Tiama HOT eye

Hot-end defect recognition

Tiama HOT eye is the Tiama solution for container defect detection, recognition and dimensional inspection at the hot-end.

Features

- **Critical defects detection and recognition**
  The Tiama HOT eye is able to detect defects and also to recognize critical defects such as birdswings, blisters and wings. The system uses light transmission measurements and benefits from the same algorithms for the critical defect recognition than the ones of the Tiama inspection machines.
- **Dimensional measurements**
  The Tiama HOT eye allows to perform on-line dimensional measurements of articles at the hot-end. Up to six diameters and three verticalities (neck, body and total) can be measured by the system. The use of high definition cameras allows to reach accurate measures.

NEW OPTION: HOT MOVE

Transport monitoring:

- Rejection of stuck and fallen articles
- The system measures the articles positions upon the conveyor on X and Y axes
- The system communicates through an open protocol which enables closed loop pusher automation

Customers benefits

- Detection and recognition of defects at the hot-end
- Critical defects immediate alarm
- Early detection of dimensional drifts
- Statistics available per section and cavity thanks to the IS synchronization
- Immediate and targeted actions can be taken onto the process
- Process management assistance
- Production earnings
- Tiama service: benefit from our worldwide presence and our whole range of services

Defects at the hot-end

English version

Operating principle

- The Tiama HOT eye is located just after the IS machine and before the annealing lehr. The system is synchronized with the IS machine.
- The system is equipped with two high definition cameras (Tiama cameras) placed inside two metallic tubes fixed on the conveyor. In front of them, an infrared light source flashes articles on the conveyor. The machine has been specifically designed to embed air cooling for the cameras and water cooling for the light source.
- The Tiama HOT eye has been designed to resist to the harsh environment at the hot-end and requires little maintenance.
- In addition, the system works with all kind of article shapes and glass colors.

Tiama HOT eye

Installation requirements

Tiama HOT systems electrical cabinet (common to the whole Tiama HOT systems range)

Width 600mm
Depth ..... 1050mm (810mm without AC)
Height 1860mm

Water and air requirements:

Water (for light source cooling)
Temperature ..... <18°C

Air (for tubes cooling)
Pressure ..... 4 bars

Line specification:
Maximum line speed: 800 bpm

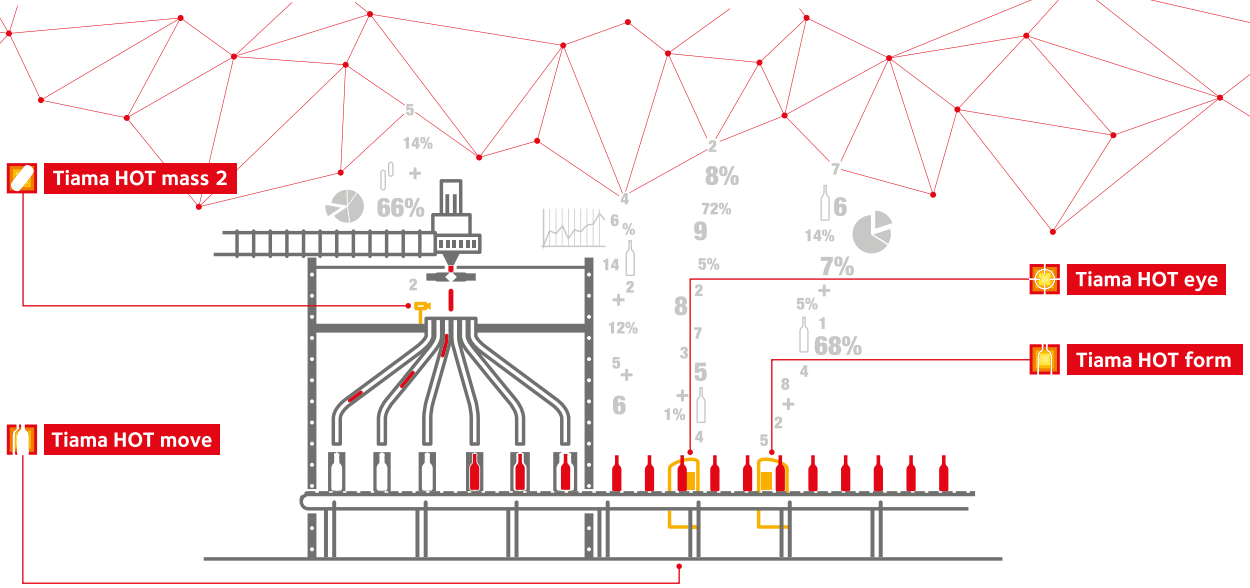
Article dimensions:
- Height: from 20mm to 350mm
- Diameter: from 20 mm to 160mm

Maximum Y positioning between articles: +/- 25mm

Distance between the tubes:
min 475mm and max 885mm depending on bottle spacing

YOUniverse, the Smart Factory Concept

The Tiama HOT eye is a monitoring solution to help customers to improve the management of their process and to reach their quality level. The Tiama HOT eye belongs to the Tiama HOT systems range, a complete set of modules which gives key information on the process from the gob to the formed articles. The Tiama HOT eye is also part of the smart factory concept developed by Tiama, the system provides a full range of data which can be used in order to have a global overview of the plant, from the hot-end to the cold-end.



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Headquarters: TIAMA
215 Chemin du Grand Revoyet • 69230 Saint-Genis-Laval • France
tel: +33 4 37 20 15 65 • fax: +33 4 78 07 94 50
email: marketing@tiama.com

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www.tiama.com