

TGP EL

PRECISION ENGINEERING
LIMITED



**ONE STOP SOLUTION
FOR PRECISION MOLDS &
PLASTIC COMPONENTS**

www.tgpel.com

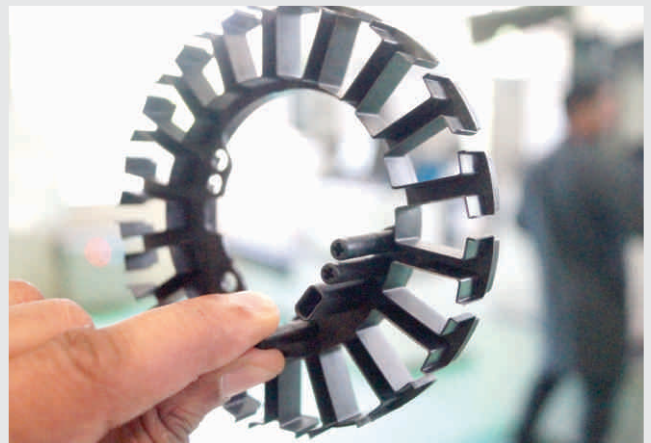


COMPANY PROFILE

TGPEL Precision Engineering Limited (Formerly known as Timex Group Precision Engineering Ltd) provides one stop solution for Plastic Injection Mould design, manufacturing, tryout, mass production, assembly, testing & validation under one roof.

TGPEL started its operation in the year 1992. With more than 30 years of rich experience, TGPEL has established itself as one of the leading precision engineering companies in the country. It caters to major automotive tier 1 industries, Consumer Electrical and Electronics OEMs, FMCG and medical equipment manufacturers.

TGPEL is an ISO 9001:2015 and IATF 16949:2016 certified company. The company is expanding its manufacturing capacity by setting up a modern Plastic Injection Moulding facility having capacity up to 660T injection moulding machines and a modern inspection and testing laboratory.



COMPANY OVERVIEW

- IATF 16949:2016 and ISO 9001:2015 Certified by TUV NORD.
- Specializes in manufacturing of high precision injection moulds and production of injection molded components.
- Qualified and experienced manpower from reputed institutes.
- Internationally competitive products with respect to quality, cost, lead time and reliability.
- Premium quality Tool steels, hardened through vacuum technology are used to enhance tool performance.
- Critical machines installed in dust free and controlled environment.
- Catering to Automotive, Electrical, Switchgear, Medical, Consumer Durables and FMCG segments in India and Abroad.



COMPETITIVE ADVANTAGE

- TGPEL provides one stop shop solution for mould development, part manufacturing, sub-assembly and complete product assemblies to its esteemed customers.
- MSIL - VSA approved Green Supplier.
- Organization structure capable of handling multiple projects at one time.
- Experienced Designers and CAM engineers.
- Qualified tool makers and CNC operators.
- In-house Mould Trial and Moulding facility.
- Effective preventive maintenance system for machines and moulds.
- In-house heat treatment facility.
- In-house inspection facility up to 1 micron.
- Capable to develop and process fully automated moulds.
- Capable to develop and process multi cavity moulds with low cycle time and dimensional accuracy.
- Capable to process all kinds of engineering plastics and parts having mirror finish.



INTEGRATED SOLUTIONS



- 1 Reverse Engineering
- 2 Design
- 3 Prototypes
- 4 Series Moulds
- 5 Mass production
- 6 Child Part Development
- 7 Assembly
- 8 Testing & validation as per Customer Requirements.

The experienced team at TGPEL is capable to offer integrated solutions which will help in bringing world class products to market faster than the competition. TGPEL boasts of timely completion of the projects in close collaboration with the customers.

The value-added services provided by TGPEL helps the customers to reduce the overall manufacturing cost of their products.

The assembled products are tested before dispatching to the customers in the in-house testing facilities to ensure that the performance of the products are met as per the standards provided by the customers.



DESIGN CAPABILITIES



Our Design Department employs highly skilled Engineers capable of using the most advanced modelling software. Our NX- CAD/CAM (formerly Unigraphics) software enables us to machine the details of the tool directly from the design data. This not only reduces the lead time of mould parts manufacturing but the potential for human error is also greatly reduced. We accept file formats which include, UGII, Parasolids, and STEP files.

Design Profile

- Engineering assistance for product design.
- Manufacturing feasibility assistance.
- Prototyping services.
- Mold flow & mould cooling analysis.
- Design optimization for enhanced mould life.

CAD/CAM: NX 11 (Formerly Unigraphics)

- Multi station designer and manufacturing bundle with gateway, free form modelling, Solid modelling (3D CAD), 2D Exchange, Assembly, Translator and Mould wizard.

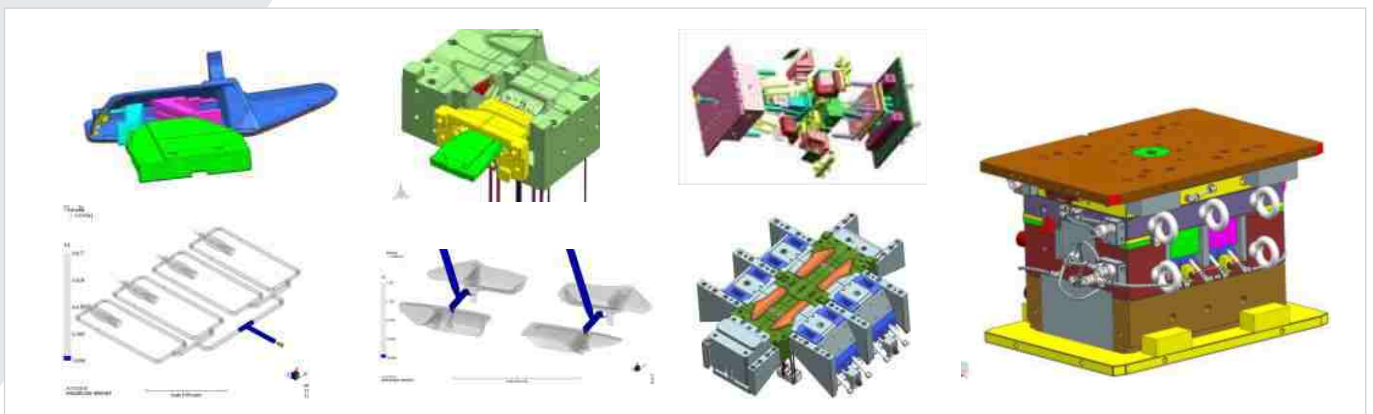
Reverse Engineering

Auto CAD

Colour printing facility up to A0 size

Mould Flow

- Approved sources for mould flow to improve the quality of components as well as to enhance mould performance.



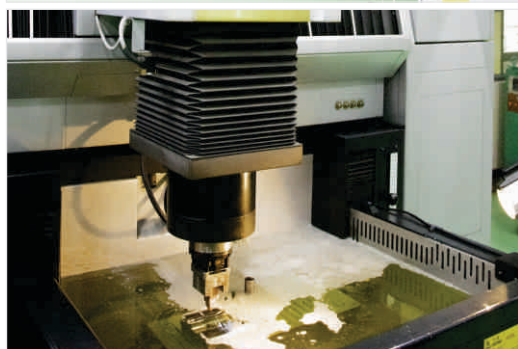
TOOLING CAPABILITIES

Our tooling department is considered by our customers to be the best source for manufacturing precision plastic injection moulds. 3 shifts operation ensures that the moulds are built to meet ever reducing lead time. Whether it is the medium hardened steel for pre-production moulds or hardened steel for high-volume production moulds, our quick turnaround time helps our customers to get new projects off the ground within stipulated timeline.



CNC Milling

- DMC 63 V, Germany.
- MAHO 630, Germany.
- MAKINO, S-33, Singapore.
- HASS, VF1 and Super Mini Mill, USA.
Rpm Range-4000 to 15000 with Graphite milling facility.



EDM

- Sodick AG 40L, Japan - 4 axis EDM with 20 rpm C axis rotation facility. With surface finish capability upto: 2.6 μm Rz Table size: 600mmx400mm
- AgieTron 1U CNC EDM with Orbiting Facility.
Table size: 250mmx160mm
- Agie Charmilles 1P Table size: 400mmx300mmx200mm
- Chmer 434C CNC EDM with Table size: 400mmx300mm



Wire Cut

- FANUC ROBOCUT Alfa - 1iC, Japan (5 axis with AWF)
- FANUC ROBOCUT Alfa - 0iD, Japan (5 axis with AWF)
- SODICK AG 400L, Japan

Grinding

- Okamoto -ACC 450DXA, Japan - High precision surface grinder with auto feed facility with an accuracy of 0.1 micron

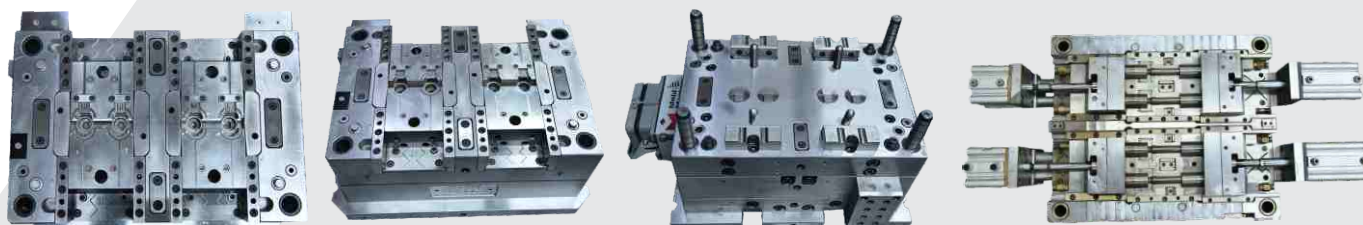


Jig Grinding

- HAUSER, Switzerland. Up to 80000 rpm. 1.0 micron accuracy. Inside taper grinding facility up to 5 degree.

Universal Grinding

- EWAG-WS11, Switzerland Cutters/Pins up to 0.2mm diameter and with an accuracy of 1.0 micron can be machined



MOULDING CAPABILITIES



Controlling the molding process is the most critical factor in the overall scope of providing close tolerance plastic components. This is accomplished at TGPEL by utilizing the microprocessor controlled closed loop injection moulding machines. With machine tonnages ranging from 25 to 300 tons of clamp force and shot sizes from as low as 2g to 860g, we provide a very wide range of options to our customers. We are now expanding machine capacity up to 660T with a shot capacity upto 3kg and vertical injection moulding machines to accommodate complete range of precision plastic segment. TGPEL is working towards investing into 2K moulding technology and dust free moulding infrastructure.

Moulding Profile

- Fastest turn-around time in the industry.
- 100% on-time delivery with zero PPM.
- Lean manufacturing techniques.
- Insert & Overmoulding.
- In-house mold maintenance & refurbishment.
- Close-tolerance critical molding.
- Working with customers for 2K injection moulding.
- Vertical injection moulding.
- Expertise in running hot runner, semi hot runner, hot Sprue and auto unscrewing moulds.



Pre-Heaters



De-Humidifier



MTC



HRTC

INSPECTION CAPABILITIES



Mitutoyo, Japan

- Light weight and compact dimensions.
- Easy to operate joystick box for measurement efficiency
- Excellent cost/performance ratio
- Resolution: 0.01 micron
- Scanner attachment for reverse engineering



Profile Projector



**Universal
Measuring M/c**

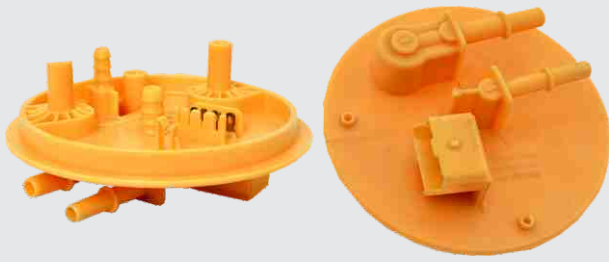


Height Master



**Tool Maker's
Microscope**

AUTOMOTIVE PRODUCTS



Flange



Manifold



Cover



Protector



Air Vent



Bobbin



Locating Pin Cover

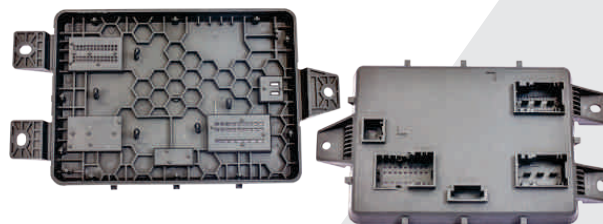


Speaker Grill

AUTOMOTIVE PRODUCTS



Garnish



Fuse Box Cover



Door Handle



Housing



Bobbin



Door RR Handle

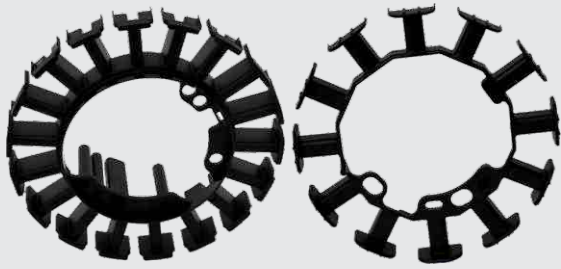


Alternator Cover



CDI Case

AUTOMOTIVE PRODUCTS



Bobbins



Encapsulations



CRB Housing



Door Handle



Clamp



Wheel Speed Sensors

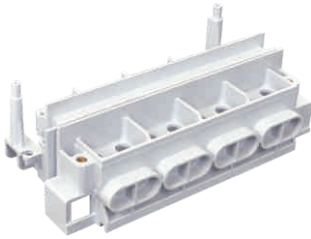


WSS Connector



Hook

ELECTRICAL PRODUCTS



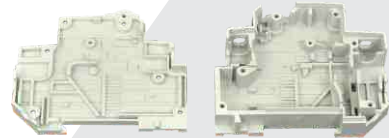
Terminal Block



Coil Frame



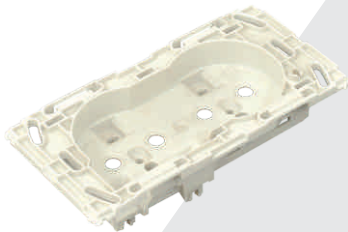
RCCB



MCB Parts



Energy Meter Parts (Base, Terminal Block, Terminal Cover, Display Window)



Housing



Bobbin

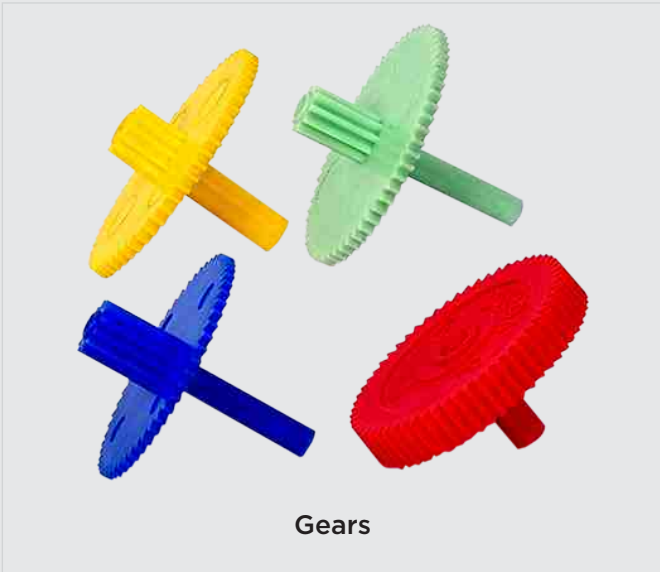


Frames



Bulb Holders

INDUSTRIAL PRODUCTS



MEDICAL PRODUCTS



OUR CLIENTS

DENSO
Crafting the Core

Kjima
Auto Technology



LUK INA FAG
SCHAEFFLER GROUP

PVNA

HI-LEX



Continental

YAZAKI



NIPPON

motherhood innovations

SHIGAN GROUP

AISIN



NIFFCO

TW



SPARK MINDA
ASHOK MINDA GROUP

interface

SECURE



HAVELLS

Nidec

GRUNER G
Schalten und Bewegen

socomec
Innovative Power Solutions

simon



POLYCARB

Landis Gyr+

KOHLER

Gillette



LohiaCorp



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