



ALUMINUM FORMWORK AND ALUMINUM BEAM

SERVICE PROVIDER OF INTEGRATED
ENGINEERING MATERIALS
ENGINEERING SUPPLIES ONE-STOP SERVICE

HUBEI ADTO ALUMINUM FORMWORK MANUFACTURING CO.,LTD

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GLOBAL SCAFFOLDING AND
FORMWORK MANUFACTURING CENTER

ABOUT US

ADTO GROUP is a leading manufacturer of formwork, scaffolding, steel & aluminum products, etc. Since 1998, the group has developed 30+ subsidiaries and 20+ manufacturing plants. We have the flexibility to tailor programs to reach our customer's unique requirements. Word of mouth from customers is a testament to our service.

HUBEI ADTO ALUMINUM FORMWORK MANUFACTURING CO., LTD., as a professional plant of ADTO GROUP for aluminum formwork system, is located in Hubei Province. It covers an area of 800,000 square meters, 12 production lines that ensure monthly output of at least 50,000 square meter. Till now we have exported to South east Asia (namely Philippines, Thailand, Vietnam, Sri Lanka), South & North America (Uruguay, Mexico, Canada), Africa and Middle East countries.



Aluminium Formwork System is a modern construction system for forming cast-in-place concrete structure of a building. It is also a system for scheduling and controlling the work of other construction work such as steel reinforcement, concrete placement and mechanical and electrical conduits.

ADVANTAGES

01 LIGHT WEIGHT

Made of aluminum alloy 6061-T6, its average weight is around 25kg/m², easy to be carried manually.

02 FLEXIBLE OPERATION

The system can be lifted by tower crane as a whole, or dismantled and installed by labors. It allows casting of wall, beam, slab and staircase monolithically or by two stages.

03 LONG REUSING LIFE

The panel is made of extrusion profiles which is high strength and not easy to be deformed or oxidated, to make sure the reusing time reach up to 300 times.

04 SAVE LABOR COST

Panels are connected by pin & wedges, un-skilled labors can install and dismantle the system by hammers only.

05 SHORTEN CONSTRUCTION PERIOD

Early-stripping application improve the system cycle and save cost for users. After pouring of concrete, wall panels could be stripped in 12 hours and slab panels 24-36 hours, thus one floor can be finished in four days only.

06 IMPROVEMENT OF WORK ENVIRONMENT

The system fabricated at factory and requires only installation at site keeps the work environment clean and safe.

COMPARISON OF DIFFERENT FORMWORK SYSTEM

Description	Timber Formwork	Light Duty Steel Mould	Heavy Duty Steel Formwork	Aluminium Formwork
Formwork material	12-18mm plywood	2-3mm steel plate	5-6mm steel plate	4-8mm aluminium plate
Formwork thickness	12-18mm	55mm	80-85mm	4mm
Formwork weight	10.5kg/sqm	35-40kg/sqm	80-85kg/sqm	20-25kg/sqm
Load Capacity	30KN/sqm	30KN/sqm	60KN/sqm	60KN/sqm
Recycle use time	5	100	250	300
Difficulty of work	Easy	Medium	Difficult	Easy
Cost of maintainance	Low	Low	High	Low
Construction efficiency	Slow	Slow	Fast	Fast
Labour requirement	Need skillful carpenter	Skillful labour not required	Skillful and trained personal	Skillful labour not required
Quality of concrete surface finishing	Rough surface, low quality	Rough surface better than timber	Good finishing	Good finishing
Recovery value (Crap value)	Lowest	Low	Medium	High
Heavey machinery requirement	None	None	Reruired full time	None
Enviromental	Not enviromental friendly, produce construction waste	Less construction waste	Enviroment friendly	Enviroment friendly

REMARK:

This comparison made based on 30 floors of construction of high rise building and mass housing project which will use the formwork in regards of high repetition.

ALUMINUM FORMWORK SPECIALTIES

OUR ALUMINUM FORMWORK

Material	6061-T6 aluminum alloy
Panel thickness	4mm
Frame height	65mm
Average weight	22-25kg/m ²
Carrying capacity	60KN/m ²

CHEMICAL COMPOSITION

Element	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	other
Request	Min	0.4	/	0.15	/	0.8	0.04	/	/	balance
	Max	0.8	0.7	0.4	0.15	1.2	0.35	0.25	0.15	0.05 balance
Result(%)	0.62	0.4	0.19	0.06	0.89	0.08	0.07	0.01	0.02	97.65

MECHANICAL PROPERTIES

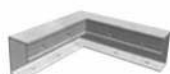
Properties	Tensile strength (N/M ²)	Yield strength (N/M ²)	Elongation (%)	Hardness	
				vickers	barcol
Request	285	265	10	13	/
Result	285	276	10	13	/

ALUMINUM FORMWORK COMPONENTS



WALL PANEL

Wall panel and Cylinder panel Components. Standard wall panel and non-standard wall panel are both used.



INNER CORNER

Main component which connect the panel of inner corner.



BEAM PANEL

Connect the wall panel and the top wall panel.



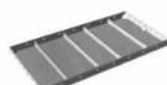
END OF WALL PANEL PANEL COVER

Shape like WE, and it was set on the beam.



PRE-EMBEDDED BOX

Used for reserving hole which can transfer the panel to next floor.



SLAB PANEL

Use for top wall and have both standard and non-standard type.



BEAM SLAB ARCH

Connect the wall panel and tower panel



MIDDLE BEAM

It's a beam for floor building and it was used for connect the wall panel when install the floor.



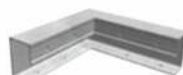
JOIN BAR

Supporting materials when using MB and EB for install the floor with props.



END BEAM

Connect the wall panel when in stalling it. It's the component for wall panel structure. It was installed at the end of the floor panel.



FLOOR INNER CORNER

Inner component for connect the wall panel and top floor panel.



FLOOR OUTER CORNER

Outer component for connect the wall panel and top floor panel.



WALL END PANEL

Component for the end of the wall panel. Forming the wall different type by panel to pressing one side or two as different angle.



FLOOR ANGLE PANEL

Connect the wall panel and helpful discharge the wall panel. It can be fastened with nut when installing



PROP HEAD

Connect the join beam when installing the floor panel. It's a beam panel for floor structure. It was installed between two floor panels. And it can unloading load for floor panel

ACCESSORIES

FORMWORK ACCESSORIES

TIE ROD

Code	Specification	Material
ADTO01PJCM0107	12mm*6m	Q235
ADTO01PJCM0108		45#
ADTO01PJCM0109	17mm*6m	Q235
ADTO01PJCM0110		45#



Washer Plate
0.57kg



Tie Nut
0.9kg



Wing Nut
0.28kg



Tie Nut
0.60kg



Steel Cone
0.615kg



Water Stop
0.48kg



Hexagonal Long Nut
0.21kg



PVC PIPE



Wedge and Pin
0.02-0.22kg



Steel prop
10-12kg



Flat Tie
0.2-0.8kg



Pull push PROP
20-25kg



Waler Coupler
0.61kg



Waler
50*50/40*60mm



Pvc Sleeve
0.3-0.4kg/m



Spacer
50*50mm/0.2-0.4kg

ALUMINUM FORMWORK TIE ROD SYSTEM



Assembling wall panel



Assembling column



Assembling end beam panels



Assembling slab panels



Assembling staircase



Binding rebars and
assembling wire&pipes

ALUMINUM FORMWORK FLAT TIE SYSTEM



Assembling flat tie



Assembling sleeve pipe



Fixed flat tie



Assembling inner&outer wall panels



Reinforce the bottom



Remove the flat tie



WHY USE ALUMINUM?

- Aluminum can be made into any shape we want
- Value maintain (recycling price can be 90% of the aluminum ingot)



SLAB



BEAM



PROP



WALL



COLUMN



STAIRWAY

THE PRODUCTION LINE



Material cutting



Welding



QC



Packing before delivery

◀ 01

02 ▶

◀ 03

04 ▶

◀ 05

06 ▶

◀ 07

08 ▶



Punching



Oil protection



Pre- assembling



Delivered by container



ALUMINUM BEAMS

ADVANTAGES:

1. Light weight
2. High strength
3. Corrosion resistance
4. High turnover frequency
5. Residual high
6. Average cost low

BELOWING MAIN SIZES WE DO

Code	Product Name	Size	Weight(kg/m)	Material
ADTO07LALX002	Aluminum beam	123*85mm	2.82	6061-T6
ADTO07LALX003	Aluminum beam	165*120mm	5.4	6061-T6
ADTO07XCML004	Aluminum beam	123*75mm	2.21	6061-T6
ADTO07XCML005	Aluminum double beam with wood	120*80mm	2.65	6061-T6
ADTO07XCML0046	Aluminum single beam with wood	167*127mm	4.99	6061-T6



ADJUSTABLE STEEL PROP

Material: Q195,Q235 Steel Pipe

Surface: Electro-galvanized, Pre-galvanized, Hot dipped, galvanized, Paint, Powder-coated



HEAVY DUTY PROP

Code	Min	Max	Internal Tube	External Tube
ADTO01ZCGC0023	1.8m	3.5m	48*2.0mm	60*2.0mm
ADTO01ZCGC0041	2.0m	3.6m	48*2.0mm	60*2.0mm
ADTO01ZCGC0004	2.2m	3.9m	48*2.0mm	60*2.0mm
ADTO01ZCGC0013	2.2m	4.0m	48*2.0mm	60*2.0mm
ADTO01ZCGC0042	3.0m	5.0m	48*3.0mm	60*3.0mm

LIGHT DUTY PROP

Code	Min	Max	Internal Tube	External Tube
ADTO01ZCGC0043	1.7m	3.0m	40*1.8mm	48*1.8mm
ADTO01ZCGC0044	1.8m	3.2m	40*1.8mm	48*1.8mm
ADTO01ZCGC0045			48*1.8mm	56*1.8mm
ADTO01ZCGC0046	2.0m	3.6m	40*1.8mm	48*1.8mm
ADTO01ZCGC0047			48*1.8mm	56*1.8mm
ADTO01ZCGC0048	2.2m	3.9m	48*1.8mm	56*1.8mm
ADTO01ZCGC0049	2.2m	4.0m	40*1.8mm	48*1.8mm
ADTO01ZCGC0050			48*1.8mm	56*1.8mm

PROJECT SHOW

