

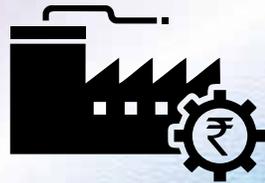
MACHINE TOOLS

WORLD

Monthly Magazine on Machine Tools & Allied Industry

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INDIA: The next MANUFACTURING



OPPORTUNITY post COVID

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INDUSTRY FOCUS

COVID-19 has taught us
that business goals
should be flexible
Pg. 20

Post Covid it'll be an uphill
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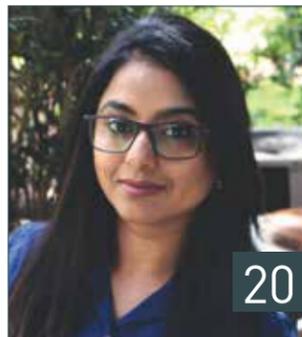
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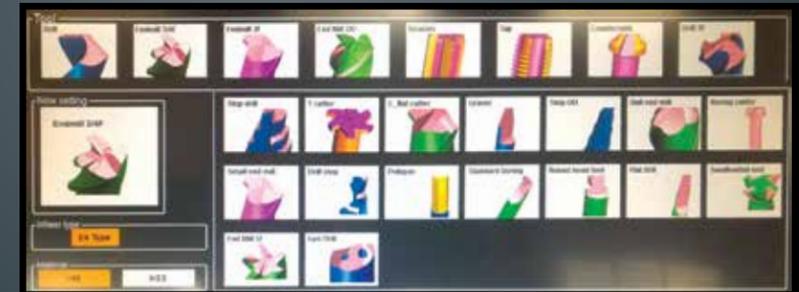
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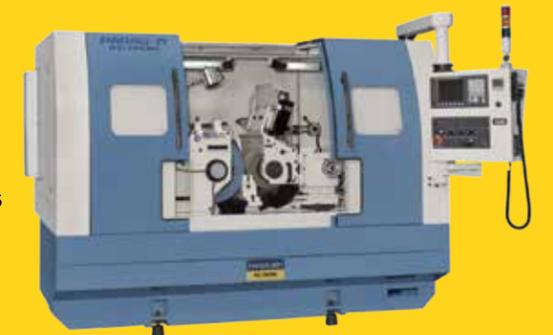
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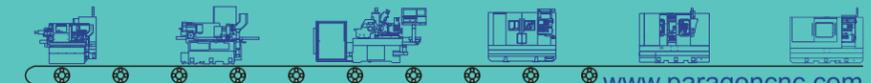


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Sandvik's new powder plant achieves AS9100D aerospace certification

Sandvik's new state-of-the-art powder plant for titanium and nickel-based superalloys has recently received the prestigious 'AS9100 Revision D' certification for deliveries to the aerospace industry.

Sandvik's powder plant for Osprey® titanium and nickel-based superalloys was inaugurated in the end of 2019 in Sandviken, Sweden.

"Now we are one of few companies that has the new and prestigious 'AS 9100D' quality certification for our Osprey® titanium powder and nickel-based superalloys used for additive manufacturing. It is a true milestone, which will facilitate many customer collaborations go-



ing forward," said Keith Murray, VP Global Sales, Sandvik Additive Manufacturing.

The launch of titanium powders for additive manufacturing supports a growing trend towards the 3D printing of titanium parts – and the shift towards sustainable manufacturing. The additive process results in far less material waste than traditional subtractive techniques, while also encouraging new levels

of design freedom. This is opening up the use of titanium in other industries such as automotive and tooling.

"If combining this with the opportunities with a light and strong material like titanium, the sustainability advantages can be enormous. Weight reduction is for example a constant key issue for the aerospace industry, driven both by fuel cost and carbon footprint. The same is true for cars and trucks, and everything else that moves. Each kilogram of weight loss on an airplane saves about 3,000 US dollars per year in fuel – and can make a great difference for the planet," said Murray. [MTW](#)

Oerlikon Balzers receives Airbus qualification



The RS 50 is located in Ferrières-en-Brie near Paris, a major Aerospace certified production facility of Oerlikon Balzers.

Oerlikon Balzers announced it has received qualification from Airbus for its RS 50 coating system, which uses the latest carbon coating technology. The RS 50 is located in Ferrières-en-Brie near Paris, a major Aerospace certified production facility of Oerlikon Balzers. The coating system has been selected and approved by Airbus to secure REACH-compliant PVD coatings with BALINIT C.

The RS 50 coating system is capable of producing BALINIT C coatings according to AIPS 02-04-007 Airbus specification. BALINIT C, a non-hazardous and REACH-compliant alternative to hard chrome plating, is a coating applied to aerospace components made of steel, titanium and various alloys that helps reduce surface fatigue, withstand wear, and high loads, whilst being lightweight and exhibiting low-friction. [MTW](#)

Mastercam announces partnership with DeBerti

CNC Software, Inc., developers of Mastercam, recently announced a new partnership with DeBerti, known for creating custom, concept vehicles as well as creating high-end, quality parts and accessories for all types of vehicles and racing.

DeBerti will use Mastercam exclusively, as CAD/CAM software for solid modeling and design, all the way to final concept and production part machining. Mastercam will also be involved in unique and special projects with DeBerti in the production of their creative ideas.

"As long time Mastercam users, the father and son duo of Doug and Brad DeBerti bring their infectious personalities and innovative concepts to audiences of all ages worldwide," said Stas Mylek, Partnership Program Manager, CNC Software, Inc. "As they ramp up their new build and



production facility in Mooresville, North Carolina, we are looking forward to being a part of their development process and bringing their one-of-a-kind concepts to life."

Brad DeBerti, Doug's son and Co-Owner of DeBerti, shared, "This partnership will enable us to bring our creative car concepts to life, exactly as we envision them. Times have changed, & every build starts its life on a computer. Now we can make that creation in Mastercam and convert it to the fixture tables and go right to machining parts. Can't wait to start the new builds." [MTW](#)

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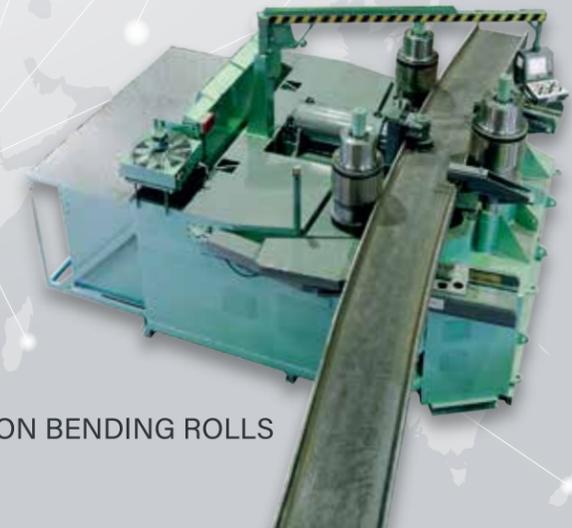


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DMG MORI strengthens future field digitization

Business development for DMG MORI in the 1st quarter of 2020 was strongly marked by corona crisis. The demand for machine tools declined significantly in the first quarter of 2020 due to the weak global economy and the rapid spread of the Corona virus. DMG MORI recorded order intake of € 440.2 million, which, as expected, was noticeably below the high level of the previous year (-38%; € 708.3 million).

Sales revenues – influenced by the Corona crisis – were at € 458.0 million (-27%; previous year: € 629.2

DMG MORI AKTIENGESELLSCHAFT

million). The decline is due in part to the fact that machines could no longer be delivered because of international border and customer-side factory closings as well as to bottlenecks in transport and logistics. The export quota amounted to 64% (previous year: 68%).

EBITDA was € 43.2 million (previous year: € 73.3 million). EBIT reached € 25.3 million (previous year: € 50.4 million). The EBIT margin was 5.5% (previous year:

8.0%). EBT amounted to € 24.8 million (previous year: € 49.2 million).

DMG MORI is looking at the current changes as an opportunity to advance the digital age at all levels together with employees, customers, partners and suppliers. As per the company, there are many opportunities for DMG MORI: internally through the digitization of the own value chain and company processes – externally through an exclusive offer of digital products and data-based services with measurable customer benefits. **MTW**

Liebherr, Stanadyne collaborate

Liebherr Components and Stanadyne LLC recently entered a strategic partnership for the global service and distribution of joint injection solutions for on- and off-highway applications.

The cooperation enables both partners to enlarge their range of light-, medium- and heavy-duty applications in the commercial vehicle sector. At the same time, both companies will offer even more flexibility with regard to individual engine designs.

“This partnership draws on Liebherr’s strengths in terms of injectors and system integration. Furthermore, we rely on decades of experience in the development and construction of our own engines. This enables us to know exactly, which requirements a common rail system needs to fulfil. Stanadyne, for its part, brings deep technical expertise in the development and production of high-pres-



sure pumps, especially for light commercial vehicles, to the partnership,” said Stefanie Gerhardt, Managing Director of the Common Rail Systems Business Unit at Liebherr.

“Stanadyne and Liebherr are both international players. By bundling these two networks, we are able to provide our customers with a personal contact on site, on every continent across the world,” commented Dr. John Pinson, President at Stanadyne LLC. **MTW**



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Nishant Sinha to lead Bosch Power Tools division in India & SAARC

Bosch Power Tools India announced that it has appointed Nishant Sinha as the Regional Business Director for India & SAARC.

Sinha aims to develop a stronger customer-connect and focus on effective channel expansion for deeper market penetration of the power tools division. He will work to broaden the reach of power tools, accessories, and measuring tools through alternate channels, while also strengthening the digital and services network of the brand.

On his appointment, Nishant Sinha said, "Bosch Power Tools in India and SAARC have exceptional people and



Mr. Nishant Sinha
Regional Business Director,
India & SAARC

an innovation-oriented work culture that has ensured its past successes as a market leader. I endeavor to channelize its full potential to propel growth & a wider outreach with customer-focused quality-driven initiatives." **MTW**

Partnership to meet increased ventilator demand

AMADA WELD TECH announces increased strategic partnerships with manufacturers of battery modules, used in vital life support systems, as part of the effort to meet the increased demand for ventilators and their component parts during the current global health crisis. The company has increased production in recent weeks, all whilst maintaining the safety and health of employees and customers.

Life-support equipment, such as the ventilators in such high demand during this crisis, must have a reliable battery back-up solution to ensure continued patient care in

the event of a total power failure. Battery technology is also necessary to ensuring continued operation of vital equipment between a power failure and the switchover to backup generators. In addition, battery power ensures that essential support and monitoring can be maintained safely as patients are moved between wards and departments.

AMADA WELD TECH has provided technology such as its High Duty DC Resistance Welding Power Supply DC2013 T and parallel gap weld heads to battery pack manufacturers who are rushing to increase production at this critical time. **MTW**

Suhner offers newly designed version of BEX 15

Suhner Industrial Products introduced its machining unit BEX 15 with maximum spindle speed up to 23,000 RPM, thus offering higher speeds and improved production inline. Standard variations are equipped with electric motors of 0.55 kW, 0.75 kW and 1.5 kW. An adapter flange is designed for the installation of multiple spindle heads and angle heads.

A new style timing belt drive multiplies the motor speed up to 13,050 RPM spindle speed. An AC in-



BEX15 shown ready for rack mounting or affixed to a Suhner linear slide assembly

verter drive is used to increase the spindle speed up to 23,000 RPM at 87 Hz. Standard motor mounting on

BEX 15 machining spindles is in the rear. Optional front motor mounting is available upon request. Additional

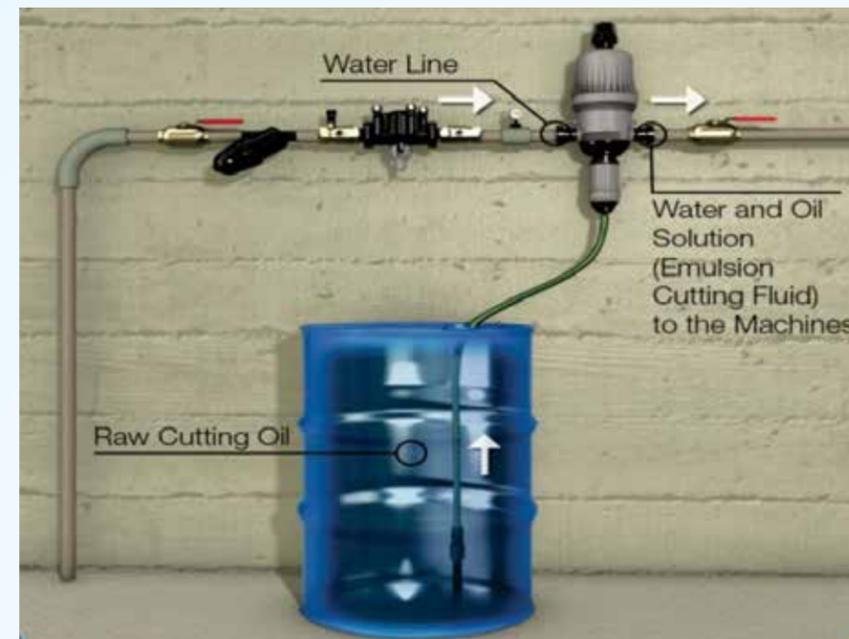
optional features include frequency converter and direct drive servomotor.

The machining unit BEX 15 can be applied in axial and radial orientation, directly mounted to a Suhner linear slide assembly Type UA15-PH or UA15-CNC. In this combination, numerous operations such as milling or demanding drilling cycles including jump or peck feed can be accomplished. BEX 15 with HSK spindle includes an integrated 4-point clamping system form C, for manual tool clamping. **MTW**



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Bruker Alicona 3D Measurement Technology in Smart Manufacturing

When measurement technology becomes the smart eye for production

Today's production managers require greater flexibility for small batch size production and tight tolerances. With our solutions for Smart Manufacturing, we demonstrate how Alicona metrology contributes towards profit.

On many production lines, the use of measurement technology for quality assurance is still realized off-line. Inspection equipment is often located at the end of a production chain and the quality of a component is only determined when it has already been manufactured. In the worst case, the component fails to meet the specified tolerances, making it necessary to move through all phases of the production cycle again. As a consequence, measurement technology is often perceived as an expensive, time consuming exercise with no added value. Smart Manufacturing moves quality assurance out from unloved shadow behind the scenes into a new role, center stage. As an integral part of the production chain, it actively engages in manufacturing operations and corrects production steps when a single component does not meet the correct tolerances. As a result, faulty components are no longer produced; first parts are good parts.

Concept: 3D measurement technology as a smart eye

The use of measurement technology as an integral part of manufacturing is based on optimized communication and networking of all interfaces. Production systems, machines, and measurement

technology form a closed loop in constant communication, which makes it possible to produce the first part directly as a good part. The integrated measurement technology is able to verify dimensions, tolerances, and surface quality even at a very early stage of production. If the measuring sensor detects that a component is faulty, this information is fed into the production circuit, which adapts accordingly. Measurement technology becomes the smart eye of production.

Alicona's Focus-Variation offers the ideal platform for using optical 3D measurement technology in production, as it is combined with areal-based high-resolution 3D measurement sensors that can be flexibly integrated. All involved systems are digitized and linked using intelligent interface technology and the provided measurement solutions can be individually customized. This gives manufacturers real-time data on production processes, allowing them to intervene at an early stage. As a consequence, smaller batch quantities with closer tolerances can be produced to a higher level of quality and precision.



Implementation: Measuring, networking, and individualization

Depending on the application, Alicona sensors can be integrated into production in a variety of ways. These are the most common ways of implementing "Smart Manufacturing":

- The use of a standard measuring system combined with the "Automation Manager" interface. Measurement series are configured by an administrator in advance, and then started by the operator in production by pushing a button.
- Using collaborative systems, "Cobots". The measuring sensor is mounted onto a mobile robot platform and can be positioned as needed, even for the measurement of components in the machine. The Cobot's safety concept is built around the physical interaction between humans and robots, and makes conventional enclosures for robots obsolete. Collaborative systems respond to human movements by means of appropriate sensor technology and switch off automatically if there is a risk of injury.

Digitization and networking between production systems, machines, and measurement technology

It is then necessary to apply high-resolution optical measurement sensors to ensure communication and networking between all the data and systems within the production chain. As a result, the measuring technology moves from a decoupled measuring room into the center of production, where complex measurements are executed quickly and easily.

All systems involved interact in a closed loop, making it possible to intervene in production at any time. Production measurement data enable manufacturers to plan and control production on a flexible basis, contributing to efficient company management.

The range of products offered by Alicona covers the entire spectrum: As a provider of high-resolution optical 3D measurement technology, we integrate measurement sensors



into the production line and provide corresponding interfaces, including a CAD-CAM interface, for connecting to existing production programs. This allows production managers to achieve autonomous optimization of production and more efficient management of the company.

Measuring systems matched to user requirements

Alicona's high-resolution optical

3D measuring systems can be extended by the user to meet specific requirements. This allows the manufacturer to adapt the measuring device to the individual production process and extend existing functionality. Customer plug-ins facilitate easy extended programming ("scripting") or the implementation of specific, proprietary software programs and libraries. This allows manufacturers to integrate individual parameters and evaluation algorithms into Alicona standard products. That

way, they can continue to develop Alicona systems to permanently extend and optimize quality assurance and expertise specific to their company.

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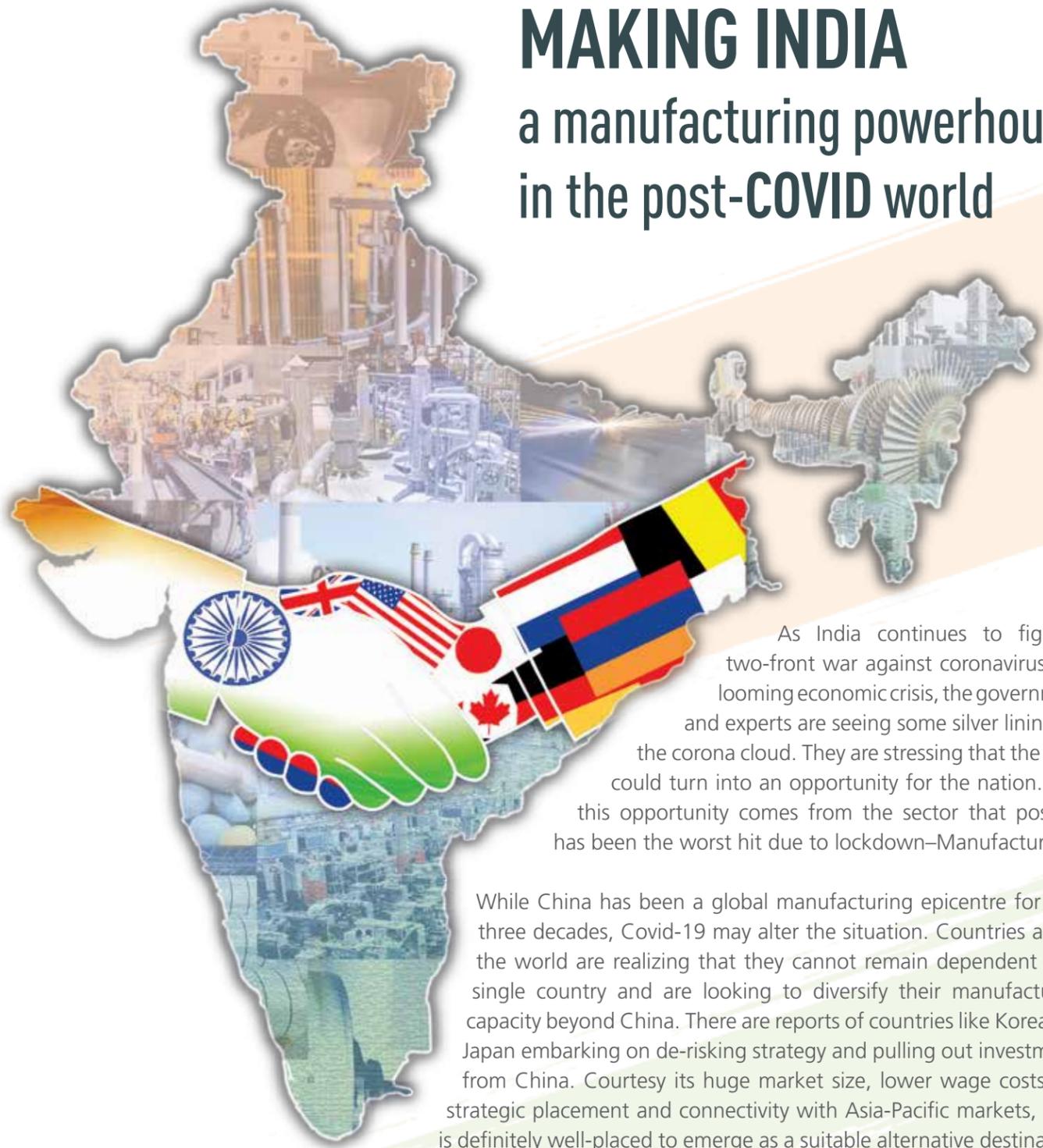
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MAKING INDIA

a manufacturing powerhouse in the post-COVID world



As India continues to fight a two-front war against coronavirus and looming economic crisis, the government and experts are seeing some silver linings to the corona cloud. They are stressing that the crisis could turn into an opportunity for the nation. And this opportunity comes from the sector that possibly has been the worst hit due to lockdown—Manufacturing.

While China has been a global manufacturing epicentre for over three decades, Covid-19 may alter the situation. Countries across the world are realizing that they cannot remain dependent on a single country and are looking to diversify their manufacturing capacity beyond China. There are reports of countries like Korea and Japan embarking on de-risking strategy and pulling out investments from China. Courtesy its huge market size, lower wage costs and strategic placement and connectivity with Asia-Pacific markets, India is definitely well-placed to emerge as a suitable alternative destination.

We, at Machine Tools World, spoke to the industry leaders to understand how India can capitalize on this opportunity and emerge as a global manufacturing powerhouse. These leaders share with us their views on the factors that work in India's favours and challenges we need to address. Excerpts:



B P Poddar,
Sr. Vice President, FEMCO-India

In 2010-11, China emerged as the world's manufacturing hub. Nevertheless, the Coronavirus epidemic is beginning to change this in many ways. Remarkably, the persistent China-US Trade war had already made global companies nervous about keeping majority of their manufacturing in China. The Covid-19 pandemic has further encouraged and augmented their plans to broaden the horizons of their manufacturing capacities beyond China.

Many industry segments have realized

Creating manufacturing-friendly environment is the need of the hour

the downsides of being excessively dependent any single country and are looking to expand in different geographic locations for spreading manufacturing facilities. This offers a lot of opportunity for India. We must create manufacturing-friendly environment and offer level playing fields to global manufacturing companies for setting up their shops in India. To emerge as strong contender, India must act proactively to create an environment that is favorable to global manufacturing so that World considers India as a trusted supply chain partner.

India needs to capitalize on this opportunity. Vietnam, Indonesia, Thailand, Malaysia, Cambodia, Singapore have also emerged as noticeable viable options for manufacturing.

Analyze & learn from China's experiences

For India to become a preferred global manufacturing hub, we must carefully

study what made China highly successful in the last two decades. We must learn from experiences of China and create encouraging, advantageous ecosystem.

A number of aspects needs to be seriously focused on, including building world-class infrastructure, logistics, strong R+D, innovation and skill enhancement and greater automation. Further, government policies must support various sectors and must facilitate greater foreign investment and introduce reforms in tax, labor laws and land availability.

The Government of India has already put a significant focus on leveraging the manufacturing sector to create jobs for millions of Indians with initiatives such as 'Make in India' & 'Skill India'.

Indian manufacturing sector must also intensify strategic plans to seize a major chunk of the shifting manufacturing business. **MTW**



Shreyansh Hippargi,
MD, QVI India

We need to create a world-class manufacturing ecosystem

in manufacturing. That said, I agree the current geo-political situation would certainly help India to emerge as the global manufacturing hub. Now it's time for action by the central and state governments by announcing suitable policies for the manufacturing sector and more importantly to cut the red-tapism. Similarly, industries should work on setting up world-class factories with latest technologies, ensuring top class quality accepted across the world, at the same time maintaining the optimum pricing.

Better industry-government coordination is required

Challenges are enormous but I feel it can be overcome by good co-ordination between the industry bodies and the government. Currently, the industry is facing

challenges in acquiring land for setting up factories, getting various approvals, and high level of taxing. These can be addressed by government intervention.

Secondly, infrastructure needs to be improved. Although government is working on that, but a lot need to be accomplished. We need to upgrade our existing ports, set-up new ports to clear the load on the current ones. Similarly, our road network should be expanded and the existing highways should be improved. Uninterrupted power supplies should be provided to the industries. Townships to be developed near the industrial zones with all the facility, so that people would not have to travel long distances for work.

Next, we have challenges in getting skilled manpower required for latest

technology manufacturing setup. In this regard our universities and colleges can play vital role by collaborating with the industries to understand their requirement, and incorporate the same in their



Vikas Khanvelkar, MD,
DesignTech Systems Pvt. Ltd.

India definitely has a tremendous opportunity here to attract companies to set-up manufacturing operations in our country. Companies will now look for potential alternative locations to China that offer the right infrastructure, lucrative corporate governance policies, beneficial economic and trade policies, provide trained manpower and workforce, to relocate their set-up.

It is going to impact their costs of operations and productions, delivery chains and mechanism, and also the quality of product. Which is why companies are going to be critically evaluative, extreme-

syllabus. We are lagging in our R&D, for which the government R&D centres and top educational Institutes like IIT & Universities should speed up their R&D programs to help the industries in producing

Competitive and attractive corporate tax structure works in India's favour

ly calculative and minutely discerning before making that decision. Many other competent countries like Vietnam, Thailand, Philippines, Malaysia, and Bangladesh are also competing to attract manufacturing investments in their countries.

India is definitely facing a tough competition. If India misses this opportunity then we have a lot to lose in terms of generating employment, reviving manufacturing industry, growing industrial output, augmenting our exports, elevating our GDP and making India an economic super power.

Having said that, India now has a very competitive and attractive corporate tax structure. At 15% corporate tax for the new manufacturing companies, India offers one of the lowest tax rates and hence is an attractive destination to make investments.

Need to provide right environment for business security

'Ease of doing business' and safeguard-

world-class products.

I am confident these issues will be addressed. As we move forward, bright future awaits our manufacturing sector! **MTW**

ing the interests of the companies to conduct business in our country are two critical factors that will play a significant role in influencing the decision of companies in our favour or against us. We need to provide the right and just environment for business security.

Government will have to revisit some of the labour policies and law decisions to strike a just balance between protecting rights and privileges of both the parties – Manufacturing companies and labour. The government should also understand that companies are corporate citizens of the country and they too need protection to survive and contribute to the economic well-being of the country, all their stakeholders and the employees.

While India has no shortage of working hands, companies require rightly trained manpower that can contribute productively towards their growth objectives. Setting up skill development centres is key to that. **MTW**

India has the technical know-how but lacks systematic implementation

We in India have the lifetime opportunity to emerge as the most preferred manufacturing hub for the world. India has the ability to produce best quality at reasonable cost without the fear of duplication. Global manufacturers are

looking towards this advantage. Now it is upon us, how we satisfy global buyers with timely delivery and ensure best quality.

This Covid-19 situation is really an eye opener globally, which has made the world realize its level of dependency on

China. Now, countries want to diversify their operations and the next preferred destination globally is India. Thanks to the work done by the present Indian government with major countries. We in India have all the technical know-how on all fronts, as far as manufacturing is concerned. However, we lack systematic implementation and long-lasting will in the business.

Focus should be on upgrading the infrastructure and workforce

If we overcome some minor shortfalls, no one can stop India from being a No. 1 supplier to the world. Firstly, a strong

infrastructure is an essential ingredient in the growth of the manufacturing sector. In India, we are yet to match the requirements of global buyers. Transportation is still a big challenge for timely deliveries. Land, building – completion of construction, other formalities for industry to start up takes its own time. Things are improving but it varies from state to state. Technology wise also we have to improve a lot.

Secondly, skilled manpower is also a concern. There are a lot of engineering colleges, training institutes, but newcomers lack practical knowledge. Presently, we are overcoming some

of the shortfalls through automation. After the announcement of Skilled Manpower training schemes from the Indian Government, the situation is changing, but the speed is slow.

Good quality raw material is also one of the most important challenges at this moment. Further, one window policy for new projects should become more efficient. Fortunately, by implementation of GST, manufacturing business has become hassle-free. With a market-friendly approach and urge to excel no one can stop India from becoming a preferred global manufacturing hub. **MTW**

Better productivity and consistent quality should be the core focus points



Bina Khambhaita, Executive Director,
Cosmos Impex (I) Pvt. Ltd.

to be changed to ROTI (Return on Time Investment). Because when Time is the Key factor in the business (even above money) then only productivity will be at its top by default, and will become a growth driver for an Enterprise. HR will have to change their roles from Human Resource to the Human Potential – HP.

Better Productivity, reliability, consistent quality should be the core focus points to incorporate in the manufacturing process to get ready to look up to global supply. The Global world looks for reliable and consistent quality products, and to establish this, the biggest hurdle we will face in India is our culture. Our workforce's "Chalta Hai" mindset. Until we address this basic work culture Issue, establishing product reliability will be the biggest challenge.

Investment in high-quality mother machines a key requirement

Our manufacturing process, should be

updated with International Standard systems, to meet the desired quality output. Every enterprise knows very clearly that, such opportunity comes only once in lifetime. Investing in 21st Century suitable mother machines with zero defect manufacturing process, and inbuilt IoT 4.0 is a good solution for entrepreneurs to establish close loop monitoring work culture to meet the global standards.

Capital goods have to be bought with high performance, better accuracy, with technology of today as key requirements to upgrade manufacturing process for the world demand. If we still keep buying conventional, cheap and economical mother machines, becoming a world-class manufacturing hub for the global world will be a multi-decade dream. Each one of us needs to commit to the goal of 'better quality product than yesterday,' to make the opportunity and vision of becoming a global manufacturing hub a reality. **MTW**



COVID-19 has taught us that business goals should be flexible

Nature is always superior than humans, says Arpita Garud, Founder, M.D. Giftwala. In this interview, she talks about how the firm is staying positive and strategizing and re-looking at business plans and goals to tide over the coronavirus crisis

Q. Please tell us about the initiatives taken by your company for business continuity while ensuring employee well-being during these challenging times?

To ensure the well-being of our employees, all are advised to work from home and not to leave their homes unless there is any real critical work. As preventive measures, we have provided a kit of N-95 face masks and hand sanitizer to them and further requested them to use it regularly. To continue the business activities, we are using the time to strategize and increase our product and service portfolio, for example, we now have the expertise to provide one-stop solutions for Digital Marketing and Innovative Branding. Also, we are focusing more on Customer Relationship Management and creative solutions for our Customers, which would help them to work remotely and at the same time support consistently.

Feeling powerless and hopeless won't be of any help, instead we can see this challenge as a chance to change ourselves. All we need to do is stay positive and keep moving forward, and together we're all going to come out of this.

Q. What steps have you taken to ensure Work from Home? How are you ensuring collaboration amongst internal teams?

Various assignments are given to the team and reviewed time to time. We are having regular video calls to make sure that the people are connected and don't

panic in the situation. We are having unique rewarding program for our Best performers.

Using time wisely, sticking to a routine, and being productive helps one promote a sense of hope that the employees and his life is progressing. In the face of occupational and social change, one may lose his productivity and tenacity while falling into idleness and subsequent discouragement.

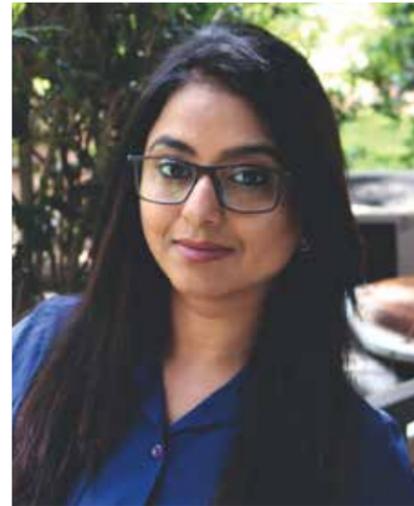
We advise our employees to continue to take steps towards their personal and career goals. We are also organizing some competitions like decorating your home work space, best view from the work place, sharing their desk space with their family members etc., to ensure that the employees are connected and motivated.

Q. What initiatives have you taken for smooth customer experience?

Our team is available for online support. We are also guiding our customers on how they should use digital marketing to ensure their product and services reach the market. Various online tools are being suggested with regular calls via various media platforms.

Q. What would you define as key lessons from this crisis?

Nature is always superior than humans, COVID-19 showed us, as did the refugee crisis, that the globe lacks the ability to assemble a powerful intensive care capacity. This is now a clear challenge for world leaders.



Arpita Garud, Founder, M.D., Giftwala

Q. In your view, what will be the impact of the pandemic on the overall business scenario and especially on your segment? What is your strategy to tackle the economic slowdown?

Even when it comes to business, a long-term planning should not be considered. Business Planning/targets/goals should always be flexible. Considering Giftwala as a branding company-this pandemic will actually help to grow the business. Other companies will look new avenues to increase their sales to meet up their sales target. Which will require push selling and aggressive marketing. So, demand for marketing agencies will be higher.

Q. What are the policies/ support that you expect from the government for your sector?

The pandemic is bringing with it a major economic and financial crisis. Facing the economic consequences of coronavirus is a major challenge for national governments, institutions and the international system. There is an urgent need to understand the extent of the crisis and the nature of the health, social and economic problems we face as well as to update the policies that have led to this crisis. **MTW**



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Post Covid it'll be an uphill task but not impossible to turn around economy

The attack of the Coronavirus has definitely changed the world for good. In the process it has devastated plenty of reputations as well as economies. As we near the end of the lockdown it is time to plan for the future, look for opportunities and learn from drawbacks. It is imperative that the government comes out with an exit plan. While the most powerful country on earth, the USA, was found flailing in the face of the virus attack, India, fortunately, managed the pandemic comparatively better. Negative comments of various degrees have appeared in the media. If the IMF has forecast that the Indian economy will grow at 1.9 per cent the Barclay's Bank has stated it would be zero per cent. Job losses to the tune of 400 million worldwide has been predicted.

Something beyond human control has struck. Perhaps we could not stop it from attacking but we can always fight it and come out victorious. We must now start thinking about the post Covid-19 scenario. Sooner or later we will definitely get out of this lockdown and make efforts to get back to a somewhat normal life.

According to a few webinars held immediately after the lock down by

some prominent economists everything is not yet lost. So far, India has not been affected as badly as it was expected. Compared to many highly developed countries India has managed far better. However, in absolute terms experts feel the Indian economy stands to lose anything between Rs 9 lakh crore and Rs 11 lakh crore from its GDP. Recouping this cash drain will be a Herculean task but it shouldn't be impossible.

The experts at the webinars spoke about certain points about what should be done to revive the economy.

First, we should realise that this is a Human Economic Financial (HEF) crisis which completely different from 2008 and should take a minimum of nine months to recover to a certain extent.

Second, banks have to be on a tighter leash to keep non-performing assets

(NPAs) in check. Your bank sanction letters don't matter now, only the amount in your account does. Banks are going to revise your sanctions and make drastic reductions, if they see a credit risk. The current situation will also lead to a drastic re-evaluation of the billion-dollar start-ups. The valuations will be challenged. Cash burn will be frowned upon and it'll be tough to raise new cash. Leverage is a double-edged sword. It can lift you or bring you down.

A couple of days ago the government has relaxed some restrictions of the lockdown. However, restarting manufacturing is going to be difficult. As the labour force will be forced to choose between fear of life or earning a livelihood. To manage this, labour has to be incentivised to return and management has to guarantee them security of life, food and lodging if required. Company managements have to become more prudent by cutting costs, downsizing and no increments/bonus. Getting cash flow back should be first priority.

Consumer credit has to increase as well as per capita income. India is very low on both accounts.

Public and private partnership

actually works, YES Bank is a good example. Though it is a competitor, government didn't allow it to fail as repercussions would have been more damaging. The government should have stepped up and done the same for PMC Bank and IL&FS. Things would have been different.

RBI should step forward and purchase corporate debt. This is a common practice by central banks across the world. NBFCs should be regulated more. If required, new banking licences should be stopped. Banks have an exposure of 12 lakh crore to these NBFCs.

Force Majeure - this term has been doing the rounds a lot these days. It was brought up in a govt gazette couple of weeks ago regarding payment to its vendors. Now many companies, including large companies are taking advantage of this and trying to skip their lease payment to the vendors. This should be used only when companies are actually not in a position to pay and not because they can avail a certain clause. As this can have a ripple effect on the economy.

Equity markets have been hit badly but should bounce back over time. There

are only two per cent equity investors in India against 40-60 per cent in some countries. Mutual fund penetration is also very low at 12 per cent compared to 62 per cent globally. First time investors should be encouraged to invest in mutual funds as they are less risky.

Large companies can within 24 to 48 hrs get QIP from foreign funds and now should be encouraged to raise more money from public.

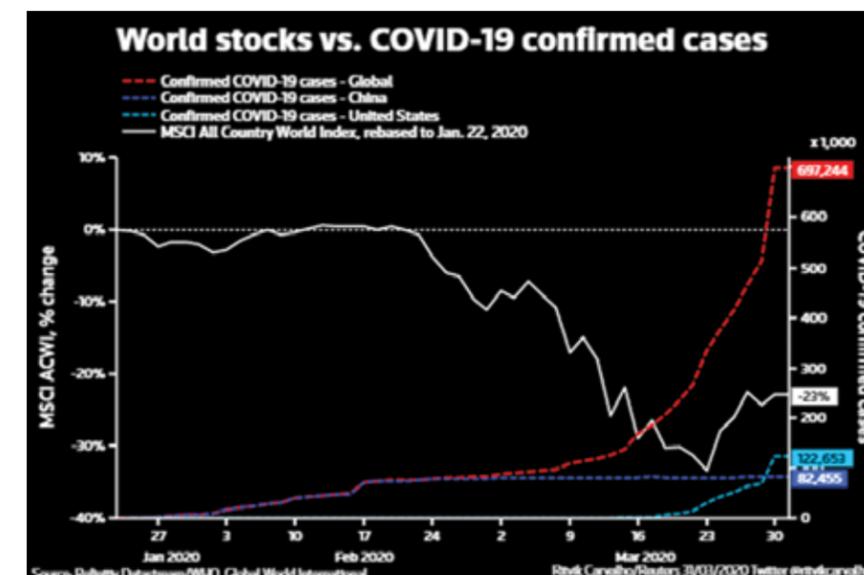
A McKinsey report said that during 2018 to 2022, a billion people in the world will be in the middle class category of which 650 million will be in Asia and 318 million will be from India. India will be huge in consumption numbers though financial savings have decreased due to increased consumer spending.

The three things that should be kept in mind in the path to recovery and they are:

- Financial sector should be strong, else economy will collapse. NBFCs need stricter supervision.
- The poor should be supported more and steps be taken for them to be brought out of poverty. In any crisis, they are the first affected and last to recover but are the backbone of India.
- Simplify rules for investment and remove complicated tax rules.

I expect the government to come up with a major stimulus scheme shortly. In fact, I had expected the Prime Minister to announce a major package to boost the economy during his last address to the nation but he did not. Hope he does it at the earliest. Various economists have suggested a myriad of solutions and it is expected the Prime Minister will heed their words.

Arijit Nag is a freelance journalist who writes on the economy and current affairs.





ROLLON WAREHOUSE SOLUTIONS

Reliability and speed in ever-decreasing dimensions: Rollon offers complete mechanical components and solutions to make shuttle and stacker cranes more efficient and support the growth of a sector in continuous expansion.

In a market worth tens of billions of dollars, a second or an inch gained can make a difference. Especially if we talk about the intralogistics sector, at the root of the e-commerce revolution, whose growth in these years has gone hand in hand with increasingly efficient automated processes within the warehouses.

Processes such as those in which Rollon has specialized, which proposes solutions to generate reliability and speed in ever smaller contents, ie the ingredi-

ents necessary for an efficient warehouse at the time of the e-commerce explosion.

To help achieve the required rate of efficiency, Rollon offers a wide range of products alongside specific know-how matured in the customization of solutions, in order to meet the different needs of the individual applications in all fields of intralogistics.

SHUTTLES

Today, shuttles run unceasingly between the shelves of automated warehouses

carrying Rollon **telescopic rails** to manage the extraction process, picking products from shelves and placing them elsewhere. This crucial process is repeated millions of times. Therefore, it is fundamental that these telescopic rails have the right characteristics. Which features do they need?

Cross-section dimensions

A difference of one centimeter on a single rail is multiplied by thousands of slots along shelves that are hundreds

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Rollon is a global provider of **linear motion solutions** for several industrial sectors, such as: **industrial machines, railway, automation, packaging and logistics, aerospace.**

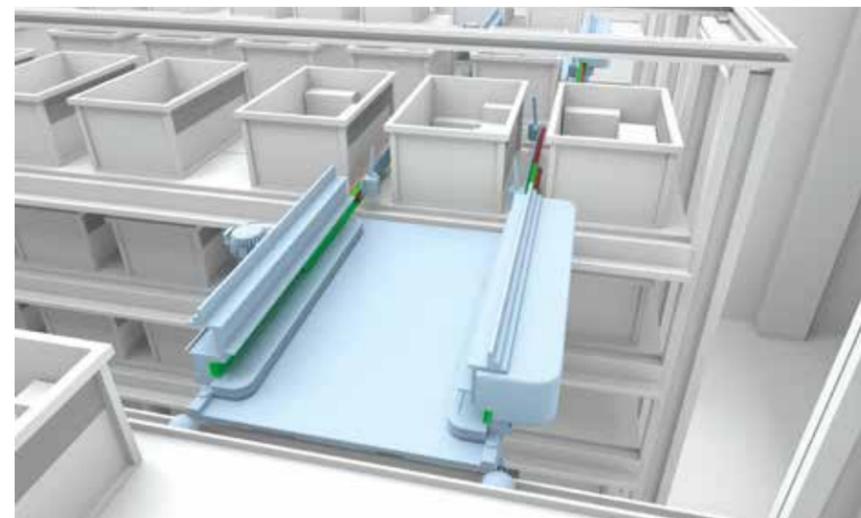
of meters in length, and this turns into meters or tens of meters of space available for new slots. A compact rail, like **ASN**, means that the warehouse can store more objects in the same amount of space

Rigidity

The extraction system must be extremely rigid. Telescopic rails used in these applications must have extremely limited play (two-place decimal tolerance) or a total absence of play. In this context, Rollon brand products are particularly efficient: for example, the **ASN** telescopic rails have induction hardened raceways that allow them to maintain coupling and preserve rigidity.

Double and over-extending strokes

Shuttles need to extract products in two directions, and Rollon solutions such as **ASN** and **DE** telescopic rails allow them to do that, thanks to the double stroke configuration option. Another issue is that, in order to reach more distant products, shuttles require a stroke with rails that are longer than the usual 50%. With Rollon rails, strokes can be extended up to 75%. If two pairs of two-stage extraction rails are used, a total extraction of 150% of the width of the shuttle is achieved.



Synchronization

To meet the needs of clients and offer a synchronized product, Rollon has proven that it is an expert at customization. Starting with the **DE** telescopic rails, the Group has created a personalized solution: the **DEF43Z**, a synchronized rail with a rack and pinion mechanism. However, Rollon's customization abilities can even go further to provide **mechanical systems integrated with personalized components** that meet the client's specific needs. These components range from belt mechanisms for synchronization to ground raceways for further improving sliding movements. They also include rails with ball bearings integrated into a special intermediate element that can guarantee maximum rigidity.

STACKER CRANES

These devices perform an intermediate rotation. Stacker cranes are systems that run on both a horizontal & vertical axis to reach products on warehouse shelves. Due to evolutions in its product range and recent corporate acquisitions that have fostered its growth in the linear actuator sector, Rollon is now able to offer **complete solutions for stacker cranes**, formed by an X-axis & a Z-axis, ideal for managing small & medium-sized loads.

In this case, the right products to use

are belt-driven actuators from the **Smart System** line, which guarantee speed and high acceleration along with no need to lubricate the belt. This combination provides the perfect solution for stressful work cycles. Smart System actuators are also supplied with all mounting accessories and fasteners needed for simple, quick integration between products, to allow the fast, easy assembly of an efficient stacker crane.

VERTICAL WAREHOUSES

Over the years, Rollon products have been confirmed as reliable reference points also in **vertical warehouses**, because they make it possible to store materials on different shelves and to move them with automated means to make them accessible. This is where Rollon's **DSS** telescopic rails come in handy. Thanks to their high load (up to 500 kg per pair of rails) and low degree of bending, they allow the operator to extract the tray holding the materials and to re-insert it inside the drawer easily.

ROLLON: A CAPILLARY ORGANIZATION ON A GLOBAL SCALE

Rollon is close to its customers, both locally and internationally. Rollon's industrial and distribution organization has been developed to reach the customer on a global basis through a widespread network. The Company can count on production sites, assembly logistics and a wide distribution network all over the world. The company is also present in India with its branch in Bangalore.

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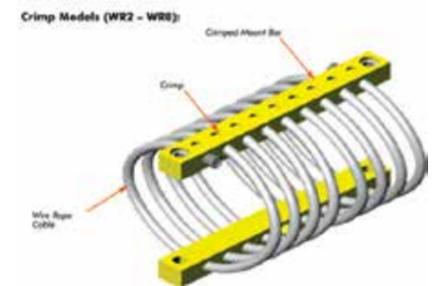
Enhancing the longevity of critical machinery with high-performance vibration isolation

ITT Enidine Wire Rope Isolators provide unsurpassed multi-axis vibration isolation to prevent equipment failure

Minimizing the amount of vibration your machines experience is critical to their long-term performance. Vibration fatigue can cause premature equipment failure and expensive machine downtime. But finding a way to reliably and cost-effectively counteract it has always been a challenge.

Enter ITT Enidine Wire Rope Isolators. Engineered with a rugged, all-metal design comprised of stainless steel cable and aluminum retaining bars, the wire rope isolators provide unsurpassed multi-axis vibration isolation. They require almost no maintenance. They're environmentally stable and highly resistant to extreme temperatures, oil, ozone, abrasives and chemicals.

The wire rope isolators also come complete with a patented crimping pattern. Along with an array of versatile mounting options and sizes, this design makes products ideal for a broad range of



applications in the Commercial, Industrial and Defense industries. All of ITT Enidine's wire rope isolators meet the industry standards of DEF-STND 0755, MIL-STD-810, BV43-44, MIL-STD-167, STANAG-042, MIL-S-901 and MIL-E-5400.

The best part? Even if your application parameters fall outside our standard product line, ITT Enidine has the engineering capabilities to design, test and recommend a custom solution to suit your specific needs. For more than 50 years, the company has partnered with its customers to provide value that extends beyond products — leveraging its extensive knowledge to address their most challenging applications.

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Features

To solve the problem of reducing the mechanism which use one bearing to replace two bearing solution. PMI 's designs & manufactures a variety of cross roller bearings that can handle radial, thrust and moment loads at the same time. These compact bearing feature rollers crossed at right angles between inner and outer rings. This structure can reduce the combined height required for bearings, achieving high rigidity & excellent load capacity. There are currently Standard type CRB, Mounting Holed type CRBF, Robots Installation type CRBR and Customization type CRBX for choose.

Product Application

It suitable used in the rotating parts of machine tools industrial robots, measuring instrument and IC manufacturing.

Product Characteristics

- **High Accuracy**
PMI offers precision cross roller bearing in the P2, P4, P5, P6 and P0 grades that to satisfy the needs of customers for precision equipment. The bearings produced by the test are classified that according to the accuracy of the ISO standard.
- **High Rigidity High Load Capacity**
Rollers crossed at right angles between inner and outer rings, the roller and

Cross Roller Bearing

groove contact area compare with ball bearings is bigger and contributing to miniaturization and increase load capacity and rigidity.

- **Save Space**
Traditional Ball bearing combination space larger than Cross roller bearing about 1.5~2 times, reduce the design space and miniaturization.
- **Specification Diversification**
Bore diameter 20mm to 110mm available for selection.
- **Crowning Rollers**

The rollers designed crowning curve that to avoid stress concentrate at both ends of the roller for the reason that it is maximum stress value of the roller can be reduced and the loading is relatively average, so improve the life of cross roller bearing.

Product Category

- 1. Standard Type - CRB**
The outer ring is separable, this model is used in locations where accuracy of the inner ring is required. Ex: Rotary part of hollow rotary table.



- 2. Mounting Holed Type - CRBF**
Mounting holes for direct fixing on outer and inner ring, helps produce smaller and lightweight equipment, product design becomes more compact, CRBF can



be assembled on the device according to the customers use, reduce the costs and delivery.

- 3. Robots Installation Type - CRBR**
Robots Installation type CRBR the outer ring is made of two split pieces, inner ring as a whole structure, mounting holes for direct fixing on mating mounting surface are available, easy installation, suitable for harmonic drive CSG(CSF) series and Multi-axis robot.



- 4. Customization TYPE CRBX**
Customers can provide design drawings to PMI, develop customized cross roller bearing products.



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The TIM QVGA-HD-T100 is a compact thermal imager for automatic body temperature screening.

This camera is designed for temperature measurement of a group of people and for targeted temperature measurement of an individual person. The software automatically recognizes

and displays people with increased body temperature. The software setup is adapted to body temperature and is suitable for common Windows PCs or the Micro-Epsilon NetPCQ (industrial PC with passive cooling). The record/snapshot functions automatically store the thermal images.

With its compact design and USB port, the camera is easy to install and can be easily set up and dismantled.

The thermal imager is intended for visitor and staff entrances, security gates, train stations and airports.

thermoIMAGER TIM QVGA-HD-T100

- Detector with 382 x 288 pixels
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- Very high thermal sensitivity with 40 mK
- Compact design
- Lightweight (320 g incl. lens)
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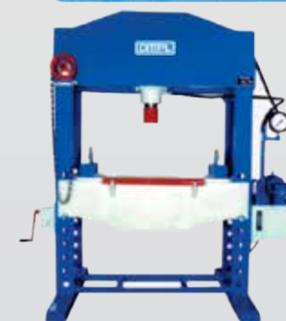
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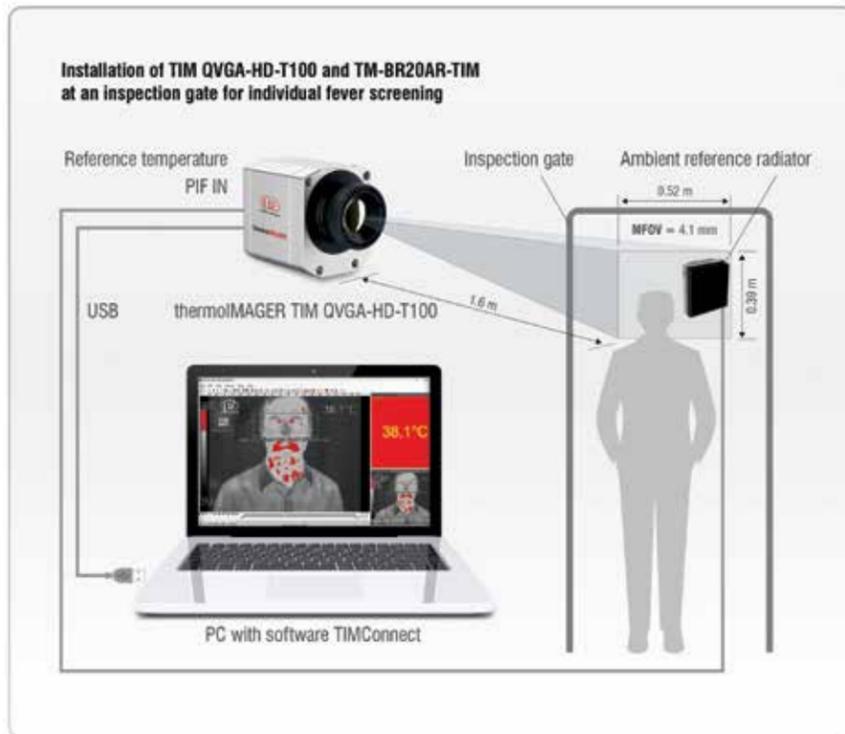
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Integration of thermal imaging cameras in automated processes



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Drake®

Drake MH Model Thread Grinders

The economical choice in precision grinding: Drake MH model thread grinders. Drake's GS:TE190-330MH and GS:TI240MH are low-cost manual helix machines designed to meet the tightest tolerance requirements without exceeding your budget. Equipped with Drake PartSmart™ menu-driven screens, these machines are easy to operate and deliver repeatable, accurate results. The use of premium materials ensures dependability and longevity regardless of your production schedule. Think high quality, low cost.

Drake machines are designed for accuracy, consistency, and reliability. These compact machines are built on high mass, cast polymer bases for vibration damping and thermal stability. The use of linear motors and linear roller ways allows for maximum acceleration and contouring. Other standard features include high precision workhead and motorized wheel spindle. Additional upgrades are also available.

After assembly and verification is completed, Drake offers hands-on training. Working with the Drake team ensures all your thread grinding requirements are met.

In addition to the MH model grinders, Drake's line of precision machines includes:

- **External Thread Grinders:** grind external threads up to 4m
- **Internal Thread Grinders:** grind internal threads up to 220mm
- **Dual Spindle Grinders:** grind multiple operations in one fixture setup
- **Crown Grinders:** grind drums for tapered roller bearings



- **Vertical Thread Mills:** rough mill parts for finish grinding
- **Rack Mills:** high speed rack milling

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We are Drake Manufacturing. We are a full service, turnkey manufacturer of precision CNC machines and provider of engineered solutions. Founded in 1972, Drake is headquartered in Warren, Ohio. The premium Drake brand is known around the world for innovation and process expertise throughout the thread grinding industry.

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FACCIN - Solutions for Heat Exchangers Manufacturers

By partnering with FACCIN solutions, Serck Gulf has been able to find the right solution to the challenges of their heat exchanger manufacturing line and meet the requirements of a new project for the fabrication of highly complex heat exchangers

Serck Services International, based in Sharjah (United Arab Emirates), is a specialist in Heat Transfer Technology and part of the U.K. based Unipart Group of Companies that operates in 13 Countries, employs 8,000 people and has a turnover of 1.07 Billion Dollars.

Serck has been providing excellence in heat transfer around the world for over 100 years and has supplied hundreds of heat exchangers to tier-one customers across Middle East and Africa.

When Serck Services International was awarded a new project for the fabrication of highly complex Heat Exchangers, the top management decided to invest in a brand-new powerful plate rolling machine that would allow them to increase their manufacturing capability.

“When we looked at the market to find the right supplier for this investment, we found FACCIN as the most suitable manufacturer. Their 3 Rolls variable



geometry HAV model with the advanced FACCIN AP package for higher productivity, prebending precision with the shortest flat end and versatility to roll different thicknesses and diameters, was an exact match to our requirements for Heat Exchanger manufacturing. We want to offer our customers the best possible equipment and we do this by having the best possible manufacturing technology available. The machines that FACCIN currently have in the Middle East and the positive feedback we heard by other FACCIN's customers did the rest,” said

James Brazier, Operation Director of Serck Services Gulf Ltd. Co.

“Furthermore, their innovative FACCIN Remote Service Management has been an added value that has given us complete assurance in terms of after-sales service”, he added

This demonstrates once again the capabilities and potential of Faccin's full in-house manufacturing process, from design to delivery of the right solutions to today's production challenges around the world.



For more information,
Mail: info@faccin.com



PRODUCT SHOWCASE

Automatic Accurate Proportioner

Reducing cost of coolants, lubricants and quenchants by automatic proportioning with water



Huge losses due to improper mixing of coolants / quenchants / lubricants with water are experienced throughout industries. These include coolant spillage losses of up to 5%, high evaporation losses of coolants from sump, failure of heat treated parts due to improper quenchant mixing, low die life or excessive lubricant consumption in die casting, hot forging operations and low tool life in CNC/ VMC operations due to improper coolant mixing with water.

Manual mixing methods followed in the industry are always subjected to human error. Maintaining consistent, correct dilution ratio of concentrates with water is a challenge faced by metal-forming industry.

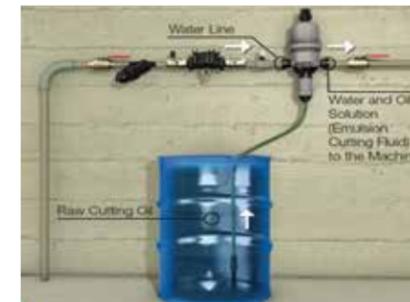
Steel Plant Specialities LLP, Mumbai, offers Accurate Proportioner for correct mixing of coolants / lubricants / quenchants with water, consistently and automatically. Mixing in correct dilution ratios with water enables a number of benefits in important operations like:

- CNC / VMC operations: Correct mix of CNC coolant with water enables reduced evaporation losses, increased sump life of coolant, preventing bad odour from sump and increased tool life due to better lubricity
- Polymer quenching: Correct mix of polymer quenchant with water enables uniform heat treatment of parts at all locations of quenching tank and desired heat treatment characteristics of induction hardened parts
- Die casting and hot forging lubrication: Correct mix of die lubricants with water enable optimal die life and ease of operations, without job sticking

Accurate Proportioner automatically sucks pre-set quantity of coolant directly from coolant drum. It emulsifies (mixes) the coolant with water and delivers the diluted solution through the outlet.

The Accurate Proportioner operates only on water connection. No electricity connection and no complex softwares or settings are required. As it works on water pressure, the proportion will always be accurate, as per the inlet of water quantity.

Difference in water inlet water pressure will not affect accuracy of proportioner. Capacity of Accurate Proportioner is up to 350 litres per hour (concentrate + water) Successful case studies and certificates of appreciation from reputed Organisations are available on request. Complete support in installation of equipment and training is offered by Steel Plant Specialities LLP. 



For Product Enquiry Contact
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211, Raikar Chambers, Govandi East,
Mumbai - 400 088, India
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Sandy Nitrile Coating (Sandy Grip)

The Gloves are knitted on computerized knitting machines using different threads or yarns like Poly-Cotton, Polyester, Para Aramid, Nylon & than the coating of different Polymers like PVC, Latex, Nitrile, Polyurethane etc. done on sophisticated machines/ automated dipping lines under stringent quality control to meet the superior quality to satisfy the customer requirements keeping in mind the high level of safety. The Palm Coated Gloves offer excellent dexterity, comfort & to perform the job of general handling light to heavy handling. Handling of sheet metals, Assembly of small components.

Features & Benefits

This unique formulation of double Nitrile Coated Gloves on Nylon or Polyester Liner helps to prevent liquid Penetration while providing secured grip with superior dexterity & comfort. Sandy Finish Coating recommended for grip in Oily Condition

Application

- General Handling
- Machine Operation
- Oily Material Handling
- Light Engineering Work **MTW**



DYNASPEDE Product Line for Process Industries

Dynaspede has long established its name as solution engineers in the paper, film, foil, and converting industries. Dynaspede's market offerings include Pneumatic & Powder Brakes and Clutches with loadcells and tension indicators for printing, coating, laminating, slitting, sheeting, corrugating and other industries. The company also provides stock solutions for speed control of industrial machines and processes. These include:

- Magnetic Particle Brakes & clutches
- Pneumatic Brakes & Clutches
- Electronic Control Panels
- Loadcells and Tachos
- Electronic Controllers

Dynaspede's solutions include analogue / digital AC/ DC or eddy current drives, DC injection brakes, planetary gear units / gear boxes and electronics to match. **MTW**



For Product Enquiry Contact

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tachyon¹

/tæki.on/ or tachyonic

noun

is a hypothetical particle that always moves faster than light. Conceptualized by a team of scientists Which includes Indian scientists Mr. V.K. Deshpande and Mr. E.C.G Sudarshan in 1962.



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