

# THE ROBOTICS VISION WITH ARTIFICIAL INTELLIGENCE

Advanced automation solutions with robotics and vision technologies



## PMS 4.0 MICROSCOPE TECHNOLOGY

WORLD'S #1 RESOLUTION IN INDUSTRIAL MICROSCOPIC METROLOGY SOLUTIONS

### ADVANCED PMS 4.0 TECHNOLOGY

Helps to fulfil 100% production quality requirements. The rich set of metrology and surface inspection functionalities let manufacturers reduce their quality management and improvement costs.

### APPLIED INDUSTRIES

The system is used and applied in many industries where high-quality productions is required. This technology is already used in industries such as Automotive, Electronics, Semiconductors, Medical, Glass, Display, Aerospace, Food, Beverage, Pharmaceutical and much more.

### METROLOGY, ACCURACY AND PRECISION

PMS 4.0 Microscope technology can identify, characterize and measure defects on high resolution images with integrated deep learning methods down to 0,005mm X-Y sizes and 0,001 mm depth.

### CONFIGURATION PATHS

The user is able to configure the working paths depending on their needs. A CAD model can be loaded into the system and then the measurement results can be compared, or it can be configured to create a model of the working object (as a reverse engineering process).



# MICROSCOPE SYSTEM MODELS

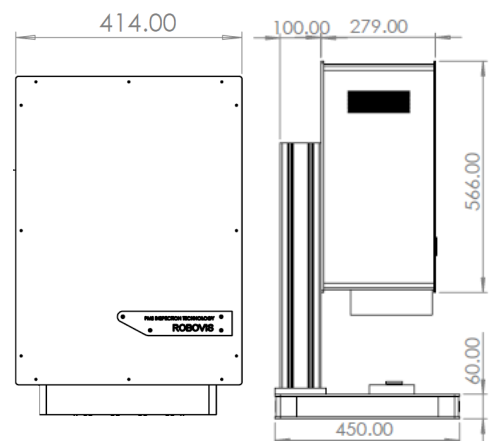
## Microscope Vision Head

The vision head is a universal part in three different resolutions and two different versions: Mono or Dual (1 and 2 cameras, respectively). The vision head has a direct connection with PMS 4.0 software via ethernet interface to the PC system. HR imaging sensor, optical telecentric units, optional bright field and coaxial illumination units, high accuracy linear axis module with the interface controllers and adapters. A telecentric optic and a linear axis enable high-quality 2D and 3D imaging and processing.



The PMS 4.0 Microscope Technology includes many features, these include defect detection regarding circularity, eccentricity, diameter, cylindricity, flatness, parallelism, perpendicularity, angularity and much more. The system also includes 3D modeling features in which a CAD model can be uploaded into the system and then compare the measurement results, or it can be configured to create the model (reverse engineering). An automatic reporting functionality is included, which is a very useful feature for the calculation of deviations and tolerances.

<b>PLATFORM</b>	PMS 4.0 Microscope Technology		
<b>SOFTWARE PLATFORM</b>	PMS 4.0 Automation Studio		
<b>MEASURING RANGE   FOV</b>	Max. 120mm (Optional > 120mm)		
<b>WORKING DISTANCE</b>	Max. 200mm (Optional > 200mm)		
<b>Z-AXIS ACCURACY</b>	0.001mm		
<b>ELECTRICAL POWER RATING</b>	100-240 V AC ~ (±10%)		
<b>TYPE OF RESOLUTION</b>	<b>Resolution I</b>	<b>Resolution II</b>	<b>Resolution III</b>
	20 MP	50 MP	120 MP
<b>HORIZONTAL RESOLUTION</b>	5472	8424	13272
<b>VERTICAL RESOLUTION</b>	3648	6032	9176
<b>FREQUENCY</b>	20 fps	15 fps	10 fps
<b>DEFECT RESOLUTION</b>	>0.040mm	>0.020 mm	>0.010mm
<b>DEPTH RESOLUTION</b>	0.005mm	0.002mm	0.001mm



\*Vision head dimensions are the same in Inline and Desktop Versions (Size of the Vision Head can be adapted for specific requirements).

Ask for your application to our experts  
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