

Responsibility
& Accountability



MUTUAL
EXPERIENCE VALUE



ECHO
ECHO

Growth



Expertise

Excellence

OUR FACILITIES

- MIL Silvassa Production Plant

Facilities - Injection Molding, Thermoforming, Assembly, Aqua graphics, TOM, Surface Coating.

- MIL Umargaon Production Plant

Facilities - Multi layer Extrusion Bubble guard Technology, Converting Facilities.

- MEPL

Facilities - Tool Design, Mold Flow, Tool Manufacturing.

- Styl'monde Plateforme Logistique

Facilities: -Thermoforming.

- Styl'monde Thermo Bree

Facilities: -Thermoforming.

Corporate Office: Andheri, Mumbai, Maharashtra



Mutual Industries Limited

Silvassa Plant - U.T. of Dadra & Nagar Haveli
IATF 16949, ISO 14001-2015, OHSAS18001-2007 & ISO 9001-2015 Certified
www.mutual-industries.com



Mutual Industries Limited

Ground Survey No 166/1 Part I, Near Radium Creation, Radium Creation road, Village Tumb Taluka Umargaon, Valsad, Gujarat, 396150. ISO 9001-2015 Certified



Mutual Engineering Private Limited Application Development and Tool Room

Vasai, Mumbai, Maharashtra
ISO 14001-2015, OHSAS



STYL'MONDE Plateforme logistique, Rue de la Gare, 01150 LEYMENT – France



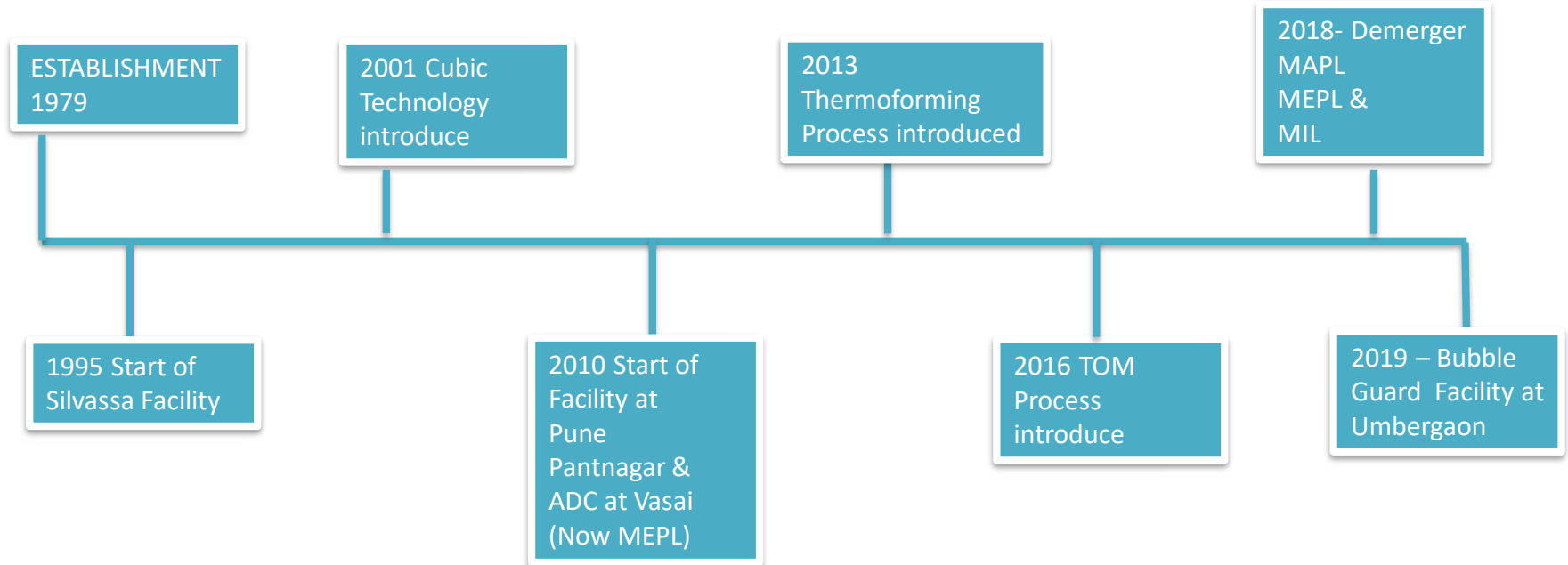
**STYL'MONDE THERMO
Brée THERMO INDUSTRIE (3
Facilities)**

Route de Montsûrs 53150 BREE - FRANCE

MUTUAL
EXPERIENCE VALUE



MILESTONES



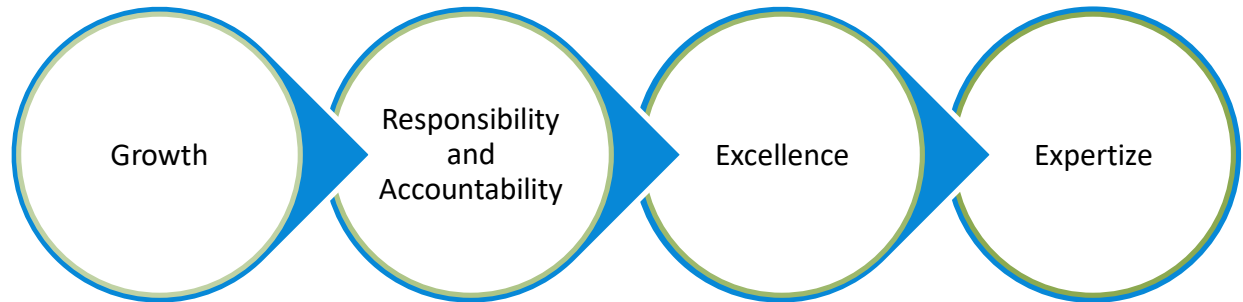
VISION

To be a global company with trail blazing innovations.

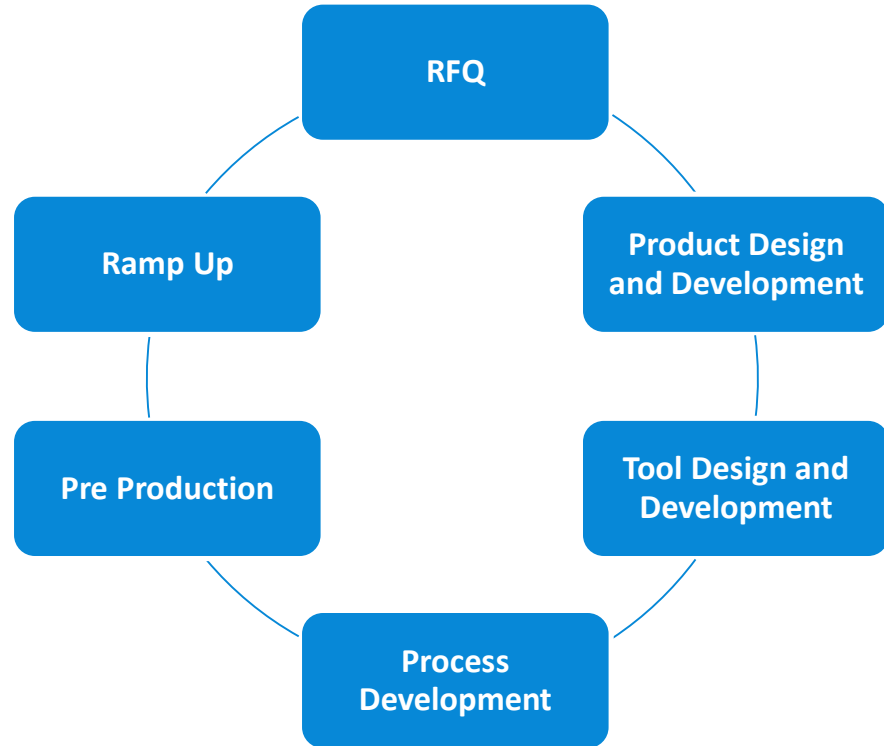
MISSION

- To provide innovative solutions that touch lives and improves the environment
- To be appreciated for our quality.
- Our relationships with customers will be found on high levels of mutual trust and respect

CORE VALUES



We support our customer with our experienced team of project management equipped with all the contemporary project management processes and tools.

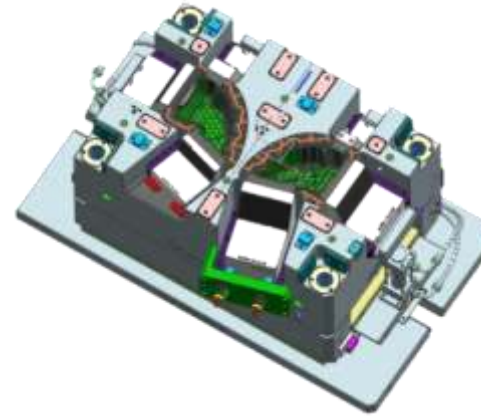


- Engineering & Tooling
- Injection Moulding
- Single Sheet Thermoforming
- Twin Sheet Pressure Forming
- Multi-layer Extrusion Bubble guard Technology
- Aqua graphic Cubic Technology
- Three-Dimensional Overlay Method (TOM)
- Surface Coating





Mould Flow Analysis



Mould Design



Mould Manufacturing



Qualifying Fixtures & Assembly Fixtures

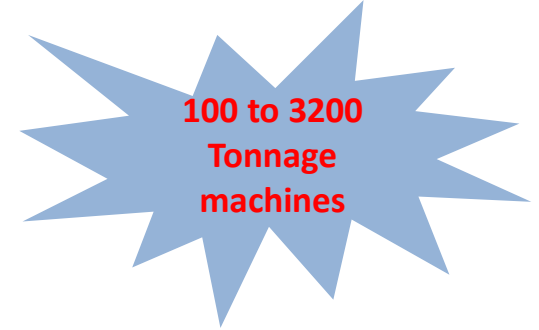


160 TON



850 TON

Most Contemporary Technology over wide range of our injection Moulding equipment's



3200 TON



Plastic Materials used :-ABS
Cubic Film: - 4C , Taiwan

Process Involved: -

- Molding
- Ultrasonic Welding
- Sheet metal bending
- Printing
- Assembly with electric motor assembly



ASSEMBLY CAPABILITIES – Electronic Voting Machine



Plastic Material used :-
ABS , PC, Nylon

Process Involved: -

- Molding
- Ultrasonic Welding
- Printing
- Heat Sealing
- Heat Insertion
- Foam Assembly



Total Parts for
Maxima assembly
: - 22 Nos.



Total Parts for
Turbo assembly: -
25 Nos.



Plastic Materials used :-
ABS , POM , GFPP , PPCP , FPP , PPRP

Process Involved: -

- Molding
- Printing
- Heat Sealing
- Heat Insertion
- Foam Assembly
- Assembly with electrical accessories i.e. pump motors, fan motors.
- Assembly with testing power code.

ASSEMBLY CAPABILITIES - Grinder



Plastic Materials used :-ABS ,
GPPS , NYLON

Process Involved: -

- Molding
- Printing
- Heat Sealing
- Heat Insertion





Process: -
Molding, Cubic



Process: -
Molding,



Process: -
Thermoforming



ASSEMBLY CAPABILITIES– ATM Fascia



Upper Fascia



Lower Fascia



Snap Cover



Chrome Part



Camera Cover

PROCESS TECHNOLOGIES – Injection Molding, Chrome Plating and Assembly

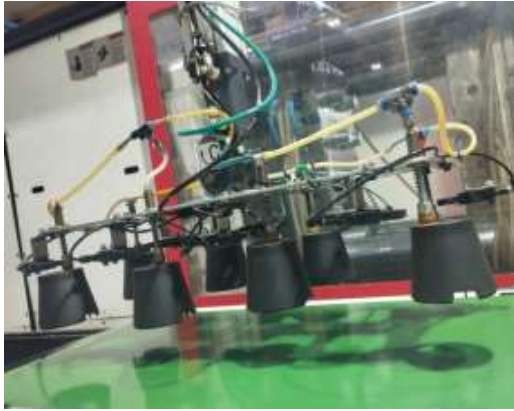


Plastic Materials used :- ABS , POM

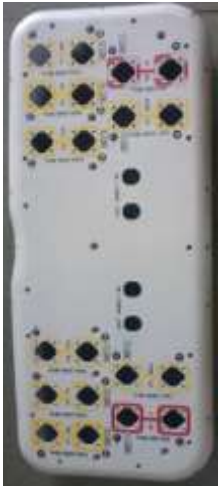
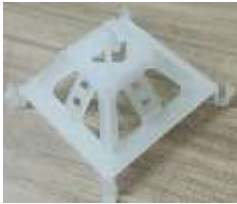
Process Involved: -

- Molding
- Plating
- Heat Sealing
- Laser Etching
- Assembly

INJECTION MOLDING – Room Freshener



INJECTION MOLDING - Telecom Sector



PROCESS TECHNOLOGIES— AQUA GRAPHICS

Mutual Industries brings Japanese technology from Taica Corporation (Cubic) that enables transformation of your products through surface enhancement to augment its beauty.

The process called Aqua graphics entails a water-soluble film, covered in natural and abstract prints that is printed onto substrates which could be made out of plastic, glass, wood, metal etc.

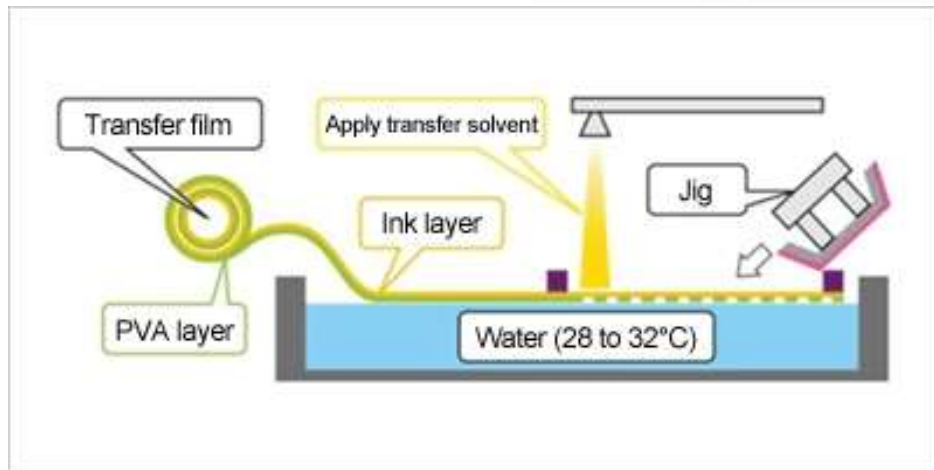
It is possible to create more than 2000 different patterns across various color shades on the products.



Oak Wood



Brushed Metal





4 Color film



3 Color film



Aqua graphics on Aluminium Fan Blades.

4 Color film



3 Color film



Aqua graphics on ABS Glass filled Fan Blades.

Aqua Graphic Printing - Advantage

- Three Dimensional Printing



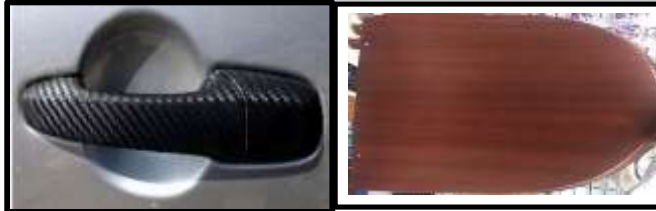
- Freedom in Product design.



- Customization



- Quality Texture Finish



- Versatile graphic design

- Sharp edges

- Deep Draw

- Wide Surface Coverage

TOM – Flexibility in Part shape design



Concave Surface



Deep Draw



Sharp Edges



Backside Wrap

TOM – Variety in Design

- Wooden Finish
- Sand Finish
- Metal Finish
- Leather Finish
- Fabric Finish
- Abstract Patterns
- Stone Finish
- Color Combinations



Mutual Industries has invested heavily in the latest finishing technologies and are a house of excellence for plastic parts surface finish.

Our Specialties:

- Manual Surface Coating Line
- Capable of handling large parts up to 2 mtr x 1 mtr
- Ability to process PU based paints
- Finished possible for Metallic and Non-Metallic



MUTUAL
EXPERIENCE VALUE

Establishment in 1979 –
Mumbai, India.



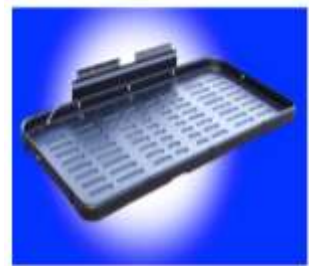
Styl'monde

Establishment in 1958 –
France , Europe.

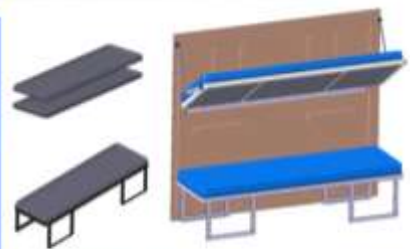
MUTUAL Styl'monde

The experience of over 3 decades of Styl'monde in European Bus Industry Synergizes with the Indigenous Engineering and Manufacturing capabilities of Mutual Industries

THERMOFORMING PROCESS - SINGLE AND TWIN SHEET EXPERIENCE



Twin Sheet Product Profile Giving Structural Strength



- > Up to 30% weight reduction vis a viz conventional
- > Base Structure Optimization
- > Commensuration possible for upper & lower deck

CAPABILITIES - SINGLE AND TWIN SHEET THERMOFORMING



State of the art technology from GEISS, Germany :



Process Capability

Vacuum Forming
Pressure Forming
Twin Sheet Pressure Forming

Capacity – 1

MAXIMUM PART SIZE :1700x1250x620
MINIMUM PART SIZE : 650x600
WITH INSERT LOADING FEATURE



CAPABILITIES - SINGLE AND TWIN SHEET THERMOFORMING



Process Capability

Vacuum Forming
Pressure Forming
Twin Sheet Pressure Forming

Capacity – 2

**MAXIMUM PART SIZE
:1450x1200x620 MINIMUM PART
SIZE : 600x350
WITH INSERT LOADING
FEATURE**

Key Features of the Geiss Machines :

- Precise Heating Control with individual zoning profile, equipped with “Flash” heating elements leading to enhanced and consistent quality across wide range of materials.
- Close Chamber & Complete integrated vacuum system will help in creating the heated sheet close to desired shape.
- Automatic sheet sag control with support air will help to control & improve the thicknesses.
- Synchronised plug assist system will help & improve the repeatability of the forming process.



CAPABILITIES - SINGLE AND TWIN SHEET THERMOFORMING



John Brown – Rotary type :



Process Capability

Vacuum Forming
Pressure Forming
Twin Sheet Pressure Forming

Capacity – 3

MAXIMUM PART SIZE : 3000x1800x610
MINIMUM PART SIZE : 850x600
WITH INSERT LOADING FEATURE

CAPABILITIES – CNC ROUTER

Geiss - 5 Axis CNC Trimming machine :



Trimming Size :
3800 x 1250 x 560

CNC Control system :
Siemens Sinumerik 840D



Bayardon - 5 Axis CNC Trimming machine :



Trimming Size : 3000 x 2000 x 560
CNC Control system : NUM 1050

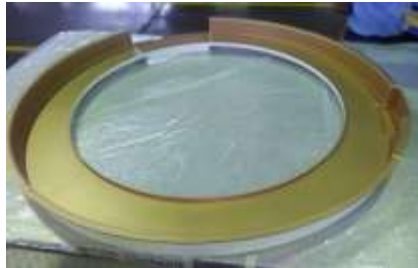
Thermoforming Capabilities



Thermoforming Sheet Material used :- PC ABS FR



Thermoforming Sheet Material used :- Transparent PC



Thermoforming Sheet Material used :- ABS FR

OTHER APPLICATIONS



Pre colored Parts - Tractor Bonnet



Textured Parts - Instrument Panel for Bus



Reinforced Parts - Material Handling



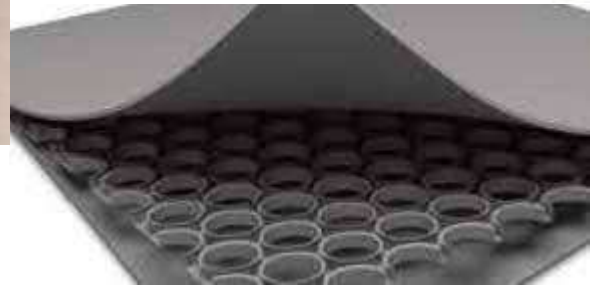
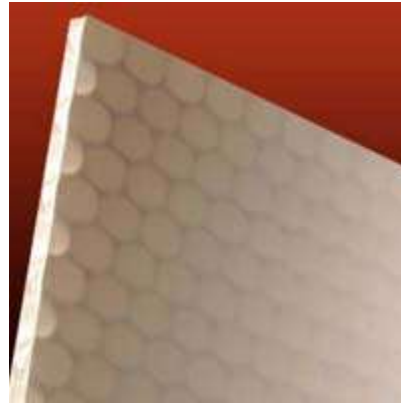
Transparent Parts - Wind Visor for Bus

COMPOSITE HONEYCOMB GUARD (Bubble Guard)

Composite Honey Guard (CHG) Bubble Guard Technology is an co-extruded PP sheet with a circular honeycomb structure & has excellent higher homogeneous strength, both in lengthwise and crosswise direction.

Key features

- Light weight
- Energy efficient process
- Long-term shape retention
- Good acoustic properties
- 100% Recyclable
- Aesthetic features
- Rigid
- Heat resistant
- Excellent thermal insulation
- Water, dust proof and flame resistant
- Thermoformable
- Bacteria / termite proof



Bubble Guard Applications



Packaging, Logistics and Transportation



FMCG, Food & Beverages



Wood & Furniture Industry

Metal ,Wires & Cable Industry



COMPOSITE HONEYCOMB GUARD (Bubble Guard)

CHG solutions for the Automotive Industry



Roof Liner layer



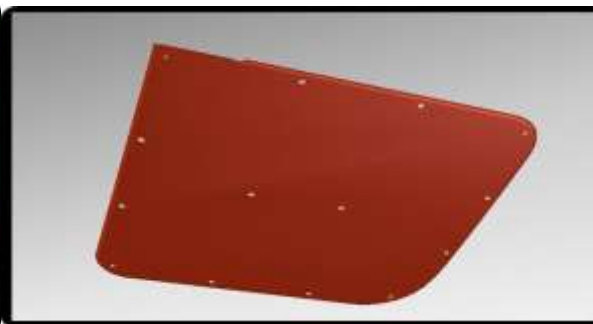
Rear Seat Back



Load Floor



Anti-Slip Flooring



Noise Insulation Panels



Fitting Supports

Packaging Solution

A. Collapsible Returnable Unit (CRU): Maximus 1210

Type 1: Integrated Legs



Dimensions: 1246 x 1046 x 1045 mm

Type 2: Add on Legs



3 Piece Construction

- Lid
- Foldable Sleeve
- Bottom Pallet

Features

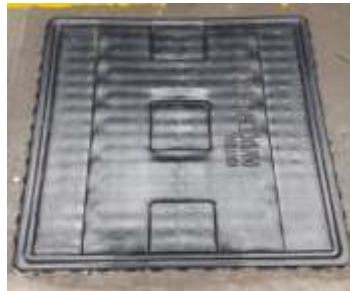
- Inner configurations
- with Fabric bags or PP inserts to hold smaller items

Thermoformed Pallets and Lids



Twin Sheet Thermoformed Pallet with Integrated Leg
1200 X 1000

Twin Sheet Thermoformed Pallet with Add on Leg
1200 X 1000



Twin Sheet Thermoformed Top Lid



Blow Molding Pallet – Lid
1200 X 1000

Blow Molding Pallet – Lid
1200 X 800

Maximus 1210 (CRU): Sequence



Forward Configuration

Return Configuration

CAPABILITIES – BULK MATERIAL HANDLING



Control Arm Assy



Shock Absorber



Differentials



Drive Shafts



Tension Arms



Shaft Gear



Bubble Guard
Packaging Boxes

Thermoformed Dunnage Trays

CUSTOMERS – THANKS FOR BELIEVING IN US

