



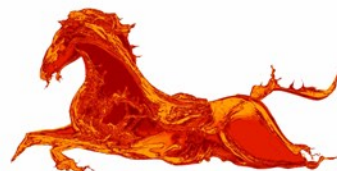
**Waterjet**



**Multi Axis Waterjet**



**Waterjet SPM**



**Laser**



**Robotic Waterjet**



**Laser SPM**

Innovative  
solution to all your  
**CUTTING**  
needs

We have developed  
widest range of cutting machines  
available in the market

**75,000 Sq. Ft. Production Facility**

**11,000 Sq. Ft. Office Infrastructure**

**100+ Human Strength**

**...GROWING WITH A PURPOSE**



# ABOUT A INNOVATIVE INTERNATIONAL LTD.

## » COMPANY PROFILE

With the passage of the 20th century, the dawn of the new millennium brought in a sea change in the development of industries worldwide and the scale of new technologies. Anticipating the bright prospects that this era promises, we, A Innovative International Ltd., were established in 2000. Since then, we have never looked back and have steadily climbed the steps of success.

Today, we have attained an excellent reputation as a Manufacturer, Exporter, Supplier and Service Provider of specialized CNC Waterjet Cutting Machine, Robotic Waterjet Cutting Machine, CNC Laser Cutting Machine and Robotic Laser Cutting Machine all over the world.

## » MISSION

To achieve market leadership with customer satisfaction by providing innovative, cost effective and high quality products in the domestic and international market with strong after-sale services.

We work on our mission to provide high utility equipments and strive to achieve excellence and growth through innovation and maximum application of modern technology. Our advanced quality control systems and expert management enable us to make international standard products and cater satisfactorily to our customers.

## » VISION

To be known as 'The Father of Indian Cutting Industry'.

In order to meet our set goals, we are committed to do 360° innovations in our products and services. We, at A Innovative International Ltd., believe in accomplishing all that, what can only be imagined. We operate on the principles of integrity, trust and teamwork in order to deliver valuable products to our customers.

We can proudly say A Innovative International Ltd. is the company with core value essence of high quality products, excellent after sales support and perfect marketing network, occupying good position in the domestic and overseas markets.

We are committed to provide our employees with challenging work, professional growth, a safe & enjoyable work environment and rewarding compensations & benefits.



Factory



Production Line

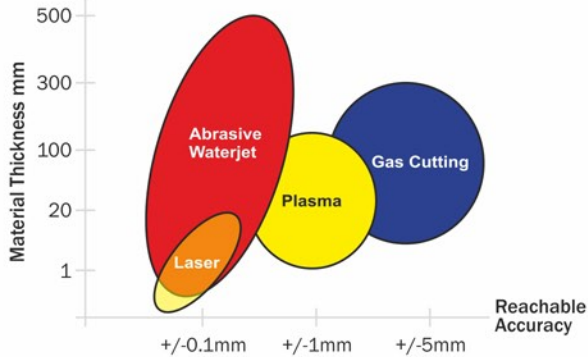


Laser Interferometer Calibration



Largest spares stockist in India

## SELECTING CUTTING TECHNOLOGY



Particulars	Waterjet	Laser	Plasma	Gas Cutting
Thickness	++	-	+	++
Quality - Surface Finished	++	+	-	--
Saving Finishing Operation	++	+	-	--
Speed	-	++	++	+
Universality	++	+	-	--
Environmental Friendliness	++	--	--	--
Flexibility	++	+	-	--
Heat Affected Zone	++	-	-	--
Metalurgical Damage	++	-	--	--
Total Processing Time	++	+	-	--
Operation Cost	-	-	+	++
Investment Cost	100%	400%	100%	60%

## CAM SOFTWARE

Our machines are supplied with specially developed CAM Software which is very advanced yet easy to use.

» Smarter & Easier to use.

**Step1** : Import CAD file **Step2** : Select Material & Processing Parameters **Step3** : Start Cutting

» Auto- transforming CAD files into G Codes and M Codes.

» Feature of Sharp Angle slow down to generate perfect profile.

» The CAD Module has library of various shapes.

» Software can simulate the track before cutting.

» The Nesting Module supports Manual and Auto Nesting in multi-sheet with option of Move, Rotate, Mirror, Array operations with multi part selection facility.

» The CAD Module supports the definition of process data including Lead In, Lead-Out, Marker, drill, cut-style, stitch, corner loop etc.

» It gives the total cutting length and the time needed for the job. This data will be useful to quote or estimate delivery schedule.

» Open database can save the cutting parameters of different materials. Without inputting the parameter again, you can use them in your CNC programs only by a mouse click.





# WE APPRECIATE BUSINESS WITH

## METAL INDUSTRY



**RAJOO**



*Dow Engifab* LLP



Steel Concept



**SONAI METALS**



**SPECTRUM INDUSTRIES**  
success through innovation



*NS Enterprises*

**Ambala Industrial Fabricators  
& Engineers (AIFE)**



**MECHANICAL  
SYSTEMS**  
Filling & Packaging Solutions Provider



**DIVINE**  
ENGINEERING SERVICE  
An ISO 9001:2008 Certified Company

**S.T. International**

\*All logos are for reference only & are the property of their respective owners.

TITLES | STONE | MARBLE | CERAMICS



Siri Maharaja  
Granites (P) Ltd.



C. L. GUPTA  
EXPORTS LTD.



Stone Age



Tile Kraft



Balaji  
Stone Track



## GOVERNMENT | PRIVATE SECTOR



## GLASS INDUSTRY



Shree Umiya Glass Works



ANANT GLASS EMPORIUM PVT. LTD.  
Perfect Place for your Lifestyle

And Many More...

[www.ainnovative.com](http://www.ainnovative.com)

MORE THAN  
**500**  
SYSTEMS  
INSTALLED



Beyond Your Expectation







Expertise in  
**WATERJET  
CUTTING**

[www.ainnovative.com](http://www.ainnovative.com)

# Jetcut™ Series

“Indigenous Machine With German Technology  
Along with all Advanced Features”



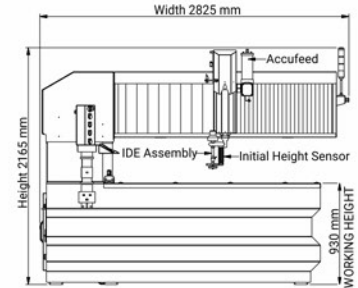
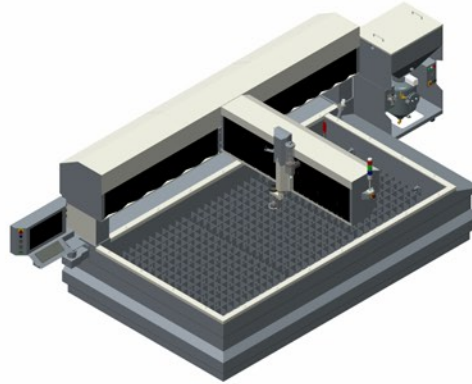
## Features

- » Faster cutting-Reducing cycle time & cost per production
- » AbraClean™ - abrasive removal pump system helps to clean the tank without shutting down the machine
- » Initial start height sensor reduces nozzle breakage & improves cut quality
- » Laser pointer - can be used for four different purposes
- » Automatic water level up-down system for submerged cutting
- » Abrasive Sensor - prevents damage to material if abrasive is empty
- » Productive covers on X, Y & Z axis - to protect the precision motion components from harsh Waterjet environment
- » LED lights to illuminates the work area to provide increased visibility and reduce operator fatigue
- » Abrasive reuse kit
- » AccuFeed™ - Servo controlled abrasive metering system
- » SmartFeed™ - Automatic abrasive feeding system
- » Loading balls for easy handling of cutting sheets
- » IDE cutting head assembly for long life & faster cutting
- » Through pass on both X & Y axis helpful for cutting sheets larger than machine working area
- » Unique, Rigid & Integrated Structure - Minimize installation area.
- » No foundation required - Easy to relocate
- » System with world's best CNC controller
- » Inbuilt automatic lubricating system improves life of high precision components
- » Pure water cutting kit
- » Parts Life Monitor
- » Mesh in tank to protect small parts falling at the bottom of tank
- » No Toe Touch design for operator convenience
- » Remote trouble shooting - machine can be checked via internet
- » Waterjet Bricks - for cutting glass, brittle materials and small pieces
- » Sheet Support - easily holds thin sheet without clamping

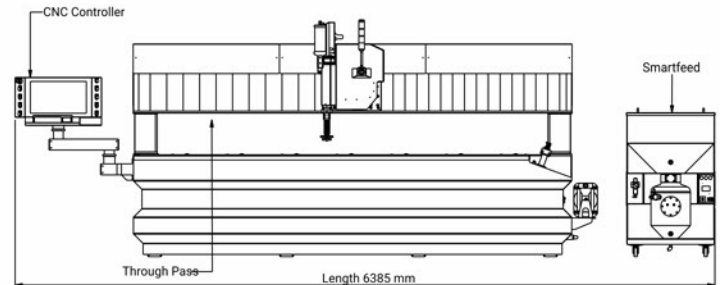


- » Nozzle Cleaning Attachment - for cleaning blocked Nozzles
- » 19 inch colour display
- » Wireless keyboard - can be used as remote pendant
- » Clamping kit to hold small jobs or thin sheets
- » Water gun for cleaning the material after cutting
- » Cut resistance tank bottom
- » Fully programmable servo driven Z axis
- » Swivel free high pressure plumbing to reduce maintains cost over the life of the machine
- » Lockable drawers for tools & spares makes them handy and safe
- » S.S. Protective cover on tank's top edges to prevent damage to tank while loading the material
- » Splash guards
- » Right angel to easily align the sheet before cutting
- » No need to realign the heavy plates. If the plate is not loaded on right angle, Machine can change the angle of cutting program accordingly
- » Precision ball screw on all X, Y & Z axis
- » Cantilever design makes work table accessible from all three sides
- » Optional manual tilting arrangement for welding application and chamfer cutting
- » Software capabilities for DUAL Pressure control for cutting brittle material.

We are proud to introduce our JetCut™ series which is fully indigenous, smart & cost effective waterjet. Aesthetic look along with compact & rigid structure makes JetCut™ unique in waterjet world. Utilizing our decade's waterjet technology experience and R&D, we designed JetCut™ series to exceed international standards of waterjet industry. After it was launched we got tremendous response from the customers. Whatever your requirement, we have the right product to meet your needs.



Technical Specification	JetCut™ 16F-31
Cutting Area :	
Travel of X - Axis	1610mm
Travel of Y - Axis	3110mm
Travel of Z - Axis	250mm (Can be customized)
Rack & Pinion Make	Gambini / Apex or Equivalent
LM Guide Make	Rexroth (Germany) or Equivalent
NC System	Power Automation (Germany) or Equivalent
Software	Most 2D or Equivalent
Traverse Speed	Up to 30000mm/min.
Positional Accuracy	± 0.04mm
Repeat Accuracy	± 0.04mm



## CNC CUTTING TABLES

- » We are proud to introduce DWJ (Desire Water Jet) series table to satisfy the desire of CNC profile cutting in every industry.
- » Size of the table can be selected as per the Length x Width of the material sheet.



**13 Series Flying Arm Structure**



**15/20 Series Flying Arm Structure**

### » FLYING ARM (3 SIDE OPEN) CNC CUTTING TABLE SERIES

Model		1313-FB	1525-FC	1530-FB	2030-FB	2040-FB	2060-FB	2080-FB
Cutting Area	X-axis	1300mm	1500mm	1500mm	2000mm	2000mm	2000mm	2000mm
	Y-axis	1300mm	2500mm	3000mm	3000mm	4000mm	6000mm	8000mm
	Z-axis	150mm	210mm	210mm	210mm	210mm	210mm	210mm
NC System		Power Automation / Washing or Compatible						
Positional Accuracy		±0.04mm						
Repeat Accuracy		±0.04mm						
Traverse Speed		Up to 20000mm/min.						

Intermediate or bigger table sizes available on request

Above specification are for references only & may be defer in quoted machine. Please refer quotation for details.





**15 Series Bridge Structure**



**30 Series Bridge Structure**

**» BRIDGE CNC CUTTING TABLE SERIES**

Model	15B-15	15B-25	30B-15	30B-20	30B-30	30B-40	30B-60	30B-80	30B-100	30B-120	
Cutting Area	X-axis	1500mm	1500mm	3000mm	3000mm	3000mm	3000mm	3000mm	3000mm	3000mm	3000mm
	Y-axis	1500mm	2500mm	1500mm	2000mm	3000mm	4000mm	6000mm	8000mm	10000mm	12000mm
	Z-axis	250mm	250mm	250mm	250mm	250mm	250mm	250mm	250mm	250mm	250mm
NC System	Power Automation / Compatible										
Positional Accuracy	±0.04 mm										
Repeat Accuracy	±0.04mm										
Traverse Speed	Up to 20000mm/min.										

Intermediate or bigger table sizes available on request

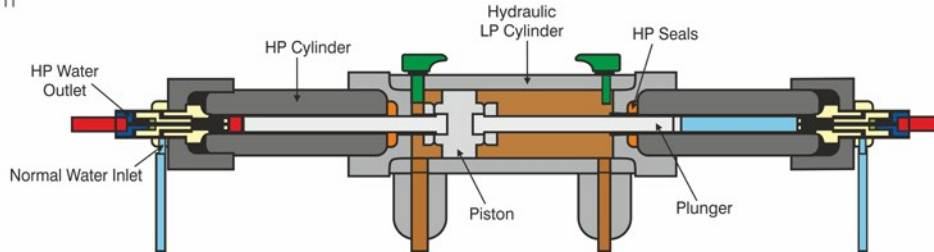
Above specification are for references only & may be defer in quoted machine. Please refer quotation for details.



## INTENSIFIER PUMP SYSTEMS

» ULTRA HIGH PRESSURE PUMP can be selected as per the material, thickness, finish and required cutting speed.

» Intensifier Diagram



### » TECHNICAL PARAMETERS OF UHP PUMP SYSTEM

Model	Parameter	Max. Pressure (bar/psi)	Max. Flow Rate (l/min)	Orifices* Dia (mm)		No. of Nozzles (pcs)		Power (Kw / HP)	L x W x H (m)
C30B		3000/40,000	3.1	0.25		1		22 / 30	1.6 x 0.9 x 1.2
C40T2		3800/55,000	3.1	0.33		1		30 / 40	1.7 x 1.0 x 1.2
C50T2		3800/55,000	3.7	0.33	0.25	1	2	37 / 50	1.7 x 1.5 x 1.4
C50V		4136/60,000	3.7	0.35	0.33	1	2	37 / 50	1.5 x 1.2 x 1.6

Above specification are for references only & may be defer in quoted machine. Please refer quotation for details.

## KMT GERMANY - PRODUCT RANGE



NEOLine



H2O JET



STREAMLINE PLUS



PRO-III

### » TECHNICAL PARAMETERS OF UHP PUMP SYSTEM

Model	Parameter	Max. Pressure (bar/psi)	Max. Flow Rate (l/min)	Max. Orifices* Dia (mm)	No. of Nozzles (pcs) with 0.25mm Orifice	Power (Kw / HP)	L x W x H (m)
Jetline JL-I 30		3800/55,000	2.3	0.28	1	22/30	1.7x0.9x1.2
Jetline JL-I 50		3800/55,000	3.8	0.35	2	37/50	2.0x0.9x1.1
NEOLine 40i		3800/55,000	2.7	0.28	1	30/40	1.1x1.4x1.0
SL-V-30 Classic		3800/55,000	2.3	0.25	1	22/30	1.7x0.9x1.2
SL-VI-50 STD		3800/55,000	4.5	0.38	2	37/50	1.7x1.1x1.5
H2O Jet 50		4136/60,000	3.8	0.35	2	37/50	1.4x1.2x1.0
SL-V-30S Plus		4136/60,000	2.1	0.25	1	22/30	1.7x0.9x1.5
SL-VI-50 Plus		4136/60,000	4.1	0.35	2	37/50	1.7x1.1x1.5
SL-V-60S Plus		4136/60,000	4.2	0.35	2	45/60	1.7x0.9x1.5
SL-V-75S Plus		4136/60,000	5.4	0.40	2	56/75	1.9x0.9x1.5
SL-V-100S Plus		4136/60,000	7.0	0.40	3	75/100	1.9x0.9x1.5
SL-V-150D Plus		4136/60,000	9.1	0.50	4	112/150	2.3x1.7x1.7
SL-V-200D Plus		4136/60,000	14	0.70	7	149/200	2.3x1.7x1.7
PRO-III 60S		6200/90,000	2.8	0.28	1	45/60	2.1x1.3x2.0
PRO-III 125D		6200/90,000	5.8	0.40	2	93/125	2.2x1.5x1.5

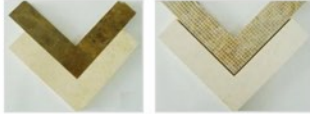
\* The maximum quantity of orifices installed can be increased or larger orifice sizes can be installed by reducing the working pressure. Please feel free to contact us for your individual calculation. Above specification are for references only & may be defer in quoted machine. Please refer quotation for details.

# OPTIONAL FEATURES

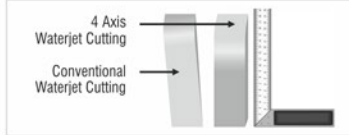
## » 4 AXIS CUTTING HEAD

### » Stone & Ceramic Industry

Increases production by making negative angle in stone and ceramic inlay

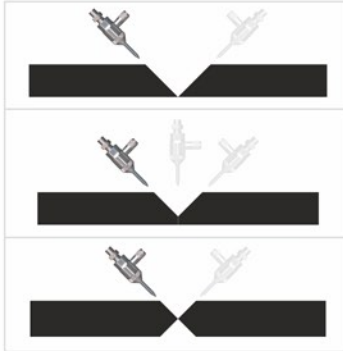


» Increases product precision by virtually eliminating taper

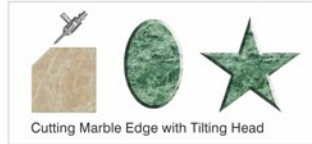


## » 5 AXIS CUTTING HEAD

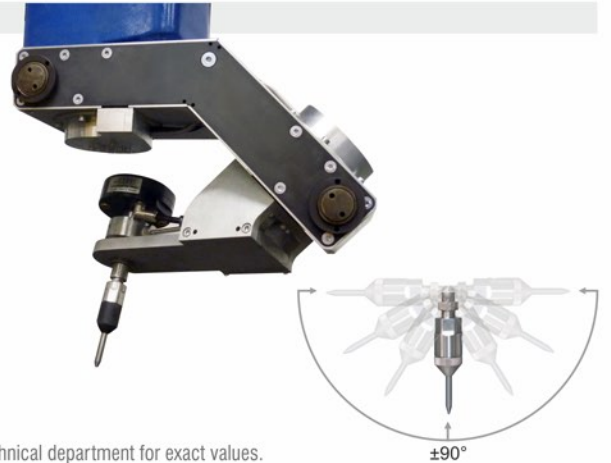
» Preparation of welding seams



» Creating beveled edges for artistic purposes



» Can do 3D cutting in formed/shaped materials



Any of the above optional feature will reduce the effective cutting area of CNC table. Please contact our technical department for exact values.

## » MULTI CUTTING HEAD

With multiple cutting heads, You can increase Waterjet's cutting efficiency :

- » Decrease the production cost
- » Saving of time
- » Increases the production capacity



## » BEVEL CUTTING HEAD

- » NC Controlled  
Bevel angle can be programmed in the controller
- » Motorized  
Bevel angle can be adjusted with the push of a button and the value will be displayed on the screen
- » Manual  
Bevel angle can be adjusted by rotating calibrated handwheel



## ADVANTAGES OF WATERJET TECHNOLOGY

» Cold cutting without thermal influences » Flexible processing of virtually all materials with consistent high quality » Material-saving production due to reduced cutting width and the nesting of several parts on a single sheet » Maximum degree of material utilization due to the smallest of part separation distances (partially free of burrs) and part-in-part production » Tension-free processed parts due to minimal cutting force » Environment friendly and clean production without poisonous gases » Good access to the work area of the waterjet system » Optimization of the cutting parameters to meet individual requirements » It is possible to identify the cut parts using waterjet engraving » Close linking with the CAD/CAM programming system » High material savings due to narrow bridges or ribs » No tool manufacturing and tool storage costs » High productivity through multihead cutting systems and multilayer cutting » High-performance drive system, which permits high-precision production of parts as well as the highest of processing speeds » The combined production using waterjet cutting machines and milling centres guarantees economical processing. The parts can be prefabricated and nested and only high precision areas are postworked. » Fast setup and rapid programming » Minimal requirement of fixture

## OPTIONAL ACCESSORIES

### » SMARTFEED - AUTO ABRASIVE DELIVERY SYSTEM

- » For efficient production processes, the level of abrasive in the abrasive hopper of the machine must be constantly monitored to ensure that it does not drop below a minimum level. SMARTFEED ensures that there is always sufficient abrasive available for the cutting process. This prevents problems like accidental cutting without abrasive thus improves quality and saves time & money. SMARTFEED guarantees process safety and excellent stability in all waterjet cutting processes.
- » It has the capability of storing abrasive and delivers the abrasive to the abrasive hopper on machine, automatically. The design shows our continuous effort to improve efficiency and reduce labor requirement.
- » High sensitive sensor which monitors the available abrasive; gives visual indication to the operator when the storage tank is to be refilled.
- » With 200 liters abrasive storage capacity, the abrasive can be directly feed-in to the abrasive hopper for continuous operation of 300 to 900 minutes (10 to 15 hours). [Higher capacity are available please request for a quote]



### » ABRACLEAN - ABRASIVE REMOVAL PUMP SYSTEM

- » Every Abrasive Waterjet Cutting Machine needs clearing to remove used abrasive from the catcher tank on regular intervals.
- » A machine has to be shut down during this process resulting into loss of production.
- » It is very difficult and risky to remove the sticky sludge manually as sharp edges of scrap can injure the person.
- » Due to metals scrap and other debris shevelling is also difficult.
- » Our abrasive removal pump can be integrated with our Machine CNC to program it for scheduled ON & OFF cycles.
- » The sludge will be delivered via flexible pipe & can be separated via cloth filter bag. Thus water can be regained into the catcher tank.
- » This entire system increases the uptime of the machine & saves money of manual removal.





# WATERJET APPLICATIONS

## JOB & MACHINE SHOP APPLICATIONS

» Our machines are used widely in job-shops to cut any metal & non-metal in variety of shapes. Job and machine shops use the unmatched versatility of waterjets to expand their capabilities beyond what is possible with machining centers, lasers, EDM or mills. When using Waterjet they can throw out pre-conceived Ideas which are traditionally Considered as "Difficult Applications".

## METALS, EXOTIC & NONTRADITIONAL MATERIALS

» Metals (Aluminum, Stainless steel, Mild steel, Titanium, Alloys, Brass, Inconel, Carbon steel, Copper, etc.) » Kevlar » Laminates » Phenolics » Wax » Plastics (high and low density) » Plexiglas » Acrylics » Leather » Wood

## MACHINE MANUFACTURING

» Pharma Machinery » Printing Machinery » Wood Processing Machinery » Paper Processing Machinery, etc...

## CERAMICS / STONES

» Floor Medallions » Tabletop Inlay » Wall Inlay » Metal Inlay » Outdoor Stone (Pool Decks, Custom Stepping Stones, Entryway, Etc.) » Border Tiles » Artistic & Architectural Designs / Murals » Stone Furniture » Kitchens / Countertops

## GLASS/METAL ARTWORK

» Flooring Inlay » Tabletop Inlay » Wall Inlay » Metal Artwork (Outdoor, Theme Parks, Special Lighting, Museum Silhouettes, etc.) » Flat glass with numerous contours » Stained glass (Crafts, Church Mosaics, Lamp shades, etc.) » Bullet proof glass » Optical glass

## MEDICAL/SURGICAL

» In manufacturing orthopedic implants and carbon braces » For blanking out surgical instrument from special steel alloys » Cutting artificial limb components » Making Prototypes

## AEROSPACE/DEFENSE/NAVY/ATOMIC ENERGY

» Titanium bodies for aircrafts » Engine components (Aluminum, Titanium, Heat-resistant Alloys) » Aluminum body parts » Tough ceramics » Interior cabin panels including soft plastics, Carpeting, foam & fabric for seats etc. » Most of the composites.

## AUTOMOTIVE

» Interior & Exterior Trims (Headliners, Carpets, Liners, Dumpers, Door & Instrument Panels, Seats, Composite Parts & Castings) etc. » Robot waterjet can cut automobile interior components in any angle and separates scrap automatically.

## INSTITUTES

» To teach waterjet m/c as an innovative cutting technology to students » Many of the larger size Institute that Offer engineering classes also have waterjet to provide job-shop services to other departments » To do R & D » To make projects.

## GASKETS

» Gaskets of Asbestos, Rubber, Teflon, Copper, Titanium, etc. for end-users & O.E.M in industries like Automotive, Marine, Engineering, Aerospace and many more.

## FIBERGLASS

» Home instrument panel » Industrial Panels (Typically 4' X 8' Sheets cut to fit specific applications) » Boat & Personal water craft bodies etc.

## FOAM PRODUCTS

» Custom foam packaging » Dense foams (Sound Insulation, Vibration Isolation, Archery targets, etc.)

## SLITTING OPERATIONS / TRIM & HOLE CUTS

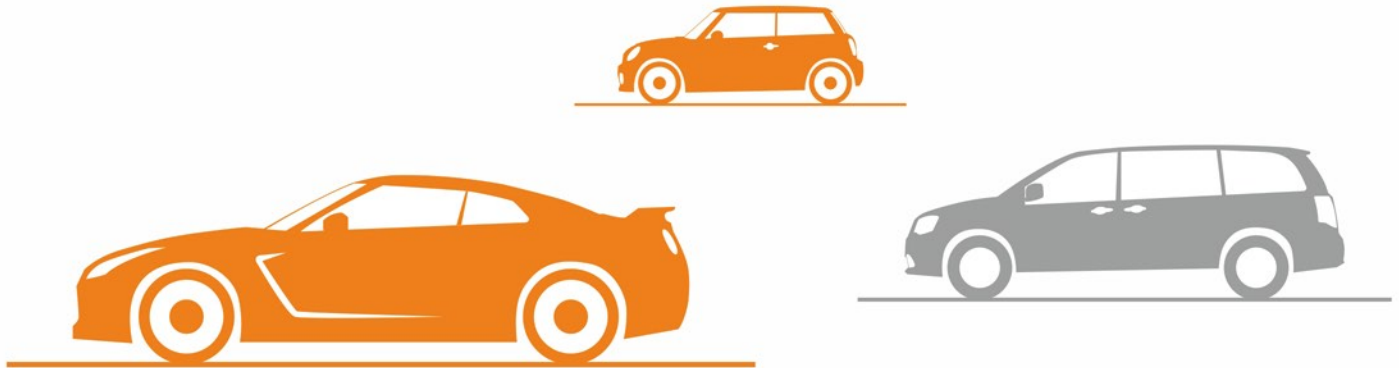
» Corrugated Box board & Paper (Where product wetting is not crucial) » Cement sheet » Food (Meat, Sea food, Bakery items etc.)

## ELECTRONICS

» Circuit boards (Populated and Unpopulated) » Cable Stripping (Insulation Coverings) etc.



For Waterjet Application Photos Scan the QR Code  
or Visit <https://www.ainnovative.in/applicationphotos>



Take maximum advantage in automobile revolution



**Beamecut**<sup>TM</sup>  
CNC Laser Cutting Machine

**Lasercut**<sup>TM</sup>  
CNC Laser Cutting Machine

Expertise in  
**LASER  
CUTTING**

[www.ainnovative.com](http://www.ainnovative.com)

## FIBER LASER SYSTEM



- » High power fiber lasers are created from active optical fibers and semiconductor diodes, a merger between two of the most innovative and advanced laser technologies. Fiber lasers use single emitter semiconductor diodes as the light source to pump the active fibers. The laser beam emitted is contained within optical fibers and delivered through an armored flexible cable. Active fibers, special optical fibers doped with rare earth ions, allow for an extremely bright light from a very small core, thus making possible the production of kilowatt class output with excellent beam quality.
- » Our robust fiber lasers share common attributes of compact size, long diode life, low maintenance operation, high wall-plug efficiency and completely consistent beam divergence and beam profile at all power levels.

### ADVANTAGES OF FIBER LASER

- » Power saver : Excellent wall-plug efficiency about 30%
- » Cost saver : Maintenance free operation
- » Easy to install : Compact and robust
- » Long lasting life span : Estimated lifetime of diode up to 1,00,000 hours
- » High reliability : Operates 24/7
- » Excellent laser beam quality : Constant Beam Parameter Product (BPP) over entire power range
- » Application Materials : Stainless Steel, Mild Steel, Coated Steel, Galvanized, Brass, Copper

# LASER CUTTING MACHINE



**Beamcut™ Series**



**LaserCut™ Series**

Model	BeamCut 1530	BeamCut 2040	LaserCut 1325	LaserCut 1530	LaserCut 2040	LaserCut 2060	LaserCut 3080
Cutting Area							
X - Axis	1530mm	2000mm	1300mm	1500mm	2000mm	2000mm	3000mm
Y - Axis	3050mm	4000mm	2500mm	3000mm	4000mm	6000mm	8000mm
Z - Axis	120mm	120mm	120mm	120mm	120mm	120mm	120mm
NC System	Power Automation / CYPCut or Compatible			CYPCut			
Software	Most 2D/CYPNest or Compatible			CYPCut/CYPNest*			
Positioning Accuracy	±0.03 mm			±0.03~±0.05 mm			
Traverse Speed	Upto 150 m / min. depending on model selected						
Power Supply	3Ø 415 VAC, 50 / 60 Hz OR As Required						
Laser Source Power	700 W / 1000 W / 1500 W / 2000 W / 3000 W / 4000 W / 6000 W / 10000 W						

» Tables with bigger cutting area available as per customers request

Above specification are for references only & may be defer in quoted machine. Please refer quotation for details.



## » Laser Applications

- » Job & Machine Shop Applications
- » Aerospace
- » Automotive Components
- » Agricultural Machinery
- » Pharma Machinery
- » Printing Machinery
- » Textile Machinery
- » Constructional Machinery
- » Earth Moving Machinery
- » Wood Processing Machinery
- » Paper Processing Machinery
- » Food Processing Machinery
- » Architectural Profiles
- » Metal Signage
- » Research Institute
- » Educational Institute
- » Gaskets
- » Control Panels
- » Ship Building
- » Coach Building
- » Racks & Cupboard Manufacturing
- » Sheet Metal Fabrication
- » White Goods Manufacturing
- » Elevators & Escalators
- » Rapid Prototyping
- » Furniture

## » Optional Features

- » Machine Enclosure
- » Live Cutting Screen
- » Auto Focus Head
- » Auto Pallet Changer
- » Pipe Cutting
- » Fumes Extraction System
- » Scrap Collection System





Expertise in  
**ROBOTIC  
WATERJET  
CUTTING**

[www.ainnovative.com](http://www.ainnovative.com)

## INTRODUCTION

An extremely high-pressure jet of water is an efficient method of cutting soft materials and combining the waterjet process with industrial robots is an economic alternative to the traditional punch tool method of producing complex-shaped components for car interiors, such as floor carpets, headliners and door trims.

Among the forms of robotic cutting systems; plasma, laser, trim die and electric discharge media, waterjet cutting is considered a fast and flexible method for cutting most plastics, foams and fabrics. The primary advantages of robotic waterjet systems are speed and flexibility.

There are only a few products that can't be cut with waterjet. Most products cut with robot waterjet are related to automobile production, but waterjet cutting technology is also being used outside of the car manufacturing industry.

On straight cuts, a waterjet can cut up to 10,000 mm per minute, depending on the material. Glass mats, made of reinforced polyurethane foam are cut slowly, while hard plastic skins can be sliced comparably at a higher speed. Automotive carpets and headliners, which range from 4.75 mm to 6.5 mm in thickness, can be sliced within seconds. Other versions of headliners, which include a composite material made from chopped fiberglass bonded to cardboard, can also be cut through. Waterjet is as accurate but faster than electric discharge media. Furthermore, waterjet leaves little waste, making it a more of a "green" system than plasma or laser cutting.

Flexibility is another strong point for waterjet. The cut quality is the same between a trim die and a waterjet robot, for squareness and taper. With waterjet, the operator has complete control over the cut angle. It is easy to readjust two mm in any direction. Time-to-market, re-engineering, etc. costs are lowered. A waterjet system can be reused, unlike a trim die.

The trim die was the system by which mass produced cutouts were made in the automobile industry for years. With the invention of reliable waterjet cutting

systems, trim dies are becoming somewhat obsolete. Trim dies are large punches that cut out fabrics and carpeting for automobiles. They are useful for only a few model configurations. A particular die has to be scrapped when that version of the model is replaced. With waterjet, a few keystrokes are all that are needed to reuse the same robotic cell for different types of vehicles and for new models. An example would be manufacturing headliners for pickup trucks with regular cabs and for those with extended cabs. Two different trim dies are needed for each size headliner. With waterjet, a few simple and quick changes to the programming of a robotic cell are all that are necessary to reconfigure the machine to cut for a different model.



### Features :

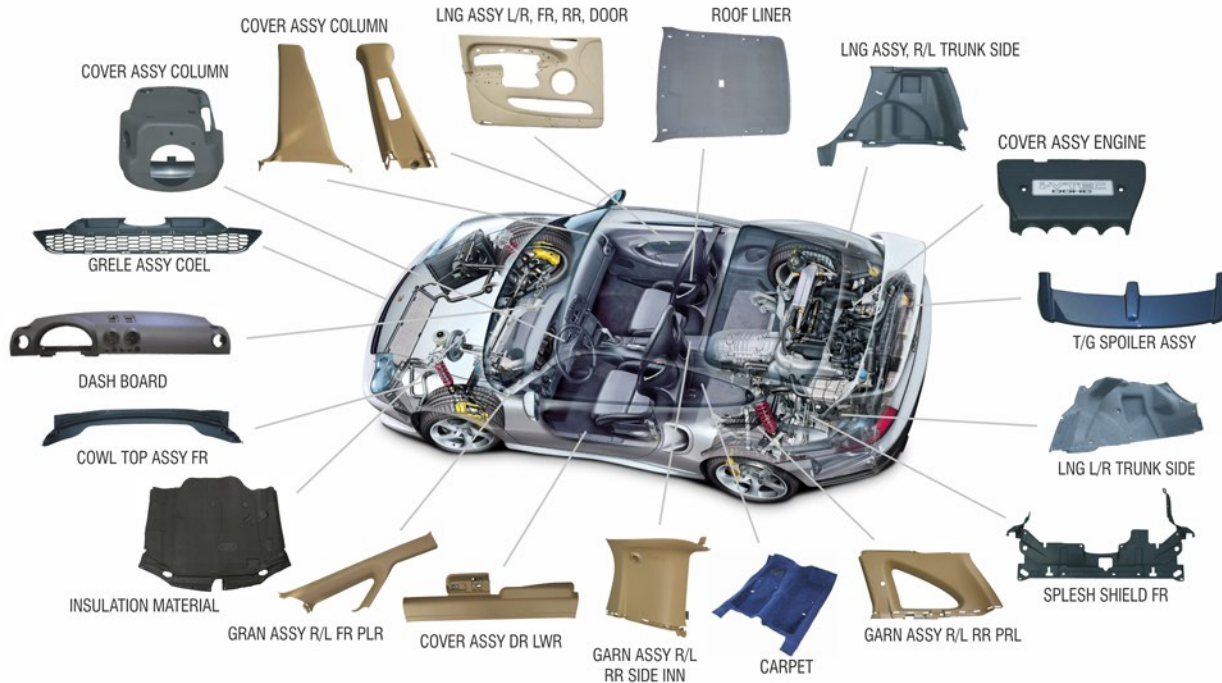
- ▶ Higher Productivity
- ▶ Reduce Manpower
- ▶ Flexible
- ▶ Easy to Operate
- ▶ Highest Standard of Safety
- ▶ Large Cutting Area



# APPLICATIONS

Cutting process of the interior pieces after press forming (including cutting shapes and holes) is an important step of automobile interior production. As the interior pieces are always composed of three-dimensional curves and curved surfaces, in the traditional manual cutting method, there are many problems, such as low efficiency, uneven quality, bad consistency and interchange ability.

The interior pieces cut by water-jet have smooth surfaces and good consistency, water-jet is also the fastest and best method of interior cutting. Our robot water-jet cutting machines are developed for automobile interiors trimming as shown in below example.



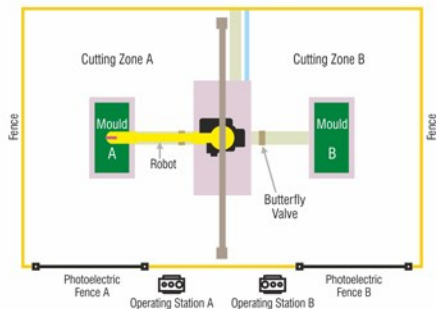
Customer's  
End-users :



# CUTTING STATION OPTIONS

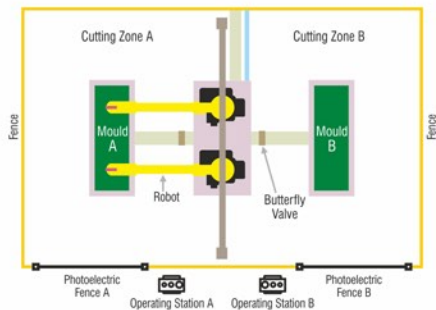
## 1 ROBOT + 2 STATIONS

Max. Cutting Dimensions(L×W×H)	Foot Print Area (L×W)
2600mm×1700mm×200mm	7m×5.5m



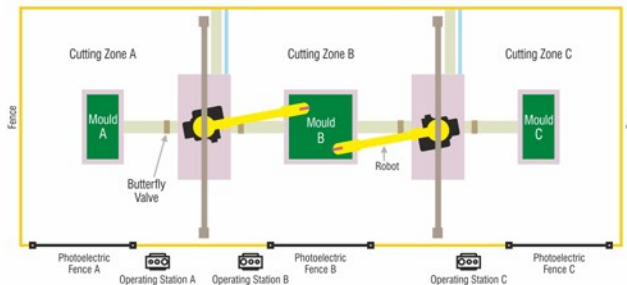
## 2 ROBOTS + 2 STATIONS

Max. Cutting Dimensions(L×W×H)	Foot Print Area (L×W)
4600mm×1700mm×200mm	7m×7.5m



## 2 ROBOTS + 3 STATIONS

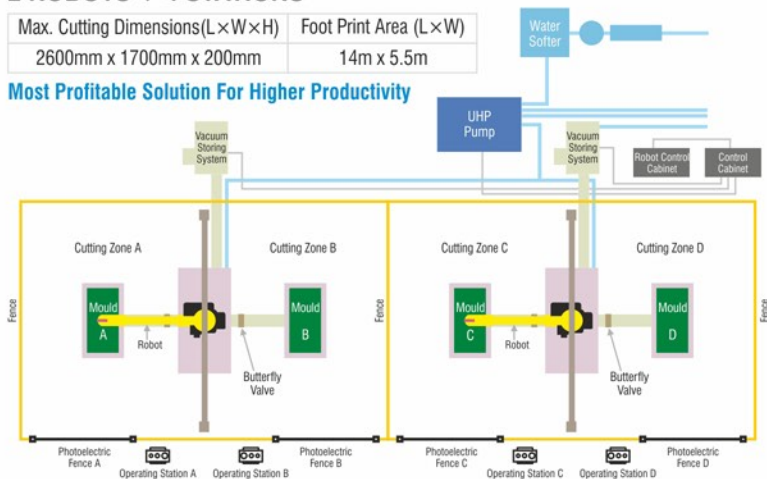
Max. Cutting Dimensions(L×W×H)	Foot Print Area (L×W)
2600mm×2800mm×200mm	12m×5.5m



## 2 ROBOTS + 4 STATIONS

Max. Cutting Dimensions(L×W×H)	Foot Print Area (L×W)
2600mm×1700mm×200mm	14m×5.5m

Most Profitable Solution For Higher Productivity





## ROBOTS FOR CUTTING



or



or



## ULTRA HIGH PRESSURE PUMP

» For Technical details of UHP Pump please refer page no. 20 & 21.

## SAFETY SYSTEM

In our comprehensive safety protection system, metal fences and photoelectric fences are installed around the working area, and an anti-collision sensor can also be selected. Once unexpected collision or Intruder is detected, the system will be paused until all hidden troubles for safe operation are removed.

## WORKING TABLE

Fixed working tables support FRP (Fiber Reinforced Plastics) moulds. FRP moulds have the same shape of the products, the product and the moulds will be clamped together by the vacuum system during the cutting process to ensure the consistency of products. The vacuum system also stores the cut off leftover material. A filter separates water & cut off waste.

## CUTTING HEADS

Pure Water Cutting Head

- » Used for Wide Range Of Different Applications
- » Reliable under extreme Conditions
- » High Performance On-Off Valve
- » Pre-Aligned Gives Long Life
- » Compact Design for Flexible Use
- » Back-up solutions
- » Easy Maintenance



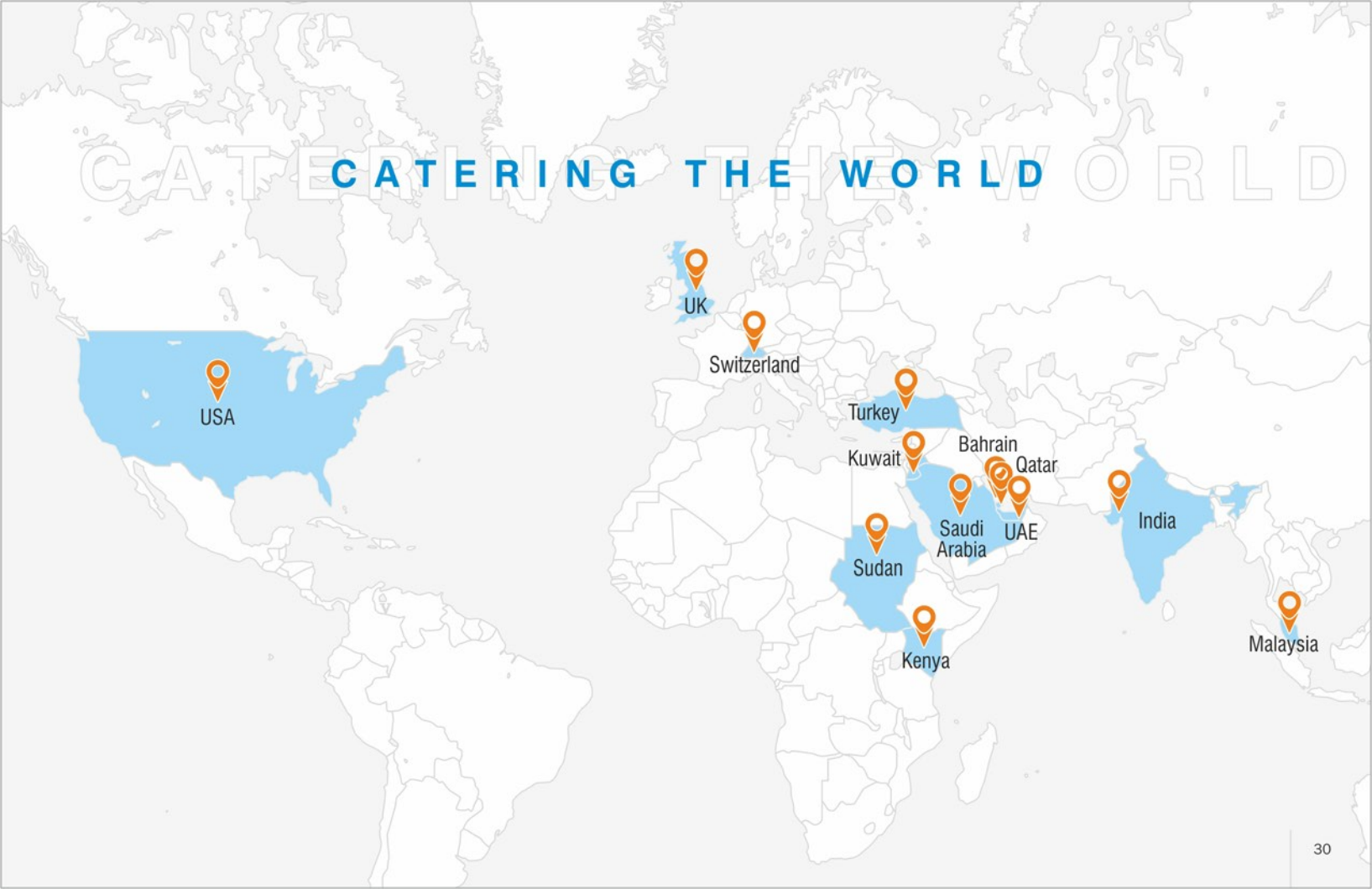
## HIGH PRESSURE TUBE SYSTEM

- » All parts are imported from Switzerland or USA.
- » High pressure coils + High pressure Swivel design with high reliability and high performance.
- » High pressure water filter for additional safety of cutting head parts.
- » Supports Dual Robot solution by using manual isolating valve.
- » Equipped with automatic high pressure relief valve. Releases the pressure when pump is shutdown, emergency stop pressed or unexpected stop happens.

## ELECTRICAL CONTROL SYSTEM

Electrical control system is advanced human-machine interface, operation is very simple and intelligent. PLC(Programmable logic Controller) coordinates and monitors all the components of the machine, it has excellent functions of automatic mould detection, automatic counting and fault diagnosis.

# CATERING THE WORLD



USA

UK

Switzerland

Turkey

Kuwait

Bahrain

Qatar

Saudi Arabia

UAE

Sudan

Kenya

India

Malaysia

## International Sales Representatives

- U.S.A** : 21, California Ave, Appt 218, Irvine, CA 92612. | Ph. : +19 493103910 | E-mail : us@agroup.in
- U.K.** : 144-146 Kings Cross Road, London, England. | Ph. : +44 2071019233 | E-mail : uk@agroup.in
- Singapore** : Block No. 109, Lengkong Tiga, Singapore. | Ph. : +65 96707440 | E-mail : sg@agroup.in
- Australia** : 43A Ferngrove Road Canley Height NSW 2166, Australia | Ph : +61 402003816 | E-mail : aus@agroup.in
- U.A.E.** : P.O. Box - 29567, Opp. Palm Beach Hotel, Bur Dubai, U.A.E. | Ph. : +971 43936696 | E-mail : uae@agroup.in
- Kenya** : Off. Enterprise Road, Ind. Area, P.O. Box - 18583-00500, Kenya | Ph. : +254 47 33787171 | E-mail : kenya@agroup.in



Grow with us..



Visit our Website

# **Ainnovative International Ltd.**

ISO 9001:2015 CERTIFIED COMPANY  BS EN 1829-1 : 2010

### Factory Address :

Shed A, Block No. 212/2, A Innovative Road, B/H Intas Pharma, Unit-II,  
Matoda Patia, Sarkhej - Bavla Highway, Ahmedabad-382 213, Gujarat, India.  
Mobile : +91 99099 88244, +91 98791 47461 | E-mail : sales@ainnovative.in  
Web : www.ainnovative.com | GST NO : 24AAHCA5842J1ZM

 WJTA Welding Technology Association	 U. S. A.	 FIRST INDIAN MEMBER	 INDO-GERMAN AHK	 GCCI	<b>Ahmedabad Foundry &amp; Engineering Cluster</b>	 VCCI	 Confederation of Indian Industry	
 FICCI	 CDOS	 EEPCINDIA ENGINEERING THE FUTURE	 MSME MICRO, SMALL & MEDIUM ENTERPRISES एन. एम. एम. उद्योग. संघ.	 NSIC ISO 9001 : 2008	 India Trade Promotion Organisation	 AHMEDABAD MANAGEMENT ASSOCIATION	 FIA UNITED WE STAND	 Indian Machine Tool Manufacturer's Association

All the photos and trademarks used herein are the property of their respective owners. All images are for indication only.