



PIONEERING CUSTOMISED DRILLING SOLUTIONS

Spearheading deep hole drilling technology, with customised machines as their forte, Precihole Machine Tools Pvt Ltd is a groundbreaking establishment that is relentless in pursuing sustainable innovation, functionally and reliably. During a visit to the company's facilities, Nishant Kashyap & Tarun Tampi, take a look at the latest manufacturing technologies.

After gaining extensive experience and expertise in Deep Hole Drilling Machines (DHDMs) from overseas, Precihole is credited for bringing this highly specialised, yet much-needed niche technology to Indian job shops. Deep hole drilling practically defines a drilling operation at a depth which is 10 times the diameter of the hole. It is a technology that comes with its own unique possibilities and challenges. This Indian company has come a long way from being an indigenous manufacturer of gun-drilling machines to becoming an exporter of quality DHDMs to Austria, Canada, Brazil and the US, to name a few.

Production Capability

The company manufactures a vast range of DHDMs. These machines are available as per clients' specific demand. And to

meet this demand, the facility never sleeps. The company has two different facilities in Thane that reliably run three shifts, round the clock, throughout the week, transporting at a high throughput rate to its clients. Machines are widely appreciated for their greater functionality and reliability. The cycle time for the production of a single standard machine is approximately four months while for more complex or Special Purpose Machines (SPMs), it takes around six months. An average of five machines is completed each month and Precihole is on its way to double its production capacity. For a machine, depending on the specification and design need of the customer, while about 25 engineers and technicians engage themselves in the manufacturing and assembling process.

In terms of specifications, drilling machines are built to handle components of diameters ranging between 1.5-250 mm typically. Machines can be

automated if required and customised to the component or part it is needed for. Training for machine operation is also provided for and usually takes a few days. International standards are maintained at every step, right from shop floor practices to component and end-product quality. Further, every machine is an improvement or innovation in one way or another.

Product Range

The company houses India's largest state of the art deep hole drilling manufacturing centre. It houses three distinct sections of the business – conventional machining tools, subcontract assembly areas and Gun or BTA drilling stations - all complementing each other. Engineering challenges are plenty and varied in deep hole drilling. The company manufactures single axis gun drilling machines, 3-axis gun drilling machines, BTA and STS drilling machines, X-Y BTA deep hole drilling machines, skiving and burnishing



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machines for deep hole drilling equipment available in the world.

Challenges Encountered

Precihole was considered more of a local player during its initial days of operation, but it implemented the necessary technology and applications to go beyond the standard product offering. When the market was growing, the company's think tanks were under the pressure to make the most of this promising environment. Gradually, the company matured in terms of trained manpower and applied technology to meet these requirements. A A Qazi, Director, Precihole Machine Tools Pvt Ltd observes, "The main challenge was to optimise the process which we followed and expand the training of our employees. We have incorporated lean manufacturing in our system, which is not only helping us reduce and identify unnecessary waste processes, but is helping us increase the volume of products being manufactured at our plant without any added cost or investment."

As one of Precihole's engineers explained during the visit, there are several challenges that arise when you are pioneering customised machines in a niche segment like DHDM. For example, when guard plates were made for gun-drilling and BTA-drilling machines, a curved design was given to add a visual uniqueness to the product. However, the curved plates were difficult to manufacture and hence, the design had to be changed to reduce the curve only to the corners, making the plates more rectangular or linear and thus, easier to manufacture.

In essence, the Thane facility has a well trained team, headed by experts with over 20 years of experience in quality systems and industry procedures. To meet the complex specifications of the petrochemical industry, the company's design team has successfully upgraded their systems constantly working to enhance product quality.

Future Outlook

From ramping up their marketing to re-energising their branding, extending into larger facilities to applying the latest in production strategy, Precihole is primed to take-off in the global DMDH market. The company's new facility situated in Kalyan, around 35 kms outside Mumbai, is in its final stage of completion. Regarding the expansion plan, Qazi explains, "The new facility, spread over more than one lakh sq ft, will help us double our capacity. We are planning to manufacture around 10 machines per month at our new facility. Apart from this, we are aggressively looking at overseas markets as well. There are some customers in the European market who are happy with our products and services and this has prompted us to focus on this market." He further adds, "During the recession, many companies in the international market prioritised cost effective products, which was a very tough task in developed markets. That situation became an opportunity for us; we provided them with the same quality product at lower cost. Now they are placing repeat orders. We have skilled manpower who can deliver the same quality product at parity with global standards. Also, when we deliver the product to customers, we send our applications engineers to their plant ensuring proper installation."

Carving its future course, Precihole has already charted out its growth strategies and is now stepping ahead into an era promising exponential success. True to character, the company persistently strives to hone its technology through innovation and guarantees its customers top quality bang for their buck! ◀

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▶ Applying international standards in lubrication & machining techniques.

machines. Apart from this, the company also manufactures SPM's.

Precihole has several hundred machines implemented successfully at several large and medium sized businesses around the world. With giants like Honda, TATA, BOSCH, Escorts, Godrej, L&T, Cummins, Premier Ltd and Mahindra as its key customers, the company has made its mark in offering state-of-the-art technology at affordable costs. The machines are well designed with the customers' need in mind. The machine tool range offered by the company covers most materials and hole diameters applied in the industry. The company has designed and manufactured all types of