

# THE MACHINIST

RNI No 71129/98

Volume 16 Issue 1 • January 2021 • Rs 75

www.themachinist.in



## ICONS OF INDIA INC

Find out why  
**Martin Schwenk** of  
Mercedes-Benz India  
and 29 other leaders  
make it to The Machinist  
Star List 2021

GLASS INDUSTRY  
**TRANSPARENT GROWTH**

ADDITIVE MANUFACTURING  
**ADAPTING TO THE DIGITAL AGE**





# **MOTUL** **TECH**

**THE INDUSTRIAL  
LUBRICANTS DIVISION  
OF THE **MOTUL** GROUP**

THE ECONOMIC TIMES



**BEST  
METAL  
CUTTING  
BRANDS**

**2019**

**SOLUBLE FLUIDS**

**INDUSTRIAL LUBRICANTS**

**FORMING OILS**

**QUENCHING FLUIDS**

**NEAT MACHINING OILS**

**HIGH PERFORMANCE GREASES**

**HIGH PRESSURE DIE CASTING**

**RUST PROTECTION**

**CLEANING**

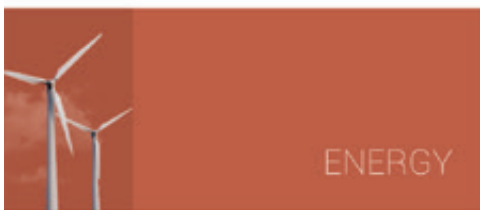
[motul.com](http://motul.com)

**Motul**  
119 boulevard Felix Faure  
93300 AUBERVILLERS - France  
Tel.: +33.1.48.11.70.30  
Fax: +33.148.11.70.38

Atlantic Lubricants & Specialities Pvt. Ltd.  
301, Ketan Apts., 233, R. B. Mehta Marg,  
Ghatkopar East, Mumbai - 400 077  
Tel.: +91 22 2501 1960 / 2501 1961  
Fax: +91 22 2501 1928



AUTOMOBILE



ENERGY



DEFENCE



INFRASTRUCTURE



HEALTHCARE



TEXTILE



OIL & GAS



PUMPS & VALVES

THE ECONOMIC TIMES



BEST  
METAL  
CUTTING  
BRANDS  
2020



AEROSPACE



**DX Large Series**  
CNC Large Turning Centre



**AX Series**  
CNC Turn Mill Centre



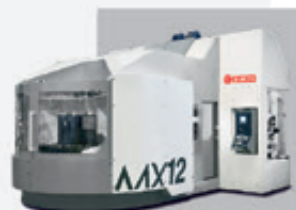
**EX Series**  
5-Axis CNC Moving Column  
Machining Centre



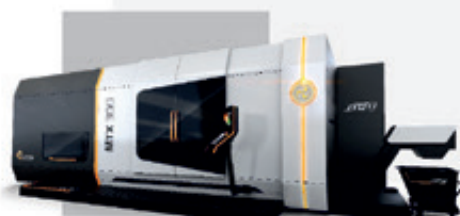
**K3X8 FIVE**  
5-Axis CNC High Speed Bridge Type  
Vertical Machining Centre



**MX 12**  
5-Axis CNC Universal Machining Centre



**MTX Series**  
CNC Multi Tasking Machining Centre



**JYOTI CNC AUTOMATION LTD.**

G - 506, G.I.D.C. Lodhika, Village : Metoda, Dist : Rajkot - 360021, Gujarat (INDIA).

T + 91-2827-235100/101, E info@jyoti.co.in, sales@jyoti.co.in jyoti.co.in

f i t y JyotiHuron





## A FRESH NEW START

If your heart is urging you to start a new chapter in your life, then listen to it. More often than not, the change that we seek outside of ourselves is actually within us. Just that our fears of the unknown or our attachment to our comfort zone holds us back. So, one must become the change one wants to experience. When the drudgery of the routine or the vicious circle of sameness is pulling you into the whirlpool of mediocrity, it is all the more important to break free from it and get flung into a new world of freedom and explore uncharted frontiers. The year 2021 will be exactly about it.

One might argue that with the extremities meted out by 2020 in the form of the pandemic, what 'new' can one seek while endeavouring to survive and sustain. But look around you and see the businesses, communities, nations,

### "MORE OFTEN THAN NOT, THE CHANGE THAT WE SEEK OUTSIDE OF OURSELVES IS ACTUALLY WITHIN US."

and individuals that have done well in this time. They have used this calamity as an opportunity to push themselves past whatever was holding them back. They have diversified, they have digitised, they have transformed, they have acquired, they have challenged themselves, they have explored, they have discovered, and they have become the change they wanted to achieve.

Of course, one cannot predict the future; it is natural that the thought of charting a new course may sound frightening. But if you choose to get excited about what could go right rather than being afraid of what could go wrong, making a fresh new start can be truly exciting and worth the efforts. Wishing you all a fantastic 2021.

*Niranjana M.*

Editor & Chief Community Officer

**THE MACHINIST**  
ULTIMATE GUIDE TO PROFITABLE MANUFACTURING  
Volume 16 Issue 1 January 2021



Chief Executive Officer **Deepak Lamba**

Chief Financial Officer **Subramaniam S**

Head Human Resource **Meghna Puthawala**

Publisher, Print & Production Controller **Joji Varghese**

Brand Publisher **Rishi Sutrave**  
rishi.sutrave@wwm.co.in  
+91 9820580009

Editor & Chief Community Officer **Niranjana Mudholkar**  
niranjana.mudholkar@wwm.co.in  
+91 9819531819

Associate Art Director **Sanjay Dalvi**  
sanjay.dalvi@wwm.co.in

Experiential Marketing **Aakash Mishra**  
aakash.mishra@wwm.co.in

Project Coordinator **Fiona Fernandes**  
fiona.fernandes@wwm.co.in

#### ADVERTISING

West & North **Ranjan Haldar**  
ranjan.haldar@wwm.co.in  
+91 9167267474

South **Mahadev B**  
mahadev.b@wwm.co.in  
+91 9448483475

**Prabhugoud Patil**  
prabhugoud.patil@wwm.co.in  
+91 9980432663

**CAREERS**  
careers@wwm.co.in

**SUBSCRIPTIONS**  
subscriptions.rmd@timesgroup.com  
022 67427209 / 67427206

Printed and published by Joji Varghese for and on behalf of owners Worldwide Media Pvt Ltd (CIN:U22120MH2003PTC142239), The Times of India Building, Dr DN Road, Mumbai 400001. Printed at JRD Printpack Private Limited, 78, Resham Bhavan, 7th Floor, Veer Nariman Road, Churchgate, Mumbai - 400 020. Editor: Niranjana Mudholkar. Published for January 2021.

Disclaimer: All rights reserved worldwide. Reproducing or transmitting in any manner without prior written permission prohibited. All photographs, unless otherwise specified, are used for illustrative purposes only. The publisher makes every effort to ensure that the magazine's contents are correct. However, we accept no responsibility for any errors or omissions and accept no responsibility for any loss or damage caused as an effect thereof. The information provided in this publication is for general use and may not be appropriate for the specific requirements and / or conditions of the reader/s. The opinions expressed by experts are their own and in no way reflect those of the publisher.





### Salient Features

- Stainless steel body, hardened to 55HRC
- Linear ball-bearing guide for plunger and core
- Excellent repeatability
- Outstanding linearity
- Long service life and reliability
- Tungsten carbide ball tip
- Removable tip permits choice of special purpose tips
- Chemically inert and non degradable Viton rubber bellow prevents ingress of moisture and dust
- Polyurethane cable for long-term oil resistance, as well as superior resistance to abrasion and cuts.
- Proudly made in India

Type	2920	2940	2910	2900
Measuring Travel	± 1 mm	± 2 mm	± 0.5 mm	± 0.3 mm
Total Travel	3 mm	4.5 mm	2.25 mm	1 mm
Linearity	± 0.3 %	± 0.3 % (in ± 1 mm range)	± 0.3 %	± 0.5 %
Repeatability	0.02 µm	0.02 µm	0.02 µm	0.15 µm
Environmental Protection (IEC529)	IP64	IP64	IP64	IP64
Length	90 mm	90 mm	64 mm	44 mm
Diameter	8h6	8h6	8h6	6h6

## BAKER GAUGES INDIA PRIVATE LIMITED

### An ISO 9001 : 2015 Company

#### Head Office-Pune

Tel. : (020) 66250600

Mob. : 7447449621

E-mail : bakerhip@bakergauges.com

Tel. : (020) 66093800

Mob. : 7447438251

E-mail : bakerbmi@bakergauges.com

[www.bakergauges.com](http://www.bakergauges.com)

### Branch Offices :

Mumbai Tel. (022) 43471701/02/03

New Delhi Tel. (011) 23328186

Chennai Tel. (044) 28140963

Bangalore Tel. (080) 22217336

Ahmedabad Tel. (079) 27540665

Kolkata Tel. (033) 22156387

Chandigarh Tel. (0172) 4631027

Ludhiana

Hyderabad

Nashik

Jamshedpur

Coimbatore

• Mob. 7400199752

• Mob. 9810160313

• Mob. 7550055245

• Mob. 7618720651

• Mob. 7435041140

• Mob. 7447444980

• Mob. 9815601027

• Mob. 7447444098

• Mob. 7447443439

• Mob. 7447438256

• Mob. 7447444978

• Mob. 9884480963

• E-mail : bakermum@bakergauges.com

• E-mail : bakerdlh@bakergauges.com

• E-mail : bakerche@bakergauges.com

• E-mail : bakerblr@bakergauges.com

• E-mail : bakerbar@bakergauges.com

• E-mail : bakercal@bakergauges.com

• E-mail : bakerchd@bakergauges.com

• E-mail : bakerldh@bakergauges.com

• E-mail : bakerhyd@bakergauges.com

• E-mail : baker\_nsk@bakergauges.com

• E-mail : bakercal@bakergauges.com

• E-mail : bakerche@bakergauges.com



# CONTENTS



14



## ICONS OF INDIA INC

Alain Spohr  
Amit Gossain  
Aravind Melligeri  
Ashwath Ram  
Chirag C. Doshi  
Deepak Kumar Hota  
Deepak Shetty  
Diego Graffi  
Gurpratap Boparai  
Harsha Kadam  
Kamal Bali  
Kishore Jayaraman  
Mahesh Gupta  
Martin Schwenk  
Nagesh Basavanhalli

Prashanth Doreswamy  
R. Madhavan  
Rajeev Joisar  
Rajesh Jejurikar  
Rohit Suri  
SP Shukla  
Salil Gupte  
Satyakam Arya  
Sudhir Mishra  
Sujatha Narayan  
Sulajja Firodia Motwani  
Suresh KV  
Vipin Sondhi  
Vivek Chaand Sehgal  
William L. Blair

Editorial .....	4
News .....	8
People.....	12
Updates .....	62
Products .....	64



## 56 GLASS INDUSTRY Transparent Growth



## 60 ADDITIVE MANUFACTURING Adapting to the digital age

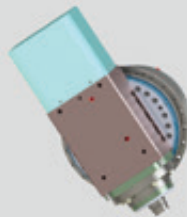




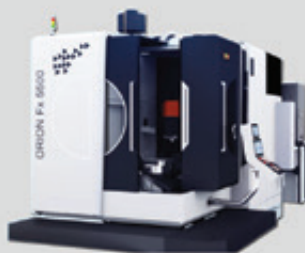
Enabling Progress ...



# Experience the Power of **Five Axes Technology Platforms**



**Swift Nx**



**Orion Fx**



**NexUs**



**Virat Fx**

**Higher Reliability**

**Enhanced Rigidity**

**Optimum Precision**

**Thermal Stability**

**Maximum Flexibility**

## Medium Range Surface to Air Missile launch successful

**DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION (DRDO)** achieved a major milestone recently with the maiden launch of Medium Range Surface to Air Missile (MRSAM), Army Version from Integrated Test Range, Chandipur, off the Coast of Odisha. The missile completely destroyed a high speed unmanned aerial target which was mimicking an aircraft with a direct hit. Army version of MR-SAM is a surface to Air Missile developed jointly by DRDO, India and IAI, Israel for use of the Indian Army. MR-SAM Army weapon system comprises of Command post, Multi-Function Radar and Mobile Launcher system. The com-

plete Fire Unit has been used during the launch in the deliverable configuration. The team from the users i.e. Indian Army also witnessed the launch. Number of range instruments such as Radar, Telemetry and Electro-Optical Tracking System were deployed and captured the complete mission data, validating the weapon system performance including the destruction of the target. Raksha Mantri Rajnath Singh lauded the efforts of DRDO and associated team members involved in the mission and said that India has attained a high level of capability in the indigenous design and development of advanced weapon systems.



## CG inaugurates new motor manufacturing facility

**VELLAYAN SUBBIAH**, Chairman CG Power and Industrial Solutions Limited, has inaugurated the State-of-the-art facility at Ahmednagar in Maharashtra on 21st December, to manufacture next generation smart Motors. This is the seventh manufacturing facility of the company in Ahmednagar which is spread over an area of 4200 sq m, and is equipped with latest world class equipment and machineries. The new facility will manufacture Smart Electric Motors from 75 kW to 1000 kW. It will cater to the increased demand of domestic and global market and will help CG to gain greater market share for higher range of LV Motors. Speaking on



the occasion Chairman, Vellayan Subbiah said, "The new plant is a testimony of the company's commitment towards Make in India initiative and deliver to its customers world class products at affordable price. This plant will keep India ahead of the curve in Motor technology.

## Ford & Mahindra call off auto joint venture

**FORD MOTOR COMPANY AND MAHINDRA & MAHINDRA** have mutually and amicably determined they will not complete a previously announced automotive joint venture between their respective companies. The decision follows the passing of the Dec. 31 "long-stop," or expiration, date of a definitive agreement the organizations entered into in October 2019. According to the companies, the outcome was driven by fundamental changes in global economic and business conditions – caused, in part, by the global pandemic – over the past 15 months. Those changes influenced separate decisions by Ford and Mahindra to reassess their respective capital allocation priorities. Ford said its independent operations in India will continue as is.

## PM Modi inaugurates EDFC's Bhaupur – Khurja section

**PRIME MINISTER NARENDRA MODI** has recently inaugurated the first fully operational section of Dedicated Freight Corridor. The state-of-the-art Operation Control Centre (OCC) setup by Alstom, which will be the 'nerve-center' of the entire Eastern Dedicated Freight Corridor, was also officially inaugurated. Two fully loaded freight trains hauled by Alstom's WAG 12 eLocomotives, each carrying more than 10,00 Tonnes of coal and food grains took off from Bhaupur & Khurja respectively. Alstom has designed



India's Make-in-India mission."

and delivered as an integrated System, the Electrification (Power Supply and OHE + OHE components), Signaling and Telecommunication systems. Execution of civil works, as well as site installation and commissioning were part of the overall delivery for EDFC's Bhaupur – Khurja section. Alain Spohr, MD, India & South Asia, Alstom said, "This begins a new era of freight rail revolution that all stakeholders envisioned jointly. It is indeed an honour to be partnering in



# Premium Products Cutting Edge Solutions



## The WIDMA Edge

The machine tool division of Kennametal India Limited, providing premium machines, fixtures & tooling solutions for a variety of components catering to segments like automobile, infrastructure, farm equipment, railways, defence, general engineering and tool manufacturing/re-grinding.

With more than 36 years of expertise in machining, we are the ideal partners to provide solutions to your machining needs.



Two Wheeler



Passenger Vehicles



Farm Equipment



Infrastructure Equipment



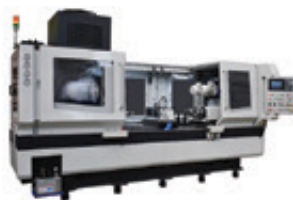
Railways



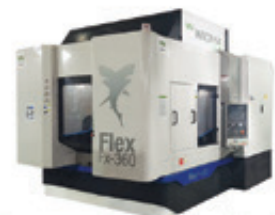
General Engineering



Special Purpose  
Machines



Deep Hole Drilling  
Machines



Customized Machining  
Centers ( Flex )



Vertical Lathes &  
Turn-Mill Centers



Tool Grinding  
Machines



Fixturing & Tooling  
Solutions

### Factory & Head Office :

WIDMA® Machining Solutions Group | Kennametal India Limited,  
8/9<sup>th</sup> Mile, Tumkur Road, Bangalore, Karnataka 560073.

[www.widma.com](http://www.widma.com)

E-mail : [k-in.widma@kennametal.com](mailto:k-in.widma@kennametal.com)

### Regional Branch Office :

Ahmedabad, Bangalore, Chennai, Gurgaon, Jamshedpur and Pune.



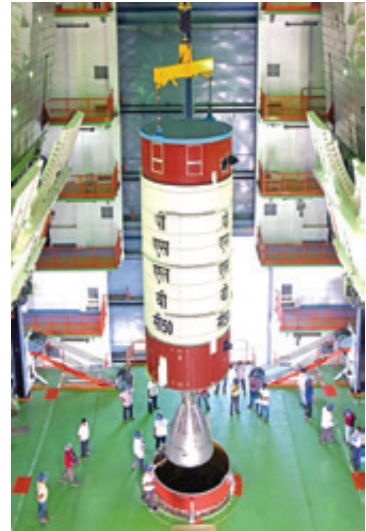
WIDMA®

**MACHINE  
FIXTURE  
TOOLING**

## Godrej Aerospace partners with ISRO for PSLV

**GODREJ AEROSPACE** has partnered with the Indian Space Research Organization (ISRO) in the successful launch of the CMS-01 communications satellite using the PSLV-C50. The 52nd mission of PSLV launched CMS-01 from Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota. CMS-01 is the 42nd Communication Satellite of India and replaces the GSAT 12R which was launched in 2011. The CMS-01 is a communication satellite envisaged for providing services in the Extended-C Band of the frequency spectrum. The Extended-C Band coverage will include Indian mainland, Anda-

man-Nicobar & Lakshadweep Islands. Godrej Aerospace played a key role by manufacturing the Vikas contour engine used to propel for the second stage of the rocket and satellite thrusters. Surendra M Vaidya, EVP & Business Head, Godrej Aerospace, said, "We are proud manufacturers of the Vikas contour engine and the satellite thrusters and are glad to have contributed the same for this launch. At Godrej, we are proudly committed to the cause of driving indigenous manufacturing for India's space programs which are key to propel India's technological prowess on the global stage."



## AM/NS India aims to double the production capacity

**DHARMENDRA PRADHAN**, Minister for Petroleum & Natural Gas and Steel, recently visited the Hazira manufacturing facility of ArcelorMittal Nippon Steel (AM/NS) India, a joint venture between ArcelorMittal and Nippon Steel. Pradhan said, "ArcelorMittal Nippon Steel is an integrated steel manufacturer, creating smarter and sustainable steels for a wide spectrum of steel-consuming industries in India. The company has plans to expand its capacity at Hazira and is actively engaging to come up with a steel plant in Odisha. The clarion call for an Atmanirbhar Bharat has paved the way for bold decisions and investments. I am happy that AM/NS India has evinced interest for expanding its investment in



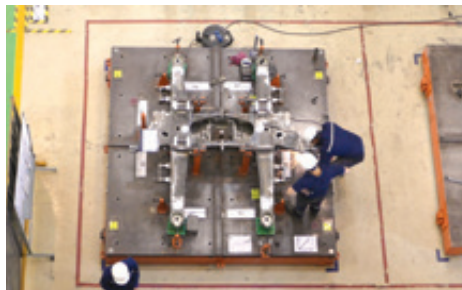
Odisha, especially in the areas of value added & special steels. Our government led by Hon'ble Prime Minister, Shri Narendra Modi ji is committed to make Odisha the nerve centre of Purvodaya in steel. Eastern India, especially Odisha will play a pivotal role in driving national economic growth making India a \$5 trillion economy & achieving the vision of a self-reliant India."

## Bosch plant manufactures 10 million power tools

**BOSCH POWER TOOLS INDIA** has announced the rollout of the 10-millionth power tool from its plant located in Oragadam, Chennai, Tamil Nadu. The facility came up in Chennai in mid-2015 and currently manufactures over 60 power tools, which includes eight types of power tools for artisans and tradesmen. The power tools plant in Chennai is well-aligned with Bosch's Made in India strategy and has become India's key supplier of power tools both in terms of value and volume. This manufacturing facility spread over two acres is driven by a motivated team of women workforce. "The rollout of our 10-millionth power tool at our plant in Chennai serves as a testament to our commitment to Indian users," said Nishant Sinha, Regional Business Director, India and SAARC regions, Bosch Power Tools.

## Bombardier Savli site celebrates 5,000th bogie frame

**BOMBARDIER TRANSPORTATION** has celebrating the roll-out of the 5,000th Bombardier FLEXX bogie frame from its bogie assembly hall at its Savli site in India. With these frames, the site has also produced around 3,000 complete bogies for local and international projects. Since commercial production of the first bogie began at the site in 2008, Savli has been the only railway vehicle production site in India to achieve this milestone. "This achievement supports the Indian Government's ambition to drive domestic industrial capacity and transform local rail



solutions for both domestic and overseas rail markets, while manufacturing great products with full respect for the environment and sustainability."



## Leading Manufacturer of Plastic Auxiliary Equipment



(An ISO 9001:2015 Certified Organization)



Mould Space Dryer



Screw Chiller



Granulator



Dehumidifying Air Dryer



Master Batch Doser



Air / Water Chiller



Hopper Loader



Thermolator / Mould  
Temperature Controller  
(Oil / Water Based)



Hot Air Dryer



Gravimetric Blender



True Weigh Hopper  
(Extrusion Process Control)



Belt Conveyor

### Nu-Vu Conair Pvt. Ltd.

Plot No. 147, 148 & 154, Devraj Industrial Park, Piplaj-Pirana Road,  
Piplaj, Ahmedabad - 382 405, Gujarat, India.

E: [marketingindia@conairgroup.com](mailto:marketingindia@conairgroup.com) | W: [www.conairgroup.com/india](http://www.conairgroup.com/india)



+91 79 2970 8147

+91 97129 28201

+91 90990 76206

## CNC Software appoints New Marketing Director



CNC Software, Inc., the developers of Mastercam, announced that Paco Agrafojo has been hired in the role of Marketing Director. Mastercam is the world's most widely used CAM software in both domestic and international markets. Agrafojo will lead efforts in support of the brand's ongoing market dominance and to further develop the company's position as a global leader in manufacturing technology. Paco Agrafojo comes to CNC Software with a wealth of experience within the industrial and manufacturing industry, creating market and product strategies for several top brands in his 20+ years of experience. Based in Suffield, Connecticut, he joins CNC Software as the Marketing Director to continue to build on Mastercam's success. "I'm very proud to join the CNC Software family at such a critical time of growth,"

said Agrafojo. "I look forward to driving engagement with the Mastercam brand through partnerships

with key customers, influencers, and ultimately end-users. As a leader in the CNC industry, it is also important for Mastercam to focus on inspiring the next generation of machinists, programmers, and engineers."

## Vishal Bhat to head after-sales services at Volkswagen India



Volkswagen India has appointed Vishal Bhat as the Head of After-Sales Services, effective 1st January 2021. Currently, the Head of Corporate & Pre-owned car sales at Volkswagen, Bhat would be taking over the responsibility from P. Ravichandran, who is now responsible for Dealer Development. With over 17 years of extensive experience in automotive industry, Bhat brings in diverse expertise to the position. In a period of last five years, he has undertaken various roles and responsibilities across functions –Aftersales, Customer Care, Corporate and Das WeltAuto sales operations and has been successfully leading them. Speaking on the appointment, Ashish Gupta, Brand Head, Volkswagen Passenger Cars India said, "As we plan for our biggest launch of 2021 with the Volkswagen Taigun, our core focus is to ensure enhanced customer experience, value proposition and peace of mind for the customers. With Vishal's vast experience and understanding of customers, we strongly believe he will bring-in new growth avenues in our service operations."

## Analog Devices' Ahmed Ali named IEEE Fellow



Analog Devices' Technology Fellow Dr. Ahmed Ali has been named an IEEE Fellow for his leadership in high-speed analog-to-digital converter design and calibration. IEEE Fellow is the highest grade of IEEE membership and is recognized by the technical community as a prestigious honor and an important career achievement. The total number selected in any one year cannot exceed one-tenth of one-percent of the total voting membership. "I am humbled by this recognition and honored to be elevated to an IEEE Fellow," said Dr. Ali. "This is a testament to Analog Devices' culture of innovation and leadership in the fields of high-speed data converters and digitally-assisted-analog algorithms. It is also a reflection of the outstanding and diligent teams at ADI that I have been privileged to work with on groundbreaking and successful products." Dr. Ali, who joined ADI in 2002, was named an ADI Fellow in 2015.

## Helmut Claas no more



Helmut Claas, long-time Managing Director, Chairman of the Supervisory Board and Chairman of the Shareholders' Committee of the CLAAS group, died on January 5 at the age of 94. Helmut Claas was born in 1926 in Harsewinkel. He joined his parents' family firm in Harsewinkel in 1958. Here he applied himself initially to his particular area of expertise, which was engineering. In 1962 he was made Managing Director. Helmut Claas accepted the position of Personally Liable Partner when the company was reconstituted as a general partnership in 1978. In 1996, as part of the restructuring of the firm into a joint-stock company, he changed from the role of Managing Director to the position of Chairman of both the Supervisory Board and the Shareholders' Committee. Four internationally renowned universities in Hungary, the United Kingdom, Bulgaria and Germany awarded honorary doctorates (Dr. h. c.) to Helmut Claas. Also in 2009, Helmut Claas was made a Knight of the French Legion of Honour in recognition of his efforts as a pioneer of Franco-German cooperation. In November 2013, Helmut Claas was inducted into the Hall of Fame of American Equipment Manufacturers (AEM).



# Seamless and Reliable Network Connectivity by LAPP

In today's Digital world where industries are creating, transferring and analysing more data than ever, there's greater need for seamless and reliable network connectivity. Driving Industry 4.0 are technologies like IIoT, Cloud Computing, Big Data and Artificial Intelligence which require multiple devices to be connected and intelligent communication in harsh industrial environments.

Data is the lifeblood of Industry 4.0, hence fast and reliable data transmission is important to make critical data driven decisions.

LAPP, a leader in cable and connection technology offers comprehensive Industrial Communication solutions which are customised for Factory, Process and Building Automation. Our extensive portfolio includes data lines, connectors, patch cords and Ethernet & Fieldbus switches. We offer everything today's smart network needs such as, complete cabling and connector systems, comprehensive connectivity between the sensor/actuator and control levels to an ERP system - all under one roof.



**INDUSTRIAL ETHERNET**  
Your Ethernet Connection Choice



**HITRONIC®**  
Optical Transmission Systems



**EPIC® CONNECTOR**  
Industrial Connectors



**ETHERLINE® ACCESS**  
Managed & Unmanaged Switches



## SCAN QR CODE

To download the Industrial Communication Catalogue

OR

## LOG ONTO

[http://bit.ly/LAPP\\_IC\\_Catalogue](http://bit.ly/LAPP_IC_Catalogue)



# ICONS OF INDIA INC

THE MACHINIST MAGAZINE'S MOST AWAITED ANNUAL FEATURE THAT SHOWCASES THE REAL 'STARS' OF THE INDIAN MANUFACTURING INDUSTRY WITH THE STAR LIST 2021

By Niranjan Mudholkar

Since 2015, The Machinist Star List has been recognising some of the finest leaders from various sectors of Indian manufacturing in every January Edition. This Sixth edition is quite special because it is the first time that we have included not 10, 15 or 20, but 30 leaders. In fact, it can be safely said that this is edition is actual a galaxy of Stars.

These leaders have been featured for three simple reasons: for their overall career graph, for their successful leadership of their respective organisations – particularly in 2020, and for their overall contribution to the industry. They are visionaries, and they are thought leaders. Importantly, they have led from the front and set the right examples. They have raised the standards of excellence, and they have raised the benchmarks of quality. And they have done so with a relentless focus on innovation and sustainability. Equally important is the fact that their leadership has a distinct humane mark stemming from compassion. And while they have already stamped the past with their brilliant leadership, they will continue to have a substantial impact in the years to come, starting with 2021.

The Machinist Star List 2021 is truly comprehensive because it has representation from the cross section of Indian manufacturing. The Stars of 2021 represent sectors like aerospace, construction & infrastructure equipment, defence, elevator & escalators, farm equipment, metro & railways, passenger cars, luxury cars, 2-wheelers & 3-wheelers, commercial vehicles, consumer goods, general engineering and power equipment.



Alain Spohr



Amit Gossain



Aravind  
Melligeri



Ashwath Ram



Chirag C.  
Doshi



Deepak Kumar  
Hota



Deepak Shetty



Diego Graffi



Gurpratap  
Boparai



Harsha Kadam



Kamal Bali



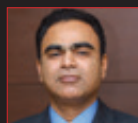
Kishore  
Jayaraman



Mahesh Gupta



Martin  
Schwenk



Nagesh  
Basavanhalli



Prashanth  
Doreswamy



R. Madhavan



Rajeev Joisar



Rajesh  
Jejuri



Rohit Suri



SP Shukla



Salil Gupte



Satyakam Arya



Sudhir Mishra



Sujatha  
Narayan



Sulajja Firodia  
Motwani



Suresh KV



Vipin Sondhi



Vivek Chaand  
Sehgal



William L. Blair

The Machinist Star List 2021 is based on editorial research done by The Machinist. It features some of the finest leaders from different sectors of the Indian manufacturing industry in the alphabetical order of their first names. This list neither represents any kind of ranking nor any kind of award. While we have tried to be as comprehensive as possible, it is likely that we may have missed out on some deserving names.





# On the go. Always arrive

With CNC machining centres and turnkey solutions from CHIRON, STAMA and SCHERER. With everything that the automotive industry needs: highest precision, maximum availability and minimum costs per piece.

**CHIRON Group**

**chiron** **STAMA** **CMS** **FACTORY<sup>5</sup>**

CHIRON India Machine  
Tools Private Limited  
Bangalore, India  
Tel +91 80 4905 6490  
info@chiron-india.com

[www.chiron-group.com](http://www.chiron-group.com)

THE  
**MACHINIST**  
*Star List*  
2021



## ALAIN SPOHR

Managing Director – India & South Asia, Alstom

**“HYDROGEN FUEL CELL TRAINS COULD BE THE NEXT BIG THING.”**

By Niranjan Mudholkar

With a career spanning four decades across different geographies, Alain Spohr is a true global stalwart of the transportation industry. This seasoned campaigner has helped some of the most remarkable infrastructure projects around the world. Alain has steered Alstom's growth in India through many milestone projects over 18 long years including the supply of designed in India and made in India electric locomotives to the Indian Railways in recent times. His key accomplishments in India include building a robust business organisation, the efforts towards indigenisation of the Indian railway manufacturing value chain, reinforcing export capabilities

and sustaining the organisation through sheer resilience even during the Covid-19 pandemic.

He knows that India is at the cusp of transformation in mainline and urban mobility. That's why there are a lot of advancements that Alstom is bringing to India as well as developing them here.

Since the Indian Railways is experimenting with hydrogen fuel-cell-based trains, Alain knows that Alstom can play a huge role as it is the only company in the world to have a product on tracks with hydrogen fuel-cell-based trains. Under Alain's leadership, Alstom is following a robust strategy to increase its headcount in India because he sees a lot of room for growth in and from India. He strongly

believes that sustainability is going to be the biggest game-changer going forward. "That is the reason our teams across locations are working extensively on emission-free solutions. Hydrogen fuel cell trains could be the next big thing, and this can be a technology that India looks forward to adapting in the coming years." Alain envisages that the Indian government's efforts to collaborate with corporates to run 151 passenger trains will attract private funds to expand and modernise the country's rail network.

Known to be positive and pragmatic, Alain is a true people's leader. Although he is from France, he is partly Indian too due to his love for this country, its railways and, of course, its cuisine.

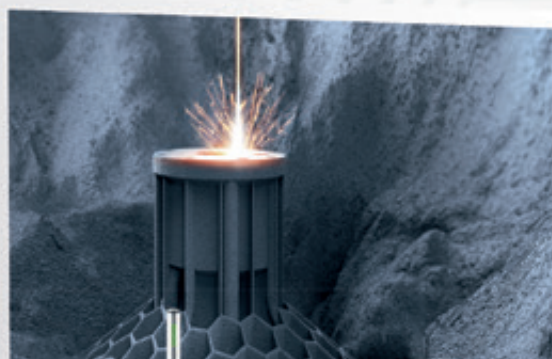


LASERTEC 30 **SLM** 2<sup>nd</sup> Generation

# HIGH-PRECISION SELECTIVE LASER MELTING

## OPEN SYSTEM

Individual adjustment of all  
process parameter and free  
choice of material supplier

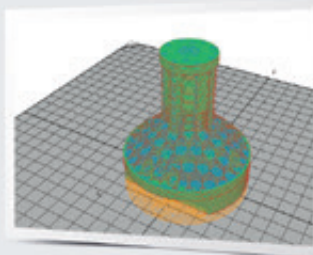


## rePLUG POWDER MODULE

- + Automated powder handling  
with integrated powder  
processing
- + change of material in  
less than 2 hours

## DMG MORI PROCESS CHAIN

pre-machining and finishing on high-precision  
machine tools from DMG MORI



## CELOS - INTEGRATED SOFTWARE SOLUTION

from CAM programming to  
machine control



More about  
ADDITIVE MANUFACTURING  
[dmgmori.com](http://dmgmori.com)

# DMG MORI



## AMIT GOSSAIN

Managing Director, Kone Elevator India

**“SUSTAINABILITY IS A SOURCE OF INNOVATION AND A COMPETITIVE ADVANTAGE FOR US.”**

By Niranjana Mudholkar

An ardent believer in the strong work-life balance, Amit Gossain is a leader who creates and nurtures a positive work ethic for his team. This industrial and production engineer, who has worked in both India and Australia, comes with a huge experience of working with multicultural workforces.

His vision for his organisation is simple: to ensure the success of its customers by delivering the best people flow experience. As a leader, he is driven by the vision to create value for all key stakeholders of his organisation – customers, shareholders, employees and society as a whole. He knows that to achieve this, he requires skilled, engaged and productive people. That's why, he strives 'to maintain a safe and

healthy working environment and foster a collaborative and inclusive culture, where people are motivated to develop their competencies and deliver the best results'. Amit, who believes that sustainability is a source of innovation and a competitive advantage, is also a strong advocate of inclusivity and creativity.

While acknowledging that the growth of infrastructure and real estate sector in India has been lean due to Covid-19, he remains optimistic as India is fast growing country and its population needs world class infrastructure as well as housing. He is confident that economic activity and Government policies are going to be favourable for this industry to grow. Amit is happy that the Government is trying to work on 'ease of doing business' and India has

improved prodigiously in the business climate index.

Speaking in the context of his industry, Amit says that it is important that the entire industry works together to ensure that there is an overall Lift Regulation & Act which allows design and manufacture of safe elevators. "We as an industry body should ensure that all our employees, customers, and suppliers have a culture of safety built in and follow all the processes required for a safe productive world class working environment," he says.

As a fitness enthusiast, Amit always makes time for running, playing badminton as well as soccer and hitting the gym. A movie fanatic, he enjoys watching meaningful and light-hearted humorous films.



# METAL PROCESSING

 **DOSATRON®**



## Dosing and proportional mixing of water-soluble oils

- ⊕ Hydraulic, volumetric and non-electric.
- ⊕ Accurate and proportional dosing to water flow-rate.
- ⊕ Excellent dosing repeatability and final solution homogeneity.
- ⊕ Emulsion delivered directly downstream by water power.
- ⊕ Easy dosing adjustment at any time.
- ⊕ Self-priming up to 4M.





Recognised as a 'Super Entrepreneur' in 2019 by The Machinist magazine, Aravind Melligeri is the founder of the Aequs Group (formerly QuEST Global Manufacturing). Aravind's vision for manufacturing is driven by two forces: continuous innovation and progressive collaboration. His major contribution to the country includes his vision, endeavours and entrepreneurship in developing an aerospace ecosystem. For more than ten years now, he has been building a vertically integrated aerospace value-chain that drives scale and efficiency. Through strategic collaboration with international players, Aequs has today expanded its global footprint with operations in India, North America, and Europe and is a preferred partner for global OEMs.

Having established a strong footing in the aerospace segment, Aravind is now also leading Aequs' diversification into the consumer vertical since 2016. The result? India's first ~400-acre toy manufacturing ecosystem in Koppal, Karnataka, and India's first sector-specific Durable Goods Cluster in Hubballi!

Aravind believes that today, Aequs stands at the cusp of a new chapter in its growth trajectory. "The pandemic required extraordinary adaptations in all spheres of our business, and to overcome the impact of this crisis, we had to make difficult decisions to withstand



## ARAVIND MELLIGERI

Chairman & CEO, Aequs Inc.

**"INDUSTRIES ACROSS THE COUNTRY MUST PREPARE THEMSELVES TO MAKE THE MOST OF THE OPPORTUNITIES TO BUILD BACK THE ECONOMY."**

By Niranjan Mudholkar

the market downturns and position ourselves for the future. Having succeeded to a great extent in this regard, we now enter 2021 with a renewed focus on further enhancing our core capabilities and building a robust business strategy based on a variable cost model towards achieving greater milestones for all stakeholders," he says.

Aravind's message to the industry is clear: "To make India a preferred manufacturing destination on a global stage, GoI has taken several measures to

strengthen its domestic manufacturing prowess, especially in the consumer-focused industry. Aequs is set to be an enabler for the vision of 'Aatmanirbhar Bharat' with the development of the country's first and largest toy manufacturing cluster in Koppal and its first sector-specific durable goods cluster in Hubballi, Karnataka. At this juncture, industries across the country must prepare themselves to make the most of the opportunities to build back the economy," he remarks.



## WELCOME TO NEW DISTRIBUTOR PARTNERS



"ARGO HYTOS is leading organisation in the field of filtration technology"

Rajeev Sharma  
Mehta Enterprises  
Bhilwara



"Happy to start our association with ARGO HYTOS"

Mukesh Patni  
Indtools Sales & Services  
Ludhiana



"Reliable products & services"

B. Sivamaheswara Rao  
ABS Hydraulics  
Hyderabad

## CONGRATULATIONS & THANKS FOR COMPLETING ONE MORE SUCCESSFUL YEAR



"A Company for Quality & Relationship."

Srinidhi R. Rao  
Pascal System Technik,  
Bengaluru



"Excellent product, trust for quality & perfect solution for OEM's equipments."

Vipul Patel  
Hydrofit,  
Ahmedabad



"We are truly humbled & honoured to receive the award."

Sanjay Jain  
Splendent Hydraulik  
Mumbai



"Feel honoured & motivated to work with ARGO HYTOS."

A.P.S. Oberoi  
Hydmark Applicon,  
New Delhi



"ARGO HYTOS truly a filtration & fluid motion control experts."

Shail Maniyar  
Hindustan Hydropower,  
Rajkot



"Great Products, compact, super finished, no complaints received till now from users, excellent service & support team."

Madhavendra Pratap Singh  
Nase Components,  
Noida



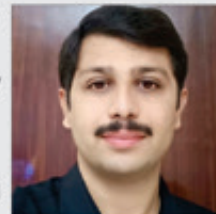
"Excellent technical & commercial support."

Sreenivasan  
Hydro Study,  
Chennai



"It's a pleasure to work with people who know the meaning of efficiency. We really appreciate the friendly business relationship & thanks for the award."

Vaibhav Jain  
Kanchan Hydraulics Pvt. Ltd  
Indore



"Very keen to sell ARGO HYTOS range of condition monitoring devices as they are very reliable & accurate."

Madhu N  
Sahana Engg.  
Pune



"We are dealing in ARGO HYTOS products for 20 years & very good initiative to award the distributors."

Sumeet Mehta  
Mehta Earthmovers  
Mumbai

## WE PRODUCE FLUID POWER SOLUTIONS



## AWARD WINNERS FOR THE YEAR 2020



**EUROPEAN QUALITY  
MADE IN INDIA**

**ARGO-HYTOS PVT. LTD.**

SF. No.82B/2B, 85/2, Sandegoundanpalayam,  
Kovilpalayam Post, Pollachi Taluk,  
Coimbatore Dist. 642 110, Tamil Nadu,  
e-mail: [info.in@argo-hytos.com](mailto:info.in@argo-hytos.com)  
Internet: <http://www.argo-hytos.com>



Over the last 28 years, Ashwath Ram has led business unit operations as well as key strategic transformations for the Engine Business and Power Systems for Cummins in India. With his leadership, he has implemented world class Six Sigma, VPI and Project Management improvements, and has driven supply chain excellence across global EBU joint ventures. Ashwath also serves as Managing Director of Tata Cummins and EBU India General Manager, overseeing the Cummins joint venture and building relationships with large OEM partners, customers and suppliers. Now, he is driving Cummins India through its next phase of growth and competitive challenges along with a strong and committed India leadership team.

Ashwath believes that for nearly six decades, Cummins India has been making people's lives better through its products, services and community efforts. "Stringent emission norms, consolidation of global capacities and digitalisation are our key enablers of growth. I see incredible opportunities for us as a company in the coming years. We have introduced some amazing products in 2020 and have great opportunity to grow our market share in 2021. We continue to invest in new technologies in digital, hydrogen, fuel cells and alternate fuels, introduce new and innovative



## ASHWATH RAM

MD - Cummins India and Tata Cummins Pvt. Ltd.  
VP - India Area Business Organization

**"I AM CONFIDENT THAT BY SUCCESSFULLY LEVERAGING THESE OPPORTUNITIES AND LEARNINGS, WE WILL TIDE OVER THESE CHALLENGES AND EMERGE STRONGER TOWARDS BUILDING AN ATMANIRBHAR BHARAT."**

By Niranjana Mudholkar

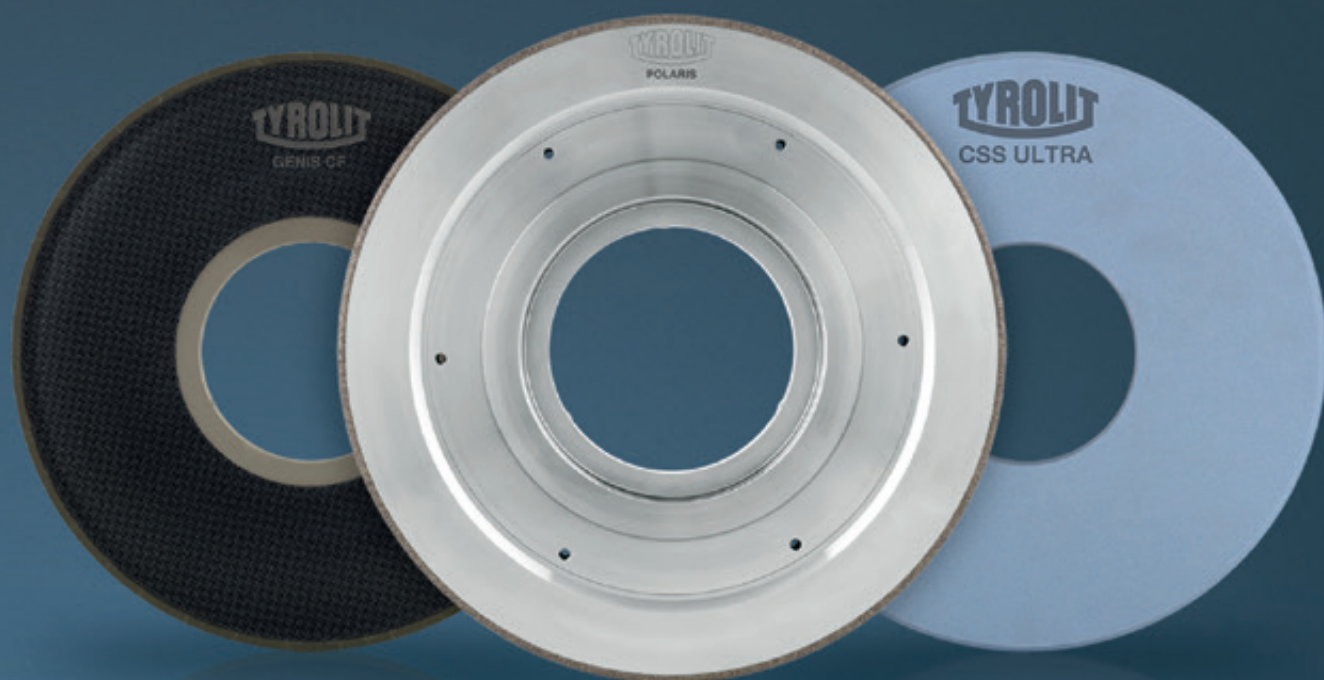
products, build stronger communities and play a significant role in our parent company's growth."

Ashwath knows that 2020 has created demanding challenges, generated tremendous opportunities and helped us to discover innovative ways of working. "The manufacturing industry witnesses a gradual transition from crisis to recovery. Our fundamentals are strong; I am confident that by successfully leveraging these opportunities and learn-

ings, we will tide over these challenges and emerge stronger towards building an Atmanirbhar Bharat. To support this initiative and ensure growth, the government should improve on ease of doing business, availability of capital at a lower rate, and globally competitive logistics and energy costs in the upcoming year. We also need to participate in Free Trade Agreements with our global partners to ensure smooth flow of materials to and from multiple markets," he elaborates.



# Your Partner in the Automotive Industry



**TYROLIT in India** | +91 80 28391811 | [sales-india@tyrolit.com](mailto:sales-india@tyrolit.com)

Premium grinding tools since 1919  
[www.tyrolit.com](http://www.tyrolit.com)



THE  
**MACHINIST**  
*Star List*  
2021



## CHIRAG C. DOSHI

MD & CEO, Walchandnagar Industries Limited

**“RESPOND TO THE DRIVE OF “ATMANIRBHAR BHARAT” TO CREATE AN ECOSYSTEM THAT CONTRIBUTES TO MAKING INDIA A PREFERRED MANUFACTURING DESTINATION OVER THE NEXT DECADE.”**

By Niranjan Mudholkar

**C**hirag Doshi has had a fairly colourful start to his career. He started his professional journey at Merrill Lynch International Bank in London. Later, he became an entrepreneur by starting extremely successful restaurants in both, New York and Mumbai. Of course, today, he is the Managing Director & CEO and majority shareholder of Walchandnagar Industries Limited. Chirag, who is on the Managing Board of the Bombay Chapter of Young Presidents Organization (YPO) as the Membership Officer, also sits on the Advisory Board of various NGOs in India that deal with issues such as education, child cancer treatment, and protection of the girl child.

He says that Walchandnagar's phi-

losophy of Nation Building is based on its desire to be dominant in the five realms, i.e. sea, sub-sea, land, sky and outerspace. “Our vision is to be a technology driven new age manufacturing company with a prime position in strategic sectors of national importance. Our endeavour would also be to integrate our operations across international supply chains and become a globally acknowledged brand. We will strive to be a responsible corporate citizen and will deal fairly with all our stakeholders. Always living by the timeless core values enshrined by our founding father Seth Walchand Hirachand and leaving behind a rich industrial heritage for future generations to come is our constant desire,” he explains.

While 2020 has been filled with uncertainty, Chirag always likes to look at the positive side of every situation. “I see two large opportunities for industry as we come out of this crisis. First, this situation has made it necessary to re-look at all our operations and processes. To experiment in areas that we were hesitant to touch. It has resulted in large savings both in cost and time. Second, respond to the drive of “Atmanirbhar Bharat” to create an ecosystem that contributes to making India a preferred manufacturing destination over the next decade. The opportunities are endless,” he remarks.

Chirag's loves to spend his free time playing Golf, watching movies and reading.





**C.R.I. FLUID SYSTEMS**

Pumping trust. Worldwide.

# Coolant Pumps



## The Stream of Cooling

**C.R.I. PUMPS PRIVATE LIMITED**

Regd. Office: 7/46-1, Keeranatham Road, Saravanampatty, Coimbatore - 641 035, Tamilnadu, INDIA.  
Phone : +91-422-7117000 Fax : +91-422-7117005, E-mail : [bcsmkt@cripumps.com](mailto:bcsmkt@cripumps.com) • [www.crigroups.com](http://www.crigroups.com)

Toll Free 1800 121 1243

THE  
**MACHINIST**  
*Star List*  
2021

**I**nducted into The Machinist Hall of Fame in 2019 for his contributions to the manufacturing industry, Dr.

Deepak Kumar Hota has had a truly illustrious career. Hota, who started his professional journey with HPCL, has worked exceedingly well across different functions including management, marketing, human resources, marketing research, planning and business operations. Joining the BEML Board of Directors in 2013, he went on to rise to his current rank of CMD in July 2016. As the top boss, he has steered BEML to landmark achievements including highest ever sales and highest order book, despite intense competition.

BEML's future business is built around core competencies in high-tech engineering products of its defence & aerospace, mining & construction as well as rail & metro business verticals. Hota believes that the focus of BEML would be on upgrading and imbibing technologies by continuous innovation through in-house R&D efforts and partnerships; to achieve the target of 'Zero Import' and strive towards 'Atmanirbhar Bharat'. "BEML is a major player in dozers, dumpers and high-end excavators and metro cars market; domains that are contested aggressively by global entities. Presently over 85 percent of our business is through orders obtained in



## DEEPAK KUMAR HOTA

Chairman & MD, BEML Limited

**"INDIAN COMPANIES NEED TO LEVERAGE EVERY OPPORTUNITY AND BECOME AN INTEGRAL PART OF THE GLOBAL SUPPLY CHAIN."**

By Niranjan Mudholkar

global competition and over 65 percent of sales is through in-house designed and developed R&D products. BEML has set a sales target of Rs.4000 crore for FY 2020-21 and has drawn plans for an YoY growth of 20 percent in the next five years," he shares.

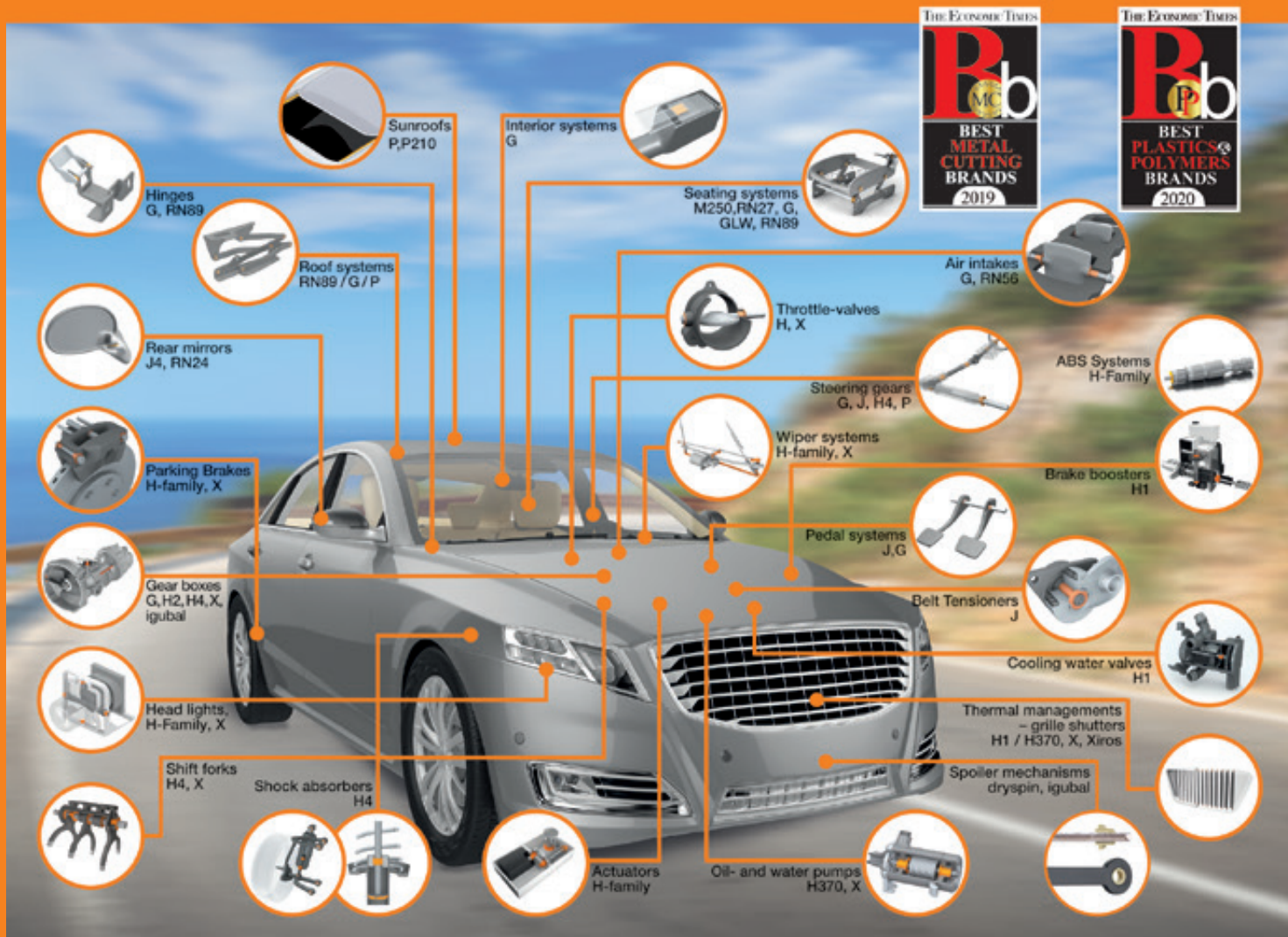
Hota sees the Indian economy slowly getting back on track; and thankfully faster than anticipated. "India's population dividend; of highly skilled working population and low labour cost would be instrumental in reviving the industry.

The government's clarion call for 'Atmanirbhar Bharat' is a big stimulus and could not have come at a better time," he remarks. According to Hota, going forward, Indian manufacturing industry should plan parallelly for modernisation of its facilities to run on lower inventories and higher flexibility. "The focus should be on innovation, quality and cost. Indian companies need to leverage every opportunity and become an integral part of the global supply chain," he adds.



# motion plastics®

## ...for the automotive industry...



High performance polymers for use in the automotive industry - whether in vehicles or automotive production lines, igus® offers ideal solutions for moving applications. Advantages of our automotive production solutions:

- reduce cost by 40%
- reduce weight by 80%
- 100 % less maintenance and lubrication
- predictable service life
- dirt-resistant
- individual custom-made products

Scan the below QR to know more



# igus.in/automotive

plastics for longer life®

igus® (India) Private Limited  
# 36/1, Sy.No.17/3,  
NCPR Layout, Euro School Road

Dodda Nekkundi Industrial Area  
- 2nd Stage  
Mahadevapura Post  
Bangalore - 560 048

info-in@igus.net  
Phone +91-80-68 12 78-00  
Fax +91-80-68 12 78-02



Powered By



## DEEPAK SHETTY

CEO and Managing Director, JCB India Limited.

**“WE NEED TO BE COMPETITIVE, FORWARD-LOOKING AND STRONG-WILLED TO BE ABLE TO COMPETE WITH GLOBAL MANUFACTURING PLAYERS.”**

By Niranjan Mudholkar

**A**lthough Deepak Shetty has taken charge at JCB India Limited as the CEO and Managing Director, rather recently, he has already spent more than a decade with JCB in different leadership roles. Interestingly, he has successfully worked across different functions including sales, marketing, product support as well as business development. Deepak has also been the Managing Director of JCB's Global Excavator business in the UK for four years.

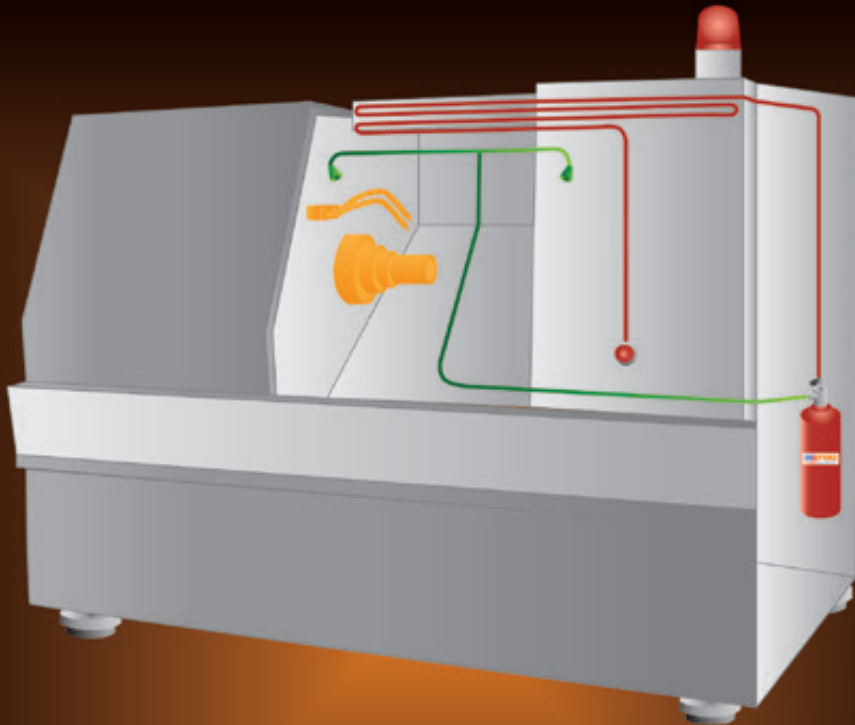
The Covid-19 pandemic has certainly had a deep impact on the market as well as on the leadership throughout

the world. Deepak believes that as we navigate through an uncertain world, the learning that we get from the Pandemic is that of Agility. His vision for his organisation is crystal clear: “Going into the year 2021, we aspire to be even more connected with our stakeholders through IoT, Machine Learning and Connectivity embedded in our operations. Our businesses, products and processes will be further aligned towards sustainable growth. Alternative fuels and energy efficiency of course being the key drivers. But most of all, we will continue to innovate and introduce world-class products and solutions for

our customers.”

Deepak is quite confident that infrastructure creation will continue to grow and will see a massive momentum in the coming years. Thus, the opportunities envisaged for all allied industries are significant. “The vision of an ‘Atmanirbhar Bharat’ will further open up manufacturing related opportunities in India. Thus, the future holds promise. We need to be competitive, forward-looking and strong-willed to be able to compete with global manufacturing players and certainly have the potential to compete, and be at par with the world,” he says.





## WEFIRE - SUPPRESSION SYSTEMS

### APPLICATIONS

CNC & EDM Machine | Electrical Panels, Switch gears & Cable Trays | UPS, Battery Racks & DG Sets | Robotic Welding Machines | Dust Collectors & Fume Cabinets  
Plastic Injection Molding Machines | Enclosed Automated Milling Machines | Wind Turbines | Server & Telephone Control Racks | Bus Engine Compartments  
Fork Lift Engine Bay | Plant Machinery | Emergency Vehicles | Farming Equipment | Transformer Cabinets | Generator Enclosures | ATM & Vending Machines  
Bank Vaults & Library | Mobility Vehicles | Industrial Storage Racks



"Sticker House" 180/1, Ravet, Ganesh Nagar,  
MIDC Road, Shinde Vasti, Nigdi, Pune-412101.  
Ph: +91 70285 20375 / +91 8806 44 99 00  
Email: [info@wepune.co.in](mailto:info@wepune.co.in)  
Web: [www.wepune.co.in](http://www.wepune.co.in)

THE  
**MACHINIST**  
*Star List*  
2021



## DIEGO GRAFFI

Chairman and MD, Piaggio Vehicles Private Ltd.

**“AFTER A SUBDUED DEMAND IN 2020, WE ARE BULLISH THAT THE COMMERCIAL VEHICLE PASSENGER SEGMENT WILL ALSO SEE A SHARP RECOVERY IN 2021.”**

By Niranjana Mudholkar

**W**ith a professional journey spanning close to two decades, Diego Graffi currently heads Piaggio Vehicles Pvt. Ltd. as the Chairman and Managing Director. In fact, this will be Diego's 15th year with the Piaggio Group having joined in 2006 as Head of Vehicles Purchasing. Of course, prior to his ongoing and long stint with Piaggio, this mechanical engineer has also worked with auto companies like Fiat and Moto Guzzi S.p.A. Before taking over as the head for Piaggio Vehicles Pvt. Ltd in India, Diego has also served the Piaggio Group as the Head of Group Materials and Components Purchasing. And although he took

charge as the Head in India in June 2017, he had been following developments in the country keenly for nearly a decade.

Today, as the leader of Piaggio in India, his clear vision is to make Piaggio a truly fuel agnostic player in the last mile transportation segment. And he has reasons for this confidence. “We have the widest range of products in the three wheeler segment cutting across fuels - diesel, petrol, CNG, LPG and electric, which will be a major focus area for us in 2021. The two wheeler segment and the three wheeler cargo segment for us is virtually back to normal Pre Covid business. After a subdued demand in 2020, we are bullish that the commercial ve-

hicle passenger segment will also see a sharp recovery in 2021,” he says.

Like all true leaders, Diego too strongly believes that the industry must operate in a collaborative mode. “We as an industry need to work closely with various government bodies and stakeholders to bring back normalcy in the shared mobility space. We hope to see a greater resolve for an incentivized scrap-page policy which is long awaited. The industry should also come together and urge financial institutions and banks to support the three wheeler business which is not only the backbone for last mile connectivity in India but is also major a livelihood creator,” he remarks.





## GURPRATAP BOPARAI

MD, Škoda Auto Volkswagen India Private Limited

**"I AM EXPECTING 2021 TO BE A MOMENTOUS YEAR FOR THE INDUSTRY WITH CONTINUED POLICY SUPPORT FROM THE GOVERNMENT TO HASTEN THE RECOVERY OF THE SECTOR."**

By Niranjan Mudholkar

Gurpratap Boparai is without doubt one of the best automotive leaders in the country today with tonnes of expertise and leadership experience. He began his illustrious automotive career at Tata Motors, Jamshedpur as a graduate Engineer Trainee in 1991. Then he went on to work with other organisations like Tata Cummins, IVECO and Ocap Chassis Parts Limited before joining FIAPL (Fiat India Automobiles Pvt. Ltd.). After a fairly long journey with FIAPL, Boparai joined Škoda Auto India as MD in April 2018.

In 2019, he was appointed as the MD of Škoda Auto Volkswagen India Private Limited as part of the management restructuring under the ambitious

India 2.0 project. And since then, he has been driving the Project with great vision and acumen. In fact, the India 2.0 project remains an integral part of Škoda Auto's and Volkswagen Group's growth strategy. "Our ambition is to continue building and reinforcing Volkswagen Group's position in the Indian market, and our activities in this respect are centered around the preferences of our Indian customers. The year 2021 is an exciting year for us as the first products of the India 2.0 Project will be launched in the domestic market from both Škoda Auto and Volkswagen this year. In many ways, this will be a landmark year for the group with the first of our made in India, Made for India SUVs rollout," he says.

Boparai believes that the barriers impeding growth of the automotive industry are currently more to do with market sentiments and realignment to the consumer's changing needs. "Overall, I am expecting 2021 to be a momentous year for the industry with continued policy support from the government to hasten the recovery of the sector which contributes close to 10 percent of the country's GDP. The industry and specifically the ancillary units should continue to focus on further modernisation of infrastructure to be able to support the localization ambition of OEMs," he adds.

An avid fan of FI motorsports, Boparai keenly follows all international motorsports events.



## HARSHA KADAM

MD & CEO, Schaeffler India and President Industrial Business

**"AMONG MANY, THE YEAR 2020 HAS REMINDED US ABOUT THE IMPORTANCE OF PEOPLE AND THEIR HEALTH AND WELFARE."**

By Niranjan Mudholkar

Besides more than 25 years of experience in functions including sales, manufacturing, product design and development, Harsha Kadam has also filed for several patents and won global awards for innovation excellence in his professional stint. He joined Schaeffler in 2018, as President – Industrial Business, a role he continues to hold. Prior to Schaeffler, Harsha has also worked with organisations like AGI Glaspac (India) and SKF India.

Harsha says that the year 2020 has taught lessons that leaders must retain and from it must learn and implement. Among many, it has reminded us about the importance of people and their health and welfare. "Employee health

and well-being is going to be the key pillar of my vision for Schaeffler India in 2021 and always. The next and important aspect is customer centricity, which has been of utmost importance for us and we will continue to remain closely engaged with our customers at all times," he says. Harsha's aim is to make Schaeffler India the hub of Schaeffler's Global Plan of Excellence. "We believe that our bearing plants in India have a huge growth potential in the entire Asia Pacific region, particularly on the industrial side of the business. This will not only be beneficial to our business but also to the overall Indian economy," he explains.

This year with the pandemic hitting us across the globe everyone has been

affected and Schaeffler has been no exception. "The unprecedented challenges that we faced due to COVID-19 has also gave us an opportunity to Retool. We have been able to reassess our business strategies, needs and approaches and learnt to take a step back and analyse to ensure we are able to protect and recover. The crisis has truly brought the entire Schaeffler India team together. With a strong focus on innovation, agility and quality, we have managed to keep the ball rolling even in these unprecedented circumstances," he shares. Harsha is confident that marching into 2021, the team will harness from the learnings to rebuild its capabilities to succeed in the new normal.





**T**his alumnus of IIT Roorkee has had an illustrious career spanning 40 years, largely in automotive and engineering industry. Of course, as he mentioned during his acceptance speech for 'The Machinist Lifetime Achievement Award in 2019', Kamal Bali feels that he still has a lot of work to do for the industry. Kamal, who has been in charge as the President & Managing Director of Volvo Group, India, since April 2014, has also been awarded one of Sweden's highest honours in the Royal Order of the "Polar Star: Commander" by Their Majesties, the King and Queen of Sweden for his untiring support to the Swedish commerce & industry in India.

While acknowledging the challenges caused by the Covid-19 pandemic, Kamal also says that his organisation has not only dealt with it successfully so far, but is also coming out wiser and stronger with astounding resilience and flexibility. "Our remarkable journey has played a pivotal role in catapulting Volvo Group India as one of the top organizations, with a difference. Our long-term vision is not just about great commerce, but also about actively partnering in sustainable mobility and infrastructure solutions, with ambitions of zero vision (that is zero road fatalities,



## KAMAL BALI

President & Managing Director, Volvo Group, India

**"THIS COULD WELL BE INDIA'S MANUFACTURING MOMENT, AND WE NEED TO GET IT RIGHT BY RELOOKING AT THE BIG PICTURE."**

By Niranjana Mudholkar

zero emissions and zero downtime) that is focused on an inclusive and humane future, with more for less and care for the planet," he says.

Talking in the context of the industry, Kamal says that the prime take away is re-affirmation of the compelling need for transparency, trust, collaboration, and care for our environment. "With rebalancing of global value chains and thanks to a slew of other enablers, we

are today at the cusp of socio-economic transformation not witnessed in a generation. We now need to raise our ambitions and position ourselves as one of the key epicentres for manufacturing. This could well be India's manufacturing moment, and we need to get it right by relooking at the big picture with elements of quality, cost, competitiveness, people, technology and holistic sustainability," he emphasises.

# THE MACHINIST Star List 2021

With more than three decades of substantial professional experience, Kishore Jayaraman is one of the top thought leaders in the country today. As the President of Rolls-Royce India and South Asia for over eight years, Kishore has been driving the strategic focus and significant expansion across the Rolls-Royce Defence, Civil Aerospace and Power Systems businesses. Under Kishore's leadership, Rolls-Royce has grown its regional presence across engineering, supply chain, manufacturing and digital. He has also led the joint ventures with HAL and Force Motors to grow the manufacturing base, while championing innovation and skill development through STEM initiatives and start-up accelerator programs. Kishore continues to champion the cause of leadership development and strategic ecosystem evolution for the present and future.

It is Kishore's vision for Rolls-Royce to be a front-runner in building a strong ecosystem in India for co-development and manufacturing of world-class technology solutions, thus enabling the country's 'Atmanirbharta' or 'self-reliance' ambitions. He continues to work passionately towards Rolls-Royce's goal to 'Create in India' by championing the need for industry to engage in co-creation, co-design, co-development and



## KISHORE JAYARAMAN

President, Rolls-Royce India and South Asia

**"INDIA INC. MUST STEP FORWARD TO STRENGTHEN THE LOCAL MANUFACTURING SECTOR TO BECOME A STRONG LEVER FOR ECONOMIC GROWTH."**

By Niranjan Mudholkar

co-manufacture of technologies and products. He believes that partnerships for co-creation opportunities, supported by effective infrastructural programmes, a qualified talent pool adept at meeting future technology needs and a strong manufacturing value chain, can help India realise its true growth potential.

Kishore believes that 2020 taught us resilience and agility in the face of adversity. "2021 will be about applying these learnings to gain long-term benefits. India Inc. must step forward

to strengthen the local manufacturing sector to become a strong lever for economic growth. Large infrastructural programmes and appropriate reforms for improving ease of doing business will remain key growth drivers. We must collaborate and build more partnerships for co-creation, create a qualified talent pool, adopt technology intelligently and keep moving up the manufacturing value chain to collectively contribute towards building an 'Atmanirbhar Bharat'," he remarks.





**A** first generation entrepreneur, Dr. Mahesh Gupta started his entrepreneurial journey in 1985, from a small room in his house, driven by dreams and self-belief. He had mere Rs. 20,000/-, his savings from his job with IOCL, to invest. His first invention was in the field of Petroleum conservation instruments, where he earned fame and half a dozen patents to his credit. Then, he went on to establish Kent Ro Systems Ltd. in the 1990s to purify water using the process of reverse osmosis. In the recent times, Gupta has diversified the brand into other products like a vegetable cleaner, vacuum cleaner, water softener, air purifiers and many more. He is also the reason why India's water purifier market, which was once unorganised, is today one of the fastest growing industries clocking over Rs. 3500/- crore.

Speaking about his vision for Kent RO, Gupta says: "The fact that we have over the years been constantly transforming in terms of technology and adding new product range; our products have been certified for quality and efficacy shows that we have constantly grown and evolved over the years and we will keep up with the momentum."

He has a serious message to the industry. He gives the background. "Cities such as Chandigarh, Gandhinagar, Patna, Bengaluru, Jammu, Lucknow, Chennai and Dehradun are listed among the cities where the tap water quality was found to be below par, as per a report by Bureau of Indian Standards (BIS). The



## MAHESH GUPTA

Founder & Chairman of Kent Ro Systems Ltd.

**"IF WE WANT TO BUILD A BRAND AND MAKE A FOOTPRINT, WE NEED TO OFFER AN ALL-INCLUSIVE SOLUTION."**

By Niranjan Mudholkar

industry needs to urgently address this problem and technology lag. It is not spending much on the R&D and innovation. It is only a few brands with their patented technology who have come to the forefront to help deal with this crisis. So the players in this industry or any

other industry as a matter of fact should not look at growth which is not holistic, or work in isolation leaving behind our environment and society. If we want to build a brand and make a footprint, we need to offer an all-inclusive solution," he elaborates.

THE MACHINIST  
Star List  
2021



## MARTIN SCHWENK

MD and CEO, Mercedes-Benz India

**“WE HAVE WITNESSED A MASSIVE HEAD START INTO DIGITALIZATION AND THE INDUSTRY SHOULD CONTINUE ITS IMPLEMENTATION.”**

By Niranjan Mudholkar

**M**artin Schwenk has been at the helm of Mercedes-Benz India as its MD & CEO since November 1, 2018. An Engineering graduate from the University of Stuttgart, Martin has found his time in India to be enriching, challenging and successful. As a true global leader, he has worked in diverse markets including Germany, South Africa, Austria, US, China and now in India. Throughout his vast experience spanning close to three decades with the Daimler Group, Martin has worked across different functions with great success.

Martin's vision for Mercedes-Benz India in the mid to long term would be

to transform the Three Pointed Star into a future ready 'Technology company' with mobility at the core. This transformation will be actively guided by strong focus in three key areas; that of Sustainability, Digitization and Efficiency & Profitability. "The vision to transition into a technology company is guided by the principle of making the customers centre to all the decisions and continuously listen to them," he says.

Martin believes that the automotive industry has shown remarkable resilience to fight back the pandemic and chart its own path of survival and recovery. "Many of the challenges from this year will continue in 2021 and we as an industry have to gear up and keep

pushing forward. However, we should always take our customers into confidence for anything we propose to do. My message to the industry would be to innovate, find new ways of creating customer demand by keeping an eye on the future. We have witnessed a massive head start into digitalization and the industry should continue its implementation. Digitization together with de-carbonization and sustainability is going to play an important part in the shared ecosystem we live in, and as an industry, we should continue our efforts in these areas," he remarks.

An avid technology enthusiast, Martin also loves travelling and experiencing new cultures.





The way Nagesh Basavanhalli has led the transformation of Greaves Cotton Limited is one of the finest success stories in the recent times. Not only has he enabled the organization to deliver profitable growth, but has also signed strategic partnerships and alliances reinforcing the company positioning as India's leading last-mile transportation, solutions and services company. His core expertise in developing strategic vision and technology roadmap has had a direct and a positively substantial impact on the top-line and bottom-line of the business.

With a professional journey spanning more than two decades, Nagesh has truly evolved as a global automotive executive while transforming leading companies with growth and overall market value. Before joining Greaves Cotton Limited, Nagesh has worked with Fiat Chrysler Automobiles for over two decades, last serving as the Managing Director and President of Fiat Group Automobiles India Pvt. Ltd.

Commenting on his vision for Greaves Cotton Limited, Nagesh says that for the year 2021, he will continue to focus on the diversification strategy and strengthening its position as an ecosystem player in the mobility domain. "We are consciously moving towards more sustainable mobility solutions, understanding the growing demand for personal vehicles for last-mile con-



## NAGESH A. BASAVANHALLI

MD and Group CEO, Greaves Cotton Limited

**"FOCUSING ON LOCAL MANUFACTURING, INVESTING IN INNOVATION AND COLLABORATING WITH THE GOVERNMENT IN THEIR MISSION OF 'VOCAL FOR LOCAL' COULD HELP US TRANSFORM THIS DYNAMIC INDUSTRY INTO THE FUTURE AUTO COMPONENT MANUFACTURING HUB OF THE WORLD."**

By Niranjan Mudholkar

nectivity, post-Covid. We will remain committed to invest in their growth and reinforce a value-led culture. We also recognise our responsibility towards the communities where we live and work and are actively contributing to programs that have a sustained social impact," he says.

Nagesh knows that the highly unprecedented coronavirus outbreak and the economic slowdown left the auto industry by storm when the sector was

slowly recovering. "However, there is much to look forward to and in my opinion, the auto industry will get back to its original pre-COVID-19 production level. I strongly believe, focusing on local manufacturing, investing in innovation, and collaboration with the government in their mission of 'Vocal for Local' could help us transform this dynamic industry into the future auto component manufacturing hub of the world."

THE  
**MACHINIST**  
*Star List*  
2021

**P**rashanth Doeswamy comes with rich professional experience spanning more than 25 years in automotive and manufacturing. An expert in establishing Greenfield facilities, Operations Management, Program Management, Lean Manufacturing and Just-in-time and Just-in-Sequence manufacturing, Prashanth has managed several roles and responsibilities across organisations. Prior to joining Continental in 2017, he has worked with organisations like Cooper Standard India, Johnson Controls, Ingersoll Rand, and Siemens VDO.

Prashanth says that Continental's focus for 2021 will be to bring stability to the business by addressing all the misses it had in 2020. "We are already practicing agility religiously in all our operations. We are on track with the industry trends, as 2021 will see a demand for advanced safety and smart connected technologies. We will continue to support our customers in this requirement by offering innovative technologies at a cost-competitive price. And our 'in the market, for the market' strategy, will help us achieve this goal, right from product conceptualisation, engineering, validation, and manufacturing. Further supporting this cause, we are rapidly expanding our R&D capabilities and actively investing in the adoption of Industry 4.0 practices and sustainability initiatives at all our plants. The future of mobility is now firmly linked to sustainability, our goal is a healthy ecosys-

tem for mobility in a comprehensive sense and has established a sustainability strategy based on four focus areas," he explains.

Prashanth says that the industry needs to quickly adapt to the changing scenarios and work together to achieve shared goals. "We should continue to invest in the growth areas like Industry 4.0 practices. This will further enhance

the agility and ability to produce quality products. The automotive industry will continue to achieve the megatrends – electric, smart, and autonomous mobility but with revised timelines. We need to embrace this transformation with confidence and determination. Being successful will depend on the ability of managing complex change in multiple areas at the same time," he remarks!



## PRASHANTH DORESWAMY

Country Head - Continental India, & MD  
Continental Automotive Components (India)  
Pvt Ltd.

**"BEING SUCCESSFUL WILL DEPEND ON THE ABILITY OF  
MANAGING COMPLEX CHANGE IN MULTIPLE AREAS AT THE  
SAME TIME."**

By Niranjan Mudholkar





## R. MADHAVAN

CMD, HAL

“LET’S SYNERGISE AND COLLABORATE FOR A WIN-WIN PARTNERSHIP.”

By Niranjan Mudholkar

Joining Hindustan Aeronautics Limited (HAL) as a Management Trainee (Technical) in July 1982, R. Madhavan’s rise as Chairman and Managing Director (CMD) of HAL in September 2018 is a story that is nothing short of a legend. In his really long stint with HAL, Madhavan has worked across divisions and functions enabling the growth of the organisation. He has been a part of several milestone projects and also has comprehensively contributed to the ‘Make in India’ campaign by developing MSME vendors in the aerospace & defence manufacturing sector. His vision of achieving self-reliance and self-sufficiency through indigenisation while focusing on skill development, manufacturing excellence, quality and digitalisation make him a true hero for the industry.

Under Madhavan’s leadership, indi-

genisation remains a “Key Thrust Area” encompassing the organisation’s internal machinery as well as policy for indigenisation of components, accessories and systems. He wants HAL to “Be the Technology Leader and Mission Success Partner.” Madhavan’s vision for HAL is to invest in the areas of cutting-edge technologies and to cater to the design and delivery of state-of-the-art platforms and weapon systems to the defence forces. “To further the framework of *Atmanirbhar Bharat*, my company will continue to strive for a mature ecosystem of industries in the country, competent to supply an array of abreast equipment and avionics. These indigenous equipment while fully supporting the indigenous platforms will also contribute towards increased export in the aerospace sector from the country,” he says.

His message to the Indian industry reflects his leadership acumen. He says: “Let’s synergise and collaborate for a win-win partnership.” Madhavan believes that considering the very nature of the aerospace industry, umbrella organisations like HAL can act as the lead integrator, while the private industry partners collaborate as tiered supply chain partners. “The success of *Atmanirbhar Bharat* entails synergistic partnerships across the industry, building on each other’s strengths. Recent policies of the Government on promoting indigenous industries and encouraging usage of domestic products by Defence Services will further boost the manufacturing ecosystem,” Madhavan says.

An avid reader and active in professional societies, Madhavan is an active member of the Aeronautical Society of India.

THE  
**MACHINIST**  
*Star List*  
2021

**H**aving held different roles with increasing responsibility during his career at Bombardier, Rajeev Joisar brings huge experience in managing complex multi-site cross-divisional projects. He has also had management positions in operations, strategic sales, project management and bid management. Most recently, his direction and leadership helped the India team to win two major new contracts with the combined value of more than half-a-billion Euros. The first was signed in May 2020 for the Delhi-Meerut Regional Rapid Transit System, and the second was signed in the first week of July 2020 for the Agra-Kanpur Metro Project. Rajeev has in-depth knowledge of the rail transportation business, coupled with strong leadership skills, commercial acumen and project management expertise.

Rajeev says that the year 2020 has been unprecedented in so many ways for the customers, partners, suppliers and for all Bombardier employees across the world. "In 2021, we will continue to navigate the ever-changing health and safety needs, introduce new mobility solutions and deliver our commitments for the recent Indian rolling stock projects won in 2020. Our focus will be to deliver on our commitments for India's first Regional Rapid Transit System and



## RAJEEV JOISAR

Managing Director for India,  
Bombardier Transportation

**"RAIL SECTOR MUST CONTINUE TO PRIORITIZE INNOVATION  
WITH FOCUS ON DIGITALISATION."**

By Niranjan Mudholkar

for Agra and Kanpur Metro projects."

"Our team in India will continue to deliver rail solutions for Bombardier's global rail projects, deliver world-class signalling solutions to Delhi Metro and propulsion systems to Indian Railways," he says.

Rajeev believes that moving forward, people across walks of life in India will understand and start believing in the true potential of rail industry which is significantly contributing towards greener and sustainable mobility

solutions. "Rail sector must continue to prioritise innovation with focus on digitalisation. Industry players need to work with rail authorities to roll out long-term plans for our cities of tomorrow, align industrial layouts on these priorities and provide young generation with the skills to execute these plans. Looking at this rail evolution, I strongly believe that Bombardier Transportation in India will continue to play a key role to address mobility needs for tomorrow," he remarks



Announcing

## The Fifth Edition of



# THE ECONOMIC TIMES POLYMERS Awards 2021

**Excellence in Plastics**

**Nominations Now Open**

### Categories

- Excellence in Automotive (OEMs & Auto Components)
- Excellence in Consumer Durables & Electrical & Electronics
- Excellence in Packaging
- Excellence in Recycling
- Excellence in Houseware & Kitchenware
- Excellence in Toys & Play Equipment
- Excellence in Medical Devices & Healthcare Equipment

Open Category (Nominations for all categories other than the above will be accepted under the Open category)

For nomination form:

**Fiona Fernandes** | +91 9930723498 | [fiona.fernandes@wvm.co.in](mailto:fiona.fernandes@wvm.co.in)

For Sponsorship opportunities:

**Ranjan Haldar** (West & North) | +91 9167267474 | [ranjan.haldar@wvm.co.in](mailto:ranjan.haldar@wvm.co.in)

**Mahadev B** (South) | +91 9448483475 | [mahadev.b@wvm.co.in](mailto:mahadev.b@wvm.co.in)

**Prabhugoud Patil** (South) | +91 9980432663 | [prabhugoud.patil@wvm.co.in](mailto:prabhugoud.patil@wvm.co.in)

# THE MACHINIST Star List 2021

**R**ajesh Jejurikar has had a truly colourful and diverse professional journey. Although, at present he is directly responsible for the farm and automotive sectors as Executive Director at Mahindra & Mahindra Ltd., his experience also spans packaged goods, advertising, media, and two-wheelers. Today, Rajesh also serves on the Boards of several Mahindra Group companies in India as well as overseas. But his focus is now to take the farm and automotive sectors to the next level. "At the beginning of F21, we charted a new mantra called 'Walk, Run and Fly' which was evolved in the context of the new normal," he shares. While "Walk" was about scenario planning and managing profitability without taking away anything strategic; "Run" is about rethinking and simplifying every part of the value chain processes – with digital at the center of the strategy. "F22 is going to be about the "Fly", where we bring in our new SUV launches - with sharper and more differentiated Mahindra DNA, focused towards creating brand affinity with strong financial returns," Rajesh adds.

Speaking to the industry, Rajesh says: "Although the pandemic exposed the vulnerabilities of complex global supply chains, it was a blessing in disguise for India's manufacturing industry, for bringing in a sense of urgency, helmed by significant government reforms. However, we will not get there by doing what brought us here. The road to "Atmanirbhar" lies in our resolve and approach. While GOI plays an enabling role by continuing to improve ease of doing business, the responsibility for growth of manufacturing lies with us and we need to commit to actions."



Powered By

 MITSUBISHI MATERIALS

## RAJESH JEJURIKAR

Executive Director (Auto and Farm Sectors),  
Mahindra & Mahindra Ltd.

**"THE NEED OF THE HOUR IS FOR THE GOI AND THE  
MANUFACTURING INDUSTRY TO CO-DRIVE TOWARDS REALIZING  
THEIR VISION OF US\$ ONE TRILLION BY 2025."**

By Niranjana Mudholkar

Rajesh wants the industry to challenge itself. "How can the industry commit to greater value addition in India?" "How can the industry commit to global standards in technology and quality? And, "How can the industry commit to overcoming the structural disabilities

due to our frugal mindset? The answers will indeed decide the future roadmap. "The need of the hour is for the GOI and the manufacturing industry to co-drive towards realizing their vision of US\$ one trillion by 2025," Rajesh remarks.





AEROSPACE



ENERGY



DIE & MOULD

**TOTAL  
SOLUTIONS**  
IS NEED OF  
THIS HOUR AND  
**WE ARE  
EXPERTS**  
IN THIS



AUTOMOTIVE



OIL & GAS



MEDICAL

TOTAL TOOLING SOLUTIONS  
TO ACHIEVE  
PRECISE RESULT WITH  
STATE OF THE ART TECHNOLOGY  
FROM MITSUBISHI



THE  
**MACHINIST**  
*Star List*  
2021

**R**ohit Suri has been successfully leading the Jaguar Land Rover (JLR) India business for the last ten years now. Known to be a thought leader and a visionary, Rohit has been responsible for JLR's success and growth in the Indian market throughout his tenure with the organisation. As President at JLR – India, he has been playing a vital role in developing the business in India and has also been instrumental in getting locally manufactured models to the Indian customer. Under his guidance, JLR has reported strong sales numbers and has driven business to its next level of growth. An auto industry veteran with close to three decades of professional experience, Rohit Suri also comes with international expertise in the sector as a General Manager for General Motors (Cadillac, Hummer, Chevrolet) when he was based in Muscat. Later, he was with Eicher International Ltd., JAFZ - Dubai as Head - West Asia for a period of four years. He is a management post graduate from IIM Lucknow.

Rohit's vision for JLR in 2021 is to deliver safe and memorable experiences for its customers, partners & fans. "Prioritising the health & safety of all our stakeholders has always been of utmost importance to us at Jaguar Land Rover. As we enter a new year, we will continue to focus on innovation in sales and service and provide cutting-edge technologies that deliver on this vision," he says. Aligned with the same thought, JLR



## ROHIT SURI

President & Managing Director,  
Jaguar Land Rover India

**"THE AUTOMOBILE INDUSTRY WILL RISE EVEN STRONGER AGAINST ALL THE UPHEAVALS AND CHALLENGES POSED BY COVID-19. 2021 IS ABOUT TAKING MEASURED STEPS AND PLAYING IT SAFE."**

By Niranjana Mudholkar

will be taking its first step towards an Electrified Future with the launch of its first electric vehicle, Jaguar I- PACE as well as its first Plug-In hybrid - the New Land Rover Defender P400e .

Though 2020 has been a challenging year for the industry at large, Rohit

is cautiously optimistic about the recovery of the sector in the coming year. "We are hopeful that the automobile industry will rise even stronger against all the upheavals and challenges posed by Covid-19. 2021 is about taking measured steps and playing it safe," he remarks.





## SP SHUKLA

Group President – Defence, Aero, Agri and Steel Sectors, Mahindra Group

**“I AM CONFIDENT THAT 2021 WILL PROVE TO BE THE YEAR OF  
TURNAROUND FOR THE INDUSTRY.”**

By Niranjan Mudholkar

**W**ith close to four decades of rich and diverse experience in managing large projects and operations, SP Shukla has been a top professional across a wide range of industries like aerospace & defence, automotive tyres, and ICT. And while he is the management and operations guru that he is, he has also overseen and orchestrated a complete makeover of the visual identity of the Mahindra Group! It was under his leadership that the Group Strategy Office launched and institutionalized the ‘Rise Prize’ (with Prize money of US \$ 1 Million) that aims to foster and develop the innovation eco-system in India. He was also responsible for Mahindra Racing portfolio – both Formula E (Electric

Cars) and MotoGP (Motorcycle).

According to Shukla, Mahindra Defence & Aero epitomises the Mahindra Group’s philosophy of doing business for the greater good of the nation. “We remain committed to serving the needs of India by providing protection and security solutions in multiple domains. The core philosophy of our business is very clear: to protect those who protect us. In the year 2021 and beyond, we would be making sincere and dedicated efforts to help the nation become ‘Atmanirbhar’ in this vital industry and focus our capabilities on designing and developing best in class equipment which can help providing proper protection and security to our brave defence personnel in adverse sit-

uations,” he says.

For Shukla, the year 2021 looks to be a promising year as the industry continues to unshackle itself from the pandemic induced constraints on supply and production side. “I see a healthy recovery in sight going forward - all thanks to the tireless efforts of businesses across the spectrum - from MSMEs to large corporates. In this endeavour, the support received from the Government through a slew of initiatives under the aegis of Atmanirbhar Bharat has been invaluable. I am confident that 2021 will prove to be the year of turnaround for the industry. We will definitely see several initiatives of the industry come to fruition in the New Year,” he remarks.

# THE MACHINIST Star List 2021

As the President of Boeing India and the senior in-country executive, Salil Gupte is responsible for Boeing's activities in India across its three business units: Boeing Commercial Airplanes, Boeing Global Services, and Boeing Defense, Space & Security. Salil is also the Chairman of the National Executive Board of American Chamber of Commerce (AMCHAM) and Chairman of ASSOCHAM's National Council for Aerospace & Defence (A&D), leading industry bodies that work towards promoting the growth of A&D in India. Gupte is a member of the Executive Board of the US-India Strategic Partnership Forum (USISPF), dedicated to strengthening the US-India bilateral and strategic partnership.

According to Salil, Boeing's commitment to India is for the long term. "With more than 75 years of operations in India, we have always supported the development of indigenous aerospace capabilities in the country and have invested in partnerships in skilling, research & development, engineering and manufacturing, contributing to the Atmanirbhar Bharat vision. We aim to continue our efforts to grow India's aerospace industry. We are focused on supporting India in the mission-readiness and modernization of its armed forces by providing the best-in-class and most advanced technology and platforms. We



## SALIL GUPTE

President, Boeing India

**"INVESTING IN PEOPLE AND BUILDING CAPABILITIES IS KEY FOR THE GROWTH OF INDIA'S AEROSPACE AND DEFENCE ECOSYSTEM."**

By Niranjan Mudholkar

want to bring the best of Boeing to India and the best of India to the world," he elaborates.

Salil understands that as air travel resumes and restrictions ease around the globe, aircraft crew and passenger health and safety are top priority. Industry stakeholders will have to work together to build multiple layers of protection to minimize health risks for passengers and crew throughout the journey. Equally important is ensuring the health of

supply chains. "At Boeing, we're doing everything we can to support our global suppliers, and their stability remains a key watch item for us. With people and businesses getting back to normal, the industry will look towards modernization and digital advances to provide sustainable solutions that are data-driven and cost-efficient. Investing in people and building capabilities is key for the growth of India's aerospace and defence ecosystem," he explains.



# Are you in this list?



## February 25<sup>th</sup>, Bangalore

### The Industry

The metal cutting and metal forming industries play an extremely important role in the growth and development of the Indian manufacturing sector.

### The Rise of the Brands

With focus on quality, technology, innovation and service, the metal cutting and metal forming brands working in India are rising to greater heights of progress.

### Recognition as 'Best Brands'

To help Indian manufacturers choose the right metal cutting and metal forming partners, The Economic Times brings out the 'Best Brands' every year.

### The Process

The key players are analyzed and shortlisted for their performance on the basis of their offerings, innovation, market reach, service and brand recall.

To learn if your company is in the list, simply give a call to

**Ranjan Halder** (West & North)

+91 9167267474

ranjan.halder@wwm.co.in

**Mahadev B** (South)

+91 9448483475

mahadev.b@wwm.co.in

**Prabhugoud Patil** (South)

+91 9380757566

prabhugoud.patil@wwm.co.in

# THE MACHINIST Star List 2021

One of the top executives in the automotive industry with diverse international experience, Satyakam Arya is a specialist in supply chain management, Green-field project set up, business turnaround management and customer service. Driven by the 'get things done' attitude, Satyakam believes in the core values of passion, discipline, integrity and fairness. Since he started working at Daimler in 2009, Satyakam has performed exceedingly well in a number of executive leadership roles across various divisions.

Satyakam took charge of Daimler Trucks operations in India in November 2018 with his appointment as Managing Director & CEO of Daimler India Commercial Vehicles (DICV). Under his able leadership, DICV continues to grow in the intensely competitive CV market with the made-for-India brand 'BharatBenz'. Besides expanding the business in the domestic market, Satyakam has also aggressively grown export operations of other Daimler Truck brands including Mercedes-Benz, FUSO and Freightliner in over 50 markets globally.

With Satyakam at the helm, Daimler India Commercial Vehicles aims to transform India's Commercial Vehicle industry with its made-for-India brand BharatBenz and to champion 'Make in India for the World' with high-quality



## SATYAKAM ARYA

MD & CEO, Daimler India Commercial Vehicles Pvt. Ltd.

**"IT IS ONLY BY WORKING TOGETHER THAT THE INDUSTRY CAN RECOVER QUICKLY AND MOVE BACK ONTO A GROWTH TRAJECTORY IN 2021."**

By Niranjan Mudholkar

export goods and services. "My vision for 2021 and beyond is to move ever closer to those goals. We bring Daimler's world-class safety, fuel efficiency, comfort, connectivity and value to Indian fleet owners and bring India's creativity, innovation and dedication to our counterparts overseas. In essence, my vision is for Daimler India Commercial Vehicles to serve as a beacon for Daimler's purpose, 'We keep the world moving'."

Despite the challenges faced by the Indian automotive industry in 2020,

Satyakam believes that there are signs of recovery in the market. "Daimler India Commercial Vehicles weathered this crisis by combining careful planning with agile response, gaining share for BharatBenz despite strong headwinds in the economy. Going forward, we will continue to support our stakeholders; our suppliers, our dealers, our employees and of course our customers. It is only by working together that the industry can recover quickly and move back onto a growth trajectory in 2021," he adds.

THE  
**MACHINIST**  
*Star List*  
2021



## SUDHIR MISHRA

CEO & MD, BrahMos Aerospace

**"THE INDIAN DEFENCE INDUSTRY SHOULD FAST-TRACK ITS EFFORTS TO BECOME A GLOBAL MANUFACTURING HUB AND REALISE ITS EXPORT POTENTIAL."**

By Niranjana Mudholkar

**D**r. Sudhir Mishra is definitely one of the most distinguished scientists that India has today.

As the top boss of BrahMos Aerospace, Mishra is leading a world class team that is successfully developing and delivering the World's Best Supersonic Cruise Missile – BrahMos, which serves the needs of all the three wings of the Indian Armed Forces. Of course, Mishra, who comes with close to four decades of substantial experience, has contributed immensely in India's quest to achieve excellence in missile technologies, which has led to the fruition of several DRDO Missile Programmes.

Mishra's vision, perseverance and diplomatic skills to achieve export orders for Indian defence weapon and equipment have resulted in many defence R&D projects with friendly coun-

tries within the framework of foreign policy and defence cooperation.

Winner of multiple awards including 'DRDO Scientist of the Year Award' by the Prime Minister of India, and the 'Super CEO 2015' by The Machinist magazine, Mishra is indeed a 'Star' in every sense.

Mishra is focused on continuing the uninterrupted momentum in retaining the supersonic trajectory of the world's deadliest cruise missile BrahMos with strongest commitment for indigenisation, new innovations and technological breakthroughs in developing and fielding more powerful, advanced variants of the weapon. "Alongside, we intend to establish India as a major weapon exporting nation in the world by successfully entering the global arms market through the export of BrahMos to friendly coun-

tries, thereby realising the export target of Govt. of India," he says.

Mishra strongly believes that leveraging on the Government's clarion call for an 'Atmanirbhar Bharat', the Indian defence industry should collectively strive towards achieving excellence in new technological innovations. "It should aim at establishing a robust mechanism of capability enhancement with optimum utilisation of all available resources at its disposal to realise indigenisation and self-reliance in defence production. With necessary hand-holding by all major stakeholders, including the Armed Forces, the Indian defence industry should fast-track its efforts to become a global manufacturing hub and realise its export potential with a highly sustainable growth trajectory in the foreseeable future," he states.



THE  
**MACHINIST**  
*Star List*  
2021



## SUJATHA NARAYAN

Regional General Manager for Wabtec Corporation in India.

**"2021 WILL BE ABOUT RECOVERY BACK TO PRE-COVID LEVELS WITH INCREASED DEMAND BOTH IN INDIA AND FROM THE GLOBE."**

By Niranjan Mudholkar

**R**ecognised by The Machinist as a Super Woman Leader in Manufacturing in 2019, Dr. Sujatha Narayan has indeed proved herself to be an exceptional industry captain. Her illustrious career spans more than two decades with 12 years in India and nine years in the US. At present, she is in-charge of the India region (includes India, Sri Lanka and Bangladesh) with Wabtec Corporation. In her role as the Managing Director of the Transit business in India, she has spearheaded the organisation through a time of unprecedented profitable growth with a focus on customer satisfaction, operational efficiency, compliance and employee

satisfaction for over three years. Besides working with Wabtec and Faiveley Transport, she has also worked with 3M India Limited and Rogers Corporation.

Speaking about her vision, she says: "We are working on building a US\$ one billion enterprise in India with a combination of revenues in India, sourcing from and manufacturing in India for the world as well as driving innovation and engineering from India for India as well as the world. We believe this growth will lead to the creation of jobs and help build communities in India and as an Indian, this makes me proud. 2021 will be about recovery back to pre-Covid levels with increased demand both in India and

from the globe and we will focus strongly on the themes of execution, competitiveness and diversification," she says.

Sujatha believes that the Rail industry has a lot to be proud of since it is the safest and most sustainable mode as compared to all other modes of transportation available and the lifeline of passenger transportation in India. "Some of the areas that the industry can really focus on is to gain an increased share of freight traffic, improve the passenger experience and lead the world in sustainability. All this can happen if we as an industry can move faster to adopt innovation and modern technologies," she remarks.



**W**inner of The Machinist Super Entrepreneur of 2020, Sulajja Firodia Motwani is the Founder & CEO of Kinetic Green Energy and Power Solutions Limited. She is also the Vice Chairperson of Kinetic Engineering Ltd and is responsible for Kinetic group's overall business strategy and development. Today, Sulajja is passionately pursuing green mobility for the masses. "In the long run, the idea of being part of and leading this massive movement of green mobility for the masses is what keeps me awake at night," she says! Sulajja is very confident that 2021 will be a year of massive growth momentum for Kinetic Green. "We have spent last 4-5 years in building a strong base of EV R&D and technology development, successful localisation of 100 percent parts of our EVs, establishment of unique asset light manufacturing model and building brand Kinetic Green as a leading EV maker by successfully selling close to 30,000 electric three wheelers across India. We also aim to rapidly penetrate the hinterland of north and east India, and build Kinetic to be the No 1 Electric three wheeler maker of India." She is also excited about the upcoming range of exciting golf carts and buggies to be built at Kinetic Green, which are

designed by Italian designers at Tonino Lamborghini SpA!

Sulajja is optimistic about the prospects for the industry for 2021. "I expect consumer confidence and sentiment to improve globally leading to an upswing in demand all across," she says. She is particularly bullish about the long term prospects of the EV industry and 2021 being the much awaited start of the disruptive transformation of the automotive industry through adoption of EVs. "With government policy firmly

in place, with higher awareness of EVs among consumers, and will battery prices falling towards the magical figure of \$150 per kWh bringing parity of EV pricing with ICE vehicle pricing in sight, there is now no stopping for the EV juggernaut! So here is to a greener, happier 2021," she remarks!

A fitness enthusiast and a marathon runner, Sulajja passionately pursues adventure sports including skiing, scuba diving, mountain biking and sky diving.



## SULAJJA FIRODIA MOTWANI

Founder and CEO, Kinetic Green

**"I EXPECT CONSUMER CONFIDENCE AND SENTIMENT TO IMPROVE GLOBALLY LEADING TO AN UPSWING IN DEMAND ALL ACROSS."**

By Niranjan Mudholkar



**S**uresh KV, or KV as he is popularly known, is the recipient of 'The Machinist Lifetime Achievement Award for the 2020'. The award was given in the recognition of his overall contribution to the industry.

KV, who started his career with Asian Paints, has also had enriching experiences with organisations like Bajaj Auto, Visteon India and Philips. Known for his humane touch when it comes to people management, KV is equally famous for his sharp business acumen and expertise in strategy and operations.

Currently, as the India head for ZF, he is responsible for the governance and overall growth of businesses in line with the strategy of his organization. ZF as a part of its global strategy has set out a target to have 30 percent of the global revenue from Asia Pacific. "This clearly indicates that ZF continues to focus on growing economies and specifically believes in the growth potential of the Indian market. The strategy of the company is to invest and grow revenue in India by 50 percent by 2030 with high levels of localization," KV shares.

Post the acquisition of WABCO, ZF will definitely be expanding the production footprint to benefit from the Indian manufacturing talent base and to significantly expand export from the country. "In addition, ZF in India plans to source components and further invest in engineering and software development by growing the existing and adding new engineering centres. All in all, ZF operations in the Indian region will grow significantly in the next decade," KV adds.

KV believes that the continuous



## SURESH KV

President Region India, ZF India Pvt Ltd

**"IT IS CRITICAL FOR ALL THE ORGANISATIONS IN THE VALUE CHAIN TO LEARN FROM THE RECENT EXPERIENCES AND IMPLEMENT INNOVATIVE IDEAS TO IMPROVE FLEXIBILITY AND PREPAREDNESS."**

By Niranjana Mudholkar

support from the government to tide over downturn and the various initiatives to make India an attractive FDI destination should also help the Indian economy to get back to the growth rates in a short span of time. "However, it is critical for all the organisations in the value chain to learn from the recent

experiences and implement innovative ideas to improve flexibility and preparedness to better face various challenges in future," he remarks.

Hailing from central Kerala, this family man is equally passionate about travelling, traditional dances and classical music.





## VIPIN SONDHI

MD & CEO, Ashok Leyland Limited

**“WE HAVE THE TALENT AND RESOURCES TO DEVELOP A HEALTHY R&D CULTURE, WHICH IN TURN WILL HELP US TO MANUFACTURE IN INDIA, FOR THE WORLD.”**

By Niranjan Mudholkar

Leading one of the largest commercial vehicles, trucks and bus manufacturers in the world like Ashok Leyland is as tough as it can get. But Vipin Sondhi is made of sterner stuff, thanks to his more than three decades of experience with manufacturing and engineering giants like JCB, Honda, Tata Steel and Tecumseh. In fact, prior to joining Ashok Leyland, he spent 13 long years at helm with JCB building the organisation into a market leader in the construction equipment industry.

Being an alumnus of The Indian Institute of Management, Ahmedabad, The Indian Institute of Technology, New Delhi, and The Lawrence School, Sanawar,

Sondhi has always believed in holistic development and pursuit of excellence.

Considering the tumultuous nature of 2020, Sondhi feels that there are many things to learn and reflect on, from this year. “Specific to Ashok Leyland, our ability to respond in real time is something that has helped us previously and been very beneficial this year. We will continue to be nimble and prepared for the future,” he states.

Talking about the New Year, Sondhi says that Ashok Leyland will continue marching towards its vision of being amongst the ‘Top 10 global commercial vehicle makers’. “Our digital journey, which is already well underway, will gain further momentum as the market moves

towards solution oriented offerings. Our digital platforms like the DigitAL Nxt, will supplement our robust offerings like the AVTR, BADA DOST and BOSS, launched earlier this year. Customers want reliability and profitability – and this is where Ashok Leyland has always focused on,” he adds.

Sondhi strongly feels that the industry must focus on ‘Design in India’ along with ‘Make in India’. “Unless we develop the skills and knowledge to design in India, we will not truly achieve our full potential as a Nation. We have the talent and resources to develop a healthy R&D culture, which in turn will help us to manufacture in India, for the world,” he remarks.



## VIVEK CHAAND SEHGAL

Chairman, Motherson Group & Motherson Sumi Systems Ltd

**"MOTHERSON GROUP WILL ALSO BE LOOKING AT OPPORTUNITIES IN THE LOGISTICS SPACE TO DISTRIBUTE COVID-19 VACCINES IN THE INDIAN MARKET."**

By Niranjan Mudholkar

Vivek Chaand Sehgal is one of the foremost entrepreneurs that our country has ever produced, and his success story is something that Indian manufacturing industry will always be proud of. Sehgal started Motherson in 1975 along with his mother and forayed into manufacturing with a cable and wire manufacturing unit in 1977. Today, the Motherson Group is a global giant with a turnover of US\$ 10.0 billion and presence in 41 countries with over 270 facilities across the world! In fact, Motherson Sumi Systems Limited (MSSL), the flagship company of the Group, is one of the largest auto ancillary companies in India.

Under Sehgal's able leadership, the Motherson Group has evolved into a

top full system solutions provider to the global automotive industry and ranked 22nd among the global automotive suppliers. Sehgal is known for his entrepreneurial genius and business acumen, which are clearly reflected in both the organic and inorganic growth of the Group in just under five decades.

"At Motherson, we like to commit to five-year targets to our stakeholders. We've done so since the year 2000, and although top-line accomplishments will never be pursued at the expense of bottom-line, we have managed to achieve most of our targets of our five-year plans ever since. We recently unveiled 'vision 2025', which is our next five year plan for 2020-2025. As per the vision, we aim to increase our top line to \$36 billion, with a 40 percent return

on capital employed (ROCE) during this period. The management has also shared that no country, customer or component will account for more than 10 percent of the overall revenue," he says.

In its five-year plan, MSSL is banking on the growth of its current business lines, the addition of new technologies to its existing products and processes, expansion into adjacent areas with new solutions in current industries besides diversification into non-automotive areas such as aerospace, logistics, healthcare and information technology. "Motherson Group will also be looking at opportunities in the logistics space to distribute Covid-19 vaccines in the Indian market as part of its business diversification strategy," Sehgal adds.



It would be fair to say that William L. Blair is quite familiar with the aerospace & defence ecosystem in India. After all, his current role with Lockheed Martin in India is actually his third appointment in the country with a multinational aerospace and defence company! Bill, as he is popularly called, joined Lockheed Martin India Private Ltd as Chief Executive on 1 October 2019. Previously, he has worked with different organisations including Lockheed Martin Space Systems, the Raytheon Company as well as GE Aviation (where he started his career and has worked for more than 25 years). With decades of experience, a robust global exposure and roles spanning multiple functions like leadership, engineering, marketing, sales, business development and program management, Bill is truly a seasoned campaigner of the aerospace & defence industry.

Bill says that Lockheed Martin is committed to being a trusted partner to India for defence, aerospace, sustainment, and technology solutions that advance India's strategic security and grow its industrial capabilities. "Having established a strong foundation in the country with two Joint Ventures in Hyderabad over a decade ago, we remain steadfast in our commitment to meet Make in India and self-reliance initiatives and continue



## WILLIAM L. BLAIR

Vice President and Chief Executive,  
Lockheed Martin India

**"WE SEE TREMENDOUS OPPORTUNITIES FOR COLLABORATION  
WITH INDIAN INDUSTRY IN SPACE AND MRO."**

By Niranjan Mudholkar

to expand our investment in and partnership with India while delivering unmatched capabilities to the Indian armed forces in the coming year," he states.

Bill is aware that the industry in India has seen many progressive steps being taken to achieve self-reliance and advance local industry by way of new reforms - increase in FDI to 74 percent being one of them. He feels that the DAP 2020 with Strategic Partner and Buy Global Make in India model will

encourage OEMs to expand their investments and establish a much greater presence in India. "We see tremendous opportunities for collaboration with Indian industry in Space and MRO. We expect closer collaborations with state governments and creation of working groups with industry to build talent and capability for the country. This is a win-win approach and will create value for all as well as much needed jobs and skill development in India," he adds.



By Niranjan Mudholkar

## TRANSPARENT GROWTH

The speciality glass manufacturing industry has a potentially huge demand in the present and future. We have expanded capacity to meet the rising demand, and there is no glass shortage, says **Rajesh Khosla**, President & CEO, AGI glaspac

**Can you give us an overview of the speciality glass/high-end glass manufacturing industry in India?**

The glass industry in India is quite old and well established. It remained largely a cottage industry for a very long time. In recent years, the industry has transformed from using rudimentary mouth-blown and hand-working processes, to adopt modern processes and automation in a big way. However, Indian per capita consumption of glass packaging (1.8 kg) is much lower compared to other nations.

According to various studies, plastic will be phased out in the coming years. India's dream and global vision are to replace plastic with green and environmentally friendly glass products. Hence, the speciality glass manufacturing industry has a potentially huge demand in the present and future. We have expanded capacity to meet the rising demand, and there is no glass shortage.

As pharma bottles are non-returnable, they are produced at the lowest possible weights and with a uniform thickness, which will be an added advantage for logistics. With the help of advanced 'blow-blow' and NNPB technologies, bottles are produced with airtight packaging and delivered to the customers. Hence, AGI



is gearing up for phasing-out plastics through its innovative glass packaging solutions.

**Where does AGI glaspac stand in terms of its market share and brand value in the market?**

We are currently one of the leading glass manufacturers with a market share of 20 per cent. The total glass manufacturing capacity in the country is eight thousand tons per day.

**What are the key challenges that the industry has been facing traditionally?**

The main challenges for AGI are the speed of implementation of our plans and the uncertain government policies, which can affect the market and our customers from time to time. By 2030, only innovative companies will survive. Robotics, digitalisation, IoT, Industry 4.0, have become important these days for all companies. We believe that innovation cannot happen with one person or department. It will start with teamwork.

We have a clear policy of prioritising the domestic market and hence do not export at the cost of domestic demand. Another challenge that AGI and other manufacturers face is the perception of the western world about the products and services provided by the coun-



**"We are currently one of the leading glass manufacturers with a market share of 20 per cent. The total glass manufacturing capacity in the country is eight thousand tons per day."**



try. This perception will change once the companies start working with us, and we deliver the best products and services to them. Otherwise, we are on par with manufacturing facilities existing anywhere in the world.

#### **How has the COVID-19 pandemic affected the industry in general and AGI glaspac in particular?**

In the glass sector, the problems faced by the industry in this emergency period and immediately before included:

- Supply of raw materials\input for manufacture
- Transportation of finished goods
- Employees' ability to come to a place of work.

The novel coronavirus crisis has already led to some of the sharpest declines in recent times in demand for certain types of packaging, including flexible films in the snacks industry, glass and metal in the alcohol in-

//

Robotics, digitalisation, IoT, Industry 4.0, have become important these days for all companies. We believe that innovation cannot happen with one person or department. It will start with teamwork.

dustry while accelerating growth for others—such as packaging for e-commerce shipments like flexible, rigid plastics and corrugated grocery packaging that are emerging as lifelines in this new world.

Ironically, during the pandemic lockdown situation, the demand for the food segment witnessed a rise while the demand in the pharmaceutical sector remained static. During the lockdown period, people were in their houses and less exposed to other medical services. Hence, the pharmaceutical glass bottle segment did not pick up.

However, we now plan to make vials for vaccines, including the COVID-19 vaccines currently under development by Indian biotech companies. We are in active talks with them. There is going to be a recurring demand in the vaccines space in the coming 2-3 years, which will boost the glass business.

#### **How have you been dealing with the pandemic, and what are the key learnings that it has given?**

The packaging of beverages has become quite important after COVID-19, owing to safety concerns. The glass packaging industry is seeing increased demand from the food and beverage and pharmaceutical sectors post the COVID-19 pandemic, as it has led to higher demand for medicine bottles, food jars and beverage bottles.

About 90 per cent of the glass containers are used for food and beverage packaging. The demand for glass packaging from cosmetics and perfume manufacturers also remains strong as these are luxuries that some consumers are still happy to buy.

Many glass packaging manufacturers have called on governments to ensure that regular recycling collections continue during the pandemic so that these materials can be converted into new products. Several glass-packaging manufacturers have also partnered with distilleries turning to hand sanitiser production.

Hence, AGI glaspac is striving hard to bring in the latest technologies, which will be beneficial and safe for users. Our R&D department has developed an anti-bacterial range of bottles using advanced Germ Guard and Active Silver Technology.

#### **Key learning:**

- Be ready for anything—and stay nimble
- Learn how to use technology like Zoom, Teams etc., before you really need it
- Deliver products and services in multiple formats
- Keep a cash buffer
- Have multiple revenue streams
- Always be growing.

#### **The pandemic has also accelerated the adoption of digitalisation. What has been the case with AGI glaspac?**

We are trying to implement all the best practices in manufacturing, introduce the management tools of operations and collaborate with world-class glass industries for technology transfer.

Digitalisation and automation are being introduced to improve business efficiency. AGI glaspac uses the latest technologies to integrate its R&D, production etc. We have adopted Windchill, which is a product life-cycle management tool that integrates all the



stakeholders of the operations right from new product development to bottle packaging. The SAP system is in use to track everyday operations metrics and quality parameters. The business excellence team is equipped with all the tools required for effective statistical analysis and development of new methods for sustaining the improvements.

**What more needs to be done to strengthen this value chain both from the domestic market perspective as well as with regards to becoming globally competitive?**

Our customer base comprises a host of multinational and Indian companies catering to various business segments. The domestic market is our priority, and AGI

together, AGI currently melts around 1,600 tonnes of glass per day, from 80 tonnes per day capacity in 1972. We are focusing on R&D in the areas of input, processes, metallurgy and products using both in-house and external capabilities and support from across the world.

Bhongir seems like a good investment, with the Telangana government ensuring stability and being very enterprising. The bureaucracy has been supportive, and the state has ensured clarity in its industrial policies. The government has provided uninterrupted electricity, water and other amenities. There is also a lot of quality manpower available in the state. The quality of life here has helped us attract senior professionals from across the world.

**What are the factors driving this expansion and growth?**

AGI has positioned itself as one of the leading container glass manufacturers in the country with two manufacturing facilities. With respect to expansion, we have already invested in the upgradation of our plant. Our investments are in technology upgradation, inspection, packaging systems, warehousing, and logistics. We are also looking at increasing our volumes by at least 50 per cent in the next five years.

The industry is experiencing a surge in demand, owing largely to the growing purchasing power, urbanisation, modern retail and growing awareness about health and hygiene among consumers. The industry's success is likely to continue or possibly improve even further in the future due to rising disposable income and India's GDP rate in the short- and medium-term. The local economy, which remained largely unaffected by the global financial crisis, has been a major aid for the glass container industry, allowing manufacturers to

//

The glass packaging industry is seeing increased demand from the food and beverage and pharmaceutical sectors post the COVID-19 pandemic, as it has led to higher demand for medicine bottles, food jars and beverage bottles.

glaspack has a clear policy that we would not like to export at the cost of domestic demand.

**Tell us about the company's expansion plans of investing INR 220 crore in a new plant at Bhongir. Why did you choose Bhongir for this investment?**

The Bhongir facility was established in 2009 and saw a further expansion in 2012. Through this new facility, we see a big opportunity across pharmaceuticals and biotechnology, cosmetics, perfumery, personal care and other sectors.

With the Hyderabad and Bhongir facilities put



grow even during these uncertain times.

**At present, what kind of manufacturing footprint do you have?**

We are currently one of the leading glass manufacturers with a market share of 20 per cent. The total glass manufacturing capacity in the country is eight thousand tons per day. The speciality glass facility will have a manufacturing capacity of 154 tonnes per day and five manufacturing lines spread across 15 acres. The company foresees top line growth in its revenue by not less than 15-18 per cent by 2022-23.

**What impact will the Bhongir investment have on the local economy and employment?**

The company currently has a capacity of 1,000 tonnes of soda ash glass per day in the Bhongir unit and is expected to generate 4,000 jobs. Our new green facility aims to upgrade the living standards to increase society's wealth as well as the purchasing power eventually.

//

The local economy, which remained largely unaffected by the global financial crisis, has been a major aid for the glass container industry, allowing manufacturers to grow even during these uncertain times.



This investment in AGI glaspac will enhance country's value in the speciality glass's global market. Additionally, it will increase productivity of domestic market by attracting the players who depend on the domestic supply chain than importing. Lastly, our vibrant manufacturing base leads to more research and development, innovation, productivity, exports, and jobs for middle-class community.


**Give us an overview of your exports business.**

The company exports to North America, Europe and Africa and is seeing fresh opportunities in Australia, New Zealand and regions like Canada, as well as the APAC regions.

**What is your take on PM Modi's vision for 'Atmanirbhar Bharat' from your industry's perspective?**

Atmanirbhar Bharat: Atmanirbharta (self-reliance) is not just a dream, but a well thought out roadmap for a future-ready India. This move has brought all the pharma, and food companies started procuring from local industries to reduce import dependence for glass products.

**Things to highlight:**

- Employment opportunity to 10 lakh people (Direct and indirect)
- It will bring an investment of approximately Rs.9000 crore.
- Increase in supply in the domestic market will restrict the reuse of glass bottles in the beer and liquor industry improving the hygiene and quality of human life.
- Solar-tempered glass is an essential component promising a huge employment opportunity due to huge growth potential of renewable energy market.
- The current per capita consumption of glass at 4kg is way below the global average consumption of approximately 110kg. Rising income and affordability of glass would result in more consumption and higher demand with Atmanirbhar Bharat. 

By Niranjan Mudholkar

## ADAPTING TO THE DIGITAL AGE

AM technology brings in lot of advantages, in terms of part consolidation, light-weighting to mass-customization, faster Go-To-Market cycle time for new designs and a digital inventory, says **Gopal Madabhushi**, Global Director – Globalization & Global Locomotive Engineering Leader, Wabtec

**Congratulations on establishing the Additive Manufacturing Center in Bengaluru recently. How important is this initiative from the perspective of developing the additive manufacturing ecosystem in India?**

The world is witnessing a rising demand for digital manufacturing and 3D printing is enabling this journey across several industries such as transportation, industrial, medical and consumer products. Additive Manufacturing (AM) ecosystem is growing at a rapid pace in Asia pacific as well as India markets to cater the needs of the industry. The Wabtec Additive Manufacturing Center is another step in our Industry 4.0 journey as we continue to integrate smart digital technologies and production systems to drive innovation and deliver cutting-edge solutions to our customers. Our India Additive manufacturing center is also a Center of Excellence (CoE) in MJF (Multi Jet Fusion) technology for the Global Wabtec Corporation. This CoE in the India will enable faster adoption of AM technology and this center opens up this expertise to be leveraged by the Indian AM community and users. This is a significant initiative for Indian AM ecosystem and the partnerships that enable more offerings in terms of better AM technology, materials and bring in design expertise to cater to the 3D printing services



**“Industry 4.0 is the new disruptor in the world of manufacturing globally and now in India. We are in a digital age and the digital manufacturing is being adapted worldwide. This is transforming the supply chain.”**



requirements of the Indian industry. Bangalore is also one of the regions, which houses many 3D printers because of its proximity to key aerospace sectors and many multi-national design companies in the IT corridor. We are proud to say that we are one of the first to adapt the MJF 3D printing technology commercially in India.

**How would you analyse the evolution of additive manufacturing as a technology both in India as well as globally?**

Industry 4.0 is the new disruptor in the world of manufacturing globally and now in India. We are in a digital age and the digital manufacturing is being adapted worldwide. This is transforming the supply chain. AM technology brings in lot of advantages, in terms of part consolidation, light-weighting to mass-customization, faster Go-To-Market cycle time for new designs and a digital inventory. This is also being proven to be a more sustainable manufacturing technology. However, there is also a greater need to accelerate this adoption in regions, like India, which is line with the Industry

4.0 journey.

While AM or 3D-printing technology was originally introduced to support faster prototyping and cycle time reduction, the technology and associated solutions have evolved in last few years at rapid pace. Current technology allows us to deliver speed and high quality at lower cost. However, this requires expertise to identify the opportunity, right printing technology, printing machine and the materials used.

Wabtec has invested in these areas over many years and gained tremendous expertise. This investment enabled the company to establish this Global CoE. Wabtec is extending this capability to other industries in a true 'atmanirbhar' (self-reliant) approach.

**While additive manufacturing is a very generic term, there are many types of this technology. What will be the focus at your Additive Manufacturing Center?**

There are many technologies that are proven, and some are still evolving. We are starting our journey with consulting in MJF (multi jet fusion), DMLM (direct metal laser melting), FDM (Fused deposition model), SLA (stereolithography) and Binder jet technologies and manufacturing services, and MJF technology as far as



**also be looking at reaching out to the players in this segment?**

AM technology is a digital technology and is industry agnostic. This technology can be adapted to all industry segments and many such examples are available. We will be open to serving customers in all segments.


**Which are the other key industry sectors that this Center will be catering to?**

We are currently focusing on railroad industry and service industries.

**I understand that MSMEs will be a major focus area for this Center. How will you be addressing the needs of the Indian MSMEs?**

We are opening the unique offerings of the Center to the Indian MSMEs. The speed AM provides a key factor in addressing MSMEs' needs.

**Additive manufacturing is constantly evolving as a technology with regards to the processes, systems as well as materials. How will this Additive Manufacturing Center contribute to the ongoing research and development?**

The AM technology is in different stages of evolution. Wabtec is gaining the expertise needed to adapt to this technology. R&D is essential to understanding material characteristics and how the product behaves in real-life field conditions in terms of temperature, vibrations and fatigue. Wabtec has a significant testing infrastructure for product qualification, which is complemented by a R&D ecosystem in Bangalore. Railroad companies operate differently in terms of product life performance ranging from five to 15 years and some of the systems run more than 20 years. That's where more of the R&D efforts are going. The AM center will enable more and faster product exploration using additive technology. Wabtec also is focusing on the production processes and many post-processing techniques, for AM at the center. 

manufacturing services are concerned. These are also AM technologies that we have adopted internally and gained significant experience over many years.

**Which are the different materials that this Additive Manufacturing Center can use successfully?**

We have successfully used both metal alloys from Stainless Steel to aerospace-grade Nickel-chromium alloys (IN718) and in polymers, such as polyamide composites family, and high strength polymers such as PEEK (Polyether ether ketone), PEKK (Polyetherketoneketone), etc. We are now exploring more options such as, TPU, TPA and PP to add to our material suite.

**Bengaluru is India's aerospace manufacturing hub. Since aerospace manufacturing has started adopting additive manufacturing to a large extent, will you**

//

Current technology allows us to deliver speed and high quality at lower cost. However, this requires expertise to identify the opportunity, right printing technology, printing machine and the materials used.



## VOESTALPINE INSTALLS INDIA'S LARGEST SCHMETZ VACUUM FURNACE

Voestalpine High Performance Metals India has successfully installed India's largest Schmetz vacuum furnace (360deg Nozzle Type Quench / German Technology) at its Chennai facility. "Such an Investment in ultra-modern technology in spite of slowdown in the business due to pandemic situation, clearly announces our vision to be the number one solution provider in tooling segment; vacuum heat treatment being an important part of it. With this advance German Technology vacuum furnace, we would be able to meet the quality and lead time requirements of our esteemed customers in South India," said Alok Jhamb – Managing Director India.



## DORMER PRAMET COMPLETES ACQUISITION OF MIRANDA TOOLS



Dormer Pramet has completed the previously announced acquisition of Miranda Tools, a manufacturer of High-Speed Steel (HSS) cutting tools in India. With a corporate base in Mumbai and several manufacturing facilities in the state of Gujarat, Miranda is one of the leading domestic brands of drills, taps, milling cutters, tool bits and saws.

Following six months of activity to finalize the acquisition, more than 580 employees will now become part of Dormer Pramet, a global manufacturer of cutting tools and enhances the company's existing production capabilities in Brazil, Czech Republic and the USA. Also, the deal strengthens Dormer Pramet's round tools offer for the general engineering, automotive component manufacturing and MRO industries in India and around the world. An inauguration ceremony took place at the main Miranda production unit in Ankleshwar on December 23, marking the first day since the acquisition from the Ashok Piramal Group.

## CHIRON GROUP ACQUIRES MECATIS AND EXPANDS THE PRODUCT RANGE

On August 1, 2020, the Chiron Group acquired Mecatis SA with headquarters in Is rables (CH/Valais). Mecatis is a specialist for small, high-precision machining centers, which are used in the watchmaking, medical, jewellery and micro engineering industry. Mecatis, founded in 2007, designs, builds and maintains machining centers for the high-speed cutting of microtechnical components. The highlight of the product range under the brand 'Factory5' is the Micro5, launched in 2017 - a compact and innovative machining center with 4 or 5 axis, which customers use for the fast and precise production of their different components. All Factory5 products are consistently marketed digitally via the [www.factory5.tech](http://www.factory5.tech) platform. Both partners profit from the acquisition: From now on, Factory5 machining centers will be sold worldwide by the Chiron Group. The entire service network of the corporate group will



With the acquisition of Mecatis, the Chiron Group is strengthening its worldwide presence and expanding its technology base.

also be available to Factory5 customers. On the other hand, the Chiron Group is expanding its technology base with the acquisition. "The high-precision machining centers from Factory5 perfectly complement the Chiron product range below the 08 series. With them, we are strengthening our offer for the precision and medical technology industries. This means that we can now optimally meet the demands of many customers for compact, highly dynamic machines for small components," explains Dr.

Claus Eppler, Managing Director R&D at Chiron. With the acquisition, the Chiron Group is now present with its own companies in ten countries outside of Germany. All Mecatis employees will be transferred to the future Chiron Swiss SA, and continue to care for the products of the Factory5 brand. Managing Director is the former owner and CEO, Samuel Vuadens.

**SUBSCRIBE NOW**

**Special Offer**  
**1-Year**  
**12 Issues**  
**Rs 800**



## INDIA'S PREMIUM MAGAZINE FOR THE MANUFACTURING INDUSTRY

Mail this coupon along with your cheque/DD to B2B subscription offer, RMD (M) Dept., Bennett, Coleman & Co. Ltd., The Times Of India Suburban Press, Akurli Road, Off Western Express Highway, Kandivali East, Mumbai - 400 101.

Call: 022 67427209 / 022 67427206. Log on to: [mags.timesgroup.com](http://mags.timesgroup.com)

<input type="checkbox"/>	<b>1-Year</b> <b>(12 Issues)</b> <b>Rs 800</b>	<input type="checkbox"/>	<b>2-Years</b> <b>(24 Issues)</b> <b>Rs 1400</b>
--------------------------	--	--------------------------	--

Term	No of issues	Cover Price	You Pay	You Save
1 Year	12	Rs.900/-	Rs.800	11%
2 Year	24	Rs.1800/-	Rs.1400	22%

### Subscriber's Details:

**All fields, including Postal code and contact number/s are mandatory.**

Name: (Mr/Ms) \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Tel No. (with STD Code) \_\_\_\_\_ Mobile: \_\_\_\_\_ E-mail ID: \_\_\_\_\_

### Payment Details:

Date of birth:   DD   MM   YY

### Debit Cards / Cash are not accepted

Cheque/DD Enclosed ☐ Cheque/DD No.: \_\_\_\_\_ Cheque Dated: \_\_\_\_\_ Bank Name: \_\_\_\_\_

₹ \_\_\_\_\_ (payable to **Worldwide Media Pvt Ltd**)

Existing subscribers please specify customer ID \_\_\_\_\_

I have read the terms and conditions and I would like to avail of this offer.

Signature: \_\_\_\_\_



**TERMS & CONDITIONS:** • Cheques/DDs should be drawn in favour of Worldwide Media Private Limited. • Cheques/DDs must contain the code/address of the issuing branch. • Non MICR cheques or two separate cheques for one subscription shall not be accepted. • Payment may be made through Paytm QR code printed on the Subscription form. In case of payment done through Paytm, please ensure that the Paytm wallet Txn ID and the Paytm Mobile number are mentioned in the subscription form and the duly filled form must be sent to [address] and the Subscription form shall be considered only in case of successful completion of payment transaction in favour of WWM. • Delivery of subscription copy/ies shall commence only on receipt and acceptance of properly filled subscription form to WWM on above mentioned address. Merely payment of subscriber fee by using any of the permitted modes shall not entail or ensure delivery of subscription copy/ies. • Money orders shall not be accepted. • Please super scribe full name, address and signature on the reverse of the cheque/DD. • For multiple subscriptions, attach separate coupons (photocopies allowed) along with separate cheques/DDs. • Please allow a delivery period of 4 to 6 weeks for the first issue of The Machinist to reach you and 8 to 10 weeks for the gift to reach to you from encashment of remittance. WWM will not be responsible for failure to deliver a The Machinist if an incorrect address is supplied in the form. WWM reserves the right to dispose of incorrectly addressed envelopes and their content without any obligation to refund the subscription amount. • Subscription copies shall be delivered by post/courier as soon as the issue is released in the market place. However, WWM shall not be responsible for any postal or courier delays. • Avoid giving PO Box or APO addresses. • In the event of an issue of the magazine is lost in transit WWM liability is limited either to replacement of the missing issue or refund of the cost of the missing issue. • WWM reserves the right to cancel or reject a subscription if it is determined that delivery of The Machinist is logistically difficult and not sustainable. In such circumstance WWM will refund the balance subscription amount to the subscriber. • The validity of the subscription period is limited to the number of issues mentioned in the offer, depending on the term subscribed for. • The Machinist issues are also available without this offer. • This offer is non - refundable and cannot be combined with any other offer. • Offers and rates are valid in India only. • The images of the gift are for representational purpose only and the final gift may not look like the image shown above. Gifts are subject to availability and strictly limited on a first come first serve basis. • All disputes pertaining to the subscription shall be subjected to exclusive jurisdiction of competent courts in Mumbai only. • WWM reserves the right to modify, withdraw, alter, extend or discontinue the subscription terms and conditions at anytime. • Incomplete or illegible forms shall not be accepted. • This is a limited period offer and valid till stocks lasts. • WWM shall not be liable for the quality of the gifts/ products sent to subscriber under this offer. The subscriber shall take up any issues regarding the gift/ product with the concerned manufacturer or distributor directly. • WWM may use the personal & transactional information that is supplied to us in order to fulfill the subscription order. • All prize, draws and competitions which are associated with WWM's The Machinist subscription offers are subject to separate terms & conditions. • These terms are subject to change.

MAC

## LVD INTRODUCES ROBOTIC BENDING SYSTEM

Featuring automated tool changing press brake

“THE PRESS BRAKE AND ROBOT WORK TOGETHER IN SYNERGY TO KEEP CHANGEOVER TIME TO A MINIMUM. AS THE ROBOT PICKS THE FIRST WORKPIECE FROM THE INPUT STACK AND CENTERS IT, THE PRESS BRAKE COMPLETES THE TOOL CHANGE.”

**L**VD has introduced Ulti-Form, a new robotic bending system featuring an automated tool changing press brake. Ulti-Form follows the success of LVD's Dyna-Cell robotic bending cell and takes automated bending technology a step further by incorporating an automated tool changing press brake to keep bending productivity at its peak, handling both small batches and long production runs efficiently with minimal changeover time. Ulti-Form delivers high productivity bending with unattended operation.

### Toolcell-Inspired Design

Ulti-Form features a 135-ton press brake designed using the ToolCell platform, LVD's top-rated automated tool changing press brake, integrated with an industrial robot. The press brake houses a built-in tooling warehouse and uses a gripper mechanism in the machine's back-gauge fingers to quickly and efficiently change tools. The press brake and robot work together in synergy to keep changeover time to a minimum. As the robot picks the first workpiece from the input stack and centers it, the press brake completes the tool change. Ulti-Form handles parts from 50 x 100 mm up to 1200 x 800 mm weighing up to 15 kgs.

### No Robot Teaching

Ulti-Form is automation that's easy to use with a fast “art to part” process thanks to LVD's powerful programming wizard. Programming of both the press brake and robot is handled offline and no robot teaching is required. CADMAN®-B software automatically calculates the optimal bend program. The robot software imports all bending data and automatically calculates all gripper positions taking into account the gripper force, collision detection and robot reachability. It generates the fastest collision-free path for the robot across the complete bending operation. The system's database contains all the

“THE EASY-FORM LASER SYSTEM ADAPTS TO MATERIAL VARIATIONS, INCLUDING SHEET THICKNESS, STRAIN HARDENING AND GRAIN DIRECTION, AUTOMATICALLY COMPENSATING FOR ANY CHANGES TO ENSURE CONSISTENTLY ACCURATE BENDING RESULTS.”



“IT HAS THE FLEXIBILITY TO ACCOMMODATE A NUMBER OF PART GEOMETRIES, AUTOMATICALLY ADJUSTING TO THE WORKPIECE SIZE. THIS ALLOWS A SERIES OF DIFFERENT PART GEOMETRIES TO BE PROCESSED WITHOUT THE NEED FOR A GRIPPER CHANGE, KEEPING PRODUCTION CONTINUOUS AND UNINTERRUPTED.”

setup information needed for the press brake and robot so that Ulti-Form is quickly readied for production.

### Auto-Adapting Gripper

The Ulti-Form robot gripper is an auto-adapting design engineered by LVD (patent pending). It has the flexibility to accommodate a number of part geometries, automatically adjusting to the workpiece size. This allows a series of different part geometries to be processed without the need for a gripper change, keeping production continuous and uninterrupted.

### Quality Assurance

Equipped with LVD's Easy-Form® Laser adaptive bending system, Ulti-Form offers automation with a quality guarantee. Real-time in-process adaptive bending technology adds advanced process stability to robotic press brake bending. The Easy-Form Laser system adapts to material variations, including sheet thickness, strain hardening

and grain direction, automatically compensating for any changes to ensure consistently accurate bending results.

### Automation for Today

Ulti-Form is a modern automated bending system. Its efficiently-organized layout has a small footprint of 8 x 10 meters. The system includes three input pallets, a large output zone and drop zone for small parts, an automated pallet dispenser and conveyor belt to transfer full pallets out of the system.

Designed for flexibility, Ulti-Form can operate automatically or in manual mode. Manual operation can be used for very complex parts and small series; automated production for long series. Flexible, productive and easy to program and operate, Ulti-Form offers a quick return on investment. Ulti-Form will make its debut at LVD's INSIGHTS Virtual and Live Tech events.

For more details, visit [www.lvdgroup-insights.com](http://www.lvdgroup-insights.com)



## NEW IGUS SLS MATERIAL

**Lubrication-free tribo-polymer iglidur I8-ESD enables the cost-effective manufacture of durable special parts with no minimum order quantity**

For safe and reliable production in the electronics and semiconductor industry, components are required that have electrostatically conductive properties. This is because even a small electric shock can destroy expensive production lines. igus has now developed a new stable material for the SLS method so that users can make their wearing parts with ESD properties flexibly and cost-effectively. The lubrication-free special parts made of iglidur I8-ESD can be printed and shipped within just few days.

Wear-resistant parts in the electronics and semiconductor industry are not only required to have a long service life but must also be electrostatically conductive, because a surge of electrostatic charge that is not dissipated by an insulating material can easily destroy the product. For the fast additive manufacture of electrostatically conductive special parts, igus has now developed a new iglidur tribo-polymer. iglidur I8-ESD is the third material that igus offers for the SLS method. The advantages of this method are evident: the user has a great deal of design freedom and can make the component without any tool costs. Moreover, no plastic waste is produced as the excess powder can be used several times and printed parts can be recycled. The parts made of the new SLS powder -



**igidur I8-ESD: electrostatically conductive SLS material for durable and abrasion-resistant 3D printed components in the electronics industry**

### high wear resistance

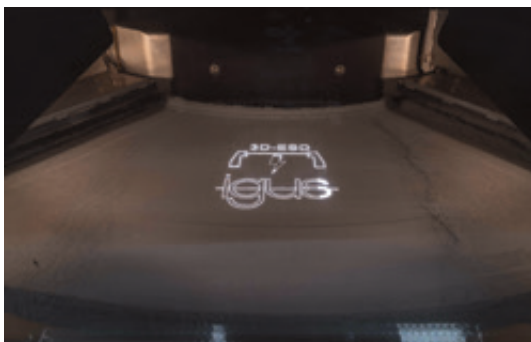
The igus tribo-polymers undergo numerous tests in the igus 3,800 square-metre test laboratory. Here a pivoting test showed that the abrasion resistance of a sintered iglidur I8-ESD wear-resistant part is twice as great as that of a PA12 sintered component. iglidur I8-ESD was also convincing in a linear wear test. igus

**“WEAR-RESISTANT PARTS IN THE ELECTRONICS AND SEMICONDUCTOR INDUSTRY ARE NOT ONLY REQUIRED TO HAVE A LONG SERVICE LIFE BUT MUST ALSO BE ELECTROSTATICALLY CONDUCTIVE.”**

like all igus materials - need no additional lubrication and are very structurally stable. “With iglidur I8-ESD, we now include a tribo-polymer in our product range that has a resistance of  $3 \times 10^7 \Omega \times \text{cm}$ . In addition, the material is inherently black. As a result, subsequent colouring is not necessary, whereby costs are lowered and the delivery time is improved,” explains Tom Krause, Head of Business Unit Additive Manufacturing at igus GmbH. “The user receives a very durable component that comes with all the desirable ESD properties.”

currently offers iglidur I8-ESD in the workshop as SLS powder for processing in the customer's own facility or for manufacture of a component in the igus 3D printing service. For the latter purpose, the user can simply send the STEP file for the part required to igus. Here, the product is printed within three days, and there is no minimum order quantity. Interested parties can now order a free sample part at [igus.eu/i8-esd-sample](https://igus.eu/i8-esd-sample).

For more info, contact, Nitin Prakash, Product Manager, iglidur®, igus (India) Private Limited,  
Email: [nitin@igus.net](mailto:nitin@igus.net), or visit [www.igus.in](https://www.igus.in)



**With the SLS method, the new black high-performance polymer can be processed in a very short time.**

**igidur I8-ESD convinces with**

## INDIA AND UAE SIGN MOU FOR TECH COOPERATION

The Union Cabinet chaired by the Prime Minister Narendra Modi has given its approval to the Memorandum of Understanding (MoU) on Scientific and Technical Cooperation between National Centre of Meteorology (NCM), United Arab Emirates (UAE) and Ministry of Earth Sciences (MoES) India. The MoU provides for sharing of knowledge, data and operational products for

meteorological, seismological and oceanic services, such as Radar, Satellite, Tide gauges, seismic and Meteorological stations. It also includes exchange of experience/visits in term of scientists, research scholars and specialists, etc. for the purpose of research, training, consultation, focused on climatic information services, satellite data utilization for now casting and tropical cyclones forecasting.

# BESPOKE FIRE RESISTANT POLYMERS



As We get future ready for Electric Vehicles fire resistance for plastic components is gaining more attention.

We at APPL have just the right solution with Bespoke Fire-resistant Grades of Engineering Plastics and Thermoplastics Compounds.

Our High-performance FR Grades are made as per UL94 Flammability Ratings and Halogen free for certain applications.



# WOHLHAUPTER®



## ALLIED MACHINE & ENGINEERING

Holemaking Solutions for Today's Manufacturing



DRILLING



BORING



REAMING



BURNISHING



THREADING



SPECIALS

Manufacturing faces many challenges, but we have more *solutions* than ever. Ask us how we can deliver the *right tool* for your holemaking and finishing needs.

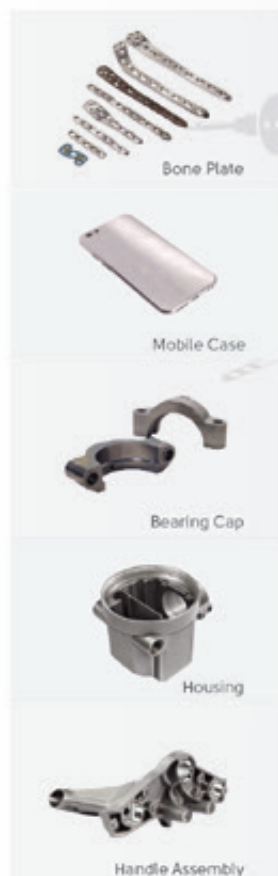
Email: [info.in@wohlhaupter.com](mailto:info.in@wohlhaupter.com) | Phone: +91 11 41827044

[www.wohlhaupterindia.in](http://www.wohlhaupterindia.in)



# High Speed Drill Tap Centre

**DTC 400-XL**  
**DTC 400L-XL**



Bone Plate

Crank Case

Mobile Case

Compressor Housing

Bearing Cap

Common Rail

Housing

Crank Case

Handle Assembly

Shifter Fork



## The Advantage

The drill tap machining center DTC-400 XL / DTC-400L XL designed specifically for high speed drill tap application along with full milling capabilities. It's a compact and powerful DTC, loaded with BT-30/BBT-30 spindles.

- Chip to chip time: 1.7 s (1.5 s\*)
- Axes rapid rate: 60/60/48 m/min (DTC-400XL)  
50/50/48 m/min (DTC-400L XL)

## Machine Highlights

- ♦ Faster Front - Pocket Tilting ATC
- ♦ Enhanced Z-axis acceleration: 1.3 G
- ♦ Spindle Speed - 10,000rpm/20,000rpm\*
- ♦ Roller guide ways
- ♦ Rigid Structure
- ♦ Compact Foot-Print

## ACE MANUFACTURING SYSTEMS LTD.

Plot No. 467 - 469, 4th Phase, Peenya Industrial Area, BANGALORE - 560 058. INDIA,  
T: +91 80 40200555, +91 99720 92970. E: salesmmt@acemicromatic.com