

DATASHEET

Analysis of the part in the robot gripper **immediately after removal from the press**
 Integrity check of the casting with 3D technology based on stereovision
 Thermal monitoring of the die at each shot **through the analysis of the part**

Technical specifications

Device

Casing material: stainless steel, temperate glass, ABS.

IP Rating: **IP 65 frontal**

Weight: **< 6kg**

Dimensions: **386 x 335 x 204 mm**

Power consumption: **< 100W**

Illumination: **Led color Red 635 nm**

Painted iron pole

Cameras and thermal imaging camera

Electrical panel

Panel size with monitor:
580 mm x 780 mm x 300 mm

Power supply: **24V-480V**

Power supply system:
TT, TN-C, TN-S

Uninterruptible Power Supply (UPS)

Vision-PC

Industrial touch screen monitor mounted on the panel door

Communication protocol:
0-24V digital IO & Profinet

Remote control: OPC

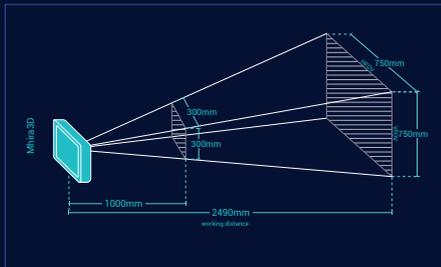
Integrity check cameras

	Configuration A	Configuration B	Configuration A	Configuration B
Resolution	1292 (H) x 964 (V)	1280 (H) x 1024 (V)	320 (H) x 256 (V)	320 (H) x 256 (V)
FOV	23° x 17°	46° x 37°	25° x 19°	45° x 35°
Focal length	12 mm	8 mm	13 mm	7.5 mm

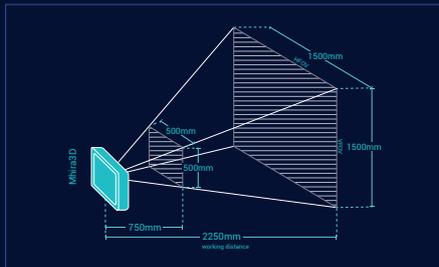
Thermal analysis camera

Two types of configuration based on the size of your dies and working distance

Configuration A



Configuration B



VFOV: Vertical Field of View
HFOV: Horizontal Field of View

IMAGO SRL



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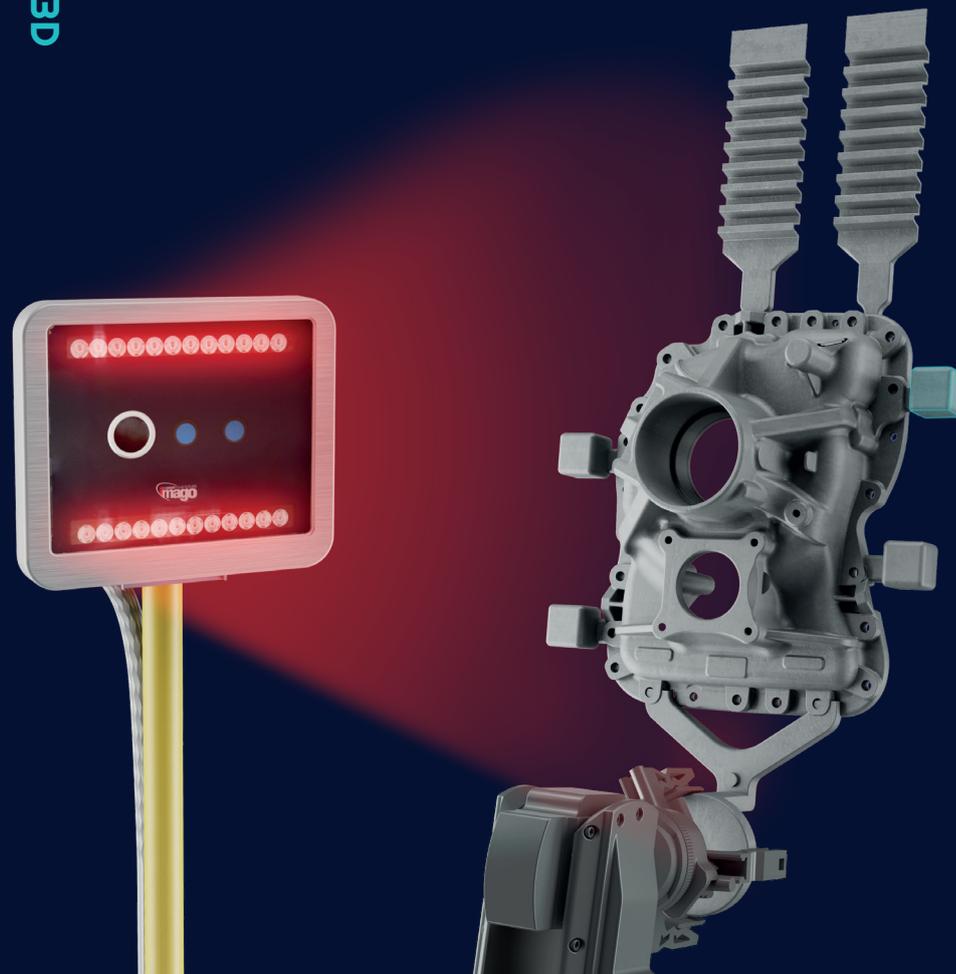
info@imagovision.it



imagovision.it



Mhira3D

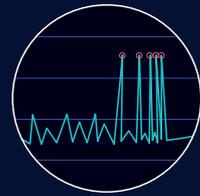


Thermal process monitoring:
smart control at every shot

Mhira3D
 Vision system for die casting

THERMOGRAPHIC ANALYSIS

Monitoring of the die thermal variations at each shot through the part analysis



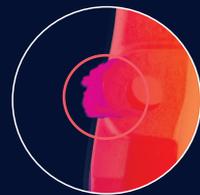
► 01
Lubrication nozzles clogging
Interception of any clogging of the lubrication nozzles thanks to specifically developed algorithms



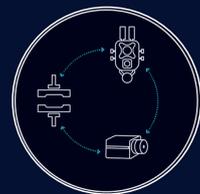
► 02
Anomaly and drift reporting
Real-time reporting of anomalies and thermal drifts in the most critical areas of the die thanks to artificial intelligence algorithms



► 03
Re-start rejects
Automatic re-start management to optimize initial rejects



► 04
Burrs
Signaling of burr formation due to die closure problems



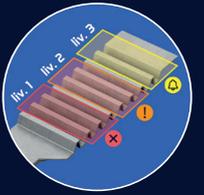
► 05
Lubrication and thermoregulation
Possibility of automatic interaction with the lubrication and thermoregulation systems



01 ◀
Overflows
Checking the presence of all Overflows by an easy and intuitive configuration



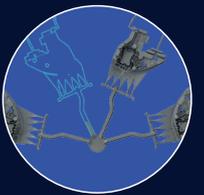
02 ◀
Chill-vent
Measurement of the chill-vent completeness according to the expected criticality levels



03 ◀
Part deformation
Detection of any deformations of the part for the subsequent deposition in the trim



04 ◀
Casting completeness
Checking the presence of all the figures of the casting for Multi-cavity dies



Broken spins

Thanks to the thermal analysis it is possible to identify the presence of broken spins in real time. (Recently registered patent)



Notifications and Signaling:

- 01 Signals
- 02 On-screen and email notification
- 03 Light indicator

Main features of the system:

- No false positives
- Automatic adaptation to ambient light conditions
- Outcome provided in a few tenths of a second
- Objective and tracked checks for each individual part

- Visual feedback
- Easy and intuitive setup
- Multiple views of the part (up to 8)
- Unlimited inspection areas for each view

- 3 levels of scrap for each inspected area
- IOT 4.0 compatible
- Immediate and automatable format change
- Guided calibration procedure

- Image archiving
- Graphs and reports viewable at any time
- Multilingual graphic and web interfaces
- Remote assistance