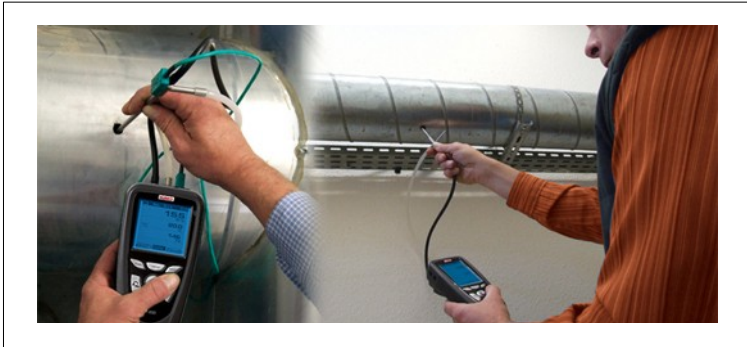




Supplied with Calibration certificate

*New*

# MP 200 Thermo-Anemo-Manometer



## Advantages

- Interchangeable measurement modules
- User-friendly (Joystick navigation)
- Large graphic display
- Blue backlight
- Up to 8,000 measurement points
- Up to 6 measurements simultaneously
- Instrument/PC wireless communication

## Connection



**Interchangeable measurement modules**  
1 instrument = more than 1 range and 1 parameter available.



**Wireless connection**  
Instrument / PC



**Smart-plus system**  
Probes automatically recognized when connected to the instrument.

## The thermo-anemo-manometers

- MP 200 P -  $\pm 500$  Pa      MP 200 H -  $\pm 500$  mBar  
MP 200 M -  $\pm 2500$  Pa      MP 200 HG -  $\pm 2000$  mBar  
MP 200 G -  $\pm 10,000$  Pa



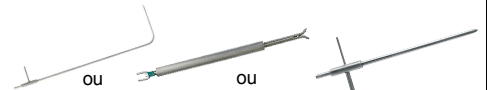
Thermocouple temperature module - 4 channels



### Current / voltage module



### Pitot tubes - Large choice



### Thermocouple temperature probes - Large choice



### CO / Temperature probe



## Functions

### Manometer



#### PRESSURE

- Automatic self-calibration with solenoid valve (MP200 P)
- Manual self-calibration (MP200 M, MP200 G)
- Selection of units
- Pressure integration (0 to 9)
- Point/point average
- Automatic point/point average
- Automatic average
- Minimum / maximum values, hold, standard deviation
- Storage



#### AIR VELOCITY AND AIRFLOW

- Large choice of Pitot tube or Debimo blades or factor for other sensing elements
- Selection of duct type
- Selection of units
- Point/point average
- Automatic point/point average
- Automatic average
- Manual or automatic temperature balancing.
- Manual air pressure balancing.
- K2 Factor
- Minimum / maximum values, hold, standard deviation
- Storage



### Thermometer

#### PRESSURE MODULE

- See pressure function above
- Storage of 1 thermocouple K, J or T channel

#### THERMOCOUPLE MODULE

- Selection of units
- Audible alarm (2 setpoints)
- Large choice of thermocouple type
- Dynamic delta T, minimum / maximum values and hold function
- Storage of 4 thermocouple K, J or T channels

### Current / voltage module

- Adjustable ranges
- Minimum / maximum values and hold function
- Storage



### CO / temperature probe

- Audible alarm (2 setpoints)
- CO maximum
- Minimum / maximum values and hold function
- Storage

### Datalogger-10

- Multi-parameters recording
- Manual and automatic storage
- Memory : up to 8,000 measurement points or 50 datasets
- User-friendly with printing of customized report
- Management of instruments pool, follow-up of calibration periods
- Intervention planning
- Wired or wireless interface



## Technical features

### Sensing elements

#### Pressure module :

##### Piezo-resistive sensor

- Overpressure allowed  $\pm 500$  Pa : 250 mBar
- Overpressure allowed  $\pm 2500$  Pa : 500 mBar
- Overpressure allowed  $\pm 10,000$  Pa : 1200 mBar
- Overpressure allowed  $\pm 500$  mBar : 2 Bar
- Overpressure allowed  $\pm 2,000$  mBar : 6 Bar

##### Connection

- 2 pressure connectors  $\varnothing 6,2$  mm made of nickelled brass
- 2 pressure threaded connectors  $\varnothing 4,6$  mm of nickelled brass
- + 1 thermocouple temperature input for miniature connectors

#### Thermocouple module :

- Connection :** 4 thermocouple temperature inputs for thermocouple miniature connectors Type K, J or T Class 1 (IEC 584-3 norm)

#### Current / voltage module :

- Connection :** 2 stereo jacks

### MP200 connection

#### On the top :

- 2 secured mini-DIN connectors for SMART-Plus probes

#### Left side :

- 1 USB port for KIMO cable only
- 1 power supply plug

### Display

- Graphic display 128x128 pixels
- Dim. 50 x 54 mm
- Blue backlight
- Display of 6 measurements (including 4 simultaneously)

### Housing

- Shock-proof made of ABS
- IP54

### Keypad

- Metal-coated,
- 5 keys
- 1 joystick

### Conformity

- Electromagnetical compatibility (NF EN 61326-1 norm)

### Power supply

- 4 alkaline batteries 1,5V LR6

### Operating environment

- Neutral gas

### Operating temperature

- from 0 to  $+50^{\circ}\text{C}$

### Storage temperature

- from  $-20$  to  $+80^{\circ}\text{C}$

### Auto shut-off

- adjustable from 0 to 120 min

### Weight

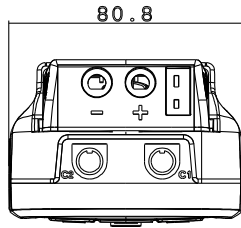
- 340 g

### Languages

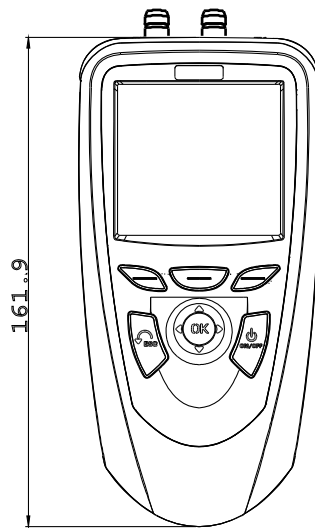
- French, English, Dutch, German, Italian, Spanish, Portuguese, Swedish, Norwegian, Finn, Danish

## Dimensions

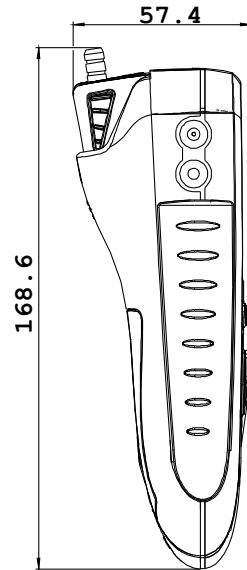
• On the top





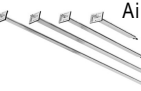

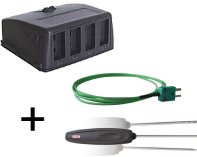

• Front view



• Side view



## Specifications

	Measuring units	Measuring range	Accuracy*	Resolutions
<b>PRESSURE</b>				
	Pa, mmH <sub>2</sub> O, In WG, mbar, hPa, mmHg, DaPa, kPa, bar, PSI	from 0 to ±500 Pa from 0 to ±2500 Pa from 0 to ±10,000 Pa from 0 to ±500 mBar from 0 to ±2,000 mBar	± 100 Pa : ±0.2% of reading ±0.8Pa, beyond ±0.2% of reading ±1.5Pa, ±0.2% of reading ±2Pa ±0.2% of reading ±10Pa ±0.3% of reading ±0.5mBar ±0.3% of reading ±2mBar	0,1 Pa from -100 to +100 Pa, 1 Pa beyond 1Pa 1Pa 0,1mBar 1mBar
<b>PITOT TUBE</b>				
 Air velocity	m/s, fpm, Km/h, mph	from 2 to 5 m/s from 5.1 to 100 m/s	±0.3 m/s ±0.5% of reading ±0.2m/s	0.1 m/s 0.1 m/s
Airflow	m <sup>3</sup> /h, cfm, l/s, m <sup>3</sup> /s	from 0 to 99,999m <sup>3</sup> /h	±0.2% of reading ±1% PE	1 m <sup>3</sup> /h
<b>DEBIMO BLADE</b>				
 Air velocity	m/s, fpm, Km/h, mph	from 4 to 20 m/s from 21 to 100 m/s	±0.3 m/s ±1% of reading ±0.1m/s	0.1 m/s 0.1 m/s
Airflow	m <sup>3</sup> /h, cfm, l/s, m <sup>3</sup> /s	from 0 to 99,999m <sup>3</sup> /h	±0.2% of reading ±1% PE	1 m <sup>3</sup> /h
<b>CURRENT / VOLTAGE</b>				
	V, mA	from 0 to 2.5 V from 0 to 10 V from 0 to 4/20 mA	±2mV ±10mV ±0.01mA	0.001 V 0.01 V 0.01 mA
<b>THERMOCOUPLE (See related datasheet)</b>				
	°C, °F	K: from -200 to 1300°C J: from -100 to 750°C T: from -200 to 400°C	±1.1°C or ±0.4% of reading** ±0.8°C or ±0.4% of reading** ±0.5°C or ±0.4% of reading**	0.1 °C 0.1 °C 0.1 °C
<b>CO / Temperature</b>				
 Temp. CO	°C, °F ppm	from -20 to +80°C from 0 to 100 ppm from 100 to 1,000 ppm	±0.4% of reading ±0.3°C ±5ppm ±3% of reading ±5ppm	0.1 °C 0.1 ppm 1 ppm

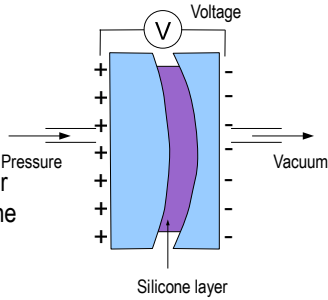
\*All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation.

\*\*The accuracy is expressed either by a deviation in °C, or by a percentage of the value concerned. Only the bigger value is considered.

## Working principle

### Piezoresistif sensor

Piezoresistif sensor is a diaphragm formed on a silicone substrate, which bends with applied pressure and generates millivoltage or millicurrent proportional to the pressure applied.



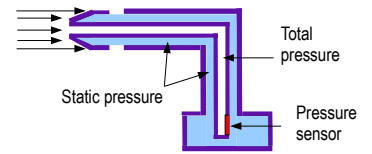
### Pitot tube

Dynamic pressure is measured by Pitot tube :  
 $P_d = \text{Total pressure} - \text{Static pressure}$

Velocity is calculated according to Bernoulli simplified formula.

Formula with temperature correction :

$$V_{m/s} = K \times \sqrt{\frac{P_0}{\rho}} \times \sqrt{\Delta P_{en Pa}}$$



$P_0$  = Barometric pressure in Pa  
 $\theta$  = Temperature in °C  
 $K$  = Pitot tube coefficient

## Supplied with...

● Supplied with ○ Option





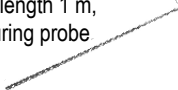

DESCRIPTION	MP 200 P	MP 200 M	MP 200 G	MP 200 H	MP 200 HP
Pressure module from 0 to ±500 Pa	●				
Pressure module from 0 to ±2,500 Pa		●			
Pressure module from 0 to ±10,000 Pa			●		
Pressure module from 0 to ±500 mBar				●	
Pressure module from 0 to ±2000 mBar					●
Thermocouple temperature module	○	○	○	○	○
Current / Voltage module	○	○	○	○	○
SMART-Plus CO / Temperature probe	○	○	○	○	○
Pitot tube Ø 6mm, lg. 300 mm	○	○	○	○	○
Pitot tube Ø 6mm, lg. 300 mm T	○	○	○	○	○
Pitot tube Ø 6mm, lg. 300 mm S	○	○	○	○	○
Thermocouple K, T and J probe	○	○	○	○	○
8 rechargeable batteries with charger	○	○	○	○	○
2x1 m silicone tube Ø 4 x 7 mm	●	●	●	●	●
Stainless steel tip Ø 6 x 100 mm	●	●	●	●	●
Calibration certificate	●	●	●	●	●
Transport case	●	●	●	●	●

Large choice of temperature probes (See related datasheet) :

- ambient
- contact
- penetration
- Food industry penetration
- General use



## Accessories (See related datasheet)

Datalogger-10	See related datasheet	See related datasheet
Datalogger-10 PC software for data recording and processing. Wired (LPCF) or wireless (LPCR) interface. 	Pitot tube available in many lengths Ø 3 – 6 or 8 mm, with or without temperature compensation 	Debimo airflow blades of different sizes 
CE 200	GST	RTS
Hands-free protective cover	Silicone heat conductive grease for temperature probes 	Telescopic extension, length 1 m, bent at 90° for measuring probe 
KPIJ 20 – 50 – 100 – 200 – 600	KCTJ10 - KCTJ02	ADS
Ammeter clamp with PVC cable lg. 2m and jack connector. 	Input cable current (KCTJ02) or voltage (KCTJ10) with PVC cable lg 2 m and jack connector	Adaptor for power supply 230 Vac

## Warranty period

Instruments have 1-year guarantee for any manufacturing defect (return to our After-Sales Service required for appraisal).

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