

MAC Group : Embracing technology innovation for excellence



An interface with: From left Mr. J. Vijayakumar, Director, Hoshi Tools, Mr. J. Nagarajan, Managing Director, MAC Group of Companies, Mr. C. J. Badrinath, Director, CNC India

Despite volatile market conditions and stiff competition, **MAC Group** has been clocking steady growth and positive turnover year-on-year over the last 25 years. Shweta Nanda from MTW spoke to three key leaders in the group: J Nagarajan, MD, MAC Group of Companies; C J Badrinath, Director, CNC India; and J Vijayakumar, Director, Hoshi Tools to know more about the group's journey, achievements and success mantra.

MAC Group, established in 1991, with its flagship company MAC Machine Tools and Automation (formerly MACH Electronics) has traversed a long way since its humble beginnings. Following an excellent turnover in the first year itself, the group's second company, CNC India Tools and Services, was introduced in

1992, followed by Hoshi Tools in 1994.

In the last 25 years, MAC Group has carved out a niche for itself and established itself as a solid player providing turnkey solutions to the machine tools, industrial automation, manufacturing, robotics & engineering verticals. Keeping up with the technological advancements and evolving customer requirements, the group has grown from strength to strength. One key thing that clearly stands out, and is perhaps the biggest strength of the group, is its focus on futuristic technology.

We takes an extensive look at the evolution and future plans of the three companies that are the pillars of MAC Group and have helped it carve its success story.

Mac Machine Tools & Automation: Sharpening Focus on IIoT Solutions

Started as a firm catering to computerized PCB repairing and servicing at the component level, Mac Machine Tools & Automation has today expanded its horizon and fulfills industrial automation and IIoT requirements of customers in Karnataka and Tamil Nadu.

Under the leadership of its Managing Director J Nagarajan, the company has achieved various milestones. The company's big breakthrough came in 1994 by being recognized as System Integrators of Rockwell Automation and in 2006 it got elevated to being authorized distributors of Rockwell Automation products for the region of Karnataka and Hosur & Krishnagiri Districts of Tamil Nadu. "This was a major milestone for us which set path for our 27 years long journey. From then on there was no looking back," avers Nagarajan.

From then on, the company has tied up with various OEMs as their authorized distributors. Today, the company provides IIoT solutions in partnership with Ewon, remote access solutions in partnership with ProSoft, data connectivity solutions in partnership with Softing, XL reports in partnership with SyTech, harmonic filters in partnership with MTE, electrical enclosures in

partnership with Pentair Hoffman, UPS and switches in partnership with Socomec and machine tools in partnership with leading machine tool manufacturers like Victor Taichung, Lymco, Adria, Flow, to name a few.

A major milestone worth mentioning is the company's partnership with Denmark-headquartered Universal Robots. "In 2018, we introduced Universal Robots' Cobots into VIVO IPL 2018 with our solutions programming the Cobot to act as cheerleaders and bar tenders for the Team RCB. We are very proud of this milestone as it is for the first time in the world that robots have acted as cheerleaders," Nagarajan shares.

The company is focused on futuristic technology and constantly embraces technological advancements by evolving itself. A case in point is its emphasis on IIoT.

"The Internet of Things is one of the more nebulous terms to have entered the digital lexicon. Say there is a robotic arm on the manufacturing shop floor. This robot not only performs rote tasks but also produces data that is automatically synced to enterprise software, giving users real-time, easy access to information regarding the shop floor's machinery and efficiency. When devices are connected to the Internet, they can constantly compile data and automate tasks. That's the power of the Internet of Things," asserts Nagarajan.

The company offers a range of IIoT solutions with its business partners. Updating about the company's product range Nagarajan says, "Rockwell Automation's Connected Enterprise' allows for a Connected World on the shop floor that enables easy monitoring. 'ProSoft Connect' by ProSoft allows you to establish communications with your machines anywhere in the world. With Connect, automation programming tools can talk directly to automation devices without the need to setup IP routing or other complicated communications settings. 'Ewon' offers Industrial Remote Solutions that enables access to distant

machines and installations. It offers advanced Data Services for performance monitoring and proactive maintenance and gives turnkey solutions for end-users/facility managers to monitor and control industrial assets online and thereby making better operational decisions."

IIoT truly has the potential to transform the entire manufacturing process. In fact, the more the usage, the better the efficiency and productivity.

Nagarajan believes that smart manufacturing can address some of the biggest challenges of Indian manufacturing. "In India, manufacturing sector is human intensive which makes productivity lesser, allowing products to have damages and exposing humans to high risk environments. 'Smart Manufacturing' would increase productivity and make growth more inclusive. It would also connect the entire shop floor allowing for constant monitoring of the production / manufacturing process," he explains.

The company is already seeing a positive response for IIoT solutions, with Indian market showing readiness for smart manufacturing. Looking ahead, the company plans to increase its thrust on IIoT solutions as the awareness increases and market becomes more mature.

CNC India: Betting Big on Robotics

From a 'service company' catering to services of CNC Machines to providing turnkey solutions to robotic automation and manufacturing Special Purpose Machines (both metal and non-metal cutting machines which are combined with fixtures), CNC India has indeed come a long way. With Director C J Badrinath at the helm, CNC India has created a niche for itself where it offers Robotic Gantry Solutions, Pick & Place Automation and Robotic Welding Solutions to the leading automobile companies across the country.

The company today primarily caters to the automotive industry with specific focus towards two-wheelers, commercial vehicles and the tractor industry, as well

as the defense and space Industry by closely working with ISRO.

CNC India is placing huge bets on robotics as it is transforming the automobile industry at a tremendous pace. "Robotics is a surging, multi-billion-dollar market because it provides businesses incredible savings and efficiencies with robotic process automation for consumer and business applications, which are expected to become an \$8.7 billion market by 2024. Being the sunrise sector for the 'Make in India' campaign and one of the key sectors contributing towards the GDP of the country, the automotive manufacturing segment has been making rapid strides in the industrial automation domain emerging as a role model for the other industries by showcasing how automation should be utilized to scale up the value chain and achieve zero-defects manufacturing," informs Badrinath.

While there is definitely a lot of interest around robotics, there are a few challenges related to mindset. "Human labour in India is very cheap compared to human labour abroad. When considering the operation costs, humans and robots are usually compared. What manufacturers are not looking at is, with robots in the manufacturing set up, the safety, efficiency and productivity of the product only increases," explains Badrinath.

The company is currently witnessing demand for robotics in the most popular applications, such as arc welding, plasma cutting, laser cutting, BIW welding lines, palletizing, tending robots on press machines, CNC machines, etc. And as manufacturing move towards smart manufacturing, robotics is slated to witness further traction. "Robots are already integrated with the computer network and hence are part of equipment in network. However, with the new sensors, information sharing tools and applications, robots can be a perfect role player in IoT based smart factory which is truly Industry 4.0 compliant," opines Badrinath.

The company is riding high on the

wave of success with automobile sale seeing a double-digit growth in the last decade. "All the organizations catering to the automobile industry have also been growing at a steady pace," Badrinath points out.

Given its success story, CNC India has charted aggressive growth plans. The company is aims to be a 100 crore company and among the top three automation companies in India by 2019.

Hoshi Tools: Expertise in Custom Built Tools

Starting out in the year 1994 with a single VMC – Makino make at Yeshwanthpur Industrial Estate, in a machine shop measuring 550 Sq Ft., Hoshi Tools is another company in the MAC Group umbrella that has played a huge role in the group's success. Hoshi Tools today owns about 20 Vertical Machining Centers (VMC), 4 Turning Centers, Cylindrical Grinding, Micro Drilling and Laser Etching Machines.

Under the leadership of Director J Vijayakumar, the company has achieved several milestones and has established itself as a major player in the South India market. "We claim about 25% of tooling requirements to South Indian industries for our category of tools. We also have our sales / marketing in North Indian sector, where we are slowly increasing our market share," updates Vijayakumar.

As the company manufactures custom designed cutting tools, mainly carbide oriented, it provides services to any metal cutting industry where there is an emphasis for productivity improvements by evolving from conventional ways of manufacturing to technologically advanced and improved ways of manufacturing. Thus, the company primarily caters to industries which involve high volume production such as automobile industries, machine tools, aerospace, ancillary units, valves industries, general engineering, etc., apart from special tools. The company also manufactures precision components for machine manufacturers.

The company's niche lies in its

ability to manufacture various types of custom built tools, as per the customer specification. "Our highly qualified design engineers are capable of producing designs as per customer requirements. Our expertise also lies in turnkey solutions where we take the manufacturing process from procurement of raw material to the dispatch of finished products. Adaptation of Computer Integrated Manufacturing (CIM) through advanced software of 3-dimensional Parametric CAD & CAM for fast interactive results, enables us to produce quality products of international standards," asserts Vijayakumar.

The company has huge focus on after-sales service and provides training to customers. It orients the customers on resolving machine related issues, thus enabling them to improve their productivity by fine tuning their processes. The company also sensitizes them on the new tools in the market for improved quality, productivity, cost reduction, etc.

Hoshi Tools is further looking at expanding its offerings and business areas. "We want to be 'One Stop Solution Provider' for all the machining requirements of our customers. In line with this, we have already tied up with M/s AKKO – Turkey to offer their Standard Turning Tools & Milling Cutters in India and M/s C P T – Carbide Precision Tools – Germany to offer their Standard & Custom Threading Tools & Thread Mills in India," says Vijayakumar.

The company is also looking at further tapping into the fast-booming sector of aerospace and adding new products into its existing line of offerings. It is also in talks with reputed MNCs for adding more product categories of tooling such as PCBN and PCD.

Clearly, with MAC Group companies' eyes firmly set on the market demands and their drive to diversify and embrace new technological advancements, the group is ready to take the next big leap. As smart manufacturing continues to gain steam in India, MAC Group's outlook looks extremely positive. 