), the pipe support will be placed under the prop head.



Used to join the prop heads with the beams (middle and end beam)

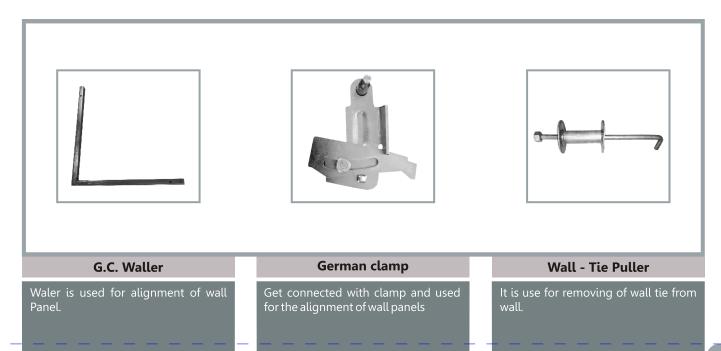
1		Supporting props				
	Outer member made from 60.3mm OD & Inner member made from 48.3mm OD M.S. Pipes.					
	Height in mtr.					
	Prop	Closed	Extended			
	OP	1.10	1.75			
	1P	1.50	2.75			
	2P	2.00	3.25			
	3P	2.00	3.75			
	<u>4</u> P	3.00	4.65			



As a substitute of a scaffolding system, these wall platforms will be fixed on the concrete and will be used as working platform for workers.



As a substitute of a scaffolding system elevator platform will be fixed on the concrete wall and will be used as working platform for workers.





Wedge & Round Pin

The round pin and wedge pin will be used to join the wall or slab panels together.



Bolt, Nut And Washer

This Accessories will be used as an embedded anchor in order to fix kickers on the concrete surface during its installation.



Long Pin

The long pin and wedge will be used to fix the joint pin with the prop head and beams (middle beam of end beam) together.



Wing Nut

A **wingnut** or **wing nut** is a type of nut with three large metal "wings", so it can be easily tightened and loosened by hand without tools.



Panel Puller

This accessories is used to remove the panel after casting.



Wall Tie

Wall tie used to tie the wall panels and plays the vital role during the concreting.



Hole Bari

Hole bari is used to align the holes of the Panels.



Tie Rod

Tie rod is used to connect the waler with the Panels.



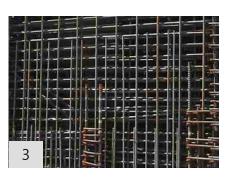
L pin

Used for the connection between Waler and Wall panels.

Setting Process































Setting Process



















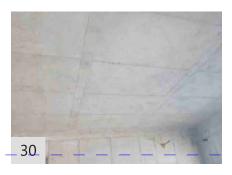




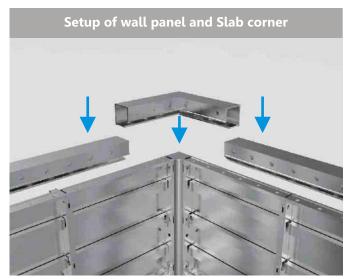


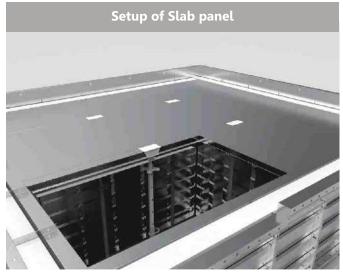


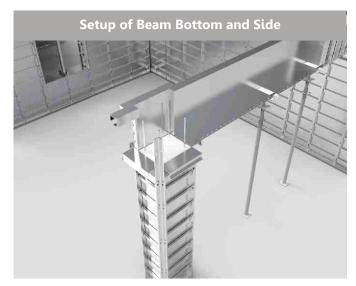


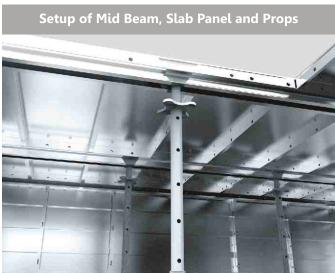


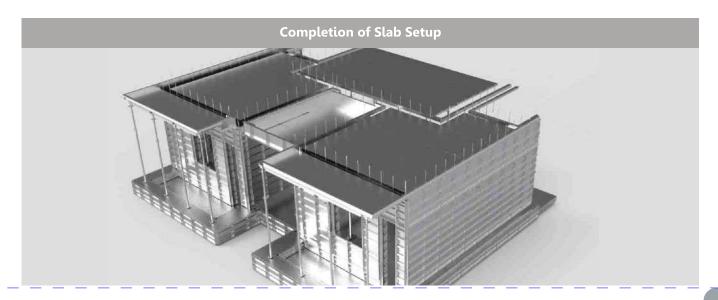
Installation Setup



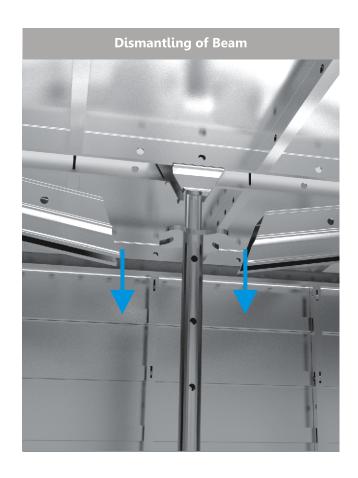




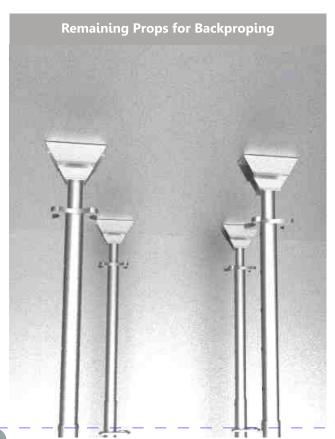


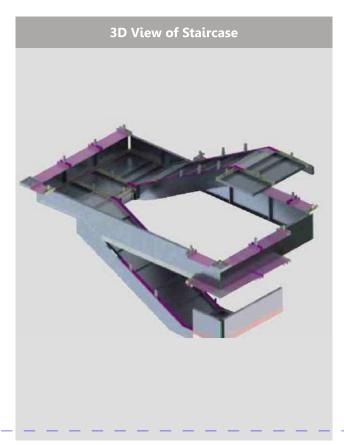


Deshuttering Process













Appreciation Letter This is to certify that M/S Unimax International has successfully supplied, erected and commissioned "Max Aluminium Formwork System "at our "Godrej Nurture" — Electronic city, Bangalore. We sincerely appreciate the hard work put by your company and how involved you are personally to ensure that Mock Up of every Lot is erected before it is supplied to us and all care is taken to make sure they reach us on time. We can always rely on your services because we know even if there is any issue, you will solve it. We look forward to doing business with you and your company for many years to come and will also recommend Ms Unimax International in the industry. A little more flexibility on payment terms with reputted clients like us will give great pleasure in being associated for future endeavour. We wish M/s Unimax International all the best for their future endeavour.



































Appreciations









Appreciations









Appreciations













This is to certify that

UNIMAX INTERNATIONAL

Works: Plot No. 1 & 10, Sector - 7, Integrated Industrial Estate, Pant Nagar, Rudrapur - 263 153, District Udham Singh Nagar, (Uttrakhand), India Head Off: Plot No. 312, G -21, Sector - 7, Rohini, Delhi, (India)

has been assessed by SGC and found to comply the requirements of

ISO 9001: 2015 Quality Management System

For the following activities:

Manufacturer of Aluminium Form Work, Table Form Work, Drop-Down System, Aluminium Fabrication, Scaffolding and Engineering Goods.

Initial Date of Certification: Not Applicable

Current Date of Certification: 24-Jan-2019

Date of Expiry: 23-Jan-2022 (Note: if filled surveillance mark is not present this certificate is inva



1" Surveillance Audit Jan 2020

2rd Surveillance Audit Jan 2021

Certificate Number: SG/XX - IX/01 - 996

ANZSIC Code: C - 2819



SG Certifications

E - 23, Sector - 27, NOIDA - 201301 (U P) Ph: 9711072788





Registry Information can be found at: www.sgcertifications.com

Asia Pucific Quality Organization is an autonomous, non-political, non-profit, scientific & technical organization domiciled in Asia Pacific region, incorporated in Philippines.

This certificate remains the property of SC Certifications Private Limited. Must be returned if certificate is withdrawn.

Testing & Certification

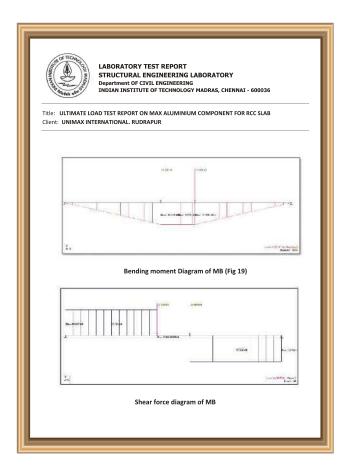


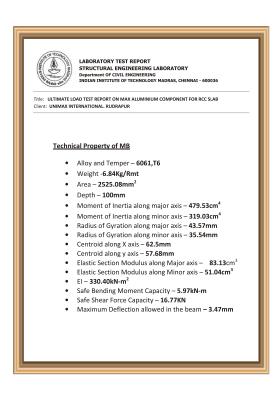


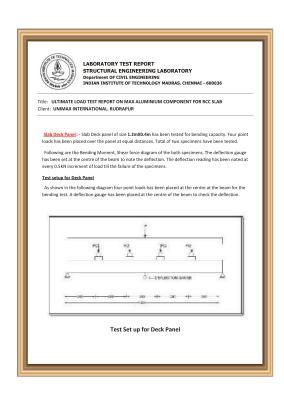


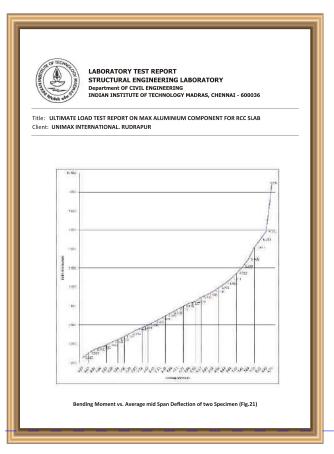


Testing & Certification



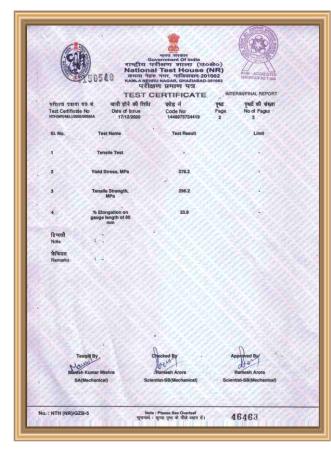


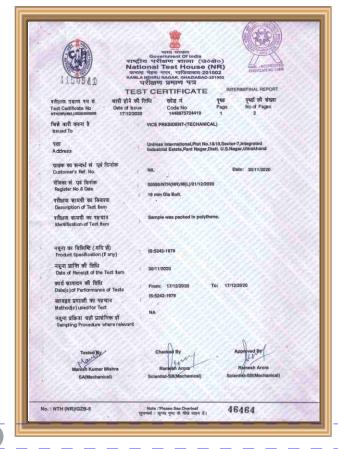




Testing & Certification









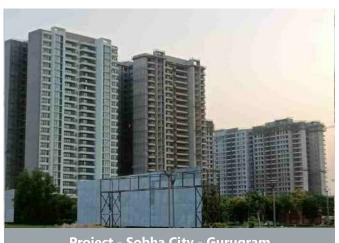




Project - Godrej - South Estate - Okhla







Project - Sobha City - Gurugram



Project - Godrej - Meridien-Gurugram







Project - Godrej - Habitat, Gurugram































Project - Pyramid- Affordable Group Housing-Gurugram



Project - SOHO-Misty Heights, Noida,



Project - TATA Housing - New Heaven - Bahadurgarh





Project -ELITE NOIDA Golf Green















Project - Mahagun Meadows, Noida



Project - Tata Housing, Bajghera, Gurgaon





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Project - Hombale - CRPF Campus Kadarpur, Gurugram





Project - Godrej Woods 43, Noida





Project -Sai Construction- Godrej Nurture, Bangalore



Project - Sobha-Azim Premji University, Bangalore



Project - Star worth-Ajmera Lugaano, Bangalore



Project - Assetz - Earth & Essence, Bangalore



Project - Assetz -leaves-Lives, Bangalore



Project - Assetz-Soul & Soil, Bangalore





Project - Keya Homes-The Green Terraces, Bangalore











Project - SVS- My Homes Twitza, Hyderabad





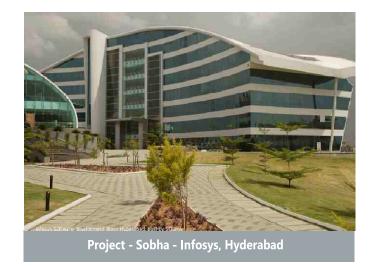
Project - Godrej- Royalewoods, Bangalore





Project - Metro Buildwell - GAR Laxmi Infobahn, Hyderabad





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Project References: Western India













Project References:Western & Eastern India













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Our Prestigious Clients





























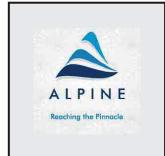




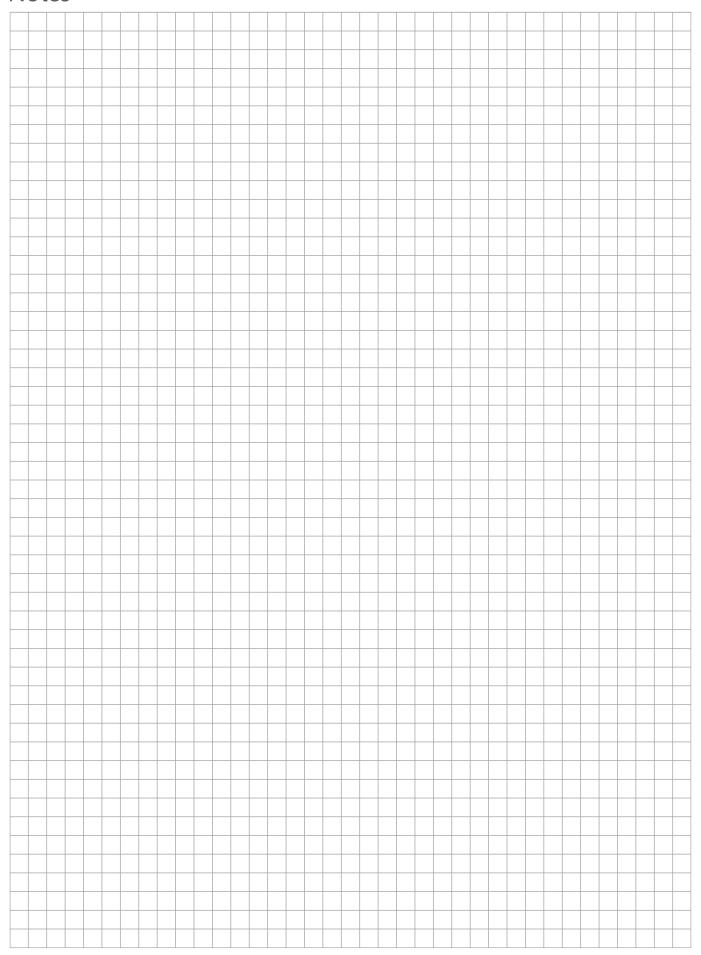








Notes





UNIMAX INTERNATIONAL

Works:

Plot No. 1&10, Sector 7, SIDCUL, Integrated Industrial Estate Rudrapur, Uttarakhand (India)

Mob: +91 9759003519

Head Office

Pocket G-21, Plot No 312, Rohini Sector - 7

New Delhi- 110085

Mob: +91 9650233944

Regional Offices RAI (Haryana)

Plot No. 1291-92 & 1293-94, HSIIDC Industrial Area, Rai Sonipat, Haryana -131029.

PUNE (Maharashtra)

59/3, Opp. Ambekar Hotel, Pisoli Under Bypass Road, Undri Tal - Haveli, Pune Maharashtra - 411060

Bangalore (Karnataka)

Plot No.248, Obadenahalli Industrial Area, Doddaballapura 3rd Phase, Bangalore-561203

Mumbai (Maharashtra)

Plot No 149, Old Khopoli Road, Ajivali Village, Panvel, Navi Mumbai - 410206

Hyderabad (Telangana)

Plot No. 44/ Part 45 & 46, Gopanpally Village, Serilingampalle Mandal, Ranga Reddy, Dist. Hyderabad (TS)-131029.

Vijayawada (Andhra Pradesh)

Plot No. 241, Auto Nagar Industrial area, Mangalagiri, Guntur, Distt. Andhra Pradesh -522503.

Sales: +91 9810298430, +91 9717392200/01 **Direct**: +91 9810598450, +91 9810598430 **E-mail** - info@maxformwork.com, info@unimaxformwork.com, nitin@maxformwork.com

Website - www.maxformwork.com