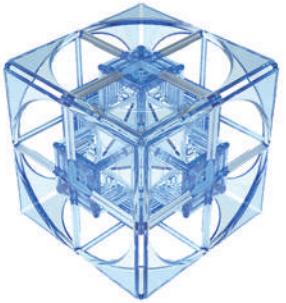


C S
INNOVATIONS
HAVE ENGINEERING YOURWAY....



CONTENTS

2 Our Services

4 Our Promise

6 Our Team

8 Products & Projects

Water Faucet | E-Bike | Safety Sign Board | Capsule | Coffee Machine | Rotary Coffee Capsule Filling Machine | Label Binding Machine

22 Ongoing Developments

Sustainable Packaging | Monorail System For Load Handling | Load Transfer Station | Car Infotainment System



OUR SERVICES

C S Innovations is an engineering consulting company focused on product development, custom machinery design and manufacturing. We provide services such as:

- Custom machinery design and manufacturing
- CAD/CAM designing and simulations
(3D modelling, engineering drawings, FEA and motion simulations, etc.)
- Injection mould fabrication and plastic item production
- Product modification and prototyping
- Reverse engineering
- 3D printing
- Compliance documentation
- Sustainable packaging

Our expertise lies in custom machinery designing and manufacturing. Most of our current clients came to us with merely a concept, and it became our responsibility to turn their idea into a reality. Providing satisfying, fluid, cost-effective collaborative design solutions for our global clientele....is our primary goal.

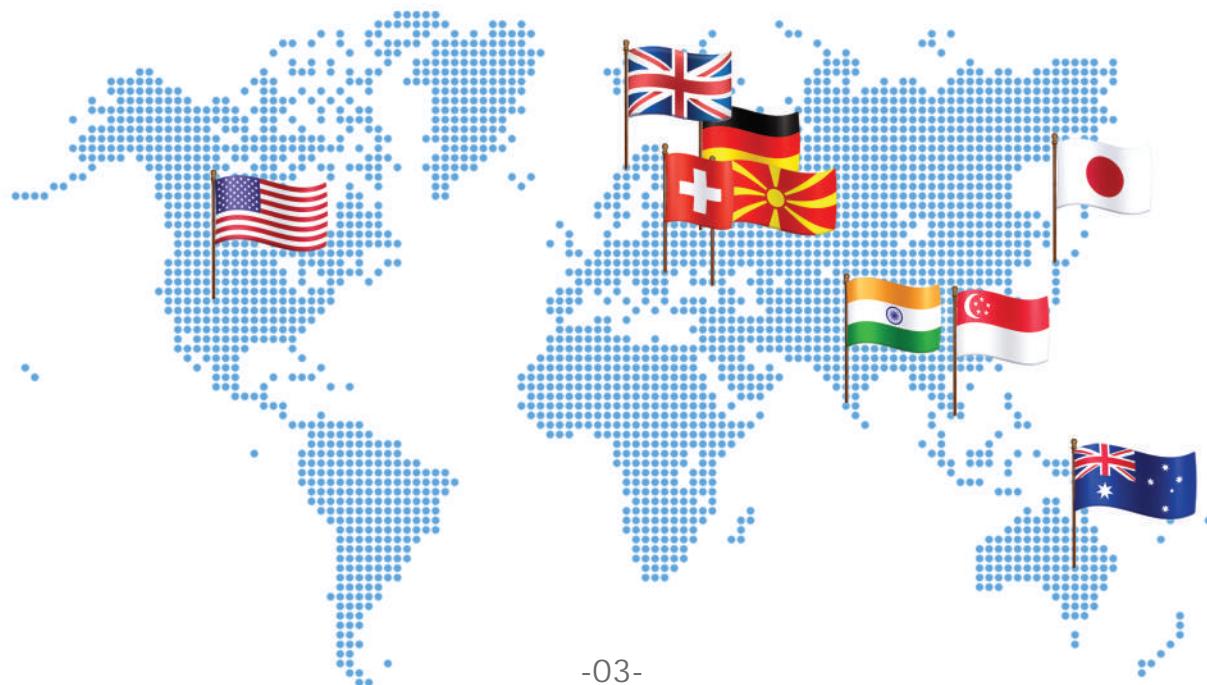
We provide services globally to various industries including automotive, aviation, food & beverages, apparel, construction and sports.



Our local clientele:



Our global family of clients.





OUR PROMISE

Excellence

Utilizing state-of-the-art technology coupled with our team of experienced experts, we are committed to bringing our global clientele exceptional results.

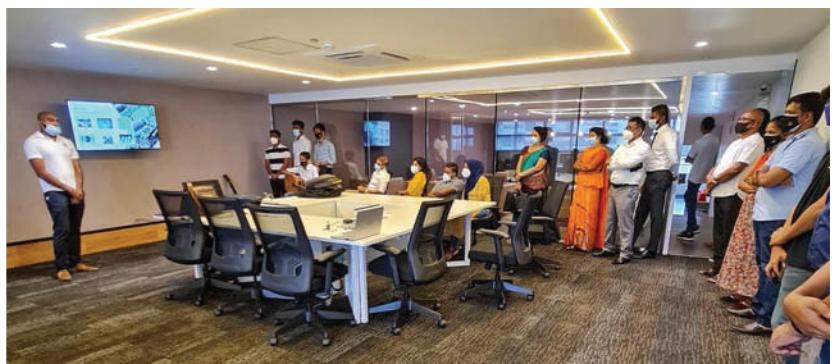
Innovation

To develop and deliver reliable client-centric design & manufacturing solutions of the finest quality at surprisingly competitive costs. We may be small compared to more established engineering giants, but we pride ourselves in offering the finest service in the industry. Our client list speaks for it itself.

Scalability

C S Innovations offers various services beginning from the initial design stage to final manufacturing and shipping. Our scope includes but is not limited to conceptualization, analysis, 3D design/ prototyping, manufacturing, and implementation.



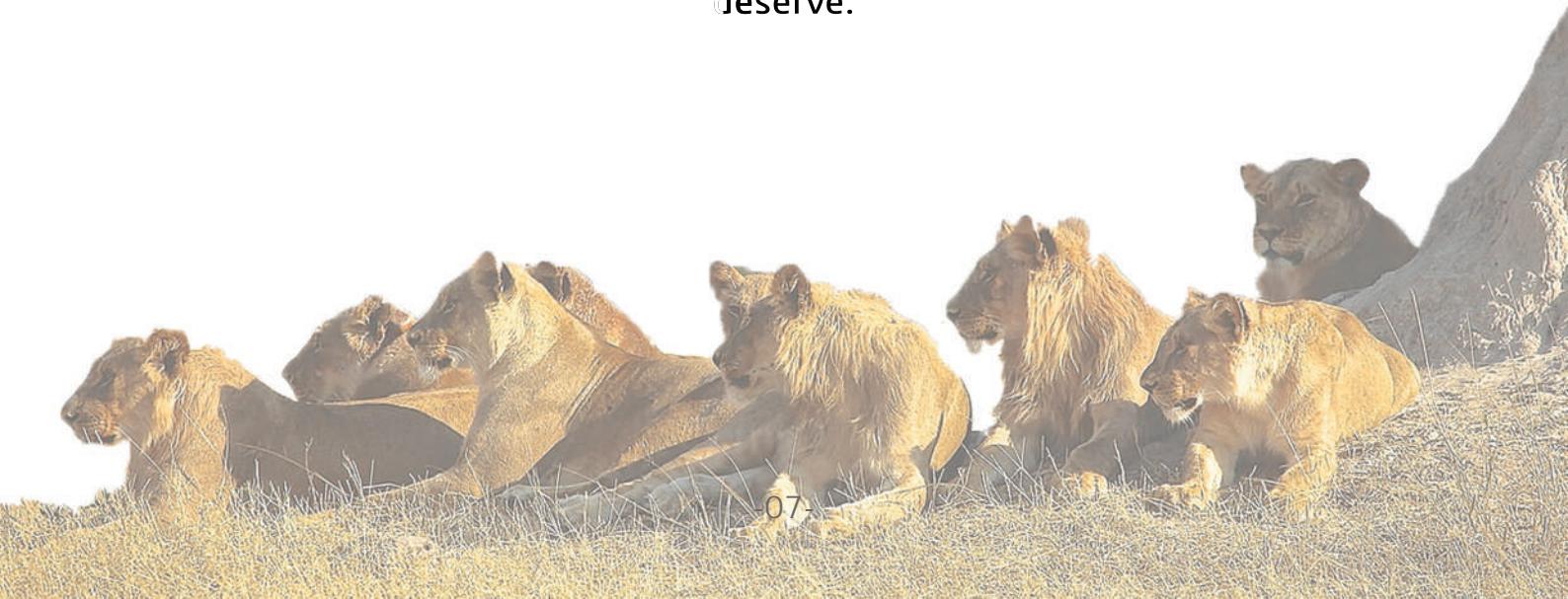


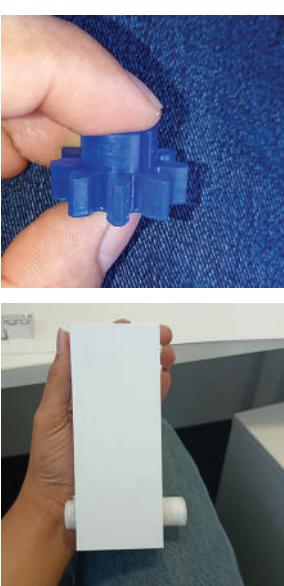
Our team



Our pride is our people. Our team consists of graduates from both local and foreign universities. The combined talents of our staff, with their collective years of experience in product design and manufacturing, are one of C S Innovations' greatest assets. That is what set us apart from the competitive engineering field.

Each team member utilizes state-of-the-art, end-to-end technologies to guarantee our clients will have a competitive advantage in today's aggressive marketplace. All aspects of every project we take on, from research to design to production and follow-up maintenance, will receive the same professional one-on-one attention that all our clients require and deserve.





Products & Projects

Zero Contact - Energy-efficient - Battery Backup -
Conserve water up to 70% -
Hands free convenience - Easy Maintenance -
DIY standard to automatic conversion



MIZU

MOTION ACTIVATED FAUCET SENSOR

Our Research and Development team designed this product as a means of reducing water consumption which has become one of the critical issues in the world. This is a custom sensor unit which allows most existing manual faucets to be retrofitted into hands free automated faucets. Our design provides a cost-effective upgrade to a modern hands-free unit.

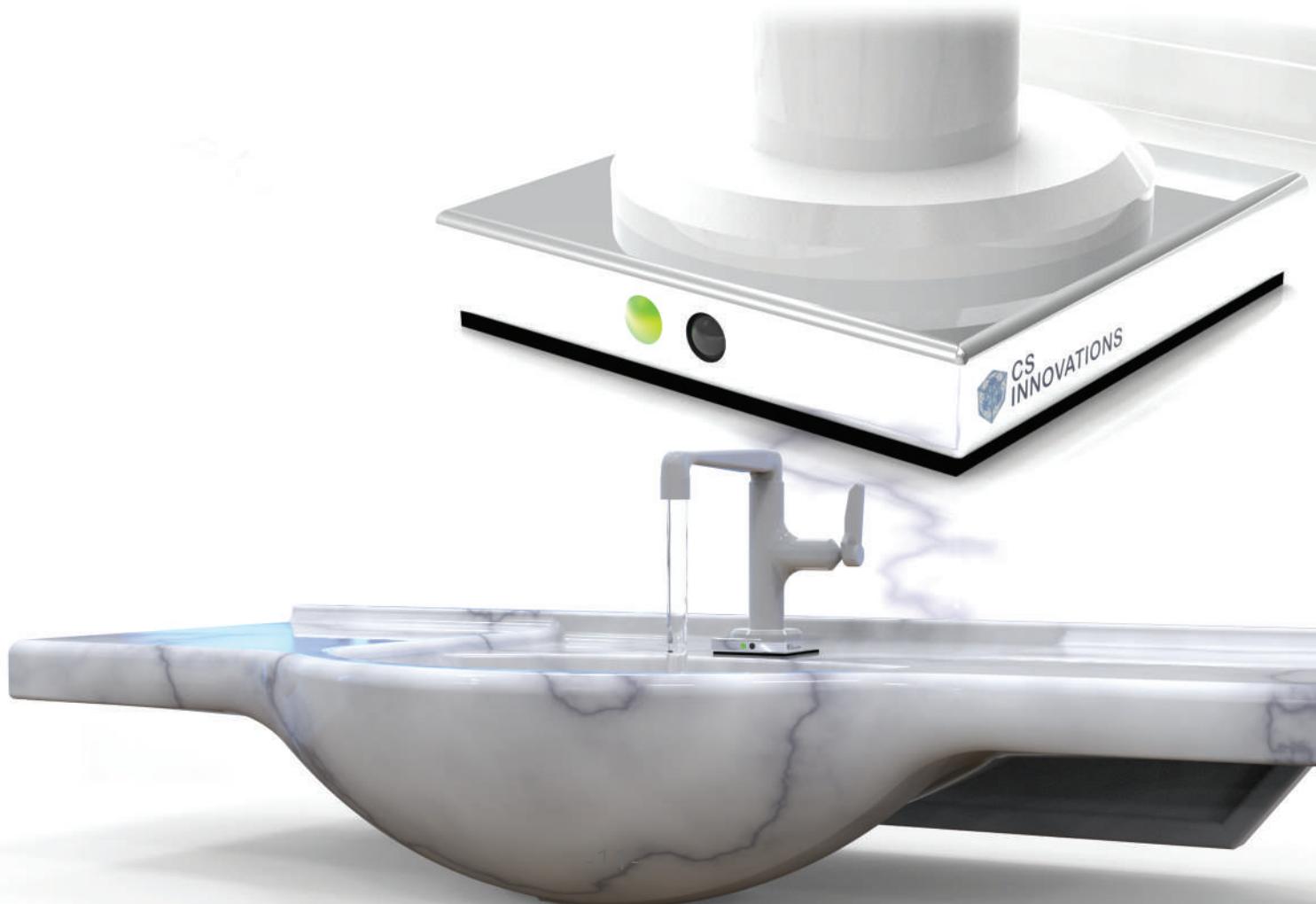
This system consists of a small box which can be mounted between the existing faucet and the washbasin.

Product Spec

Voltage: 110V - 220V

Battery Backup: 4 hours (at a full run)

Warranty: 1 year



All-wheel drive system-
Middle drive train for better weight balance-
Runs like a regular electric bicycle without any pedaling-
Utilize either human power or electric power, or both!



TERENOWY ALL-TERRAIN E-BIKE

Electric power-assisted bikes are one of the fastest-growing technology in the bicycle industry. These E-bikes utilize a rechargeable battery power motor to help you along.

This bike gives you three options:

- Full electric motion with no pedaling required
- Electric assistant pedaling
- Pedal as a regular bike

Our bike was designed for maximum traction when you ride the bicycle in sand, snow, rock or in mountain ranges over logs etc.

The motor is powered by a battery that is charged with a regenerative braking action. The rider can pedal the bicycle to save battery power. However, the physical effort to pedal a traditional bike is not required since the e-motor provides a backup.

If the battery runs out, the rider can disengage the motor and ride it like an ordinary bicycle.

Product Spec

Dimensions	Length -	2120mm
	Wheelbase -	1370mm
	Width -	530mm
	Height -	1120mm
	Range -	65km*
	Max Speed (Electric Throttle) -	35km/h
	The power train of the system -	1kW motor
	Battery -	48v and 17Ah*
	Tire size -	26x4.0 Fat bike tires
	Motor controller supporting regenerative braking	



-Gas Discharged-

-Dangerous Atmosphere-

-Evacuate-

-Exit-



SAFETY SIGN BOARDS

GAS DISCHARGED/ EVACUATE

Gas Discharged LED Warning Light Boards use with gaseous protection systems

The LED design provides for low current consumption with maximum brightness.

EXIT SIGN

An exit sign is a device in a public facility denoting the location of the closest emergency exit in case of fire or other emergency. These Exit signs are designed to be absolutely unmistakable and understandable to anyone.

DANGEROUS ATMOSPHERE

"Dangerous atmosphere" LED warning signboards are installed at spaces with less ventilation such as parking garages or basements where vehicles and machines could generate gases that are toxic. Exceeding safe concentrations of these gases can put anyone at risk. These warning light boards alert the people and protect lives.

Product Spec

Highly Effective LED Back Light
Surface mounted device
Buzzer (98 dB @ 300 Hz)*
Low Current
Polarity Protection
Power supply fuse resistor protector
Constant current and luminous flux
Power supply from 9V DC upto 30V DC
Working temperature from -10C up to 50C
Battery backup upto 180min*
Sound and light option - Permanent or Flashing*

*On request

- The Coffee maker comes with a 19 bar Italian made pump, brewing the espresso to perfection with the coffee maker's advanced temperature control system.
- A mini 1000W Thermoblock gives an instant heat up whilst bringing the Power consumption to a minimum level, saving you the cost of bills at the end of the day.
- Strong Stainless Steel housing and Balanced, User-friendly design for long term durability purposes.
 - Removable 1L water tank with easy refill lid.
- The detachable drip tray that comes with the coffee machine makes cleaning completely hassle free



Home Barista

CAPSULE COFFEE MACHINE

This Multifunction espresso machine is the perfect solution for you to make your espresso with Nespresso capsules. It can deliver up to a 19 bar pressure to unlock the delicate flavors and premium aromas of each coffee capsule to create an incomparably dense and unctuous crema. The machine comes with a large detachable water reservoir which holds up to 1L of water and a detachable drip tray which is easy to clean. These features will help create a velvety smooth espresso that will make your day so much better.

Product Spec

- 1000W Thermo-block heater
- Italy 19 bar pump
- Water capacity: 1L
- Transparent removable water tank
- Buttons for short and long espresso
- Ultra-High temperature optional
- Adjustable dispenser for various cup (80-107mm)
- Capsule bin with max accommodation of 10 used capsules
- Alarm when water tank is empty
- Brewing interruption when handle is opened during brewing
- Capsule auto ejection system
- Coffee volume programmable
- Stand by for 15 minutes
- On/Off switch with illumination



*Horizontal machine design - Easy maintenance - Stable functional design
Simple operation - Premade lid - Auto cap feeder - High fill accuracy
Adjustable auger height - Effortless installation - Nitrogen Flushing*



ROTARY STYLE FULLY AUTOMATED COFFEE CAPSULE FILLING AND SEALING MACHINE

The request of our customer was to manufacture a fully automated coffee capsule filling machine to meet their through put.

We realized that they were not merely looking for any capsule filling machine but an easy to operate, flexible and reliable filling machine.

This machine consist of 8 stations that can be customized according to specific requirements.

Machine Spec

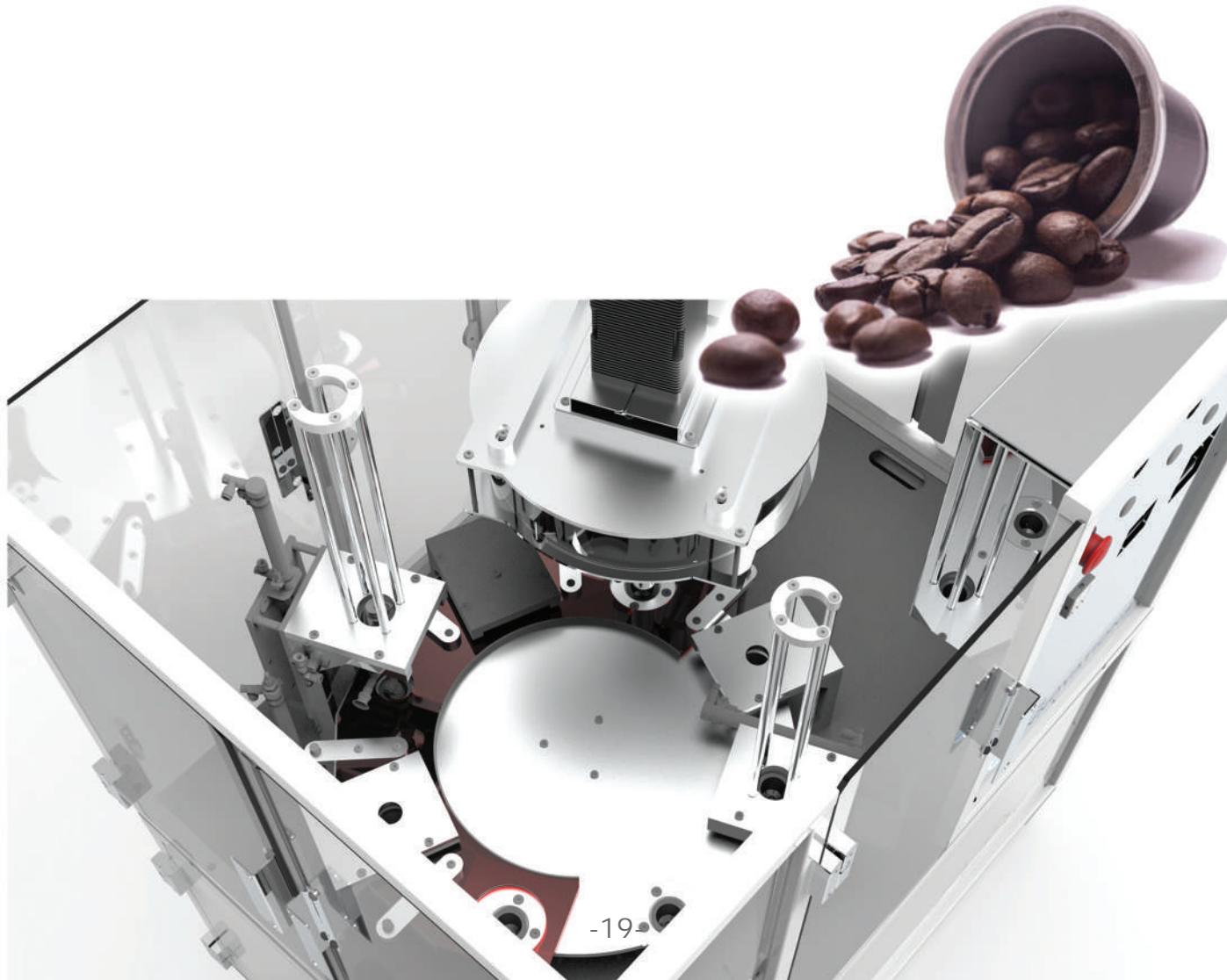
Throughput 120 capsules per hour

Maximum power 550W

Capacity 3.5L -Expandable

Max foot print 720mm x 1000mm

Height 700mm



*2-8 labels per bind - Can use for different label sizes -
80% time saving - Low Noise and Vibration -
Minimum human involvement*



APPAREL LABEL BINDING MACHINE

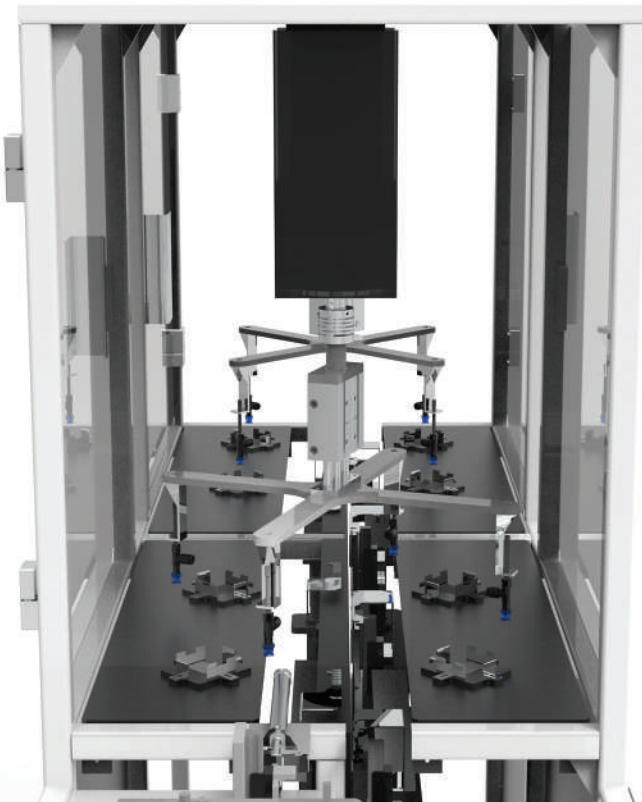
Most garment production factories bind their labels manually. A process which can take up to 30 seconds to bind 8 labels on average. Automating this process will help reduce the bottlenecks and increase the throughput as it saves a significant amount of time.

This machine can be used to bind a variety of custom label sizes and quantities.

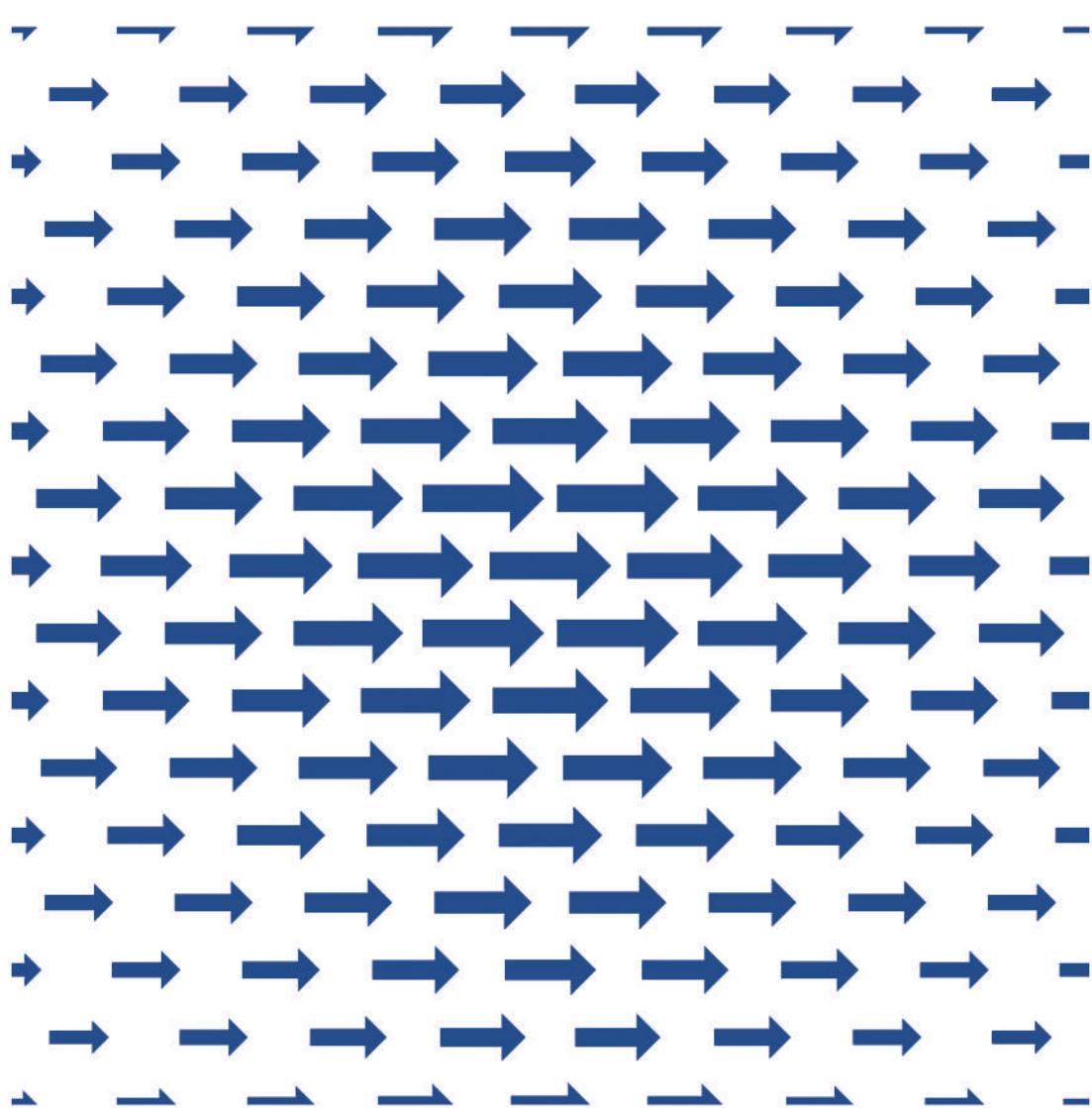
Designed to keep vibrations and noise levels at a minimum, allowing a pleasant work environment.

Machine Spec

Throughput 5sec per 8-label bunch
Maximum power 550W
Capacity 500 labels
Max foot print 2000mm x 600mm
Height 1600mm



Ongoing Development



SUSTAINABLE PACKAGING

Mycelium

One of the key aspects that set us apart from the rest in the field is our effort to make environmentally conscious decisions. As a team, we firmly believe in sustainability and try our maximum best to use recycled plastic or biodegradable plastic for the fabrication of our products. Sustainability is given preference in our own Research and Design projects as well as projects of our clients. Manufacturing shin guards out of recycled plastic are one of our initiatives towards this cause.

Developing a packaging material using fungal Mycelium

Due to the rapid growth of the human population, global consumption of commodities and other polymers (plastics) has also increased. Therefore, industries are forced to recognize the obligation to society to create wealth and develop sustainable production systems that minimize the environmental consequences.

As a team, we are developing a packaging material out of mycelium.

Using mycelium-forming fungal microorganisms to produce packaging materials has been recognized as a sustainable solution in this regard. Mycelium-based materials have characteristics that can be used in a wide range of mycelium applications.

Mycelium is a completely natural material that is lightweight, strong and cheap to produce making it an increasingly attractive and cost-competitive alternative option to fossil fuel-derived materials. One major benefit is the ease with which it can be moulded into different shapes, with the material literally growing to fill the moulds.

Mycelium has gained a lot of sustainability advocates for several reasons:

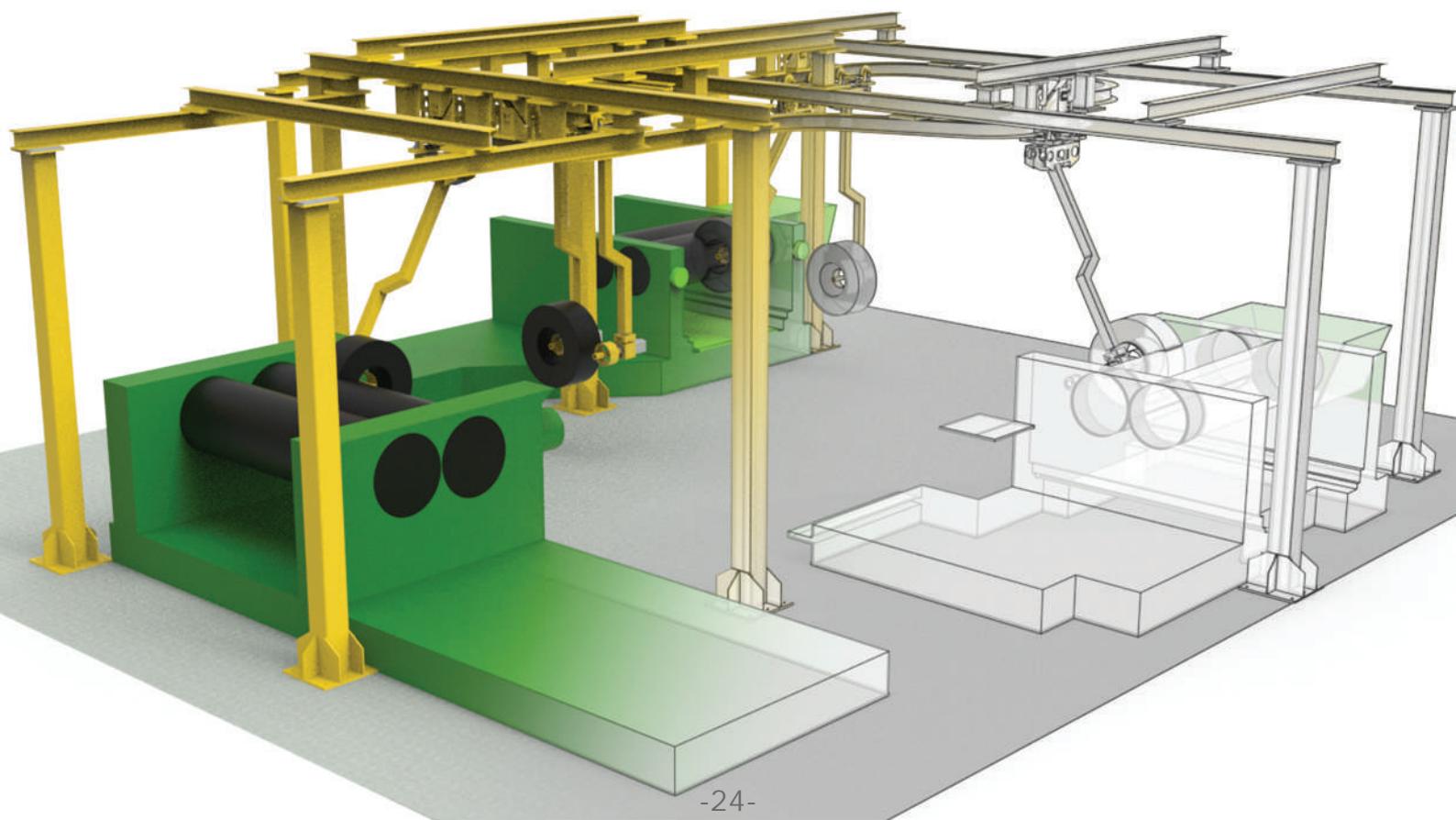
1. It is a completely natural product. Mycelium is a completely natural material found in the environment and the species used to have no toxic effects.
2. Made from a renewable resource – no fossil fuels and infinitely renewable.
3. Easy to grow, needing very little water, light or space to produce at an industrial scale.
4. Excellent end-of-life performance – mycelium is home compostable which is highly desirable for single-use applications such as packaging. It can even degrade in the natural environment, returning nutrients to the soil. Some companies even infuse wildflower and grass seeds into their mycelium packaging to make them bio-contributing.



MONORAIL SYSTEM FOR LOAD HANDLING

A monorail transfer system for handling tires in tire production plants, running along an overhead rail. This is used to ensure a continuous flow of tires from station to station.

The new special aluminium rail concept guarantees high performance while maintaining excellent reliability and stability of the entire system. The shuttle can handle various tire sizes and interface with different types of presses completely automatically.



LOAD TRANSFER STATION

Our load transfer solutions can help you automate time-consuming and repetitive processes whilst improving efficiency and safety in your warehouse. Our load transfer stations can be used in many industries including shipping, cosmetics, pharmaceutical, food packaging, etc. We use the latest technology to manufacture our load transfer stations giving our customers reliable and long-lasting solutions with easy installation and low maintenance.

Load transfer stations remove loads from a single pallet at a time and allow transferring of loads to a slip sheet, to another pallet or for floor loading.

Process:

- A loaded pallet is placed onto the loading station via a fork truck.
- The truck operator then pulls the overhead chord connected to the Load Transfer Station to activate the load transfer.
- Then the pallet is removed from the loading station and the load is available to be transferred.

Main features:

- Automatic pallet stacker holds up to 20 pallets
- Heavy-duty construction
- Hydraulically actuated
- Easy to operate
- 5 HP integral hydraulic power unit
- Weighs 2900kg
- Standard Emergency stops
- Low maintenance
- Allen Bradley PLC controls
- 230V, 460V or 575V power supply
- 24VDC controls
- 1800 kg load capacity

Advance Features:

Our standard Load Transfer Stations are equipped with an overhead pull chord to actuate, switch to a radio signal transmitter for more flexibility.

You can customise your standard load transfer station with a,

- Pallet Dispenser
- Conveyors for fully automated options

The following safety features included to increase safety and durability.

- Warning lights when in operation
- Automatic shut off when the load exceeds
- Warnings when pallet limit exceeds pallet dispensers.

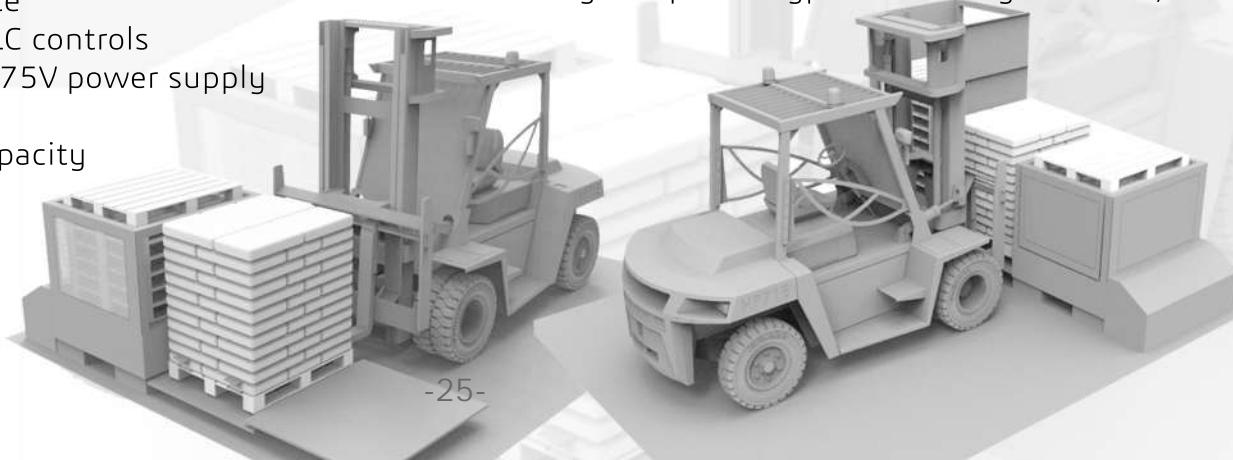
We offer both manual and automatic pallet dispensers

- Maximum weight up to 450kg
- Auto and Manual Controls
- Cycle time 1 pallet/min
- 230V, 460V or 575V power supply

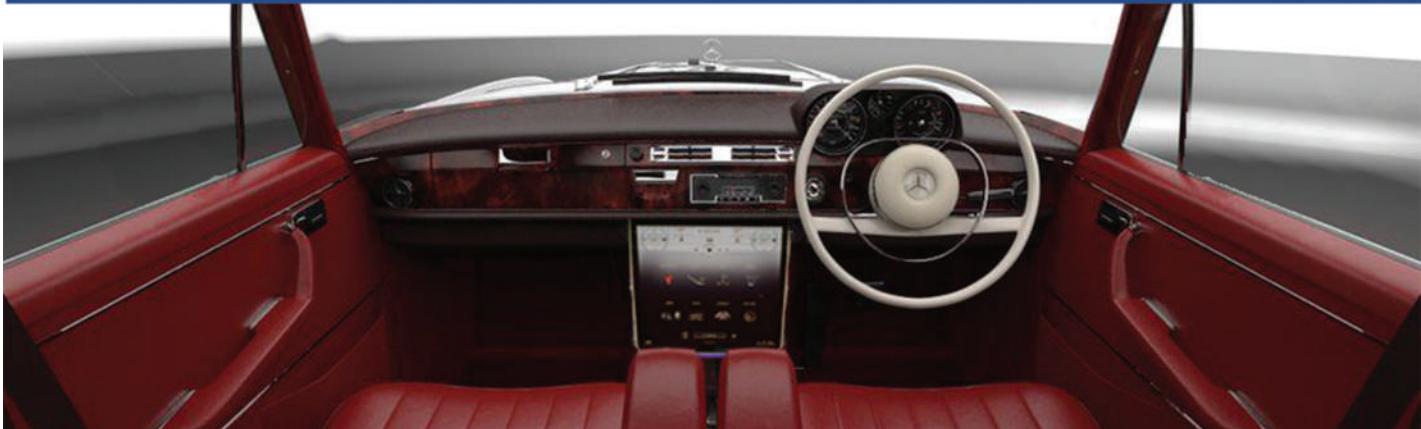
Our standard pallet dispenser can hold up to 20 pallets at a time and can be loaded at once using a fork truck. The main advantage of this dispenser is that it reduces pallet handling by eliminating the loading of individual pallets.

Our Standard load transfer stations coupled with a pallet dispenser allows a single fork truck operator to perform the entire loading and unloading process faster.

Our pallet dispensers can be customized to suit your pallet types including wooden,



NEXT-GEN CAR INFOTAINMENT SYSTEM



This project was done as an initial step of our long-term goal of creating an autonomous driving program.

Has a high-security system that protects your vehicle from outdoor hazards.

Possess the option to navigate in the native language of Sri Lanka.

Has a modern interior that elevates the look of a classic Mercedes Benz

We choose the Mercedes W115 200D model because of the reliable engine, the external appearance, and the Sri Lankan market demand.



Main Features:

- Inbuilt Broadband System
- GPS system
- Inbuildt blackbox
- Global car locator system
- 8 cameras with birdeye view
- Side-view cameras

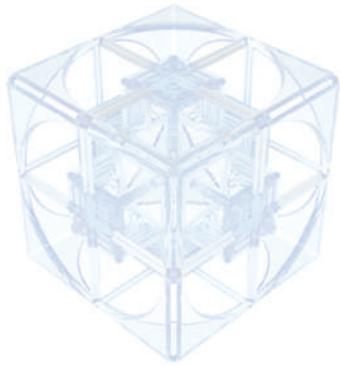
Entertainment system:

- 7.1 Surround sound
- 7" Main touch display
- 2 x 4.5" Support displays

Luxury features:

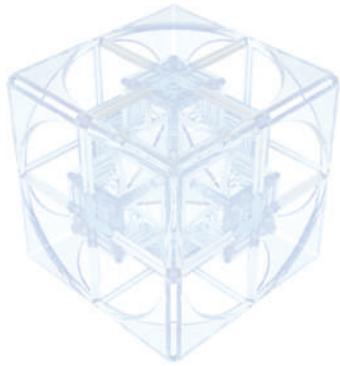
- Height Control system
- Auto door open/close

NOTES

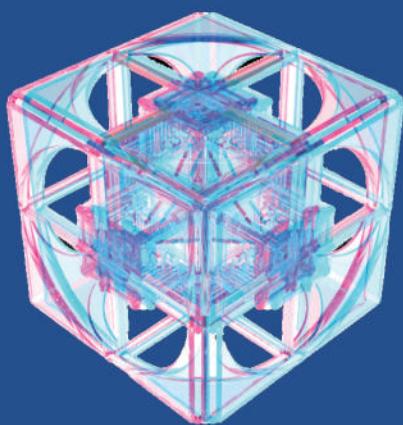


CS INNOVATIONS

NOTES



CS INNOVATIONS



GET IN TOUCH

9th floor, Orion City, Colombo 09, Sri Lanka.

info@csinnos.com

www.csinnos.com