TAGMA TIMES

NEWSLETTER

(Technical Info. on Die, Moulds & Toolroom)

Volume: XXVII / No. 06 (Private Circulation for Members Only) February 2021

Handing over the BATON

THE CHOSEN ONES:

TAGMA ELECTS NEW COUNCIL MEMBERS

TAGMA INDIA TOOL AND GAUGE MANUFACTURERS ASSOCIATION OF INDIA

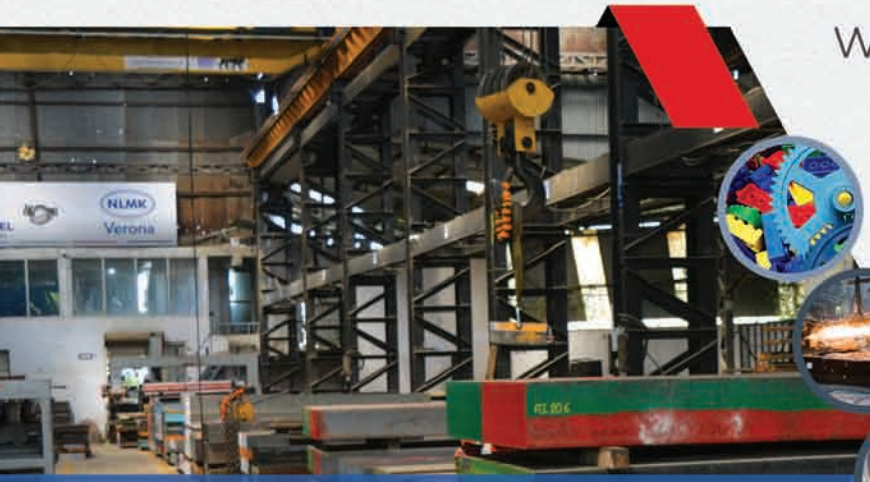
tagma.mumbai@tagmaindia.org

www.tagmaindia.org

PUROHIT STEEL

YOUR PARTNER FOR BEST QUALITY STEEL AND SERVICES FOR NUMEROUS APPLICATIONS.

PUROHIT STEEL
GLOBAL STEEL SOLUTIONS



What We Provide ?

High quality mould steel for pvc, Switches, toys, rubber industry, automotive, caps and closures

Machined & Ground plates

Excellent hot work tool steels for forging and die casting dies

High performance cold work too steels for stamping, forming, cutting tool

Stainless steel grades for pharmaceutical industries

EN series steel for machine parts, gears, hobs etc

Quality Steel Providers From around world

NLMK Verona

BÖHLER DEUTSCHE EDELSTAHLWERKE

For More Information

Phone: 7798815678 / 25678 / 35678
Email: info@purohitsteels.com

Nexus™ Systems

Ready ▶ Set ▶ Inject ▶

Mastips next generation Nexus Pre-Assembled and Pre-Wired Systems are delivered as a complete turn-key solution for quick and simple installation.

Features

- Fast and simple installation out of the box, pre assembled
- Thermal and Valve Gate configurations
- High Temperature Valve Cylinders, hose and fittings
- Customisable wiring frame to match specific mould layout

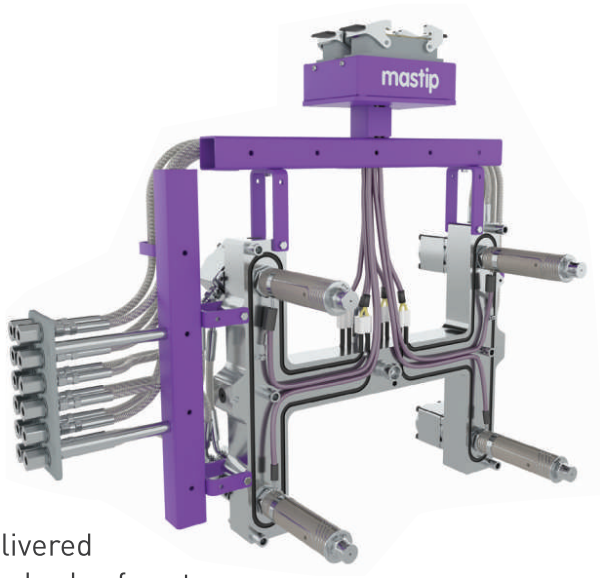
Benefits

- Advanced heating technology for superior thermal performance
- User-friendly maintenance and easy serviceability due to quick removal of complete unit from mould
- Cold condition starting without the risk of polymer leakage

Experience the difference that we make for our customers in everything we do. Talk to us today about your next project and see for yourself.

Cylix™ Valve Gate Actuation

The Cylix™ Cylinder features Pneumatic Valve actuation in a thermally stabilized system mounted directly to the manifold. With the ability to adjust valve pin height and incorporating long life seals and bearings, it is the optimal solution for precise control of your moulding requirements.



FlowLoc™ Nozzle

The FlowLoc nozzle range features a threaded base that attaches to the manifold providing a secure, leak-proof operation. With advanced heating technology, the FlowLoc delivers superior thermal performance for a wide moulding window.

Partnering for 24 years, MADHU has successfully delivered thousands of innovative, cost efficient systems to hundreds of customers.

Madhu Machines & Systems Pvt. Ltd.

Regd. Off :
A - 4/5, Anurag,
Ganesh Krupa Soc; Chikuwadi,
Vadodara - 390 007. INDIA.
Tel.: 91 - 265 - 2353886,
2321104, 2334278
E-mail: info@madhu-group.com

Works :
No. 19/1, Kempaiah Garden,
Near BTS 9th Depot, 4th Phase,
2nd Stage, Peenya Industrial Area,
Bangalore - 560 058. INDIA.
Tel. : 91 - 80 - 28360131
E-mail : mms@madhu-group.com

www.madhu-group.com

We make things better

CONTENTS

Editorial & Design Team

Nishant Kashyap	Kimberley D'Mello	Amol Padhye	Abhijjeet Bhowmik
Editor	Associate Editor	Design & Operations	Sr Technical Writer

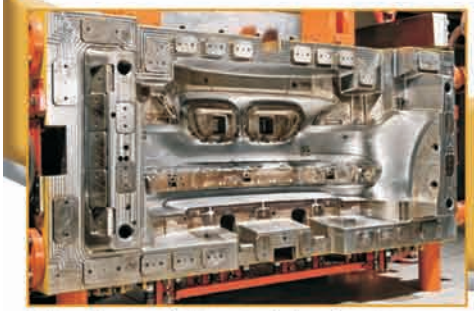
Cover Image Courtesy: elements.envato.com

PCK-Buderus | Special Steels

Buderus | Edelstahl

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-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

TAGMA Executive Council

PRIVATE CIRCULATION FOR MEMBERS ONLY

EXECUTIVE COUNCIL 2020 – 2023

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 & 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

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

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

THE NEW ART OF TECHNOLOGY

MILLUTENSIL spotting **presses provide the most advanced** technology for testing and proving the quality of your moulds and dies.

System

- ✓ Very high technological standard
- ✓ Best ergonomics
- ✓ Compact room-saving structure
- ✓ Very easy management

Services

- ✓ Ad hoc customer-specific solutions
- ✓ Multilingual professional assistance
- ✓ Special care to design
- ✓ Integrated diagnostic system

Security

- ✓ Maximum work safety
- ✓ Optimal access
- ✓ No dangerous handling of mould and dies
- ✓ Great saving of time and manpower

THE BEST SOLUTION TO VALIDATE YOUR MOULDS AND DIES

TAGMA DIEMOULD INDIA - 2022

12th DIE & MOULD INDIA
INTERNATIONAL EXHIBITION
27th April to 30st April 2022
Bombay Exhibition Centre, Goregaon, Mumbai, India

MILLUTENSIL®
SINCE 1955

Plant Via delle Industrie, 10
26010 Izano (CR) - Italia
info@millutensil.com
millutensil.com

Office Corso Buenos Aires, 92
20124 Milano - Italia
Tel. +39 02 29404390
Fax +39 02 2046677

NEW! BV 34 PLUS SPOTTING PRESS
size of press plates: 1.500x2.000 mm

PRESIDENT'S MESSAGE

I would like to begin by thanking all the members of TAGMA and the Executive Council for their faith in me and for choosing me to lead TAGMA as its President.

I have been working with the tooling industry for more than three decades and I have seen this industry grow to become one of the strategic sectors today. The tooling industry not only plays an important role in the development of the manufacturing sector, it also has huge economic importance.

Being a toolmaker myself, I know the challenges faced by Indian toolmakers. As the President of India's largest association for tool and die makers, I would like to focus on the following activities in the next three years:

- Increase the number of members to create a larger community of toolmakers and associated industries.
- Skill development and training would be our prime focus.
- Work closely with the government and policymakers to put forth the challenges of toolmakers and help the government with policymaking.
- Work on cluster development activities.
- Enhance TAGMA's presence in the global tooling fraternity.
- Organise bigger and better Die & Mould India Exhibition, International Tooling Summit and ToolTech Show.

Under the guidance of Mr. D. K. Sharma, the Outgoing-President, TAGMA has seen newer heights in terms of our relations with policymakers and other TAGMA events and activities. I would like to assure the industry that I and all the Executive Council members are committed towards the development of the industry and TAGMA.

I urge you all to share your thoughts and suggestions on the development of the tooling industry. Let us all work together to make India a strong tooling destination.

D. M. Sheregar
President,
TAGMA India

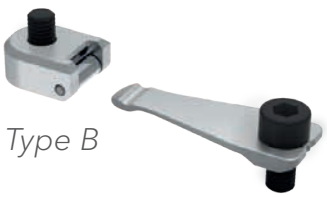
THE NEW LEAF SPRING ROLL STOPPER

FOR OPTIMAL SLIDE RETENTION

With the new E 3050 leaf spring roll stopper,
friction and wear are a thing of the past.

- Three different spring variants for release force up to 140 N
- Type A with integrated spring-loaded end stop
- Adjustable slide stroke thanks to two different versions
- Time-saving maintenance without dismantling the mould

Type A



Type B

See for yourself at:
www.meusburger.com/leaf-spring-roll-stopper

meusburger
SETTING STANDARDS

Meusburger India Pvt Ltd.
T +91 98450 62529
sales@meusburger.in

EDITORIAL

Promise of hope

February was an eventful month. The Government of India presenting the Union Budget 2021-22 and Aero India 2021 witnessing the signing of many prestigious aerospace and defence deals were the two major events that garnered accolades from media across the world. The scenario at the Tool and Gauge Manufacturers' Association (India) was no less exciting, as candidates geared up for the recently concluded election to bring onboard a "Team TAGMA" that would work to find opportunities to help the Indian tooling industry prosper and be on par with their global counterparts.

TAGMA elected a new Executive Council for 2020-23 on February 19, 2021. Steered by Mr. Devaraya Manjunath Sheregar, Managing Director and Chairman, Devu Tools Pvt. Ltd., as the new President, and Mr. D. Shanmugasundaram, Managing Director, S&T Group, as its Vice President, the Executive Council members are all optimistic about the growth prospects of the Indian tooling industry. They have charted out plans to bring the toolmaking fraternity closer to OEMs, help the industry with skill development initiatives and work closely with the government to formulate industry-friendly policies.

All these events show the promise of hope and have ushered in positivity for the tooling industry. Besides this, the Indian manufacturing industry is witnessing newer heights with development in sectors such as defence, aerospace, infrastructure, electronics, and toy manufacturing, along with automotive and packaging. In such a scenario, the demand for tooling is going to grow significantly.

In the recently released Indian Tooling Report, "The market size of the tool room industry in India is estimated to be ~INR 18,000 crore with ~70% of demand being met domestically and ~30% from imports. The tooling imports into India are ~5x tooling exports from India by value; China and Korea account for almost 40% of the total tooling imports into India." The above figures and the growth in user industries clearly show the kind of opportunities that Indian toolmakers are going to find in this decade.

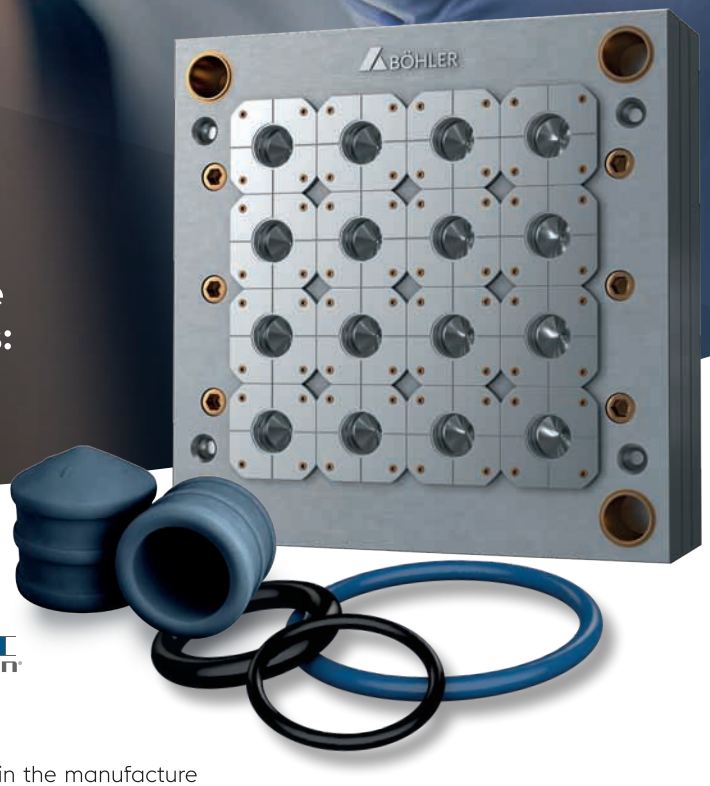
I'd like to congratulate the newly elected "Team TAGMA" as they take over the reins and write a new chapter of the tooling industry's growth story. If you would like send your ideas and suggestions about the role "Team TAGMA" can play in the development of the Indian tooling industry, we will be happy to hear from you.

Nishant Kashyap
Editor
nishant@antechmedia.in

BÖHLER

NO TIME FOR COMPROMISES

When rubber molding products become life savers, it is no time for compromises: voestalpine BÖHLER India mold steels



BÖHLER M261 | BÖHLER M315 | BÖHLER M303

BÖHLER W400 VMR® | BÖHLER W403 VMR® | BÖHLER W360 ISOBLOC®

BÖHLER M310 ISOPLAST® | BÖHLER M333 ISOPLAST® | BÖHLER M340 ISOPLAST® | BÖHLER M368 MICROCLEAN®

BÖHLER M789 AMPO — Powder for Additive Manufacturing

A BÖHLER Tool Steel is the optimum answer to any application in the manufacture of plastic mold parts, meeting the increased expectations of users as regards shape, function, aesthetics, product quality and durability. After all, a product is only as good as is the mold in which it is produced.

voestalpine High Performance Metals India Pvt Ltd.
marketing@bohlerindia.com

www.bohler.in

voestalpine
ONE STEP AHEAD.

TAGMA elects new council members

During the 29th TAGMA Annual General Meeting on February 19, 2021, the Tool & Gauge Manufacturers Association of India (TAGMA-India) elected Mr. D. M. Sheregar, Managing Director and Chairman of Devu Tools Pvt. Ltd., as its new President and Mr. D. Shanmugasundaram as its Vice President. Mr. Sheregar played an instrumental role in the development of TAGMA activities as an EC member of the previous term (2017-2020).

The Executive Council members comprise:

- **West zone: Mr. Akshay Kalyanpur**, Sridevi Tool Engineers Pvt. Ltd.; **Mr. Paresh Panchal**, CAM TOOLS; **Mr. Devaraya Manjunath Sheregar**, Devu Tools Pvt. Ltd.
- **North zone: Mr. Parveen Satija**, Stitch Overseas Pvt. Ltd.; **Mr. Amit Kumar Parashar**, Subros Tools Engineering Centre (STEC)
- **South zone: Mr. D. Ravi**, Classic Moulds & Dies; **Mr. D. Shanmugasundaram**, S&T Engineers (P) Ltd.; **Mr. Arvind Chawla**, ZAHORANSKY Moulds & Machines and **Mr. T. S. Gopalakrishnan**, Multiple Special Steel Pvt. Ltd.

Congratulating the newly elected management, Mr. D. K. Sharma, Immediate Past President, TAGMA India, said, "I congratulate the newly elected TAGMA management and wish them the very best. Led by Mr. Sheregar and Mr. Shanmugasundaram, I am sure that TAGMA will achieve newer heights and will continue to play an active role in the development of the Indian tooling industry at large. We had started many futuristic activities in the past few years, and I am sure that the new team will ensure that the benefits reach the entire ecosystem. As the Immediate Past President of TAGMA India and a passionate toolmaker, I will continue to help TAGMA and the industry."

After the announcement of the election results, the newly elected members also had their first AGM on same day. The new team charted out various development plans for TAGMA and the Indian tooling industry. "The Indian tooling industry is in a high-growth phase with the Indian manufacturing industry gaining considerable amount of attention in the past few months. In such a scenario, TAGMA's role becomes even more important to help the Indian tooling industry capitalise on these growing opportunities. As the newly elected President of TAGMA, together, with all the EC members, we all will work hard to bring the toolmaking fraternity closer to OEMs, help the industry in skill development initiatives and present the challenges of toolmakers before the government," said Mr. Sheregar.

About TAGMA India

TAGMA India is an all-India association of the tooling Industry, established in 1990. TAGMA serves as a forum for the Indian tool room & die and mould industries whose activity involves design, sales or manufacture of dies for pressing, stamping, punching and forming; injection and compression moulds; die casting dies; patterns and pattern equipment; jigs and fixtures; standard tooling components; CAD/CAM; rapid prototyping; gauges; precision machining; special machines and other related products.

Authorized
Official Dealer
for India

FORGING&
CASTING
DIVISION

GROUP
LUCCHINI RS

EXTRA LARGE FORGED DIE BLOCKS.

For light alloys structural parts for automotive.

© ag visuell / Drawbot - stock.adobe.com

negrini+varetto

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

www.LucchiniRS.com

LOOK BEYOND

Mr. Devaraya M. Sheregar

Chairman and Managing Director,
Devu Tools Pvt. Ltd., Mumbai, Maharashtra.

Company Profile:

Devu Tools Pvt. Ltd. has been a recognized name in the pipe fittings category for the past 27 years. It boasts of local customers such as Finolex Industries Limited, Ashirvad Pipes Private Limited, Supreme Industries, Prince Pipes and Fittings.

Work Experience:

Mr. Devaraya M. Sheregar, started out as a Mould Technician in a reputed mould manufacturing company in 1983. It was here that he gained in-depth knowledge of mould manufacturing and assembling techniques.

After acquiring 10+ years of practical experience in mould manufacturing, technology and services, Mr. Sheregar established Devu Tools, in 1993, as a proprietorship firm. It was only in 1999 that the company acquired the status of a Private Limited Company.

With the support of a team of professionals, Mr. Sheregar handles the marketing of products. Over the years, he has built strong relations with the top management of renowned pipe fitting manufacturers, OEMs, Tier-1 suppliers across 2 and 4-wheeler vehicles.

Among his other quality awards and achievements, Mr. Sheregar was awarded the Plasticon Award for developing and manufacturing an innovative "inline dripper mould" in February 2012.

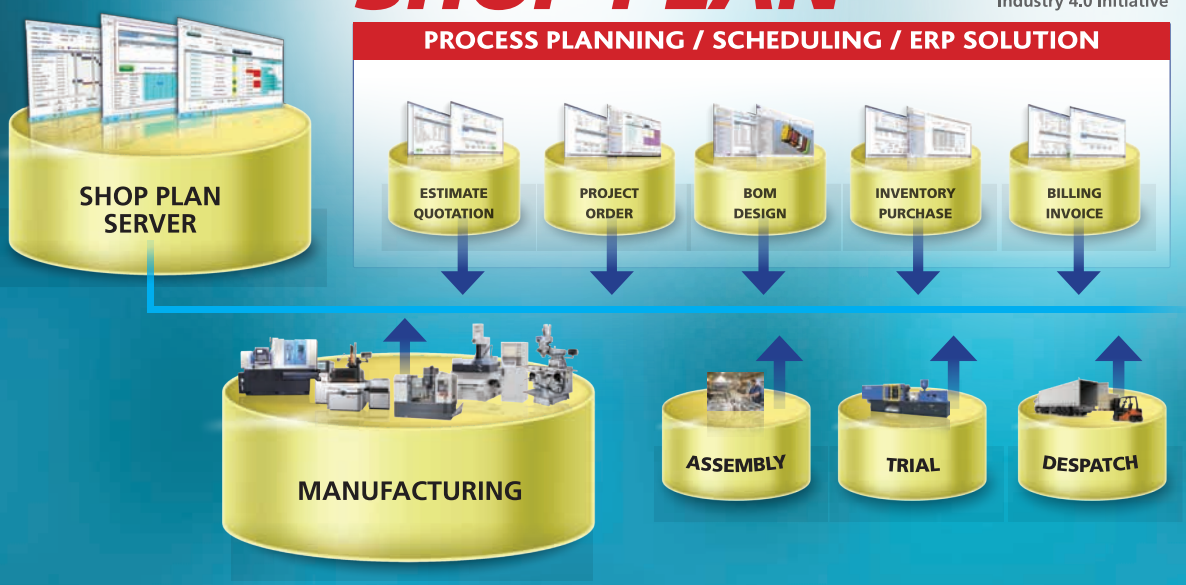
CAD MAcRO

Be part of Smart and Digital Tool Room

SHOP PLAN

eFACT Industry 4.0 Initiative

PROCESS PLANNING / SCHEDULING / ERP SOLUTION



OUR EXISTING SHOP PLAN CLIENTS

Sivananda Moulds & Dies · CNH MOULDS PVT LTD · GOEL · Goldmedal · Savitri Automation · AMARA RAJA · CIT · Pioneer Tooling Services · kangaro · MPI MODERN PLASTIC INDUSTRY · ENDURANCE · EIGEN · Hitech · CRAFT · ICS DESIGNS · MUTUAL

OTHER PRODUCTS

MACRO EDM — EDM DETAILING AND CAM

MACRO WIRE — WIRE EDM SOLUTIONS

SHOP MOLD — MOLD MAINTENANCE SOFTWARE

Visit us @

TAGMA DIEMOULD INDIA - 2022
Hall #1 - Stall A13
12th DIE & MOULD INDIA INTERNATIONAL EXHIBITION
27th to 30th April 2022
Bombay Exhibition centre, Goregaon, Mumbai, India

ACMEE 14th International Machine Tools Exhibition
An AIEMA Initiative
Stall # D59
3 - 7 June 2021 Chennai Trade Centre, Chennai, India

IMTEX 2021 · DIGITAL Tool 2021 · CONCURRENT SHOWS
BIEC Bangalore International Exhibition Centre
June 17 to 23 2021

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**

Mr. Shanmugasundaram Doraiswamy

Managing Director, S&T Group,
Coimbatore, Tamil Nadu.

Companies' Profiles:

S&T Group is among India's top 5 private sector machine tool manufacturing companies. S&T Group of Companies includes:

S&T Machinery (P) Ltd., which manufactures engineering equipment.

S&T Plastic Machines (P) Ltd., which manufactures plastic injection molding machines.

S&T Engineers (P) Ltd., which trades engineering equipment.

S&T Welcare Equipment (P) Ltd., which trades fitness equipment.

S&T Healthcare Technologies (P) Ltd., which trades medical equipment.

Technocart.Com Online Services Pvt. Ltd., which is an online portal for industrial products, machine tools, and accessories.

Work Experience:

Mr. Shanmugasundaram graduated in Mechanical Engineering from Annamalai University in Chidambaram, Tamil Nadu.

He started his career in 1994 with Gedee Weiler Pvt. Ltd. in Coimbatore. Although he came from a family that did not have a business background, Mr. Shanmugasundaram had a penchant for becoming an entrepreneur. He quit his job within 3 years and started the journey to set up S&T Group.

Having established the S&T Group in 1996, he developed the business with limited resources. He started out at an interior city, like Coimbatore, and went on to represent the world's popular brands in the machine tool industry, such as Makino in Japan, YCM and Excetek in Taiwan, Tederic in China, Kelch in Germany, Tecnomagnete in Italy, and bedra in Germany, to name a few.

Under his leadership, S&T has grown as a nationwide network of 16 branches with a team of more than 600 people. It is now engaged in every facet of the machine tool industry's needs.

Among other achievements, S&T Engineers Pvt. Ltd. received the 'World's No. 1 distributor award' in 2015, 2016, and 2017 from Excetek. He was also recognized as best entrepreneur by Times of India in 2012. STM was felicitated as "ET Best Brand" in metal cutting for the year 2020. Welcare was recently awarded with the 'Innovation in Gym Equipment' presented by renowned health magazine, Men's Health.

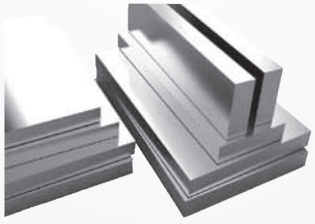
ASHNA
Toolroom Excellence

SERVING BEYOND MOULD BASE. **SERVING AN EXPERIENCE.**

Ashna Enterprises is one of the pioneering companies in Standard and Customized Mould Base, Die Set, Machined Plates and Accessories. A wealth of market knowledge, built up since 2000 makes us a one-stop-shop for all mould base solutions. It spreads over 25,000 sq. ft. area and has a team of 60+ skilled and experienced professionals. Today, Ashna has acquired a reputation as a reliable tool room partner by manufacturing top quality products, representing excellent value for money.

Standard Mould Base

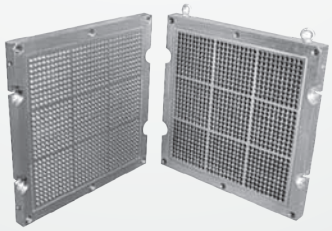
Machine Plates

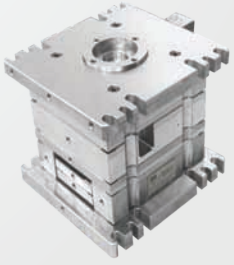


Pillar Die Set

Customized Mould Base

900 Cavity Rubber Mould Base





ASHNA ENTERPRISE

P: +91 9028002982 | M: +91 90216 70870

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

Mr. Akshay Kalyanpur

Director, Sridevi Tool Engineers Pvt. Ltd.,
Vasai, Maharashtra.

Company Profile:

Established in 1972, Sridevi Tool Engineers specializes in design, development and manufacturing of plastic injection moulds for automobile, and other engineering industries. The company's tool room is spread across 75,000 sq ft and is equipped with more than 40 high-end European and Japanese machines.

Work Experience:

Mr. Kalyanpur has completed his Bachelors in Mechanical Engineering (B.E Mech) from Rajiv Gandhi Institute of Technology, Mumbai, in 2009. In 2011, he completed a diploma in Family Business Management from S.P. Jain Institute of Management and Research, Mumbai. In 2011, Mr. Kalyanpur started his journey in Sridevi Tool Engineers at the shop floor, where he learnt on the job. Over the years, he has worked his way up to the management level.

DIJET®
www.dijet.co.jp

MULTI EXTREME

Possible to high feed machining and shoulder milling.

2 types of holder is available by using same insert

HF type for high feed machining & SM type for shoulder milling, possible to facemilling, vertical wall milling, and corner milling.

Dia Range Ø32 to Ø63

Insert Description WNMU070620 ZER-PM

+91 22 40121231 / +91 2241005361
india_office@dijet.co.jp
www.dijet.co.jp

322, Arcadia,
Hiranandani Estate, Patlipada,
G. B. Road, Thane (W) 400 607

Mr. Amit Kumar Parashar

Senior Vice-President — Operations,
Subros Limited, Noida, Uttar Pradesh.

Company Profile:

Subros Tool Engineering Centre (STEC) makes tools for automotive as well as non-automotive sectors. STEC handles all three kinds of tooling, namely, injection moulds, PDC dies and sheet metal tools. It has the capacity to handle more than 100 tools per annum.

Work Experience:

Mr. Parashar looks after the vertical domains of Tool Room, Operations and Customer Support and Service. He has over 30 years of total work experience of which he gained more than 22 years of immense experience in the automobile sector. His career graph shows him having valuable experience in operational excellence, quality management, business analytics, process and performance improvement and project leadership.

He also has rich experience in vendor management and control, and development of tooling vendors with a focus on improving the quality of the job works at small tool rooms.

Under his leadership, Subros tool room has grown from captive tooling to commercial tooling with development of tools for non-automotive sectors as well.

www.diemouldindia.org

BE A PART OF TOOLING EXTRAVAGANZA!

12th Die & Mould India International Exhibition

TAGMA DIEMOULD INDIA - 2022

27 28 29 30 APRIL 2022

Bombay Exhibition Centre, Goregaon (E), Mumbai, India

Unlock your Potential, Attain Newer Heights, Expand Globally!

EXHIBIT CATEGORY

ORGANISED BY:

TAGMA INDIA | TOOL AND GAUGE MANUFACTURERS ASSOCIATION - INDIA

A-33, Nand Jyot Industrial Estate, Safed Pool, Andheri - Kurla Road, Mumbai - 72
Tel.: +91 22 28526876, 28508976, 28503273, +91-9653427396
E-mail : tagma.mumbai@tagmaindia.org, tagma.diemould@tagmaindia.org

Mr. Arvind Chawla

Managing Director, ZAHORANSKY Moulds and Machines Pvt. Ltd., Coimbatore.

Company Profile:

ZAHORANSKY is known for its reliability, precision, and sophisticated technology. The company's foundation was laid in 1902 by Anton Zahoransky, in Todtnau, Germany. Mr. Chawla became a part of ZAHORANSKY in 2008 and helped to relocate the company's operations in India from Mumbai to Coimbatore.

Starting out in a rented space, ZAHORANSKY built a state-of-the-art facility in 2013. By 2019, ZAHORANSKY occupied an area of 6,000 sqm and was equipped with all the latest machines and equipment to manufacture high-precision moulds and machines. It's a 'Platinum' rated Green Factory Building, certified by IGBC, with 93 points, which is the highest points' rating in India.

Work Experience:

Mr. Chawla started his tooling career with Accurate Moulds and Dies in 1990. From 1993 to 2008, he worked at Mutual Industries, where he spent 15 valuable learning years. He believes that the event wherein Mutual Industries entered into a joint venture with French company, Mecaplast, was a turning point, which opened the doors to understand the European tooling culture.

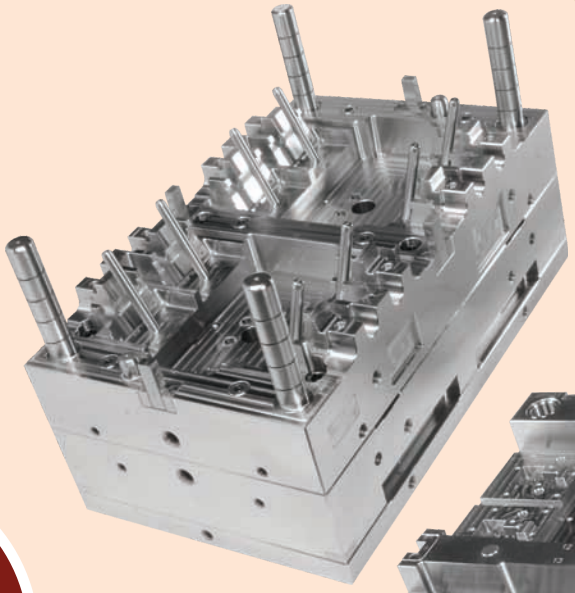
According to Mr. Chawla, the experience of working with international and Indian tooling industries helped him understand the gaps or limitations between customer demands and supply. This helped him upgrade the team accordingly and export many moulds and machines to global customers.

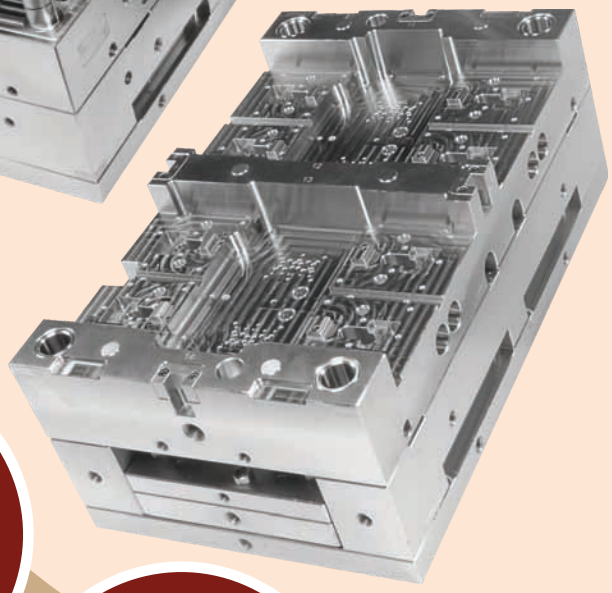
As his interest or hobby is designing, machining, assembling and learning new things, he always looks forward to building a skilled team comprising fresh engineering graduates and upgrading the tooling industry.

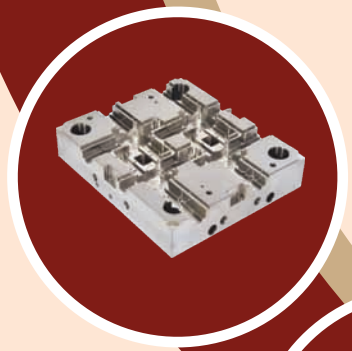
WORLD CLASS PRECISION MOULD BASES

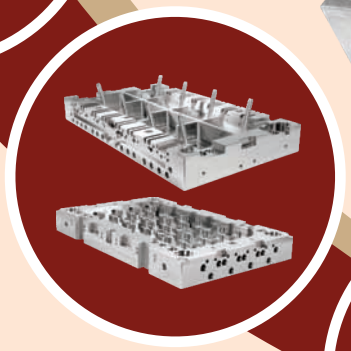
INTEGRITY · IMPROVEMENT · SERVICE · TEAM WORK
1994 — 25 YEARS — 2019

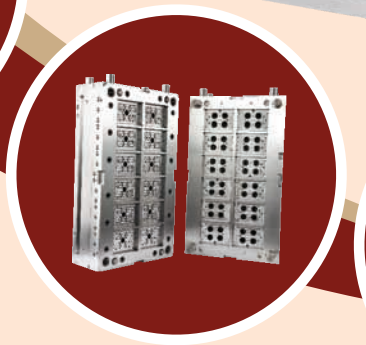
Are you looking for
Precision engineering...
Machining competency...
Timely delivery..

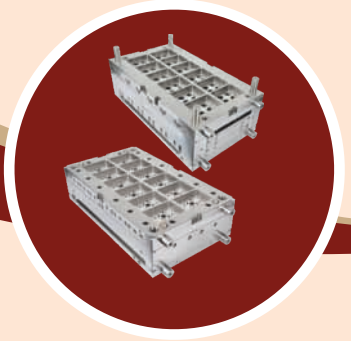












PMT™

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

Mr. D. Ravi

Managing Director in a Group of Companies

Companies' Profiles:

Classic Moulds & Dies manufactures press tools, GDC and LPDC dies.

CLASTEK Engineering Private Limited manufactures plastic moulds and plastic components.

Ability Engineering Private Limited manufactures cold and warm forging dies and powder metallurgy dies.

CMD Precision Products Private Limited manufactures CNC-machined and sheet metal components and assemblies.

Work Experience:

Mr. Ravi is a qualified Tool Engineer with 36 years of tooling experience. He worked as a Tool Design Engineer in NTTF & Lucas – TVS before starting his journey as an entrepreneur.

SHAPING THE FUTURE OF MANUFACTURING™

FOCUSED

ON THE FUTURE OF MANUFACTURING.

Our Focus is Manufacturing.

Mastercam outperforms the competition with a singular focus on developing the best CAD/CAM software, services, and support for manufacturing productivity. Period.

Mastercam 2021

NOW AVAILABLE

SCAN QR CODE TO KNOW MORE

Mastercam India

303 - Tower 1 | World Trade Centre, Kharadi, Pune - 411014

+91 7378 55 2000 | marketing@mastercamapac.com

Mr. Gopalakrishnan T.S.

Marketing Director, Multiple Special Steel Pvt. Ltd.,
Bengaluru, Karnataka.

Company Profile:

In the 90s, when the tooling industry was burgeoning, Mr. Gopalakrishnan joined a small proprietary company called Multiple Agencies (Bombay) and developed it into a partnership firm. Multiple Agencies then grew into Multiple Special Steel Pvt. Ltd. From 2005 onwards, the company has been representing, Italian major, Lucchini RS, in India, as their exclusive service centre. The company had humble beginnings. From selling one container over a period of six months, it has now reached a point where it sells more than six containers in one month.

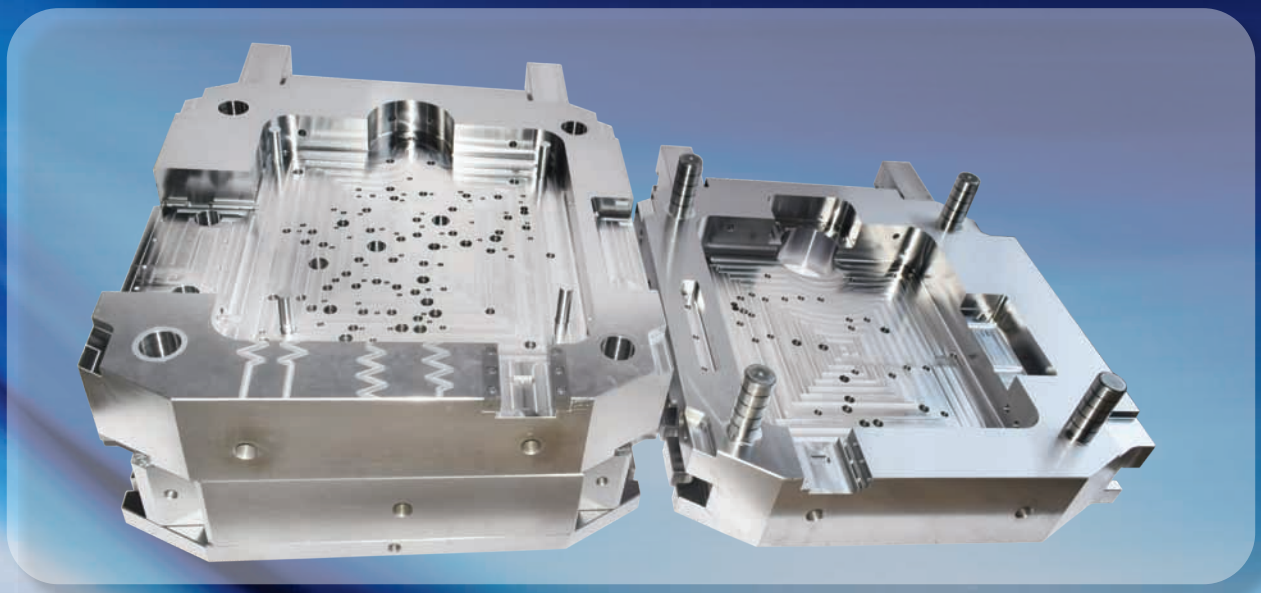
Work Experience:

Mr. Gopalakrishnan completed his schooling and college at Palakkad in Kerala. He hails from a family of entrepreneurs and so, he was naturally drawn to becoming an entrepreneur himself. He started off by selling pickles and then went on to become a pharmaceuticals salesperson. "From health, I moved to selling wealth [tool steels] to all my patrons," he says. As of today, Mr. Gopalakrishnan has been working with the tooling industry for 32 years.

As a re-elected Executive Council member, his first priority is going to be supporting his team to double the existing number of active members. He will also encourage TAGMA members to follow the path of 'Atmanirbhar Bharat'. He believes that if the government's clarion call for 'Vocal for Local' is followed appropriately, it could make each and every TAGMA member a success story. He also feels that toolmakers in India need to help the government reduce dependency on imports, especially from China, by improving their skill set. This move, he says, will also benefit sick and struggling tool rooms, which are in desperate need of work orders.

KALYANI

World Class Precision Standard & Custom made Mould Bases and Inter- changeable Components for Plastic and Die Casting Moulds



KALYANI Standard or Custom Made Mould Bases are Manufactured with The Highest Precision of Accuracy, exactly to the cuctomer's requirements with perfect interchangeability at any time.

Widest range from: 160x 160x 1500x 4000 or Mould Bases as per cuctomer's design & specifications.

KALYANI MOULD BASE PVT. LTD.
Raju Industrial Est, Perkpade Street,
Near Dahisar Check Post, P.O. Mira,
Mumbai - 401 104 (India)
Phone : 2896 6637, 2828 5290, 2897 4586
Fax : 0091-22-2828 4592
E-mail : info@kalyanimouldbase.com
Website : www.kalyanimouldbase.com

Mr. Paresh Panchal

CEO, CAM Tools, Mumbai, Maharashtra.

Company Profile:

Today, CAM TOOLS is recognized as a quality automotive mould maker and injection moulded parts supplier. CAM TOOLS has mould manufacturing facilities at Mumbai and Pune along with injection moulding, hot stamping for interior decorative parts, pad printing, ultrasonic welding and sub-assemblies at Chakan in Pune.

Work Experience:

Mr. Panchal is a 1995-batch graduate in Tool Engineering from SVKM - Mumbai University. He earlier worked as a Tool Room Engineer at Mutual Industries, a leading automotive mould maker and component supplier. It was here that he witnessed the transition from copy milling to CNC – CAD/ CAM technologies. In 1997, he decided to start his own CAD/CAM resellers business and implemented CAD/CAM solutions for mould makers in Western India. He attended various practical training programs from Delcam UK in High Speed Machining, 5 Axis Machining, Wizard-based Mould Designs-Electrode Design and Inspection software.

As an active Executive Council member, Mr. Panchal wishes to contribute to TAGMA with an effective membership drive, mainly comprising small and medium-sized tool rooms and additional value-added suppliers like design services, machining suppliers and mould base manufacturers. He also wishes to work with Global Tooling Association to strengthen tie up with TAGMA.

PPD®

Ejector Pins, Punches & Ancillary Products for Moulds & Dies

We manufacture all our Moulds and Dies ancillary products, based on the international standard systems for the convenience of Moulds and Dies Manufacturers. Also for the easiest interchangeability & to reduce down time of Moulds and Dies.

Precision Punches & Dies

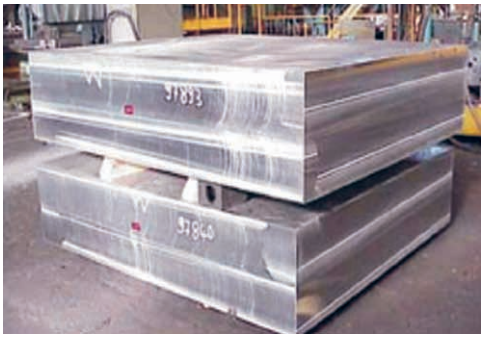
5-B, Raju Industrial Estate, Penkarpada Street,
Near Dahisar Check Post, P.O. Mira, Mumbai - 401 104 (India)
Phones : 2897 4586, 6521 5274, 6521 5275
Fax : 0091-22-2848 2115
E-mail : ejectorpin@vsnl.net, ppd.punches@gmail.com
Website : www.ppdejectorpin.com

PCK-Buderus | Special Steels Your Reliable

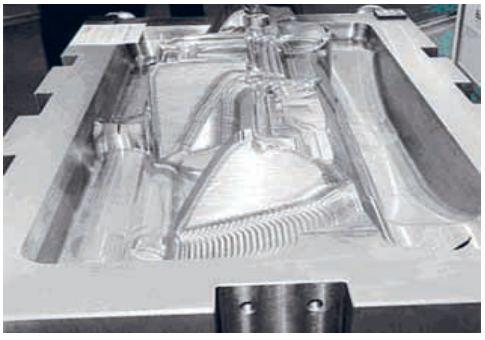
The Partner for Plastics Industry

- 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.

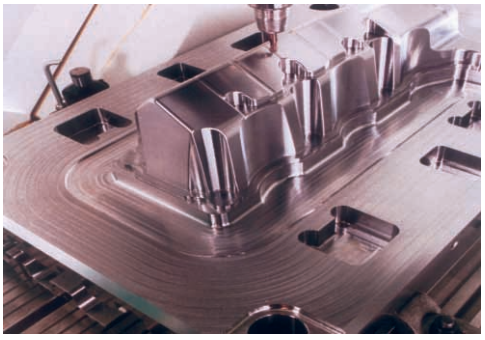
Stockholding Steels



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

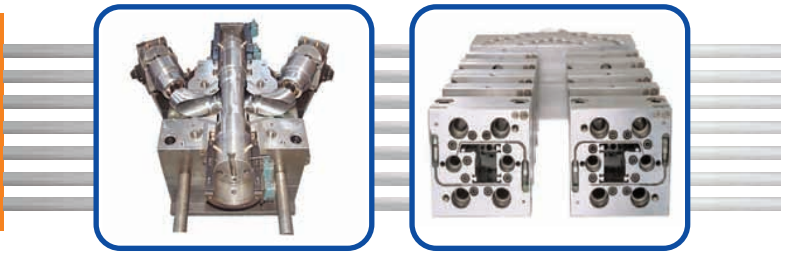
Kolkatta Office
Flat No. 403, Vishal Apartments,
4th FloorNo. 18,
Prince Anwar Shah Road,
Kolkatta - 700 033
Tel : + 91 33 2417 1078
Email : info@pck-buderus.com

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 N o 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

Executive Council 2020-2023

Mr. Parveen Satija

Founder and Managing Director,
Stitch Overseas Private Limited, Gurugram, Haryana.

Co-founder, Sandhar Tooling Private Limited,
Gurugram, Haryana.

Companies' Profiles:

Stitch Overseas Private Limited came into existence in the year 1995 as a technology solutions provider for the Indian engineering industry. In the last 20 years of its journey, Stitch has inked phenomenal growth by expanding its forte in technology and engineering solutions to a wide industry base in India. A name to reckon with, today it is one of the fastest growing importers and sourcing companies in the engineering arena. Its global alliance and networking spans across countries like Japan, Korea, Switzerland, Austria, Taiwan, Germany, Malaysia and many more with application in industries like automotive, auto components, engineering, electrical switch gears, white goods, tool room and other allied areas, to name a few. With a client base of more than 1000 companies and a network of strategically located offices across India, Stitch has made its presence felt in the Indian engineering industry. Stitch focuses on 5 key business areas, namely, steel & metals, machining application engineering, dies & moulds, machine tools and advanced technology. Sandhar Tooling Private Limited manufactures dies and moulds.

Work Experience:

With over two decades of rich experience in engineering and manufacturing technology, Mr. Satija has charted a distinguished career, reflected in the rise of the company. He is an Engineering Graduate with a Post Graduate Program in Management and with specialisation in Foreign Trade. He has grown leaps and bounds to become a reputed figure in this domain. Among his top priorities are competitive ability, scalability and management quality of the enterprise. Under his experienced leadership, Stitch Overseas rapidly expanded and forged strategic alliances with leading organisations across the globe. He is a thorough professional with a clear focus on business improvement and strategy. He is widely known for his customer-centric approach, sharp business acumen and techno-commercial skills.

Devendra Kumar Singh,

Additional Secretary, Government of India and Development Commissioner, Ministry of MSMEs

'Cluster development approach will be very useful for toolmakers'

"Through this approach, they can resolve their supply-side issues, apart from creating critical infrastructure for the die and mould industry," says Devendra Kumar Singh, Additional Secretary, Government of India and Development Commissioner, Ministry of MSMEs.

Nishant Kashyap

Q How would you describe the present state of the Indian manufacturing sector? What role do you think will MSMEs play in the development of the Indian economy?

We are passing through a crisis, which is unprecedented in nature. During the last one year, most of the MSMEs survived owing to various factors, including the different strategies adopted by them. Now, they are entering into a revival phase. The current ecosystem of support developed by the government has, by and large, helped.

For instance, at a cost of INR 1,45,980 crore, the government introduced the Production-Linked Incentive (PLI) Scheme for Large Scale Electronics Manufacturing with an aim to boost manufacturing within the country and decrease imports. The scheme is applicable in 10 sectors, namely, pharmaceuticals, automobiles and auto components, telecom and networking products, advanced chemistry cell battery, textile, food products, solar modules, white goods, and specialty steel. Hon'ble Prime Minister Narendra Modi also announced an economic package of INR 20 trillion under the 'Atmanirbhar Bharat Abhiyan'. This package is expected to help India become self-reliant and will also benefit others, including MSMEs, labourers, etc.

MSMEs are the largest generators of employment and have contributed >30% to the nation's GDP. This contribution is likely to increase manifold in the medium term, as ease of doing business increases with the support of campaigns such as 'Atmanirbhar Bharat', Vocal for Local, and the PLI scheme, among the other initiatives introduced.

Q In recent times, we seem to have been witnessing growth in all the sectors, but are still facing challenges with regard to skill development, infrastructure, adequate availability of finance, etc. What initiatives have the government undertaken to help the tooling industry grow?

The government has carefully charted a plan to promote industrial growth in the nation at various levels. With regard to helping the tooling industry bridge the gaps, the Technology Centres and MSME DIs are providing on-the-job skill development in various fields such as CNC machines, IoT, low-cost automation, tool design, CAD/CAM, etc. Apart from this, the Ministry of Skill Development and Entrepreneurship has approved 38 Sector Skills Councils (SSC) in services, manufacturing, agriculture and allied services, and informal sectors. The sectors include 19 out of 20 high-priority sectors identified by the government and 25 sectors under the 'Make in India' initiative. All these initiatives are being undertaken in close coordination with the industry. The MSME Ministry has also set up sectoral task forces, which deliberate on various aspects, including training in new areas.

On the infrastructure and credit fronts, a lot of initiatives have been approved in the latest budget and through the 'Atmanirbhar Bharat' initiative. Besides this, collateral-free loans under the CGT MSE, Fund of Funds, and Interest Subvention Scheme, of the MSME Ministry are providing credit support to MSMEs.

Q What initiatives and activities has the MSMEs Ministry undertaken to uplift Indian manufacturing MSMEs?

The ministry has adopted three-pronged strategies to uplift the Indian manufacturing sector. The first is the revision in the definition of the classification of MSMEs based on two criteria: the investment in the plant and machinery, and the turnover. Now, enterprises having an investment of up to INR 250 crore are also classified as MSMEs. Therefore, there is tremendous scope for these enterprises to grow.

The second is providing credit linkages as per the need and linking 'udyam' registration with the primary sector lending by the RBI. Schemes like Fund of Funds and Subordinate Debt, besides traditional schemes like Credit-linked Subsidy and Interest Subvention on incremental capital will help handhold the industry to grow.

The third approach is to increase the competitiveness of the industry by adopting schemes like Design Clinic, Lean Manufacturing and the revised Zero Defect Zero Effect scheme apart from adopting an innovative mindset.

Q India aims to achieve $1 trillion Gross Value Added (GVA) from manufacturing in the next five years. What opportunities will it create for Indian manufacturing MSMEs and toolmakers? How should they gear up for the same?

We are already seeing some improvement in the manufacturing sector. With the initiatives of the Government of India, like the PLI Scheme, ban on imports of some items, revised duty structure, etc., MSMEs will have better opportunities for domestic and international integration in the supply chain.

Our manufacturing sector, including the toolmakers, needs to focus on design, innovation, cost reduction, economy of scale, reduced rejection rate, productivity and reduced cycle time. By implementing these measures, manufacturers and toolmakers will be able to get a hold of the Indian market, apart from getting their due share in the global GVA.

Q How can campaigns like 'Make in India' and 'Atmanirbhar Bharat' help Indian MSMEs grow?

Campaigns like 'Atmanirbhar Bharat' and 'Make in India' have forced us to think aloud and explore the possibility of manufacturing in India. There are 358 items, which are reserved for manufacturing by MSMEs. There are about 20 items of this list whose imports are more than INR 100 crore in each case that we feel can be manufactured domestically.

Items like bolts and nuts, centrifugal pump suction, hand tools, inverters, testers, metallic valves, battery eliminators, voltage stabilizers and other similar products, have opportunities for domestic manufacturing in the micro segment. The government is also focusing on high-technology products in the defence and railways sectors.

Q We have witnessed a huge supply chain disruption after the pandemic and the ongoing geo-political situation. How will this impact Indian MSMEs?

This disruption has its pros and cons. While disruption, along with initiatives of the Government of India, will create a scenario for us to become self-sufficient, it is creating a lot of turbulence. The QCDs (Quality, Cost and Delivery) being issued will ensure good quality raw materials to the Indian industry. The improving duty structure and FDI Policy will have a positive impact on the Indian MSMEs in the long run.

Q Companies operating in the die and mould industry are mostly SMEs. What policies and initiatives could help them grow?

The cluster development approach will be very useful for them. Through this approach, they can resolve their supply-side issues, apart from creating critical infrastructure for the die and mould industry. They need to focus on QCD. Value chain analysis is also critical, as SMEs need to look out for areas where they are losing time and money. Mid-segment companies should opt for equity funding to reduce the cost of funds and to upscale their production capacity.

Q Any suggestions for the Indian die and mould fraternity?

I will emphasize on nurturing innovation and design apart from manufacturing excellence for the Indian die and mould fraternity. Most Indian die mould manufacturers belong to the micro and small sectors. It will be beneficial if they collaborate in developing their design capability. Procurement of raw materials and right skilling their workforce may be other areas which they can improve upon. They also need to specialize in their respective fields to become leaders and champions by supplying quality dies and moulds off the shelf at competitive prices.

I would also urge the Indian die and mould fraternity to work in partnership with our tool rooms and Technology Centres, which are equipped with state-of-the-art machinery and equipment.

Ace Micromatic Group

AMS
In Pursuit of Excellence

Precision Machines.

Reliable Performance.

Largest Manufacturers of Vertical & Horizontal CNC Machining centers

We understand complex shapes and exotic materials can be a real challenge to machine without the use of right products. With AMS's multitasking and 5 axes machining centers you can address these issues while raising the productivity levels. Our products are handcrafted to suit varied parts machining while they are also designed for high dynamic performance.

ACE MANUFACTURING SYSTEMS LTD.
Plot No. 467 - 469, 4th Phase, Peenya Industrial Area, BANGALORE - 560 058. INDIA.,
T: +91-9880189832 E: helpdesk@amslindia.co.in

www.amsl.in

PM says that the Budget showcases India's self-belief

PRIME Minister Shri Narendra Modi has said that the Budget this year has the feel of reality and confidence of development and showcases India's self-belief. He also said that it will infuse a new confidence in the world in these difficult times.

In his remarks after the Union Budget was tabled in the Lok Sabha, the Prime Minister said that the Budget carries the vision of 'atmanirbharta' and inclusion of every citizen and section. Shri Modi explained that the principles behind the Budget include – expansion of new opportunities for growth; new opportunities for the youth; giving new dimension to human resource; infrastructure development and helping new sectors grow.

The Prime Minister said that the Budget will enhance the 'ease of living' for the common man by simplifying procedure and rules. The Budget will bring positive changes for individuals, investors, industry and infrastructure sector.

The Prime Minister noted the positive early response that the Budget received within hours of its presentation. He said that the government gave proper attention to its responsibility towards fiscal sustainability while increasing the size of the Budget. He expressed happiness that the transparency factor of the Budget has been appreciated by the experts.

Stressing the proactive approach of the government, whether during the Coronavirus pandemic or campaign for 'atmanirbharta', the Prime Minister noted that the Budget doesn't have an iota of reactive approach. "We have gone beyond active and have given a proactive Budget," said the Prime Minister.

Appreciating the all-round development emphasis of the Budget, Shri Modi said that it is focused on wealth and wellness, MSMEs and infrastructure. He also noted unprecedented focus on healthcare. The Prime Minister expressed happiness that the Budget has taken into account the development needs of southern states, the Northeast and Leh Ladakh. He said this is a huge step in the direction of turning our coastal states like Tamil Nadu, Kerala, and West Bengal into business powerhouses. The Budget will also be greatly helpful in tapping the unexplored potential of the North-Eastern states such as Assam.

Stressing the proactive approach of the government, whether during the Coronavirus pandemic or campaign for 'atmanirbharta', the Prime Minister noted that the Budget doesn't have an iota of reactive approach. "We have gone beyond active and have given a proactive Budget," said the Prime Minister.

Mentioning the impact of the Budget on various segments of society, Shri Modi said its emphasis on research and innovation will help the youth. Common men and women will be benefitted by the stress on health, 'swachchata', nutrition, clean water and equality of opportunities. Similarly, enhanced allocation in infrastructure and procedural reforms will lead to job creation and growth.

The Prime Minister said that the Budget has many provisions for the agriculture sector and increasing farmers' income. Farmers will get easy and more credit. Provisions have been made for strengthening APMC and the Agriculture Infrastructure Fund. "This shows that villages and our farmers are at the heart of this Budget," said the Prime Minister.

Shri Modi noted that the allocation for the MSME sector has been doubled to improve employment opportunities. He said that the Budget will lay a strong foundation for a new decade and congratulated the countrymen for a Budget for 'Atmanirbhar Bharat'.

Tata Motors delivers Tigor EVs to Goa's Department of New and Renewable Energy

INDIA'S leading automobile company, Tata Motors, has partnered with the Department of New & Renewable Energy (DNRE) to deploy Tigor EVs in Goa, as a part of its tender with EESL. In an event held recently, the handover ceremony took place in the presence of Shri Pramod Pandurang Sawant, Hon'ble Chief Minister, Government of Goa; Shri Rajesh Tulshidas Patnekar, Honourable Speaker, Goa Legislative Assembly; Shri Nilesh Cabral, Hon'ble Minister for Power, Environmental, Non-conventional Source of Energy & Law & Judiciary; Shri Parimal Rai, Chief Secretary, Government of Goa; and other senior officers of the Ministry. Tata Motors is playing a leading role in proactively driving the adoption of electric mobility in the country. The company is closely working with other Tata Group companies, including Tata Power, Tata Chemicals, Tata Auto Components, Tata Motors Finance and Croma, to contribute to the faster adoption of EVs in India through its eMobility ecosystem called the "Tata uniEVerse".

Tata Motors has consistently catered to the evolving needs of customers for electric cars with the introduction of best-selling products in both fleet (Tigor EV, with a range of 140 km & 213 km) and personal segment (Nexon EV, with a range of 312 km), thereby commanding a market share of 71% in EVs (YTD FY21).

Ola to deploy ABB robotics and automation solutions at its mega-factory for electric scooters

OLA, one of the leading mobility companies in the world, recently announced that it has selected ABB as one of its key partners for robotics and automation solutions for its mega-factory in India. Ola's mega-factory will roll out the much-anticipated Ola electric scooter. Ola's scooter mega-factory, billed to be the world's largest scooter factory, is expected to be ready and operational in the coming months.

Ola will utilise ABB's automation solutions in its factory's key manufacturing process lines, including its painting and welding lines. The ABB robots will be deployed extensively for the battery and motor assembly lines. These include ABB's IRB 5500 paint and IRB 2600 Integrated Dressing robots in its painting and welding lines, and IRB 6700 robots for assembly and material handling in the battery and motor assembly areas.

The ABB robots will be digitally integrated into Ola's AI-enabled mega-factory, to optimise robot performance, productivity and product quality. The use of ABB's robots and automation solutions will ensure remote digital connectivity and monitoring of the robots that will ride on Ola's proprietary AI engine and tech stack.

Bhavish Aggarwal, Chairman and Group CEO, Ola, said: "We are delighted to bring on board ABB, a global leader in robotics, machine automation and digital services, as a key supplier and partner for robotics and automation solutions that will be deployed at our scooter mega-factory. ABB's solutions will be riding on Ola's own proprietary AI engine and tech stack embedded in our scooter mega-factory. We are bringing in global expertise and stitching up partnerships that will help us build out our factory in record speed and roll out the first of our electric scooters in the coming months."

"Connecting ABB's robot solutions to Ola's digital ecosystem will ensure our robots are key components of Ola's new, advanced facility. This level of automation will enable Ola to consistently achieve their twin objectives of high productivity and high quality," said Andrea Cassoni, managing director of general industries at ABB Robotics.

'Factory of the future'

- Ola is building its mega-factory on Industry 4.0 principles. It is to be powered by its own proprietary AI Engine and tech stack that will be deeply integrated into all its systems, continuously self-learning and optimising every aspect of the manufacturing process. This will provide unprecedented control, automation and quality to the entire operations, especially with Ola's implementation of cyber-physical and advanced IoE systems.
- With an initial annual capacity of 2 million units, Ola's mega-factory will create 10,000 jobs and serve as the company's global manufacturing hub for both India and international markets across Europe, UK, Latin America, Australia and New Zealand.
- The mega-factory is also expected to be the country's most automated, with about 5,000 robots and automated guided vehicles in use once the factory is fully operational to its full capacity.

THRUHARD SUPREME HG

For Glossy or Chrome plated parts

Front grille

Panoramic Sun roof

THRUHARD SUPREME High Gloss 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

Front Grille Mold For Heavy Truck

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

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

www.pck-buderus.com

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

Budget is a booster dose to 'Atmanirbhar Bharat', economic recovery: ASSOCHAM

FINANCE Minister Mrs. Nirmala Sitharaman has given a booster dose to the economy through six pillars of mega rise in capital expenditure on healthcare, physical infrastructure without putting much pressure on the taxpayers, ASSOCHAM President Mr. Vineet Agarwal said.

A huge 137 per cent increase in outlay for healthcare with specific INR 35,000 crore for COVID-19 vaccine rollout, a courageous asset monetisation programme along with strategic disinvestment, including two banks, stand out as defining features of the Budget for 2021-22, Mr. Agarwal said. Prime Minister Mr. Narendra Modi's flagship 'Atmanirbhar Bharat' is imprinted on the Budget through a string of measures on giving safety to domestic manufacturers through customs' rationalisation.

Mr. Agarwal said that despite an unprecedented pandemic exerting huge pressure on government finances, the Finance Minister has been able to keep the path of fiscal consolidation with a fiscal deficit of 6.8 per cent of GDP for the next financial year. "There is big emphasis on capital expenditure on building key infrastructure, both in the rural and urban parts of the city. There has also been big time focus on highways, better connectivity to ports through roads and rail and bringing down the cost of logistics to make Indian manufacturing competitive in the world," the ASSOCHAM President said.

He said that the roadmap for taking healthcare up to the block and district levels of the country along with the blueprint for research in preventive vaccination would go a long way in adding strength to our human resource. Priorities to nutrition, primary healthcare would be vital for the human capital.

He said, capital spending on infrastructure has been one of the six pillars of the Budget. Announcement of a development financial institution with an initial capital of INR 20,000 crore and a lending potential of INR 5 lakh crore would provide impetus to the sector. Asset monetisation of brownfield road projects and dedicated rail freight corridors would add speed to the infrastructure development. "The mantra is clear: Spend on quality infrastructure for faster economic recovery to double-digit growth in 2021-22," the ASSOCHAM President said.

He said that the Budget has maintained the pathway to reforms with a crucial revision in FDI limit in the insurance sector to 74 per cent from 49 per cent. "The decision would lead to the sector generating a significant multiplier," said Mr. Agarwal, adding that the Budget has given certainty and an inspired confidence in entrepreneurship by retaining the fiscal incentives for start-ups and the Stand-Up India programme.

He said that on the taxation front, the decision to limit the assessment—reopening to three years from six years—reflects increasing trust between taxpayers and the government. The focus on MSMEs with doubling of outlays for the sector and several regulatory and tax compliance reliefs would lead to ease of doing business for the small businesses.

The ASSOCHAM President complimented the government for continuing emphasis on the agriculture sector with a commitment for building enhanced agri infra. However, the government could consider replacement of proposed cess with raising more through disinvestment, the target for which may be raised in the wake of a healthy capital market.

CASTING&FORGING DIVISION

Authorized Official Dealer for India

GROUP LUCCHINI RS

Lucchini RS Presents “3D Forging” for Structural ESKYLOS 2344 HDC | ESKYLOS Optimo | ESKYLOS HiMo

“3D FORGING”

FOR

BETTER GRAIN REFINING
OPTIMAL MICROSTRUCTURE
IMPROVED “HEAT CHECK” RESISTANCE

www.msspl.co

Defence Minister inaugurates HAL's second LCA plant, calls LCA 'pride of India'

DEFENCE Minister Mr. Rajnath Singh inaugurated the second plant of HAL's LCA Division in Bengaluru recently. He lauded the efforts made by HAL to increase the production capacity of LCA, which is going to be the backbone of the IAF fighter fleet in the years to come.

"HAL's new LCA facility is an example of how 'Atmanirbhar Bharat' is shaping and HAL deserves the largest indigenous order of 83 LCA Mk-IA. LCA is the pride of India and sends the right message to others that India can make fighters of class in-house. The fighter is superior in many ways when compared to others fighters in its category besides being cost effective. I compliment HAL for working through the COVID times and bringing out this facility. The company has a lot of talent and more orders should come its way in future. We cannot depend on others for security issues and therefore, will make HAL stronger, whatever it takes," he added.

Capacity augmentation

- State-of-the-art machines such as CNC profilers, 5-axis machining centres, etc., for producing technologically challenging, high-pressure fluid cell press machine, test rigs, specialised facilities for heat treatment, special processes and hangars for structural assembly of aircraft are being created in the New LCA Complex.
- Production tooling and productivity improvement initiatives have also been undertaken by adopting the latest simulation software packages under capacity augmentation.

Mr. Raj Kumar, Secretary, Defence Production, said, HAL, has taken timely steps proactively to set up the facility well ahead of receiving the order.

Mr. R. Madhavan, CMD, HAL, said, the Defence Minister's visit is a great morale booster for HAL. The phase-1 of the facility getting ready on 35 acres of land will enable HAL to enhance its production capacity to 16 from the current eight aircraft every year. Mr. Aravind Limbavali, Minister in the Karnataka government, Air Marshal Sandeep Singh, DCAS, Dr. Tessy Thomas, DG (Aero), and many other senior officials from the defence fraternity, were present on the occasion.

Honda Cars India expands 'Make in India' commitment with its first-ever automobile exports to left-hand drive markets

HONDA Cars India Ltd. (HCIL), a leading manufacturer of premium cars in India, has announced that it will export its recently launched 5th Generation Honda City to left-hand drive countries. In a first for the company, this marks the beginning of production of left-hand drive models in India for exports and reaffirms its commitment to the Government of India's 'Make in India' initiative.

The company has begun the export of the 5th Gen Honda City with the dispatch of the initial batch to Middle East countries from the Pipavav port in Gujarat and Ennore port in Chennai. HCIL has been exporting the right-hand drive models of the all-new City to South Africa since August 2020 and to the neighbouring countries of Nepal and Bhutan from October 2020.

Car models being exported

- Honda Cars India Ltd. has been exporting car models, including Amaze, WR-V and City to Nepal, Bhutan, South Africa and SADC countries.
- The export of 5th Generation Honda City (both right-hand and left-hand drive) is the newest addition to the export business from India.

Speaking on the announcement, Mr. Gaku Nakanishi, President & CEO, Honda Cars India Ltd., said, "Honda City has been the benchmark of sedans in India and the addition of exports of its left-hand drive model to completely new destinations is a great opportunity for us to strengthen our India business. We have invested in creating an expansive world-class manufacturing facility at Tapukara, which can produce both right-hand and left-hand drive models that allow us to manage demand for domestic and international consumers. The 5th Generation City has been very well appreciated in the Indian market and we hope that we will be able to replicate this success and satisfy our global customers with its best quality and performance."

"This is in line with our commitment towards 'Make in India', where HCIL has been manufacturing all its volume models with more than 90% localisation and has been integral in developing a strong ecosystem in the country," he added.

DMU 60 eVo with PH 150

5-AXIS CHAMPION FOR DIE & MOLD MAKING

PH 150 PALLET HANDLING

up to ten pallets with 150 kg
transfer weight (250 kg optional)

CELOS

speedMASTER

36-month warranty on spindle
unlimited spindle hours
(20,000 rpm, 130 Nm, 35 kW)

Exclusive Technology cycle

MPC 2.0 – MACHINE PROTECTION CONTROL

Vibration monitoring and
machine protection in standard

Find out more about
DMU 60 eVo with PH 150

dmu-evo.dmgmori.com

DMG MORI

What will manufacturing look like in 2021?

Major systemic changes to the manufacturing industry were well underway to converging the physical and digital prior to the widespread disruptions of 2020. And, the disruptions aren't finished. Trends arising from the effects of Brexit, new waves of COVID-19, and the rolling impact of all-digital living and working promise to keep shifting the ground under manufacturing in 2021. Here are the 5 top trends to watch out for.

Even before the pandemic shredded plans and targets, manufacturers were struggling to maintain cost effectiveness while adopting or planning to adopt Industry 4.0 digitalization initiatives. In 2021, the manufacturing industry will continue to face economic upheaval, evolving consumer behaviour and changes to global trade patterns.

The efficiencies of fusing the physical with the digital in manufacturing—from disruption-ready supply chains to digital upskilling and intelligent automation—are now vital for fulfilling sustainability goals. However, many industry thought leaders also believe this convergence is an existential challenge that firms must take on to succeed. There will be risks to mitigate but, more important, opportunities to grasp as the industry reimagines the new possible.

Here are five ongoing manufacturing trends that will continue to define the near future, with some thoughts on how the industry can respond.

1. Higher demand for bespoke products

Mass customization may not be new, but demand for personalized products is rising. In saturated product categories, differentiation through features alone is getting harder to achieve. On top of that, 2020 made consumers acutely aware of the things they value most. From fast-moving consumer goods to industrial machinery, customers want products that reflect their individual needs.

This year, manufacturers will have to find ways to satisfy an even more personalization-hungry market on a mass scale. They'll need to do this while remaining profitable—despite the artisanal overheads that come with bespoke production. Meanwhile, design and manufacturing teams will need to avoid falling victim to product development systems overloaded with customization requests, which can create bottlenecks that kill innovation.

Fortunately, as demand takes shape, there will be an opportunity to look again at both pricing and fulfillment. After all, research shows consumers will pay 20% more on average for bespoke products—and wait longer to receive them.

2. The rise of smart products

Consumers are rapidly evolving new behaviours, and their expectations are rising faster than manufacturing can follow. Of the 30,000 new products introduced to market each year, some 72% fail to hit profitability targets.

After the shocks of 2020, consumers want to live better lives. So, everything they purchase has to add value. But what constitutes value? Manufacturers have to get closer to end users to know the answer.

In 2021, smart manufacturers will not only focus on concepts, such as big data and IoT, but also get better at interpreting the data they already have. They'll use it to develop smarter products that offer bundles of extended services and benefits, which, in turn, provide ongoing insight into how consumer preferences and behaviour are evolving. Instead of products, manufacturers should think of whole ecosystems, attaching apps or software features, or new subscription models that deliver recurring revenue (and data).

Meanwhile, product designers will need to give customer experience their full attention. Rather than focusing on new forms, features, and benefits, they'll need a stream of up-to-date information from customers and suppliers, analytics to understand what the data is telling them, and tools to apply what they learn to design.

3. The use of data to inform automation

Automation of repetitive tasks is already well established in high-cost countries, particularly in verticals like automotive that feature standard product or series production.

The challenge in 2021 will be to apply automation in markets defined by trends, like mass customization, where many processes and schematics can't be preprogrammed. For example, automation can be used to address categories of customer preference rather than every individual whim, helping manufacturers create personalized products while remaining efficient. To do this, automation systems will need to be fed with data currently sitting in manufacturing's technology silos: living on individual machines or inside disconnected software solutions.

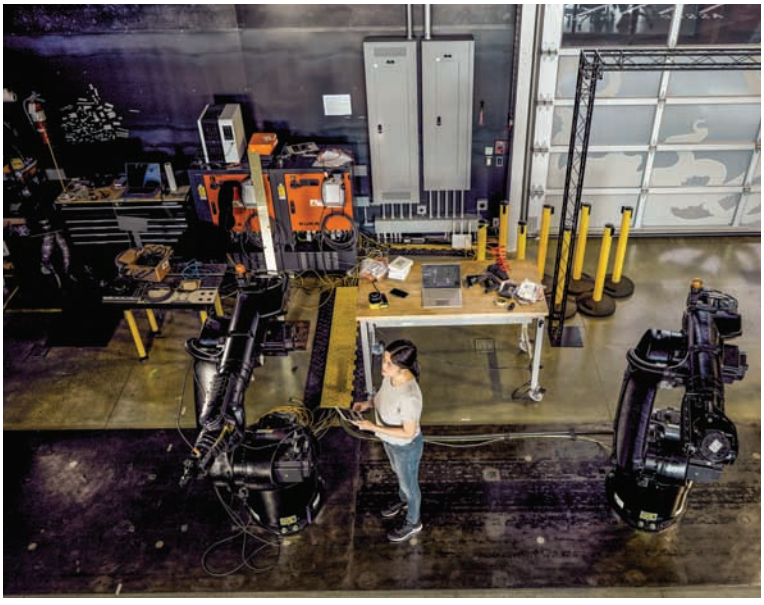
Applying new levels of automation beyond the factory floor will also uncover value and become a key driver of new efficiencies. In the design phase, for instance, greater adoption of generative design will help automate resolution of problems, letting engineers and designers focus on value-added tasks.

If there's a caveat, it's to avoid seeing automation as a cost-saving cure-all. The human beings in manufacturing's value chain are another kind of data silo, and the information and experience living in their heads is invaluable. Manufacturers will need to balance machine and human work or fall victim to cautionary tales such as Tesla's over-automation of production for its Model 3, which led to severe delays.

4. Increased supply chain resilience

When the pandemic upset supplier relationships this year, there was a knee-jerk assumption that procurement would simply come back onshore. That's proven to be untrue. Even when local suppliers have the goods manufacturers need—and the capacity to take on new orders—restrictions, like lockdowns, can keep people away from work sites and stop materials from getting through.

Supply chains need to be flexible enough to scale, as business levels ebb and flow: 2020 demonstrated just how brittle they've become after years of relentless cost optimization. It's also revealed how much manufacturers still rely on critical strategic providers that can't easily be replaced. In 2021, manufacturers will have to adopt measures to strengthen supply



chain resilience. Reviewing supplier relationships to understand where critical capabilities might lie will help shield against the impact of disruption.

Firms can invest in greater digital connectivity with strategic suppliers to strengthen collaboration. They can also take steps to spread the risk of operational downtime by finding backup suppliers for the most vital materials, services, or components. Investing in digital skill sets that support greater information sharing will take on new importance. Manufacturers might consider offering training for key strategic suppliers to help them adapt to new communication and collaboration tools.

5. The convergence of manufacturing with both construction and design

Are buildings just very large products? The construction industry seems to think so. It's borrowing heavily from manufacturing: adopting tools, processes, and ways of working that reduce costs and inefficiencies. That's led to greater cross-sector collaboration in areas such as data. It's also impacting how construction projects execute. Industrialized construction has led to more prefabrication of building components for on-site assembly later—a direct nod to manufacturing processes.

For manufacturers, greater convergence could lead to stronger supply chains. Construction is also bringing more agility to the sector, creating modular factories that can be restructured and reengineered quickly to create smaller batches of high-value products.

Designers are creating products that have structural aspects, and architects are building structures that function like products. Manufacturers should be looking to recruit skill sets that complement both industries.

Placing data at the center of the product-development process has also led to the convergence of design and manufacturing, where data in the cloud centralized within software tools creates a common data experience and better collaboration across departments, from the factory floor to the C-suite. This data-led convergence can exponentially accelerate product development by breaking down silos of communication between departments and by unlocking the potential for greater automation, which, in turn, increases productivity by reducing the delays of working manually.

Automation technologies, such as generative design harness artificial intelligence (AI), cloud computing, and data to automate aspects of design and manufacturing while further blurring the lines between both disciplines. There is also enormous potential to reduce waste by cutting down on the material used, reducing part counts, and moving more of the testing and validation processes from physical to simulated environments.

These convergences point toward the future of work, when designers are freed from mundane manual tasks and have more time for innovation. Executives will have more bandwidth to focus on business growth. Manufacturing professionals will gain new skills working alongside robotics and automation, while staying connected 24/7 to the entire supply chain.

As more elements of construction are manufactured in controlled environments and specialized construction robotics aid in tough manual labour, workers will enjoy safer and less physically debilitating conditions. And, for all employees involved, the through line of a common data experience will make remote work—with the added utility of augmented-, mixed-, and virtual-reality tools—more efficient, whether it's simply desired or required.

2021: Manufacturing's year of digital

The common thread of digitalization runs through all of these 2021 trends. This will be the year when manufacturers realize that digital transformation isn't limited to production applications like robots. It applies to the full business lifecycle: concept, design, engineering, production, and customer experience, through to management and operations. With its vast potential to reduce material waste, allow seamless remote collaboration, and foment other efficiencies, a digital transformation is key to the sustainable transformation of industry.

This year, manufacturers will need a digital strategy that can overcome the challenges of globalization, customization, resilience, and complexity—and take as much guesswork out of product development as possible.

About the Author
Karthik Manivachagam,
Industry Manager - Manufacturing at Autodesk

Article courtesy
This article originally appeared on Autodesk's Redshift, a site dedicated to inspiring designers, engineers, builders, and makers.

Effective tool condition monitoring

CNC machines are well known for their accuracy even if they produce hundreds of machined parts at a time. However, monitoring the condition of cutting tools in any machining operation is critical as it can not only help avoid unexpected machining hassles but also improve machining accuracy.

Does using only CNC machining guarantee precision of the components machined? While CNC machines come with a certain level of precision, accuracy and automation in manufacturing, achieving an optimal level of precision requires another very important, but largely ignored, aspect to be done well and that is Tool Condition Monitoring (TCM).

A well-known problem that is common for all machining is tool breakage. However, a lesser known one, which causes more rework, rejection, scrap and affects the bottom-line is the wrong tool used while machining. If we shift our focus to the importance of accurate tool offsets in die and mould, we will see the exponential impact of solving these two problems.

What happens when a wrong tool loaded goes undetected?

It is common to have instances of wrong tools being loaded. For example, instead of a 6 mm end mill, an 8 mm one is used in the CNC machine. The difference is barely recognisable to the naked eye, especially during the last hours of the shift, when fatigue has already set in. This error can lead to tool damage, job rejection and rework.

How do you effectively detect the wrong tool?

What if you had an automatic tool setter that has the ability to detect the wrong tool loaded and halt the programme? The operation stops until the operator has taken corrective action and replaced the wrong tool with the right one before it resumes operation.

What happens when tool breakage goes undetected?

Cases of improper cutting tool, or where the tool tip is damaged and not sharp, will cause poor surface finish on the part, and even leave cutter marks on the material, which speeds up the tool wear at the same time. In the metal cutting process, the tool condition has to be administered either

by operators or by online condition monitoring systems to prevent damage to both the machine tools and the workpiece.

How to detect tool breakage/damage effectively?

Using a good 3D tool setter/height master either manual or automatic with a direct CNC interface can help in the early detection of tool wear/tool breakage. A good tool condition monitoring system helps you know when to:

- Replace the tool with a new one if it's blunt.
- Choose the right tool and setting according to the characteristics of the material.
- Adjust the settings to proper specification for a particular cutting tool.

Results

The die and moulds industry is one where the unit cost of each mould is high and cases of rework, rejection or scrap can adversely impact the cost as well as profitability and reputation of the customer. By replacing manual, human-centric methods, where the scope for error is so high, with an automatic solution, a company can look at reducing rework, rejection, scrap on account of wrong tools by >50%. Studies have shown that this can result in 60% to 90% reduction in scrap i.e., today if scrap in your production is around 1.26%. Assuming a high precision machining scenario, using a quality tool setter can help you reduce this to 0.42% and this adds to huge cost savings when you are looking at total components manufactured per year.

An effective tool setter will be a beneficial investment that can guarantee quick return on your investment if it can cater to the following applications:

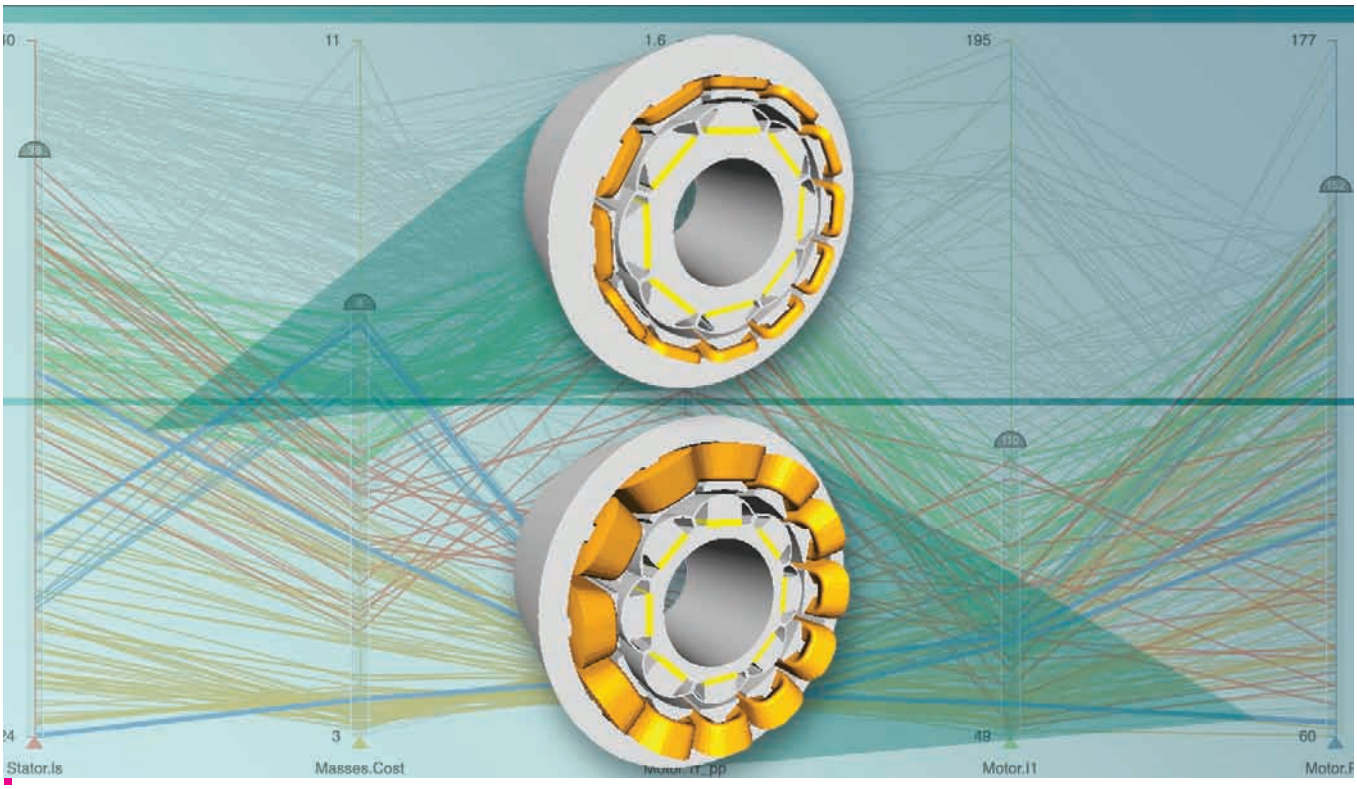
- Automatic tool length and radius
- Automatic update to the tool banks
- Automatic detection of wrong tool
- Tool breakage detection
- Detect and control the key tool dimensions.

About the Author

Rashmi Gururajarao is the Business Development Manager at Manleo Designs & Founder of Light Beam Associates. She is a professional with over 17 years of experience across Business Development, Pre-Sales, and Financial planning & Analysis. Through a nano approach, she understands the industry's ecosystem and the product/service portfolio of clients. She works with clients to design, execute a strategy to launch, cross sell or up-sell products/services such that they deliver best value proposition for the client's customers and stakeholders. She is currently focussing on strategically launching 3D Probes & Tool Setters to clients in the CNC Machining industry.

Visualization adds transparency to digital product development

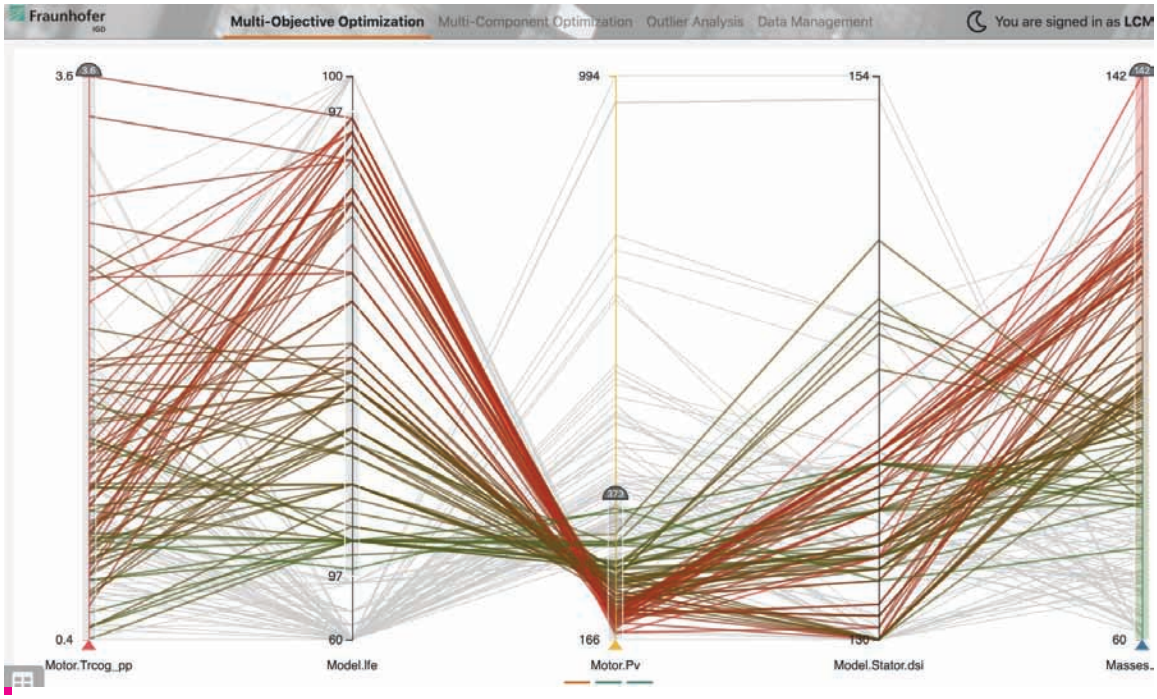
Product development is becoming increasingly demanding. Quality requirements are rising; additionally, designers need to consider criteria such as sustainability and energy efficiency. Visualization software offers the potential to reveal the complex interaction between all the different parameters and features of the planned product. For this purpose, Fraunhofer researchers have developed an interactive tool that provides a reliable basis for making informed decisions about the design alternatives of a product.



While the visualization software was developed specifically for the design of an electric motor, it can also be used to optimize nearly any other complex system or project.

Data visualization has turned into a megatrend. It is about more than just using visual representations to illustrate numbers – the visualization provides an overview, highlights structures and reveals correlations. Given the exponential growth of data quantities in all sectors – whether business, industry, retail or transport – the flood of data can no longer be controlled without visualization.

The Fraunhofer Institute for Computer Graphics Research IGD in Darmstadt has developed a particularly promising visualization application. Its main focus is on product design, i.e. the development of products in which all of the variable characteristics or performance indicators are calculated and balanced. Together with the Linz Center of Mechatronics (LCM) in Austria, the Fraunhofer researchers applied this project specifically to the development of electric motors. The research



© Fraunhofer IGD

The visualization software displays hundreds of design alternatives as polylines. Typically, up to ten optimization criteria are observed at the same time.

partner from Linz generated the technical data and, based on this, executed the mathematical simulation of all product parameters.

All product parameters in a single interactive visualization

The visual representation created by the Fraunhofer software covers all criteria that are relevant for the development of the motor, this includes: size, weight, engine power, torque, consumption, costs, efficiency and temperature. Typically, up to ten different criteria are observed at the same time.

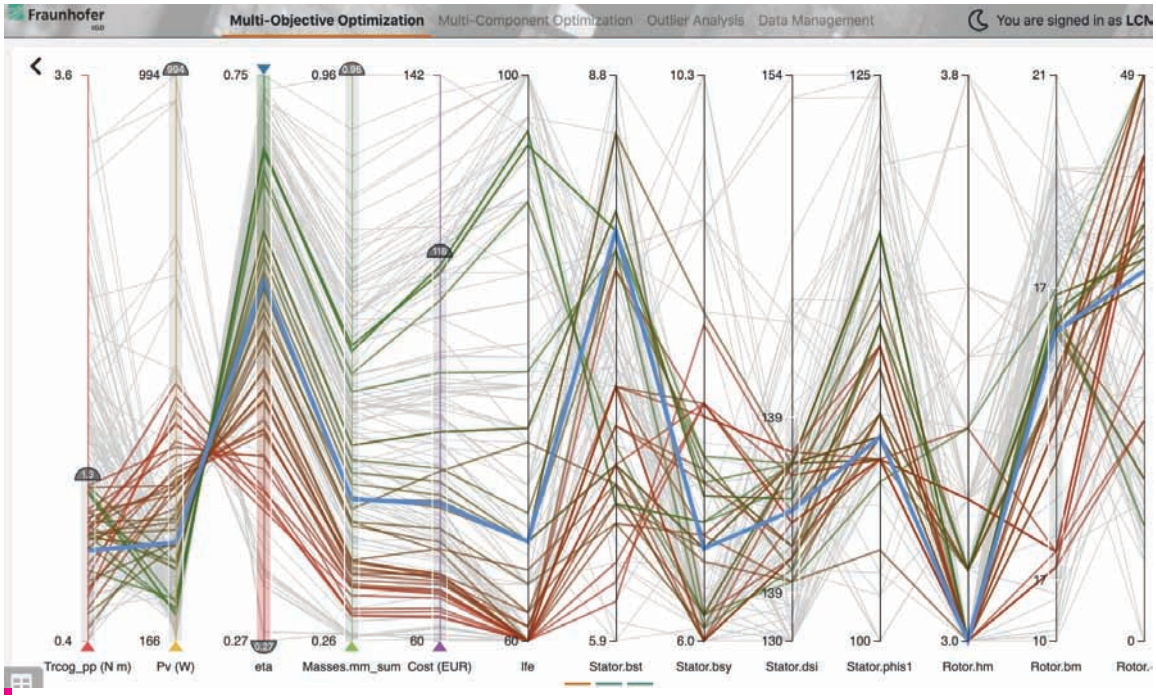
The visualization depicts the interactions of individual parameters in the form of exact curve charts and, in particular, communicate what happens when one value is changed. Changing a value often leads to conflicts of interest. If, for instance, the desired engine power is increased, costs increase as well, to name just one example.

The visualization is by no means static. The developer can change the value of each parameter continuously by moving a slider, thereby eliminating undesired values, such as excessive costs. The software displays how this affects the other criteria in real time. In this way, it is possible to run through what-if scenarios for the different design alternatives.

While this may seem trivial at first glance, the interaction of the parameters is highly complex. "Including nine or ten parameters quickly results in several hundred different design alternatives," explains Lena Cibulski from Fraunhofer IGD. She works in the institute's Information Visualization and Visual Analytics department and leads this project.

The visualization not only supports developers and engineers during their daily work, it can also be of great help during presentations to the company's customers or members of management. They can see the available options at one glance and explore all of the possible design alternatives in an easily understandable way. "There is no single best solution," says Cibulski. There are only a number of available options, each with different characteristics and performance indicators that the responsible decision-makers need to trade off. This results in a product with features and performance characteristics that are carefully balanced and represent the best possible compromise.

The visualization software offers two additional features to make the decision process even more transparent. Shortlisted design alternatives can be marked as favourites and highlighted with a specific colour. They will always remain visible in the visualization. In addition, the developers can specify limits for the individual properties. This ensures that the product meets the required specifications, for example, with regard to consumption or performance.



Highly complex, but clearly communicated: preferred design alternatives (in blue) can be marked as favorites, less favorable options (in gray) fade into the background.

Visualization reveals hidden relationships

The tool is not meant to replace the expertise of an experienced engineer. Instead, it helps them utilize their knowledge and experience as efficiently as possible. For example, they could use the software to try out unconventional ideas directly on the screen. "It often comes down to nuances. A small change in a certain value, even if it is only the wall thickness of the material at a certain location, can have unpredictable effects on other parameters," explains Cibulski. As such, the visualization tool also makes hidden relationships visible. Furthermore, on-screen simulations help eliminate design errors and minimize risks.

The software is web-based. The customer or business partner only needs to click on a link to launch the software and can then compare and evaluate all of the alternatives themselves – dramatically speeding up communication and coordination processes. However, the software can also be installed locally on a computer, if required.

The software application developed by Cibulski and her team at Fraunhofer IGD is not dependent on the simulation model provided by the Linz Center of Mechatronics. In principle, any simulation model can be used for visualization. The selected model determines the options to be compared and calculates their values for the desired product parameters. The resulting solution candidates can then be imported into the Fraunhofer application and compared with each other.

Applications in many industry sectors

This enables the Fraunhofer researchers to offer their visualization software for various industry sectors. In the case of electric motors, the software is suitable both for the development of new motors and for the further development and optimization of existing products. "The software is an ideal choice whenever dealing with many design options and a number of incompatible quality criteria that require a compromise to be made," explains Cibulski. Examples include decisions involved in considerations about energy supply concepts for a building or in the development of complex production systems in a factory.

Product development has become much more complex in recent years. As an example, aspects such as sustainability and energy efficiency have been included as additional targets as a result of the climate debate. This complexity makes visualization even more important because it creates a transparent and reliable basis for all decisions. As such, visualization is an important part of the workflow and helps accelerate the entire product development process.

The article and images are courtesy Fraunhofer-Gesellschaft

Remembering R. Srinivasan

(May 1940 to February 2020)

Mr. R Srinivasan being felicitated by TAGMA for his contributions to the Indian Tooling industry

"Legacy is not leaving something for people. It's leaving something in people," reads a quote by Peter Strople. This quote well explains the life of Former Vice-President of TAGMA, Mr. R. Srinivasan, also called R. S. Mama, who passed away in February 2020. Mr. Srinivasan, who was Sr. Vice President, Technology Development of Brakes India Ltd., believed that if he were to make a difference in the world, he would have to work on himself first and this is what led him to obtain the required educational degrees and continuously hone his skills to get better at his job. A humble man to the core, Mr. Srinivasan was a caring and compassionate leader. He believed in not only empowering himself but also others, especially those who came from the poorest sections of society. He mentored them to lead successful professional and personal lives. TAGMA Times remembers the contributions of Mr. Srinivasan and the legacy he has left behind.

Former Vice-President of TAGMA Mr. R. Srinivasan, fondly known as R. S. Mama, passed away in February 2020. Mr. R. Srinivasan, Sr. Vice President, Technology Development of Brakes India Ltd., was elected in 1995 and served on the Executive Council 1995-2011. He was elected Vice President in 2006-07. He was a livewire that led TAGMA activities in Chennai and was very active on the Executive Council.

Early life

Mr. Srinivasan was born on May 18, 1940, at Tirupathur near Pudukkottai in Tamil Nadu. His father, Nallan Chakravarthi Sri R. Rangaswamy Iyengar, was an advocate in the Pudukottai court, while his mother was Smt. Ranganayaki. He was the second of four siblings, a brother to Janaki, Vijayalakshmi, and Kousalya.

Mr. Srinivasan had a modest upbringing in Pudukkottai in a joint family. Fondly called Cheenu, he inherited patience and kindness from his father, and his vigour and can-do attitude from his mother. He attended the esteemed Sri Kulapathi Balaiah Higher Secondary School and the Sri Brahadambal Government Higher Secondary School in Pudukottai before completing his PUC in H.H. The Rajah's College.

His innate interest in the discipline of Science led him to obtain a BSc. degree in Physics from St. Joseph's College in Trichy, where he was Secretary of the Sanskrit Society. He then attempted an MSc. in Annamalai University before joining the prestigious Madras Institute of Technology to obtain a DMIT degree in Instrumentation. He was the first engineer in his family.

Marriage and family

At age 23, Mr. Srinivasan married 17-year-old Smt Rajalakshmi on June 23, 1963, at Pudukkottai. Her father P. K. Sundarrajan was the Branch Manager of TVS Pudukkottai. They had two sons, Chi Vijay Anand and Chi Raghunathan. Mr. Srinivasan was a devoted husband and father, who took every effort to ensure that his family had a secure and comfortable life. His hardworking nature was complemented by his ability to balance his work and his family engagements. He spent time with his sons, and regularly kept in touch

Obituary

Mr. R Srinivasan at the inauguration of Die & Mould India 2011.

Mr. R Srinivasan being felicitated for his contributions to Brakes India.

with relatives in Chennai as well as in Pudukottai to make sure his family understood his roots.

Career

On June 23, 1964, which was the day of his first wedding anniversary, Mr. Srinivasan was appointed as an Apprentice Engineer at Brakes India TVS in Padi, Chennai. With a salary of INR 300 per month, he moved with his family to Ayanavaram, Madras. His first mode of transport was a Hercules bicycle. His work ethics and dedication were so unparalleled that he quickly rose within the ranks in Brakes India to become a manager and eventually, its first Senior Vice-President. Mr. Srinivasan was one of the few employees outside of the TVS family to achieve such a high-ranking position. At Brakes India, he was responsible for several departments including the Tool Room and Production Engineering. In 1988, realising the need for the company to innovate new technologies and tools, he founded the Technology Development Department and grew the department from a few engineers to a strength of 250.

At Brakes India as well as in the industry, Mr. Srinivasan was widely recognised as a revolutionary technology leader of his time. He introduced new breakthrough technologies, including computers and CAD/CAM, robotics, and special purpose automation to the company. He spearheaded several major technology initiatives, culminating in the formation of the Technology Development Department. Here, he created computer-controlled special purpose machines that were so innovative and cost effective that orders poured in from top manufacturing firms in Germany, Japan and China.

Mr. Srinivasan was the Vice-President of the acclaimed TAGMA (Tool and Gauge Manufacturers Association) and was recognised as Chartered Engineer by the US Society of Manufacturing Engineers. An avid traveller, he visited over 30 countries to meet customers and vendors, and to speak at conferences. A Brakes India legend, Mr. Srinivasan was asked to extend his employment beyond retirement several times, and ultimately provided 52 years of incredible service to the company.

Other initiatives

Mr. Srinivasan was a caring and compassionate leader who quietly practised world-class management principles. He hired over 600 talented employees from the poorest sections of society without regard for religion or caste. Under his mentorship, they were trained to become the next leaders of the company. He not only guided them to become experts in their profession but also taught them how to be successful in their personal lives. He recognised their hard work by celebrating birthdays and important occasions.

A master organiser, he invited the company's leaders and employees to the grand annual 'Ayudha Pooja' festival, which he conducted with the assistance of 'kainkaryapaaraal' from Srimath Andavan Ashramam. This event created a strong sense of kinship between employees and their managers.

Legacy lives on…

A family man, a professional, a mentor, a leader… Mr. Srinivasan was all this and so much more. He believed that his actions must speak louder than his words. And, through his actions of humility, hard work, sincerity, and dedication, he has led by example. He has motivated and guided others to the path of success. His death has left a void in the world of manufacturing, but he will continue to live on in the minds of those whose lives he has inspired.

Patron Members of TAGMA

NO	Existing Patron Members	CITY
1	BHARAT TECHNOPLAST PVT LTD	Mumbai
2	BRAKES INDIA PRIVATE LIMITED	Chennai
3	CRAFTSMAN AUTOMATION PVT LTD	Coimbatore
4	DEVU TOOLS PVT LTD	Mumbai
5	ELECTRONICA HITECH MACHINE TOOLS PVT. LTD.	Pune
6	GODREJ & BOYCE MFG CO LTD - Tooling Division	Mumbai
7	JAIN IRRIGATION SYSTEMS LTD	Jalgaon
8	KINETIC TECHNOLOGIES (a divn. of Jayahind Sciaky Ltd)	Pune
9	LMT INDIA PVT LTD	Pune
10	LUCAS TVS LTD	Chennai
11	MAHINDRA UGINE STEEL CO LTD	Raigad
12	MANGAL INDUSTRIES LTD.	Chittor
13	MISUMI INDIA PVT LTD	Gurgaon
14	MULTIPLE SPECIAL STEEL PVT LTD	Bengaluru
15	MUTUAL ENGINEERING PRIVATE LIMITED	Thane
16	NTTF	Bengaluru
17	SANDVIK COROMANT INDIA at SANDVIK ASIA PVT LTD	Pune
18	SCHUNK INTEC INDIA PRIVATE LIMITED	Bengaluru
19	SECO TOOLS INDIA (P) LTD.	Pune
20	SRIDEVI TOOL ENGINEERS PVT LTD	Thane
21	SUNDARAM CLAYTON LTD.	Chennai

ADVERTISERS INDEX

New Members February 2021

BRAHMADEVI ENGINEERING PRODUCTS PVT LTD
19, Martand Chowk, Indore – 452007, Madhya Pradesh
Tel: 9425318546, **Email:** ruchir@diespares.net, **Website:** www.diespares.net
Contact Person: Mr. Ruchir Gupta – Director
Product: Manufacturers of Mould and Dies Standard Spare Parts Like, Pillar Post Sets, Punches, Die Buttons, Springs, Ejector Pins, Gas Springs etc.

www.ampcometal.com

AMPCO®

AMPCO METAL

Our forged AMPCOLOY® 944/940 Beryllium free copper alloys having superior mechanical & physical properties than casted Copper titanium alloys

AMPCOLOY®

AMPCOLOY® advantages

- Materials are forged & extruded to get best physical properties
- Stock availability : No limitation on supply dimensions
- Available round bar sizes : Ø9.5mm -Ø370mm
- Available plate thickness : 10 mm-310 mm thick
- Increase productivity by min. 20%
- 50 % more thermal conductivity than Copper Titanium
- Cycle time & Mould life is better than Copper Titanium
- Excellent wear & corrosion resistance, Good Machinability

Mechanical and Physical Properties	Units	Beryllium-Free Copper Alloys		Copper Titanium Alloy
		AMPCOLOY® 940 Nominal Values	AMPCOLOY® 944 Nominal Values	
Tensile strength Rm	MPa	689	938	800-1100
Yield strength Rp 0.5	MPa	517	725	750-1000
Elongation A5	%	13	5	3
Brinell hardness	HBW 10/3000	210	294	270-320
Rockwell hardness	HRB	95	106	103-107
Modulus of elasticity	GPa	131	135	127
Density ρ	g / cm^3	8.71	8.7	8.7
Coefficient of expansion α	10^{-6} / K	17.5	17.5	18.1
Thermal conductivity λ	W / m · K	208	156	100
Electrical conductivity	% I.A.C.S.	48	30	17

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

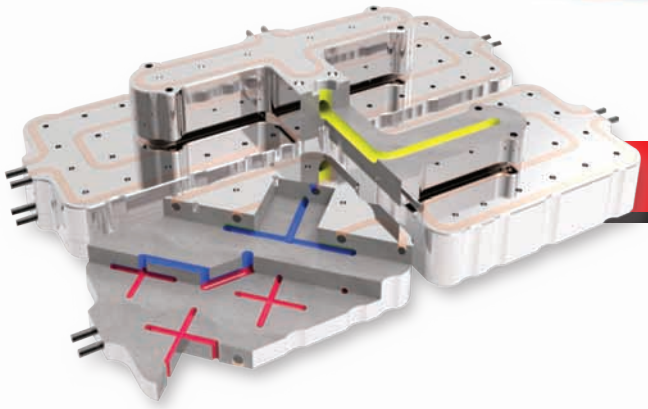
AMPCO METAL EXCELLENCE IN ENGINEERED ALLOYS

EXTRAORDINARY EFFORTS. EXTRAORDINARY RESULTS.

HOT SOLUTION

YUDO

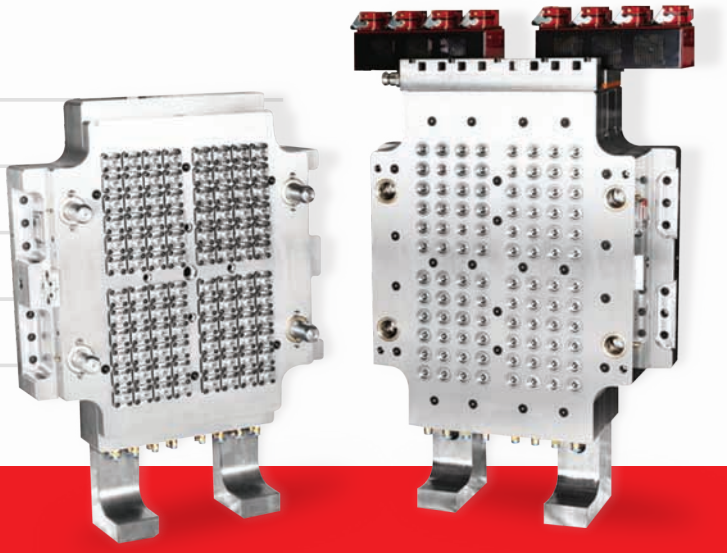
HOT RUNNER SYSTEM



ISO edgeless manifold for packaging

Advantages:

- Best weight variation in Industry - Below 3.5%
- Fastest color change
- Eliminate dead spots inside the flow channel
- Reduce pressure drop
- Prevent burning issue in case of delicate resin

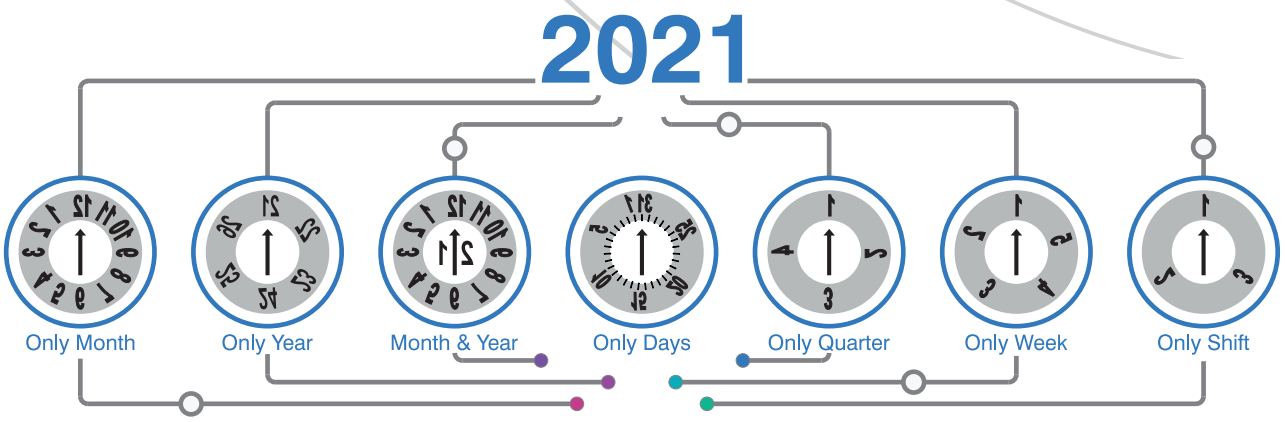


YUDO HOT RUNNER INDIA PVT. LTD.

A/113 & 114, Evershine Industrial Estate, Waliv Road, Chinchpada Junction, Vasai (E), Thane-401208, INDIA.
Tel.: +91-250-3200922, 2451156/56 | Fax: +91-250-2451158 | Email: sales@yudo.co.in | www.yudo.com

DATE INDICATORS
FOR YEAR 2021

VIJAYDEEP®
Standard Solutions



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

Estd.1993

DEVU TOOLS PVT. LTD.

AN ISO 9001 : 2015 COMPANY

MOULD MAKERS
MANUFACTURER & EXPORTER

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
Unit : 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