



We Build **Bespoke** **Smart Machineries**



Modular



Scalable



Interoperable



IT Enabled

Our Value Propositions



Weigh & Dispense



Automation Infrastructure



Innovation
Value for money
Solutions



Defense and Aerospace



Special Purpose Machine



ODM Products



Inventions
Partner Technology
Products



Knowledge
Application Expertise &
domain



Material Handling Equipment Bespoke Machinery

MATERIAL STORAGE & DISCHARGING

- From Sack Tip, Bulk Bag Stations to Day Bins and External Bulk Silos.
- From simple Rip-n-Tip stations to Automated sack emptying systems.
- Sophisticated FIBC stations with self-sealing vibratory tables and neck clamp assemblies, interlocked access control door and bag massage systems.
- Fully automatic sack emptying systems (up to 1000 bags per hour) with a simple in-feed conveyor and automated pallet feed system.
- Suitable for harsh environments.
- Waste bag compacting systems.

PNEUMATIC TRANSFER

- Day bin top ups transfer system for powder, palette and granules with automated routing control & stock monitoring.
- Wide technology range using Lean phase, Dense phase batch transfer systems.
- Vacuum conveying and weighing systems.

WEIGHING SYSTEMS

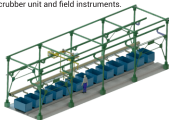
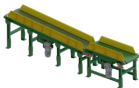
- From small platform scales to automatic large capacity batch weighing hopper equipment.
- From standalone off-line platform scales to fully automatic mobile weigh carriages.
- Online weighing conveyors.
- Liquid weighing, transfer and injection systems.

SOLIDS HANDLING & MECHANICAL TRANSFER

- From simple roller conveyors to fully automated transfer systems incorporating in-line check weighing, assembly stations and other bespoke features.
- Gravity roller conveyor, polymer weighing and transfer system.
- From Basic Belt Conveyors to plant-wide automated transfer systems for powder and solids.
- Intelligent Trench Conveyors.

PLATING PLANTS

- Design, supply and commissioning of mechanical, electrical and control systems for Phosphating, nickel plating, anodizing.
- Automated phosphate plant for metal-to-rubber bonding (rubber industries).
- Chrome plating, zinc plating etc., with tanks, transporter, scrubber unit and field instruments.



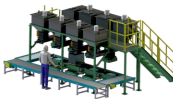
Rotary Valves
Blowers & Pressure Vessels
Dense Phase Conveying
Vacuum Conveying
Bulk Silos
Sack Tip Stations
Vibration & Air Discharge Aids
Screw & Vibratory Feeders Auto
Storage & Retrieval System
Automatic Palletizer & Depalletizer
Conveyors : Roller / Belt / Free
Flow / Chain / Friction Conveyor

Smart Cart

Minor Ingredients System

SYSTEM OVERVIEW

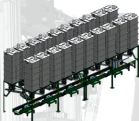
The Smart Shuttle is a multi-ingredient dosing and weighing system designed for dispensing small quantities of ingredients with precision. Tailored for various industries, including Tyre and rubber components, it automates the weighing process for minor ingredients, ensuring accuracy and minimizing human error. The system employs Screw feeders, weigh scales, and a seamless shuttle system to enhance product quality, consistency, and overall production efficiency.



- **Elimination of Cross-Contamination** : Ensures a contamination-free environment.
- **Automatic Ingredient Dispensing** : Enables automatic dispensing of ingredients.
- **Automatic Sealing (Optional)** : Offers optional automatic sealing for added convenience.
- **Modular System** : Designed for future expansion to adapt to evolving production needs.
- **Complete Traceability** : Provides comprehensive traceability for quality control.

SPECIFICATIONS:

- **Storage Bin Capacity** : Ranges from 50L to 500L.
 - **Screw Material** : Made of polyurethane for durability.
 - **Vibrator** : Ensures free flow of materials.
 - **Weigh Scale** : One scale is used for two ingredients.
 - **Human Intervention** : Minimal, ensuring efficiency.
 - **Production Consistency** : Maintained throughout the process.
 - **Batch Time** : Only 2 minutes per batch.
- This Auto-Weighing System guarantees meeting customer expectations with its efficient and precise operation.



AUTOMATED BAG HANDLING

- Fully automatic in-line low melt bag manufacturing systems.
- Systems range from manual removal and sealing to fully automatic closure, removal and accumulation or direct transfer to the mixer or other downstream process.
- A truly automatic ingredient weighing system with less / no operator intervention.

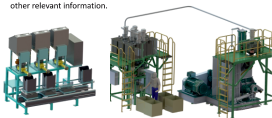
FEEDING

- Can integrate bulk material delivery in FIBC/IBC or 25 kg sacks.
- Accurate throughput delivery with vibratory or screw type feeders.
- Experienced in handling complex flowability of materials.



WEIGHING

- Greater accuracies and resolutions are achieved through precision platform scales.
- Current site installations are achieving accuracies of better than 3 grams in 20 kg.
- Throughput is typically around two bags per minute. Offers product traceability - All weighments are recorded and stored as batch reports together with target weights, batch identification numbers and other relevant information.



High Accuracy
High Throughput
Contamination Free
Expandable

Semi Automatic Weighing System

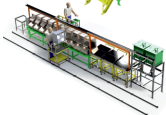
CHEMICAL WEIGHING SYSTEM

- Flexible Recipe creations with multi level authorization.
- Ensuring formulation secured.
- Error-proof, User friendly / System guided Semi-auto weighing.
- Real time consumption and inventory reporting.
- Increased operator efficiency through Multilingual display for operation convenience.
- Reduction of batch to batch variation and compound scorch.
- Mistake proof loading and weighing ensuring standard operating procedures / sequence with accuracy within permissive levels.



INVENTORY MANAGEMENT SYSTEM

- Raw material Inventory management through RFID/ Bar code technology.
- Dynamic space allocation.
- FIFO based Issue control.
- Material acceptance control through QA/QC - Lab Integration.



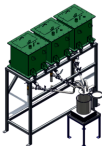
MIXER SEQUENCE CONTROL

- Banbury/Intermix/Kneader controls ensuring foolproof sequential charging of materials.
- Time/Temperature/RPM / Energy/Ram position and pressure based mixing control.
- Safety protected system for mixers and open mills.
- Auto controlled Final Batch mixing/Direct Final Batch mixing.
- Variable Frequency Drives for Banbury/Intermix / Kneader / Open mill.
- Integration with downstream equipment's like TSS and Batch-off, auxiliary equipment's control for TCU.



LIQUID HANDLING

- From simple drum pump stations to fully automated plant-wide oil storage, transfer, pipe trace heating and insulation.



Auto Oil Weighing &
Injection System
Polymer Weighing System
Accurate Chemical Weighing
System

Industry 4.0 | IIOT Enabled Machinery

TRACK AND TRACE SOLUTIONS

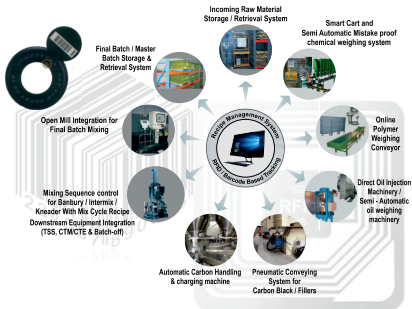
- End to end track and trace system for Tyre / Belt / Rubber compounds etc. with speciality pre-cure and post-cure labels and identification system
- Enterprise connectivity with WIP/Warehouse Management System.

RUBBER AND TYRE SUITE FEATURES

- Complete Integrated Mixing plant solution
- Inventory Management System
- RFID/ Barcode based compound tracking solution
- WIP Tracking for tyres
- ERP integration
- Energy Management System
- Modular/Scalable / Information enabled.



Track & Trace
Product Genealogy
ERP Integration
Workflow Management System
Maintenance Management System
Online OEE Monitoring System
QC & Inspection System
Electronic Batch Reporting System





Trusted for Manufacturing Excellence

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