

Adding value through automation www.synapserobotics.in

#### Sectors

Food & Beverage, Paint & Oil, FMCG & Healthcare, Agro commodities, Chemicals & Fertilizers, Automotive & Appliances, Cement & Construction Materials

#### Solutions

Case Packaging, Carton Palletizing, Paint Pail Palletizing, Bag Palletizing, Bottle Unscrambling, Truck Loading, Intralogistics conveyors and sorting

# PACKAGING & **PALLETIZING**

## **ABOUT** SYNAPSE ROBOTICS

Synapse Robotics has more than a decade of experience in delivering customized **PACKAGING AND PALLETIZING** solutions. We have successfully delivered challenging projects to our customers in India, Middle East & Africa. We are a **50+** member organization and we work tirelessly to satisfy our customer's needs. We believe in forging **long-term partnerships** with our customers and suppliers.

#### WHY US?

We follow an established 8-step process to ensure the success of our projects. Our Automation Solutions and Concepts are created by **Experienced Engineers** and validated using **Advanced Simulation** software, both for mechanical design, robot reach and cycle time. Our solutions are optimally engineered, safe, reliable, aesthetically pleasing, serviceable and offer **HIGH OEE**.

We take pride to say that the revenue from service and spares is less than 1% of our turnover.

# OUR 8 STEP PROCESS



#### **ROBOTIC** CASE PACKAGING —

Our secondary packaging solutions engineered with robots and servo collators offer a great deal of flexibility for handling a variety of products. These solutions are suitable for systems which require frequent model changeover. The changeover time can be less than 10 minutes.

Robotic carton erectors can be used to accommodate multiple carton sizes in the same system. Accessories such as check weighers, metal detectors, bottom and top sealers can be added to the system to completely reduce the dependency on labour.





## **ROBOTIC** PALLETIZING

Robotic palletizing solutions are being utilized extensively to counter rising labour costs and labour shortages. These fully automated systems that Synapse delivers, ensures **UNINTERRUPTED PRODUCTION** and full utilization of the capital intensive product filling lines.

Seasonal products and commodities can be run on demand without the need to find manpower on a short notice. Robotic systems offer a high level of reliability and flexibility when compared to other types of palletizers. We offer features such as **PARAMETRIC PROGRAMMING** to easily enable new recipe additions without the skill required for robot programming.



#### CARTON PALLETIZING

Cartons are the most widely used form of secondary packaging. Food products, beverages, healthcare products, personal care products, pharmaceutical products and appliances are typically packaged in cartons and require end of line palletizing solutions.



#### BAG PALLETIZING -

Products such as rice, lentils, animal feed, carbonate, cement, gypsum and plastic pellets need to be palletized for transportation to retailers. Bag weights vary from 10 to 50 kgs. Robotic palletizing solutions are economical and offer the versatility required for frequent product and pattern changes. To maximize the utilization of the robot, 2-3 lines can be serviced by 1 robot.

#### ACCESSORIES FOR PALLETIZING SOLUTIONS

- Pallet Dispensers
- Rejection Stations
- Slip sheet Dispensers
- Label Applicators
- Bag flatteners
- Servo/Pneumatic grippers
- Stretch Wrappers
- AMR's



#### PAINT PAIL PALLETIZING

Our robotic systems handle the entire process between paint filling and the ASRS system. We offer robust solutions for both pails and cartons. Our solutions integrate seamlessly with existing ERP and SCADA systems for efficient operations.



- Checkweighers
- Metal Detectors
- X-ray Machines
- Conveyors & Spirals

# BOTTLE UNSCRAMBLING

Robotic unscrambling can be used where conventional unscramblers don't meet the frequent recipe change requirements

- · Multiple bottle sizes and configurations can be accommodated on the same line
- Programmable tool-less recipe changeover
- Direct loading of bottles to pucks
- · Unsymmetrical bottles can be easily accommodated



#### DEPALLETIZING -----

- Bag depalletizing for Sugar, Flour and other raw materials
- Beverage shrink wrap depalletizing for truck loading
- Full layer glass bottle and container depalletizing for feeding to filling lines
- Logistics and e-commerce carton depalletizing

#### TRUCK LOADING

There is a huge requirement for loading bags directly to open trucks. Synapse has developed a robotic system with the following features,

- Direct loading of truck by robot
- Automatic Dimension measurement of trucks
- · Different models of trucks can be loaded
- Upto 750 bags per our with 1 robot & upto 1500 bags per hour with 2 robots

#### **OUR** CUSTOMERS



#### **BUSINESS CARD**



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