

VIPAC D1

Three-dimensional volume measurement of cuboid goods



VITRONIC
machine vision people

The volume measurement system VIPAC D1

- is the only certified system worldwide for measurements above sorters
- can even be used above sorters and therefore eliminates the need for several volume measurement systems above in-feed belts
- allows automated invoicing and revenue recovery
- can be easily installed as a stand-alone system or integrated into the camera-based identification system VIPAC.



Volume measurement system VIPAC D1 can also be installed by the users themselves.

VIPAC D1

- measures the volume of cuboid, dimensionally stable objects on a moving conveyor
- offers certified volume measurement above cross belt and tilt tray sorters, as well as above conveyor belts (except roller conveyors)
- detects trays

Mode of Operation

VIPAC D1 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 D1 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 saves transportation costs and leads to a reduction of CO₂ emissions.

• Statistics

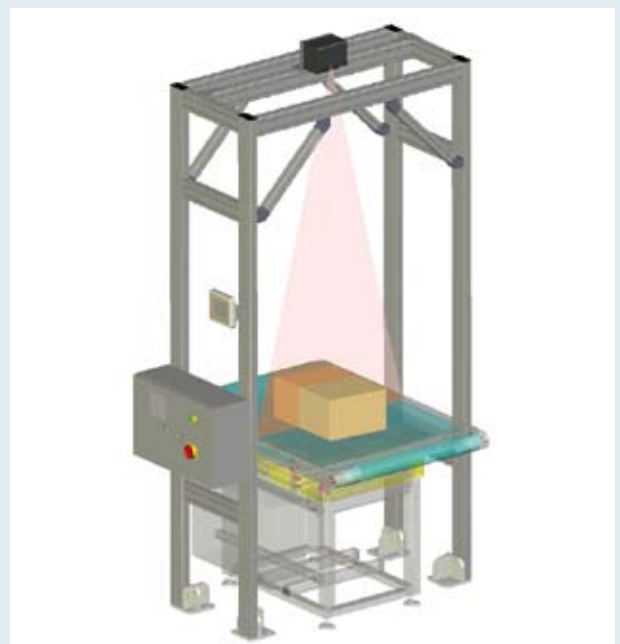
The recorded data can be fed into statistical databases to streamline the internal flow of goods. In addition, the data can be used to monitor price structures and logistics processes.

Standard Equipment of a certified VIPAC D1

- 1 sensor VOLUME C
- computer with VIPAC volume measurement software
- speed signal device
- cable set
- certification for calibrated operation
- display for displaying all measured values
- mounting points
- alibi storage

Options

- standard frame or frame adapted to customer specifications
- VIPAC D1 without certification
- VIPAC R system for code and OCR reading



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VIPAC D1 Technical data of a certified standard system

Object type	cuboid objects	Conveying technology	
Sensor	1 sensor	Height	standard up to 900mm/ 36in
• External dimensions (HxWxL)	170mm x 135mm x 100mm 6.7in x 5.4in x 4.0in	with conveyor belt	
• Weight	2.3kg/ 5.1lbs	• belt width	1000mm / 40in
• Laser class/power	2 (EU) or II (USA), 7.5mW	• max. object dimensions (HxWxL)	1000mm x 1000mm x 2500mm 40in x 40in x 99in
Cabinet		• min. measured value output (HxWxL)	50mm x 100mm x 100mm 2.0in x 4.0in x 4.0in
• External switchgear cabinet dimensions (HxWxL)	400mm x 600mm x 210mm 15.8in x 23.7in x 8.3in	• measuring accuracy (HxWxL)	5mm x 10mm x 10mm 0.2in x 0.4in x 0.4in
• Weight	7.5kg /16.6lbs	• belt speed	up to 3.0m/s / 600fpm constant speed
Display		with cross belt/tray sorter	
• External display dimensions (HxWxL)	35mm x 146mm x 165mm 1.7in x 5.8in x 6.5in	• width	1000mm /40in
• Weight	0.5kg / 1.1lbs	• max. object dimensions (HxWxL)	depends on tray
Standard frame		• min. measured value output (HxWxL)	50mm x 100mm x 100mm 2.0in x 4.0in x 4.0in
Frame height + conveyor belt height (variable)	2100mm / 82.7in + conveyor belt height	• transport speed	up to 2.5m/s / 492fpm constant speed
Frame width + conveyor belt width (variable)	655mm / 25.8in + conveyor belt width	• tray shape	flat, round, trapezoidal
Length	605mm / 23.8in	• object lies on	one or two trays
Foundation	vibration-free	Distance between objects	50mm / 2.0in
		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 USA, Canada

Material-handling system	Conveyor belt	Conveyor belt	Tilt tray sorter
Measurement precision [mm] / [inch] H x W x L	5 x 10 x 10 0.2 x 0.4 x 0.4	5 x 5 x 5 0.2 x 0.2 x 0.2	- 0.2 x 0.4 x 0.4
Min. Object Size [mm] / [inch] H x W x L	60 x 120 x 120 2.4 x 4.8 x 4.8	60 x 60 x 60 2.4 x 2.4 x 2.4	60 x 120 x 120 2.4 x 4.8 x 4.8
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**	1,000 x 1,000 x 2,000 39 x 39 x 78* 40 x 40 x 79**	- 18 x 16 x 18
Object Speed [m/s] / [fpm]	3.0 600* / 590**	1.2 236	- 600
Certification	*USA / **Canada	*USA / **Canada	USA

Certified for calibrated operation in Europe

Material-handling system	Conveyor belt	Cross belt/ Tilt tray sorter
Measurement precision [mm] H x W x L	5 x 10 x 10	5 x 10 x 10
Min. Object Size [mm] H x W x L	50 x 100 x 100	50 x 100 x 100
Max. Object Size [mm] H x W x L	1,000 x 1,000 x 2,500	Depends on sorter
Object Speed [m/s]	3.0	2.5
Certification	MID (EU)	MID (EU)