



GreyOrange
Linear Sorter

CE

Automate sortation with an **industry leading solution.**

Challenges such as increasing costs, high order volumes, manpower issues, shorter order processing window & scope for zero-error have led to adoption of automation solutions imperative for supply chain professionals around the world, to overcome any operational inefficiencies in the processes of distribution or fulfillment centers.

The GreyOrange Linear Sorter is built on the backbone of tried and tested pneumatic arms technology and gives never seen before throughputs, package-handling capability and reliability, thanks to next-generation of IoT sensors and advanced software. It routes packages based on industry, defined sortation logics such as destination, volume, weight or any other custom logic based on your business dynamics. The system is completely modular and scalable and comes in three standard sorting configurations of 1500, 3000 or 6000 packets per hour with up to 500 end-destinations.

Customer Challenges

End-Customer Satisfaction

Manual sortation process takes several hours and is prone to incorrect deliveries and bagging, sometimes as high as 3-5%*, leading to bad customer experience

Discrepancies in Shipping Cost

Non-availability of technology to determine the correct volumetric weight - a standard pricing technique for commercial freight transport could result in discrepancies in calculating the correct shipping costs, leading to disputes with partners

Seasonal Demand Surge

Managing peak demand due to daily, weekly, monthly seasonality and other similar reasons can create chaos within the fulfillment centers

Integration and Real-Time Issues

New sortation solutions do not work seamlessly with existing IT systems. Additionally, the system information is not updated in real-time

Long Lead Time

Industry-wide it takes 6-8 months to install a sortation system

GreyOrange Solution

High-Throughput and Error-Free Sortation

With GreyOrange Linear Sorter, packets get sorted in under a minute and using a light-based system-directed sub-sortation technology, entire sorting and bagging process is error-free, with accuracy of 99.99%*

Volumetric Weights

With the highly accurate and industry-standard technology to determine both volumetric and gross weights of every packet in real-time, you can now know of exact shipping costs upfront. This data, combined with image archiving feature enables you to resolve any disputes in minimum time with your partners

Dynamic Software Configuration

Because the Linear Sorter system cuts down the sorting time drastically, it can handle demand peaks well. Also, the dynamic software configuration using GreyOrange Sorter Management Software enables you to dynamically reconfigure sortation logic to manage changing business demands

Seamless Integration

Having integrated with all major WMS and ERP systems, GreyOrange Linear Sorter system works seamlessly with your existing enterprise systems, making all information available in real-time

Fastest Conceptualization to Go-Live Time

GreyOrange Linear Sorter can be delivered, installed and go-live in 6 weeks to 3 months enabling you to use the technology as early as possible

* Data based on customer installations

Customer Challenges



Effective Space Utilization

As demand grows and distribution centers become expensive to operate, ineffective space utilization is not an option anymore



Varied Payload Types

With varied SKUs being shipped everyday from distribution centers, shape and size of a packet does matter. Sorting thousands of packets of varying size and shape efficiently in a few hours is challenging



High Maintenance Cost

After a couple of years of operations, maintenance cost rises exponentially, due to high cost of spare-parts, replacement of which is usually not covered in standard annual maintenance contracts (AMC)



Cost

Sortation is an expensive automation solution which only large players can afford

GreyOrange Solution



Small Footprint

Do more in less space with GreyOrange Linear Sortation System that has a relatively smaller footprint and can be installed in a location as small as 2400 sq. ft*



Sorting Regular and Irregular Packets

GreyOrange Linear Sorter is designed for sorting a variety of payloads including polybags and regular and irregular packets with object as thin as 3mm



Low Maintenance

With GreyOrange's SLA-based AMC costing that covers both spare-parts and labour costs, the maintenance cost, even after a couple years of operations, remains fairly low



Low TCO with Lower Entry Barrier

GreyOrange Linear Sorter lowers the threshold for entry for using sortation technology even for small and medium-size players



* Data based on customer installations

Key Features



Multiple Profiles

Creation of profiles to support inbound and outbound processes; switch between different profiles in less than few minutes



Image Capturing

Automated image capturing and archiving for auditing and enabling pilferage control



Modular and Scalable

As your business scales, increase sorter arms or Pick-Put-To-Light (PPTL) systems to handle increased load or sorting destinations



Information Security

Role-based access control and encrypted communication over secure HTTPS protocol between customer enterprise system and Sorter Management Software



Remote Monitoring

Monitor sorter operations, system health and productivity locally or remotely through dashboards and visualization; get alert notifications in real-time for prompt actions



Fulfilment Policies

Define sortation processes based on the vendor cut-off time and distribution centers policies

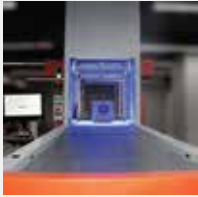


System Components



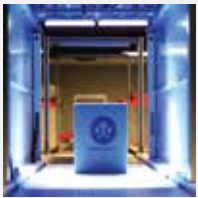
Operator Panel

- Shows dashboards for end-to-end monitoring



Infeed System & Dynamic Auto-spacer

- Comprises of an accumulator and input conveyor belt for continuous flow of packets
- Spaces out or places packets together, depending upon the packet size
- The only one of its kind of a solution in the industry that can decrease gaps between packets



Scanning Conveyor

- Identifies packets using either 1D barcode, 2D barcode or both
- Also captures packet images for archiving



Dimensioning & Weighing System (DWS)

- Captures both the gross weight and volumetric weight of the packets
- Records dimensions (length, width, height) of the packet and real volume for better bag utilisation



Sortation Conveyor

- The conveyor is equipped with pneumatic arms on either side to sort the packets
- The total length of the sortation conveyor and the total number of arms configured according to the size of distribution center/number of sort destinations



Chutes

- Sorter's arms divert shipments into chutes to maximise productivity at the sub-sortation bays
- Chutes can be padded for fragile items and their bottoms can be lengthened
- Chutes can also be unmanned or manned (depending on the throughput)



Sub-sortation Bagging Unit with Pick-put-to-light (PPTL)

- Sub-sortation bagging unit facilitates secondary sorting and bagging operations
- PPTL ensures sorting accuracy by alerting the operators to close the bags once the bags are full, using any bag closing logic such as volumetric weight, number of shipments or dispatch time

Technical Specifications

- **Minimum Dimensions (LxBxH):**
100mmX100mmX3mm
- **Maximum Dimensions (LxBxH):**
600mmX600mmX600mm
- **Weight Range:** 10gms-15kgs
- **Single or double deck** operations

Comprehensive Support and Maintenance Services

GreyOrange ensures that our army of engineers are watching your system live, all the time.

Our maintenance support is unmatched in the industry. Our onsite support engineers predict when maintenance or repair should be performed, ahead of the time. This helps improve our system's performance and reliability to provide more uptime and cost savings, by bringing down unplanned downtime.

Type	Gold	Silver	Bronze
Spare - Parts Coverage	Full	Full	Partial
Response Time	4 Hours	8 Hours	24 Hours
Remote Support (Tele/Email)	24x7	24x7	Business Working Hours
Preventive Maintenance	Monthly	Bi - Monthly	Bi - Monthly
Software Updates	Yes	Yes	Yes
Software Upgrades	Yes	Yes	No
Uptime Guaranteed	Fortnightly	Monthly	Quarterly

The GreyOrange Advantage

- Managing holistic and seamless customer experience - from designing solution to providing world-class integration and installation services, followed by unmatched warranty and maintenance support
- Accelerated delivery time with installation of GreyOrange Linear Sorter in less than 12 weeks, depending on site readiness and customizations required
- Modular architecture to scale-up on-demand, as per the changing customer requirements
- Committed to developing innovative sustainable technologies that ensure lower carbon footprint
- 24x7 global customer support

About GreyOrange

GreyOrange is a multinational firm that designs, manufactures and deploys advanced robotics systems for automation at warehouses, distribution and fulfilment centres. With deep domain expertise, world class hardware and software engineering and the passion to solve complex business problems, the company is disrupting the way logistics and supply chain processes across the world are being optimized. Founded in 2011, GreyOrange is headquartered in Singapore with offices in India, Hong Kong, Japan, Germany and UAE, and a state-of-the-art Research and Development center in Gurgaon, India. To know more, [visit greyorange.com](http://www.greyorange.com)

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