



# KAO

Professional metrology devices  
production and automation

Automotive supply industry  
White Appliances Industry  
Defense industry  
Hydraulic equipment manufacturing  
Mass production of parts

# KA200

8 Channel Pneumatic measurement device

Repeatability  
**0.001**  
mm

Accuracy  
**0.001**  
mm

Resolution  
**0.0001**  
mm

Pneumatic Measuring  
**DIN**  
**2271**



## General Features

- 8 Channel single/multiple showings
- Resolution 0.1um
- Repeatability 0.1um.
- Use it with built-in regulator
- Open & Close Air with part
- Callibration with one button
- Callibration calling functions
- Part Counting Functions
- 100 Test Part Memory
- 100 Test Measurement Memory



## Data recording & connection

- Digital Input & Output
- USB & RS232 Barcode Usage
- Wired Ethernet
- Wireless Ethernet data transfer
- Measurement recording with quality parameters
- Last 10,000 records in internal memory

## Usage

- 7" Capacitive touchscreen
- Usage like your mobile phone
- Password protected parameters
- Multiple Language Support
- Visual & Audio Warnings
- Easy to understand settings



## Automation

- Unlimited channels and automation with multiple devices via bridge connection
- Digital Input & Output
- Wired Ethernet Modbus
- Communication and data sharing with PLCs and robots via TCP and other industrial protocols

Air-based measurement has earned a rightful place in the production of parts that require precise measurement due to its ease of use and measurement accuracy. The installation cost is low, and once set up, it becomes an indispensable benchtop measurement device. The results, control, and repeatability are excellent. KAO has brought this measurement technique, which is relatively old for its age, into modern technology, providing a strong foundation for future generations of users.

# If you own a **KAO** pneumatic measurement device.

1

You can use probes manufactured by all well-known probe manufacturers worldwide.

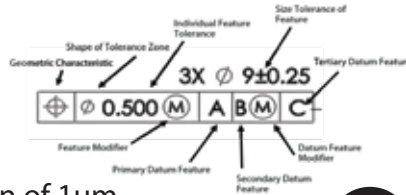


2

With its compact size, you can measure a large number of dimensions without taking up much space next to your CNC machine.

3

You can obtain results with a resolution of  $1\mu\text{m}$  in the  $\pm 80\mu\text{m}$  tolerance range and  $0.1\mu\text{m}$  resolution in the  $\pm 20\mu\text{m}$  tolerance range, including geometric tolerances such as blind inner diameter, inner diameter, outer diameter, roundness, and taper..



4

You can enable your CNC operator to perform measurements with  $0.1\mu\text{m}$  accuracy without requiring much effort or training.



5

When pneumatic devices are not in use, they consume 13 liters per minute per channel of air. In KAO devices, this is only 0.35 liters per minute per channel. This significantly reduces your carbon footprint and provides economic savings..



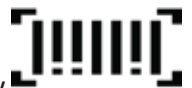
6

It performs not only measurements but also records measurement results to ensure traceability and maintain continuous quality. Without any data cable investment, it transfers data to your server via the device's Wi-Fi feature. It stores this data in international standards, and if needed, you can transfer it to other environments..



7

You can prepare these for later review by including not only measurement values but also the date, time, part code, name, manufacturer code, name, serial number, operator code, workstation code, control, production, and calibration parameters. You can scan these using a 1D or 2D barcode reader connected to our device, directly from the part.

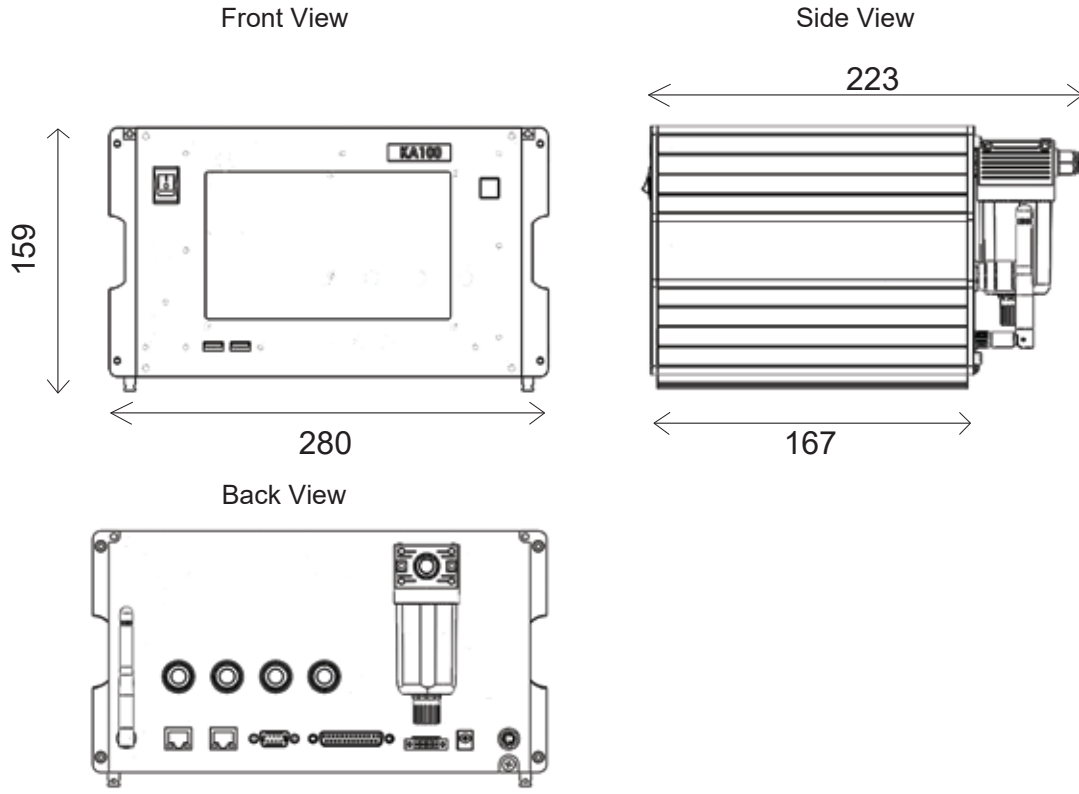


8

“What if the device hasn't been calibrated? No matter how accurate the measurements are if I haven't done the calibration or if it was forgotten” you might be thinking. You're right. Our device has built-in safeguards for this. Now, when the device is turned on, if the result is out of tolerance, after a certain number of parts or within a set period, calibration will be mandatory. If these conditions are not met, your device will not work. Additionally, we also record the calibration action. If needed, we have added a requirement for verifying with a calibration part after calibration. Of course, we have settings available for you to choose whether or not to implement all or some of these actions



If your device is not being operated by an operator and the part is being picked up by a robot and placed on the test fixture, there is no issue. As soon as the part is placed on the test fixture, the measurement will be taken, and acceptance or rejection signals will be sent through the digital outputs. Your robot will then take this information and place the part into the designated box.



### Technical Specifications

Master range	$\pm 10\mu\text{m}$	$\pm 20\mu\text{m}$	$\pm 40\mu\text{m}$	$\pm 80\mu\text{m}$
Precision	$0.1\mu\text{m}$	$0.1\mu\text{m}$	$0.1\mu\text{m}$	$0.1\mu\text{m}$
Accuracy	$\pm 0.5\mu\text{m}$	$\pm 1\mu\text{m}$	$\pm 1.5\mu\text{m}$	$\pm 2\mu\text{m}$
Repeatability	$\pm 0.5\mu\text{m}$	$\pm 1\mu\text{m}$	$\pm 1.5\mu\text{m}$	$\pm 2\mu\text{m}$
Number of Channels	8			
Measurement Number	8			
Part Memory	100			
Master Memory	100			
Required Air	3.5 – 7 Bar			
Air Connection	ID5mm-OD8mm pneumatic hose			
Working Voltage	24VDC-1.5A			
Dimensions (mm)	En 280 x Boy 167 x Height 159 (Without Connections)			

- **Internal Functions**
- Automatic Channel Showing
- Part Counting
- Automatic Air Closing
- Ovality measurement
- Calibration programming
- Multi Parameterized Measurement recording

### Accessories

- Pedals
  - 3 button remote control
- For Digital Outputs
- Cable extension and Connection Cables
  - Panel mounting brackets
  - Bridge Connection Cable

**KA0**

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