

VIPAC D2

Three-dimensional volume measurements of cuboid and arbitrary goods with maximum accuracy



VITRONIC
machine vision people

The volume measurement system VIPAC D2

- is a certified system and therefore allows to create invoicing automatically and legally binding revenue recovery
- offers additional functions
- can be easily installed as a stand-alone system or integrated into the camera-based identification system VIPAC



Volume measurement systems VIPAC D2 can also be installed by the users themselves.

VIPAC D2

- measures the volume of cuboid and irregular objects during movement of conveyor
- provides maximum measuring accuracy
- optionally detects defects on five object sides
- offers volume measurement and simultaneous defect-detection

Standard equipment

- 2 sensors *VOLUME*
- Computer with *VIPAC* volume measurement software
- speed signal device
- Trigger (software or photo eye)
- cable set
- certification for calibrated operation
- display for displaying all measured values
- mounting points
- alibi storage

Options

- Non-certified operation
- Frame or construction drawing
- *VIPAC R* system for code reading and OCR

Mode of Operation

VIPAC D2 determines the maximum dimensions of the objects from the measured lengths. From this, the system calculates the dimensions of the smallest possible rectangular box surrounding the item. This information provides the basis for:

Automatic invoicing and revenue recovery

Using VIPAC D2 and its tamper-proof alibi storage it is possible to create invoices automatically and to reconcile package data to information provided by the customer.

Loading optimization

Volume data is the basic information for calculating transport capacities and for optimizing the loading of vehicles. This means that the capacity utilization increases and the route planning can be further optimized. This also leads to a reduction of CO₂ emissions.

Statistics

The recorded data can be fed into statistical databases to streamline the internal flow of goods. In addition, the data can be used to monitor price structures and logistics processes.

Form analysis

VIPAC D2 recognizes defects and packages which deviate from predetermined criteria. Even the convexity of parcels can be identified.

Laser-based measurement

VIPAC D2 uses the method of the time-of-flight measurement: The sensor emits a fan-shaped laser beam which is reflected by the object. The time it takes for the laser beam to arrive back at the sensor is measured. From this measured time, the speed of the light and the beam displacement, the system calculates the distance to the object. By means of a movement of the conveyor, the object passes under the scanner and a 3-D image is obtained.

VIPAC D2

Three-dimensional volume measurements of cuboid and arbitrary goods with maximum accuracy



VITRONIC
machine vision people

VIPAC D2 - Technical specifications of a certified standard system	
Object type	irregular objects
Sensor	2 sensors
• External dimensions (HxWxL)	170mm x 135mm x 100mm 6.7in x 5.4in x 4.0in
• Weight per sensor	2.3kg/ 5.1lbs
• Laser class/power	2 (EU) or II (USA), 7.5mW
Switchgear cabinet	
• External switchgear cabinet dimensions (HxWxL)	400mm x 600mm x 210mm 15.8in x 23.7in x 8.3in
• Weight	7.5kg /16.6lbs
Display	
• External display dimensions (HxWxL)	35mm x 146mm x 165mm 1.7in x 5.8in x 6.5in
• Weight	0.5kg / 1.1lbs
Standard frame	
Frame height + conveyor belt height (variable)	2100mm / 82.7in + conveyor belt height
Frame width + conveyor belt width (variable)	655mm / 25.8in + conveyor belt width
Length	605mm / 23in
Foundation	vibration-free
Conveying technology	
Height with conveyor belt	standard up to 900mm/ 36in
• belt width	1000mm / 40in
• max. object dimensions (HxWxL)	1000mm x 1000mm x 2500mm 40in x 40in x 99in
• min. measured value output (HxWxL)	50mm x 50mm x 50mm 2.0in x 2.0in x 2.0in
• belt speed	up to 3.0m/s / 600fpm constant speed
• measuring accuracy (HxWxL)	
• cuboid	5mm x 5mm x 5mm / 0.2in x 0.2in x 0.2in
• non-cuboid	10mm x 10mm x 10mm / 0.4in x 0.4in x 0.4in
Distance between objects	50 mm/ 0.2in
Interfaces	serial data output (RS232)
Line voltage	230V AC, 2.5A / 115 VAC, 5A / approx. 150W
Operating temperature	+0°C to +40°C / 14°F to 104°F
Degree of protection	IP20

Certified for calibrated operation in Europe		
Object Form	Non-rectangular box	Rectangular box
Measurement Precision [mm] H x W x L	10 x 10 x 10	5 x 5 x 5
Min. Object Size [mm] H x W x L	100 x 100 x 100	50 x 50 x 50
Max. Object Size [mm] H x W x L	1,000 x 1,000 x 2,500	1,000 x 1,000 x 2,500
Object Speed [m/s]	3.0	3.0
Certification	MID (EU)	MID (EU)

Certified for calibrated operation in USA, Canada	
Object Form	Rectangular box
Measurement Precision [mm] / [inch] H x W x L	5 x 5 x 5 0.2 x 0.2 x 0.2
Min. Object Size [mm] / [inch] H x W x L	60 x 60 x 60 2.4 x 2.4 x 2.4
Max. Object Size [mm] / [inch] H x W x L	1,000 x 1,000 x 2,000 39 x 39 x 78* 40 x 40 x 79**
Object Speed [m/s] / [fpm]	3.0 600
Certification	*USA / **Canada

