



STON Robotics Sdn.Bhd.

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STON ROBOT

200+

staff

65%

Research and Development
Engineer

300+

Intellectual Property

50km+

Cumulative track length

60+

National and Regional Service
Operational Capability

1000+

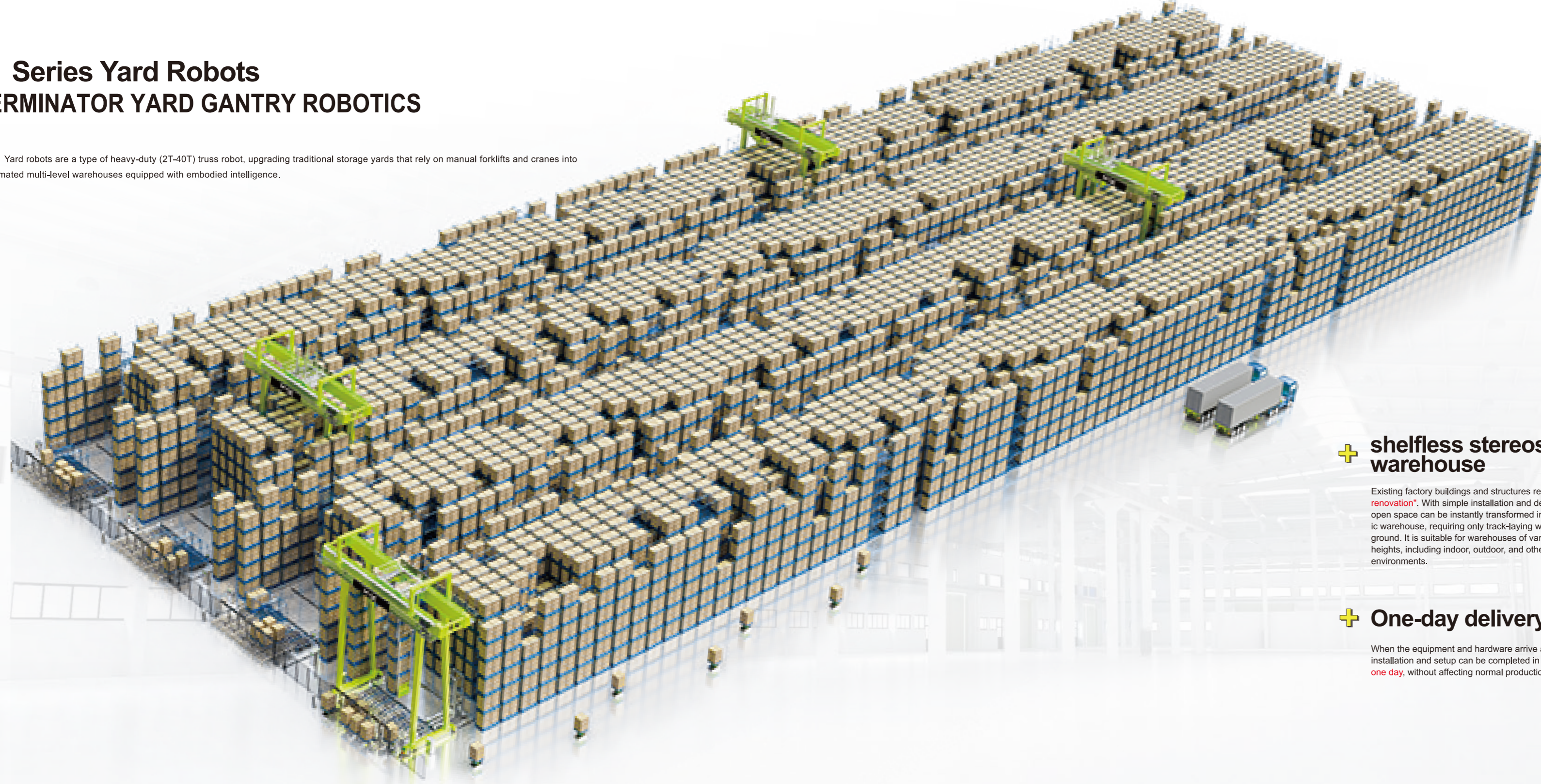
Project

- STON Robotics is the developer of the national standard for truss robots.
- The leader in the global yard robot field.

T Series Yard Robots

TERMINATOR YARD GANTRY ROBOTICS

Yard robots are a type of heavy-duty (2T-40T) truss robot, upgrading traditional storage yards that rely on manual forklifts and cranes into automated multi-level warehouses equipped with embodied intelligence.



+ shelfless stereoscopic warehouse

Existing factory buildings and structures require **“zero renovation”**. With simple installation and deployment, an open space can be instantly transformed into a stereoscopic warehouse, requiring only track-laying work on the ground. It is suitable for warehouses of various sizes and heights, including indoor, outdoor, and other such environments.

+ One-day delivery

When the equipment and hardware arrive at the site, the installation and setup can be completed in as fast as **one day**, without affecting normal production.

+ Embodied Intelligence

No manual **operation** required, no manual **debugging** required, no manual **programming** required, no manual **maintenance** required. Automatically senses the environment, autonomously plans routes, and independently optimises inventory.

+ Lego-style flexible warehouse

By means of flow-through cargo bins, heightening and densifying stacking enables stacked stereoscopic storage. It allows the grabbing of entire stacks, facilitating the easy implementation of **“First-In-First-Out (FIFO)”**. By leveraging AI-driven intelligent dynamic storage location planning, space utilization is maximized — this not only resolves the issue of floor space waste caused by heavy materials and multi-specification goods, but also realizes the **“bulk-in, bulk-out”** cargo handling method.

+ Rapid Fault Recovery

Self-developed distributed cabinet-free control system can replace electrical cabinets, reducing the probability of electrical faults and simplifying after-sales maintenance. It also supports quick module replacement, with fault repair taking **only 5-20 minutes**; its plug-and-play function is as simple and easy to use as household appliances.

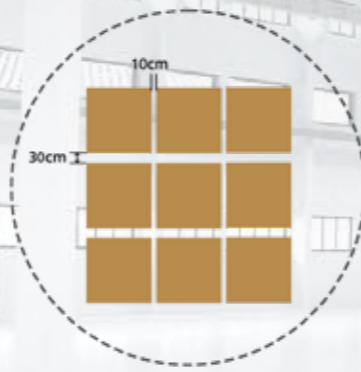
T800 /Overhead Type



- Maximum span: 36m
- Distance travelled: 200m+
- Maximum load: 5t
- Arm stroke: 5.0/6.4m
- Cargo stacking height: 4.8-6.2m
- Factory building height: 10-13m



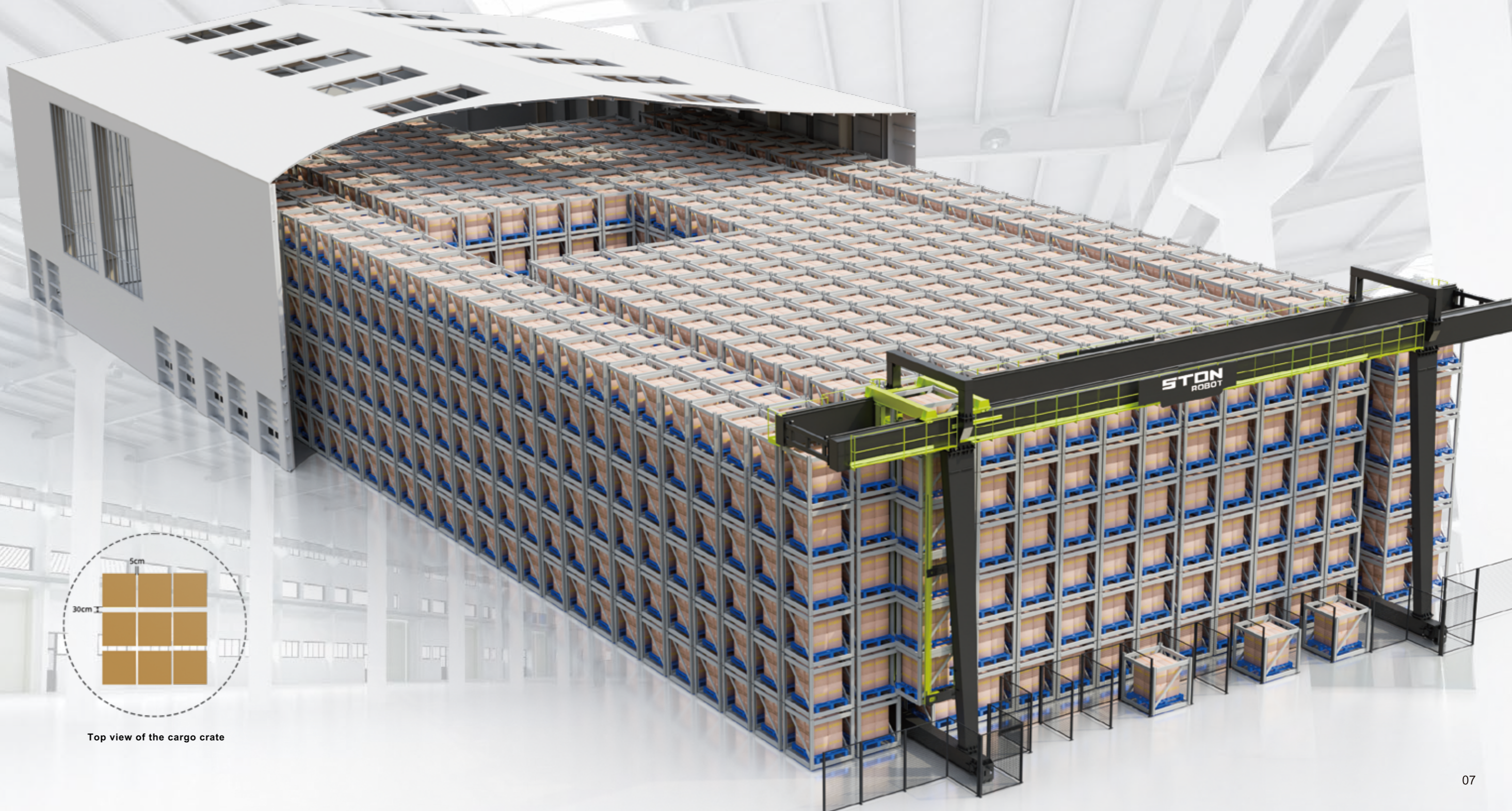
All T800 handling operations are conducted atop the cargo.



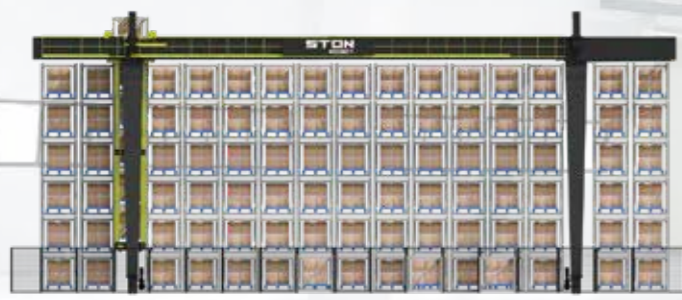
Top view of the cargo crate



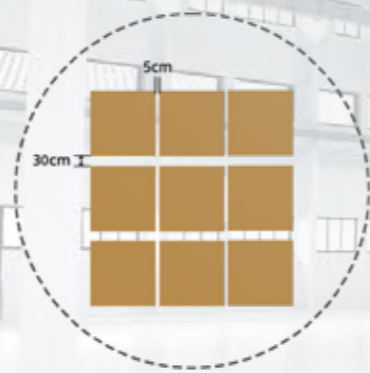
T800MD /Tunnel-type



- Maximum span: 36m
- Travel distance: 200m+
- Maximum load capacity: 10t
- Arm stroke: 2.5/3.2m
- Pallet stacking height: 4.5-9m
- Building height: 8-12m

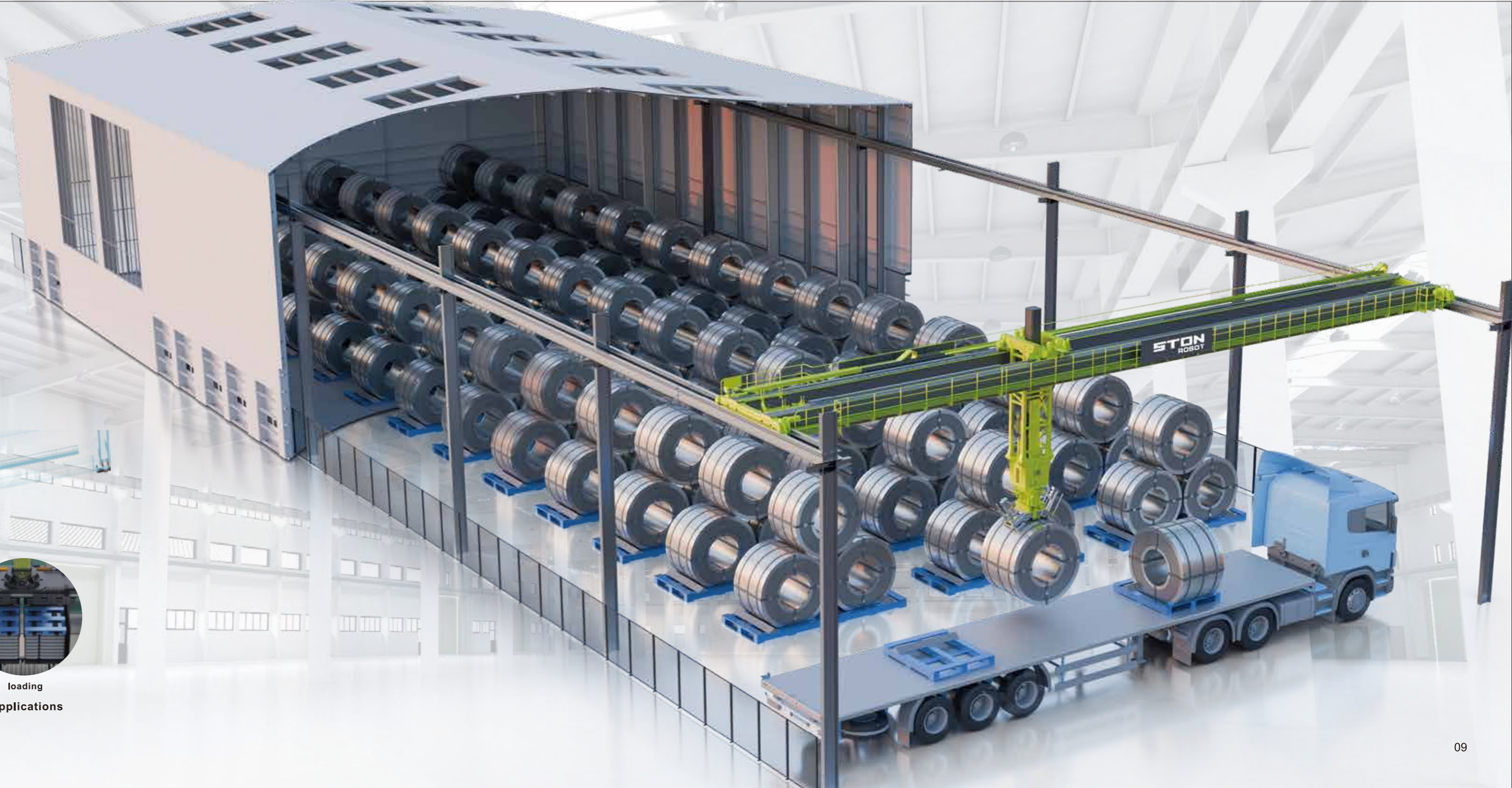


Goods are transported through the passageway.



Top view of the cargo crate

T700 /Single-arm type



- Maximum span: 36m
- Travel distance: 200m+
- Maximum load: 10t
- Arm stroke: 2.5/3.2m
- Workshop height: 9-13m



tonne bag



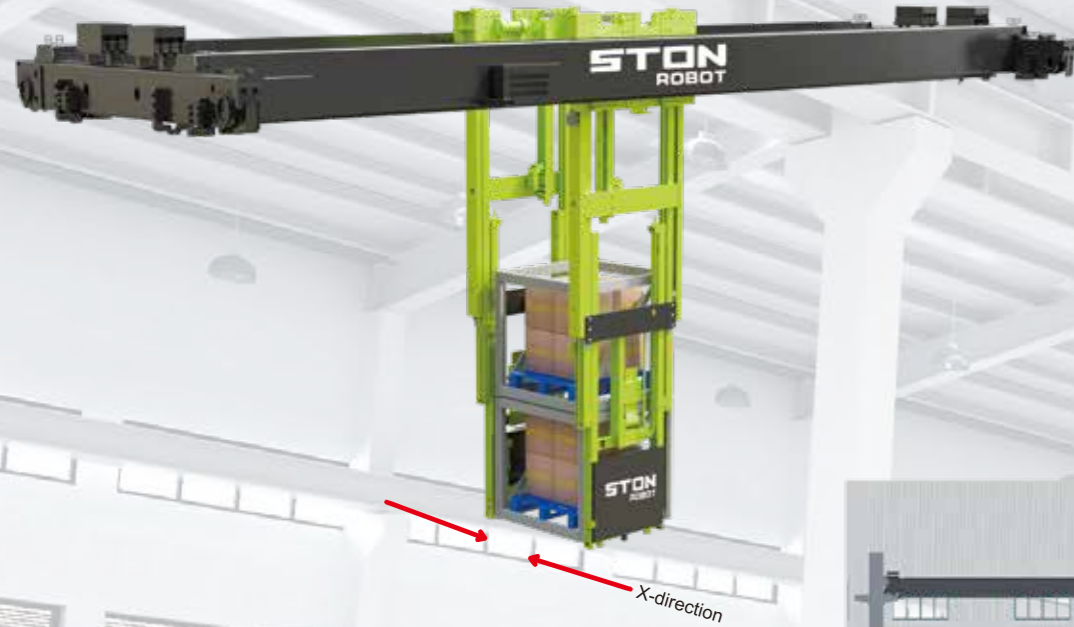
Feed tray



loading

Optional gripper attachments for versatile applications

T5



Maximum span: $\leq 12\text{m}$

Travel distance: $200\text{m}+$

Maximum load: 2t

Arm stroke: 3.3m

Pallet stacking height: $\leq 5\text{m}$

Building height: $\leq 6\text{m}$



T6



- Maximum span: 12m
- Travel distance: 200m+
- Maximum load capacity: 2t
- Arm reach: 3.3m
- Goods stacking height: 5m
- Building height: ≤6m



Second floor

Overhead/Tunnel-compatible

Ground floor



LOADING ROBOT



M7 Forklift

Loading robot

Fork speed: 15m/min

Fork stroke: 13.5m

Loading height: 1.2-1.6m

Maximum load: 35t



L7 chain-type

Loading Robot

Stroke: 13.5m

Loading Height: 1.2-1.6m

Maximum Load Capacity: 35t

Conveyor Speed: 15m/min

SERVO STACKER

S1500

Servo Stacker Crane

Height: 3-40m

Load Capacity: 1520kg

Horizontal Speed: 180m/min

Lifting Speed: 45-60m/min



T800 /Overhead-Type

Energy-saving Semi-finished Warehouse

Project Background:

- Maximum span: 36m
- Stacking height: 4.8 - 6.2m
- Load: >1.2t
- Factory height: 15m
- Z-axis handle length: 5.0 - 6.4m
- Railing width: 0.8 - 1.8m
- SKU: 5000+
- Entry exit: 60times/ hour

Before implement:

Unclear storage classification, different workshops, and semi-finished products are mixed. The warehouse is operated entirely by manual labor, and there is no system for inventory management. The inventory count is done manually, which easily leads to errors, omissions, and theft.

- The warehouse area was originally a production line. No modifications were made to the ground, and the production line tracks remain. Stacking robots use the original shuttle tracks. The original site was renovated and upgraded, and no major demolition or construction was done on the existing site. This kind of flexible warehouse that can be moved and quickly restored to a production line is what customers want, so the second phase of the warehouse project still adopts this plan.



T800 /Tunnel-Type

Chemical Bulk Bag Finished Goods Warehouse

Project Background:

- SKU: 50+
- Warehouse Dimension: 185m x 89m x 10m
- Stacking Height: 6.5m
- Inbound/ Outbound Efficiency: 200 pallets/h
- Repeat Positioning Accuracy: ±5mm
- Maximum Load: 5t

Before implement:

Customers have large inventory and heavy single-pallet loads. Forklifts require dedicated passage, and multi-layer stacking makes inbound and outbound difficult.



- Characterized by heavy weight, easy packaging damage, and high storage environment requirements for chemical fertilizers. Through unmanned precise handling and 'goods to person' selection, it effectively reduces packaging damage, reduces the impact of dust leakage and irritating substances on the human body, and greatly improves the working environment. At the same time, the intelligent system realizes precise inventory management for each bag of fertilizer, thoroughly solving the core pain points of difficult retrieval, disordered inventory, and first-in-first-out execution, and improving inbound and outbound efficiency.



T800 /Tunnel Type

Chemical Fiber Finished Product Warehouse

Project Background:

- SKU: 10+
- Warehouse Dimensions: 107m x 25m x 9m
- Pallet Size: 1400 x 1300 x 130mm
- Highest Efficiency: 36 pallets/ h
- Material Rack Size: 1600 x 1850 x 1880mm
- Maximum Load: 4T

Before implement:

Materials are stored chaotically, stacked unevenly, and easily scattered. Inventory information is unclear, and manual operations require significant effort to search for materials.



- The warehouse was originally a production line. No modifications were made to the ground, and the production line tracks remain. Stacking robots use the original shuttle tracks. A rackless control system is adopted, which does not require PLC engineers; only software is needed for remote operation. It took the customer one month to start using it. The original site was renovated and upgraded, and no major demolition or construction was done on the existing site.



T800 /Overhead Type

Plastic Flooring Finished Product Warehouse

Project Background:

- SKU: 7000
- Stacking Layers: 5 layers
- Pallet Type: 160+
- Average Single Cycle Time: 1.5min
- Average Weight per Pallet: 1t
- Pallet Speed: 18 seconds

Before implement:

The client currently has a 3500m² warehouse storing 3000 pallets. The number of cargo types exceeds 7000, and there are 160+ types of pallets. During inventory transfer, picking is difficult, relying entirely on manual handling and management. Space utilization is low, storage capacity is small, and it cannot meet the growing order demand.



• The flooring industry faces issues with numerous specifications, many SKUs, and high surface requirements. Traditional racking and manual handling have low efficiency, easily causing collisions and scratches. After upgrading to a vertical warehouse with adaptive flexible grippers and adopting a 3D shelving system, precise handling is achieved. The original site was renovated and upgraded without major demolition or construction, making it a flexible warehouse that can be moved at any time and quickly restored to a production line, which is what customers want, greatly shortening inbound and outbound times..

T800 /Overhead Type

Bearing Semi-finished Product Warehouse

Project Background:

- SKU: 1200
- Stacking layers: 5 layers
- Factory Dimensions: 17m x 100m
- Average Single Cycle Time: 1.5min
- Pallet Size: 1 x 0.8m
- Pallet Speed: 18s
- Average Weight per Pallet: 1t

Before implement:

The client currently has a 2000m² warehouse storing 1000 cargo items. Space utilization is low, and chaotic inventory makes picking difficult, taking at least 30 minutes. Single cargo items are heavy, and multi-layer stacking makes inbound and outbound difficult.



- There are issues with the warehouse of components: a large variety of specifications, difficulty in rust prevention for precision parts, and stagnation in turnover efficiency. After upgrading, the processes of oiling, drying, warehousing, and handling are integrated without interruption. When components are stored to the specified capacity, the system automatically issues commands. Robots shuttle components back and forth between the oiling area and the drying area to their storage locations, completing secondary rust prevention and precise scheduling throughout the entire process. This ensures the craft rhythm and eliminates oil stains, confusion, and inefficiency brought by manual operations

T800 /Overhead Type

Aluminium Ingot Storage Warehouse

Project Background:

- SKU: 1200
- Warehouse Dimensions: 17m x 100m
- Pallet Size: 1 x 0.8m
- Average Weight per Pallet: 1t
- Stacking layers: 5 layers
- Average Single Cycle Time: 1.5min
- Pallet Speed: 18s

Before implement:

There is a shortage of operational equipment, low handling efficiency, and severe chaos. Channel management is ineffective, impacting both safety and efficiency. Lack of regional planning and disordered storage sequence.

- Aluminum ingots are heavy, and the site has mixed traffic of people and vehicles, making it prone to safety accidents such as collisions and crushing. Traditional warehouses have problems like difficulty in finding goods and difficulty in inventory management. After upgrading to a vertical warehouse, inbound and outbound times are greatly shortened. The original site was renovated and upgraded without major demolition or construction.



T800 /Overhead Type

Home Appliance VMI Warehouse

Project Background:

- SKU: 15
- Pallet Type: 2
- Pallet Size: 1 x 1.2m/ 0.76 x 1.1m
- Average Weight per Pallet: 1.2t
- Stacking Layer: 3 layers
- Average Single Cycle Time: 1.5min
- Pallet Speed: 30s

Before implement:

Customers in the home appliance industry nationwide have a demand for large-scale inventory management. Products have a single pallet weight of 600kg or more. Forklifts require dedicated passage, multi-layer stacking makes inbound and outbound difficult, and manual picking and sorting are time-consuming.

- Home appliance warehouses face issues such as complex management of multiple categories, heavy reliance on manual labor, and low inventory visibility. After upgrading, they are not restricted by fixed zones and can move freely within the warehouse area. Equipped with advanced sensor technology and intelligent algorithms, they can quickly identify different types of home appliance products. Stacking robots can identify goods in different zones, pick them for inbound and outbound, and classify semi-finished products of various types and sizes.



T800 /Overhead Type

Automotive Parts Storage Warehouse

Project Background:

- Warehouse Dimensions: 68m x 18.5m x 24m
- Inbound/ Outbound Efficiency: 120 pallets/ h
- Cargo Rack Dimensions: 800 x 1760mm
1200 x 1650mm
160 x 2100mm
- Maximum Load: 3000kg
- SKU: 8

Before implement:

Unable to implement First-In, First-Out (FIFO). Relies entirely on manual handling operations, resulting in low efficiency, low safety coefficient, irregular stacking, and poor aesthetics.

- The automotive parts industry faces issues with numerous SKUs, high delivery accuracy requirements, fast inventory turnover, strict quality traceability, and high requirements for edge-to-edge coordination. After upgrading to a vertical warehouse, precise unmanned handling and 'goods-to-person' selection thoroughly solve the core pain points of difficulty in finding goods, disordered inventory, and the inability to implement First-In, First-Out, thereby improving inbound and outbound efficiency.



T800 /Overhead Type

Profile Material Warehouse

Project Background:

- SKU: 3000
- Stacking layers: 7 layers
- Factory Dimensions: 7m x 9.6m
- Average Single Cycle Time: 1.5min
- Pallet Size: 1.2 x 2m
- Pallet Speed: 12.8s
- Load: 5t

Before implement:

The client's sheet metal and profile materials have large outer dimensions, many varieties, and high demand for scattered outbound storage. Manual operation is difficult for picking, and the outbound efficiency is 10 pieces/hour. It relies entirely on manual handling and management, which is time-consuming and labor-intensive.

• Profile materials have problems such as being excessively long, heavy, and prone to bending and deformation. Traditional methods involve stacking them outdoors or on flat ground indoors, resulting in extremely low space utilization. After upgrading to a vertical warehouse, dense storage racks are used to avoid cargo deformation and scratches. Inbound and outbound times are greatly shortened, enabling seamless connection to production and easily coping with business surges.



T800 /Overhead Type

Large-Sized Sheet Material Warehouse

Project Background:

- Dimensions: 25.5m x 24m x 9.2m
- SKU: 50+
- Pallet Specifications:
 - 5900 x 2600 x 220mm
 - 5300 x 1300 x 220mm
 - 4100 x 2100 x 220mm
- Stacking Layers: 10 layers
- Load: 5000kg

Before implement:

The client's products have large outer dimensions and high demand for scattered outbound storage. Manual operation is difficult for picking, and inbound and outbound rely entirely on manual handling, which is time-consuming and labor-intensive.

- Large-sized sheet materials are heavy, large, and soft, making handling with forklifts time-consuming and labor-intensive. When they are pressed at the bottom, it takes a lot of effort and time to retrieve them. After upgrading to a vertical warehouse, the time for retrieving and storing sheet materials is greatly shortened, enabling seamless connection to production and easily coping with business surges.



T5

Door & Window Raw Material Warehouse

Project Background:

- Warehouse Dimension: 69.5 x 9.1 x 5.1m
- Warehouse Floors: Four
- SKU: 100+
- Stacking Height: 2.95m
- Material Length: 6-12m
- Load: 1500kg

Before Implement :

Customer panels and profiles have large dimensions and a wide variety of types. Loose-item outbound demand is high, making manual sorting difficult. The outbound efficiency is only 10 pieces per hour, relying entirely on manual handling and management, which leads to significant time and labor costs.

- The door and window raw material warehouse previously faced issues such as complex material specifications, risk of scratches and damage, low manual handling efficiency, and disorganized inventory management. After upgrading to a vertical storage system with high-density storage racks, material deformation and damage were avoided. Inbound and outbound handling time was greatly reduced, enabling seamless production integration and supporting rapid business growth.



T6

Feed Raw Material Bulk-Bag Fermentation Warehouse

Project Background :

- Location: Thailand
- Maximum Load: 2t
- Warehouse Dimensions: L153 x W12.5 x H8m
- SKU: 0+
- Stacking Height: 4m
- Warehouse Height: 8m
- Average Cycle: 15 units/h

Before Implement :

The client is located in Thailand. The facility height is 8 m, with a maximum stacking height of 4 m. The products have heavy pallet loads and require frequent truck loading. Relying only on forklifts and manual handling is no longer sufficient to meet the growing production capacity demands.

- The jumbo-bag fermentation warehouse previously faced challenges such as heavy loads, humid conditions, disorganized stacking, and lack of information traceability. After the upgrade, a modular heavy-duty rack system enables vertical stacked fermentation of jumbo bags, maximizing space utilization. The system eliminates the need for manual handling and forklifts, supports various container carrier sizes, and features corrosion-resistant robotic grippers with a high-temperature and high-humidity adaptive system to ensure operational safety.



T6

Turnover Box Dense Storage System

Project Background :

- Warehouse Dimensions: 54m x 8.7m x 2.95m
 - Stacking Layers: 8/10 layers
 - SKU: 500+
 - Average Cycle: 30~40times/h
 - Bin Dimensions: 615 x 423 x 200mm
 - Load: 300kg
- 460 x 260 x 160mm

Before Implement :

In this project, the client plans to build a new warehouse and develop it into an efficient intelligent warehouse. The entire inbound and outbound material process will be managed through digitalized and intelligent systems. Leveraging its product advantages and industry experience, STON Robotics integrates its hardware and software capabilities to deliver a complete intelligent warehouse solution.

- The turnover box dense storage warehouse previously faced challenges such as complex bin contents, space wastage, difficulty in locating items, and high reliance on manual operations. After the upgrade, the system enables efficient transport and ensures continuous material supply to the production line. Located on the second floor, the project overcomes low plant height limitations. High-precision sensors and an intelligent control system help reduce safety risks caused by manual operations.



T700 / Single-Arm Type

Jumbo Bag Semi-Automatic Truck Loading

Project Background :

- Jumbo Bag Weight: 1t
- Truck Loading Speed: 80bags/h
- Travel Speed: 90m/min
- Pick-and-Place Speed: 30m/min
- SKU: 50

Before Implement :

The client's products have a high pallet load and require large-scale truck loading. Relying solely on forklifts and manual operations cannot meet the increasing production capacity demands.



- Jumbo bags previously faced challenges such as severe dust contamination, pallet deformation, high manual handling intensity, difficulty in retrieving goods, and disorganized inventory management. After upgrading to the automated warehouse system, adaptive grippers enable unmanned precision handling and intelligent destacking operations, effectively solving issues related to item retrieval, inventory management, and FIFO implementation.



T700 / Single-Arm Type

Jumbo Bag Semi-Automatic Truck Loading

Project Background:

- Jumbo Bag Weight: 1t
- Travel Speed: 90min/min
- Jumbo Bag Size: 1100 x 1100 x 1150 mm (without straps) / 1800 mm (with straps)
- Truck Loading Speed: 80bags/h
- SKU: 60

Before Implement:

The client's products have a high single-pallet weight and require large-scale truck loading. Relying solely on forklifts and manual handling cannot meet the increasing production capacity demands.

- The jumbo bag fully automatic truck loading system ensures orderly cargo stacking while replacing manual operations with automated handling. The gantry loading robot can handle 2 tons per cycle, and a full truck can be loaded in approximately 15 minutes. The system supports flatbed trucks, low-side trucks, and high-side trucks, significantly improving loading efficiency.



T700 / Single-Arm Type

Refractory Brick Storage Warehouse

Project Background:

- SKU: 4600
- Stacking Layers: 4
- Factory Bay Dimensions: 18 x 120 x 11 m
- Average Cycle Time: 40min
- Average Pallet Weight: 1.5 t
- Pallet Handling Time: 90s/pallet
- Pallet Dimensions:
1220 x 700 x 850 / 1070 x 820 x 850 / 920 x 920 x 850
920 x 830 x 850 / 920 x 740 x 850 / 850 x 820 x 850

Before Implement:

The product inventory volume is large, with each pallet weighing 1.5 t. Forklift operations require reserved aisles, making multi-layer pallet stacking during storage difficult. Outbound operations are time-consuming and labor-intensive when locating and retrieving goods.

- The refractory brick warehouse previously faced issues such as heavy product weight, high risk of damage during handling, complex specifications, and numerous SKUs. Traditional storage systems often mixed different batches and models, making FIFO management difficult. After upgrading to the automated warehouse system, inbound and outbound processing time was greatly reduced, enabling seamless integration with production and supporting rapid business growth.



T700 / Single-Arm Type

Semi-Finished Pipe Storage Warehouse

Project Background:

- Warehouse Dimensions: 36 x 18 x 10m
- SKU: 50+
- Pallet Dimensions: 1050 x 950 x 600mm
- Average Cycle Time: 3min
- 1800 x 1250 x 850mm
- Bin Weight: 5t

Before Implement:

The client's products have large dimensions and require frequent loose-item outbound handling, making manual sorting difficult. All inbound and outbound operations rely on manual handling, leading to significant time and labor costs.

- The pipe finished goods warehouse previously faced challenges such as long material length, heavy weight, complex specifications, risk of collision damage, and large space occupation. Manual handling in traditional warehouses was inefficient and prone to damage. After upgrading, adaptive flexible grippers and vertical racking enable precise handling and on-site upgrade without major reconstruction. The flexible system can be relocated easily and quickly restore production, significantly reducing inbound and outbound processing time.



T700 / Single-Arm Type

Steel Coil Finished Goods Warehouse

Project Background:

- SKU: 10+
- Steel Coil Specifications: ≤ 600 mm
- Load: 6t
- Stacking layers: 5 layers
- Average Cycle Time: 2.2min/unit
- Average Throughput: 300t/day

Before Implement:

This project introduces intelligent lifting equipment for the client's photovoltaic bracket production workshop. By integrating warehouse management, precise positioning, automation control, video monitoring, safety management, and real-time monitoring, two intelligent lifting systems were designed for both raw material and finished goods warehouses. The solution enables centralized intelligent management, improving automation, digitalization, and overall production efficiency.

- In the steel coil industry, individual coils can weigh several tons, posing risks of dropping and rolling and creating safety hazards during manual handling. Traditional warehouses face challenges such as difficulty in locating coils, large floor space requirements, and low space utilization. After the upgrade, inbound and outbound handling time is significantly reduced, improving efficiency and ensuring operational safety.



T700 / Single-Arm Type

Steel Cord Spool Finished Goods Warehouse

Project Background:

- Feeding Rate: 2-5pallets/minutes
- Warehouse Dimensions: L4200 x W7300 x H4600
- Number of Pallet Type: 3 types
- Storage Capacity: ≥ 10 pallets
- Throughput: 1 item/min
- SKU: 20+

Before Implement:

Due to the wide variety of spool product specifications, manual sorting is time-consuming and labor-intensive, resulting in inefficient operations.

- The spool warehouse previously experienced long downtime during handling and changeovers, with numerous spool types occupying large floor space and making FIFO difficult to implement. After upgrading to a compact vertical racking system, inbound and outbound processing time was significantly reduced, enhancing production efficiency.



T700 / Single-Arm Type

Steel Plate Storage & Picking Warehouse

Project Background:

- Steel Plate Material: Q235, 16Mn, Q490
- SKU: 10+
- Maximum Plate Length: 10m
- Minimum Plate Length: 3m
- Maximum Plate Weight: 10t
- Warehouse Dimensions: 104 x 24 x 10.5m

Before Implement:

This production line is designed for cutting and processing structural steel plate components. It supplies raw plates to 8 cutting machines and handles the transport of both raw materials and finished parts. The system enables automated control of loading, cutting, unloading, sorting, and calibration processes, supports continuous cutting operations, and provides real-time remote monitoring. It is also compatible with MES integration.



T700 /Single-arm type

Steel Cord Spool Finished Goods Warehouse



Case video

Project Background:

- SKU: 11
- Number of Pallet Type: 11 types
- Pallet Dimensions: Diameter 0.5 - 1.2m
- Average Pallet Weight: 1.5t
- Stacking Layers: 3-5
- Average Cycle Time: 1.2min
- Storage Capacity: 4400

Before Implement:

The customer has a substantial warehousing management demand for cable reel supplies. However, traditional cable reel storage only allows for extensive flat spreading, occupying large areas with heavy goods. Manual inbound and outbound operations are time-consuming, labor-intensive, and involve high operational risks.

- Products such as cables and steel coils that do not require indoor storage can be stored outdoors using ground rail systems to achieve high-density vertical storage. This not only solves the issue of cables and steel coils traditionally being laid flat in a single layer and occupying large floor space, but also improves warehouse management efficiency. The independently developed unmanned control system supports IP67 waterproof and dustproof protection, and is not affected by weather or environmental conditions.



L7

Steel Cord Spool Finished Goods Loading System



Case video

Project Background:

- Maximum load: 40,000kg
- Equipment Length: 16.5m
- Loading Conveyor Width: 2.3m
- Speed: 12–15m/min
- Throughput: 70/h
- Repeat Positioning Accuracy: ±5mm

Before Implement:

The loading process requires high throughput, with heavy loads per pallet. Operations rely entirely on manual handling, leading to low efficiency and disorganized stacking.

- Metal products present challenges such as diverse specifications, wide weight ranges, high surface protection requirements, low handling efficiency, and complex inventory management. Traditional systems struggle with item retrieval and FIFO implementation. After the upgrade, the L7 chain loading robot supports multiple vehicle types and cargo forms. Manual loading takes 2–3 hours, while automated loading can be completed in as little as 5 minutes.



M7

New Energy Component Truck Loading



Case video

Project Background:

- Maximum Load: 48t
- Loading Acceleration: 12mm/s²
- Loading Travel Distance: 13.5m
- Loading Power: 60kW
- Fork Speed: 15m/min

Before Implement:

Due to the large shipment volume, operations rely entirely on manual handling, leading to low efficiency, reduced safety, unorganized stacking, and poor overall presentation.

• The M7 fork-type loading robot is specially designed for four-way entry shaped pallets, featuring fully servo-controlled automatic height adjustment without manual intervention. A chain-driven fork system enables platform-level pushing functionality. It can be seamlessly integrated with production lines to achieve fully automated loading and unloading.



L7

Truck Loading Industry



Case video

Project Background:

- Maximum Load: 30t
- Conveying Acceleration: 0.2m/s²
- Lifting Stroke: 500mm
- Conveying Speed: 15m/min
- Travel Distance: 13.5m
- Horizontal Travel Stroke: 500mm

Before Implement:

The STON loading robot enables rapid outbound handling through four-directional transformation and high-load pushing capabilities. It automatically adjusts height and angle to match trucks or containers, then transfers goods via a chain plate and push mechanism. This replaces manual handling, improves efficiency, and reduces truck waiting time. It is suitable for manufacturing, FMCG, chemicals, construction, logistics, raw materials, and energy industries.

- The truck loading industry faces issues such as low efficiency, high labor costs, cargo damage, long truck waiting times, and disorganized operations. After upgrading, the system supports multiple vehicle types and cargo forms. Manual loading takes 2-3 hours, while automated loading can be completed in as little as 5 minutes, greatly improving efficiency.



\$1500

Brake Disc, Gear & Rack Servo Automated Warehouse



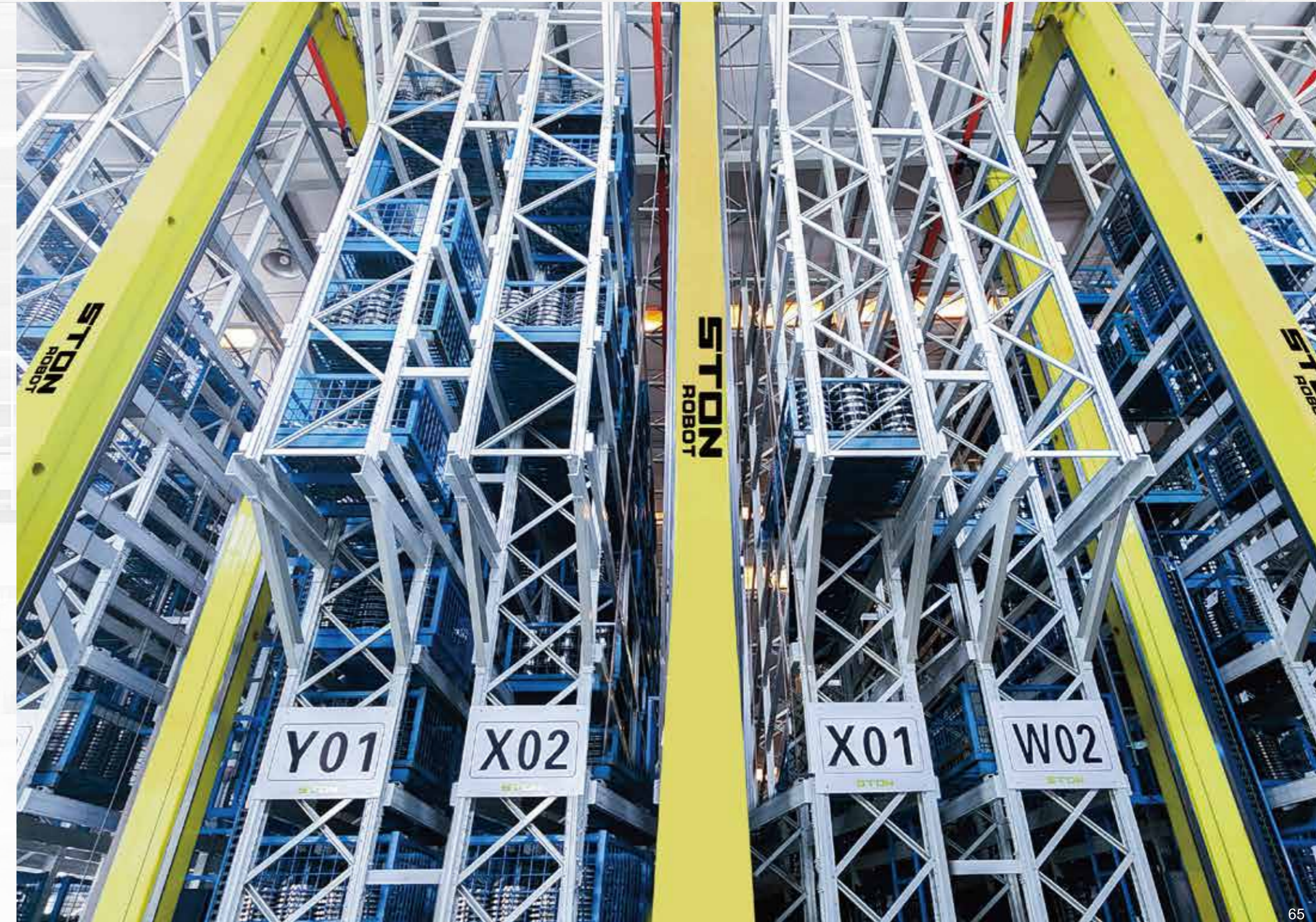
Case video

Project Background:

- Warehouse Dimensions: 60 x 36.6m
- SKU: 20+
- Pallet Dimensions: 1050 x 1050 x 665
- Storage Capacity: 6500
- Number of Stacking Layers: 11 layers
- Average Cycle Time: 1.5min
- Average Pallet Weight: 1.5t
- Number of Pallet Types: 6 types

Before Implement:

Individual storage units are extremely heavy, and the lack of organized storage and guidance results in retrieval times exceeding 30 minutes. Multi-layer stacking is difficult, leading to very low space utilization.



- The brake disc servo automated warehouse faced issues such as heavy item weight, high anti-corrosion requirements, complex specifications, low manual handling efficiency, and strict traceability requirements. After upgrading, additional storage levels and automated operations increase capacity and maximize vertical space utilization, allowing more goods to be stored within the same footprint.

\$1500

Servo Automated Warehouse for Automotive Exterior Parts, Gears & Racks



Case video

Project Background:

- Warehouse Dimensions: 30.3 x 14.5 x 15.5m
- Pallet Dimensions: 2200 x 2300 x 2350mm
- Throughput: 72 units/h
- Storage Capacity: 568 pallets
- SKU: 5+
- Number of Stacking Layers: 5
- Average Pallet Weight: 5t
- Height: 15m

Before Implement:

Automotive exterior parts are prone to deformation, scratches, and collision damage. Traditional warehouses rely on manual handling for inbound operations, and heavy components require multi-person coordination. Leveraging its product strengths and industry experience, STON integrates hardware and software capabilities to deliver a complete automated warehouse solution.

- The automotive industry faces challenges such as large component sizes, irregular shapes, and strict surface protection requirements. Manual handling in traditional warehouses is inefficient and prone to damage. After upgrading, adaptive flexible grippers and vertical racking enable precise handling, significantly reducing inbound and outbound time and improving space utilization.

