



TECHNOLOGY USED

Common Facility Services

The common facility services was formed with the objective to support the sustainability and growth of Footwear & allied industry by addressing common requirements such as improvement of technology, market access and access to capital etc.

Its aim is to be a complete product development hub which the students, industry members, entrepreneurs, and industries in and around Chennai city. They can finish the complete product development process by availing the facility with advanced technologies.

Value addition offered by Common Facility Services to Industry Members & Entrepreneurs:

- This facility will increase the productivity and decrease the processing time used for innovation, further helping the industrial member and entrepreneurs to experiment on a higher knowledge intensive level and will enhance their technical expertise.
- These services will help the industrial members & entrepreneurs increase their market potential as well.

We everybody knows about the technology provided across in terms of having interchange of technology understanding each other and providing solution to the market.

The advanced machineries available at the facility are:

- Automated Pattern Sewing Machine
- 3D Customized EVA Footbed
- 3D Shoe CAD Software
- Laser Cutting & Engraving Machine
- Comelz Cutting Machine
- Dieless Cutting Machine

Automated Pattern Sewing Machine

Footwear manufacturing is basically manual. There are several reasons to explain this characteristic which employs a wide range of materials used to make product ranging from different styles, segment or functions. Whatever the styles, segment or functions, all footwear making is facing complexity process even though adopting actuating devices like JIGS, Dyes & Fixtures. In this case, the new ways of better handling the process in sewing operations, few manufactures are proposed to use direct drive programmable electronic pattern sewing with the enlarged sewing area which brings the accurate and strong sewing for heavy and extra-heavy materials which includes the special features in the machine like double hook reduces the frequency of bobbin changes, intermittent presser foot and with the high functional LCD touch



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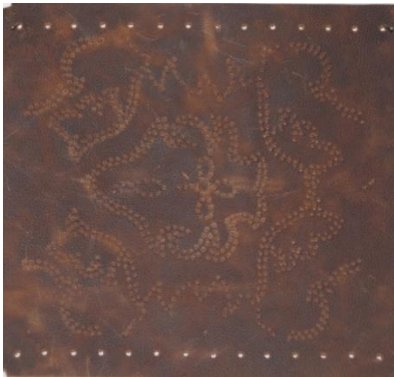


panel that offers easy programming and also aim to lower the energy consumption without losing the known quality performance in the product & services.

The pattern sewing machine has one of the advanced technology and competitive pricing on computerized programmable sewing machines. If we are looking to automate our sewing application and lower labor cost we can help.



Automated Pattern Sewing M/c



Samples Developed from Automated Pattern Sewing M/c

This machine has the specialty of smooth feeding. Then, we also found drastically the noise is reduced. Technology upgrade needs some in terms of improving the quality, cost deliverance and quality deliverance to the customer, reducing hour wastages for new product development, all are linked to technology upgrade and this machine has taken the right steps.

3D Customized EVA Footbed



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The 3D customized EVA Footbed machine specializing in the design of orthopaedic insoles. It includes software that allows true-custom insoles to be designed from different input data like foot measurements, the positioning of certain key points, foot meshes or digitized insoles and lasts. Full length or $\frac{3}{4}$ length insoles can be designed, and different parameters like the wedge or the heelcup can be configured so as to aid in the treatment of different foot disorders.



3D Mobile Scanner

Furthermore, a series of additions can be added to the insole being created while at the same time, it is possible to retrieve data from databases of standard insoles or adapt the insole to a specified last. Different databases of patients, laboratories, lasts, etc are available for this aim.



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Podo Print



Milling and Routing Machine CNC FRH50

This has also facilitated with the router FRH50 series, we can mill, cut, shape, drill, or mark the following materials: metal carving (mainly non-ferrous metals: brass and aluminium alloys), carve acrylic plates, Acrylics, wood, MDF, EVA resins for prototyping. The use of any other material must be expressly confirmed by the manufacturer through written communication.





Heel Offloading

Forefoot Offloading

Standard Insole

Comelz Cutting Machine

This technology is used to simplify the production, increase reliability and quality, but it also helps to achieve the typical compactness of Comelz design.



Comelz Cutting M/c

This machine has facilitated punch cutting for patterns and insoles with this original solution eliminates length limitations of the cutting area and allows a continuous and productive work cycle: no cuts to remove waste material, piece removal by fall and with the possibility to cut sheets with unlimited length or in rolls. This automatic punching machine that eliminates dead time and does not require constant presence of the operator to remove pieces and waste or for frequent loading of the material. The oscillating units of punch and micro punch are manufactured with special high-resistance and light materials. They have a fast and easily accessible tool change system, an opening for materials up to 8 mm thick and a pen for texts and marks.



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Marking Pattern & Insoles Cut from Comelz Cutting M/c

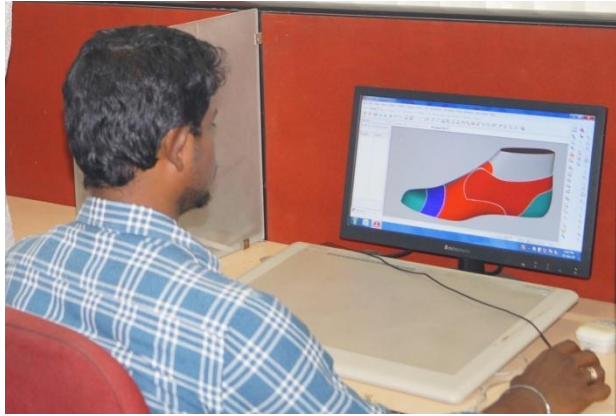
Because of its versatility and productivity, The machine is suitable for various contexts, from series development for pattern making to samples and small-medium production of insoles. The machine cuts in single or multiple layers a great variety of materials including cardboard, fibreboard, various plastic materials and all rigid materials for insoles.

3D Shoe CAD

This 3D Shoe CAD software for footwear design and pattern engineering that integrates into a single program two different environments, virtual 3D and technical 2D, which work in parallel and simultaneously. This way, 3D Shoe CAD is obtained as the best virtual alternative to the traditional process of design and pattern engineering, reducing the time spent as well as the material and human resources of the company.



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3D Shoe Design

The facilitation of this software is as follows:

- Design, create and modify footwear models, and their patterns, in parallel and simultaneously in 3D or 2D with total reliability and precision.
- Flatten lasts for all types of footwear, including boots and ankle boots, with total accuracy.
- Modify the flattening with a single “click”, avoiding repeating the processes that should be carried out when such modifications are made manually.
- Create, or import, soles, heels, decorations or accessories quickly and easily, thanks to its intuitive interface.
- Customize and get images as hyper-realistic as photographs taken from real footwear models.
- Simulate the appearance of shoes after last slipping adding realism to any models.
- Export the patterns to any cutting device, with no need for further adaptation and without ever losing the 3D-2D correlation.
- Recalculate the yield without having to re-flatten. Thus, you can modify the model parts to maximize material yield.
- Grade the footwear sizes in a completely customizable way and in just one "click".



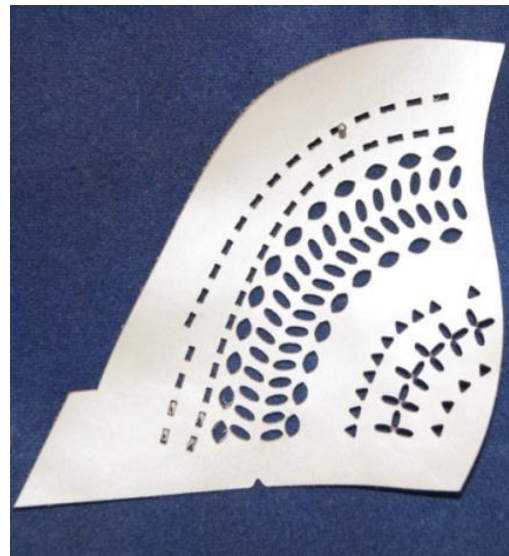
- Create fully customizable technical specification sheets, adapted to any company's production process, by adding any kind of information, photographs and even 3D objects.

Laser Engraving & Cutting M/C

Laser engraving is the best systems to engrave leather, paper, fabric, acrylic and much more. This machine uses as an engraving tool and Co2 as a laser source to produce a permanent, crisp, and a highly detailed mark without actually touching the material. By using this technology, we can engrave even the most complex designs with so much ease.



Laser Engraving & Cutting M/c



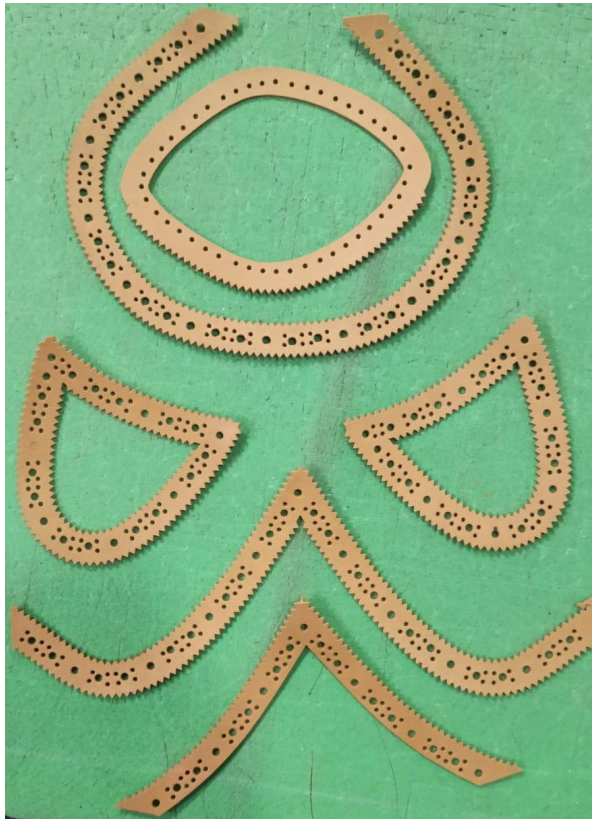


Samples Developed from Laser Engraving & Cutting M/c

This machine has special features with special design of carriage where 2" lens or 5" lens both can be used. 5" lens gives better quality of cutting, if the thickness of the material is more than 10mm and 2" lens should be used for cutting media less than 10 mm thickness. It has high quality touch panel display would be very easy to use. The machine is provided with foot-mounting legs so that there is no vibration in machine and it can be adjusted on zero level. It also provide with heavy duty compressor which has air-assist combining adjustable focus systems in coaxial jet air to prevent cutting edge from burning down. In addition to this, laser cut software with window based software enhances cutting speed & angle/curve performance and maximum cutting thickness of acrylic 25mm.

Dieless Cutting System:

Dieless cutting machine has been setting the place in the development and manufacturing of multifunctional cutting systems for the footwear industry. This machine has facilitated with superior speed and acceleration, intelligent tool control, the ability to change cutting parameters any time during cutting, optional material handling and workflow computerization are among the reasons why this machine is by far the most productive sample-making and productive system.





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Samples Developed from Dieless Cutting M/c

The latest cutting systems captures the hide & skin shape and up to four flaw grades in seconds using a digital camera. It then analyses the image and automatically nests parts to maximize hide/skin yield. Cutting is fast and extremely accurate with correctness knife technology.

PU Pouring

This machine is composed by pouring system, heating system, pressure monitor system, microcomputer measuring data control system, measuring pump assembling, feeding cleaning system, liquid storage tank cycle system and cooling system etc.



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This machine is specialized for producing different color, density and polyurethane outsole, midsole, sandal & Chappals etc. In addition to these, having all the relevant technical and human resources with capable to resolve any problems that industrial people or entrepreneurs may encounter such as production technical process and better quality of products.