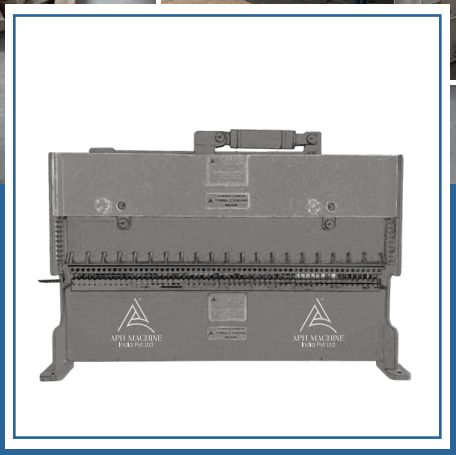
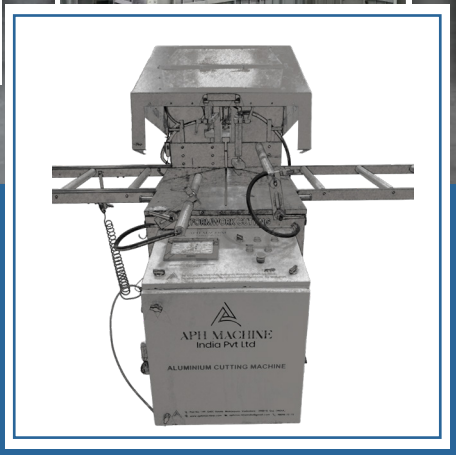
Aluminum Formwork Making Machinery









APH MACHINE
India Pvt Ltd

Delivering Excellence

About APH Machine India Pvt. Ltd.

APH Machine India Pvt. Ltd., a proud division of **Patel Engineering Works**, is a premier manufacturer of CNC Work, VMC Work, Horizontal Boring Work, aluminium door & window-making machine & equipment, and aluminium formwork processing solutions. **Since 1968**, with over **57 years** of innovation and expertise, we have been at the forefront of shaping the industry, setting new standards in precision and performance.

With APH Machine has 3 factories, which is located in Vadodara city in Gujarat, India. APH Machine blends advanced technology, expert craftsmanship, and unwavering commitment to quality.

Our mission is to empower industries with high-performance machinery, ensuring efficiency, accuracy, and durability.

Our Product Line

- CNC Double Head Any Degree Cutting Machine
- CNC Single Head Any Degree Cutting Machine
- Straight Cutting Machine (700MM)
- Hydraulic Punching Machine (60 Punch 3 Meter)
- Multi Head Slotting Machine (9 Head 3 Meter)
- Single Head Automatic Slotting Machine
- Shearing Machine (3 Meter)
- Friction Welding Machine

At APH Machine, we believe in building partnerships, exceeding expectations, and delivering unmatched service. Our promise is simple yet powerful.

"Delivering Excellence – Sincere Service, Unwavering Commitment"

Choose APH... Choose Innovation... Choose Excellence...

Hydraulic Punching Machine 3 Meter

The punching machine is used for the aluminium formwork 80-600mm C Panel and 100x100-150 IC profile holes punching, special fixture for 50 C panel is available per requirement.
The machine body is heat treated to eliminate internal stress and has sufficient strength and rigidity. The machine adopt high quality hydraulic station driven, the four-bar linkage mechanism ensures that the slider and the punching pins are simultaneously working.
The punching stroke adopts photoelectric control, which is easy to operate and has high precision. The punching pins is free of disassembly, so, the holes distance is easily to set without disassembling the punching pins, which features high production efficiency and easy operation.

▪ Hydraulic Punching Machine For Aluminium
▪ Formwork (Model :160T) - 3 Meter
▪ Slider Norminal Capacity : 1600KN
▪ Working Bench Lenghth : 3250mm
▪ Slider Stroke : 100mm
▪ Working bench height from the ground:800mm
▪ Max working pressure of hydraulic : 20Mpa
▪ Max punching holes : 60 nos
▪ Punching time : 5s (Aprx)
▪ Punch hole accuracy : Diameter 16mm±0.1
▪ : Hole distance 50mm±0.1

▪ Motor capacity : 15 HP -
▪ Machine size (L*W*H) : 3570*1700*2400mm
▪ Gross Weight : 10000KG (Aprx)
▪ Oil Tank Capasity : 160 Ltr.
▪ Double Acting Hydraulic Cylinder
▪ Electrical Control Panel







Multi Head Slotting Milling Machine (700mm)

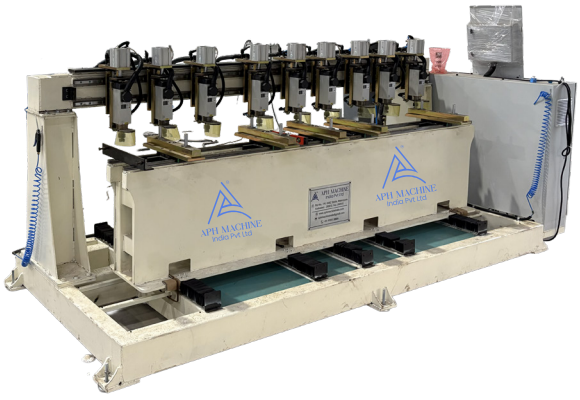
Suitable for all kinds of Aluminium Formwork Panel slots milling.

The clamping fixture is designed according to different shape of the workpiece. It can milling the IC, L, C profiles height from 100 to 600mm. Non standard profiles fixture can be customized. The special designed worktable make the machine suitable for both old aluminium formwork panels and new formwork panels. Each slots milling heads equipped with fine adjustment facilities, features very convenient for operation.

▪ CNC Formwork 9 Head Sloting Machine
▪ Model : Automatic PLC Control & HMI Display
▪ GDF46-18Z 3.5KW Spindle - 9 Nos.
▪ 380V Air Cooled er25
▪ 4KW Folinn VFD - 9 Set
▪ Router Cutter : 40mm - 9 Nos.
▪ Pneumatic Clamp - Declamp Assembly
▪ Cutting Movement - Servo Stepper Motor
▪ Power Supply : 380V 50Hz
▪ Working Air Pressure : 04 - 0 . 8 Mpa
▪ Milling of C-Shaped Profile : Width 100～500mm

▪ Milling L-Shaped Materials : 65mm Width
▪ Processing Material Length : 3000mm
▪ Min Distance Between Two Main
▪ Spindles: 150mm
▪ Milling Depth:
▪ 1.7-2.5m Ball Screw Arrangement
▪ Pneumatic Coolant Assembly - 9 Nos.
▪ CNC Feed Arrangement.
▪ Feed Table Size : 3000*1200mm





Straight Cutting Machine

The machine is suitable for all kinds of large aluminium formwork extrusion profiles 90 degree cutting, especial for 600mm aluminium formwork profiles straight cutting.

The cutting width is adjustable according to real requirement.

Saw blade feeding adopts linear bearing moving pair, the pneumatic feeding cylinder with hydraulic damping system which features smooth movement and excellent performance.

- Formwork Cutting Machine - 90 Degree
- Model : MMSH - 700 Automatic
- PLC Control & 7" HMI Display System
- Degree Range : 90` Degree Only
- 420mm Diameter Saws Bled
- Pneumatic Clamp & Declamp Operation
- Boll Screw & Servo Motor for Cutting
- Pneumatic Pump for Cutter Coolant
- Automatic Shut-Off Safety System
- 3 Phase 3 HP Motor
- All moving parts work on linear rail + vehicle
- Auto & Manual Mode of Operation

- Servo Feeder Roller Table - 3.5 MTR
- 3.5 MTR Roller Table with Stand - 2 No.
- 400mm & 600mm Roller Table Width

- Servo Stepper Motor Arrangement
- Rack & Penion Arrangement - 3.5 Meter
- Multi Function Size Input



Fully Automatic Aluminium Any Degree Cutting Machine (Boll Screw with Servo Stepper Motor Operated)

This machine used for the degree cutting all typys of aluminium formwork profile & Industrial profile.

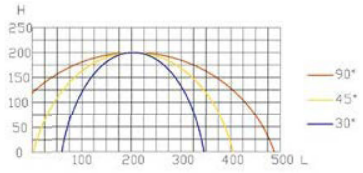
- Model: MMUPST 450,500,550 & 600
- Automatic Cutting height adjustment
- Servo Stepper Motor with Ball Screw Cutting Operation **(First time in the industry)**
- CNC Control Panel with 5" & 7" HMI Display, Siemens Controller
- Pneumatic Clamp De-Clamp Operation
- Italian lubricant technology Pneumatic Spray Valve for bur free cutting
- Compete high grade CI Casting structure with the head and rotatory base
- Machine equipped of Siemens electrical kit for best quality performance
- Back face support with pneumatic clamping cylinder gives optimum grip and best burr free cutting on profiles.
- Carbide Italian saw blade supplied with a machine to ensure quality cutting.
- Wide range of optional accessories available with the machine like roller track with tape fitted, DRO Monitor with 0000.000 digit display & Magnate scale length gauge & Servo stepper motor with rack & pinion arrangement for automatic length measurement

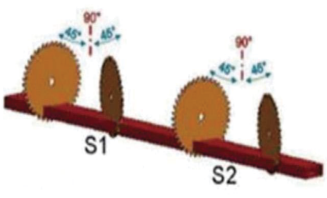
First time in the industry

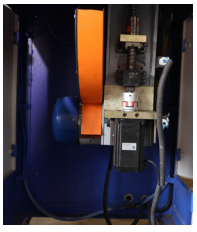
Technical Parameters

Power Supply	2.20-KW – 3.0HP, V415/220
Motor RPM	2800r/min
Working Air Pressure	5 to 7 Kgf/cm2
Pneumatic Cylinder Make	SPAC
Saw Blade Size	450mm / 500mm / 550mm / 600mm
Cutting Angle	45` 90` 45` (ANY) – Automatic with Ser
Cutting Width	225mm to 450mm
Cutting Height	125mm to 250mm
Overall Size – Automatic	H1700mm * W1100mm * L700mm
Saw Blade Make	Freud (Made in Italy)
Control Panel	CNC PLC Control & HMI Display
Cutting Coolant	Italian lubricant technology Pneumatic Spray Valve for bur free cutting
Main Body	Heavy Duty CI Body

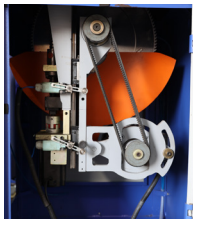


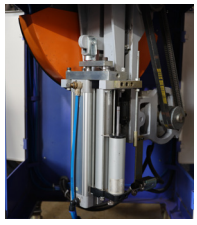












Friction Welding Machine

Friction Stir Welding (FSW) is a solid-state jointing process. FSW produces no environmental pollution before or during the welding process. It generates no fumes, dust, sparks, or harmful glare, and operates at low noise levels ensuring both operator safety and an eco-friendly working environment. With a constantly rotating tool with specially designed shoulder and pin is plunged into the work-piece, the frictional heat is generated by friction between the tool and welding material, causing the stirred material thermo plasticized. While the tool moves along the welding interface, plasticized material is swept from the leading edge of the tool and deposited at the trailing edge, thus realizing solid-state jointing of work-piece after mechanical forging process by the tool. It is an cost saving welding technology comparing to other welding technology.

▪ Joint form: welding seam docking, overlap, etc.	▪ Centralized lubrication system
▪ Size: length 3000 * width800 * height	▪ Power 15KW
▪ 500mm(within)	▪ X&Y - Axis Feed Rate : 0 ~ 10000mm/min
▪ Air Vacume System	▪ Vertical movement : 500MM
▪ Electrical Part:	▪ Z Axis Feed Rate : 0 ~ 5000mm/min
▪ Control system, drive system, electrical control	▪ X Axis Travel : 3000mm
▪ cabinet, handheldoperation unit	▪ Workbench : 3000*800mm
▪ Cooling System:	▪ Gantry Passing Height : 150-650mm
▪ Electric control system, air conditioning cooling	▪ Welding Thickness : 1～10mm thickness
▪ system, mixinghead and component cooling sys.	▪ Welding spindle speed : 0～4000 rpm





Shearing Cutting Machine

- Model: HVR - 330
- Max Cutting Thickness / Width: 3000mm,
- Shearing Capacity (In M.S) & (S.S): 3mm M.S & 2 mm S.S.
- Normal Rake Angle: 1.45" Degree,
- Rake Angle Range: 0.5 - 3" Degree,
- Stroke/Minute: 24-6 Minute,
- No. of Hold Downs: 15 Nos.,
- Blade: HCHCR 62 x 14 x 3000mm (D2)
- Hydraulic Pump : Gear Pump,
- Hydraulic Solenoid Valves : Yuken Make
- Back Gauge Range: Motorised Back Gauge,
- Power: 5 HP (1440RPM) (Havels / CG)
- Overall Dimension (L x W x H): 3200mm x 1500mm x 2000mm,



CNC Double Head Automatic Cutting Machine

Use for cutting the profile of aluminum door and windows, curtain wall and corner connector.

The feeding system adopts the imported linear guide pair with high accuracy and stability.

Two heads with cutting angles 90, 45, degrees are available.

Automatic feed and cycle run. Digital display with high positioning accuracy.

Touch screen and CNC control system, with high accuracy.

Cushioned pneumatic clamping by push button, saw blade rotates smoothly due to high accurate main spindle.

It is designed for milling the end of ribs of aluminum formwork U-plate, processing both ends at the same time, with high production efficiency and convenient operation.

TECHNICAL PARAMETER

Input voltage	3 P, 380V,50HZ
Input power	6 KW/7.1KW
Air pressure	0.5~0.8MPa/120psi
Air consumption	200L/min
Motor rotation speed	2800r/min
Cutting length	400~4200mm
Cutting length tolerance	+0.005
Cutting angles	90,45
Cutting width height	160*190MM(90) 160*130MM(45)
Saw blade standard	500/600 * 4.4 * 30xZ * 120
Overall dimensions	5700 * 1650 * 1520mm





Variable Angle Single Head Cutting Machine

High speed precision miter Saw machine (Digital display) is used for cutting aluminum profiles Digital display to show any angle cuttin (30-150 angle) from bottom side come out

TECHNICAL PARAMETER

Saw Blade	500mm/550mm/600mm/650mm
Power Supply	380V/50HZ
Input power	3 KW
Saw Blade	500/600/650/*4.4*30*Z120
Weight	650kg
Dimension	1500*1160*1850mm



Aluminium Formwork Single Head Slot Milling Machine

The machine is designed for aluminium formwork slots automatic milling. Automatic locating fixture, after product placed in the fixture, just press the start button or foot pedal switch, the machine will automatically press the workpiece and feed automatically for milling.



List of Customers

- Banco Aluminium Limited – Vadodara Gujarat
- Lakshmi Technologies - Bengaluru
- Shreeji International – Africa
- A. S. Industries – Bengaluru
- Bright Electricals – Daman
- Vikayath Cnc – Bengaluru
- V Furnita Pvt. Ltd. – Bengaluru
- Inovizhen Interior Private Limited – Gujarat
- Mitutech Solutions – Bengaluru
- Alich Industries Pvt Ltd – Surat Gujarat
- Oriana Façade – Surat Gujarat
- Sb Fab's – Bengaluru
- Elegant Designs – Mumbai
- Utsav Led Wall – Indore Mp
- Mudra Metal Works – Mumbai
- Nimisys Engineering – Bengaluru
- Pneumatic Vacuum Elevators And Lifts India Pvt. Ltd.
- Elegant Designs – Mumbai
- Ludhiana Glass House – Ludhiana
- Rishit Bunk Makers Pvt. Ltd. – Vadodara Gujarat
- Sujal Infra Pvt. Ltd. – Surat Gujarat
- Suraj Infra Llp – Surat Gujarat
- United Office Systems Pvt. Ltd. – Umbergaon Gujarat
- Almighty Aluminium Formwork Pvt. Ltd. – Rajkor Gujarat
- Building Comforts - Bhubaneswar – Odisha
- Asg Enterprises – Pune
- Space Management Systems India Pvt. Ltd. – Bengaluru
- Caterpillar Signs Pvt. Ltd. – Gandhinagar Gujarat
- Ss Solar Speciality – Ludhiana
- Om Ply Agencies – Hyderabad
- Micro Puftech Pvt. Ltd. – Gandhinagar Gujarat
- M/S. Gudhka Brother – Mumbai
- Alutronic Industries – Jhar Majri - Himachal Pradesh
- Varn Extrusion Private Limited – Surat Gujarat
- Ashiana – Kolkata
- Shraddha Modular Furniture Private Limited
- Rajeshri Enterprises – Jalna Maharashtra
- Kelwyn Door Cares India – New Delhi
- Hectafine Alusystems India Ltd. – New Delhi
- Hectafine Alusystems India Ltd. – Mumbai
- Sleek View – Guwahati – Assam
- Architecture Glazing Solutions – Ghaziabad Up
- Rainbow Expo Systems – Coimbatore
- In Effects Marketing – Hyderabad
- Shree Radheshyam Traders – Bhuj-Kutch Gujarat
- Gopinath Enterprise - Bhuj-Kutch Gujarat
- Baux Inpro Private Limited - Gurugram, Haryana
- Kelwyn Door Cares India – Delhi
- Closma India – Delhi
- Sleek International Pvt. Ltd. - Palghar Mumbai
- Sisa World – Chennai
- Maguda Engineering – Chennai
- Pearl Engg. & Polymers – Chennai
- Atari Infra Engineering – New Zealand
- Avaan International Pvt. Ltd. – Gandhinagar Gujarat
- Somya Glass & Hardware – Indore Mp
- Silver Fox Windows – Indore Mp
- Balaji Alubuilt (P) Ltd. – Indore Mp
- Prism Glass N Light – Mumbai
- Cera Craft Industries – Lucknow Up
- wemake Solutions Pvt. Ltd. – Chennai
- Ishicon Engineering – Pune Mh
- Aluplex India Pvt Ltd – Gadwal – Telangana
- Sri Ayyan Fabs – Bengaluru
- Pikai Enterprises – Allahabad Up
- Alcomo Technologies Llp – Pune
- Sri Lakshmi Balaji Fabrication – Vellore Tn
- Aadityaa Accurate Part Pvt. Ltd. - Vadodara Gujarat
- Stoichem Interio Private Limited - Panchmahals Gujarat
- Spacemaker Solution - Pune
- Sports And Sports International - Gejha Up
- K P Engineering - Ahmedabad Gujarat
- Grifin Corporations Pvt Ltd - Indore Mp
- Matrix Aluminium - Vadodara Gujarat
- Vidya Agencies - Berelly Up
- Arohan Forge Private Limited - Pune
- The Design Box - Vazirabaad Maharashtra
- The Innovatives - Goregaon
- Alenco Alu LLP - Vadodara Gujarat
- A B Enterprises - Bengaluru
- Safe Guard Net - Pune
- System Control - Maniyanur Tn
- Shyam Windows - Vadodara Gujarat
- Gurusai Industries Pvt. Ltd. - Maharashtra
- V-Tech Building Systems Private Limited - Bengaluru
- Computrick Wood & Alu - Ichchhapore Gujarat
- Balaji Plywood & Hardware - Sillod Maharashtra
- Renu Glass Industries - Chikhli Maharashtra
- Iform System Technology Llp - Noida
- Excellent Aluminium - Belgaum Karnataka

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