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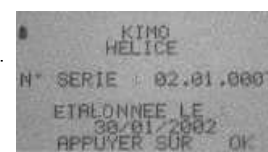
SUPPLIED  
WITH  
Calibration  
Certificate

# SMART MULTI-FUNCTION INSTRUMENTS

## VT 300, 300 PRO and 300 STD


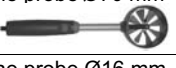

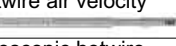


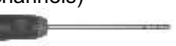
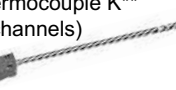




- Intuitive menu with control knob -----
- Ergonomic housing with Elastomer protection -----
- Display of 5 parameters -----
- Display of battery life level -----
- Interchangeable Smart Pro probes -----
- Automatic recognition of the probes -----
- Display of calibration date -----
- 4-channel thermometer -----
- Data-logging capabilities -----
- PC and printer interface -----
- Selection of languages -----



# SPECIFICATIONS

The VT 300 is a multi-function instrument, compatible with all SMART PRO probes, and with all thermocouple K temperature probes. The SMART PRO probes are supplied with calibration or adjusting certificate (last calibration date display when connected). They are automatically recognized when connected, and are fully interchangeable.

		Measuring units	Measuring ranges	Accuracy*	Resolutions
THERMO ANEMO WITH VANE	Vane probe Ø100 mm 	m/s, fpm	0,20 to 3m/s 3,1 to 35m/s	±2% of reading ±0,06m/s ±2% of reading ±0,2m/s	0,01m/s 0,1m/s
	Vane probe Ø70 mm 	m/s, fpm	0,3 to 35m/s	±2% of reading ±0,1m/s	0,1m/s
	Vane probe Ø16 mm 	m/s, fpm	0,6 to 40m/s	±2% of reading ±0,1m/s	0,1m/s
	Ambient temperature (except vane Ø 16 mm)	°C, °F, K	-20 to +80°C	±2% of reading ±0,1°C	0,1°C
	Airflow	m³/h, cfm, l/s, m³/s	0 to 65000m³/h	±3% of reading ±10m³/h	1m³/h
THERMO ANEMO WITH HOTWIRE	Hotwire air velocity 	m/s, fpm	0 to 3m/s 3,1 to 30m/s	±3% of reading ±0,03m/s ±3% of reading ±0,1m/s	0,01m/s 0,1m/s
	Telescopic hotwire air velocity 	m/s, fpm	0 to 3m/s 3,1 to 30m/s	±3% of reading ±0,03m/s ±3% of reading ±0,1m/s	0,01m/s 0,1m/s
	Ambient temperature	°C, °F, K	-20 to +80°C	±2% of reading ±0,1°C	0,1°C
	Airflow	m³/h, cfm, l/s, m³/s	0 to 65000m³/h	±3% of reading ±10m³/h	1m³/h
THERMO HYGRO	Humidity 	%RH, g/kg	3 to 98%RH	±1% of reading ±1,5%RH	0,1%RH
	Dew point	°C, °F, K	-20 to +80°C	±2% of reading ±0,1°C	0,1°C
	Ambient temperature	°C, °F, K	-20 to +80°C	±2% of reading ±0,1°C	0,1°C
THERMOMETER	Pt 100 temperature (2 channels) 	°C, °F, K	-100 to +400°C	±2% of reading ±0,1°C	0,1°C
	Thermocouple K** (2 channels) 	°C, °F, K	-200 to -40°C -39 to +999°C +1000 to +1300°C	±1% of reading ±1,2°C ±0,5% of reading ±0,8°C ±1% of reading ±1,2°C	0,1°C 0,1°C 1°C
TACHO	Optical 	tr/min, rpm, m/min, ft/min, ln/min	60 to 50000tr/min	±0,5% of reading ±1tr/min	1tr/min
	Contact 		4 to 2500m/min 30 to 20000tr/min	±2% of reading ±1m/min	0,1m/min 1 tr/min

\* Performed in laboratory conditions, all the above accuracies mentioned in this document will be guaranteed, provided that you use the calibration compensation data or identical calibration conditions.

\*\* The thermocouple K probes are not part of SMART PRO probes.

## HYGROMETRY PROBE :

### Maximum interval guaranteed\* :

EMG (GAL) = ±2,70 %RH between 18 and 28°C (general field)

Range of measurement : 3 to 98%RH  
Drift at short time : better than 1%RH / year  
Response time : 10 seconds

$$* EMG = Et + Ehl + k (uet^2 + ur^2 + ud^2 + us^2) / 2$$

As per the 2000/2001 hygrometer chart :

uet : uncertainty of calibration = ± 0,55%RH

ur : uncertainty of resolution = ± 0,003%RH

ud : uncertainty of manufacturing = ± 0,17%RH

us : repetition of comparison = 0,11%RH

Et : difference due to thermal deflection = ± 0,28%RH

Ehl : difference due to hysteresis and linearity = ± 1,25%RH

k : expansion factor = 2%RH

# FUNCTIONS



## **HOTWIRE THERMO-ANEMOMETER :**

- Air velocity
- Airflow in ducts and with cones
- Automatic average
- Point/point average
- Automatic point/point average
- Pt100 temperature inside the probe
- Pt100 temperature (channel C2 in option)



## **VANE PROBE THERMO-ANEMOMETER :**

- Air velocity
- Airflow and airflow with cone (with Ø100 mm vane)
- Automatic average
- Point/point average
- Automatic point/point average
- Pt100 temperature inside the probe (except vane probe Ø 16 mm)
- Pt100 temperature (channel C2 in option)



## **THERMOMETER :**

- Pt100 temperature : 2 channels, dynamic delta T
- Thermocouple K temperature : 2 channels, dynamic delta T



## **THERMO-HYGROMETER :**

- Hygrometer : relative humidity, absolute humidity, ambient temperature, dew point, Pt100 temp. (channel C2 in option)
- Psychrometer : dry and wet temperature, relative humidity, absolute humidity, enthalpy.
- Surface dew point : contact dew point, contact temperature, relative humidity, ambient temperature



## **TACHOMETER :**

- Optical revolution counter
- Contact revolution counter



## **DATALOGGER :**

- Multi-parameters recording
- Manual and automatic storage
- Memory : 8000 pts and 40 measuring campaigns
- Simple to use, with printing of customized report
- Management of instrument fleet, and follow-up of the calibration periods.

## **SECONDARY FUNCTIONS :**

Hold, min. and max. values, standard deviation, printing, adjustable automatic shut-off, selection of languages.

# TECHNICAL FEATURES

## **DISPLAY :**

Graphic, with automatic backlighting. Size 66 x 33 mm.

## **HOUSING :**

Shock-proof, made of ABS/PC, with Elastomer edges.

## **KEYPAD :**

Made of Elastomer : 4 keys and one control knob.

## **CONNECTIONS :**

**Connectors** : mini-DIN secured plugs.

**Thermocouple K connectors** : compensated miniature plugs

**Numeric connection output** : USB.

## **COMMUNICATION MODE :**

RS 232.

## **MEASURING ELEMENTS :**

**Vane anemometer** : Hall effect sensor

**Hotwire anemometer** : thermistance with negative temperature factor.

**Hygrometry** : capacitive element

**Pt 100 temperature** : Pt 100 class A

**Thermocouple temperature** : Thermocouple K class 1

**Optical tachometry** : optical detection (phototransistor)

**Contact tachometry** : ETC type adaptor fitting optical tachometry probe.

## **CONFORMITY :**

Electromagnetical compatibility (norm NF EN 61326-1)

## **POWER SUPPLY :**

4 Alcaline batteries 1,5 V LR6

## **WORKING ENVIRONMENT :**

Neutral gas

## **WORKING TEMPERATURE :**

From 0 to 50°C.

## **STORAGE TEMPERATURE :**

From 0 to 50°C.

## **DIMENSIONS :**

183 x 100 x 40 mm

## **WEIGHT :**

450 g

## **LANGUAGES AVAILABLE :**

French, English, Spanish, Portuguese, Italian, German, Dutch.

# SUPPLIED WITH...

O Optional

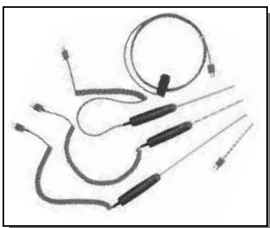
X Included

**VT 300 PRO**

**VT 300 STD**

**VT 300**

	VT 300 PRO	VT 300 STD	VT 300
Vane probe Ø 100 mm, length 310 mm	X	O	O
Vane probe Ø 70 mm, length 310 mm	O	X	O
Vane probe Ø 16 mm, telescopic length 720 mm	O	O	O
Hotwire probe Ø 8 mm, length 300 mm	O	X	O
Straight hotwire extension	O	X	O
Telescopic hotwire graduated, Ø 10 mm, length 900 mm	X	O	O
Hygrometry probe Ø 13 mm, lg. 110 mm	X	X	O
Pt 100 temperature probes	O	O	O
Thermocouple K temperature probes	O	O	O
Optical tachometry probe Ø 17 mm, length 195 mm	O	O	O
Contact tachometry probe length 200 mm	O	O	O
Printer	O	O	O
Software for PC	O	O	O
Transport case	X	X	X
Calibration certificate	X	X	X

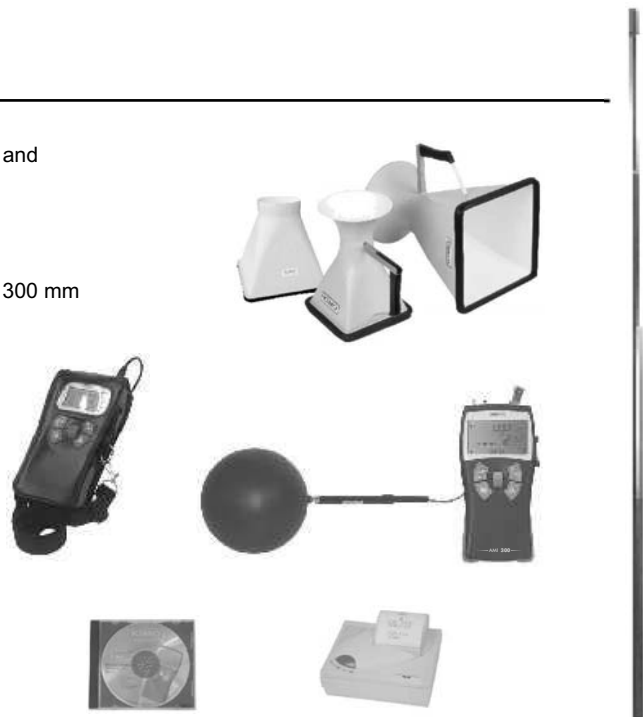


Large choice of thermocouple K and Pt100 probes: ambient, wire probe, general use, penetration, contact, high precision... (For more details, you can refer to the technical data sheets of the probes for portable instruments).



## ACCESSORIES

- Airflow cones : several sizes and ranges of measurement (for hot-wire and vane Ø100 mm anemometers).
- Black ball Ø 150 mm with union for temperature probe Ø 4,5 mm. Further dimensions available on request.
- Hotwire extension / to be clipped / straight or angled, Ø 10 mm, length 300 mm
- Telescopic extension, length 1m bent at 90° for probe.
- Hands-free protection cover
- Printer
- Software for PC
- Hotwire cleaning spray
- Silicone heat-conductive grease for temperature probes
- Adaptor for power supply 230 Vac



## AFTER-SALES SERVICE

Kimo performs the calibration, the adjusting and maintenance of all their instruments to guarantee a constant level of quality of your measurements. Within the Quality Insurance norms, we recommend that the instruments are checked once a year.

[www.kimo.fr](http://www.kimo.fr)

### EXPORT DEPARTMENT

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