



Want to accelerate your business growth in the post-pandemic era?

Then you must deploy technology and innovation to gain a competitive advantage over your peers.

Before proceeding, there is a serious concern that requires clearance. It is a pervasive misconception among people that technology will eliminate human jobs.

Trust us. That's not true.

On the contrary, technology augments human efficiency, increases production, eliminates errors, reduces cost, and boosts profitability.

In this whitepaper, we'll delve deeply into how Artificial Intelligence (AI) enhances operational efficiencies, bridges gaps, and created opportunities for retailers, and supply chain management and logistics service providers.

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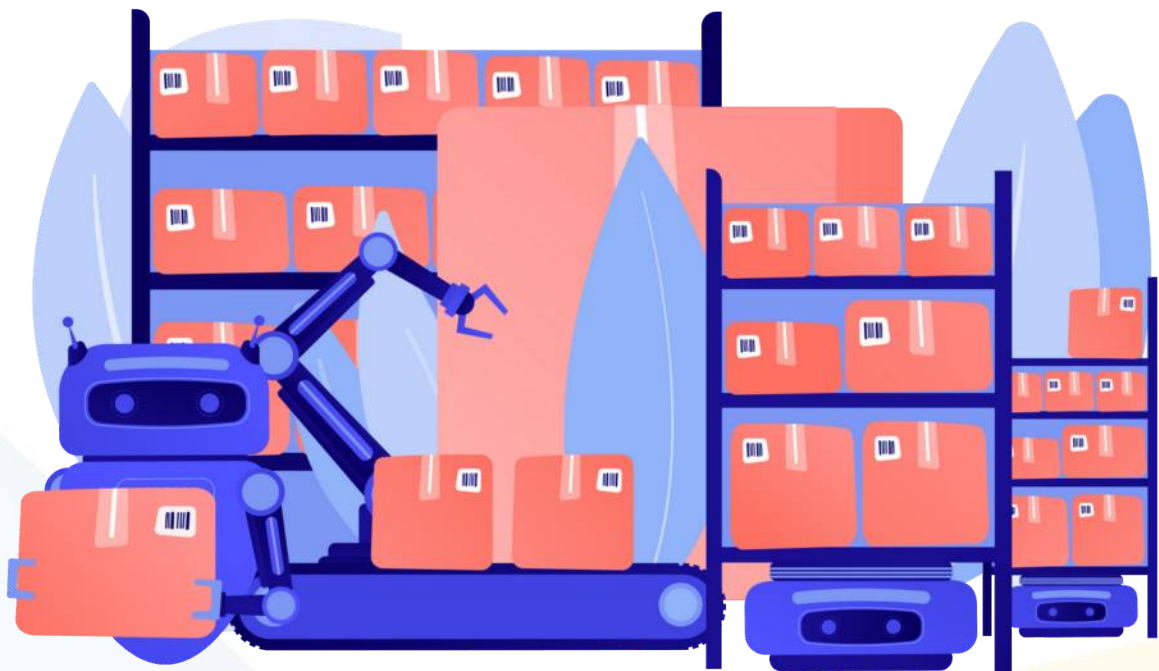




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AI, ECOMMERCE, AND LOGISTICS



Today commerce is synonymous with ecommerce.

As people prioritize safety, they prefer shopping online instead of visiting brick and mortar units. In 2020 alone, over 150 million new people joined the online shopping clan, making ecommerce sales hit the peak.

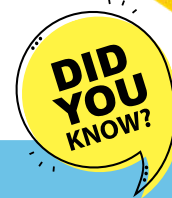
In fact, the ecommerce industry is estimated to reach USD 6.2 trillion by 2027, at a 7.9% CAGR. So the growth opportunity for warehouses and logistics providers is expected to be indeed groundbreaking. They will have to improve operational speed, productivity, and efficiency to cater to the increasing demand.

Artificial Intelligence (AI) has proved to be a game-changer in increasing warehouses and logistics service providers' efficiency and profitability. It has transformed warehouses and logistics into profitability centers by enhancing operations and service and reducing costs and errors. From supply to delivery, AI has revolutionized the automation of dimensioning, sorting, processing, packaging, shipment, and tracking.



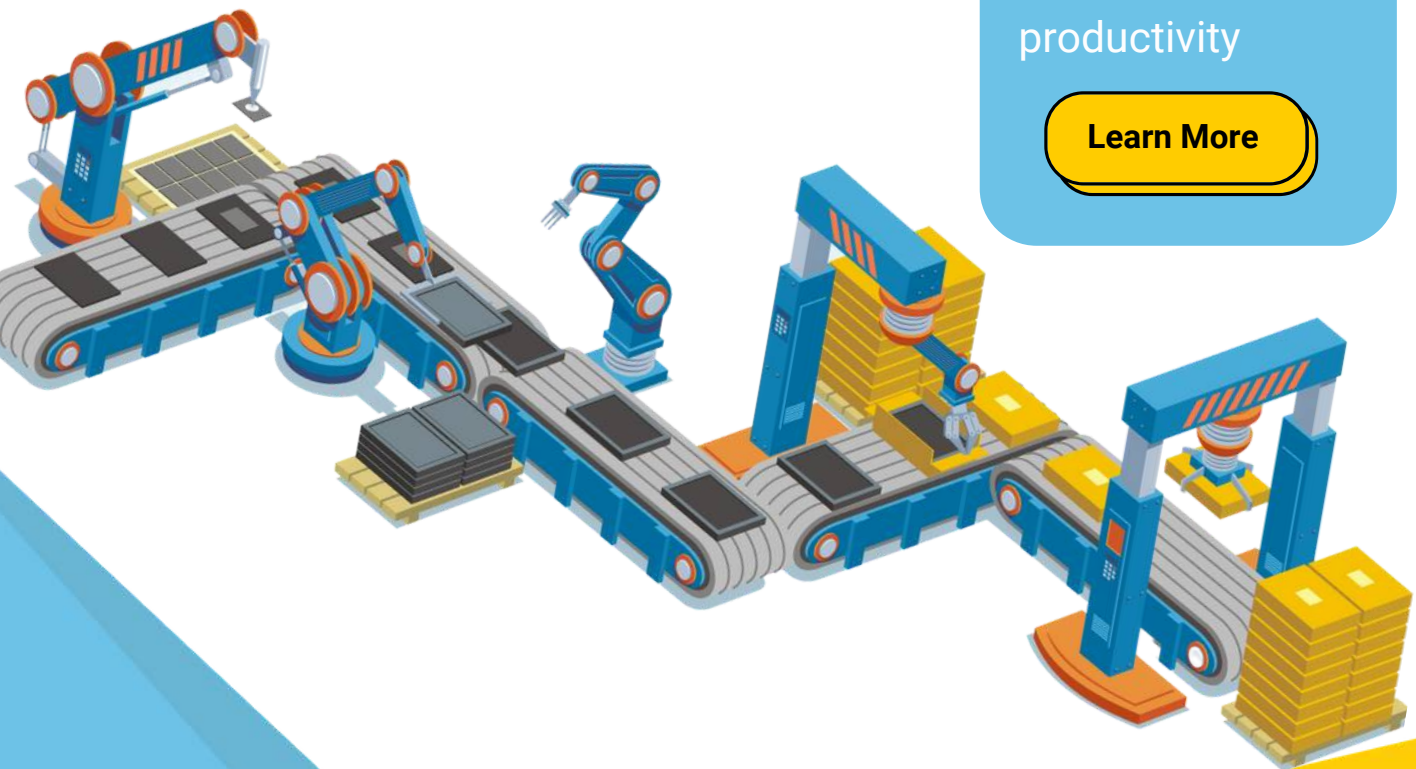
WHAT IS ARTIFICIAL INTELLIGENCE?

Artificial Intelligence refers to machines' cognitive intellect that lets them learn from experience, apply new observations, and perform human-like tasks. AI powers automation in planning, processing, dimensioning, reasoning, problem-solving, and insight delivery.



Logistic software Solution providers incorporate Automated dimensioning and edge AI into their solutions to improve warehouse productivity

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FUTURE OF AI

AI is the buzzword today, irrespective of the industry. As we move into the post-pandemic 2021, AI will become an integral part of every operation. It will continue to dominate critical functions in warehouses, logistics, and ecommerce.

It is estimated that by 2024, over 60% of G2000 manufacturing organizations will leverage AI platforms to drive digital transformation across the supply chain. And this adoption will lead to a 20% increase in productivity.

Through machine learning, natural language processing, and computer vision, AI will ease automation in shipping, image analysis, dimensioning, slotting, packaging, cartonization, and billing. AI will enable businesses to increase efficiency, reduce cost, and boost profitability.





COMPUTER VISION

Computer vision is a part of AI that enables computers to extract and comprehend pictures and videos. It helps the system distinguish and label images more efficiently than humans. This technology is extensively used across several image recognition industries, clinical diagnostics, surveillance, and crop and livestock monitoring.

Logistics and warehousing firms deploy computer vision cameras in self-operating trucks and Autonomous Mobile Robots (AMR) to navigate highways and position the products safely in fulfillment and distribution centers.

Computer vision further supports dimensional weighing, product inspection, autonomous navigation, face tracking, people tracking, and vehicle tracking. It also assists in anomaly detection, surface defects inspection, broken package detection, food inspection, and sorting.





HOW IS AI APPLIED IN LOGISTICS?

AI empowers logistics providers to optimize operations, control costs, reduce damage, automate measurements, and track shipments. It helps consolidate shipments, increases price negotiation potential, and minimize harms, delays, and ambiguities during freight.

AI also analyzes warehouse items and checks the need for refilling, order completion, and delivery. It helps in scheduling, monitoring, adjusting real-time shipping routes using custom software. Machine learning aids logistics providers in analyzing datasets, managing delivery time, predicting future needs, and making things smarter.





BENEFITS OF AI IN LOGISTICS



Eliminating human blunders:

Assigning teams to collect, manage, and track data is a tedious, error-prone task. AI does this humungous task in no time, without any human errors. This accurate data management improves operational and business efficiency.



Reducing cost:

AI reduces cost by eliminating manual errors, optimizing freight charges, and guaranteeing accurate dimensions.



Automating functions:

AI automates tedious operations such as delivery tracking, monitoring, invoice data recording, and product shipping.





VMEASURE ASSEMBLE & DEPLOY IN 15 MINUTES



Instantly measures the length, height, and width of any object and manage all your dimensioning needs with an AI-driven solution

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AUTOMATION SOLUTIONS THAT PLAY A SIGNIFICANT ROLE IN LOGISTICS

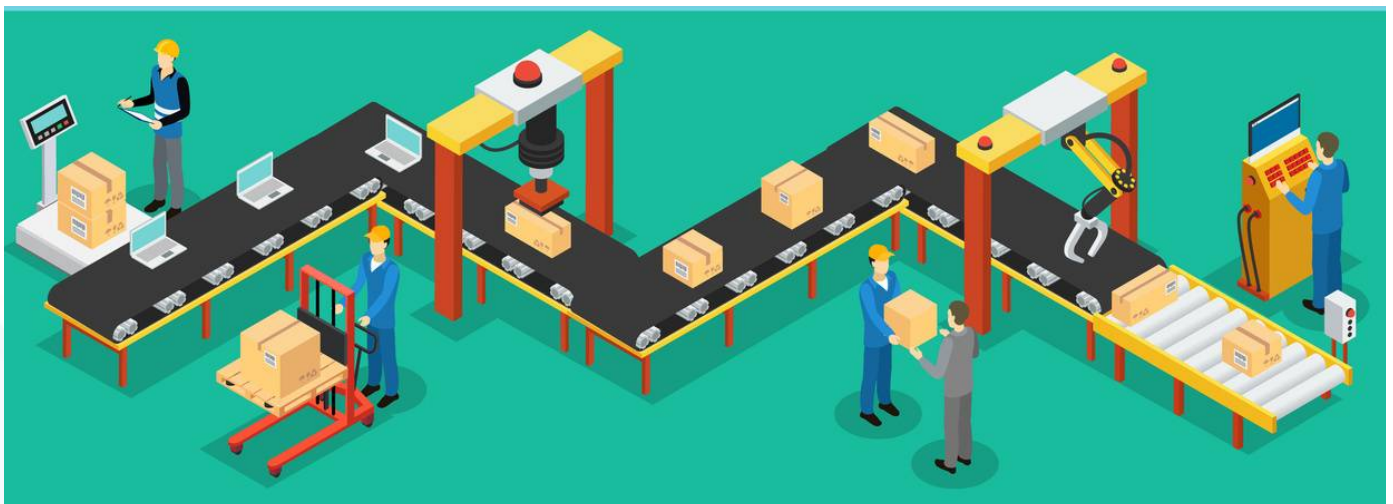


AUTOMATED DIMENSIONING SOLUTIONS

Automated dimensioning and weighing are effective means to save money, drive margins, and profitability. They optimize pricing, picking, packing, storage, shipping, and distribution on different levels.

Dimensioning is a vital building block in any warehouse operation. Accurate measurement data helps enhance storage density by placing items in locations that make warehouses as compact as possible.

Conveniently designed for conveyors and other automation machinery, dimensioning systems assess design precision based on dimensions such as height, breadth, width, and weight of the product. Its high-speed printing facility quickly scans, weighs, and processes dimensions to print and apply carton shipping labels for quick and easy shipments. Shipping a truckload or cubing out pallets with exact measurements can save considerable time, cost, and effort.





➤ **BENEFITS OF THE AUTOMATED DIMENSIONING SOLUTION**



Increased accuracy:

Accurate measurements reduce inaccuracies in shipping tariffs and generate a higher income for your business.



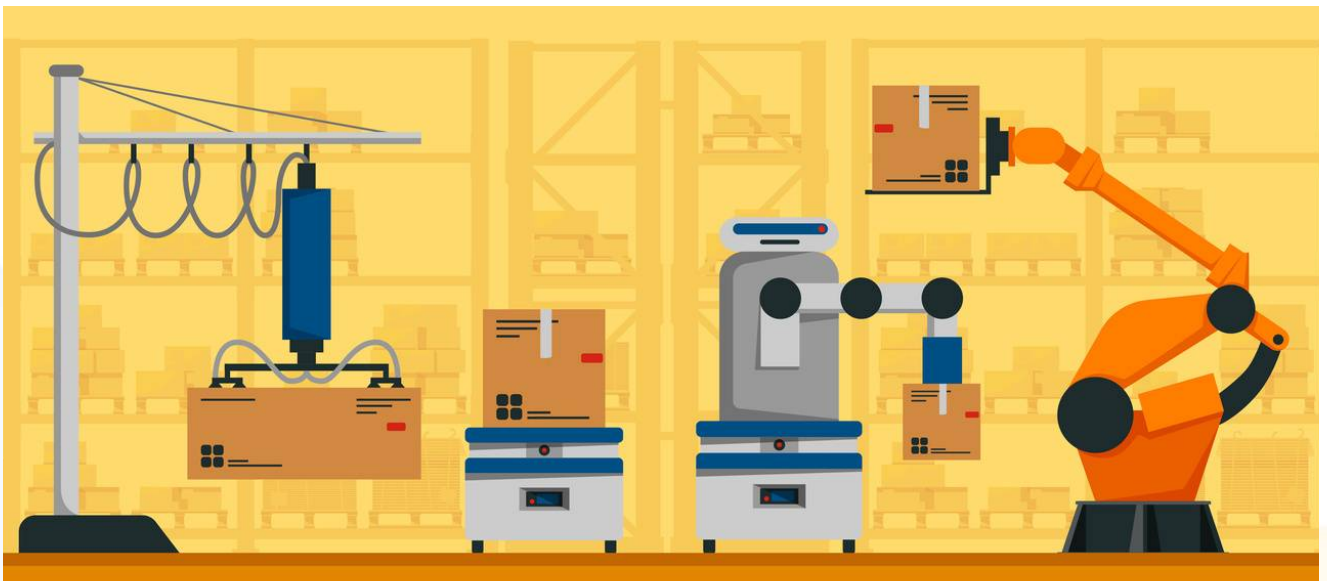
Improved space optimization:

Space equals money in the world of warehouses. Automated dimensioning systems help optimize space allocation by providing the exact volumetric measurements. These values help place the item optimally.



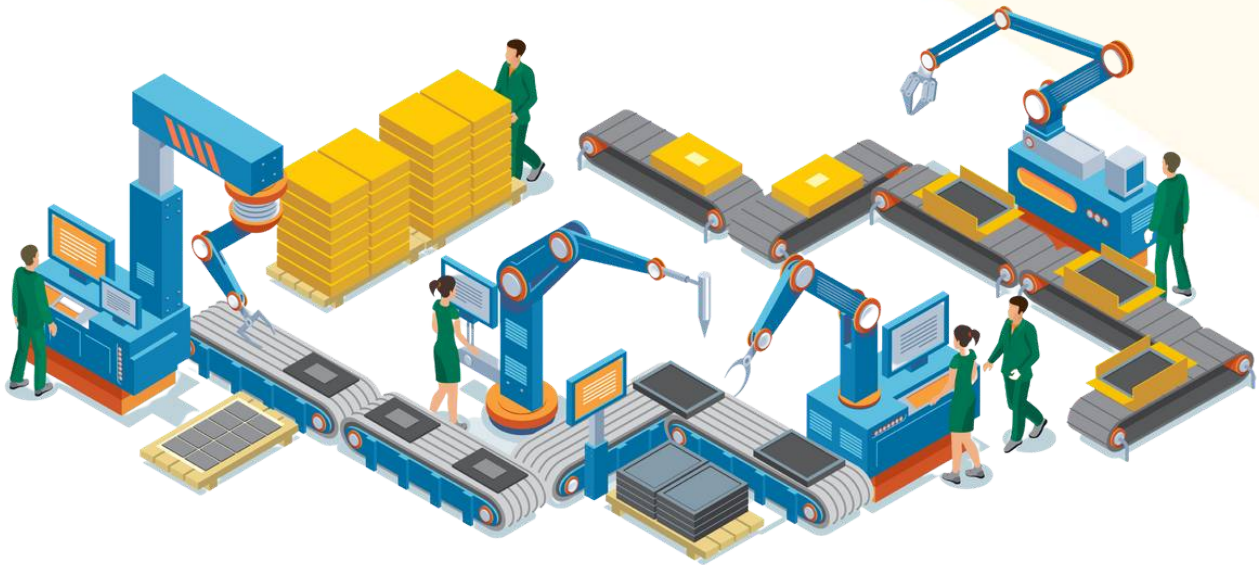
Reduced human error:

In traditional dimensioning, the tape and ruler are utilized to calculate the parcel's dimensions. These are prone to human errors and lead to higher freight charges. With an automated dimensioning solution, human errors can be eliminated entirely, as it deploys accurate high-tech sensors.





AUTOMATED ROBOTS



Automated systems that are used to transport materials perform tasks, and streamline warehouse processes are called automated robots. Indispensable to efficient warehouse operations, these smart robots perform repetitive tasks and allow employees to focus on complicated work that demands human intelligence. Automated Guided Vehicles (AGV), Automated Storage and Retrieval Systems (AS/RS), and Articulated Robotic Arms are prominent examples of robots in warehouses.

BENEFITS OF AUTOMATED ROBOTS IN THE LOGISTICS INDUSTRY



Increased speed and scalability:

Robust automated robots get many repetitive tasks done in the shortest timeframe. Robots can quickly scale up and down based on the urgency of orders.



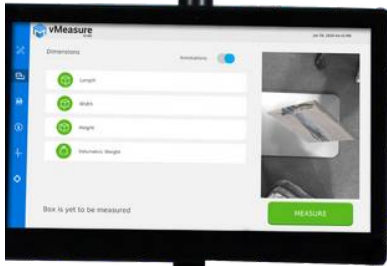
Decreased human blunders:

Human errors can be quite costly for businesses. Robots reduce human errors and help boost productivity, customer satisfaction, and profitability.



vMeasure Parcel Pro
S100

VMEASURE PARCEL PRO S100 100 PARCEL IN 15 MINUTES INCLUDING LOADING & UNLOADING TIME



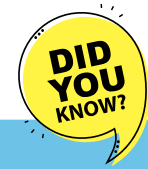
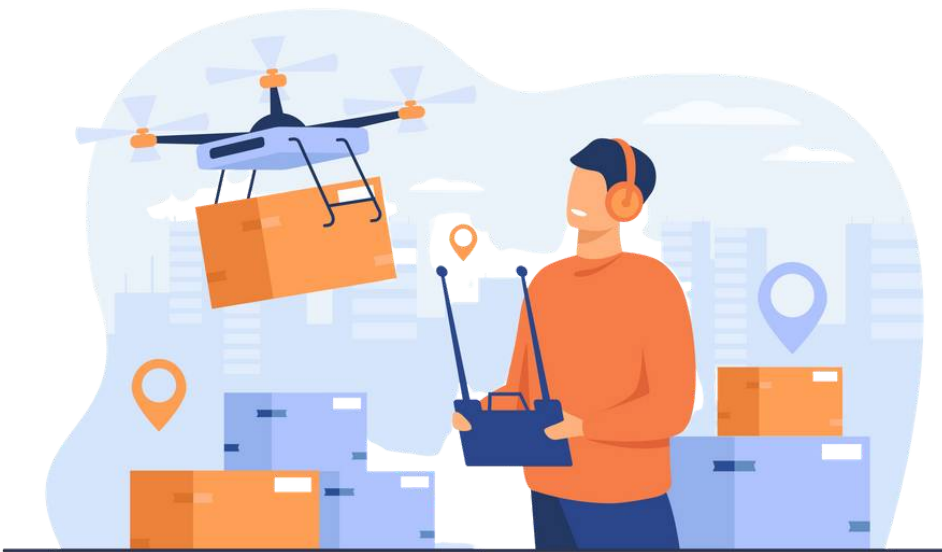
Instantly measures the length, height, and width of any object and manage all your dimensioning needs with an AI-driven solution

Learn More





DRONES






Automated dimensioning solutions built on Stereo-camera tech are faster and more accurate than other types of dimensioning systems

[Learn More](#)

Drones are brilliant flying devices that help in conducting surveillance and carrying products in the air. These Unmanned Aerial Vehicles (UAVs) help upgrade warehouse and logistics processes using optical sensors. From several meters, they can quickly locate an item, scan RFID tags, gauge inventory levels, and transmit all the data directly to the Warehouse Management System.

ADVANTAGES OF DRONES IN THE LOGISTICS INDUSTRY

-  Aids inventory management and movement within the warehouse
-  Accelerates delivery
-  Works 24/7 for greater productivity



AUTONOMOUS VEHICLE

Moving vehicles without/with much lesser human intervention is the basic principle behind autonomous vehicle technology. Autonomous mobile robots (AMRs) are common in many warehouses, helping employees fulfill orders quickly and efficiently. They effortlessly handle fleet management and pick optimization functions.

One of the biggest concerns about autonomous self-driving vehicle usage is managing employee interaction. Some employees fear that the bots will get in their way, causing slowdowns and dangerous working conditions. But this apprehension is only before deployment. Once the employees get accustomed to the self-driving vehicles and bots scurrying around, they are no longer worried.

AI IN BACKEND OPERATION

The back office is a function where most of the transport arrangement and management gets done. With cognitive automation, the blend of Robotic Process Automation (RPA) and AI tools, all data-related operations and accounts can be automated and managed efficiently. AI in the backend saves time, reduces human errors, and increases productivity and accuracy.





PREDICTIVE DEMAND AND IMPROVING CUSTOMER EXPERIENCE

Predicting demand is an opportunity to generate increased profit. Today AI is beneficial for forecasting the demand for a particular product. Based on this data, orders can be documented and modified. Efforts can be directed towards delivering the in-demand items to the local warehouse. The automated demand prediction and logistics planning help lower freight and operational costs immensely.

AI drives customer satisfaction by automating back-office operations and personalizing customer service and delivery. It delivers omnichannel experiences to customers by integrating AI-driven customer devices for greater flexibility and personalization in order placement, payment, and delivery.





CONCLUSION:

AI helps logistics and supply chain management companies accelerate productivity, efficiency, and profitability. The future of logistics with AI is undoubtedly promising, with several opportunities for business growth.

Want to know how AI-led computer vision, automated dimensioning, and robotics can transform your warehouse and logistics business?

Get in touch with us at sales@visailabs.com.

For more insights, blogs, and whitepapers, check out <https://visailabs.com/>





CHECK OUT THE COMPUTER VISION ENABLED AUTOMATED DIMENSIONING SYSTEM FOR WAREHOUSES AND ORDER FULFILLMENT CENTERS



Minimum Dimensioning: 10x10x10 cm



Maximum Dimensioning: 50x40x30 cm



Accuracy

+/- 5 mm for cubes and cuboids

+/- 10 mm for non-cuboidal shapes

Dimension:



Cubes



Cuboids



Polybags



Tubes



Irregular shapes



WANT TO DEMO/ EVALUATE VMEASURE PARCEL PRO S100?

Connect with us
sales@visailabs.com

visiting us
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