LENOVO CASE STUDY

SOLUTION OVERVIEW

Country: India
Industry: High Technology Diamond Processing

CUSTOMER PROFILE

Sahajanand Technologies is a trendsetter in the development of cutting-edge diamond manufacturing equipment, systems and processing solutions. It has been providing laser-based material processing technology, and imaging and artificial intelligence-based smart equipment for the diamond and medical industries, for more than 15 years. Other than India, it has a presence in countries like China, Botswana, and Thailand.

BUSINESS SITUATION AND SOLUTION

Sahajanand wanted robust performance, less downtime and faster processing for their products. Therefore, they chose Lenovo ThinkCentre M90 desktops for use in their Magnus range of Diamond Planning systems, diamond processing Lazer Super series machines and StentSpect series machines for Stent manufacturing.

BENEFITS

- Robustness, reliability and seamless support
- Empowers 24x7 operations
- Cost and time savings
- Immediate productivity
- Green features enable more energy savings
- High processing power for diamond planning and processing

DIAMOND PROCESSING MAJOR CREATES INDIGENOUS CUTTING EDGE PRODUCTS FOR HIGH TECHNOLOGY DIAMOND INDUSTRY

Sahajanand Increases Robustness and Processing Power in its Products While Reducing Downtime and Power Consumption

> We continuously think of better ways to understand the needs of the industry and we create products that help our customers to compete in the global market

Rahul Gaywala
Executive Director,
Sahajanand Technologies

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Earlier we used assembled computers but we faced many problems as the assembled PCs did not have high processing power and were not stable. But now we are using Lenovo ThinkCentre PCs known for their reliability and robustness.

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INDUSTRY OVERVIEW

Diamonds are awe inspiring. One of the purest forms of carbon and hardest natural substances, they are not only used in ornaments, but in many industrial applications, too. Approximately 26 tonnes of diamonds are mined yearly, predominantly from mines in Africa, Russia, Canada, Brazil, India and Australia. Africa leads the pack with close to 49% of the world's diamond supply originating from the region.

India on the other hand, is the largest diamond cutting and polishing country of the world. It processes 95% of all diamonds in the world, by number of pieces processed. This accounts for 82% of carat share and 60% of value share. It is also the third-largest consumer of diamonds after US and Japan.

Surat is the hub of this trade in India and close to 80% of all diamonds processed in the country are processed in this city with an annual turnover of $13.03 billion. (Source: India Brand Equity Foundation)

CORPORATE INTRODUCTION

Sahajanand Group of Industries is one of the leading players in the diamond processing industry in India. They are a manufacturer and exporter of laser and vision technology-centered capital equipment for diamond processing industries. Their portfolio of services and solutions consists of diamond analysis and systems, laser-driven diamond processing equipment, auto blocking and polishing machines. All these are used at different stages of the diamond manufacturing process.

There are five stages involved in converting a raw diamond into a polished one. In the first stage, diamonds are sorted depending on their size and quality. After the classification of diamonds, the planning and marking stage follows, wherein different options that can be used to cut the diamond are looked into; depending upon the options, a diamond cutting expert can minimize wastage and increase the value of a diamond. Sahajanand's Magnus range of planners are used for this purpose. They create a complete profiling of the rough diamond and suggest improvements.

The third stage is the sawing stage in which, following the mark made on the diamond, the cutting process is carried out. Sahajanand's Lazer range of machines utilizes the latest laser technology and provides high productivity, automation, elimination of finishing operations, reduced processing cost and improved up time in this stage.

The cutting stage is followed by the bruiting, auto-blocking and polishing stage. Machines used in these stages are compact and robust, designed for vibration free and quiet operations. All kinds of processed rough stones can be polished on these machines.

Executive Director, Rahul Gaywala, said that they are competing in an extremely competitive global market where national boundaries are diminishing. In this environment they have to keep innovating and developing new products to ensure that they always remain a step ahead in the competition. He said, "We continuously think of better ways and means to understand the needs of the industry and customers and, based on those needs, we create products that help our customers to compete in the global market."

SITUATION

Before the advent of laser machines, all the above mentioned stages of diamond cutting have been very person dependent. Only an experienced diamond cutting professional can judge the right cut of the diamond in the planning process. At times, larger diamonds are not even cut for a long time because of the fear of eroding their value due to a wrong cut.

Also, even though diamonds are the hardest substance in the world, they are extremely brittle, too. One wrong blow from a hammer can break the diamond into unusable pieces. Diamonds were thus, always cut by other diamonds. This further reduced the yield from the raw product available.

Laser planning and bruiting machines by companies like Sahajanand have helped increase the yield of diamonds multi-fold. But, this has not been without challenges.

The laser machines used in this process need to have extremely high computational power to be able to graphically scan and draw 3D images of the diamond, enabling the planner in deciding the exact cut. The machines have to be extremely robust to survive in a 24x7x365 environment, with no down times. And finally, as they are high precision machines, they need to be free from vibrations.

SOLUTION

The solution provided by Sahajanand has been path breaking in many ways. Their machines are built by seasoned diamond cutting experts and experienced software professionals. They create extremely user friendly software for an audience that is not tech savvy at all.

Munjal Gajjar, Vice President- Information Technology, Sahajanand Technologies, mentioned that, "We develop our sophisticated software, which works very well on Lenovo's computing hardware. We have also been using Lenovo/ IBM's solutions since 2002 and have bought close to 2,100 machines (70% for the planners and 30% for the laser machines)."

Along with their industry leading software, Sahajanand's Magnus and Lazer Super products have standardized the use of Lenovo desktops in all their models. They use Lenovo's top of the line ThinkCentre M90 business desktops for all their processing and user interface needs.

"The planning and bruiting stage requires high processing power. Earlier, assembled computers were being used by us, but we faced many problems as the assembled PCs did not have high processing power and were not stable. But now we are using Lenovo ThinkCentre PCs known for their reliability and robustness", says Gaywala.

BENEFITS

Robust and Error Free Operations

"The machines are used 24/7 and cannot afford downtimes, thus if anything goes wrong it will have an adverse effect on our customer's business and hence, we produce the best products using the best technology available. Lenovo's Think-branded products are of good quality and Lenovo provides excellent service and support," says Prakash Rakholia, Director-Marketing, Sahajanand Technologies.

Easy-to-manage ThinkCentre M90/ M90p desktops support the latest data security, remote data management and worry-free storage—which help reduce costs, downtime and desk-side IT visits. Since all of Sahajanand's products are installed at remote client locations, low downtimes ensure that they have to spend less time and money on support and have highly reliable machines. The Lenovo ThinkCentre M90 series of business desktops also support the latest recovery technologies for faster system restores. The ThinkVantage Rescue, Recovery and Update features help the users recover from crashes quickly.

High processing power

The ThinkCentre M90 features the Intel Core i5/i7 series processors with Turbo Boost and Hyper-Threading technologies that provide faster performance and multitasking.

With the help of high processing power used in Sahajanand Magnus (the planner product) the diamond can be seen from all sides and helps in providing a lot more options than any human can think of. To begin with, it shows the 10 most suitable options to the user and can generate up to 30 new options, every 20 seconds.

With these options, the customer can easily decide on the best suitable shape in which the diamond should be cut and mark it on the diamond using laser technology. Sahajanand has, till date, sold more than one thousand units of their Magnus planner product.

Green Features Enable Energy Savings

Earlier this year, the company launched their latest models of the Lazer Super

> We develop our own sophisticated software which works very well on Lenovo's computing hardware.
>
> **Munjal Gajjar**
> Vice President- Information Technology, Sahajanand Technologies

NO VIBRATIONS: All tower models of Lenovo Thinkcentre M90 family are equipped with cat-foot cushions that reduce table vibrations considerably, thus reducing the risk of errors in these high precision machines.

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ABOUT LENOVO

Lenovo (HKSE: 992) (ADR:LNVGY) is dedicated to building exceptionally engineered personal computers. Lenovo's business model is built on innovation, operational efficiency and customer satisfaction as well as a focus on investment in emerging markets. Formed by Lenovo Group's acquisition of the former IBM Personal Computing Division, the company develops, manufactures and markets reliable, high-quality, secure and easy-to-use technology products and services worldwide. Lenovo has major research centers in Yamato, Japan; Beijing, Shanghai and Shenzhen, China; and Raleigh, North Carolina.

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diamond cutting machines. These machines are able to produce 50-60% more output power than most other models that are available in the market.

The Lenovo ThinkCentre business desktops add to the push on energy savings by Sahajanand. The Energy Star-compliant power supply unit and Lenovo Power Manager present in the Lenovo's ThinkCentre M90 helps in reducing the power usage and cost. Also adding to the green quotient of the machines, they are built with up to 42% post-consumer content, the industry's highest, with minimum use of plastic.

"Being a responsible corporate citizen, Sahajanand Technologies operates on high ethical standards. The company is actively involved in preserving the environment by developing, manufacturing and selling environmentally friendly and energy saving diamond processing products. Helping to save the environment and lower energy costs are standard benefits of Lenovo Think-branded computers," says Gaywala.

Lower Vibrations

Sahajanand manufactures extremely high precision laser-based machinery that works on expensive raw diamonds. It is important that the machines are absolutely vibration free and do not cause any defect in the diamonds because of unnecessary shivers.

All tower models of the Lenovo ThinkCentre M90 family are equipped with cat-foot cushions that reduce table vibrations considerably, thus reducing the risk of wastage and errors in these high precision machines.

FUTURE PLANS

In the next two years, Sahajanand is planning to sell around 3,000 new systems, all equipped with Lenovo Think-branded PCs. Sahajanand's goal is to create as many automated solutions that are reliable and give great value to their customers.

According to Gaywala, sophisticated and high-end planners and advanced laser systems have changed the face of the industry. "We are committed to bring these high-end innovative technologies within the reach of every diamond manufacturing industry and to make them drive on the road of success. We are on the verge of bringing 3rd generation technology revolution into the diamond industry."

He said, "We are now working on a machine that can provides better accuracy and can handle even finer inclusions in diamonds. The company is looking at Lenovo's business computing solutions to power these machines, with all the advantages that they offer — including high reliability and great processing power."

Also, by the end of this year, Sahajanand is planning to launch an "Automatic Polishing Machine" and a technology wherein the diamonds can be directly transferred from the Magnus planner machine to the Lazer Super machine. ■

THE TEAM: The experts at Sahajanand Technologies work hard to create cutting edge products for diamond processing that are powered by Lenovo ThinkCentre M90 series