

TAGMA TIMES

NEWSLETTER

(Technical Info. on Die, Moulds & Toolroom)

Volume: XXVIII / No. 8

(Private Circulation for Members Only)

April 2022



The Stage is Set



Vasa Speciality Steels Pvt. Ltd.

(The Vasa Group)

Since 1973

Business Partner for  Mitsubishi Materials (Japan)

 inquiry@thevasagroup.com  www.thevasagroup.com

speroni

precision by design

TOOL **PRESETTING** | TOOL **MEASUREMENT**
TOOL **SHRINKING** | TOOL **MANAGEMENT**
TOOL **INSPECTION** | TOOL **IDENTIFICATION**

SINCE 1963

future proof technology

www.speronipa.com



Since 1973

Vasa Speciality Steels Pvt. Ltd. (The Vasa Group)

Business Partner For



Mitsubishi Materials (Japan)



IBC Advanced Alloys Corp. (USA)



TATA STEEL

Visit us at:
Stall No.-
G52 & G53



27 - 30 April, 2022

Quality Steels providers from the World's Best Manufacturers

We Provide Entire Steel & Tooling Solutions Under One Roof



Special Grades
(Tailor-made)



Hot Work Tools
Steel



High Speed
Steel



Beryllium
Copper



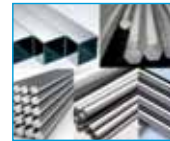
Cold Work Tools
Steel



Plastic Mould
Steel



Aerospace
Aluminum



Other Alloy Steel
(En19, 24, 31, 36 etc.)

Looking forward for strategic partnership for catering to Aviation Sector

REACH AT:

Corporate : 903/1007/1110, Techno IT Park, Link Road, Borivali (W), Mumbai- 92.

E : info@thevasagroup.com / hr@thevasagroup.com

Workshop : SK Tools, G/4 SK Industrial Park, Naik Pada, Vasai (E).

E : vasaexport@gmail.com / vasaexport@rediffmail.com

UAE : 3903, Tower 2, Address Sky View, Dubai.

Sharjah : Mischen 9 T5/19, SAIF Zone, Sharjah.

Our Financial Advisory Arm:



CORPORATE ADVISORS AND RESOLUTIONS
CHARTERED ACCOUNTANTS • MUMBAI

M&A | DEBT SYNDICATION | TAX ADVISORY | VALUATION | SOLAR RESCO

Vasa Foundation



CSR: Formerly known as Matushree Rasilaben Shantilal Vasa Charitable Trust



www.thevasagroup.com



PUROHIT STEEL
GLOBAL STEEL SOLUTIONS

Visit us at



from April 27th to 30 at
BEC Goregaon (E) Mumbai
Stall No. E04
Hall No. 1

Are you Looking Tool Steel Solutions For Better Life & Dimensional Stability ?

DON'T WORRY, WE HAVE GOT YOU COVERED.

Choose from a range of high-end **V&L** tool steel for your mould needs

For More Information :
7798815678 / 25678 / 35678
info@purohitsteels.com / www.purohitsteels.com

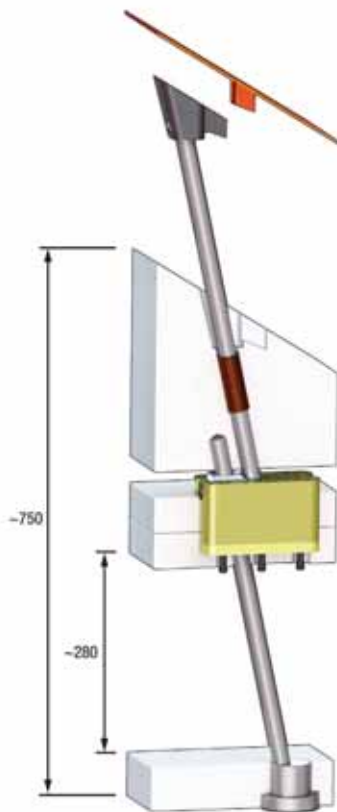
NLMK **Verona** **BÖHLER**

GRUPPESCHWEISS-ANSTALTEN
Produktion von Werkzeugstahl



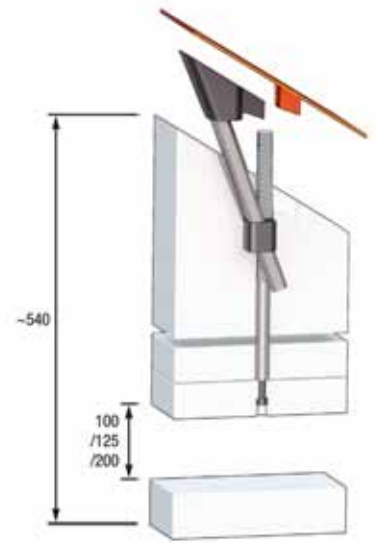
INDUSTRY DEFINING PATENTED UNDERCUT SOLUTIONS

CUMSA DOBLE RACK SYSTEM



Conventional System

DR



Double Rack System

- Eliminates the need for high-precision angled housings in the core plates.
 - Vertical function maximizing strength.
- Smaller and less expensive injection machine required.
 - De-moulding under cuts from 14mm to 60mm.
 - Customized drafts.
- Complete flexibility for moulding insert dimension.
- Big savings in time & cost for machining & adjustments.
 - Significant reduction to the ejection stroke.
- "Mirror" parts available for 1+1 cavities moulds.



Madhu Machines & Systems Pvt. Ltd.

Registered Office:

Vadodara, India.

91-9376215486

meeta@madhu-group.com

Factory:

Bengaluru, India

91-80-28360131

mms@madhu-group.com



CONTENTS



Curtain Raiser

Die & Mould India 2022:
Taking the technological leap

22

Organisers' Views



DM Sheregar,
President, TAGMA India

28



D Shanmugasundram,
Vice President, TAGMA India

30

Leaders Speak



Amit Kumar Parashar,
Sr. Vice President,
Subros Tool Engineering
Center

32



**Ananthanarayan
(Ananth) Iyer,**
Managing Director & CEO,
MC Machinery Systems
India Private Limited.

36



Arvind Chawla,
Managing Director,
Zahoransky Moulds and
Machines Pvt. Ltd.

40



L. S. Umesh,
Director & CEO,
Ace Manufacturing
Systems Ltd.

44



Manickam K.,
Director,
CAD Macro

48



Praveen Satija,
Managing Director,
Stitch Overseas

51



Rajnikant Patel,
Director,
HASCO India Pvt. Ltd.

58



Veronica Just,
Vice President,
Millutensil

62



◀ **THRUHARD SUPREME HH** ▶

"When designers at BMW-Germany are working on the new design for the 7 series, they also know what is the best mold steel that will meet their high quality requirements-THRUHARD SUPREME HH"



Injection molding tool for the Bumper



Injection molded Bumper part



PCK Buderus (India) Special Steels Pvt. Ltd.

Corporate Office

PCK HOUSE,
New No. 84, Old No.13,
South West Boag Road,
T. Nagar, Chennai - 600 017
Tel : + 91 44 2434 6503 / 1904 / 8638
Fax : + 91 44 2434 1181
Email : info@pck-buderus.com

Pune Stock Holding Center Machining Division

New Gat 754, Pune Nagar Road
Wagholi, Pune - 412 207
Tel : + 91 20 2705 1958, 3254 6767
Fax : + 91 20 2705 0700
Email : punewh@pck-buderus.com

Ludhiana Stock Holding Center

C-1, Industrial Area C, Jaspal Main Road,
Kanganwal, Ludhiana - 141 120. Punjab.
Tel : + 91 161 6532016 / 2017 / 2510073
Fax : +91 161 2510072
Email : ludwh@pck-buderus.com

Kolkatta Office

Flat No. 403, Vishal Apartments
4th Floor, No. 18,
Prince Anwar Shah Road,
Kolkatta - 700 033
Tel : + 91 33 2417 1078
Email : info@pck-buderus.com

Exhibitors' Views 66

Abhishek Tiwari,
Regional Manager –
West and North India,
CoreTech System Co. Ltd

Akshay Kalyanpur,
Director,
Sridevi Tool Engineers

Nitin Jain,
Managing Director India,
OPEN MIND CAD/CAM
Technologies India
Pvt. Ltd.

Parag Sawant,
GM – Business Development,
Machine Tools India Ltd.

Renin Raj,
Head of Marketing,
PROLIM Solutions India Pvt. Ltd.

Vinayak Jadhav,
Chief Executive Officer,
Schimmel Online India Pvt. Ltd.

T. S. Gopalakrishnan,
Director,
Multiple Special Steel Pvt. Ltd.

Daxesh Vyas,
Proprietor,
Daxter Tools

Hardik Doshi,
Director,
Orange City Alloys Private Limited

Ashish Varma,
CEO,
Prime Graphite Pvt. Ltd.

Karan Dharnidharka,
Managing Partner,
Girdharilal Agrawal & Co.

Sudhakar N. A.,
SBU Head – Toolworks &
Battery Components,
Mangal Industries Ltd.

Sanjib Chakraborty,
Managing Director,
Hurco India Pvt. Ltd.

Sohrab Kothari,
Co-Founder,
Sahas Softech LLP

Shreyansh B. Hippargi,
Managing Director,
QVI India Pvt. Ltd.

Surendra Kumar,
Partner,
PI-TECH Services

Tool Talk



Virendra Singh Bhadauria,
Deputy General Manager – Projects,
Hero MotoCorp Ltd.

86

Event Report

TAGMA organizes Chapter Meetings	90
HURCO TAKUMI Open House 2022	94

Report

PLI to account for 13-15% capex	96
---------------------------------	----

Tech Know-how

A second life for vehicle components	98
--------------------------------------	----

Tips & Tricks

Five things you need to know about connected machine monitoring	100
--	-----

Inside

Editorial	08
Industry Update	10
Tech Update	18
Product @ DMI	82
Exhibitors' List	103
Patron Members	105
Ad Index	106

Editorial & Design Team

Nishant Kashyap
Editor

Kimberley D'Mello
Associate Editor

Amol Padhye
Design & Operations

Abhijeet Bhowmik
Sr Technical Writer

MILLUTENSIL SPOTTING PRESS

THE BEST SOLUTION TO VALIDATE YOUR MOULDS AND DIES



Integrated with industry 4.0

New Siemens Tablet
with the exclusive
MyMILL App®



12th DIE & MOULD INDIA
INTERNATIONAL EXHIBITION

27th April to 30th April 2022

Bombay Exhibition Centre, Goregaon, Mumbai, India



 **MILLUTENSIL®**
SINCE 1955

MILLUTENSIL SRL
Plant via delle Industrie, 10
6010 Izano (CR) - Italy
info@millutensil.com

Office Corso Buenos Aires, 92
20124 Milano - Italy
Phone N. +39 02 29404390
Fax +39 02 2046677

TAGMA Executive Council

PRIVATE CIRCULATION FOR MEMBERS ONLY

EXECUTIVE COUNCIL 2020 – 2023

FOUNDER MEMBERS

Anil C Kilachand
A R A Shaikh
J N Godrej
P N Rao
N Reguraj
S C Kalyanpur
S Samu
Vijay N Kulkarni

REGISTERED OFFICE

C/o. NTTF
23/24, Peenya Industrial Area,
II Phase, Bangalore - 560 058.
Tel.: 080-28397196 • Fax : 080-64509966
Email: tagma.bangalore@tagmaindia.org
Contact: Mr. Ashok Shetty - Secretary
Cell.: +91 98453 97780

CENTRAL OFFICE

A-33, NandJyot Indl. Estate,
Safed Pool, Mumbai - 400 072.
Tel.: 022-28526876 / 28508976
Cell.: +91 96534 27396 / 97694 07809
Email: tagma.mumbai@tagmaindia.org

PUNE OFFICE

Plot A-22/2, Chakan Industrial Area,
Phase II, M.I.D.C, Village Khalumbre 410501
Tal. Khed, Dist. Pune.
Cell.: +91-95276 89700
Email: tagma.pune@tagmaindia.org

COIMBATORE CHAPTER

C/o. S & T Engineers (P) Ltd.
22, Vasanth Nagar, Trichy Road,
Singanallur, Coimbatore - 641 005.
Tel.: 0422-2590810 • Fax : 0422-2573629
Email: tagma.coimbatore@tagmaindia.org

PRESIDENT

Mr. D. M. Sheregar
Devu Tools Pvt. Ltd., Mumbai – 400 072
Email: president@tagmaindia.org; sheregar@devutools.com

VICE PRESIDENT

Mr. D. Shanmugasundaram
S & T Engineers (P) Ltd., Coimbatore – 641 005
Email: shan@stengineers.co.in

MEMBERS

Mr. Akshay Kalyanpur
Sridevi Tool Engineers Pvt. Ltd., Vasai – 401 208
Email: akshay@sridevitools.com

Mr. Amit Kumar Parashar
Subros Tool Engineering Center (STEC), Noida – 201 301
Email: aparashar@subros.com

Mr. Arvind Chawla
ZAHORANSKY Moulds And Machines (P) Ltd - Coimbatore – 641 107
Email: arvind.chawla@zahoransky.com

Mr. D. Ravi
Classic Moulds & Dies, Chennai – 600 058
Email: ravi@classicmoulds.com

Mr. Gopalakrishnan T. S.
Multiple Special Steel Pvt. Ltd., Bangalore – 560 099
Email: gopalakrishnants@gmail.com

Mr. Paresh Panchal
Cam Tools, Mumbai – 400 072
Email: paresh@digitaltoolroom.com

Mr. Parveen Satija
Stitch Overseas Pvt. Ltd., Gurgaon – 122 004
Email: parveen@stitchtools.com

SECRETARIAT

Mr. Bhaskar Kanchan - Director
Mrs. Deepali Pandav - Deputy Director



EDITED & PUBLISHED BY : D.M. SHEREGAR FOR TAGMA INDIA at A/33, Nand Jyot Indl. Estate, Safed Pool, Mumbai - 400 072.
Tel.: 2852 6876 • 2850 8976 / Cell.: 96534 27396, 97694 07809



Made In Japan

Tools for

Every Application in

Die & Mould, Aerospace Machining



EDITORIAL ADVISORY BOARD

D. K. Sharma,
Immediate Past President,
TAGMA India & Member-MSME
PPP Apex Committee

D. M. Sheregar,
President,
TAGMA

D. Shanmugasundaram,
Vice President,
TAGMA

DMI 2022 is here!

During the late 90s, when the Indian manufacturing industry was growing, and many foreign companies were setting up shop in India, Indian toolmakers were looking for a platform to showcase their capabilities and meet customers. They needed a platform, where they could interact with potential customers, understand their expectations, gauge the industry trends, and know about the latest technologies. Looking at the demand, TAGMA India conceptualized the first dedicated exhibition for die and toolmakers and launched Die & Mould India in 1998.

The first edition of Die & Mould India, which was held in Mumbai, was a grand success. It attracted exhibitors and visitors from all over India. The exhibition opened a plethora of opportunities for Indian toolmakers and associated technology providers. Since then, the exhibition has come a long way to become a truly international exhibition with participation from all over the world. Over the years, it has become a go-to platform for all those, who are associated with the tooling industry, be it toolmakers, accessories providers, machine tool builders, software providers, and tool steel, among others.

The 12th edition of Die & Mould India is set to take place at the Bombay Exhibition Centre in Mumbai during April 27-30, 2022. I am very confident about the success of the event, as I have personally met many people, who are excited about it. Looking at the profile of the exhibitors, I am sure we are going to witness some of the latest technologies and solutions at the exhibition. The latest 5-axis CNC machines equipped with industry 4.0 features; injection moulding machines; cutting tools with new geometries; the latest software for design, manufacturing & simulation and, not to forget, additive manufacturing solutions, along with capabilities of Indian toolmakers are going to be on display at the exhibition.

The April edition of TAGMA Times is dedicated to Die & Mould India 2022. It has all the information you need about the exhibition, what's on display, what are the latest trends... Read our 'Curtain Raiser', 'Organisers' Views', 'Exhibitors Views', 'Leaders Speak', 'Products@DMI' sections to know more.

On behalf of the TAGMA Management and tooling fraternity, I invite you all to Die & Mould India 2022.

Looking forward to meeting you!

Nishant Kashyap
Editor
nishant@antechmedia.in

WE HAVE YOU COVERED

Under our umbrella we have
all you will ever need



Our Products (Materials)*

Tool Steel

- Hot Work
- Cold Work
- Plastic Mold

High Speed Steel

- Conventional Steel
- Powder Metallurgy

Special Steel

- Aerospace
- Chemical Processing
- Oil & Gas
- Power Generation

Ready To Use Components

- High Performance Core Pins and Sub-inserts

Our Services (Process)

Surface Engineering

- PVD Coating
- Advanced Benefit Process (ABP)
- Polishing

Heat Treatment

- Vacuum Heat Treatment
- Cryogenic Process
- Stress Relieving

Additive Manufacturing

- Manufacturing Services
- Powder for AM
- Research Competence

Metallurgical Laboratory

- Highly Experienced Team
- Tool Design Support
- Tool Failure Analysis

* Fulfilled by our world leading brands BÖHLER and UDDEHOLM

Visit our website



Indian Railways to achieve net-zero carbon emission by 2030: RN Singh, Secretary, Railway Board

MR. R. N. Singh, Principal Executive Director (Infra) and Secretary, Railway Board, Ministry of Railways, has said that Indian Railways plans to achieve net-zero carbon emission by 2030. Addressing the '4th Smart Railway Conclave' recently organized by FICCI, Mr. Singh said, "Indian Railways plans to electrify its entire broad-gauge network by December 2023 to achieve the goal of 'net-zero' carbon emission by 2030." He added that it is expected that reliance on fossil fuel-based power for Indian Railways will be significantly reduced by 2030.

Mr. Singh stated that Indian Railways is currently focusing on railways' share of freight and passenger transport on economic as well as environmental considerations. He further shared that Indian Railways has formulated an ambitious investment program that primarily focuses upon the network capacity enhancement and advancement of core assets including

tracks, network, station redevelopment, signaling upgradation, and locomotive upgradation. "Indian Railways has recently launched National Rail plan, where the primary objective is to develop capacity ahead of demand and enhance the rail freight share from 27% to 45% by 2030 through massive capital investment," added Mr. Singh.

He further shared that Indian Railways is a major participant in Gati Shakti launched by the government, which is likely to become the game changer for the infrastructure and logistics scenario. "In addition, the focus has been on making policy interventions like introduction of new Gati Shakti Cargo Terminal Policy and better PPP model, which has been recently launched for hybrid bot which will be deployed for calling the bids for Sonnagar-GOMOH section," Mr. Singh added.



Mr. B. V. N. Rao, Chair, FICCI Transport Infrastructure Committee, said, "Year 2021 has been a 'Year of Major Transformation and Achievements' for Indian Railways. It has witnessed an extraordinary growth in development

of infrastructure, freight loading and diversification, enhanced safety, capacity expansion of network, freight train speed. The launch of the Gati Shakti Cargo Terminal Policy will also be instrumental to fast-track approvals and increase the freight loading share of Indian Railways."

Mr. Sandeep Selot, Co-Chair, FICCI Transport Infrastructure Committee, said, "Gati Shakti will contribute to the enhancement of multimodal logistics through the length & breadth of the country & will be a critical factor in the overall increasing share of railways in the transportation sector."

Airbus expects demand for 2,210 planes in India over next 20 years

AIRBUS expects Indian airlines to order 2,210 planes over the next 20 years, up from a previous forecast of 1,900, it recently said, citing growth in the country's aviation sector. With low-cost carriers making up the bulk of the Indian market, Airbus expects airlines will need 1,770 narrowbody planes to grow their fleets and replace old planes, with the remainder being widebody planes, Brent McBratney, head of airline marketing for India and South Asia, said at an air show.

India's domestic and international air travel market is expected to grow 6.2% per year over the next 20 years, outpacing average global growth of about 3.9%, McBratney said. While a proliferation of low-cost carriers has spurred demand for narrowbody



Image courtesy: © Airbus 2022

planes in India, McBratney also expects growth in long-haul travel, which he said was a largely untapped market for Indian carriers.

Domestic air travel in India is recovering from the pandemic, helping airlines such as IndiGo, which is

Airbus' biggest customer for its A320 narrowbody planes, and Vistara, a joint venture between Singapore Airlines and Tata Sons, to boost capacity and utilisation levels. But as crude prices hit record highs following Russia's invasion of Ukraine, the cost of jet fuel has risen, which could lead to higher ticket prices and temper demand.

However, Airbus expects domestic air travel in India to reach pre-COVID levels by mid-2022, while international travel traffic is expected to recover by next year. Airbus said in November it expected a market total of 39,020 jetliner deliveries over the next 20 years, fractionally lower than the 39,213 it forecast two years earlier.

Courtesy: Reuters



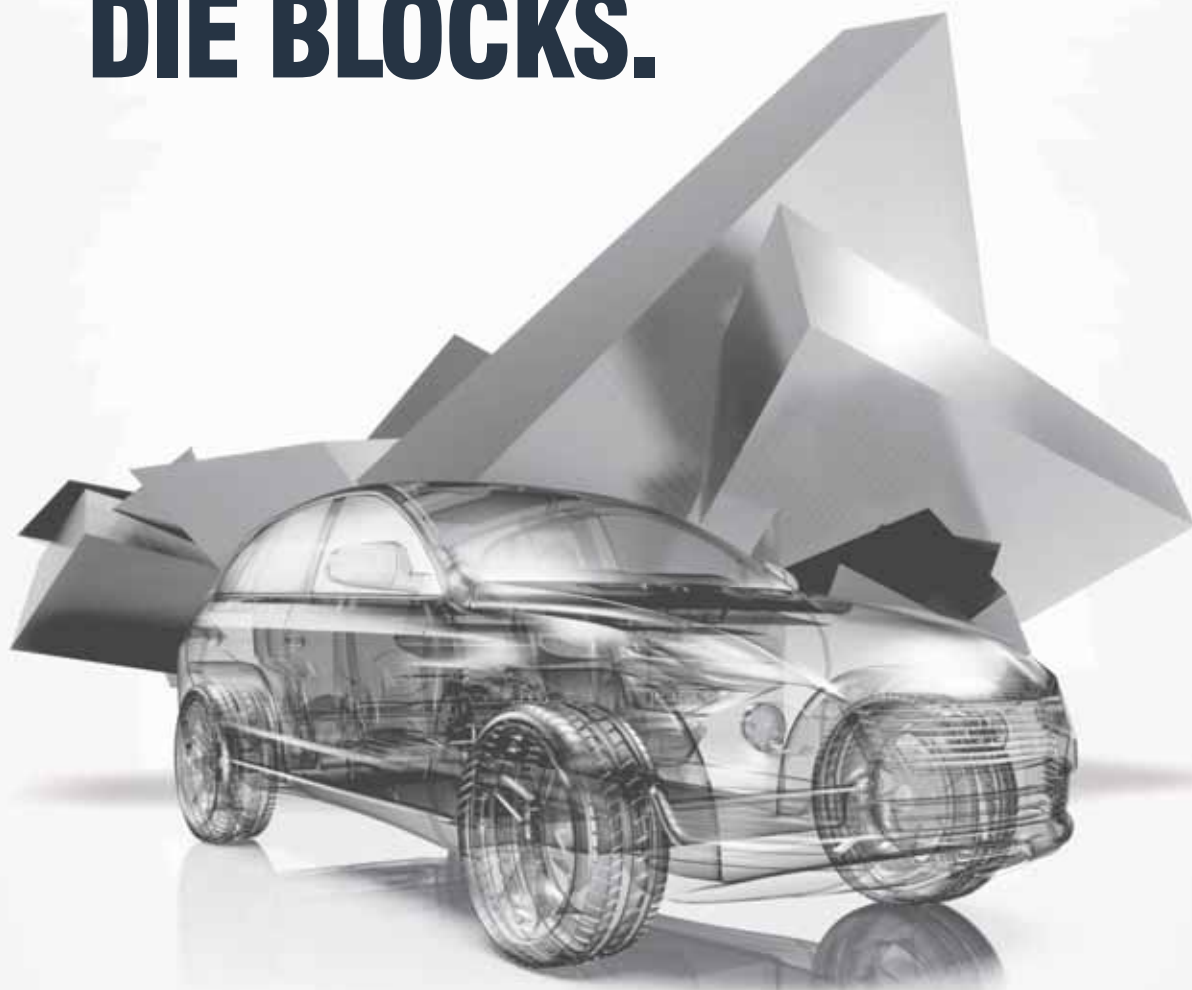
Authorized
Official Dealer
for India

**FORGING &
CASTING
DIVISION**

LUCCHINI GROUP
RS

EXTRA LARGE FORGED DIE BLOCKS.

For light alloys structural
parts for automotive.



**ESKY[®]
LOS**

**2343 DC/HDC
2344 HDC**

Dimensions:
Width 1700mm max.
Thickness 700mm max.

- 1** Fine grain size
- 2** Optimal micro-structure
- 3** Optimal “Heat Check” resistance

GE Healthcare boosts local manufacturing in India, new factory goes live

WIPRO GE Healthcare, a leading global medical technology and digital solutions innovator, has announced the launch of its new manufacturing facility in Bengaluru, under the Indian government's Production-Linked Incentive (PLI) Scheme. The new plant, Wipro GE Medical Device Manufacturing factory (MDM), is aligned to the National Agenda of 'Aatmanirbhar Bharat' and will further boost local manufacturing of medical devices in India. The plant is a 100% subsidiary of Wipro GE Healthcare and has been setup as a green field legal entity. The company has invested a little over INR 100 crore in this facility.

A 35000 sq ft facility, the MDM factory is set up for 24/7 operations for manufacturing CT machines, cathlab equipment, ultrasound scanners, patient monitoring solutions, ECG machines and ventilators. It is equipped with automated testers to assess performance of the medical devices. This facility currently has 35 employees in its shopfloor, which is expected to increase to 100 in the next 2 to 3 years.

Azim Premji, Chairman, Wipro GE Healthcare and Chairman, Wipro Enterprises, said, "India is on an accelerated growth path in gaining global prominence for medical devices manufacturing. Wipro GE Healthcare's new factory, with support from the government's

Production-Linked Incentive (PLI) Scheme, will aid the health ecosystem in India to realize its true potential in addressing local and global challenges for healthcare providers."



Image used for representation only. Courtesy Envato Elements

Commenting on the launch, Dr. Shravan Subramanyam, Managing Director, Wipro GE Healthcare, said, "The new facility is a testament to our continued commitment to an 'Aatmanirbhar Bharat' and is a step forward in elevating India's capability as a global manufacturing hub. We applaud the government's initiatives towards making India self-reliant. The new draft of the National Medical Devices Policy 2022 provides further impetus towards empowering India's healthcare ecosystem, and we, at Wipro GE Healthcare, are very optimistic about the future of MedTech in India.

"We congratulate Wipro GE Healthcare

for its contribution towards boosting local manufacturing and generating employment in the local communities. Through our Karnataka Digital Economy Mission,

we will provide continued support to the company's efforts towards augmenting the ESDM sector and providing fillip to the region's digital economy," said C. N. Ashwath Narayan, Minister of Information Technology - Biotechnology, Higher Education, Science and Technology of Karnataka in his virtual address.

Mahesh Kapri, Managing Director, GE BEL & General Manager - ISC, South Asia, GE Healthcare, said, "The country's import dependency for medical devices stands at 75-80% and for India to rise the ranks as the leading MedTech devices market, local innovation & production is pivotal.

We are confident that our new factory will contribute meaningfully to India's self-reliance goal and will accelerate India's profile on the global product development map."

"GE's 14 factories across energy, aviation and healthcare manufacturing already play a significant role in supporting India's 'Make in India' goals. The launch of our fourth healthcare manufacturing facility in the country highlights local hi-tech manufacturing skills, and a growing ecosystem for production of medical devices and components. I am proud of the Wipro and GE partnership that continues to catalyze product development and growth in access to healthcare in the country," said Mahesh Palashikar, President, GE South Asia.

The Government of Karnataka projects the Electronics System Design and Manufacturing (ESDM) sector to yield more than 20% of regional GDP by 2025. The state government has been shaping its digital economy with new policies in the IT, ER&D, ESDM, and Skill Development sectors. Wipro GE Healthcare's new facility promotes the ESDM sector in Karnataka and is in sync with the state government's goal to build-up the digital economy for the world through state-of-the-art medical devices made in India.

Courtesy PTI News

KALYANI

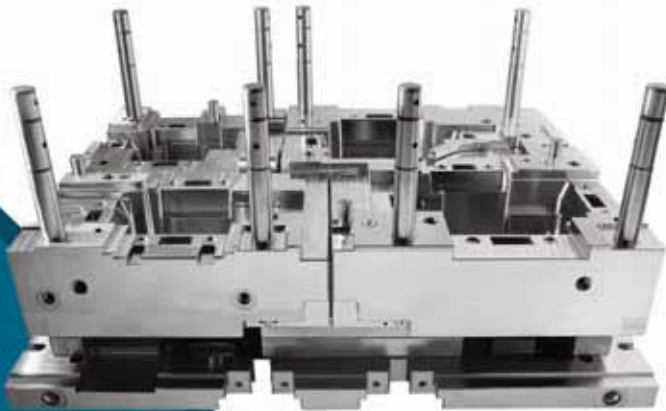
**WORLD CLASS PRECISION STANDARD,
CUSTOM-MADE MOULD BASES &
INTERCHANGEABLE COMPONENTS
FOR PLASTIC AND DIE CASTING MOULDS**

Kalyani standard or custom made mouldbases are manufactured with the highest precision and finish exactly to customer specifications ensuring perfect interchangeability of sub assemblies

Visit us at



Stall no E03



KALYANI MOULD BASE PVT LTD

14, Raju Industrial Estate, Penkar Pada Street,
Near Dahisar Octroi Check Post, Post - Mira,
Dist - Thana 401104

91-022-28966637 / 28974586 / 28285290

info@kalyanimouldbase.com

www.kalyanimouldbase.com

Volvo Group expands its R&D operations in India to become the largest site outside Sweden

JAN Gurander, Deputy CEO, Volvo Group, recently laid the foundation for the 'Vehicle TechLab' for Volvo Group's Research and Development operations in India. Concurrently, Jan Gurander also marked a key milestone – where Volvo Group's R&D operations in India now becomes the largest development site outside Sweden. Earlier, in July 2021, Volvo Group launched CampX – Volvo Group's Global Innovation Arena – the first site outside Sweden.

"Volvo Group has one of the most ambitious SBTi targets in the industry, targeting the 1.5-degree pathway, where we will achieve net-zero value chain greenhouse gas (GHG) emissions by 2040. Already, by 2030, we target to cut the CO2 emissions of our trucks & buses by 40% per vehicle km. To achieve this path, we are in the midst of a global organisation-wide business transformation to adopt emerging technologies, as well as new business models, across Automation, Electromobility & Connectivity. By 2030, 50% of our revenues will come from



services & solutions. India is going to play a key role in this transformation journey as Volvo Group's largest R&D site outside Sweden, along with our other global support functions, is located here," commented Jan Gurander, Deputy CEO, Volvo Group.

"At Volvo Group in India, we are proud to be playing a key role in shaping the future of the global world of transportation. This is one of the most exciting times to be an engineer. Our aim is to provide one of the most rewarding & satisfying work environment for our engineers – a culture that offers learning, capability building, high feasibility to turn ideas into actions, a global network, good work-life balance, flexible workplaces and that which is

marked by trust, transparency and collaboration – while being immersed in advanced technology that goes in making world leading trucks," commented Kamal Bali, President & MD, Volvo Group.

Volvo Group Trucks Technology in India employs more than 1600 engineers, and this number will significantly increase in the coming years. The current set up includes a host of facilities such as vehicle garages, electrical & electronics lab, AR/VR Lab, and access to proving grounds.

The increased focus on product and project responsibility within Volvo Group's R&D operations in India, has led to a demand for a framework that will support the enhancement of product

knowledge and prototype validation capability within India. Today, this capability is being enhanced with the set-up of the Vehicle TechLab – which is a first in the industry in India. This lab can house complete trucks, chassis and aggregates. It has various supporting equipment for engineers to test, innovate, validate and experiment their ongoing work - through a set up equipped with driving simulators, test benches, 3D scanners among various other tools and systems.

"This Vehicle TechLab is designed as a collaborative virtual workspace – creating a simulated workshop environment - using technologies like virtual reality, human body motion tracking & realistic digital rendering of vehicles that allows Volvo Engineers across the globe to connect & collaborate virtually. This facility will significantly reduce the development times, improve problem solving and offer better insights & speed in building innovative solutions," commented C. R. Vishwanath, Vice President, Volvo Group Trucks Technology, India.

Exide Industries announces investment of INR 6,000 crore in Karnataka

EXIDE Industries has announced an investment of INR 6,000 crore in Karnataka. This is for setting up one of the largest giga factories for advanced cell chemistry technology. "Exide Industries MD & CEO, Subir Chakraborty, met with Chief Minister (Basavaraj Bommai) for INR 6,000 crore

investment in a Lithium-Ion cell manufacturing giga factory," Department for Industries and Commerce recently said in a statement.

Stating that this will be one of the country's largest giga factories for

advanced cell chemistry technology, it said Exide has requested 80 acres of land in the Haralur Industrial Area near Bengaluru airport. The project is expected to generate 1,200 -1,400 employment opportunities, it added.

Courtesy PTI News



EFFICIENT CORE COOLING

WITH THE DEFLECTION BAFFLES FROM MEUSBURGER

With the new **E 21010** stainless steel baffles you can create **up to 26% more flow** than brass baffles.

HOW YOU BENEFIT

- » Stainless steel ensures **high durability**
- » Head connection adapts to the **conditions of the cooling hole**
- » **E 21000** also available with **sealant already applied**



Comparison of cross sections
(left: stainless steel, right: brass)

meusburger

Standards for your success.

Meusburger India Pvt Ltd.

T +91 98450 62529

sales@meusburger.in

Suzuki to invest INR 10,445 crore for manufacturing EVs, batteries in Gujarat

JAPANESE automaker Suzuki Motor Corporation has said it will invest around 150 billion yen (about INR 10,445 crore) by 2026, for local manufacturing of Battery Electric Vehicles (BEV) and BEV batteries in Gujarat.



Toyota Tsusho Group had announced a joint venture for vehicle dismantling and recycling and set up a unit in Noida, Uttar Pradesh.

SMC's Indian arm Maruti Suzuki plans to enter the electric vehicles segment by 2025. The company, a leader in the mass market segment, has maintained that at the current prices it would be difficult to sell affordable EVs at mass scale. Maruti Suzuki had earlier, in 2019, tested an electric vehicle based on its WagonR with plans to launch in 2020, but decided against a commercial launch for personal usage citing lack of infrastructure and government support.

Courtesy PTI News

The company has signed a Memorandum of Understanding (MoU) to this effect with the Gujarat government. It was signed "on March 19, 2022 at India-Japan Economic Forum held in New Delhi, India, in the presence of Japanese Prime Minister Fumio Kishida and Indian Prime Minister Narendra Modi," Suzuki Motor Corporation said in a statement.

Speaking at the forum, Suzuki Motor Corporation

(SMC) Representative Director and President Toshihiro Suzuki said, "Suzuki's future mission is to achieve carbon neutrality with small cars. We will continue active investment in India to realise Self-reliant India (Aatmanirbhar Bharat)."

Under the MoU, the company's wholly-owned arm Suzuki Motor Gujarat Pvt. Ltd. (SMG) will invest INR 7,300 crore for the

construction of a plant for BEV batteries at a land neighbouring to SMG's existing plant by 2026. Also, SMG will invest another INR 3,100 crore for increasing production capacity for BEV manufacturing by 2025. Moreover, another group firm, Maruti Suzuki Toyotsu India Pvt. Ltd. (MSTI), will make an investment of INR 45 crore for the construction of a vehicle recycling plant by 2025. In November 2019, Maruti Suzuki and

Hope to make India a global hub for EVs, cell tech: Ola co-founder

OLA co-founder Bhavish Aggarwal has expressed the hope to make India a global hub for electric vehicles and cell technology, with the company being selected for the government's Production-Linked Incentive (PLI) scheme for the manufacturing of advanced chemistry cell battery storage. The heavy industries ministry has named Ola Electric and three other companies eligible for receiving benefits under the PLI scheme. The allotment was made for a total of 50 Giga Watt Hour (GWh) of battery capacity to the four successful bidders.

These firms, the ministry said, will receive incentives under the country's INR 18,100-crore programme to boost domestic production of advanced chemistry cell (ACC) battery. "India has the strongest government support

for electrification in the whole world! Excited to be selected for the PLI scheme for manufacturing world-class cells in India. Today, 90% of global capacity is in China. We will reverse that and make India a global hub for EVs and cell tech," Aggarwal tweeted.

Hyundai Global Motors Company and Ola Electric Mobility bagged for 20 GWh capacity each, while Reliance New Energy Solar Ltd. and Rajesh Exports won for 5 GWh each. The government approved the PLI scheme – 'National Programme on ACC Battery Storage' – for achieving a manufacturing capacity of 50 GWh of ACC to enhance manufacturing capabilities with a budgetary outlay of INR 18,100 crore. Under the initiative, the emphasis of the government is to achieve greater domestic value

addition, while at the same time ensuring that the cost of battery manufacturing in India is globally competitive.

The beneficiary firm will be free to choose suitably advanced technology and the corresponding plant and machinery, raw material and other intermediate goods for setting up a cell manufacturing facility to cater to any application. The programme envisages an investment to boost domestic manufacturing and also facilitate battery storage demand creation for electric vehicles and stationary storage along with the development of a complete domestic supply chain and foreign direct investment in the country.

Courtesy PTI News

MOULDS DEVELOPMENT SINCE 1979...



BUMPER SYSTEMS



**EXPORTS TO EUROPE :
COMPLEX HVAC MOULDS**



**HIGH ESTHETICS KITCHEN SYSTEMS
FOR A GERMAN BRAND**



TWO WHEELER BODY CLADDINGS



AIR COOLER BODY MOULDS



APPLIANCE MOULDS



**ALL DEVELOPMENT SOLUTIONS UNDER ONE ROOF WITH
*THE ART OF PRECISION.***

ENGINEERING SERVICES

PRODUCT DESIGN - ENGINEERING , CAE VADIATION & PROTOTYPING

MOULD DEVELOPMENT

CAPACITY OF 200+ MOULDS FOR INJECTION SIZE UPTO 3500T

END TO END PROJECT MANAGEMENT

TURNKEY SOULTIONS PROVIDER COMPRISING OF PRODUCT ENGINEERING,
TOOL DEVELOPMENT & INDUSTRIALIZATION.

RIGHT, FIRST TIME... every time...every step !!!

CONTACT US :

✉ info@mutualengineering.in

☎ +91 - 9152009012 / +91-89564 39004



www.mutualengineering.in

REGISTERED OFFICE :

MUTUAL ENGINEERING PVT.LTD, 9 EHARA INDUSTRIAL COMPLEX, VILLAGE WALIV, VASAI EAST, PALGHAR - 401208

Kennametal introduces lightest-weight version of electric vehicle tooling solution saving set-up and machining time

WINNER
BI
BEST OF
INDUSTRY
AWARD



■ The 3D printed stator bore tool with carbon fiber body weighs 7.3kg.

KENNAMETAL has introduced its next-generation 3D-printed stator bore tool for the machining of aluminium engine housings for electric vehicles. This latest version of the tool features a newly designed arm structure, a larger center tube made of carbon fiber, and a further weight reduction of greater than 20% over the original design. The complex tool is capable of machining three large diameters in just one operation, saving set-up time and machining time for automotive component manufacturers and delivering the highest accuracy and surface qualities.

The newly redesigned tool recently won MM MaschinenMarkt's Best of Industry Award in the Production and Manufacturing category based on votes by readers and industry experts.

"As our automotive customers expand their offerings of hybrid and electric vehicles, we continue to respond to their need for lighter-weight tooling

solutions. By leveraging advanced manufacturing techniques like 3D printing, we've reduced weight a further 20% over the first-generation tool, while improving chip control and increasing tool rigidity—innovations that help our customers machine faster and more efficiently," says Ingo Grillenberger, Product Manager, Kennametal.

Machining three diameters in one operation, the stator bore tool ensures the alignment and concentricity of the machined surfaces whilst reducing the cycle time significantly. The lightweight 3D printed combination tool enables a faster tool change and spin-up

even on less powerful machines. The surface specifications and component tolerances are achieved without constraints.

Hassle-free chip removal is ensured by means of airfoil shaped arms that are through coolant featured to ensure precise and powerful coolant supply to the cutting edges and guide pads. This would be difficult or impossible to economically produce with traditional manufacturing, but 3D printing enables us to realize even such complex internal features. Additionally, the Kennametal RIQ reaming system features easy diameter adjustment and a trouble-free set-up of new inserts.



■ The airfoil shaped arms with through coolant and RIQ reaming technology. Complex internal and external features enabled by additive manufacturing.



■ First-generation design (9.5kg) on the left, and latest tool design variants (less than 8kg) on the right for hassle free tool changing.

Explore **FIBRO** Advantage



**WE STAND FOR
RELIABILITY**

PROXIMITY

COMPETENCY

Visit us at



12th DIE & MOULD INDIA
INTERNATIONAL
EXHIBITION

27th April to 30th April 2022

Bombay Exhibition Centre,
Goregaon, Mumbai, India

Stall no. D06

www.fibro-india.com

MAXIMUM PRECISION SINCE 100 YEARS

MEMBER OF THE LÄPPLE GROUP

 **LÄPPLE**

Mastercam 2023 Public Beta released for global testing

IF you are a currently maintained Mastercam customer, you can now participate in the Public Beta Program for Mastercam 2023. Manufacturers all over the world, from small job shops to Fortune-100 companies, get a chance to test-drive Mastercam 2023 before it is released and provide valuable feedback to help shape the final product. Participants in the Public Beta Program get an early look at dozens of powerful new tools for simple to complex jobs.

Many of the improvements in Mastercam 2023 are directly driven by Mastercam users and shops. Feedback from Public Beta releases, shop visits, customer surveys, and consultation with our expert industry partners create the practical, shop-driven focus that helps ensure Mastercam users' success.

Consolidating Multiaxis Toolpaths.

Morph, Parallel, Along Curve, and Project Curve are no longer individual toolpaths in Mastercam 2023. Instead, the Unified toolpath allows access to these cut patterns when you add the appropriate curves. For example, to create a toolpath that morphs between

Mastercam 2023 PUBLIC BETA

two surfaces, select Unified from the Multiaxis toolpaths, and then set the Cut Pattern to two surfaces with the Morph style.

Toolpaths in files from previous releases are automatically converted to a Unified toolpath as follows:

- ▶ **Morph:** Becomes the Unified toolpath with a Cut Pattern of two curves or surfaces with the Morph style.
- ▶ **Parallel (set to Curves or Surface):** Becomes the Unified toolpath with a Cut Pattern of one curve or surface with the Parallel style.
- ▶ **Parallel (set to Angle):** Becomes the Unified toolpath with a Cut Pattern of Plane with the style set to the appropriate plane.
- ▶ **Along Curve:** Becomes the Unified toolpath with a Cut Pattern of Curve with the Perpendicular style.
- ▶ **Project Curve:** Becomes the Unified

toolpath with a Cut Pattern of Curve with the Project style.

Detecting Undercut Stock When Machining.

The Dynamic OptiRough and Area Roughing toolpaths can now be aware of undercut stock conditions, resulting in improvement to the toolpath motion, including less air cutting.

New B-Axis Contour Turning Toolpath.

Mastercam 2023 introduces a new toolpath to the Turning suite for the Mill-Turn product. B-Axis Contour Turning is a finishing toolpath that allows for rotation of the B-axis while the tool is cutting. The toolpath features a top-down workflow and provides you with either Automatic or Manual motion control. Automatic mode produces safe toolpath motion that keeps the insert in contact with the contour. Manual mode offers full control over the B-axis angles along the contour.

These are only a few of the new features and enhancements coming to Mastercam 2023.

WIDIA introduces the next generation in versatile end milling

WIDIA™ recently announced the launch of the WCE solid end milling platform, delivering affordable performance and reliability for small to medium machine shops. The initial release of the WCE platform features WCE4, a four-flute geometry, which combines advanced, high-performance features with a brand new, versatile grade offered at a highly competitive price.

"With its new design, the WCE4 delivers the next generation of versatile end mills to help our customers be more productive and



efficient," said Tamir Sherif, Solid End Milling Global Portfolio Manager, WIDIA. "The WCE4 is an attractively priced tool for small-to-medium shop floors, where reliability and consistent tool life are high priorities."

Two key features of the tool are its asymmetrical index and variable helix. The combination of the two reduces vibrations and enables heavy cuts, while the new grade, WU20PE, enables versatility on steel,

stainless steel and cast-iron applications. These design features, coupled with the four-flute geometry, deliver an end mill with reliable performance and application versatility – even in demanding operations such as full slots and heavy cuts.

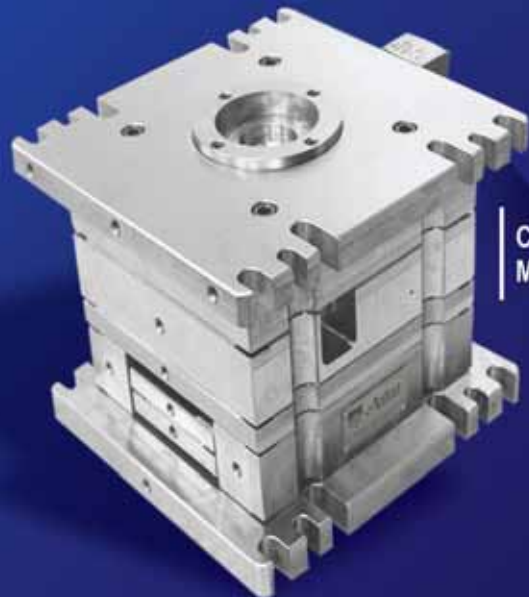
The WCE platform includes four-flute, square-end and ball nose end mills with both straight and Weldon shanks and is available in both metric and inch dimensions. The WCE5 five-flute geometry will be released later in 2022.

ACCURACY. TIMELY DELIVERY. STATE-OF-THE-ART INFRASTRUCTURE

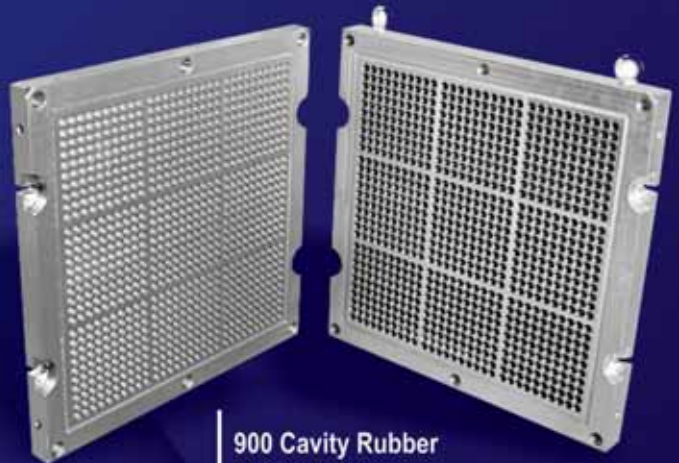
It has been 20 years that we at Ashna Enterprise are moulding quality and accuracy. Our manufacturing facility spreads over 35,000 sq. ft. area, and we are backed with 60+ highly skilled and experienced professionals. We are one of the pioneering companies in Standard and Customized Mould Base, Die Set, Machined Plates and Accessories. Today, we, at Ashna Enterprise, have acquired a reputation as a reliable mould base partner ensuring top quality products, representing excellent value for money.



PDC
Mould Base



Customized
Mould Base



900 Cavity Rubber
Mould Base



VISIT US AT
DIE & MOULD INDIA
INTERNATIONAL EXHIBITION
27th April to 30th April 2022
STALL No. A21/22

Bombay Exhibition Centre, Goregaon, Mumbai, India

Mould Base | Machined Plates | Machined and Bore Plates | Die Set

ASHNA ENTERPRISE

P: 0250 - 2450407 / 08 | M: +91 9322 519511 / 9028 002982

E: ashnaenter@rediffmail.com / info@ashnaent.com | W: www.ashnaent.com





Taking the technological leap

As the manufacturing industry continues to evolve at a fast pace, one can no longer undermine the crucial role that the Indian dies and moulds segment is set to play. State-of-the-art technologies are set to define manufacturing operations. The 12th edition of Die & Mould India International Exhibition 2022 will showcase many such technologies that are set to revolutionise the tooling and allied industries. A report...



Curtain Raiser

After a four-year-long gap, the Tool and Gauge Manufacturers Association of India (TAGMA) is back with the 12th edition of the Die & Mould India International Exhibition. The much-awaited event promises to have on display the best technologies of the global die and mould segment. The action-packed exhibition will be held during April 27-30, 2022, at the Bombay Exhibition Centre, Goregaon, Mumbai.

The COVID-19 pandemic had slowed down the functioning of the Indian economy and created a huge gap between demand and supply. But the manufacturing industry, aided by government initiatives, has come up with workable solutions to help the industry pick up pace. The automotive industry & its suppliers, construction equipment, electronics, white goods and steel production industries, are among those that are benefitting from these measures.

As the manufacturing industry treads on this fast-paced growth path, the country's die and mould industry is gearing up to meet the rising demands. In fact, the tooling industry has found many new customers in segments including: plastic products, energy, medical, auto ancillary, consumer durables, etc. The 12th Die & Mould India International Exhibition will provide an ideal opportunity for die & mould companies to upgrade their know-how and keep pace with the latest developments in this segment.

A look at the previous editions...

The 1st edition of the Die & Mould India International Exhibition was held in Mumbai in 1998. Over the years, the event has steadily grown to become the largest die

and mould exhibition in the country. Today it is known to be one of the most important events for businesses related to the tooling industry. The unique industry event showcases the developments, innovations and the latest technologies and solutions among others. TAGMA India, a non-profit organisation, has been actively promoting the tooling industry since its inception in 1990.

The previous edition of the exhibition held in Mumbai was highly successful. It saw more than 300 exhibitors from 19 countries presenting a large variety of products and services for the die and mould and other related industries. With a 15% increase in exhibitors than the previous edition and 45% increase in this venue, the 11th edition of Die & Mould India turned out to be a grand success. Looking at the response and growing demand, the 12th Die & Mould India International Exhibition is back in Mumbai.

The event has become a one-stop shop for die & mould manufacturers—a place to meet prospective customers and showcase the latest technologies. Being the biggest die and mould-focused event, the exhibition leaves no stone unturned in consistently meeting the expectations of both exhibitors and visitors alike.





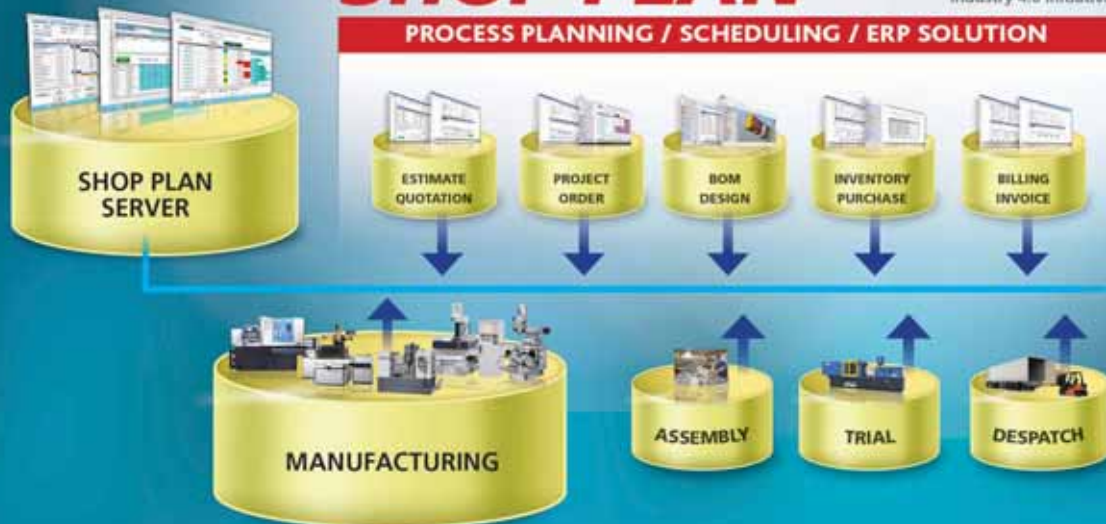
Indian Die & Mould Industry

The die and mould making industry in India has evolved over the years and is now focussed on delivering high quality with high precision. Today, it competes in a global arena. As the tool room industry undergoes a change, TAGMA India is looking forward to helping the industry gain engineering excellence with an aim to establish India as a global manufacturing hub and making it self-reliant.

India is likely to witness the kind of growth that China experiences. When automotive players set shop in China, the local tooling suppliers enhanced their capabilities to fulfil the growing demand. Eventually, the local tooling suppliers improved and started exporting to developed markets like the US, Europe and Japan. Experts believe that India's growth story will also be on similar lines. The demand will drive the adoption of technology, and eventually, India will become a major supplier of tools.



SHOP PLAN

eFACT
Industry 4.0 Initiative**PROCESS PLANNING / SCHEDULING / ERP SOLUTION**

OUR EXISTING SHOP PLAN CLIENTS



OTHER PRODUCTS

**MACRO EDM****EDM DETAILING AND CAM****WIRE EDM SOLUTIONS****MACRO WIRE****SHOP MOLD****MOLD MAINTENANCE SOFTWARE****VMC JOB VERIFICATION TOOL****MACRO INSPECT**

CAD Macro Design & Solutions Pvt Ltd

33, CREW Building, Sapthagiri Colony, KR Layout, Jafferkhanpet, Chennai-83

Phone: **96000 13015-18, +91 44 43589050**E-mail : info@cadmacro.com • www.cadmacro.com



The stage is set for the consortium to begin...

Exhibit Range

- » Additive Manufacturing / 3D Printing
- » CAD / CAM system related to dies & moulds
- » CNC Milling / Machining Center, EDM, etc.
- » Coating
- » Cutting tools
- » Digitizing
- » Die / Mould Polishing / Die Spotting Machines
- » Dies & Mould, Press Tools, Jigs, Fixture, Gauges
- » Heat Treatment
- » Hot Runner System
- » Injection Moulding Machine
- » Machine Tools & Accessories for Dies and Moulds
- » Measuring Machines, Quality Assurance / Metrology
- » Mould Base & Standard Parts of Dies & Moulds, Tooling
- » Moulding Machines/Die Casting Machines Sheet Metal Presses & Ancillaries
- » Precision Machining / Aerospace
- » Rapid Prototyping & Tooling
- » Surface Treatment
- » Texturizing
- » Tool Steel
- » All Ancillary Materials Equipment, Accessories, Consumable, Services & Automation Covering the Die & Mould Industry



Die & Mould India 2022: The place to be

Die & Mould India has always been a highly focused B2B event and this year will be no exception. Indian as well as global companies will exhibit their latest technologies and solutions, helping industry professionals connect, network, update their knowledge and explore business prospects. As demonstrated during the previous editions, Die & Mould India 2022 has all the prerequisites – participants and visitors who mean business, excellent infrastructure, and a reputed organiser, among other factors – to make it a thumping success. The exhibition is the place to be if you want a sneak peek of the best and the latest in the industry.

This year, the exhibition will be showcasing an array of technological advancements mushrooming across the globe. As the Indian die and mould industry is making its mark in the global market, Die & Mould India 2022 comes at an opportune time to provide Indian and global companies a common platform to forge strong partnerships.

What's in it for you?

- » Opportunity for value addition
- » A chance to explore business potential
- » Meet the tooling fraternity at one location, enabling periodic fellowship and bonding
- » Offer insights to formulate strategies to meet the challenges faced by the tooling industry
- » Choose from a wide array of state-of-the-art technologies and processes to scale up production to seize growth opportunities and diversify
- » Opportunity for a Live DEMO in an actual working environment to receive live feedback from potential customers
- » Stay updated with the latest innovations in the global tooling industry
- » Highlight your capabilities and presence in the Indian die and mould industry
- » Expose the industry workforce to the latest innovations across all tooling applications
- » Attract new talent to the tooling industry



Loc Check

A5900/...

With the new HASCO Loc Check A5900/...,
you can locate your moulds wherever
a mobile phone network is available.

- Worldwide GSM tracking
- 3,200 transmission cycles per battery charge
- Temperature-resistant up to max. 120°C
- Maximum data security on certified servers
- Easy-to-use web interface



www.hasco.com

HASCO®



DM Sheregar,
President, TAGMA India

About the Indian tooling industry

As per the latest Indian Tooling Report compiled by TAGMA India and Nomura Research Institute, Ltd., the market size of the Indian tooling industry stands at ~INR 18,000 crore, with more than half of the total demand attributed to automotive and auto components sector. Most major global auto manufacturing hubs have a strong domestic tooling industry. India, however, is a notable exception here, as a significant portion of its tooling demand is still met via imports.

Looking at the huge demand from the domestic market, I believe that India will grow at a much faster pace in the coming days. Tool rooms in India are making their way into the next generation, as its successors have already got a platform and are doing their best to take their companies to new heights with the latest technologies and new ideas.

The growth drivers

The tooling industry around the world depends on the automotive industry and the Indian automotive industry has grown to become one of the largest in the world among all the segments. The growth has positively impacted the tooling business in India. Apart from this, we are seeing the emergence of many sectors in India such as aerospace, defence, white goods, consumer durables, packaging, medical equipment, and railways, among others, which will have a direct impact on the tooling business. Since the last decade, the industry has been growing in double digits and we are optimistic that it will continue to grow in the coming years as well.

Dies and moulds, these days, are becoming increasingly complex with increased functional and quality demands. The dies and moulds market in India is experiencing increased demand from industries such as automotive, plastic, electronics and electrical, healthcare, and machine

tools, among others. In my opinion, the industry is growing at about 15% to 20%, which is phenomenal. With all the above factors, the future of the Indian die and mould providers looks promising.

Challenges in the industry

There are currently 6 major obstacles that are impeding the growth of Indian tool rooms:

- ▶ Indian toolmakers face many challenges with respect to easy access to finance
- ▶ It is observed that the import duty on tools is lower than the import duty on raw materials and bought-out components used in manufacturing these tools.
- ▶ Duty-free moulds imports from certain countries such as South Korea
- ▶ Toolmakers in other countries receive state-sponsored incentives to explore export markets, but that is not the case in India
- ▶ In India, there is a severe lack of skilled workforce available for employment in tool rooms
- ▶ Lack of outsourcing ecosystem

Most of these challenges are related to policies. As I had earlier said, we act as a voice for the Indian tooling fraternity... we closely work with policymakers and share the abovementioned challenges with them so that they can come up with an industry-friendly framework. In my opinion, we are among the best when it comes to making tools, but we need some policy support from the government to grab bigger opportunities and reduce imports.

About Die & Mould India 2022

Die & Mould India exhibition has been playing an instrumental role in providing a platform to the Indian tooling fraternity, where they can showcase their capabilities, meet potential customers, and learn customers' expectations. In the last 11 editions, the exhibition has grown to become an international exhibition with participants from countries around the world. Being the only dedicated exhibition, it has become a go-to place to witness the latest technologies and meet fellow industry professionals.

The 12th edition of Die & Mould India is taking place after a gap of three years, when the industry is opening up after the infamous lockdowns, travel restrictions are easing out, and the severity of COVID-19 is decreasing. Also, there is genuine excitement for the exhibition, as people are looking forward to physical interactions. Looking at these scenarios, we are expecting the largest-ever Die & Mould India exhibition in terms of visitor footfall.

Also, to make this event a grand success, TAGMA's management, office bearers and members are leaving no stone unturned. We are inviting over 50 delegates from user industries and public sector units. I welcome you all to the 12th edition of the Die & Mould India Exhibition.



12th DIE MOULD INDIA INTERNATIONAL EXHIBITION

April 27th to 30th 2022
Bombay Exhibition Centre,
Goregaon, Mumbai, India

Get Ready To
Explore,
Engage,
& Enhance
Your
Business
Network



**AEROSPACE
INDUSTRY**



**DEFENCE
INDUSTRY**



**AUTOMOBILE
INDUSTRY**



**CONSUMER DURABLE
INDUSTRY**



**ELECTRONICS
INDUSTRY**



**DIE MOULD
INDUSTRY**



**PLASTICS
INDUSTRY**



**3D MANUFACTURING
INDUSTRY**



**TOY MANUFACTURING
INDUSTRY**



**JIGS &
FIXTURES**

Visit the Die Mould India International Exhibition (12th Edition) to meet the best of the tooling fraternity under one roof and explore innovative ways to grow your business.

**ONLINE REGISTRATION IS MANDATORY
SAFETY PROTOCOLS TO BE STRICTLY FOLLOWED**

For more information, visit www.diemouldindia.org

REGISTER TODAY



ORGANISED BY
**TAGMA
INDIA**



D. Shanmugasundaram,
Vice President, TAGMA India

About the Indian tooling industry

Currently, the market share of Indian companies in the global tooling industry is less than 5%. However, with the kind of growth that we are experiencing in recent years because of the localisation among automotive companies, campaigns like 'Aatmanirbhar Bharat' and PLI schemes for various industries, Indian companies are set to increase their market share in the coming years. We need to firstly reduce the imports and then look for overseas markets.

Role of TAGMA

TAGMA is working hard to help Indian companies in their growth journey. We organise events to help our member companies showcase their capabilities to potential buyers. We also work with global associations and agencies to share knowledge and facilitate collaborations. Apart from these, we work with the government in drafting industry-friendly policies.

Expectations from Die & Mould India 2022

For three years we paused our activities due to the pandemic. But now, the industry is going to witness a lot of interaction between TAGMA members and customers. There is genuine interest among industry professionals for physical events, such as exhibitions. Also, based on their pandemic experience, companies are now looking to upgrade their existing infrastructure and install digital solutions. Die & Mould India will provide them a platform, where they can witness some of the latest technologies in action. As an exhibitor and organiser, I am looking forward to the event and hope that this exhibition will act as a platform for various stakeholders to form strong connections.

During this post-COVID-19 recovery phase, the industry is looking to revamp. The industry is finding opportunities while becoming stronger, including building resilience to react in agile and decisive ways. As we move to the next phase, now is the time for businesses to seek out and seize the emerging opportunities. This involves capitalising more effectively on the opportunities rising in the post-COVID-19 recovery phase and to continue to win in the present market conditions.

Talking about the visitors, 30000-35000 visitors is the past record. This year, we would expect a minimum of 40000-50000 visitors. We have already received more than 9000 online registrations till date without much marketing. I believe that it's going to grow exponentially when we start aggressive marketing from April onwards.

Technologies @ DMI

From the exhibitor count and the kind of companies participating in this edition of Die & Mould India, I have a feeling that we are going to witness some of the latest technologies in the field of tool making. In this edition of DMI, we will have the latest 5-axis CNC machines equipped with industry 4.0 features; injection moulding machines; cutting tools with new geometries; latest software for design, manufacturing & simulation and, not to forget, additive manufacturing solutions.

In the Indian manufacturing space, the scenario has changed drastically in the last few years. With the presence of many global brands in India, the expectation level from customers has increased in terms of speed and accuracy. To cater to such demand, toolmakers have no option but to adopt the latest technologies. In fact, companies are already adopting best-in-class machines and software.



OUR PRODUCT RANGE



Automation Components



Fasteners



Materials



Press die components



Plastic Mold Components



Injection Molding Components

SERVICES WE PROVIDE

e-Catalogue

Over one million components have been developed based on customers need

Mold EX-Press

Complete collection of 3D CAD Library for Standard Components of Press Die and Plastic Mold

Web Ordering System

24x7 online quotation and ordering services available. Price check, delivery time, tracking of shipments, all at your fingertips.





‘A good opportunity exists, where the gaps can be filled up by the Indian tool room industry’

“As the tool supply from Asian countries have got delayed/ restricted, the industry is looking to make up for the loss through order realization domestically... However, the industry should be ready to take up the challenge and deliver,” says

**Amit Kumar Parashar,
Sr. Vice President, Subros Tool
Engineering Center.**

Q What are your views on the Indian tooling industry and expectations from 2022?

The market size of the Indian tool room industry is estimated to be INR 18,000 crore with 70% of the demand being met domestically and 30% through imports. While the Indian tool rooms have developed the capability to cater to a variety of tooling needs, they still face high delivery time as compared to overseas tool rooms due to inadequate infrastructure and capacity. So, tool rooms need to invest in high-speed machines, die spotting and quality inspection infrastructure like CMM, contour checker, invest in CAE tools in the design section, and strengthen project management through tool room-specific software readily available for planning and scheduling.

Q What are the trends shaping the Indian die and mould industry?

Indian tool rooms, which were mostly focused on catering to the needs of the automotive industry, are now exploring other industries. Sectors such as packaging, medical devices, white goods, electrical appliances, defence, aerospace, railways, and mobile phones manufacturing, among others, have a high untapped potential for growth. Investments in these sectors and the promotion they have been receiving by the Production-Linked Incentive Scheme and other initiatives like ‘Make in India’ are making them lucrative options. Now is the best time for the Indian tool rooms to enhance their capacities to meet the growing demands of these sectors.

Die Spotting press



No more dangerous
mould handling



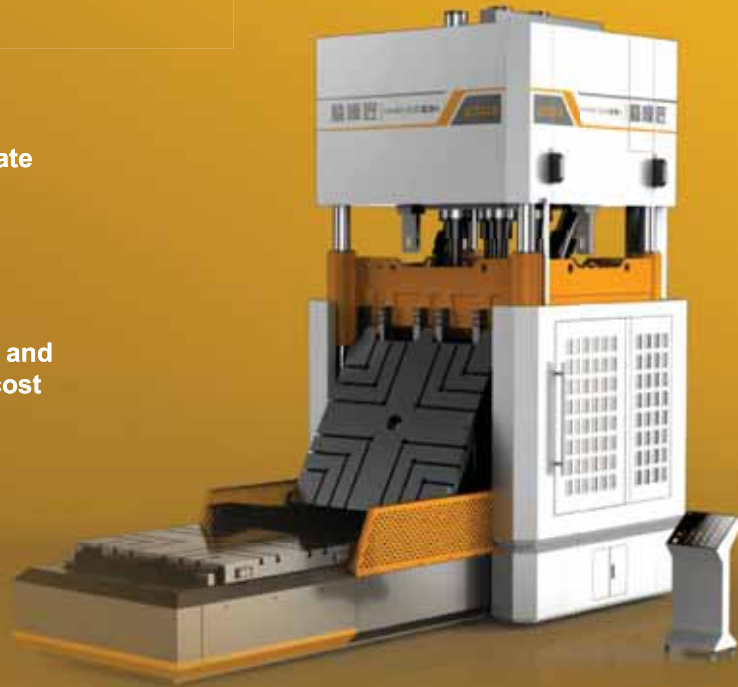
Highly accurate
design



Special Pneumatic
safety lock



Low operating and
maintenance cost



WHY DIE SPOTTING PRESS :

- No more dangerous die /mould handling by means of cranes, forklift trucks and lifting equipment.
- No more spotting on injection moulding machines, which are cost intensive and difficult to access.
- Optimal accessibility and ergonomics by means of tilting plates.
- Low operating and maintenance costs.
- High flexibility
- Considerable reduction of correction grinding through reproducibility.
- Trials of hydraulic slides, auxiliary cylinders and ejectors can also be done in single operation.

Special Features:

- Four column type design-higher accuracy.
- Four clamping cylinders - even distribution of clamping pressure.
- One way and Two way type design to suit the space available at site.
- CE Certified Special pneumatic safety locks. Servo motor driven pump.
- Optional encoders on all columns.



Electro-Permanent
Magnetic Chuck



Deep Hole Drilling
Machine



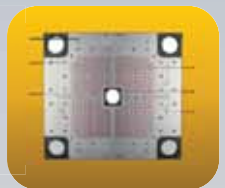
Trimming Machine



Hydraulic Quick Die
Change System



Mould Flipper



Magnetic Quick Die
Change System

Q Can you elaborate on the challenges that the Indian tooling industry faces?

When it comes to vehicle production ranking, then globally, India ranks fourth, but when it comes to the tooling industry, then globally India is at the twelfth spot.

The key reasons for this are:

- » Very few tool rooms produce critical parts toolings. Basically, adherence to strict quality requirements for both side panels, fenders, critical tools like LED lights, backlights, etc., is an issue.
- » The quality level in high aesthetic parts requires specific texturing and a smooth finish.
- » The workforce skill gap, especially in areas of design in CAE and also low ability to respond to design changes.
- » The last and critical factor is infrastructure and capacity of advanced CNC machining and reliable subcontracting base for job works make it difficult to meet the delivery timelines.

So, for the Indian tool room industry to compete globally, it needs to shift its focus on quality in tool manufacturing processes as well as assembly and texturing along with the move for advanced machining solutions.

» What will you be showcasing at the upcoming Die & Mould India exhibition?

Subros Tool Engineering Center specializes in catering to all three types of tools, namely, injection moulds, pressure die casting tools, and sheet metal tooling – both progressive and tandem. We are putting up our stall to show our expertise of thin-walled parts having requirements of warpage control, insert moulding, squeeze pressure die casting parts, and progressive tooling.

» How would you describe the role of Die & Mould India in the Indian die and mould industry? How has the event helped you over the years?

Die & Mould India is a key event for the entire die and mould industry, which is helping

tool rooms to showcase their strengths and capabilities. It shows users/ OEMs how they can benefit through tool localization given the fact that now in India, tool rooms with similar capability like Korea, Japan, China and Taiwan are available. It is also a big platform to have B2B and B2C meetings helping in future growth. We had seen 30% CAGR growth in the last five years. I'm sure, this year, the Die & Mould India exhibition will help us further our mission to produce tools of Japanese quality and achieve the cost competitiveness of China, Korea and Taiwan.

» Can you describe the business outlook of the Indian tooling industry?

The global die and mould market is anticipated to rise at a considerable rate during the forecast period, between 2022 and 2030. From 2020, the market was growing at a steady rate and with the rising adoption of strategies by key players, the market is expected to rise over the projected horizon. The die and mould market is expected to grow at a highest CAGR during the forecast period 2020-2030. On a short term basis, as the tool supply from Asian countries have got delayed/ restricted, the industry is looking to make up for the loss through order realization domestically. A good opportunity exists, where the gaps can be filled up by the Indian tool room industry. However, the industry should be ready to take up the challenge and deliver. For the long term, the promising factor is 'Aatmanirbhar Bharat', that is the 'Make in India' campaign, where localization of tooling is a major thrust area in automotive and non-automotive sectors. Given that the origin of the crisis was from China, global supply chains are severely disrupted. From a global perspective, China cannot remain a trusted partner anymore. This creates huge opportunities for India. Major manufacturing nations in the world have given signals that they wish to diversify the sourcing for global value chains. There will be tough competition to attract investors to India, but this will give a golden opportunity to our Indian tool room industry to get a foothold in the global value chains. 🇮🇳



Craftsman
STORAGE SYSTEMS —

Our state-of-the-art advanced storage solutions enable industry 4.0 and are fully integrated with WMS

AUTOMATED STORAGE AND RETRIEVAL SYSTEM

A Division of

Craftsman
AUTOMATION —

EFFICIENT STORAGE SOLUTION



MAXIMUM EFFICIENCY



MAX. STORAGE CAPACITY



ACCURATE TRACKING



HIGH THROUGHPUT



www.craftsmanstorage.com



‘We expect the Indian tooling industry to record double-digit growth over the next 4 to 5 years...’

“...and also cross the coveted USD 200-billion mark in terms of industry size. The current geopolitical issues are reshaping global supply chains and India will emerge as a significant player in the days to come,” says Ananthanarayan (Ananth) Iyer, MD & CEO, MC Machinery Systems India Private Limited.

Q What are your views on the Indian tooling industry and expectations from 2022?

The year 2021 was a significant year for the Indian tooling industry, as it stepped out of the shadows of the pandemic. Additionally, the Production-Linked Incentive (PLI) schemes and ‘Make in India’ 2.0 have rebooted the tooling industry; we expect this to continue, as we step into 2022. The current global tensions may not have any significant impact on demand. But I do believe that the recovery of the auto industry from the current semiconductor shortage will be an additional shot in the arm for toolmakers.

Q What are the trends shaping the Indian die and mould industry?

As far as the trends go, I believe there is a clear shift here – to focus on quality – which

has led to greater investments in high-quality CNC units. The tooling industry will look to improve accuracies and efficiencies, while reducing delivery lead times and costs. Besides, crunching lead times will lead to the adoption of higher levels of automation, as we go forward.

Q Can you elaborate on the challenges that the Indian tooling industry faces?

The biggest challenge that the Indian tooling industry continues to face is the lack of skilled manpower and the additional challenge seems to be in terms of holding on to good ones. Further, there continues to be challenges with regard to good infrastructure and higher costs associated with imported raw materials, which adversely impact the margins of toolmakers.

THE MOST ADVANCED TOOLROOM IN INDIA

QUALITY YOU CAN TRUST



Godrej Tooling is one of the leading toolroom in India since 1935. Constant innovation has ensured that even today we are the most advanced tool room with diversified solutions for critical & complex die casting dies. With expertise in automotive, telecom and power industry, we develop tools which provide better yield and high-quality parts.

We stand proud because we make tools that mobilize our country.



DIE CASTING DIES
HPDC/LPDC & GDC



PRESS TOOLS



**INDUSTRIAL
MACHINES**

HEAD OFFICE

Godrej & Boyce Mfg. Co. Ltd.
Godrej Tooling, Plant no. 8, Vikhroli, Mumbai 400 079

SERVICE BRANCH

NCR, Bangalore & Chennai

+91-22-67962758/59

trmktg@godrej.com

<https://www.godrej.com/godrej-tooling>



Q What will you be showcasing at the upcoming Die & Mould India exhibition?

We will be showcasing our new-generation Sinker EDM - SG series, which incorporates aspects like an advanced controller and Artificial Intelligence to achieve high productivity and accuracy. Our very popular Wire EDM - MV1200S will also be on display to highlight its features like non-contact liner shaft motor and intelligent AT wire threading systems. Apart from these, we will be showcasing our range of consumables and laser cutting products.

Q How would you describe the role of Die & Mould India in the Indian die and mould industry? How has the event helped you over the years?

Die & Mould India organised by TAGMA is a hallmark event that brings together the entire die and mould industry under one roof. It

allows one to gain first-hand knowledge of the latest trends. This exhibition has allowed us to showcase our existing and new products. We will be using the opportunity provided by Die & Mould India this year to promote our new series Sinker EDMs and showcase our most popular and best-selling Wire EDM.

Q Can you describe the business outlook of the Indian tooling industry?

We expect the Indian tooling industry to record double-digit growth over the next 4 to 5 years and also cross the coveted USD 200-billion mark in terms of industry size. The current geopolitical issues are reshaping global supply chains and India will emerge as a significant player in the days to come. The PLI scheme will drive capital investment and automation and the tooling industry will benefit significantly. 🇮🇳

REACH NEW HEIGHTS IN AEROSPACE INDUSTRY

12th DIE MOULD INDIA INTERNATIONAL EXHIBITION

Get Ready To Explore, Engage, And Enhance Your Business Network



27th – 30th APRIL, 2022

BOMBAY EXHIBITION CENTRE, GOREGAON (E), MUMBAI, INDIA

Visit the Die Mould India International Exhibition (12th Edition) to meet the best of the tooling fraternity under one roof and explore innovative ways to grow your aerospace business.

INDUSTRIES BENEFITED :

Aerospace, Automobile, Auto Ancillary, Defence, Consumer Durables, Electrical, Electronics, Engineering, Railways & Plastic Products

ONLINE REGISTRATION IS MANDATORY

SAFETY PROTOCOLS TO BE STRICTLY FOLLOWED

For more information, visit www.diemouldindia.org

REGISTER TODAY



ORGANISED BY



The Integrated CAD CAM PDM Solution

ABOUT US

TOPSOLID is the world's leading publisher of CAD/CAM software. With more than 35 years of experience under its belt, TOPSOLID is in a position to offer a fully integrated CAD/CAM solution. The company mainly targets the mechanical sector (machinery, tools, etc.), sheet metal work and the wood industry. Wherever a machine interacts with material to machine, shape or produce a part.

WHAT'S NEW IN 2022

- Give yourself a new perspective with continuous 5-axis automatic port machining and deburring
- Produce a perfect surface quality with our latest grinding module.
- Explore all the options of your lathe milling machines with complex kinematics.
- Make your programming easier with the all-new 2D contouring operation

Check more easily the conformity of your parts with our innovative probing module.

Tooling Modules



235 Hubtown Solaris, Opp. Teli Galli,
Vijay Nagar, Andheri (East),
Mumbai - 400 069, India.
+91-22-28378478



M-21, Anand Mangal Indl. Estate,
Sativali Road, Waliv Phata, Vasai (East),
Palghar - 401 208, India.
+91 86059 96688



www.topsolid.com



contact@designcell.org



TopSolid
INTEGRATED
DIGITAL
FACTORY



‘The world is considering India as a possible manufacturing destination’

“Technology is at its best and the possibility of showing our ability is very high. When there’s hope for stability in the current issues disturbing businesses, then sky will also not be a limit for the Indian tooling industry,” says Arvind Chawla, MD, Zahoransky Moulds and Machines Pvt. Ltd.

Q What are your views on the Indian tooling industry and expectations from 2022?

The Indian tooling industry was going through a rough phase in 2020 and 2021. During the pandemic, most tool rooms were battling labour shortage, fewer orders, and if orders were present, then there were expectations of speedy delivery. As a result, the industry began thinking of new ways to do business. This, in turn, meant more automation, remote project handling and quick turnout. From the looks of it, 2022 seems to be bringing in a lot of new projects for the Indian tooling industry, hopefully without any more surprises or disruptions.

Q What are the trends shaping the Indian die and mould industry?

Many new areas, which were import dependent, are now opening up for the domestic market. Electronics, low-cost and fast-delivery tools, toys, medical equipment, etc., are some of the areas, which have now come to domestic manufacturers because of the adverse situation and not because of our

competitive approach. It was not possible to enter these markets earlier, but now, if taken care of professionally, then they can be new segments of opportunities for the Indian die and mould industry.

Q Can you elaborate on the challenges that the Indian tooling industry faces?

Challenges are always there. Some of the most common ones are:

- » Projects are cost driven
- » Long payment terms
- » High raw material cost
- » Non-availability of required RM at the right time
- » Lack of skilled workforce
- » Lack of infrastructure to connect demand and supply
- » Lack of project management in case of technical issue or time pressure
- » Approval processes are very critical; often, it takes more than the manufacturing time
- » After approval, final payment and dispatch of mould on time
- » Specific tooling advisor/ consultant.

More Crop Per Drop[®]



Jain PE & PVC Pipe & Fittings



Jain Column & Casing Pipe & Fittings



Jain Drip Irrigation System



Jain Sprinkler System



Jain Filtration Equipment



Jain Fertigation Equipment



Jain Automation System



Jain Solar Pumping System



JAIN
Mobile App

 **JAIN[®]**
Jain Irrigation Systems Ltd.
Small Ideas. Big Revolutions.[®]



JAIN
Website link

Jain Plastic Park  1800 599 5000  +91 9422776699  jisl@jains.com  www.jains.com

Follow us at:  JainIrrigationSystems  @JainIrrigation  JainIrrigation_

Q What will you be showcasing at the upcoming Die & Mould India exhibition?

As a German tool room, our technology and high skill in making moulds is much ahead of time. The Indian market or similar requirement countries have low labour cost. Hence, they cannot think of automation beyond a cost. What we make in Germany now, will be the future here. Our effort will be to show the possibility of doing things differently. It's the product, which decides the process, and not the process, which should decide the product. This concept is very important to be understood. In this cost-competitive market, the initial investment decides the life of a product and making it faster gives best the ROI. The challenge is for the customer to estimate the right life of product initially.

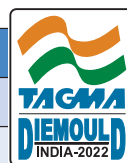
Q How would you describe the role of Die & Mould India in the Indian die and mould

industry? How has the event helped you over the years?

Die & Mould India is a platform to support and connect the industry having similar requirements, similar challenges and same opportunities. A good vendor base is the strength of the anchor industry, while Die & Mould India is the link between them. Over the years, there has been considerable growth in arranging information from across the world and providing solutions to die makers in India via all possible ways.

Q Can you describe the business outlook of the Indian tooling industry?

There was never a better time than what we have now. The world is considering India as a possible manufacturing destination. Technology is at its best and the possibility of showing our ability is very high. When there's hope for stability in the current issues disturbing businesses, then sky will also not be a limit for the Indian tooling industry. 🇮🇳



EXHIBITORS SEMINAR SLOTS DURING DMI 2022

Venue: International Lounge (above Hall 1) Bombay Exhibition Centre, Goregaon, Mumbai

April 28th 2022

Time	Topic	Speaker	Exhibitor
11.30 to 12.15 hrs	Thermal Management of tooling inserts by using Metal Additive Manufacturing (3D Printing) Technology and its advantage	Günther Prunner - Regional Innovation Manager	voestalpine High Performance Metals International GmbH
12:30 to 13:15 hrs	Solutions for Forging Dies	Sivamullainathan	MMC Hardmetal India Pvt. Ltd. (MOLDINO)
15:00 to 15:45 hrs	Industeel innovative solutions for Mould and Tool steels....Less segregation, through hardness, better polishability, easier machinability, improve thermal conductivity, easy repairing..	Henry Pascal	Industeel France

April 29th 2022

Time	Topic	Speaker	Exhibitor
11.30 to 12.15 hrs	Profitable Solutions for Die & Mold Machining	K Gowrishankar	Lakshmi Machine Works Ltd.
12:30 to 13:15 hrs	Innovative Solutions for Profitable Mold Making	Mr. Abhay Deshmukh & Mr. Sankarshan Choukekar	Shilpin Machine Tools Pvt. Ltd.
15:00 to 15:45 hrs	Solutions for Forging Dies	Sivamullainathan	MMC Hardmetal India Pvt. Ltd. (MOLDINO)

MILESTONE ACHIEVED



Team Pawan Successfully Manufactured and Dispatched

10,000+
GAS SPRINGS

‘Made In India, Made For World’





‘India is emerging as one of the best and most trusted manufacturing hubs...’

“...because of our business values, government support, and also because of the talent and capabilities in India to produce best-in-class products for the world,” says **L. S. Umesh, Director & CEO, Ace Manufacturing Systems Ltd.**

Q What are your views on the Indian tooling industry and expectations from 2022?

The Indian tooling market has huge potential and a lot of opportunities to expand. As per recent reports, the Indian tooling industry is expected to reach INR 26,000 crore by 2025. A TAGMA survey indicates that the current Indian tooling market size is roughly INR 18,000 to INR 20,000 crore, with around 70% of demand being met domestically and 30% through imports thanks to robust growth in major end-user industries. However, government assistance and intervention are needed on many fronts to improve India's tooling ecosystem. We need to be more competitive in both technology and commercial avenues to compete with other nations like China and Korea, which account for nearly 40% of the total tooling imports.

Q What are the trends shaping the Indian die and mould industry?

The recent innovations in die and mould production machinery such as a combination

of high-speed machines, quick tooling, and CAD/CAM solutions, have made operations simpler and faster. They have also enabled high-precision surface finish and reduced cycle time, which is the need of the market today. The future will be driven by 3D Printing technology, which will become more competitive and eco-friendly.

Q Can you elaborate on the challenges that the Indian tooling industry faces?

The key challenge for the Indian tooling industry is finding talent with the required skill sets. A large number of engineering talent is opting for careers in non-engineering sectors, like finance and BPOs, for faster growth with better salary packages. We have to take initiatives to tap talent and nurture it at the academic level, which will motivate them to stay focused in their core area and develop skills that are required for the Indian tooling industry. Apart from this, we need to improve the access of financing to develop entrepreneurs in the tooling industry.



AUTHORISED DISTRIBUTORS

**AM/NS
INDIA**

ARCELOR MITTAL NIPPON STEEL
INDIA LIMITED



JINDAL STEEL &
POWER LIMITED



UTTAM VALUE STEELS LTD

INDIA'S ONLY STOCKIST OF HR PLATES UPTO 600 MM THICKNESS WITH UT & TC PASS

IMPORTERS, STOCKIST, WHOLESALE DEALERS OF HR COILS, HR PLATES, SPECIAL GRADE PLATES AND
ALL KINDS OF IRON & STEEL RAW MATERIALS.



HR COILS / E350C / E450BR COILS



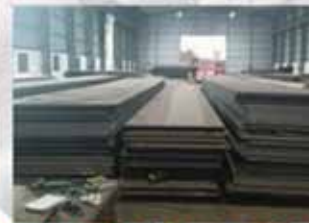
HR PLATES / SHEETS



HR SLABS UPTO 600MM THICK



CHEQUERED PLATES



SPECIAL GRADE PLATES - SAILHARD, BQ PLATES SA516 GRADE 70, HARDOXX 400/500, S690QL WELDOX 700 PLATES, HIGH MANGANESE PLATES,
STRUCTURAL STEELS- MS PIPES, ANGLE, CHANNEL, JOIST, FLAT, ROUND, SQUARE, RAIL, WIRERODS, TMT BARS ETC



CARBON STEEL C45 GRADE / EN8 / EN19
EN24/ EN31 GRADE PLATES



CORTEN STEEL ISRM 41/97
S355J2W+N PLATES



CNC PLASMA / OXYFUEL PROFILE GAS CUTTING
UPTO 600MM THICKNESS



SQUARE PIPE

SITAARAM GOYAL

☎ 9444000533, 8807000333

H.O : 148A, AI BLOCK, FIRST STREET, SHANTI COLONY, ANNA NAGAR, CHENNAI-600040

GODOWN : 43, VICHUR VILLAGE, MANALI NEW TOWN, CHENNAI- 600103

E-Mail : info@srkinternational.co.in www.srkinternational.co.in

Q What will you be showcasing at the upcoming Die & Mould India exhibition?

In recent years, Ace Manufacturing Systems' die and mould customer base has increased in good number and contributes to around 25% to our revenue. We have developed a Centre of Excellence for die and mould, which is responsible for developing new products, features and customers. This initiative has shown improvements in multi-dimensions and some of the outcomes are the products that we are showcasing at Die & Mould India 2022. We plan to showcase:

- ▶ 740V DM compact and cost competitive feature loaded machine suitable for high precision die cutting
- ▶ 1580V high performance machine suitable for bigger die parts and patterns.

Q How would you describe the role of Die & Mould India in the Indian die and mould industry? How has the event helped you over the years?

TAGMA's Die & Mould India is the one and only platform to promote and showcase India's die and mould capabilities to the world. It has helped us learn about and understand our customers' needs, new technologies, how to develop business and products, and so much more. It is time TAGMA ventures with global forums to promote the Indian die and mould

sector. After a slowdown of two years due to the pandemic, Die & Mould India 2022 is a booster event for the Indian die and mould sector to demonstrate its capabilities and connect with industry peers.

Q Can you describe the business outlook of the Indian tooling industry?

COVID-19 has changed the equation and dynamics of every industry; same is the case with the die and mould sector. In many ways, India is emerging as one of the best and most trusted manufacturing hubs, as compared to other nations, because of our business values, government support, and also because of the talent and capabilities in India to produce best-in-class products for the world. Global manufacturing companies are setting up their R&D centres and plants in India, which will continue to grow in the coming years. Thus, giving us new opportunities to grow and expand our reach to countries, which were untapped till now by the Indian tooling industry. Apart from automotive, we have to start focusing on other sectors like consumer durables, plastics, medical, toys, mobile, electronics, and electrical, to name a few. It is time to work on our strengths and leverage opportunities to make India a global leader in the tooling industry. 🇮🇳

POWERING DEFENCE INDUSTRY
12th DIE MOULD INDIA INTERNATIONAL EXHIBITION
Get Ready To Explore, Engage, And Enhance Your Business Network

27th – 30th APRIL, 2022
BOMBAY EXHIBITION CENTRE, GOREGAON (E), MUMBAI, INDIA

Visit the Die Mould India International Exhibition (12th Edition) to meet the best of the tooling fraternity under one roof and explore innovative ways to grow your defence industry business.

INDUSTRIES BENEFITED :
Aerospace, Automobile, Auto Ancillary, Defence, Consumer Durables, Electrical, Electronics, Engineering, Railways & Plastic Products

ONLINE REGISTRATION IS MANDATORY
SAFETY PROTOCOLS TO BE STRICTLY FOLLOWED
For more information, visit www.diemouldindia.org

REGISTER TODAY

ORGANISED BY
TAGMA



Scan Me



Kushal Metal & Steel Industries Pvt. Ltd.

Success comes from Harmony.....
and win comes from Innovation



SSAB

Toolox 33
Toolox 40
Toolox 44

Powder Metallurgy Grades

High Speed Steel &
Die Steel in PM

2% Beryllium

Copper
C17200

**Value Added
Services for Machining
& Ground service**



Hot Work Steel

H10, H11, H11 Mod
H13, H13 Mod, H21,
1.2714, 1.2367, 1.2767,
DHA1, KDA1,
TGGP13 (ORVAR SUP Equiv.)

Plastic Mould Steel

1.2311, 1.2738,
1.2738 HH, 1.2316,
1.2085, 1.2083,
PHX-SUPRA,
TGP-80 (NAK80 Equiv.)

Cold Work Steel

D2, D3, O1, S7, S1,
A2, A8M,
8% Cr (DC-53 Equiv.) NOGA

High Speed Steel

M2, M35, M42,
W4241, W4341
& many more...

All above available in Flats, Rounds, Coils, Sheets, Squares & Blocks

Authorised Distributor & Stockist



SSAB
TOOLOX

sij acroni

METALCAM

Nippon Koshuha
Steel Co., Ltd.



SANYO
SPECIAL
STEEL



NGK INSULATORS, LTD.
NEW METALS DIVISION



GLORIA MATERIAL
TECHNOLOGY CORP.



DAIDO STEEL

**CONTACT
DETAILS**

Nitin Doshi
+91-93222 33268

Kushal Doshi
+91-99204 75123

L. K. Pandey
+91-93216 04504

Maunish Shah
+91-098920 66691

OFFICE : 8th Floor, Majestic Shopping Centre Premises Co-op. Society Ltd, 144 JSS Road, Girgaon, Mumbai - 400 004.

WAREHOUSE : Gala No. 3A/3B & 3, Bldg. No. 188 & 183, Indian Corporation Compound, Mouje Gundavli
(Mankholi - Phata), Taluka: Bhiwandi - 421 302. Dist: Thane. (Maharashtra). India. ☎ 02522-662981



Mumbai +91-22-68520000/10-30
Ahmedabad +91 9224640506



kushal@kushalmetal.net
kushalmetal09@gmail.com



www.kushalmetal.net
www.berylliumcopper.in



‘The business outlook for the Indian tooling industry seems positive’

“Also, the ‘Aatmanirbhar Bharat’ campaign and PLI schemes are going to generate huge business opportunities for toolmakers. We are also seeing exceptional growth in the aerospace, defence, construction equipment, and agriculture equipment industries. All these factors will help the industry grow,” says **Manickam K., Director, CAD Macro**

Q What are your views on the Indian tooling industry and expectations from 2022? What are the trends shaping the Indian die and mould industry?

I have been closely working with Indian die and toolmakers for a very long time. It is great to see that the Indian tooling industry has indeed come a long way and is catering to some of the largest companies from the world, handling large and complex tools. From the past few years, there has been a shift towards adopting the latest technologies. Now, companies are looking to adopt high-end technologies. The conversation with toolmakers is mostly about the technology, application, and outcome, and not just about the cost. I believe that Indian toolmakers are in a good position to cater to the growing demands. In 2022, I expect Indian tooling companies to continue the trend of adopting good technologies, diversifying into other sectors, such as aerospace and defence, and focussing on skill development.

Q Can you elaborate on the challenges that the Indian tooling industry faces?

We are a technology provider. However, during my interactions with toolmakers and experience in the industry, I feel that Indian tooling companies find it challenging to attract and retain manpower. Apart from this, easy financing is a big issue for toolmakers. Tooling business is very capital intensive, and they need government support to start and expand. Apart from this, the import taxes on some of the important components are very high, which make it tough for toolmakers to reduce the cost. In spite of all these challenges, Indian toolmakers have made good progress in recent times; they have started exporting as well.

Q What will you be showcasing at the upcoming Die & Mould India exhibition?

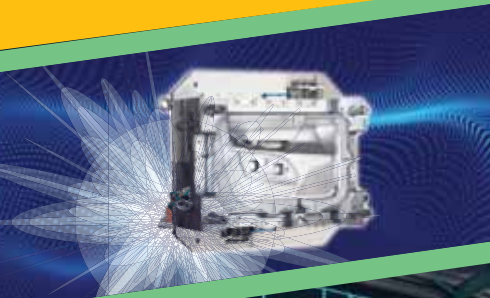
We have many products for tool rooms and have been serving some of the largest players in the industry. We are going to showcase:

SRIDEVI TOOL ENGINEERS PVT. LTD.



Since 1972

Celebrating



- » **Macro Wire:** A powerful CAM solution specifically designed to automate the generation of NC codes for CNC wire cut machines.
- » **Macro EDM:** A CAM solution for the CNC EDM programming with setup sheets to semi automate CNC EDM machines (Mitsubishi, Makino, Sodick, GF, etc.).
- » **Macro Lathe:** A CAM solution specifically designed to automate the generation of NC codes for lathe machines.
- » **Macro Mill:** A CAM solution for CNC Milling 2D, 2.5D and a holes knowledge base feature based programming tool.
- » **Shop Plan:** It is specially developed for the tool room. Shop plan stands out in the marketplace for its ability to increase the quality and visibility of information the tool room management needs to make strategic and tactical operational decisions.
- » **Shop Mold:** Die history/maintenance records keeping as a knowledge portal for die design and prompt intimation for PM/Breakdown/Insert/Life of tool Status as well as keeping inventory for spares.

Q How would you describe the role of Die & Mould India in the Indian die and mould industry? How has the event helped you over the years?

Die & Mould India, being the only exhibition for die and toolmakers, is a must-go event for everyone into the tooling business. It gives all toolmakers and technology providers a platform to showcase their capabilities and solutions. I am sure that the event has helped the Indian tooling industry in their growth journey. We are a regular participant at Die & Mould India, and I must say that it has played an instrumental role in helping me meet many of my customers.

Q Can you describe the business outlook of the Indian tooling industry?

With growth in the automotive industry and the emergence of many sectors, the business outlook for the Indian tooling industry seems positive. Also, the 'Aatmanirbhar Bharat' campaign and PLI schemes are going to generate huge business opportunities for toolmakers. We are also seeing exceptional growth in the aerospace, defence, construction equipment, and agriculture equipment industries. All these factors will help the industry grow. 🌱

**TRANSFORMING
CONSUMER DURABLE
INDUSTRY**

12th DIE MOULD INDIA INTERNATIONAL EXHIBITION

Get Ready To Explore, Engage, And Enhance Your Business Network

27th – 30th APRIL, 2022
BOMBAY EXHIBITION CENTRE, GOREGAON (E), MUMBAI, INDIA

Visit the 12th edition of the Die Mould India International Exhibition and meet the best of the tooling fraternity. Explore incredible ways to grow your consumer durables business.

INDUSTRIES BENEFITED :
Aerospace, Automobile, Auto Ancillary, Defence, Consumer Durables, Electrical, Electronics, Engineering, Railways & Plastic Products

**ONLINE REGISTRATION IS MANDATORY
SAFETY PROTOCOLS TO BE STRICTLY FOLLOWED**

For more information, visit www.diemouldindia.org

REGISTER TODAY

ORGANISED BY
TAGMA



‘India is acknowledged as the fastest growing major economy in the world’

“It is expected to be one of the top three economic powers in the world over the next 15 years. With India on course to be a USD-5-trillion economy, the contribution from the tooling industry (being the mother industry) will be substantial owing to localisation in automotive and other segments like electronics, aerospace, consumer goods, toys, mobile phones, electrical and defence,” says Praveen Satija, Managing Director, Stitch Overseas.

Q What are your views on the Indian tooling industry and expectations from 2022?

The Indian tooling industry is one of the most promising industries in India at the moment owing to the immense potential it carries as being a mother industry. Due to multiple drivers like ‘Make in India’ for the world, PLI Scheme and the present geopolitical situation, the world is looking at India as a new and better manufacturing hub. The Indian industry drove into 2022 with a positive sentiment, especially with the huge investments expected in electronics/ mobile phone localisation under the PLI Scheme and also with the automotive industry upbeat to embrace new technologies such as electric vehicles and with multiple launches of both two wheelers and four wheelers – which were slow owing to the pandemic. We look at 2022 and beyond to be busy for our tool room industry coupled with capacity expansions and new investments in tool room technological deliverables.

Q What are the trends shaping the Indian die and mould industry?

The Indian die and mould industry has

evolved amazingly well over the past few years, especially after the ‘Make in India’ trigger. It is now already on the path to compete globally. Trends could be in terms of new technologies being imbibed and also in terms of new avenues of the industry. With quality, productivity and precision being recognised, technology is contributing a very fast shift towards high-speed machining, both 3-axis and 5-axis, coupled with the best of CAD/CAM solutions, best of CNC tooling, acceptance of the appropriate tool steels, skilling on IOT/AI/data analytics for performance enhancement and manufacturing practices. As India opens up, we have a plethora of new avenues besides the automotive industry. We have new emerging sectors like medical, electronics/ telecom, mobile phone, packaging, aerospace, appliances and defence, which are all triggering a new manufacturing ecosystem. The Indian die and mould industry doesn’t have an option but to keep pace with the demand from all such industries and could position itself as an important global deliverable. Once a new technology rolls over,

if you are not a part of the steamroller, you are a part of the road! Tool rooms, stay alert!

Q Can you elaborate on the challenges that the Indian tooling industry faces?

The Indian tooling industry is predominantly a small-scale ownership industry and faces many challenges, which impede its growth. It has limited access to finance, lack of skilled workforce and the biggest challenge is the lack of understanding to adapt and perform. Adaption would also apply imbibing modern manufacturing techniques and the upliftment of manufacturing standards, which are much compromised. The industry also lacks an outsourcing ecosystem and a quality handholding from OEMs, Tier-1s/ their customers by way of untimely/ quality of knowledge sharing and financial support.

Further, lack of streamlined tool development processes and standardisation of tool and die components are a challenge for improving the overall efficiency. In order to compete globally and also reduce the dependence on imports, the Indian die and mould industry has to apply a systematic approach while focussing on quality, reliability, delivery and adaptability instead of using shortcuts, which is an obvious Indian mindset.

Q What will you be showcasing at the upcoming Die & Mould India exhibition?

At Stitch, we are always committed to accelerate value creation by innovating and introducing affordable cutting-edge technology while understanding the future of production. With EVs, light weighting will play a crucial role in their success, which is possible by contribution from HT/ UHT and hot-forming applications. Also, with the demand for fuel-efficient IC engine vehicles and the automotive crash norms getting more stringent, this cannot happen without HT/ UHT and HF applications.

Therefore, the future will have increased demand for high-tensile steels and here, we are to support the automotive industry for achieving the desired results with both ultra-high strength material and the respective press dies from one window. We shall be showcasing our capabilities and skills for the development of high-quality press dies for

ultra-high strength steel up to 1310 MPa. This is besides our existing offerings of various other services related to BIW viz. engineering/ light-weighting services, press dies for skin panel, progressive dies, prototype tooling/ parts/ assemblies/ BIW, hot press forming, die casting dies, etc.

Q How would you describe the role of Die & Mould India in the Indian die and mould industry? How has the event helped you over the years?

Die and mould is where manufacturing begins and Die & Mould India is the only focussed event, as of now, which showcases the present and future of the die and mould business/ manufacturing. We have been participating in this event since its inception in 1998 and have witnessed its recognition, evolution and immense contributions to the Indian tool room industry. This unique event has participation from India and overseas for all products and services related to the tooling development and application under one roof, with easy approach to the domestic industry. The event has been accredited for showcasing the capabilities of the Indian die and mould manufacturers to their respective industry OEMs/ Tier-1s and has also been an important platform to trigger exports by inviting focused visitors/participation from overseas as well.

Q Can you describe the business outlook of the Indian tooling industry?

India is acknowledged as the fastest growing major economy in the world. It is expected to be one of the top three economic powers in the world over the next 15 years. With India on course to be a USD-5-trillion economy, the contribution from the tooling industry (being the mother industry) will be substantial owing to localisation in automotive and other segments like electronics, aerospace, consumer goods, toys, mobile phones, electrical and defence.

Without quoting too many statistics, as is floating in the public domain, we are confident that with so many government initiatives, new manufacturing and foreign investments happening, our tool room industry is ascertained to witness a good double-digit pace of growth. 🌈

**HIGH QUALITY
PRECISION COMPONENTS
For Moulds And Dies**

PPD[®]
Mould and Die components



Visit us at



PRECISION PUNCHES & DIES
+91-7777039765 / +91-7777039632

5-B, Raju Industrial estate, Penkarpada Street, Near Dahisar Check Post, P.O. Mira, Mumbai-401107, Maharashtra, India
Email : info@ppdejectorpin.com, ppd.punches@gmail.com Web : www.ppdejectorpin.com

Stall no E03

PCK-Buderus | Special Steels Your Reliable

The Partner for Plastics Industry

- Comprehensive Stock Holding of Plastic Mold Steels
- Service centers at Chennai, Pune and Ludhiana
- Express delivery in cut to lengths for blocks and rounds
- Contour Sawn Blocks for Cores and Cavities
- Machining Facility to handle piece weights upto 60 tons
- Delivery of 3D pre-machined Mold halves upto Bumper dimensions
- Deep Hole Drilling
- Technical Support on Steel Selection, processing, welding, Polishing and Texturising.



Stockholding Steels



6 Sides milled with Lifting hole



3D pre-Milled Dash board Mold



3D Machining to CAD Data

Grades in Program : ● Buderus 2311 ISO-BM mod ● Buderus 2738 ISO-BM
● CONQUEROR SUPER CLEAN ISO-B ● Buderus 2083 ISO-B

Partner in India for **Buderus | Edelstahl**

Partnership of 50 years with
Buderus | Edelstahl
and Indian Industry,
based on Reliability and Trust.

ALL FROM ONE SOURCE



Corporate Office

PCK HOUSE,
New No. 84, Old No.13,
South West Boag Road,
T. Nagar, Chennai - 600 017
Tel : + 91 44 2434 6503 / 1904 / 8638
Fax : + 91 44 2434 1181
Email : info@pck-buderus.com

Pune Office :

Warehouse & Machining Division:

Gat. No. 191, 192, 193, Alandi-Markal Road,
VaduKhurd, Tal. Haveli, Pune - 412216/INDIA
Tel. : 020 66783000/66783002 to 66783023
Fax : 020 6678 3001
E-mail : punewh@pck-buderus.com
pckpune@vsnl.net

Ludhiana Stock Holding Center

C-I, Industrial Area C, Jaspal Main Road,
Kanganwal, Ludhiana - 141 120. Punjab.
Tel : + 91 161 6532016 / 2017 / 2510073
Fax : +91 161 2510072
Email : ludwh@pck-buderus.com

Kolkatta Office

Flat No. 403, Vishal Apartments,
4th Floor No. 18,
Prince Anwar Shah Road,
Kolkatta - 700 033
Tel : + 91 33 2417 1078
Email : info@pck-buderus.com

www.pck-buderus.com

- THRUHARD SUPREME HH/HG • Buderus 2711 ISO-B • Buderus 2344 ISO-B
- Buderus 2316 ISO-B mod • Buderus 2767 ISO-B • Buderus 2379 IOSO-B

NITRO-B®

New Generation Corrosion
resistant Pre-hardened
Mold Steel



Nitro-B® is Nitrogen alloyed Corrosion resistant Plastic Mould Steel developed further on our reliable Buderus 2316 ISO-B Mod. The special analysis also allows the user to further heat treat the tools to 53 HRC.

SALIENT FEATURES

- Excellent microstructure
- Excellent machinability
- Higher wear-resistance
- Higher Hardness: 320-370 BHN (34-40HRC)
- Excellent Corrosion resistance event at Higher Hardness
- Can be heat-treated up to 53HRC

PCK Buderus (India) Special Steels Pvt. Ltd.

Corporate Office : PCK HOUSE, New No. 84, Old No.13, South West Boag Road, T. Nagar, Chennai - 600 017

Tel : + 91 44 2434 6503 / 1904 / 8638 Fax : + 91 44 2434 1181 Email : info@pck-buderus.com

Chennai Stock Holding Center Machining Division

No. 1/512, Ponni Amman Koil Street,
Gandhi Nagar, Vengaivasal,
Chennai - 600 073.

Tel : + 91 44 2278 1107

Fax : + 91 44 2278 1869

Email : info@pck-buderus.com

Pune Stock Holding Center Machining Division

Gat No 191-192-193,
Alandi-markal Road, Vadu Khurd,
Tal-Haveli, Pune - 412216.

Tel : + 91 20 6678 3000

Fax : + 91 20 6678 3001

Email : punewh@pck-buderus.com

www.pck-buderus.com

Ludhiana Stock Holding Center

C-I, Industrial Area C,
Jaspal Main Road, Kanganwal,
Ludhiana - 141 120. Punjab.

Tel : + 91 161 6532016 / 2017 / 2510073

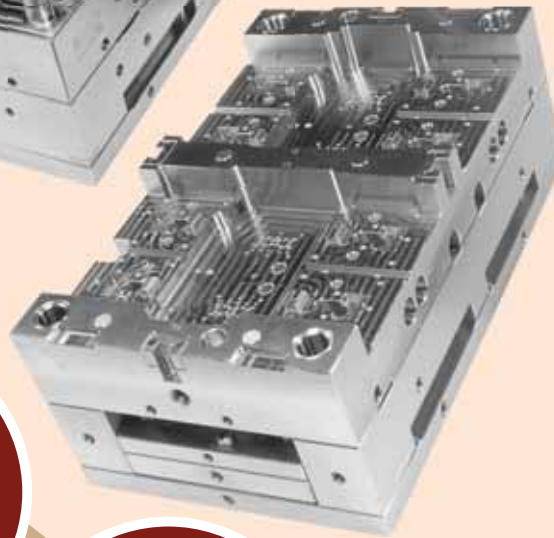
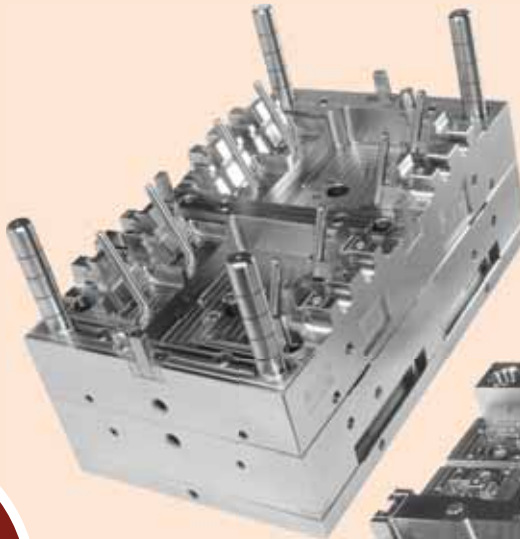
Fax : +91 161 2510072

Email : ludwh@pck-buderus.com

WORLD CLASS PRECISION MOULD BASES



Are you looking for
Precision engineering...
Machining competency...
Timely delivery..



PRECISION MOULD TECH

Your Success Partners

No. 159, 3rd Main Road, Industrial Town, Rajajinagar, Bengaluru - 560 044
Phone : +91-080-23405544, +91-080-23503142 Fax : +91-080-23402760
E-mail : info@precisionmouldtech.com Website : www.precisionmouldtech.com



‘India has already become a manufacturing hub for many global players’

“I strongly believe that the future of our Indian tooling industry is very bright, and we all will witness stronger growth during the next decades,” says Rajnikant Patel, Director, HASCO India Pvt. Ltd.

Q What are your views on the Indian tooling industry and expectations from 2022?

Indian toolmakers have begun to make high-end precision quality tools after adopting new technologies, and materials, and enhancing their know-how to better their manufacturing capabilities. This is visible through an increase in the trend of exporting tools and final products to the global market. However, our local industry should also compete globally in terms of ensuring faster delivery of tools to enable the quick realisation of the idea into final mass production of the product for the market.

Q What are the trends shaping the Indian die and mould industry?

Productivity is key to success. Our industry understood very well that this can be achieved with the help of implementing standardisation throughout the mould-making process. Starting with the design and proceeding via the assembly stage, a considerable amount

of empirical know-how can be built upon the deployment of standard components. With their repeated use, the acquired routine will save a great deal of time. Using standard products and processes also make it possible to standardise and shorten the process steps of machining and mould making and, thus, offers time and cost savings, which increase competitiveness.

Q Can you elaborate on the challenges that the Indian tooling industry faces?

All manufacturing steps in tool making require skilled labour. Many students studying technical skills prefer to choose white-collar jobs, resulting in a skilled labour scarcity. Toolmakers should offer their own training and educational benefits to attract and retain motivated workers within the organisation and make them a good fit to grow together. Technical joint ventures with overseas toolmakers from developed countries will also help the industry grow stronger.



AMARA RAJA
Gotta be a better way

MANGAL
INDUSTRIES LIMITED

MANGAL

TOOLWORKS

**Unlock New Possibilities
in Precision Engineering**



**INJECTION
MOULDS**

**STAMPING
TOOLS**

**DIE CASTING
DIES**

**JIGS &
FIXTURES**



**World-Class
Manufacturing**



**Engineering
Expertise**



**Global Quality
Standards**



**Top-notch
Customer Service**

Sales Enquiries: sas1@amararaja.com • +91 95663 36833
mangalindustries.com

Q What will you be showcasing at the upcoming Die & Mould India exhibition?

Some of the innovations to be displayed at the show are:

- » High-quality metal powder grade 1.2709, 1.4404 for 3D Printing
- » Loc-check A5900 having GSM technology in order to access the physical location of mould anywhere in the mould
- » Multi-coupling cooling system offering a reduction in set-up time of moulds on injection moulding machines
- » Streamrunner® - the world's first 3D printed hot runner system for gentle melt flow, and hot runner controller primezone offering identification of potential assembly errors before starting the mould as part of mould diagnostics.

Q How would you describe the role of Die & Mould India in the Indian die and mould industry? How has the event helped you over the years?

TAGMA is the pillar of our industry and the Die & Mould India exhibition is the best platform,

where new technologies and trends are shown to the market by the stakeholders of this industry. Since the establishment of the show, HASCO has been continuously contributing to showcasing the innovations developed for the tool-making industry through this platform. This truly helps designers, toolmakers, and injection moulders to improve the quality and standard of their processes and products after adapting our high-end technological products.

Q Can you describe the business outlook of the Indian tooling industry?

Ease of communication, and the capability to supply high-quality moulds at par with global standards and at globally competitive prices are some of the most important drivers enabling the Indian tooling industry as a favourable stop for global tooling needs. India has already become a manufacturing hub for many global players in all industrial sectors due to its own high domestic consumption of products. I strongly believe that the future of our Indian tooling industry is very bright, and we all will witness stronger growth during the next decades. 🇮🇳



**DRIVING
AUTOMOBILE INDUSTRY**

12th DIE MOULD INDIA INTERNATIONAL EXHIBITION

Get Ready To Explore, Engage, And Enhance Your Business Network

**TAGMA
DIEMOULD
INDIA-2022**

27th – 30th APRIL, 2022
BOMBAY EXHIBITION CENTRE, GOREGAON (E), MUMBAI, INDIA

Visit the Die Mould India International Exhibition (12th Edition) and meet knowledge masters from the tooling fraternity in one place to discover numerous ways to grow your automobile manufacturing business.

INDUSTRIES BENEFITED :
Aerospace, Automobile, Auto Ancillary, Defence, Consumer Durables, Electrical, Electronics, Engineering, Railways & Plastic Products

**ONLINE REGISTRATION IS MANDATORY
SAFETY PROTOCOLS TO BE STRICTLY FOLLOWED**

For more information, visit www.diemouldindia.org

REGISTER TODAY



**ORGANISED BY
TAGMA**

We are a Tool Room Resource Company



ELECTRONICA HITECH
SRP Electronica Group

electronica

For more information, get in touch with us today

Electronica Hitech Machine Tools Pvt. Ltd.

Elektra Chambers, 44 Mukundnagar, Pune 411 037, India

Tel.: +91 20 68688400 Mob.: +91 88888 99297,

Email: marketing@electronicaHITECH.com

www.electronicaHITECH.com

www.studiowindesign.com

Authorised Dealer of PAN India

Branches North Zone : Gurgaon, Ludhiana, East Delhi **West Zone :** Mumbai, Baroda, Ahmedabad, Rajkot, Pune

South Zone : Bangalore, Chennai, Coimbatore, Secunderabad **East Zone :** Kolkata



‘The tool room industry is undergoing a change in manufacturing practices’

“Now, the industry is switching over to the latest technologies to gain a competitive edge. Investment in the latest technologies by SSI and MSI units are increasing year by year in India,” says Veronica Just, Vice President, Millutensil.

Q What are your views on the Indian tooling industry and expectations from 2022?

With growth in industrial sectors like automotive, consumer durables, plastics, electronics, and electricals, the die and mould making industry is poised to grow. Besides, aggressive promotion of the ‘Make in India’ campaign, backed with the support of necessary statutory policies restructuring to facilitate ease-of-doing business, the die and mould making industry will grow manifold.

In such a scenario, using Millutensil die and mould spotting presses becomes critical in all sectors. We believe that India will play a big role in our company’s growth in the coming years. We mostly serve die and mould makers and want to be their growth partners by providing them with high-end technologies.

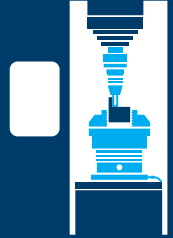
Q What are the trends shaping the Indian die and mould industry?

The tool room industry is undergoing a change in manufacturing practices. Now, the industry

is switching over to the latest technologies to gain a competitive edge. Investment in the latest technologies by SSI and MSI units are increasing year by year in India. Indian companies are now using the latest CAD and CAM software, digital technology, with a complete vision to industry 4.0, all aimed at an increasingly integrated technological process.

Millutensil die and mould spotting presses guarantees great advantages to the process of mould testing as well as quality and reliability of the moulds and precision and cost saving. We have already developed products that are in line with the industry 4.0 concept. It is very smart in nature and can help companies in predictive and preventive maintenances. This will further improve process efficiency and quality of the products. With digitalization, you can know your machine and accordingly work on its performance. There are now sensors integrated in various parts of the machine to provide the user the much needed data, which can be further analysed to improve

Equipped by
SCHUNK



+ 1:1 interchangeable
replacing heat shrinking
toolholders
Hydraulic Expansion Toolholder

T E N D O Slim Max



+ Up to 5 -sided complete/
simultaneous machining
Manual Clamping System
KONTEC KSX



+ Up to 90%
set-up cost savings
VERO-S Quick-change
Pallet System



Superior Clamping and Gripping

**Everything for your
Machining Center**

More than 7,500 components for
workpiece and tool clamping.

SCHUNK

schunk.com/equipped-by

the performance of the machine. Digital manufacturing, I feel, will be the future of manufacturing.

Q Can you elaborate on the challenges that the Indian tooling industry faces?

Excellent tool design, efficient execution, effective communication, skill development, inverted duty structure are some of the challenges. Quality and reliability are a must; this is what customers require.

Q What will you be showcasing at the upcoming Die & Mould India exhibition?

Millutensil is a worldwide leader in the production of die mould spotting presses and die splitters. Die spotting presses help in considerable reduction of mould production cost, and ensure safety, optimal accessibility, user-friendly operation with next-generation Siemens controller, industry 4.0.

We are a 67-year-old company working in die and mould spotting presses/ die splitters and machinery for sheet metal working. We have been doing business in India for a long time

and are committed to the market. We have been present for 10 years with the Italian Technology Centre (ITC) in India, which is our local office. They provide aftersales services to our Indian customers and also help us in marketing activities.

Q How would you describe the role of Die & Mould India in the Indian die and mould industry? How has the event helped you over the years?

Die & Mould India is a trendsetter. It is a unique trade fair for the die and mould industry in India. This exhibition has always built awareness about the technology trends worldwide to the die and mould industry in India.

Q Can you describe the business outlook of the Indian tooling industry?

The Indian tooling industry is estimated to grow tremendously by 2025 on the back of a strong growth in key end-user segments. However, government support and intervention is required on many fronts to augment the tooling ecosystem in India. 🇮🇳



**ENHANCING
ELECTRONICS INDUSTRY**

12th DIE MOULD INDIA INTERNATIONAL EXHIBITION

Get Ready To Explore, Engage, And Enhance Your Business Network



27th – 30th APRIL, 2022
BOMBAY EXHIBITION CENTRE, GOREGAON (E), MUMBAI, INDIA

Visit the 12th edition of the Die Mould India International Exhibition and meet the best of the tooling fraternity. Explore incredible ways to grow your electronics manufacturing business.

INDUSTRIES BENEFITED :
Aerospace, Automobile, Auto Ancillary, Defence, Consumer Durables, Electrical, Electronics, Engineering, Railways & Plastic Products

ONLINE REGISTRATION IS MANDATORY
SAFETY PROTOCOLS TO BE STRICTLY FOLLOWED

For more information, visit www.diemouldindia.org

REGISTER TODAY



ORGANISED BY


Innovative solutions
Indian values

X CUT[®]
TECHNOLOGIES

We have complete Solutions for Die & Mould Machining



ZOMW, ZNMU, SDKW: High performance tools for high speed machining. Our Diameter range starts from 8mm upto 125mm to cover all kinds of applications to improve tool life & drastically reduce cycle time by increasing machine efficiency.

DH-DHs: Solid carbide series for all Die & Mould applications from 30 HRC upto 68 HRC. Powerful performance can beat any competitor.

XIB: Premium quality Indexable ball nose inserts for all kinds of Roughing/Finishing application. We have multiple grades for different varieties of material.

www.x-cut.in



Abhishek Tiwari,
Regional Manager – West and North India,
CoreTech System Co. Ltd.

About the Indian tooling industry

After experiencing the pandemic, the OEMs have understood the benefit of building tools in India, which will prove to be a big boon for Indian toolmakers and the tooling industry. The Indian tooling industry will witness a good growth rate in the coming years. Besides this, the government's initiatives of promoting manufacturing in India and special subsidies for promoting the electronics industry, IC and semiconductor industry, toys industry, automotive & composite industry, are setting a good platform for Indian toolmakers to compete in the global tooling market. However, in this competitive market, time and cost are always the biggest challenges. Moldex3D caters to a wide range of next-generation simulation capabilities and services to meet the industries' expectations. It tries to help toolmakers to validate the product design, tool design at a very early stage and helps in reducing time to market by saving time and cost wasted in trial and error method. Identification of risk at an early stage is better than tackling it at a later stage. So, Moldex3D offers a wide range of CAE simulation solutions to help toolmakers deliver best quality products and in reducing the time to market.

About Die & Mould India

Die & Mould India provides an excellent platform for the Indian die and mould industry to interact with potential customers by bringing Indian and global companies together under one roof. It is the best exhibition for industry-specific business networking for die and mould makers. At this edition of Die & Mould India, we will be showcasing Moldex3D, which is the world's leading flow simulation software to meet the industry's need for injection moulding, advanced hot runner, advanced injection moulding technology, like powder injection moulding, foam injection moulding, gas and water-assisted injection moulding, PU foaming, compression moulding, injection compression moulding, resin transfer moulding, along with other new digital twin products like Machine Characterization, Material Characterization, Material Hub cloud, ISLM digital data management platform, and Moldex3D university MPE eLearning platform for educational institutes and corporates.

Business outlook

The Indian tooling industry has good potential to grow in the coming years by not only making tools for Indian OEMs but also exporting tools outside India. Die & Mould India exhibition is already helping the tool and die industry in its goal.



Akshay Kalyanpur,
Director, Sridevi Tool Engineers

About the Indian tooling industry

Our industry will see some rough patches in 2022. Though the government in India seems stable and geared for 'Make in India', the supply chain disruptors like semi-conductor chip shortage, geopolitical tensions, and mutations of the coronavirus strains may slow us down. Historically, the challenges for the Indian tooling industry have remained the same, namely, scalability, manpower, low-cost import alternatives and cash flow. Capacity is the main constraint for the Indian die and mould industry. Any trends that address this issue should be encouraged and adapted. For some, replacing old worn out machines with industry 4.0 machines would be the goal or adding robotics to enhance productivity. One can also expect far more acceptance of additive manufacturing in the Indian die and mould industry.

About Die & Mould India

Die & Mould India gives visibility to a buyer as well as to a seller. Since a majority of the visitors are influencers or decision makers, the show turns out to be successful each time with a high level of satisfaction for exhibitors and visitors. The die and mould manufacturers also get a chance to interact with technology providers at the show and this has been of a great help to many mould manufacturers. At this edition of Die & Mould India, we will be showcasing parts belonging to the latest model launches in the automotive space.

Business outlook

Like I mentioned above, this year looks uncertain. But overall, the future of the Indian tooling industry looks promising in the near future.

ISO 9001:2015 & EN 9120:2018 (AEROSPACE) CERTIFIED COMPANY

LUCCHINI^{RS}

Leader in tailor made tool steels...

PLASTIC 'STANDARD'

KEY^{os} 2311

KEY^{os} UP

KEY^{os} 2738

PLASTIC 'UPGRADE'

KEY^{os} 2738MHH

KEY^{os} 2002

KEY^{os} 2002

CORROSION RESISTANT

KEY^{os} 2083

KEY^{os} 2085

HOT WORK, DIECASTING & 'SPECIAL' PLASTIC PROCESSING

KEY^{os} 2343

KEY^{os} 2344

KEY^{os} 2344 HDC

KEY^{os} OptiMo

KEY^{os} HiMo

AEROSPACE ALUMINIUM

Yefong Aluminium

5083 H111 | 6061 | 6082 | 7075 T651
aerospace@msspl.co

TOOLING ALUMINIUM

Constellium

ALUMOLD
350 | 400 | 500 | 600



MACHINING DIVISION



MILLING | GRINDING | DEEP HOLE DRILLING | TAPPING

machining@msspl.co

MULTIPLE SPECIAL STEEL PVT LTD.

Ramanath Complex, Sy No. 30/11, Shanthipura Main Road, (Near Veerasandra Indl. Area),
Huskur Post, Bengaluru - 560099, Karnataka, INDIA

☎ +91 80 27848058 / 67 / 89 **info@msspl.co** Commercial : **+91 9731331101** Logistics : **+91 9731334008**

BRANCHES : COIMBATORE 9363103620 PUNE 9823780363 GREATER NOIDA 9811204736

www.msspl.co





Nitin Jain,
Managing Director India,
OPEN MIND CAD/CAM Technologies India Pvt. Ltd.

About the Indian tooling industry

The wide range of final products is reflected in the diversity of products available in the Indian mould and die-making industry. That's why we expect more mould and die makers in India to use the latest machines and means of production as well as the most up-to-date CAM software, like hyperMILL, to manufacture efficient and consistent tools sustainably. The majority of mould components must fulfill stringent requirements in terms of dimensional tolerances ($<5\ \mu\text{m}$) and surface qualities ($<1\ \mu\text{m}$), for example, car shell body parts, headlights and reflectors, as well as in the optics industry, such as for lenses. These factors, along with material properties (rarely below 60 HRC), must be factored in when machining and use the corresponding strategies when milling precision components. The variety of geometries, materials, the high demands on precision, and quality are all specific challenges the Indian tooling industry has to face. At the same time, costs must be reduced, and deadlines met. These parts often have large model files, detailed manufacturing process lists, large amounts of calculated tool paths, and therefore, require a robust CAM environment.

About Die & Mould India

We will be showcasing hyperMILL, the perfect solution for efficient manufacturing of all mould and die making requirements. From CAD and CAM (2.5D, 3D, 5-axis milling) through to electrode manufacturing, wire EDM and probing to simulation, automation and the Manufacturing Execution System (MES), one can benefit from the unique consistency by using just one CAM system –hyperMILL. By implementing this system, manufacturers can increase process security, minimize throughput times, reduce costs, and streamline processes. TAGMA is doing a great job by encouraging and connecting the die and mould industry in India. Die & Mould India helps us showcase the latest technologies and the advantages of hyperMILL to die mould manufacturers. Having a complete, powerful and the most versatile solution, we consider this segment to be one of our core strengths for precision manufacturing of die moulds.

Business outlook

The Indian tooling industry is expected to grow in double digits in the coming years due to strong growth expected in market segments like automotive (like EV), aerospace and defence, medical and consumer goods. The industry is willing to partner with companies, like OPENMIND Technologies, which can not only provide cutting-edge products, but also transfer machining process technology, based on our global expertise.



Parag Sawant,
GM – Business Development,
Machine Tools India Ltd.

About the Indian tooling industry

The pandemic slowed down growth for the past two years, but new opportunities also opened up at the same time. We expect the tooling industry to prepare a realistic budget and focus on large capex investments to meet the global demands. More bold decisions with calculated risk should be taken by the industry. Now is the right time to do so. As far as the die and mould industry goes, despite the huge potential, the industry remained conservative in their approach. Shortage of skilled human resources and creativity are some of the real challenges it faces. But the situation is slowly changing. Growing demands from the automotive, aerospace and other engineering industries are churning out the best. New machines with incredible capabilities e.g. high speed/high accuracy with feature rich software are being adopted. The Latest Wire Cut, EDMs or VMCs, Laser Engraving, etc. are taking the die and mould industry into other dimensions. Machine Tools India offers total solutions to make it possible.

About Die & Mould India

We have heard a lot about Die & Mould India and are excited to be participating in this exhibition. It will be our first participation and we are optimistic about the outcome. We will be showcasing our CNC VMC and Compact CNC Turning Centre from DOOSAN-Korea. We will also be showcasing our Metrology and tool room products.

Industry outlook

'Make in India' and 'Aatmanirbhar Bharat' will remain the key drivers. The Union Budget has been quite supportive of MSMEs and the overall manufacturing sector. The focus is on being competitive to fulfill global demands.

iFusion SF1[®]

For Tool & Die Industry



**ADOPT
ADDITIVE
MANUFACTURING.
ADD MORE TO
YOUR BOTTOMLINES.**

Lower Cost of Production
vis-à-vis Others



Lowest Machine Hour Rate
(MHR) In The Industry



Achieve Lowest Cost
Per Part



Local Powder Availability –
Cost Efficient & Easily
Accessible



Integrated safety glove door
to protect the powder from
exposure

**FINANCE
OPTIONS
AVAILABLE**

EXPERIENCE THE INTECH ADVANTAGE

Quick Service support – Online & On-site | Print Support in case of capacity issues

| Conformal & Simulation Service Support | Faster Reaction Time

| On-Time Technical Support



ifusion@intechadditive.com



+91 63664 50455



www.intechadditive.com



Renin Raj,
Head of Marketing,
PROLIM Solutions India Pvt. Ltd.

About the Indian tooling industry

Indian tooling companies have, in the past, sourced their complex moulds from China and Taiwan. But due to the geopolitical tensions in the region, coupled with the COVID-19 pandemic, many companies are forced to think of alternatives in their supply chains. Now, they will have to either make it themselves or source the moulds from India. Unfortunately, they do not possess the know-how to produce complex and detailed/precision moulds. Besides, design, testing and tryout facilities are not available under one roof; these are often scattered, resulting in delays. Commercial tool rooms need much more support and bigger sustainable orders to raise their capacity. In the next 12 months, Indian toolmakers must improve their capability to manufacture critical and high-precision parts and components. They also need to work on their in-house designs, testing and tryout facilities, and ensure on-time delivery schedules.

About Die & Mould India

Die and Mould India is a great platform for the Indian die and mould industry. Here, they can learn from each other, build their network, and give and get business from each other. We will be showcasing the predictive engineering involved in the end-to-end mould making, validation and how to improve the quality of parts using state-of-the-art CAD, CAE and PLM software tools.

Business outlook

The dies and moulds market in India is poised to grow by \$1.47 billion during 2021-2025, progressing at a CAGR of 9% till 2025. The pure tooling industry in India was about INR 14,650 crores around three years ago. But now, it exceeds INR 20,000 crores. This is the sum total of domestic tooling and imports. Imports account for about 15% of the overall market, while domestic production is about 85%. Currently, commercial tool rooms account for slightly over 50% and captive tool rooms are just below 50% share in domestic production.



Vinayak Jadhav,
Chief Executive Officer,
Schimmel Online India Pvt. Ltd.

About the tooling industry

The recent pandemic and current global scenarios indicate that a lot of opportunities are heading towards India. It is time to recognize and gather our strengths, capacities and competencies to offer services to the local as well as the global markets. The Indian die and mould industry is evolving over the years and is competing with global players. With an increasing demand from industries such as automobiles, auto components, packaging, plastics, electronics, electrical, healthcare and machine tools, we can see a huge opportunity for the industry. The industry is currently undergoing a change in terms of manufacturing practices, which include maximum machine utilization, and adoption of latest and smart technologies aimed at maximizing productivity and business efficiency to deliver products of the desired quality. As the tooling industry requires high capex, it is challenging to transform from conventional manufacturing practices to the latest technologies. Another challenge is that it lacks skilled labour to work with updated procedures. The tooling industry is also owner driven and lacks industry updates, which are some of its hurdles. Besides this, the tooling industry also has very insignificant digital presence, which is a must in today's times.

About Die & Mould India

Die & Mould India has played a vital role in the Indian die and mould industry over the years. It helps businesses from various parts of the country, and even the world, connect with industry players and their suppliers all at one location. It facilitates exchange of knowledge, showcases the latest technologies and gives participants and visitors an opportunity to network. Every edition of Die and Mould India has so much to offer. We will be showcasing Book My Tool – Unique Digital platform exclusively for the Indian tooling & related industries in the form of website (www.bookmytool.com) & mobile applications (Android & iOS) to showcase their competencies, expertise and machining capacities. For instance, Book My Tool can help its users connect with each other and share resources across the network. It can also fulfill buying requirements or display the products/service offerings; it can post vacancies available at various organizations and a lot more to help its users' business grow locally as well as globally.

Business outlook

The Indian tooling industry has a huge potential to grow amidst all the challenges arising worldwide. The global market is already looking at India as a competent manufacturing hub as an alternative to the existing other Asian countries.



Schmiedewerke Gröditz GMH GRUPPE



**STEEL
WORKS**



**OPEN DIE
FORGINGS**

**ESR -
STEEL**



**PLASTIC
MOULD
STEEL**



**HOT
WORKING
STEEL**



PARTNER IN INDIA



ANAND MOULD STEELS PVT. LTD.

ashish@anandsteels.com
MUMBAI

south@anandsteels.com
HYDERABAD

north@anandsteels.com
GURGAON

www.stahl-groeditz.de

www.anandsteels.com



T. S. Gopalakrishnan,
Director,
Multiple Special Steel Pvt. Ltd.

About the Indian tooling industry

The tooling industry is an important industry for which our government shows apathy and the OEMs it serves does not show empathy. I fervently hope that this situation will change in the near future. The government has now opened its eyes to understand our plight, but to make OEMs open their minds, the tool rooms need to unite. The industry faces many challenges, but the major ones are related to finance, technology, skilled manpower, power, red tape, feudalism of OEMs, and monopoly attitude of many raw material suppliers. Fortunately now, from over dependence on the automotive industry, slowly but surely the industry is waking up to the opportunities available in other sectors such as defence, railways, metro, white goods, toys and EVs, among others.

About Die & Mould India

From the first Die & Mould Exhibition in 1998 by TAGMA to the upcoming one in April 2022, the journey has been a memorable one. TAGMA is the only apex association of tool rooms in India. TAGMA is still struggling to unite the more than 3000 tool rooms dotted across the country. Our journey together started from 2006 Die & Mould India, which was held in Chennai. The event helped to increase our customer base from Madurai in the South to Ludhiana in the North. We will be showcasing our tool and alloy steel products sourced from LucchiniRS at the exhibition. Apart from that, to augment the clarion call of our central government, we are promoting an alternative to tool steel inserts, core and cavity, in the form of high-strength aluminium alloy.

Future outlook

Sky is the limit here, quite literally. The only thing is that the tool rooms should move from being automotive centric to white goods, electrical & electronics, toys, metros, railways, defence, and aerospace centric. A definite paradigm shift must become the order of the day and TAGMA must play an active role in this.



Daxesh Vyas,
Proprietor,
Daxter Tools

About the Indian tooling industry

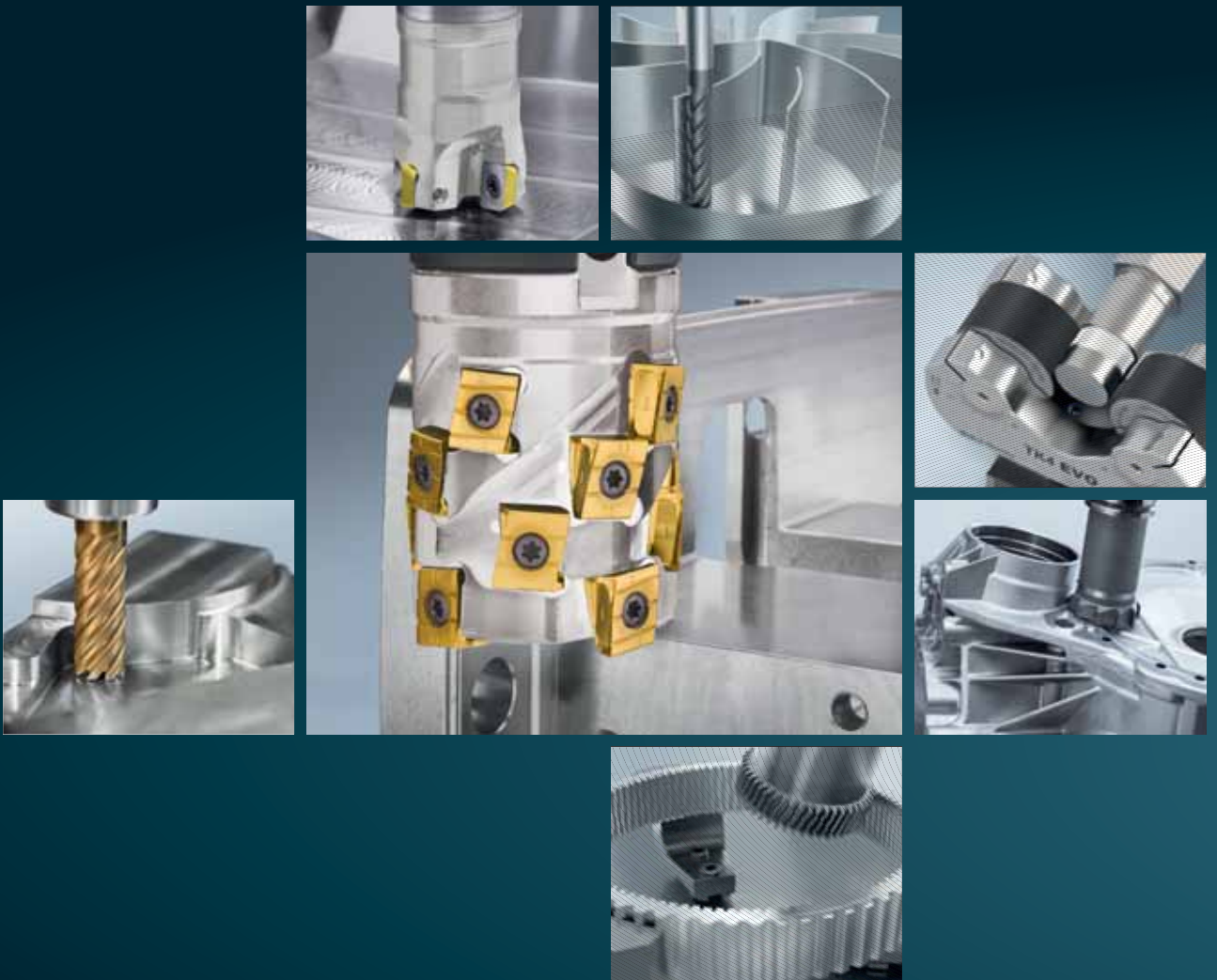
COVID-19 affected 2020 and the first half of 2021, but the tooling industry geared up. It now caters to the new tooling demands for upcoming OEM projects. The current buzzword for all products (auto, appliances, household) is short development time and short product life due to ever-changing demands of the consumer, government norms, and technological innovations. This has resulted in shorter development time, lower tool life expectation, and low tooling cost from the customers. Besides this, the Indian tooling industry faces a number of challenges. Shorter timelines, stretched payment terms from OEMs, lesser profit margins, scarcity of skilled labour, higher funding costs from banks, and competition from foreign toolmakers, to name a few.

About Die & Mould India

Die & Mould India brings together all the stakeholders involved in the die and mould industry under one roof. It is a great platform for Indian toolmakers to showcase their strengths, as it has a major appeal among both Indian as well as overseas OEMs and Tier-1s. Over the years, Die & Mould India has helped us build contacts not only with customers but also machine manufacturers and other important members of our supply chain. This has helped in the betterment and advancement of our organization. At the upcoming Die & Mould India exhibition, we will be demonstrating our expertise in automotive parts such as HVAC, tanks, trims, exteriors & interior parts for 4 and 3 wheelers, body, seat and other parts for two wheelers, our capability for 2K moulds, and our infrastructure, which is built to deliver first-time right parts for customer satisfaction. We will also showcase the addition of our injection moulding plants, which will further enhance our presence and our vision of delivering total solutions aimed at total customer satisfaction.

Business outlook

The Indian tooling industry is growing in spite of the increasing competition globally. It is a substantial contributor to the country's GDP and revenue generation; it has the potential to expand further. However, toolmakers are facing many challenges and TAGMA needs to intervene to redress their issues. For instance, till date most OEMs rely on foreign toolmakers for bigger tools for auto parts. To help local toolmakers, TAGMA could work jointly with the Ministry of Trade & Commerce to develop infrastructure, and arrange for subsidized funding. Eventually, Indian toolmakers will not only cater to all the tooling requirements locally, but will also become a hub to meet global tooling requirements.



HIGH PERFORMANCE FOR YOUR MACHINING TASKS

LMT Tools is one of the most renowned experts in the development and production of precision tools. Our passion for precision ensures that our industrial customers implement unparalleled quality at the interface between the machine and the workpiece.

We offer an extensive product range of standard and special tools focusing on milling and tapping, rolling systems, gear cutting and advanced tooling.

Exactly the best solution for your requirements.

lmt.in@lmt-tools.com
+91 2135 614960

www.lmt-tools.com





Hardik Doshi,
Director,
Orange City Alloys Private Limited

About the Indian tooling industry

We witnessed a slowdown during the first year of the pandemic. But, as the months passed by, the scenario started improving. FY 2021-22 witnessed one of the best financial years with respect to growth – it recorded the highest GST collection ever. Besides, policies that are favourable to increase exports and also to become self-reliant are already in place. The year 2022 will have more opportunities for the aluminium, plastic, and die and mould industries, especially as the demand for electric two and four wheelers increases. As the world changes and new technologies emerge, the manufacturing sector too has been adopting technologies to ensure that their products are accurate. Newer facilities equipped with Industry 4.0 technologies are being set up to cater to the needs of the toys, medical, aerospace, and automobile, among other industries.

Challenges in the tooling industry

The Indian tooling industry has been facing a number of challenges. The main challenge, I feel, is that there are very few clusters in India. Die and mould industries are mainly concentrated in Chennai, Hyderabad, Delhi-NCR, Mumbai and Pune. The smaller cities in India need more clusters. Another challenge is finding skilled manpower to operate the machines. Also, the rate of steel has increased twofold in the past one year. Such high increase in prices will make it difficult for mould makers to survive.

About Die & Mould India

TAGMA's Die and Mould India exhibition has helped us market our products and promote our capabilities in the die and mould industry. It has successfully connected us with many suppliers, which has helped our business grow. Like our business, Die & Mould India has also helped many industries grow and shown them new technologies in the market that they should adopt in order to help their business grow. Our past experience with Die & Mould India was wonderful. This is the second time that we will be participating in TAGMA's Die & Mould India. We are a mould base manufacturer and produce mould base of 20MT for 3200Tons press. Orange City Alloys Pvt. Ltd. is the only manufacturer of pattern, steel casting and mould base in central India. We will be showcasing the process of manufacturing the steel casting and the bigger sizes of mould base manufactured by our team.

Future outlook

India is set to witness exceptional growth over a decade. Many OEMs are expressing interest in setting up their production hubs in India. The demand for medical, toys, LED lights, plastic utility and automobile sectors will increase the demand for the Indian tooling industry twofold within a period of five years.



Ashish Varma,
CEO,
Prime Graphite Pvt. Ltd.

About the Indian tooling industry

The Indian tooling industry is gearing up for new products and projects to meet customers' demands even in such challenging and volatile times. In recent years, there are certain trends shaping up, which include customers looking for end-to-end solutions, reduced timelines for new product development and relentless focus on quality, among others. To meet these demands, Indian toolmakers need to have an excellent operational manufacturing system in place.

Challenges in the tooling industry

The biggest challenge is to compete with imports. We still have a huge number of moulds and dies being imported into India. Another challenge is cash flow and managing client expectations in terms of quality, cost and delivery.

About Die & Mould India

TAGMA's Die & Mould India is an important event. It provides a platform for the tooling fraternity to come together and network, showcase new technologies, meet subject experts, and interact with OEMs and potential clients to exchange ideas. We are into EDM solutions. Our products like Machined Graphite EDM electrodes, mould insert parts, and synthetic die electric, which we offer across the Indian market to all die and mould customers, will be the highlight of our booth. We are certain that we will meet some great customers at this edition of Die & Mould India.

Future outlook

In the Indian manufacturing industry, the scenario is challenging, but the overall business outlook remains positive. I believe, we, in India, are ideally placed to meet the current volatility in the global economies and can place ourselves as a global manufacturing hub. I am highly optimistic about the coming years. We have already started seeing an upward trend.



UE PRESS TOOLS PRIVATE LIMITED



Design, Manufacturing, Part Proving and Supply

- Press Tools (Tandem, Progressive, Auto Transfer Tools)
- Gauges, Jigs, Checking Fixtures, Assly Fixtures & Welding Fixtures
- Press / Stamping Parts Production
- Injection Moulding Parts Production



Facilities

- In-house Machine shop with VMCs and Wire-EDMs
- 50+ Power Presses
- 10+ Injection Moulding Machines
- Welding Facilities
- In-house Design Team



📍 No.320, SIDCO Women Industrial Park, Chennai – 62.
📍 7/8-D, CTH Road, Ambattur Industrial Estate, Chennai – 58.
☎ +91 9789056717 / + 91 9500731887
🌐 Website : www.uniqueengg.co.in





Karan Dharnidharka,
Managing Partner,
Girdharilal Agrawal & Co.

About the Indian tooling industry

The Indian tooling industry will ride the growth curve of the overall manufacturing industry. During 2021, we witnessed the demand strengthening beyond pre-COVID levels, and expect the same to sustain and grow in 2022. India is emerging as a manufacturing hub, especially with our China+1 strategy, and is likely to attract demand from overseas OEMs, which will eventually boost the tooling industry too. There is a gradual (and fast) shift in focus from price to quality. We have observed that across industries, there is an increasing emphasis on die life, consistency and reliability. People are willing to pay more for quality, because in the long run, the increase in performance far outweighs the price. This has also prompted Indian steel manufacturers to pay more attention to tool and die steels.

Challenges in the Indian tooling industry

The distribution network of tool and die steel is still largely unorganized and fragmented. This results in misrepresentation (inferior products being sold under the guise of reputed makes), which is often impossible to verify by the users. Consolidation of tool and die steel suppliers and higher traceability will result in authentic makes getting promoted, which in turn will benefit end-users.

About Die & Mould India

Die & Mould India is probably the most extensive platform for suppliers and users to come together. Since the nature of this industry is mostly fragmented, it is a strenuous task to build a customer-supplier network. Die & Mould India provides the necessary avenue to facilitate the creation of this network. At this edition of Die & Mould India we will be showcasing tool and die steels for hot work and cold work applications.

Business outlook

Tooling is an indispensable operation across all manufacturing sectors - auto, power, machinery, aerospace, defence, consumer durables, plastics, ferrous and non-ferrous metals, and so on. And, in almost all these sectors, India is fast emerging as a global choice (in line with the aforementioned China+1 strategy). Thus, we are optimistic about a healthy and sustainable growth in the Indian tooling industry.



Sudhakar N. A.,
SBU Head – Toolworks & Battery Components,
Mangal Industries Ltd.

About the Indian tooling industry

The Indian tooling industry is back on a positive note, post the pandemic. The OEMs' perception of Indian tool rooms is slowly changing, and the trust and confidence in the capabilities of Indian tool manufacturers have improved a lot over the past few years. Non-automotive sectors, which were meeting a large part of their tooling demand through imports, have started preferring domestic suppliers. Automotive, plastics, consumer appliances and packaging continue to register faster growth, creating reasonable demands for tools in India. However, lack of skilled workforce and high Investments are some of the significant challenges faced by the Indian tool rooms. Also, non-availability of special steels for core and cavities of moulds in comparison to overseas steel quality standards is a hurdle. India needs to develop tooling SEZs/clusters close to automotive/manufacturing hubs for close collaboration and reduction in the lead time.

About Die & Mould India

Since this is the first time that we will be participating in the Die & Mould India exhibition, we are very excited about it and would like to meet and network with the industry fraternity to exchange ideas and knowledge. We are targeting over 100 potential customer visits to our stall at the event. We hope to utilize this exhibition as a launch pad to demonstrate our engineering expertise. We will be showcasing our injection moulds & components, stamping tools, die casting dies, and jigs & fixtures, at the exhibition. With a lot of action among our customer industries and the tool industry converging for the first time after 2018, we expect this to be a successful exhibition.

SHAPING POSSIBILITIES



Get in Touch

Mr. Amit Kumar Parashar - aparashar@subros.com - 9818172871
Mr. Sanjay Mohan - sanjay.mohan@subros.com - 9971155767

Subros Tool Engineering Centre, A 16, Sector-68, Noida, Gautam Budh Nagar, U.P. 201304

A JV Company Between **Subros** **SUZUKI** **DENSO**

STEC
SUBROS TOOL ENGINEERING CENTRE
www.subros.com



Sanjib Chakraborty,
Managing Director,
Hurco India Pvt. Ltd.

About the Indian tooling industry

A slowdown was observed for two years because of the pandemic. But the market is again shaping up and we are seeing a steady surge in demand. The year 2022 will be busy for all of us and we expect a similar trend to continue over the next few years. The Indian die and mould industry has matured more in the past few years using world-class technology. The dependency on imported tools is slowly reducing, as the capability and performance of the Indian die and mould industry is improving. There will be a steady growth in demand for high-precision dies and moulds from domestic manufacturers. However, the Indian tooling industry is facing several challenges. Lack of skilled workforce, high financing cost, lack of outsourcing ecosystem, and uncertain material cost are some of its major challenges.

About Die & Mould India

TAGMA's Die & Mould India is a much-awaited event for the Indian die and mould industry. It is a knowledge-sharing platform, which is the need of the hour for the industry. The best part about the exhibition is that you can find both types of participants – the machine tool users as well as the machine tool suppliers. This exhibition has always helped us promote the right products to the right customers. This is first time in India that we will be showcasing the Takumi along with Hurco. There will be high-speed and high-performing VMC from Takumi range with bridge-type structure for high-precision tool rooms. We will also showcase 3-axis VMC of Hurco make with tilting table performing 5-axis simultaneous application. We will demonstrate the latest motion control technology, which can make our customers profitable under stiff global competition.

Business outlook

After decades of efforts, the Indian tooling industry is getting the much desired acceptance in the global market. We can see a clear shift of demands towards domestic tool suppliers in the last few years. It is an opportunity for all of us but our business outlook should be to grab these opportunities.



Sohrab Kothari,
Co-Founder,
Sahas Softech LLP

About the Indian tooling industry

The Indian tooling industry has grown to about 25% of the total AM applications worldwide. I expect the value of the Indian tooling industry to grow significantly in 2022. Today, the latest technological trends are driving the die and mould industry by providing cost-effective, energy-efficient, and environment-friendly solutions to the die and mould makers. With new-age 3D printing technologies, companies are now being able to easily develop patterns in production-grade plastic that are not subject to material property variation caused by the changes in temperature and external conditions. However, lack of skilled workforce, high financing costs, lack of outsourcing ecosystems, and inverted duty structures are some of the major challenges the tooling industry currently faces. The industry needs the government's support to redress these issues.

About Die & Mould India

Die & Mould India imparts useful knowledge to tool and gauge manufacturers. This event focuses on the promotion and encouragement of improvements in tool room industries for greater efficiency and to enhance the contribution of the tool room industry to the growth and development of the Indian economy. At this edition of Die & Mould India, we will be showcasing various AM applications, Reverse Engineering 3D scanners, and new material possibilities in AM. We have samples from multiple industrial applications. We also have a few demo machines to showcase at the expo.

Business outlook

The outlook for India's manufacturing sector seems to have improved in the October-December 2021 quarter, even as the cost of doing business remains a cause for concern and hiring prospects remain subdued. The Indian industry is looking at self-sustainable growth through the 'Make in India' movement. But we still are dependent on imports for raw materials and electronics. High raw material prices, high cost of finance, the uncertainty of demand, shortage of working capital, high logistics cost, low domestic and global demand due to supply chain disruptions are some of the major constraints that are affecting expansion plans.



35 Years of Commitment

We are One Stop Solution Provider in manufacturing & supplies of Plastic Injection Moulds, Blow Moulds, Injection Moulded and Blow Moulded Components & Assemblies to Automotive & Non-Auto Industry.



Making a Mark of Excellence in Mould Manufacturing



M/s. Abhijeet Dies & Tools Pvt . Ltd.

(Corporate Office & Tooling Plant)

Survey No.:173-B, H.No.:12,14,15,
Village- Chandrapada, Naigaon (East), Palghar – 401207.

Landline Number: + 91-9136993791 / 92 / 93 / 94.

E-Mail: enquiry@abhijeetplastics.co.in

Website: www.abhijeetplastics.co.in

Group Companies: Moulding Plants

- Abhijeet Industries, Dadra & Nagar Haveli
- Abhijeet Technoplast (India) Pvt. Ltd., Nasik
- Abhijeet Plastics (India) Pvt. Ltd., Pune
- Abhijeet Industries Pvt. Ltd., Sanand.
- Abhijeet Ranee Polymers Pvt. Ltd., (J.V.) Chennai



Shreyansh B. Hippargi,
Managing Director,
QVI India Pvt. Ltd.

About the Indian tooling industry

The die and mould industry is the backbone of the manufacturing sector. As the manufacturing sector grows, we will see equivalent growth in the die and mould sector. The FMCG sector is also looking good, and this augurs well for the die and mould sector. After almost two years of dealing with the pandemic, FY 22-23 looks favourable, as the manufacturing sector is set on the growth path. We have seen initial trends in growth in almost all the sectors, which makes us believe in strong growth this fiscal. However, we need to watch how the Ukraine war situation evolves in the coming days. The rising raw materials cost is one of the major concerns for the Indian tooling industry. Besides, availability of skilled labour is also a big challenge; the tooling industry requires skilled labour, which is difficult to get.

About Die & Mould India

Die & Mould India has been very effective in promoting the business interest of the industry. It has also evolved over the years and serves as a platform to showcase the latest technologies and trends in the die and mould sector. The exhibition has helped bring relevant customers, and suppliers under one roof. At this edition of Die & Mould India, we will be showcasing our latest video measuring systems, which include SNAP 200 and Flash 200 machines. SNAP is our single-shot instant measuring system, ideally suited for large volume parts. Flash is our high-end multi-sensor measuring system. With Flash, you have the flexibility of using a camera, probe and laser sensor, which enable measurement of all critical features.

Business outlook

The Indian tooling industry has evolved in the last two decades, with increase in the use of high-productivity tools. Besides, the use of high-end multi-axis CNC machines with the latest controllers have enhanced the quality of tools, as well as increased productivity. The Indian tooling industry is at par with the best countries globally; its outlook definitely looks stronger.



Surendra Kumar,
Partner,
PI-TECH Services

About the Indian tooling industry

As the country moves towards e-vehicles, and vehicles with reduced total weight, there are higher expectations from the plastic mould industry, as compared to those from the sheet-metal industry. Progress is apparent already. The use of high-frequency spindles for die-polishing is in its inception in India, while it is already being used in progressive countries of Asia, Europe, and the US. It is good that the process has started in India with robotisation. However, the biggest challenge comes from tooling being supplied from China or other countries in Asia. The other challenge is the trend of our government in raising customs duties on die elements. For the last two years, a new tax SIMS has been levied by DGFT on import of die-springs, despite the fact that high-quality, longer-life die-springs are not produced in India. So, the cost is going up for the Indian tooling industry.

About Die & Mould India

Die & Mould India is an important event for the die and mould industry. It offers an opportunity for the industry to be updated about the latest developments, and gives an opportunity to the exhibitors to receive interested visitors of value, perhaps unknown before. At this edition of Die & Mould India, PI-TECH Services will be displaying Self-Lubricating Self-Cooling, Longer-Life Gas Springs from Quiri of France. We will also display High-Frequency Compact Spindles of upto 100,000 r.p.m. for Die-Polishing from SycoTec, Germany. For the Sheet-Metal industry, on display will be High-Speed Pneumatic Feeders from Herrblitz of Italy. Lastly, there will be an array of Flat-Wire Die-Springs as per ISO-10243 from Bordignon of Italy, and as per JIS B-5012 from Samsol of Korea.

Business outlook

The current phase of COVID-19 has given an opportunity to India to approach customers at destinations, which were earlier catered to by China or Korea. We foresee higher business turnover for the Indian tooling industry, both in terms of domestic consumption as well as exports.

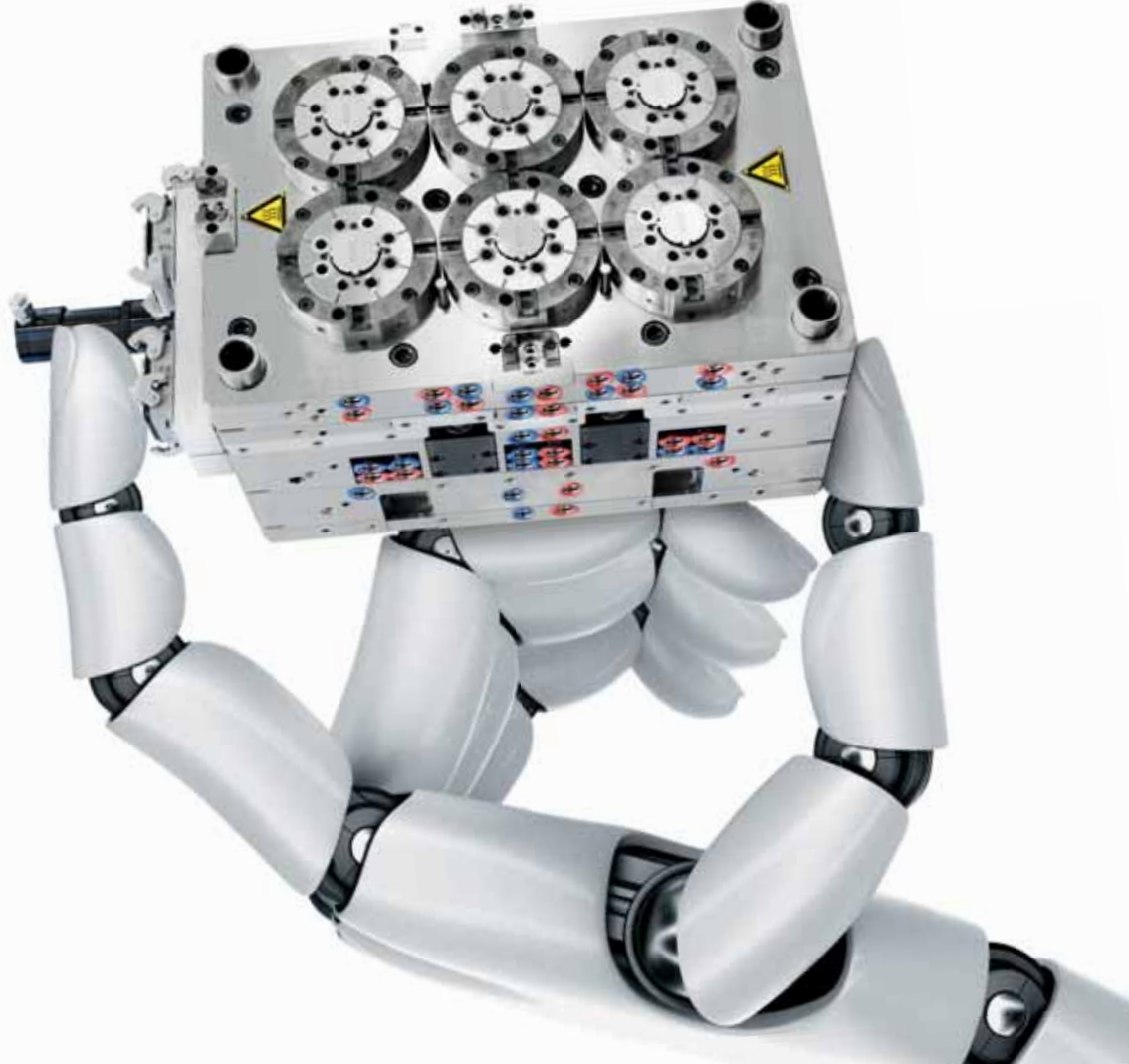


ZAHORANSKY
PERFECTLY DIFFERENT

The One-Stop Solution Provider for Automation & Molds



Passion and Perfection in Molds, Machinery and
Automation. Black Forest Quality by ZAHORANSKY



More information: zahoransky.com

Hot Runner System

Innovative Streamrunner® is the world's first 3D printed hot runner system on the market which offers maximum freedom of design and completely new possibilities in hot runner technology. Using this technology, flow channels can be configured with the optimum rheological layout, avoiding sharp edges and areas with poor flow. The gentle passage of the melt through the manifold makes for considerably lower shear stress in the material, resulting in better quality mouldings. And the flow-optimised design speeds up colour changes too, since the melt can be divided and deflected over-generous radii. In the future, it will also be available as a needle valve version. This can be seen on the HASCO stand in the form of a compact, fully balanced 20-drop system.

HASCO hot runner will also showcase the innovative 6 to 96 zones controller Primezone H1281 which stands out through its intuitive operation, precise control, and maximum production reliability.

For more details, visit:

HASCO INDIA PVT LTD (Hall 1, Booth D43)



Vertical Machining Center

740V is Compact & High productivity vertical machining center ideally suitable for small aluminium & cast-iron components on mass production basis, loaded with BT-40 spindle & 20 tool side mounted ATC. High precision Roller guideways, ball screws and high rapid traverse helps in achieving high degree of positional accuracy at faster rate. With a rigid structure and high precision parts one can achieve high accuracy and productivity. The 540V can be offered with linear pallet changer or rotary pallet changer & CTS. Machine is suitable for continuous cutting along with 30 tools automatic tool changer & higher spindle speed of 10000 rpm. On the other side, 1580V is High Performance Machining Center, capacity to machine bigger size heavy-duty components. This machine is ideally suitable for machining Die and Mould components. High precision LM guide ways, ball screws help in achieving high degree of positional accuracy at faster rate.

For more details, visit:

Ace Manufacturing Systems (Hall 1, Booth F01)

Products DMI

Tool Setting Probes

Economic solutions for tool breakage detection and tool length measurement in CNC machining centres. Measurements of unrivalled speed and precision under the most adverse manufacturing conditions using a modern measuring mechanism based on a linear working principle and optoelectronic switch signal generation. It provides, Wear-free, optoelectronic signal generation; High-precision and is equipped with modern measuring mechanism using linear working principle. Due to the linear working principle the probe provides a minimal and torque-free measuring force. Even the most sensitive and smallest tool diameters can be measured extremely precise.

For more details, visit:

Blum Novotest Measuring and Tesint Technoloy Pvt Ltd
(Hall 1, Booth G01)



CAD/CAM Software

ZW3D is cost-effective CAD/CAM software for 3D modelling, mold design and machining, which takes engineers from concept to finished product in one easy-to-use, single collaborative environment. Supported by its Show-n-Tell built-in learning system, ZW3D comprises data exchange to allow efficient reuse and sharing of designs, hybrid modelling with its unique Overdrive kernel, mold and die module with cavity preparation tools and standard component libraries, and intelligent, adaptive CNC machining from 2-axis to 5-axis. The software can directly read many 3D CAD software formats, such as NX, SolidWorks, CATIA, Creo and Inventor and support 3D exchange standards, including DWG, STEP, IGES, ACIS, DXF, Parasolid, SAT, and STL.

For more details, visit:

Zwindia Software solution Pvt Ltd (Hall 1, Booth G56)

Milling Cutter

EXSIX Shoulder six for highly efficient shoulder milling with high rigidity 6 corner insert. It provides excellent chip removal rate useful for wide application such as face milling, slotting and plunging. Feature of the cutter includes: arc/wiper geometry on the periphery of cutting edge; positive axial rake angle; economical double-sided insert (6 corners) 7.5 mm thickness provides high rigidity enable stable machining for roughing.

For more details, visit:

Dijet Industrial Company Limited
(Hall 1, Booth G08)



Buderus 2738 ISO-BM

For high quality Moulds where there is no compromise on quality



Buderus 2738 ISO-BM is stocked extensively at:

PCK Buderus (India) Special Steels Pvt. Ltd.

Corporate Office : PCK HOUSE, New No. 84, Old No.13, South West Boag Road, T. Nagar, Chennai - 600 017
Tel : + 91 44 2434 6503 / 1904 / 8638 Fax : + 91 44 2434 1181 Email : info@pck-buderus.com

Chennai Stock Holding Center Machining Division

No. 1/512, Ponni Amman Koil Street,
Gandhi Nagar,
Vengaivasal, Chennai - 600 073.
Tel : + 91 44 2278 1107
Fax : + 91 44 2278 1869
Email : info@pck-buderus.com

Pune Stock Holding Center Machining Division

Gat no 191-192-193,
Alandi-markal Road,Vadu Khurd,
Tal-Haveli, Pune - 412216.
Tel : + 91 20 6678 3000
Fax : + 91 20 6678 3001
Email : punewh@pck-buderus.com

Ludhiana Stock Holding Center

C-I, Industrial Area C,
Jaspal Main Road,
Kanganwal, Ludhiana - 141 120.
Punjab.
Tel : + 91 161 6532016 / 2017 / 2510073
Fax : +91 161 2510072
Email : ludwh@pck-buderus.com

www.pck-buderus.com

PCK-Buderus | Special Steels

Buderus 2738 ISO-BM

PREMIUM QUALITY PRE-HARDENED MOULD STEEL



Shopping Trolley Mould

Corporate Office :

PCK HOUSE
New No. 84, Old No.13,
South West Boag Road,
Chennai - 600 017
Tel : + 91 44 2434 6503, 2434 1904
Fax : + 91 44 2434 118
Email : info@pck-buderus.com

Pune Office :

Warehouse & Machining Division:

Gat. No. 191, 192, 193, Alandi-Markal Road,
VaduKhurd, Tal. Haveli, Pune - 412216/INDIA
Tel. : 020 66783000/66783002 to 66783023
Fax : 020 6678 3001
E-mail : punewh@pck-buderus.com
pckpune@vsnl.net

www.pck-buderus.com

Ludhiana Office,

Stock Holding Center

C-I, Industrial Area C,
Jaspal Main Road, Kanganwal,
Ludhiana - 141 120. Punjab.
Tel : + 91 161 6532016, 6532017
Fax : + 91 161 2510072
Email : ludwh@pck-buderus.com

PCK-Buderus | Your reliable Partner in India for **Buderus** | Edelstahl

‘Indian toolmakers should aspire to be recognized globally’

“To achieve this, they need to invest in skill development, infrastructure, and the latest technologies. They should incorporate smart manufacturing technologies in their system to reduce errors and dependency on manpower for all types of jobs,” says Virendra Singh Bhadauria, Deputy General Manager – Projects, Hero MotoCorp Ltd.



Q What are the emerging trends in the global automotive industry vs the Indian automotive industry?

India is the leading country as far as two wheelers are concerned. Our manufacturing capacity is also one of the highest in the world. We have the most stringent emission norm, BS6, in place and from April 1, 2023, the OBD2 norms are also planned to be introduced, which will help users identify the abnormalities in the vehicle, if any. This means that two wheelers are going to become smarter by the day with the use of smart technologies such as electronic sensors and software. I foresee an increase in the use of electronic content in vehicles in the coming days. Now, it's going to be possible to control and know the health of a two wheeler using a smartphone.

These are some of the emerging technologies and I am happy to share that India is one of the leading countries to implement all of these new concepts and technologies.

Electric Vehicles (EVs) is another major entrant in this segment. Almost all the two-wheeler OEMs have either entered this segment or are soon going to enter it. EVs is one segment that has also seen new entrants. Nowadays, many start-ups are developing electric two wheelers. Besides, the government is pushing for EVs by launching many customer-friendly schemes. Also, gradually, bikes are becoming a lifestyle product. This means good business for the off-road bikes. Besides, there are several biker clubs. So, in India, a bike is not just for commuting but is a lifestyle product.

In a nutshell, a few trends I see are related to safety/emission norms, EVs, and lifestyle bikes.

Q How will these trends impact component suppliers and toolmakers?

In the two-wheeler industry, changes are taking place faster than expected. This demands entirely new components and tools. So, I believe that the emergence of new trends will bring lots of business opportunities to toolmakers. We all know about how the transition from BS4 to BS6 generated huge business for toolmakers. So, any new change in the future is also going to have a similar effect. Also, because of the localisation trend among the automotive OEMs and campaigns like 'Aatmanirbhar Bharat', good business opportunities are definitely in store for Indian toolmakers.

Q In such a scenario, how should toolmakers align themselves with the changes that are taking place in the user industry, like the two-wheeler industry?

As far as toolmakers are concerned, I feel that

Tool Talk

our Indian toolmakers have to be technically competent enough. We have all the world-class machines and software, but the skills needed to develop some complex tools are what I feel is lacking in our tooling industry. So, we have to invest a lot in the training and development of our workforce so that they can adopt the changes and support the automotive industry by providing excellent products by following the first-time right philosophy.

Q You earlier mentioned about EVs being another major entrant. We all know that EVs are said to be the biggest game changers in the global automotive industry. In the two-wheeler industry specifically, it seems like EVs are gaining acceptance faster than expected and are set to impact component suppliers as well. In your opinion, how will the emergence of EVs impact the demand for tools in the automotive industry?

With the emergence of EVs, I think, many new designs will emerge. In the two-wheeler segment, the adoption of EVs is happening faster than the other segments of the automotive industry. Companies are adopting new technologies. These changes will lead to new designs and then, new tool makings, respectively. The tooling industry and the component industry that adapt to the changes happening in the automotive sector will have better business opportunities in the coming days. So, in the long run, I feel EVs are going to create huge business opportunities for tooling suppliers.

Q How about the BS6 norms? After the transition to BS6, which resulted in a surge in tooling businesses, what's next on the cards and when can we expect it to materialise?

The BS6 transition period has definitely been good for toolmakers. Although it was related to emissions, OEMs used it as an opportunity to refresh their models as well. We live in a constantly changing world. Everything is in the process of transforming into a better version of itself. With the advent of EVs and hybrid vehicles, the same is happening with the automotive industry. These new trends need new designs, which will result in the requirement of tools.

In recent times, most OEMs have launched new products. So, there might be a little break in between for tools. But soon, starting from this year onwards, the tooling industry will see a further boom because of EVs & other

technologies, as they will have different styling and requirements. All the body components and the smart lighting will still be required. This trend will have a positive impact on tooling suppliers and part suppliers.

Q That's encouraging to know. At Hero MotoCorp Ltd., what percentage of your tooling requirement is made by domestic toolmakers and how much is imported?

At the moment, we can meet almost 100% of our tooling supplies locally. We have worked very closely with our toolmakers and have developed them to this level, where they can match the quality and delivery standards of overseas suppliers. Some of the large body parts, for which we used to import tools, have also been procured locally. Body parts are 100% sourced locally, but lighting is one area wherein I would like to challenge domestic toolmakers. This is one area where Indian toolmakers are far behind compared to overseas companies. In India, for lighting tools, 90-95% of companies are dependent on overseas suppliers. So, this is one major potential area Indian toolmakers can look into.

Q What are your key observations while working with domestic and overseas toolmakers?

We have worked with many overseas suppliers and domestic companies, and have, over the years, reduced our imports to almost negligible. However, one thing I have observed is that the skill level suppliers from China, Taiwan and Korea possess is way ahead of Indian companies. Indian companies have improved a lot and given neck-to-neck competition, but they still lack in some areas, such as lighting tools. I have seen some companies specialize only in a certain type of tooling and, over the years, while doing the same type of tooling, they have acquired so much expertise. This is what we need to develop in India.

In my opinion, Indian toolmakers should not just aim to become import substitutes, but consider exporting as well. Indian toolmakers should aspire to be recognized globally. To achieve this, they need to invest in skill development, infrastructure, and the latest technologies. They should incorporate smart manufacturing technologies in their system to reduce errors and dependency on manpower for all types of jobs.

Q In the automotive or any industry, it's important to work with the right partner. What are the key evaluation factors for any automotive OEM before finalising on a tool room for a project?

That's a very good question. There are four evaluation factors, which are:

- ▶ First, we look for technical competency. The toolmaker should have a deep understanding of the product, the whole design, and also the manufacturing techniques.
- ▶ Second is commitment. We would like to work with toolmakers, who adhere to commitments. Once the dates are finalised, they should be able to meet that deadline.
- ▶ Third is cost. In the automobile industry, the product lifecycle has gone down. So, every year, we have to change the products and need tools. These tools cannot be used for any other products, as the design requirement is changing rapidly. So, we want to work with toolmakers, who can help us reduce the cost of tooling.
- ▶ Fourth is consistency. There's no scope or room for rejections. Toolmakers need to work with the first-time-right approach.

Q Technical capabilities, delivery timeline and costs are some of the factors that you look into. You have been also talking about the skill set of Indian toolmakers. According to you, what can be done to enhance the skill level of Indian toolmakers? What role can user industries like Hero MotoCorp play in handholding toolmakers and enhancing their knowledge?

For that, we first need to attract lots of youth to take up toolmaking jobs. Many young engineers are not ready to join the tool-making industry. Toolmaking is a specialized job and not a normal engineering one. Toolmaking is considered an art and to attract young engineers, we need to tell them the importance of this job and industry. For that, OEMs, component suppliers, and toolmakers will need to work together.

At Hero MotoCorp, we work with our tooling suppliers as a partner; we work very closely with them and solve challenges together. We share our learnings with them and are involved in the toolmaking process at every stage. It is never like we release a tool to certain toolmakers and now it's their responsibility; we work like a team to develop the tool. We need more and more collaboration. I feel TAGMA is the right forum to take the lead here.

Q Would Tier-1s and OEMs backward integrate and set up captive tool rooms, or nudge existing toolmakers to enhance capacity? What do you think will be the trend going forward?

Tool making is a specialized job and is independent of any sector such as automotive, white goods, and electrical, among others. OEMs usually have small in-house tool rooms to support their requirements. But as far as I know, none of the OEMs fulfil their demands in their tool room. They usually source tools from external companies. We would rather jointly work with toolmakers and share our knowledge with them. We prefer to outsource it rather than develop it on our own. Also, if we start doing everything on our own, we will lose our competency, which is developing great two wheelers.

Q What advice would you give Indian toolmakers?

Indian toolmakers have come a long way and by producing highly complex tools, which are of international standards, they should be very confident to go outside India. However, a few things that they can do are:

- ▶ They should target 100% accurate component in the first-style attempt itself. I have met many toolmakers, who proudly say that they produce 95% accurate tools on the first attempt, and I wonder why don't they target 100%? The first sample should be 100% okay dimensionally because the more trials you do, the more you reduce your profits.
- ▶ Also, toolmakers need to work on timelines. The timelines, which toolmakers give for the development of tools, in my experience, are a little on the higher side. They must work on their capabilities, and skills to reduce the timeline. Once, we had got a complex tool developed within record time in India. The vendor was not very confident about it, but closely worked with his team members and got the job done within the timeline. Now, he is confident about developing tools within the stated timeline. We need to challenge ourselves to build such confidence.
- ▶ Apart from this, as I have already mentioned earlier, we need to focus on skill development, need to upgrade infrastructure, adopt smart technologies, 3D printing in tools, digitalization.

I am very sure that the future of Indian tooling industries is going to be very bright. 🌈



**USBCO
STEELS**
PRIVATE LIMITED

EST. 1960 THE NAME YOU CAN TRUST

SISTER CONCERN



ASIA
ENGINEERING
SUPPLY STORES
PRIVATE LIMITED

AUTHORISED AGENT OF

sij | metal
ravne



EUROPEAN TOOL, DIE, MOULD, HIGH SPEED, STAINLESS, & SPECIAL STEEL SOLUTIONS

STOCKING PROGRAMME
ROUNDS, FLATS, SQUARES, BLOCKS

HIGH SPEED STEELS

M2, M35, M42, T1

T4, T5, T15, T42, ASP23, ASP30, ASP52, ASP60

HOT WORK TOOL STEELS

HOT DIE STEEL H13, H11, DIE BLOCK

DIN 2714, H21 2367, H10 (ESR AVAILABLE)

COLD WORK TOOL STEELS

HCHCR D2, D3, D6, OH255 (8% CR+2.5% MO

PREMIUM GRADE) OHNS 01 OHNS 07, S1, S7

PLASTIC MOULD STEELS

P20, P20+NI(2738), 2316, 2083

(HIGH HARD & ESR AVAILABLE)

ALLOY STEELS

EN24, EN31, EN36 EN19, EN353

STAINLESS STEELS

440B, 440C, 420MOD

**WE OFFER MACHINED, GROUND & HARDENED PLATES AND BLANKS
AS PER YOUR DRAWINGS AND SPECIFICATIONS.**

KOLKATA • MUMBAI • PUNE • BANGALORE • NEW DELHI
LUDHIANA • CHENNAI • COIMBATORE • AURANGABAD
RAJKOT • AHMEDABAD • HYDERABAD



CONTACT US

EMAIL: SALES@USBCOSTEELS.COM

MOBILE: +91 9820521753

WWW.USBCOSTEELS.COM

AN ISO 9001:2015 COMPANY

TAGMA India successfully organises multicity chapter meetings for members

Tooling industry stakeholders gather to discuss growth opportunities and challenges at TAGMA's chapter meetings. TAGMA's Executive Council promises many more such events in the year.



The Tool and Gauge Manufacturers Association (TAGMA) India organized a series of chapter meetings in Delhi, Chennai, Mumbai, Coimbatore, Bangalore and Pune between February 26 and April 6, 2022. The chapter meetings were aimed at giving all the industry stakeholders a common platform to discuss their growth opportunities and the challenges that impact them. In these six meetings, TAGMA connected with over 500 members and 50+ delegates from the user industry.

"A lot of restrictions were imposed during the pandemic. The market opened after two years. So, we thought of organising some events for our members and providing them a networking platform, where they can meet fellow toolmakers, and user industry professionals, to understand the market sentiment. We are pleased that all the events were successful and attended by a huge number of participants in all the cities," said D. M. Sheregar, President, TAGMA India.



TAGMA
INDIA

TOOL AND GAUGE MANUFACTURERS ASSOCIATION - INDIA

CHAPTER MEETINGS

Main Sponsors



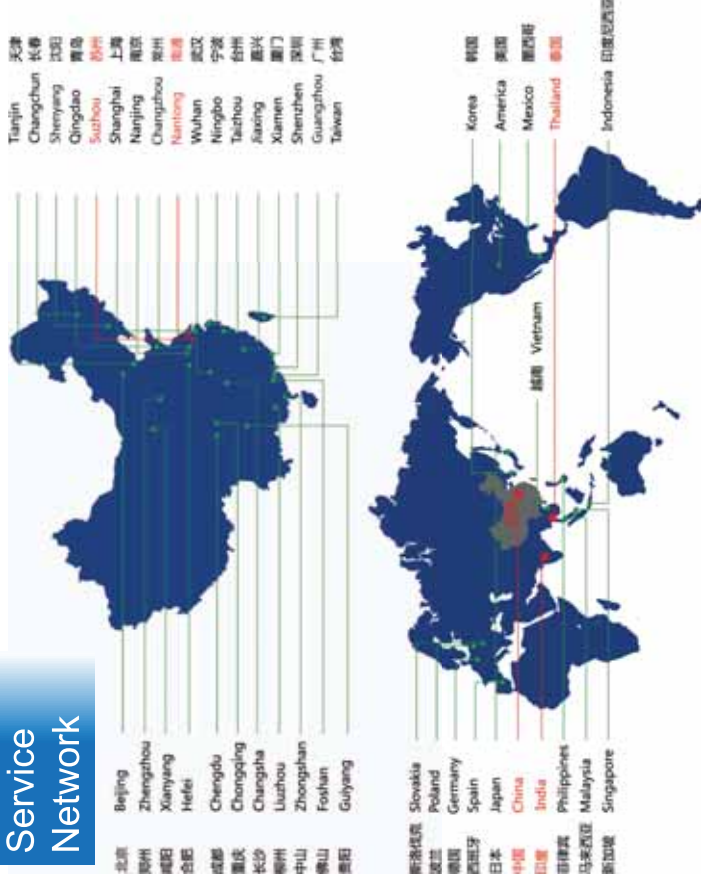
Co-Sponsor





HTS HOT RUNNER SYSTEMS

服务网点 Service Network



全国布局，为客户的生产运行保驾护航

National layout to escort customers' production and operation

430+

中国区域

人数China region
Number of staff

160+

海外区域

人数overseas
region
Number of staff

汽车客户群Automotive customer base



家电客户群Home appliance customer base



管道配件客户群Pipes & Fittings customer base

DEVU GROUP

Website:<http://www.szhts.net>

All the chapter meetings were sponsored by Yudo Hot Runner India Pvt. Ltd., Multiple Special Steel, and S&T Machinery India Pvt. Ltd. The sponsors made presentations during the event and highlighted the importance of the latest technologies in the tooling industry. They also shared their views about the latest developments in their respective products such as hot runner systems, CNC machining, and tool steel.

D. Shanmugasundaram, Vice President, TAGMA India, said, "During the lockdown period, when we were all working from home, we launched many digital events such as the first-ever virtual ITS and Tool Talk. We were determined to organise some physical events once the situation got better. The chapter meetings are the start of such events. This year, we have many events planned, including Die & Mould India 2022."

The chapter meetings were attended by executives from companies including Volkswagen, TATA Motors, IAC Group, USHA Industries, Motherson Sumi, Varroc, Torq Motors, Matter, SMR Automotive, Toyoda Gosei, and Force Motors, among others.

The Pune chapter meeting also featured a panel discussion on the 'Impact of changing dynamics on the tooling industry'. The panel discussion was moderated by Vishal Agrawal, President, Yudo India, and Chetan Chaudhary, Head - Interior and Exterior CVBU, TML, Pune; Manoj Patil, Head of S.R.M., Skoda VW, Mukul Singhal, VP - Engineering/R&D, TACO, and Arun Pratap Singh, Co-founder & COO, Matter, were the panelists. The panelists highlighted some of the changing trends and how they are going to impact the tooling industry. They also made some suggestions to Indian toolmakers for improvements and



The market opened after two years. So, we thought of organising some events for our members and providing them a networking platform, where they can meet fellow toolmakers, and user industry professionals, to understand the market sentiment.

DM Sheregar, President, TAGMA India.



encouraged them to not only cater to the Indian companies but also consider exports.

"The Government of India has said that the Indian manufacturing sector has the potential to reach US\$ 1 trillion by 2025 and contribute almost 20% of the total GDP. However, to have such a robust and growing manufacturing sector, we, as a country, must have a strong tooling industry. The whole ecosystem of the industry, comprising OEMs, Tier-I suppliers, government bodies and toolmakers, should work together to achieve this target," said Sheregar.

"The world is looking at India as not just a significant consumer hub, but also to make good business out of it by producing in India. With adequate support from the government and OEMs, I am confident that we can emerge as a powerful tooling destination that not only fulfils the domestic demand, but also plays a prominent role in the international market," concluded Shanmugasundaram.

The success of the six chapter meetings are testimony of the excitement toolmakers have for future opportunities. Considering the number of delegates, who visited these chapter meetings, it is evident that Die & Mould India, with the largest number of participants, in its 12th edition will be a huge success. TAGMA members and management hope to see maximum participation at the 2022 edition of Die & Mould India. 🌈



Scan Me



TGS
SPECIAL STEEL PVT. LTD.

"The Name You Can Trust"

A Joint Venture between
Tiangong International Company Limited and Kushal Metal & Steel Industries Pvt. Ltd.

High Speed Steel

M2, M35, M42, W4241, W4341, M2A, M-35A (Special grade for Taps) & M2B (Special grade for Hobs & broaches).

Hot Work Steel

H-10, H-11, H-11 Mod, H-13, H-13 Mod, 1.2367
Premium HDS - TGE-13 (ESR), TGGP-13 (ESR), & TGE-23 (ESR)

Cold Work Steel

D-2, D-3, DC-53, S7, O1, A2 & A8M

Plastic Mould Steel

1.2311, 1.2738, 1.2316, 1.2085, 1.2767 & NAK-80

Hss & Carbide Cutting Tools

HSS Straight Shank Twist Drill
HSS Taper Shank Twist Drill
HSS Taps | HSS End Mill | HSS Drill Blanks
Other General Tools | Carbide Tip Drills

Titanium

Bars, Sheets, Flats, Ingots & Tubes

Powder Metallurgy

High Speed Steel & Die Steel

**TG is the 1st largest
tool steel manufacturer
in the world as per
SMR Reports**

**Value Added
Services for Machining
& Ground service**



**Available form -
Rounds, Squares, Flats, Blocks, Sheets, Coils & Tubes**



**CONTACT
DETAILS**

Nitin Doshi
+91-95222 53268

Kushal Doshi
+91-99204 75125

L. K. Pandey
+91-93216 04504

Maunish Shah
+91-98920 66691

OFFICE : 8th Floor, Majestic Shopping Centre Premises Co-op. Society Ltd, 144 JSS Road, Girgaon, Mumbai - 400 004.

WAREHOUSE : Gala No. 3A/3B & 3, Bldg. No. 188 & 185, Indian Corporation Compound, Mouje Gundavli (Mankholi - Phata), Taluka: Bhiwandi - 421 302. Dist: Thane. (Maharashtra), India. ☎ 02522-662981



Mumbai +91-22-68520000/10-30
Ahmedabad +91 9224640506



kushal@tgkssl.com
marketing@tgkssl.com



www.tggi.cn | www.tgkssl.com
www.tzgttools.com

HURCO TAKUMI Open House 2022:

A new milestone in industry partnership for machine tools industry



HURCO TAKUMI Open House 2022 set a new benchmark in industry partnerships. More than 300 delegates registered and visited the two-day machining event held at Hurco India Technology Centre at Chinchwad, Pune. Hurco India, along with its 11 partners, successfully organized HURCO TAKUMI Open House 2022, with a focus on making the latest machining technologies and processes affordable and adaptable for Indian manufacturers.

HURCO TAKUMI Open House 2022 held during March 15-16, 2022, ended with a spectacular achievement for Hurco India as well as for Accutech, Blaser Swisslube, Blum-Novotest, Haimer India, Hexagon Manufacturing Intelligence, REGO-FIX, Renishaw India, Sarda Magnets, SolidCam India, ZECHA, and Machine Maker.

The guests of honour Mr. O. P. Singh from OM Galaxy,

Mumbai, Mr. Malkit Singh from Panesar Agriculture, Ludhiana, the first customer of Hurco in India, and Mr. D. Subramanian from Chennai CNC, another major user of Hurco machines, graced the opening session of the Open House. "We are delighted with the excellent response we received during the Open House. With our partners, our aim of making machining technology affordable and adaptable, led to the success of the event with an appreciable

Event

number of delegates turning out from Pune as well as other regions," said Mr. Sanjib Chakraborty, Managing Director, Hurco India.

On Live Display

Five machines were under live display at the Open House. Hurco's range of machines included VM 20i Machine, VMX 42i with 5-axis simultaneous application, and TMM10i High-performance Turn-mill Center, while Takumi's Vertical Machining Center models PV1052 and H12E were on live demonstration of high-precision die mould components.

REGO-FIX brought the pioneering powRgrip solution to the event, Renishaw demonstrated NC4+ Blue High Accuracy Laser Technology, along with Equator and Primo Probe, and ZECHA displayed its cutting-edge PEACOCK and IGUANA cutting tools to achieve high-precision machining. Accutech Tools & Solutions showcased the LMT Cutting Tools with the Callington Metal Working Fluids at the event. HAIMER India displayed its Microset Tool Presetting System, and Sarda Magnets displayed MagnaSlot 50 work-holding solutions, SolidCam India its iMachining, Blaser Swissslube their Liquid Tool, Blum-Novotest their latest probes, and tool setters, Hexagon Manufacturing Intelligence its EspiritCAM and WORKNC during the two-day event.



Machine Maker's special print edition

At the opening ceremony, Machine Maker launched its special print edition, which was unveiled by Mr. Chakraborty and Mr. Joseph Braun, Senior Vice President – Global Brand Manager, and Head of Asia Operations, Hurco Companies, Inc., which was further distributed to the delegates of the event. The registered participants were also shared digital copies of the special edition, where a special section on the Open House was featured.

The Outcome

The Open House created huge interest among industry players and several companies shared their willingness to partner with Hurco. Keeping the event focused on Metal Cutting and Die & Mould solutions, and due consideration regarding the space and focus, the 11 industry partners were selected.

The event brought about international exposure to India's machine tool innovation. "We are confident that the global expertise of Joseph [Braun] would not only help in acquiring a strong customer base, but also help Hurco's global R&D team to come up with more competitive solutions for the Indian machine tool market in the future," said Mr. Chakraborty.

Concluding the event Mr. Chakraborty said, "With the encouraging response, we aim to organize many such events across India with our industry partners." He then requested all the industry partners to share information and leads, and take this collaboration to a more constructive level. 🌈

In 3-4 years, PLI to account for 13-15% capex in key sectors

Of the INR 2.5-3 lakh crore potential spend under the scheme, 60% approved already



Image used for representation only. Courtesy Envato Elements

The implementation of the Production Linked Incentive (PLI) scheme will lead to a potential capital expenditure (capex) of INR 2.5-3 lakh crore over the scheme period and will account for 13-15% of average annual investment spending in key industrial sectors over the next 3-4 years, a CRISIL analysis shows.

Since its introduction in March 2020, PLI has been announced for 15 sectors, involving government incentives to the tune INR 1.93 lakh crore. Of this, 50-60% is to be spent on sectors with domestic

manufacturing and export focus, and the rest on import localisation.

CRISIL's analysis indicates this could translate into an incremental revenue addition of INR 30-35 lakh crore over the scheme period. The scheme will have many firsts in terms of bringing integration across supply chains, reducing import dependencies, and propelling exports.

PLI is now poised for rapid on-the-ground execution, with almost 60% of the capex approved already and

major spending set to occur over fiscals 2023-2026. The approved capex is in 10 sectors. While capex in mobile, pharma and telecom has already kicked off, that in capital-intensive sectors such as automobile and solar photovoltaics — which form 70% of the committed investment — will kick off from April 2022.

The scheme has received interest from over 900 players across sectors, of which ~350 have got approval so far. Of the approvals, 20% have been received by global multinationals and the rest by domestic players. Also, 50% of the bidders are large in terms of revenue, while the rest are medium and small players.

Says Hetal Gandhi, Director, CRISIL Research, “PLI will spur green investments in India, with ~55% of the scheme expected to be green, in sectors such as auto for electric vehicles/ fuel cell electric vehicles, solar photovoltaics, and advanced chemistry cell (ACC) batteries. The incentive-to-capex ratio varies among sectors — at >3 times, it is particularly attractive for mobile phones, electronic components, telecom equipment, and IT hardware, which have high dependence on imports across value chains and relatively lower domestic base.”

The rate of incentives offered under the PLI scheme are measured as a percentage of incremental sales over the 5-7-year scheme period and vary from 4-6% for mobiles and white goods and 5-20% for pharma active pharma ingredients/ key starting material to 8-18% for autos and auto-components.

CRISIL's estimates show mobiles will enjoy higher

incentive-to-capex of 3.5 times and a larger share of revenue, but entail lower capex, as even assembly is incentivised. At the other end, the capex-heavy sectors mentioned above and segments such as ACC batteries and specialty steel will require higher commitment to set up the ecosystem. If successful, however, these investments will ensure development of the entire ecosystem even long after PLI fades.

Aside from supply-chain integration, PLI will aid exports, too. Of the 15 sectors, nine show an export potential, ranging from 20-80% of the incremental revenue generated. This, in turn, can create an annual export potential of INR 2 lakh crore, or 6% of the total exports of calendar 2021. Sectors that could benefit from exports include mobiles, pharma, food processing, IT hardware, white goods and specialty steel.

Says Sehul Bhatt, Associate Director, CRISIL Research, “The nine sectors have an export potential of INR 11 lakh crore. The scheme will open export opportunities in traditional sectors such as pharma, food processing and textiles. Emerging ones such as mobile and electronics hardware also stand to gain.”

All the same, industry stakeholders will remain watchful of timely payment of incentives, medium-to-long term policy push from the government, the extent of value addition emphasised in these sectors, and the ability of players to achieve these numbers for technology and capital-intensive sectors, such as battery and solar-module manufacturing, amid evolving global supply chain dynamics. 🌈

Article courtesy: © 2021 CRISIL LIMITED

Circular Economy

Turning old into new: A second life for vehicle components

A huge number of used parts end up in the scrap yard for recycling every year. It is far more resource-efficient, however, to remanufacture alternators, starters and the like as part of a recirculation approach. This reduces waste, lowers the CO2 footprint and extends the service life of products. In the EIBA project, the Fraunhofer Institute for Production Systems and Design Technology IPK is developing an AI-based assistance system for semi-automated image-based identification of used parts without QR or bar codes. This will assist the worker with the sorting process so that more used components can be sent for remanufacturing.



AI-supported assistance system for semi-automated sorting of used components.

The circular economy is a major lever for achieving the objectives of the Paris Climate Agreement. Remanufacturing – the process of rebuilding used equipment to reflect its original condition – may become a key element of the circular economy. Given the fact that equipment is reused, the service life of products is extended. Researchers at Fraunhofer IPK are pursuing this goal as part of the EIBA project, which is funded

by the German Federal Ministry of Education and Research (BMBF). The project partners are Circular Economy Solutions GmbH, Technische Universität Berlin and the National Academy of Science and Engineering acatech. The aim is to remanufacture used parts instead of recycling them. According to a study by the VDI Centre for Resource Efficiency, manufacturing costs can be cut by up to 80 percent by remanufacturing used parts and material consumption can be reduced by up to around 90 percent.

Four-eyes principle reduces error rate

Clearly identifying and assessing vehicle components is one key challenge in the remanufacturing process. Many products are virtually indistinguishable from one another and are difficult to identify due to dirt and wear. Up to now, this task has been carried out manually by specialists under considerable time pressure. This is where Fraunhofer IPK's AI-based assistance system comes in: This system will help employees to identify and assess defective wear parts such as starters, air-conditioning compressors and alternators based on the four-eyes principle.

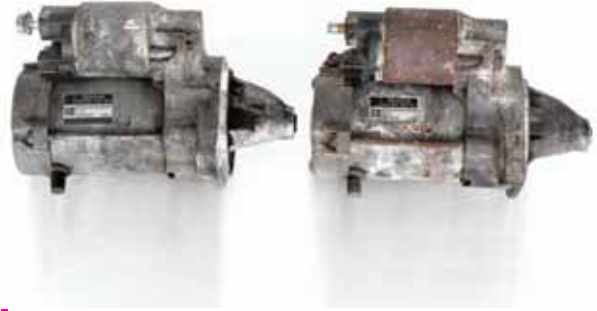
Humans and machines working hand in hand

"In the automotive industry, once the used part has been removed, it is assessed at the sorting center based on certain criteria to determine whether it can be reused," says Marian Schlüter, a scientist at Fraunhofer IPK. "This is far from trivial, however. Part numbers, which are the only visually reliable feature, are no longer legible, are scratched, painted over, or the type plates may have fallen off. This means that

© Fraunhofer IPK/Larissa Klassen



Product variance – two generators with different part numbers are visually identical.



Condition variance – two starters with identical part numbers differ in appearance due to wear marks.

the worker ends up discarding it by mistake, and it is recycled purely as a material. This is precisely where AI comes into play. It identifies the used parts based on their appearance, irrespective of the part number, and sends them off for a new lease of life." Identification features such as weight, volume, shape, size and colour characteristics are used, but customer and delivery data are also included in the evaluation. The employee, on the other hand, spots any loose components or burnt parts, which is where the AI system's image processing function comes up short.

The employee has the final say

But what exactly does the process entail? First of all, the used part undergoes image-based processing. This involves the system scanning the packaging to gather information about the product group. By breaking this process down into subtasks, the search range for identification is reduced from 1:120,000 to 1:5000. The used part is then weighed and recorded by 3D stereo cameras. The results obtained from the image-based processing stage are combined with the analysis of the part-specific commercial data, such as the origin, date and location, in order to identify the part reliably. The information is processed by two AI systems simultaneously. The results of the image-based processing stage are merged with the analysis of the part-specific commercial data, such as the origin, date and location, so that the used part is identified in a reliable and comprehensive manner. "One AI system was trained for image processing, which was our task for the project, and the other one was trained for commercial data. We use convolutional neural networks for the image processing AI method. These are algorithms from the field of machine learning that specialize in extracting features from image data," explains the production

engineer. The outcome of the identification process is shown to the employee, who receives a suggestion list with a preview image and part number, thus retaining full control. "The AI is incorporated into the ongoing operation and the work process is not disrupted. The worker has no extra tasks to perform, which is extremely important in this time-sensitive process. Our AI system runs on conventional desktop PCs. All of the company's sites can be networked via the cloud, meaning that the practical knowledge of one employee can benefit workers at other sites." The versatile technology can be used for all types of dimensionally stable components.

Every year, about five to seven percent of one million used parts processed by Circular Economy Solutions GmbH – that is, up to 70,000 parts – are discarded because they cannot be identified. A study conducted as part of the project revealed a recognition accuracy of 98.9 percent. Seen in terms of the 70,000 used parts that are discarded, it is expected that AI-based identification will allow 67,200 more used parts to be fed back into the cycle than before.

The project partners are continuously reviewing the sustainability of this scheme. The aim of the project is to keep more used parts in circulation. But is all this worth it given the high amount of energy required to train the AI and power the cameras and PCs? "The answer to this is a resounding yes. The potential for CO₂-equivalent savings is high, whereas in contrast the energy requirements for the AI are negligible. According to our projections, the AI system will pay for itself in terms of CO₂ equivalents in no more than a week," summarizes the researcher. 🌈

Article courtesy: Fraunhofer-Gesellschaft

Five things you need to know about connected machine monitoring



Digitally connected machining is following the Industry 4.0 transformation that other industry segments are undergoing. One of the most important advantages of that transformation is the data that connected machines can provide in real time. This real-time data offers machining operations new possibilities for transparency, optimized planning and more streamlined, error-free production. However, data alone is not enough — and often can be too much. In this article we're going to discuss the best methods and tools to mine, organize, and analyze connected machine data to help implement continuous improvement, and lean manufacturing.

1. Machine analytics is more than green/yellow/red andon lights.

When machine shops depend on the green, yellow or red andon lights to indicate the status and utilization of their operations, they're not making the best use of the data their machines are generating. If you see a red light, what is that telling you? Has the machine crashed? Is engineering doing a test, or is the machine out of work material?

Some companies will have in-house analytics that take historical data exported from machines to assess processes after the fact. However, the latest generation of connected machine monitoring systems provides real-time, in-depth analytics that capture and

Tips & Tricks

report the data underlying those red, yellow and green lights. That data is based on rules that are established in collaboration between the condition monitoring software provider and the machining operation. These rules can follow industry-standard measurements for overall equipment effectiveness (OEE), incorporating factors such as machine utilization, availability performance, and production quality. These platforms are designed to capture and report the kind of data machining operations have determined to be crucial to sustain continuous improvement and lean manufacturing efforts.

2. Start small and focus on capturing and analyzing data from specific machines or processes.

So, you have a lot of machines generating a lot of data — how do you determine what data to focus on to make the best use of powerful condition monitoring software? Apply classic lean principles to start. Identify persistent issues or bottlenecks — waste, unscheduled downtime, quality issues with specific parts or machines — that you need more complete data on to implement root cause analysis.

For example: many shops find that they have machines that spend more time doing setup than actually machining parts. The right condition monitoring software can be configured to track key parameters: setup times, part loading/ unloading time, time spent on fixture changes, tool changes, or blow-off cycles, etc.

Today's machining condition monitoring platforms let you easily configure and track these data points and zero in on where time is being wasted and contributing to low utilization of your assets. More importantly, this data is now available in real time and is much more accurate; Equipping you with the data to make operational changes or business decisions much more rapidly and with confidence that you will achieve your optimization goals.

3. Classify the data you track to guide meaningful business decisions.

In lean manufacturing continuous improvement processes, the first step is often to ask operators on the shop floor about what's going on — what are their pain points and persistent issues. With today's condition monitoring software, we can now start collecting dynamic input from ongoing operator input to identify patterns. In addition, we can directly ask the digitally connected machines what's going on — eliminating the need to manually monitor machines with a stopwatch and spreadsheets.



Sandvik Coromant's CoroPlus® Machining Insights platform provides insights on your machine utilization and performance with reports consisting of real-time and historical data.

An important step is to classify the data the system captures into categories that can drive meaningful business decisions. For example, you could focus on a machine or group of machines and find out how much time was spent cutting a specific part. Further analysis could identify which part or parts caused the most unscheduled downtime on those machines.

Comparing the most optimized machines running that part with other machines can enable decisions around how different machines are scheduled, improve maintenance or replace tooling on machines with too much downtime or determine that additional capacity may be needed.

4. Choose condition monitoring platforms from providers with machining expertise.

There are a range of commercially available condition monitoring software platforms available, many developed for general industrial applications. CNC machining and machine centers are highly specialized systems with unique operating factors that may require significant customization of off-the-shelf software to generate actionable, real-time data applicable to common machining utilization and quality manufacturing challenges.

There are advantages to selecting a platform created by a manufacturer that has in-depth machining expertise — especially one that is using that same platform to continuously improve their own operations. Platforms from these suppliers are

already configured to capture, organize and analyze machining data, eliminating the need for extensive configuration and saving valuable time when you begin using them.

Manufacturing companies, such as Sandvik Coromant, that supply high-quality condition monitoring software also offer valuable technical support — both remotely and/or, on-site. Furthermore, they can also continue the partnership walking hand in hand with the improvement efforts offering their expertise in manufacturing knowledge in support through the whole process.

Sandvik Coromant has found that customers utilizing their CoroPlus® Machining Insights platform, were able to realize quick returns on their investments (many times <3-6 months). This pay back typically comes from the initial improvements efforts of reducing waste in their processes from the insights the software can offer. Mainly because the average shop typically, and most often unknowingly, operates at a 30-40% utilization of their assets.

A key factor to consider when selecting condition monitoring platforms is the design and ease of use of the operator dashboards they offer. Well-designed dashboards provide critical visual metrics and alerts on the key indicators you establish to assess machining performance. This real-time data about when a machine is running and not, stop causes, faults and alarm reasons enables operator and engineering intervention to prevent issues from becoming serious problems. These dashboards also provide insights into opportunities to improve

resource planning, asset management and cost and time prediction.

The best platforms support drag-and-drop programming, built around the key tasks, processes and performance metrics unique to machining, for easier setup and enabling you to customize the dashboards to your needs and workflows. They should also support tablet and smartphone displays so operators can receive alerts and respond to issues without having to go to specific machines.

5. Cloud-based condition monitoring systems offer inherent advantages.

Condition monitoring platforms that are cloud-based offer multiple advantages compared to systems that must be installed and networked on servers at your operations. Many of the more recent machine tools have high-speed Ethernet-based interfaces that make it much easier to connect tools and production floors to external networks with access to cloud-based applications.

The kind of complex, real-time analysis and reporting provided by these condition monitoring programs utilize advanced algorithms and significant processing power — which the cloud is much more able to support than on-premise servers, no matter how robust. Not to mention, solutions that are cloud based as Machining Insights, offer the ability, from literally anywhere in the world, to see the current state of their machines but also how those machines have performed since the first day they were connected.

With a cloud-based solution, data is protected behind firewalls, with leading condition monitoring providers offering systems that typically comply with strict government security protocols covering sensitive defense and intelligence applications. A cloud-based application is managed and kept up to date by the platform provider. This means that machining company IT departments are not required to maintain expertise in managing and updating this kind of application.

One further advantage is that cloud-based condition monitoring programs can be rapidly implemented without any additional hardware, with the same system supporting multiple locations worldwide. They also can support remote support capabilities, enabling technicians to collaborate with end users on a specific machine issue and implement the solution over the network. 🌐

Article and images courtesy: © Sandvik Coromant



With Sandvik Coromant's CoroPlus® Machining Insights platform, get instant access to data about your machine- and tool availability, increased transparency and the opportunity to optimize your production processes.

Exhibitors' List



Member Name	Stall No.
3S Plastocraft LLP	E20
A.G. Industries Pvt Ltd	G07
Abbott Toolfast Pvt Ltd	A26
Abhijeet Dies & Tools Pvt Ltd	G13
Abhinitee India	A51
Accurate Sales & Services Pvt Ltd	B41
Ace Manufacturing Systems Ltd	F01
Acme Toolings	G44
Adroit control Engineers Pvt Ltd	B37
Ahire Machine Tools Pvt. Ltd	D55
Alex Machine Tools Pvt. Ltd.	E72
AMAXE Technologies	A53
Ampco Metals India Pvt Ltd	H03
Anand Mould Steels Pvt Ltd	F04
Andreas Maier Workholding Technology Pvt Ltd	A12
APM Technologies 3D Pvt Ltd	D50
Ashna Enterprise	A21
Asian Laser	A31
Associated Technocrats Pvt Ltd	B42
ATQ Metro	H13
AutoForm Engineering India Pvt Ltd	E75
Automac Services	B11
Avi Sales Corporation	A32
B. S. Steel Corporation.	C11
Balaji Engineering	H14
Balaji Metals	E22
Bangalore Bhat Metals Research Pvt Ltd	G20
Bharat Technoplast Private Ltd	D13
Bluechip Infocorp Private Limited	A49
Blum Novotest Measuring and testing technology pvt ltd	G01
BN Tools and Components Pvt. Ltd	E23
Brahmand Solutions	A34
Cad Cam Galaxy	A36
Cad Macro Design & Solutions (P) Ltd	A13
CADBRO India	B40
Cam Tools	E11
Caparo Engineering India Limited	C18
Cautoni Swastik Instruments India Pvt Ltd	G23
Chetocorporation, S.A	D10
China Machinery Engineering Suzhou Company Limited	C32
Classic Moulds & Dies	B23
Concord United Products Pvt Ltd	A10
CoreTech System Co.Ltd	A54
Cosmos Impex (I) Pvt Ltd	F11
Creative Engineering Works	E33
Customised Technologies Pvt Ltd	G48
Cyrus Industrial Solutions Private Limited	G36
Daido D.M.S India Pvt Ltd	A43
Datumtools Pvt Ltd	F21
Daxter Tools	C09
DesignTech Systems Pvt Ltd	C29
Devu Tools Pvt Ltd	F05
Dietech India (P) Limited	B12
Die-Tek Springs Private Limited	E24
Dijet Industrial Company Limited	G08
DME India Pvt Ltd	A50
DMG Mori India Pvt Ltd	C01
Drives & Drives	E28
Dynamic Dies and Moulds LLP	C04
Dynascan Inspection System Co	G17
Eastman Preci Tooling	A41
EIGEN	E29
Electronica Hitech Machine Tools Pvt. Ltd	H1-2
Electronica India Ltd	B06
Elin Electronics Limited	H07
Eltec Engineering	B14
Empire Machine Tools	B24
EST Tools Steel Pvt Ltd	E14
Excellence Engineering Services	B05
Exeron	A52

Member Name	Stall No.
Falcon Toolings	B21
Faro Business Technologies India (P) Ltd	F14
FIBRO India Precision Products Pvt Ltd.	D06
Francis Klein & Co. Pvt Ltd	B16
FRECH India Machinery Pvt. Ltd.	E07
General Imsubs Pvt. Ltd.	F16
Girdharilal Agrawal & Co	E09
Godrej & Boyce Mfg Co Ltd - Tooling Division	E10
Goel Steel Company	D05
GPY Machine Tools Pvt Ltd	D45
Hanspark Industries Pvt Ltd	F03
HASCO India Pvt Ltd	D43
Helli Moulds	A14
Hexagon Manufacturing Intelligence	E67
Hiraoka hyper tools inc	A17
Hitachi Metals India Pvt Ltd	B02(b)
Hitech Tools	E27
Hongada Hibootools India pvt ltd	H11
Hotmold Engineering India Pvt Ltd	E12
HRS Flow India Pvt Ltd	D53
HTS Hot Runner Systems	B39
Hurco India Private Limited	D01(a)
Husky Injection Molding Systems (India) Private Limited	D47
Hwacheon Machine tools India Pvt Ltd	B04
Imaginarium Rapid Pvt Ltd	C25
Ind Sphinx Precision Ltd	C26
Indo German Tool Room	C12
Industeel India LLP	E14
Institute for Design of Electrical Measuring Instruments (IDEMI)	H12
Intech Additive Solutions	C15
Intriguity	A47
Ionbond Coatings Private Limited	C27
Italian Technology Center	C17
ITL Industries Ltd	H01
JBM Auto Limited	D41
Jergens India Pvt Ltd	F18
Jig Engineering	G21
Jisan Trade	E78
Jupiter Tooling	C24
Jyoti CNC Automation Ltd	E02
Jyoti Solutionsworks Pvt Ltd	B25
Kalyani Mould Base Pvt Ltd	E03
Kamdar Brothers Overseas Pvt Ltd	B30
Kinematics Machines Pvt Ltd	D04(a)
Kisco Castings (India) Limited	D40
Kishore Industries Pvt Ltd	A08
Korloy India Tooling Pvt Ltd	B07
Krishna International	A39
Kushal Metal & Steel Industries Pvt Ltd	D09
Lakshmi Life Science Limited	C14
Lakshmi Machine Works Ltd	D01
Lakshmi Vacuum Technologies Pvt Ltd	B28
Laser Technologies Pvt Ltd	A16
Laxmi Electronics Moulds & Precision Engg Pvt Ltd	D42
Liba Enterprises	G50
Machine Tools India Limited	H1-6
Madhu Machines & Systems Pvt Ltd	D04
MAG India Industrial Automation Systems Pvt. Ltd.	G12
Maharashtra Scooters Ltd	G11
Makino India Private Limited	E01
Mangal Industries Limited	E31
Manleo Designs	G22
Marco Polo Products P Ltd	A38
Marposs India Private Limited	C07
Mastercam India Pvt Ltd	G06
Mastercraft Engineers Pvt Ltd	B09
Maxeff Engineering Pvt Ltd	A59
MC Machinery Systems India Private Limited	D02
Mechanite Engineering Solutions	B17
Mechasoft	B27

Member Name	Stall No.
Mechmatrix	H15
Mersen India Pvt Ltd	G10
Metacut Technologies	E40
Metal Extrusions	G27
Metals United Alloys & fusion Products Ltd.	B33
Meusburger India Pvt Ltd	C10
Miju Precision India Pvt Ltd	A06
Misumi India Pvt Ltd	C19
Mitutoyo South Asia Pvt Ltd	B29
MMC HardMetal India Pvt Ltd	B02(a)
Mohinder Agencies	C11
Moldwell Products India Pvt Ltd	E71
Multiple Special Steel Pvt Ltd	C03
Mutual Engineering Pvt Ltd	F03 (a)
N S Precision Works Pvt Ltd	A15
Nagata India Private Limited	F08
Nakashi CNC	A55
Nambang CNA	C33
NCBrain India Software Pvt Ltd	D49
N-Gravetek	F15
Nickunj Eximp Entp P Ltd	G30
Ningyuan Machine Tools Pvt Ltd	B49
NRB - IBC Bearings Pvt. Ltd.	E37
NTTF	F12
Oerlikon Balzers Coating India Pvt Ltd	
Oilmax systems Pvt Ltd	H10
Om Enterprises	G38
Om Steel Enterprises	E13
Om-Sai Moulds & Plastics	E73
ONS Engineers & Consultants	A37
Open Mind Cadcam technologies India Pvt Ltd	F13
Opptum Engineering Solutions Pvt Ltd	A44
Orange city alloys pvt ltd	G02
Otto Bilz India Private Limited	G24
Pahwa Metal Tech Pvt Ltd	A19
Param Machining Technologies Pvt Ltd	C28
Pawan International	A30
Pck Buderus (India) Special Steels Pvt Ltd	E05
Perfect Engineers	F19
Phillips Machine Tools India Pvt Ltd	F02 / H2-3
Pi-Tech Services	A18
Planetto Tooltech Pvt Ltd	B19
Plassteze	B08
Plastipack Industries	G18
Pneumec Kontrollis Pvt Ltd	A03
PPAP Automotive Ltd	C13
Pre Mould Engineers	G25
Prece Mould Industries	E36
Precision Products Marketing (P) Ltd.,	A24
Precision Punches & Dies	E03
Prime Graphite Private Limited	B13
PROLIM Solutions India Pvt. Ltd	B45
Protiq India	H2-1
Protosys Technologies Private Limited	F20
Punch Industry India Pvt Ltd	B31
Pureon AG (Microdiament)	G19
Purohit Steel India	E04
QVI India Pvt Ltd	E35
Raise Machine Tools Pvt Ltd	B20
Rajamane Telectric Pvt. Ltd.	A58
Renata Precision Components Pvt Ltd	E30
Richcam Auto Engineering India Pvt Ltd	C23
Right Angle Dies	E34
Riya Electrodes Pvt Ltd	H02
Robin Precision Products Pvt Ltd	B18
Rontgen Metalworking Solutions Pvt. Ltd,	A09
S & T Engineers (P) Ltd	C06 / B22
S.D Engineers Tech Pvt Ltd	G09(a)
Sahajanand Technologies Pvt Ltd	G09
Sahas Softech LLP	B44
Saketh Seven Star Industries Limited	G54

Member Name	Stall No.
Sakshi Steel N Alloys	B10
Sandeep Enterprises (A Unit of Vision Vanijiya Pvt Ltd)	F06
Sandhar Tooling Pvt Ltd	B32
Santhosh Engineering Equipments	G37
Schimmel Online India Private Limited	G26
Schneider Eletric India Pvt Ltd	D11
Schunk Intec India Private Limited	D03
Setco Spindles India Pvt Ltd.	C30
Seventh International	B47
Shilpin Machine Tools Pvt Ltd	G42
Shivam Tools & Steels	H3-3
Shree Gajanana Industries (I) Pvt Ltd	H1-1
Shree Rapid Technology	C25(a)
Shreedra Enterprises	C31
Siddhi Tools	A48
SKH Technologies	C22
SMW Autoblok Workholding Pvt Ltd	E68
Sodick Technologies India Pvt Ltd	B03
Solid Vision	A57
Solidcam software India Pvt Ltd	A46
Solitude Technologies Pvt Ltd	E21
Sparkonix (India) Pvt Ltd	G04
Sridevi Tool Engineers Pvt Ltd	F07
SriYantra Engineers Private Limited	C21
Stiack Engineering Pvt Ltd	C16
Stitch Overseas Private Limited	A01
Store Supply (India) Agency	D39
Subros Limited	B48
Suhner India Pvt Ltd	B38
Sunflag Iron & Steel Company Ltd.	B43
Supershine ABS Platers pvt ltd	E15
Suresh Indu Lasers Pvt Ltd	B36
Swedish ME Steel Pvt Ltd	E16
Swiss Steel India Pvt Ltd	D07
SWIT	A04
Synventive Molding Solutions JBY Pvt Ltd	D44
System Level Solutions (India) Pvt. Ltd.	H3-1
Tara Tools	A56
Technocart Online Services Pvt Ltd	H1-3
TGK Special Steel Pvt Ltd	D09
Titan Company Limited (Watches Division)	G41
TopSolid India (Designcell)	G46
Trocut Solutions Private limited	A42
TruCut Precision Tools Pvt Ltd	H06
Trucut Tools India Pvt Ltd	A40
TTB Tooling	H1-7
USBCO Steels Pvt Ltd	E08
Valiant India	C34
Vanto Industries Pvt Ltd	G03
Vardhaman Enterprises	H09
Vasa Speciality Steels Private Limited	G53
Vasantha Tools Crafts Pvt Ltd	C08
Vem Tooling India Pvt Ltd	D56
Venus Dies & Moulds Pvt Ltd	G28
Vijaydeep Mould Accessories Pvt Ltd	G05
Vinpak Machines Pvt Ltd	A25
Vishal Precision Products Private Limited	B36(a)
Voestalpine High Performance Metals India Pvt Ltd	C05
Wimi Industries Pvt Ltd	A05 / G14
Wimi Industries Pvt Ltd	G14
Xtra Precision Screws Pvt Ltd	F17
Y N J Industries	A35
Yamazaki Mazak India Private Limited	B01
Yash Tools (I) Pvt Ltd	G49
Yudo Hot Runner India Pvt Ltd	E06
Zahoransky Moulds And Machines Pvt ltd	H3-2
Zecha Precision Tools Limited	B15
Zonap Engineering Solutions Pvt Ltd	B34
Zoom Technologies	E17
Zwindia Software solution Pvt Ltd	G56

Patron Members

Patron Members of TAGMA

NO	Existing Patron Members	CITY
1	ABHIJEET DIES & TOOLS PVT. LTD.	Vasai
2	ANAND MOULD STEELS PVT. LTD.	Navi Mumbai
3	BHARAT TECHNOPLAST PRIVATE LTD.	Mumbai
4	BRAKES INDIA PRIVATE LIMITED	Chennai
5	CRAFTSMAN AUTOMATION LIMITED	Coimbatore
6	DEVU TOOLS PVT. LTD.	Mumbai
7	ELECTRONICA HITECH MACHINE TOOLS PVT. LTD.	Pune
8	GODREJ & BOYCE MFG. CO. LTD - TOOLING DIVISION	Mumbai
9	HASCO INDIA PVT. LTD.	Bangalore
10	HTS HOT RUNNER SYSTEMS INDIA PVT. LTD.	Pune
11	HUSKY INJECTION MOLDING SYSTEMS PVT. LTD.	Tamil Nadu
12	JAIN IRRIGATION SYSTEMS LTD.	Jalgaon
13	KINETIC TECHNOLOGIES (A DIVN. OF JAYAHIND SCIACY LTD.)	Pune
14	LMT TOOLS INDIA PRIVATE LIMITED	Pune
15	LUCAS TVS LTD.	Chennai
16	MAHINDRA UGINE STEEL CO. LTD.	Raigad
17	MANGAL INDUSTRIES LIMITED	Chittoor
18	METALS INDIA	Faridabad

NO	Existing Patron Members	CITY
19	MISUMI INDIA PVT. LTD.	Gurgaon
20	MULTIPLE SPECIAL STEEL PVT. LTD.	Bangalore
21	MUTUAL ENGINEERING PRIVATE LIMITED	Vasai East
22	NTTF	Bangalore
23	PCK BUDERUS (INDIA) SPECIAL STEELS PVT. LTD.	Chennai
24	PUROHIT STEEL INDIA PVT. LTD	Vasai East
25	SANDVIK COROMANT INDIA AT SANDVIK ASIA PVT. LTD.	Pune
26	SCHUNK INTEC INDIA PRIVATE LIMITED	Bengaluru
27	SECO TOOLS INDIA (P) LTD.	Pune
28	SRIDEVI TOOL ENGINEERS PVT. LTD.	Vasai
29	SUBROS TOOL ENGINEERING CENTER (STEC)	Noida
30	SUNDARAM CLAYTON LTD.	Chennai
31	UE PRESS TOOLS PVT. LTD.	Chennai
32	USBCO STEELS PVT. LTD.	West Bengal
33	VASA SPECIALITY STEELS PVT. LTD.	Mumbai
34	XCEED TOOLINGS PVT. LTD.	Mumbai
35	YUDO HOT RUNNER INDIA PVT. LTD.	Vasai East
36	ZAHORANSKY MOULDS AND MACHINES (P) LTD.	Coimbatore

Welcome to New Members

IMBOS MOULD TECHNOLOGIES PVT LTD

Plot No 93/A2, KIABD Industrial Area,
Honga, Belgaum – 591113, Karnataka

Tel: 0831-2001706

Contact Person: Mr. Prabhu Dayal – Managing Director

Email: prabhu@imbosindia.com

Website: www.imbosindia.com

Activities: Manufacturing of Mould Base and its components

OM SHAKTHI HYDRAULICS

No. 72, Sangoor Main Road, opp. Union Bank of India,
Ganapathy, Coimbatore – 641006, Tamil Nadu

Tel: +91-0422-2333630

Contact Person: Mr. A Umamaheswari

Email: omshakthi@gmail.com

Website: www.omshakthihydraulics.com

SSN TOOLINGS

No. 4B, Jeevarathinam, 3rd Street, K. S.R Nagar,
Ambattur Chennai- 600053, Tamil Nadu

Tel: +91 98842 04952

Contact Person: Mr. M. Sathiskumar

Email: sathishkumar@ssntoolings.com

Activities: Design & Manufacture of Press Tool and Jig & Fixture

VIVINS PRECISION TECHNOLOGY

S.F No. 131/2, Kannimar Nagar, Ganapathy
Coimbatore – 641006, Tamil Nadu

Tel: +91- 0422-4376342

Contact Person: Mr. N. Kandavel / Mr. N. R. Saravanan – Partner

Mobile: 98940 89342

Email: toolroom.vivins@gmail.com

Website: www.vivins.in

Advertisers Index

Advertiser	Pg. Nos.	Advertiser	Pg. Nos.
ABHIJEET DIE & TOOLS PVT LTD.....	79	MILLUTENSIL SRL.....	5
AMPCO METAL INDIA PVT LTD	107	MISUMI INDIA PVT.LTD.....	31
ANAND MOULD STEELS PVT.LTD.	71	MULTIPLE SPECIAL STEEL PVT LTD.....	67
ASHNA ENTERPRISE	21	MUTUAL ENGINEERING LTD.....	17
CAD MACRO DESIGN & SOLUTIONS	25	PAWAN INTERNATIONAL	43
CRAFTSMAN AUTOMATION LTD.....	35	PCK BUDERUS (INDIA) SPECIAL STEELS PVT. LTD... 3, 54,55,56,84,85	
DESIGNCELL CAD-CAM SOLUTIONS PVT. LTD.	39	PLASSTEZE	33
DEVU TOOLS PVT. LTD.	BACK COVER	PRECISION MOULD TECH	57
DIJET INDUSTRIAL CO LTD	7	PRECISION PUNCHES & DIES	53
DMI 2022	29	PUROHIT STEEL INDIA PVT. LTD.....	FRONT INSIDE COVER
ELECTRONICA HITECH MACHINE TOOLS PVT. LTD.....	61	SCHUNK INTEC INDIA PRIVATE LIMITED.....	63
FIBRO INDIA PRECISION PRODUCTS PVT LTD	19	SRIDEVI TOOL ENGINEERS PVT.LTD.....	49
GODREJ & BOYCE MFG. CO. LTD - TOOLING DIVISION	37	SRK INTERNATIONAL	45
HASCO INDIA PVT. LTD.....	27	SUBROS TOOL ENGINEERING CENTER (STEC).....	77
HTS HOT RUNNER SYSTEMS INDIA PVT LTD	91	TGK SPECIAL STEEL PVT LTD.....	93
INTECH ADDITIVE SOLUTIONS.....	69	UE PRESS TOOLS PVT LTD	75
JAIN IRRIGATION SYSTEMS LTD	41	USBCO STEELS PRIVATE LIMITED	89
KALYANI MOULD BASE PVT. LTD.....	13	VASA SPECIALITY STEELS PVT. LTD.....	COVER GATE FOLD
KUSHAL METAL & STEEL INDUSTRIES PVT. LTD.....	47	VIJAYDEEP MOULD ACCESSORIES	BACK INSIDE COVER
LMT TOOLS INDIA PRIVATE LIMITED.....	73	VOESTALPINE HIGH PERFORMANCE METALS INDIA PVT. LTD.	9
LUCCHINI RS	11	XCEED TOOLINGS PVT LTD	65
MADHU MACHINES & SYSTEMS	1	YUDO HOT RUNNER INDIA PVT. LTD.	108
MANGAL INDUSTRIES LIMITED	59	ZAHORANSKY MOULDS AND MACHINES (P) LTD	81
MEUSBURGER INDIA PVT. LTD.....	15		

Advertise with TAGMA Publications

Any Page 4 color advertisement

Advertise in TAGMA TIMES



₹ 10,000/-
per insertion

Subject to revision w.e.f. January 2018

Technical Data:

Print Size : 250X180 mm

Cut Size:

210X280mm

Bleed Size:

286X216mm

Discount:

4 Pages - 5%;

5 Pages upto 9 Pages - 10%;

10 Pages and Over - 15%

REIMBURSEMENT 2022

Available at Reimbursement

Expenses of **Rs. 1500/-** for

12 monthly issues



Expert materials for sliding components in die and mould applications



AMPCO® wear components

- ▶ Wear characteristics are 20% to 40% better than commercial bronze
- ▶ Pressure resistance is 10% greater than normal bronze alloy
- ▶ Corrosion resistance is 30% to 50% higher than normal bronze alloy
- ▶ Longer mould life

Mechanical and Physical Properties	Unit	AMPCO®18	AMPCO®18.23	AMPCO®21	AMPCO®M4
Hardness	HBW	192 (92B)	207 (94B)	286 (30C)	285 (30C)
Elongation	%	16	15	1	8
Coefficient of friction		0.18	0.18	0.21	0.23
Thermal conductivity	W/mK	63	59	43	42

Minimize component jamming and greatly extend the service life of the mold with AMPCO® sliding components.

Food Approval of AMPCO®, AMPCOLOY® Materials
AMPCO® 18, AMPCO® M4, AMPCOLOY® 940, AMPCOLOY® 944



Address

AMPCO METAL INDIA PVT. LTD.

A-8/4, At Village - Nighoje, Chakan MIDC,
Phase IV, Tal : Khed, Pune - 410501
MAHARASHTRA, INDIA
Tel: +91 2135 610 810 | Fax: +91 2135 610 811
infoindia@ampcometal.com
An ISO 9001:2015 Certified Company

AMPCO METAL S.A

Route de Chesalles 48 P.O Box 45,
1723 Marly Switzerland
Toll Free Phone: 800 8080 5050
Tel.: +41 26 439 93 00
Fax.: +41 26 439 93 01

Get the premium efficiency of
prewired hot runner system
that is setting benchmarks.



Product Features

- ▶ 100% Leak proof guarantee
- ▶ 0% heater and t/c failure
- ▶ Best in segment, cylinder cooling efficiency
- ▶ Customized system to suit gates at any angle

Part Advantages

- ▶ Perfect solution for GF and LGF applications
- ▶ Quickest color change
- ▶ Intelligently controls cascade injection moulding product with variable wall thickness
- ▶ Prevents over heat effect by optimizing thermal balance based upon casted heaters technology

YUDO HOT RUNNER INDIA PVT. LTD.

A/113 & 114 , Evershine Industrial Estate, Waliv Road, Chinchpada Junction, Vasai (E) - 401208, INDIA.

Tel.: +91 766639458, +91 7666920922 | Email: sales@yudo.co.in | www.yudo.com



Injection Accessories



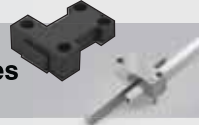
ACCESSORIES FOR MOULD MANUFACTURING



Undercut Release Systems



Three Plate Mould Accessories



Slides and Accessories



Ejection Accessories



Mould Alignment



Die Springs



Mould Cooling Accessories



Part & Mould Identification



General Mould Accessories



Visit us @
Diemould India 2022
27th April - 30th April
Bombay Exhibition Center,
Goregaon, Mumbai

Hall No. 1 | Booth # G-05

 **VIJAYDEEP[®]**

Standard Solutions

+91-22-6107 7900 (100 lines) | sales@vijaydeep.in | www.vijaydeep.in



Estd. 1993

DEVU TOOLS PVT. LTD.

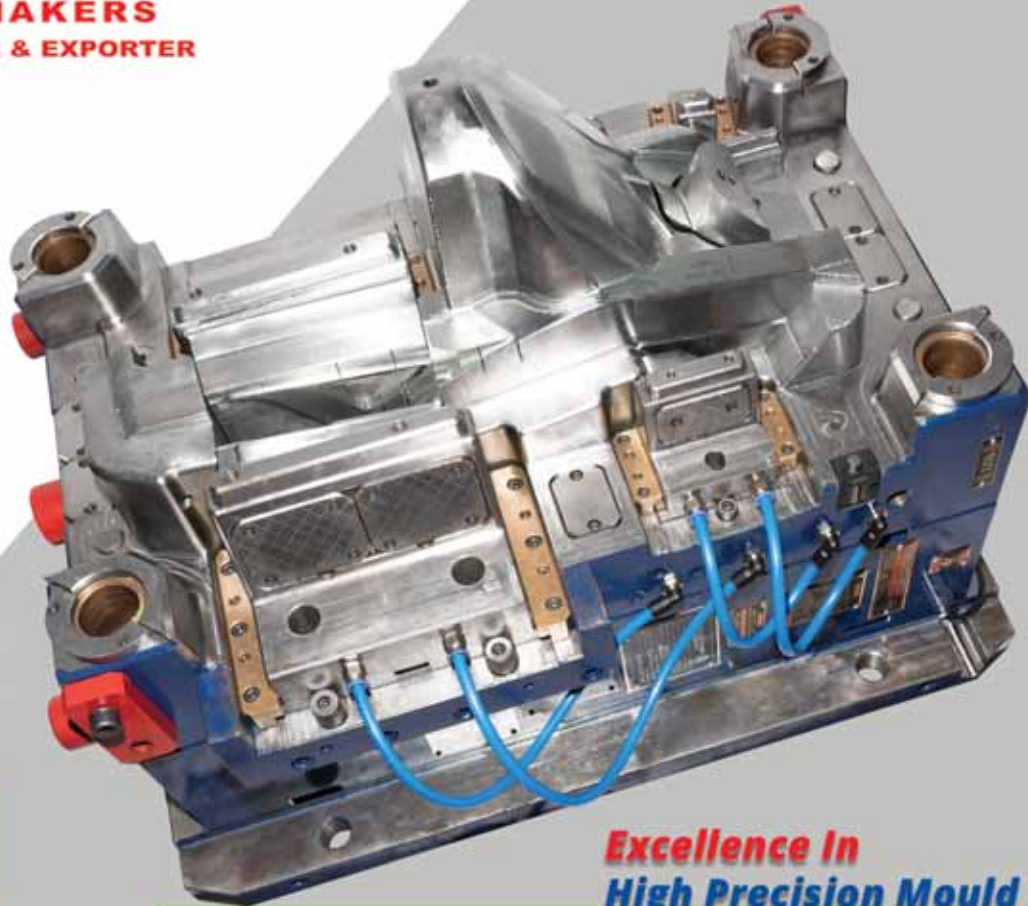
**MOULD MAKERS
MANUFACTURER & EXPORTER**

Visit us at



from April 27th to 30 at
BEC Goregaon (E) Mumbai

Stall No. F 05



**Excellence In
High Precision Mould**
India's One of the Largest Mould Maker

**MOULD MAKING IS AN ART, OVER THE
YEARS WE HAVE MASTERED THE 'ART'.**

At Devu tools we begin with a complete understanding of your needs, problems and production requirements. An in-depth analysis from our experienced engineers, resulting in solution to meet your molding needs. With World-class facility, high-end technologies, and skilled manpower, we are well positioned to serve the growing demand for the complex mould requirements. We believe in changing with time and well equipped to face the changing market dynamics.



Devu Tools Pvt. Ltd.

Office : A/44, 2nd Floor Nandjyot Indl. Estate, Kurla - Andheri Road, Safed Pool, Sakinaka, Mumbai - 400072
Factory : Plot Survey No. 57/7, Atgaon Indl Estate, Mumbai Nasik Highway, Post Pundhe, Atgaon, Taluka Shahapur,
Dist Thane-421601, Maharashtra, India
Phone : +91-22-6128 2626 (100 Lines) 2851 2635 / 6691 4412 Fax : +91-22-2851 8690 / 2859 0285
Mobile : +91-9820030764 Email : marketing@devutools.com, sheregar@devutools.com Web : www.devutools.com