



# NEW VISTAS

INDIAN MANUFACTURERS OF HIGH-SPEED MACHINES ARE EXPLORING VARIOUS AVENUES TO SUSTAIN THEIR BUSINESS AMIDST CUT-THROAT COMPETITION.

BY BINDU GOPAL RAO

## USERS OF HIGH-SPEED MACHINES HAVE SEEN

changing business requirements that have put pressure on vendors to match up. "India is coming up the value chain. To compete globally, we require suppliers to be cost effective and also handle higher volume (particularly in commercial airplanes). This, in turn requires suppliers to work with high speed machines that helps them with reduced cycle time. As of today, Indian suppliers are using machines with about 15,000-18,000rpm. Indian suppliers use machines from Mazak, Makino,

DMG and Mori Seiki. The design of the machines is driven by the customer/market requirements in terms of parts manufactured and manufacturers have kept pace with the changing environment. Higher rpm machines allow suppliers to handle parts of higher complexity in a cost effective way. In future, suppliers will invest in higher speed machines (~30-35K rpm). This will allow them to handle more complex parts," says Pratyush Kumar, president, Boeing India.

Likewise, companies are gearing up to meet new-age demands. Dhruvin Patel, director, HOF, avers, "We are witnessing huge spike in demand after GST was introduced and we expect that this will keep on increasing in the days to come. To meet the demand, we have synchronised our product with designs and component development, so that the speed of production increases. We have our in-house R&D and design studio headed by Mann Singh, a graduate from NID and a reputed Indian product designer."

Utilising his expertise, the company is moving ahead to develop products that aid speedy manufacturing to meet the demand of the market. Their manufacturing process is equipped with pneumatic technology to conserve time and energy consumption. "We have adopted an in-line production process for packaging systems; our chairs and sofa are manufactured in line with the demands of the automobile industry. The processes adopted ensure extraordinary finishing and skill development, thereby decreasing manufacturing time and cost, and commencing speedy delivery to channel partners," he added.

## THE BACKBONE

Machine tools make up the 'mother industry' in the industrial development of any economy. The machine tools industry is growing massively, with the governmental motto of Make in India. Increasingly, more manufacturers are moving towards finalising the finished products here in India. Not only finalising the products, but acquiring tools, machinery and raw materials from domestic markets only. With the exponential growth in the need of machining tools, competition is also rising. Further, to meet competition, more technologically advanced and high-speed machining is being produced.

"Our products are similar to machining tools, as both machinery and modular containers assist in the making of the final product or plan. For instance, to produce a metal sheet, you need the help of boiling machinery, and to set up the factory where this boiling machinery will be established, you will need an office container. By being present on the site to make sure everything is being executed and con-



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2. Dynamic Technologies getting ready with Chinook structures.

struction is going as per schedule, you will need to have a shelter on site where, one can work, sleep, prepare lunch, accommodate staff, store raw material and make other required human necessities. This is done in modular containers now," says Ashish Budhiraja, CEO, AB Sea Container.

#### PRICE RIGHT

CNC machines are getting increasing expensive due to R&D efforts, but, on the contrary, the market is seen as price-sensitive. "The costs of the machine have not changed significantly, however currency fluctuation and change in labour rate index in the developed countries (Europe/Japan/USA) can affect the landed price of the machine. The organisation decides on higher technology machines depending on a few parameters like volume of the part/longevity of order, accuracy required and productivity benefits. Higher accuracy machines allow higher productivity and enable suppliers to compete better. So, overall, it should not impact the cost v/s return paradigm," says Kumar.

#### SOFTWARE MATTERS

A lot of machining skill development is now getting shifted to Machine Design Centres, the CNC soft-

ware literature and product performance is more important to users than ever before. Manufacturers naturally need a great after sales support from vendors. "For us, we have recently installed a CNC wood-cutting machine and multi-boring, which very precisely cut as per requirement. Due to the rising competition rates of these machines, rates have dropped down. Now is the correct time to move towards more advanced and completely computer-operated machinery. This will save labour cost and

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labour compliances," says Patel.

"The CNC software literature and product performance is more important than ever before; the newer machines are more versatile and support programmes that can be generated/ fed into the machine right from the product model/design. The controls of the machines are standardised to make the programming and operator job easy. The machine users are moving towards software that is widely used by their customers so that there is standardisation," says Kumar.

#### TECH TALK

Technology obsolescence is a major issue in high-speed machining as new innovative ideas emerge regularly. Organisations are naturally making specific strategies to combat this by getting into alliances or tie-ups through strategic FDI investments or otherwise. They are also focused on making their ongoing systems and machinery better, and providing customers better results, both quality and efficiency wise.

"We are a design-centric company. All our products and components are specially designed by our R&D team to meet our company's vision to produce aesthetically-designed furniture using

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phasis on aesthetics, ergonomics, quality, industrially produced components and finished products,” says Patel.

#### VENDOR AGREEMENTS

Expectation from vendors on after sales support is managed through an AMC (Annual Maintenance contract), which is extended every year so that the benefit of software upgrades are received. In fact, every hour of machine downtime is a cost and loss of productivity for the supplier, and can also stop the production line of an Original Equipment Manufacturer (OEM), so this is of paramount importance. “HOF takes its vendors as partners to fortify the company’s core strength. Our search for vendors is done through parameters, which are drawn by the R&D team with regard to the component/product & thereafter it is taken forward by the purchase team. Hence, facility visits and team

assessments are done. We also review their current products and their strengths in manufacturing through the parameters drawn by the R&D team. Each time we receive a lot of products from any vendor; that particular product is also tested in our in-house testing facilities. We, at times, reject it and send it back to vendors if it does not pass the testing parameters of that particular product. This exercise is undertaken to keep reviewing the quality parameters on a real-time basis and ensure quality products are supplied to our esteemed customers,” says Patel.

#### LOOKING AHEAD

The industry has its own set of challenges too. “Knowledge of innovating is the biggest challenge which we face. We manufacture modular containers, and for the masses it is very hard to understand how someone can sit and live inside a container. And that is exactly what we do. We make them into a human-friendly environment by insulating the container and giving it a room-like finish. But the old idea of containers just being used as a mode of logistics hampers creativity. And our team successfully educates the masses about how it can be used differently,” avers Budhiraja.

Likewise, maintaining quality and controlling the cost of the products as per set parameters is primary. “Lack of skills is a major issue with all industries across India and to overcome that, we run a training of our labour workforce thrice a week for all-round skill and technical training. India will be growing at a fast pace as Digital India and GST gain ground. This will also be very beneficial to every industry sector in India,” concludes Patel. **MT**