Marrari AUTOMAÇÃO

DATASHEET
INLINE SYSTEM · CONVEYOR VOLUME
EN

Volume X

Volume meter for belt conveyors

A laser scanner traces the load profile on the belt, with no contact with the product, and calculates the volume going by.



2%	5,000 mm	100/s	IP65
static accuracy	maximum width (HR2000)	readings (HR900)	scanner protection

01 WHY USE IT

Know how much material moves on the belt, every second.

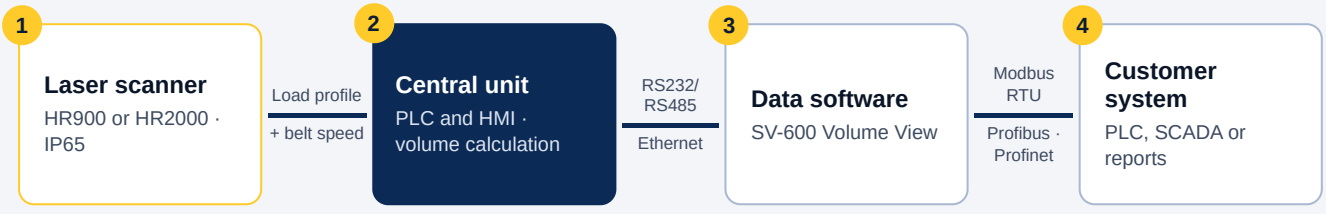
Non-contact
Laser measurement that never touches the product or disturbs conveying.

Volume and flow
Instant volume (m³/h) and totalized volume (m³), with belt speed.

Density and mass
With a belt scale, it calculates bulk density and mass flow.

02 HOW IT WORKS

The scanner measures the load's **cross-sectional area** at every reading. With the **belt speed**, the central unit calculates volume and raises production, batch and min/max flow alarms.



The belt speed sensor and the surge protection (DPS) box complete the system. With a belt scale, it also calculates bulk density and mass.

MODELS

Two scanners, one for each conveyor

Choose by load height and belt width:

- HR900: high accuracy, loads up to 600 mm
- HR2000: belts up to 5,000 mm
- HR900: 100 readings per second
- HR2000: 50 readings per second

03 COMPONENTS AND SPECIFICATIONS



Central unit

Dimensions	500 × 400 × 250 mm · IP54 · 17 kg
Power supply	95 to 240 Vac, 50/60 Hz · 500 W max.
Temperature	Central unit up to 40 °C · sensors up to 50 °C
Communication	1 RS232 · 1 RS485 · 1 Ethernet
Protocols	Proprietary RS232/RS485 and TCP · Modbus RTU · Profibus DP, Profinet and EtherNet/IP on request

Accuracy

Volume flow	Static 2% of reading · dynamic up to 5%, depending on belt shape and material (Annex 05.c)

04 INPUTS, OUTPUTS AND DATA

Digital inputs
4 DI
Operating status, belt speed sensor and alarm reset.

Digital outputs
6 DO
Alarm, machine stopped, low production, scanner reset, cleaning air jet and save to PC.

Analog
2 AO · 1 AI (4–20 mA)
Instant, per-minute or per-cycle flow (m³ or t); belt speed input.

Data shown
On the HMI and software
Instant and totalized volume, speed, density, mass and production alarms.

Yearly maintenance
Performed by Marrari
Software update and check against Marrari standards, once a year.

Warranty
6 months
Made in Brazil, with support and training from the after-sales team: posvendas@marrari.com.br.

General specifications

Measurement	Laser, non-contact
Cross-section	Load profile at every reading
HR900	Load up to 600 mm · 100 readings/s
HR2000	Belt up to 5,000 mm · 50 readings/s
Accuracy	Static 2% · dynamic up to 5%
Central unit	50 Hz reading
Protection	Scanner IP65 · central unit IP54
Outputs	m³/h, m³, m/s, kg/m³, t
Set	Central unit, scanner, DPS box and speed sensor
Documents	MR600 manual · Annex 05.c