

CASE STUDY



Ensuring Precision & Efficiency With Faro's Measurement Solutions



With the help of the 'Make in India' campaign — launched in September 2014 to transform India into a global design and manufacturing hub — India is on the path of quickly becoming a hub for hi-tech manufacturing. With the potential to reach US\$1 trillion by 2025, India's manufacturing sector is expected to become one of the world's top three by 2020.

A leading manufacturer that offers automation systems, aerospace tooling, pallets for engine assembly, and sub-assembly fixtures & tables, Jendamark Techcellency Automation(I) Pvt. Ltd. (Jendamark Techcellency) began their journey as Techcellency Engineering (I) Pvt. Ltd. in 1998. The company focuses largely on the manufacturing of automation assembly lines, as well as aerospace and jig fixtures. In 2014, as part of its growth plan Techcellency entered into a partnership with South-Africa-based Jendamark Automation (Pty) Ltd to become Jendamark Techcellency. Jendamark Techcellency boasts a state-of-the-art manufacturing unit that is well-equipped with both conventional and high-technology equipment. To further expand its capabilities, the company has also invested in a new 10,000-sqft facility to support rising demand for its quality products, which are used by renowned aerospace and automotive manufacturers such as the Audi Group, Mahindra & Mahindra, and the subsidiaries of the Tata Group.

The Need To Meet International Standards

The manufacturing of the various parts necessary for automation systems, aerospace tooling, and pallets for engine assembly, and sub assembly fixtures and tables, require high levels of precision and accuracy.

In the past, Jendamark Techcellency would outsource metrology processes in areas such as alignment, calibration, and inspection. An external service provider would be engaged to support product quality control and validation of products. However, with the increasing volume of production, the service providers could no longer support its production needs.



When being set in automation systems and assembly lines, the intricate parts require accurate measurements — especially during calibration and inspection.

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Previously, traditional hand tools — such as Vernier calipers, height gauges, and tape measures — and fixed coordinate-measurement machines (CMMs) were used to carry out metrology tasks at Jendamark Techcellency. Due to nature of these manual work, the company often grappled with time management issues and could not complete projects in a timely manner.

Mr. Sunil Megade, Plant Head at Jendamark Techcellency, shared, “The conventional measurement methods were time consuming and unable to provide the accuracy we needed for our products. Careful measurements need to be implemented at every stage, whether for inspection, calibration, or alignment, to ensure that the quality of our products meet international standards.”

Streamlining Processes For Increased Precision & Time-saving

Having heard about the benefits of FARO’s portable CMMs from their service providers, Jendamark Techcellency decided to invest in an 8-ft Platinum FaroArm in a bid to find a better solution for their

metrology needs. A portable CMM, like the FaroArm, provides mobility — so operators can deploy a solution wherever there is a need. It is also less cost-prohibitive when compared to fixed CMMs.

Jendamark Techcellency’s operators no longer worry about moving a bulky, heavy object, that can be as heavy as 2 tons, into a measuring room. In addition, measurements taken with the FaroArm are much more precise and accurate than those obtained using conventional methods.

Immensely satisfied with the positive results from their initial investment in the Platinum FaroArm, Jendamark Techcellency purchased the FARO Laser Tracker ION and QuantumM FaroArm to further improve their manufacturing processes, when the solutions became available in 2016 and 2017 respectively.

The FARO Laser Tracker ION, a state-of-the-art interferometer-based measurement system, allows Jendamark Techcellency to inspect large parts in both the automation and aerospace products with the highest precision due to its accuracy level of up to 0.015mm. It can be applied



The QuantumM FaroArm boasts a new ergonomic design and an overall weight optimization which provides operators with an unequalled freedom of movement and an unparalleled measurement experience.

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during in-line measurements when setting jigs and aerospace parts for assembly lines, where accuracy is crucial. As the Laser Tracker ION is also useful for measurement of large objects, the company uses it to measure objects that are up to 6 meters long and weighs up to 2 tons.

The Quantum^M FaroArm, on the other hand, is certified against ISO 10360-12:2016 and ensures maximum measurement consistency and reliability in all of Jendamarck Techcellency's applications. 20% lighter in the hand than its predecessors and immediately ready to use as it requires no warm up time, the QuantumM FaroArm also ensures better productivity during the inspection, design and manufacturing process by enabling operators to work longer hours and more comfortably.

FARO's measurement solutions provided Jendamarck Techcellency with support throughout pre-production, production, and post-production processes, eliminating concerns about human error and lengthy measurement times. Jendamarck Techcellency was then better able to increase

process efficiency without compromising on the quality and precision of its products.

MOVING AHEAD WITH FARO

With enhanced efficiency and improved capabilities from FARO's 3D measurement solutions, Jendamarck Techcellency is now able to eliminate the need for additional verification and inspection at its customers' facilities, many of whom are based overseas.

"At Jendamarck Techcellency, we are constantly trying to improve our processes," remarked Mr. Megade. "FARO's 3D measurement solutions have proven to be valuable additions, and they have allowed us to streamline our operations while maintaining a high standard of quality. FARO's solutions have helped eradicate the struggles we faced in managing our inspection and monitoring processes, and improved our overall productivity. Going forward, we plan to invest in more of FARO's solutions for their high-performance functionalities — especially when we venture into reverse engineering applications."

About Jendamarck Techcellency Automation(I) Pvt. Ltd.

Jendamarck Techcellency Automation (I) Pvt Ltd is a EN9100:2016 and ISO 9001: 2015 certified company engaged in offering an excellent range of Automation Systems, Aerospace Tooling, Pallets for Engine Assembly and Sub Assembly Fixtures & Tables. Backed by sophisticated facilities and efficient team members, Jendamarck Techcellency offers clients a diverse range of products under one roof. The company is a noted manufacturer and exporters of Automation Systems, Aerospace Tooling, and Pallets for Engine Assembly, Sub Assembly Fixtures & Tables, and eepos. Designed and fabricated using superior raw materials, Jendamarck Techcellency's products are highly sought-after for its easy installation, long service life, low maintenance, high performance and many more features. Being a

CRISIL and SE 2B certified company, the company has consistently offered highly durable products since its inception in the year 1998.

For more information, please visit

www.jmktechcellency.com

started removing the additional equipments used to control the temperature, even after that the temperature remains the same.

Details from Sidhee Cement Plant:
Equipment: Kiln Supported Gear Box (Kiln Pier-III)
Oil Used: Servo 680
Sump Capacity : 30 Ltr.
Polytron MTC used : 3 Ltr.