

**Portable Pyrometer for the monitoring and documentation of the oven temperatures in coking ovens.**

**IGA 315-K**

- Rapid temperature recording of nozzle bricks and air stages in coking ovens
- Viewfinder with temperature area markings for simple aiming at the measuring point
- Double measurement temperature display on the housing and in the viewfinder
- Special measurement memory for storing measurement values in measurement series
- Focussable precision optics for adjustment to smallest measurement fields
- Infrared interface for transfer of measurement values to a PC
- Focusable optics with a small measuring fields at large measuring distances



The IGA 315-K portable pyrometer has been specially developed for use in coking plants. It is used for the non-contact temperature measurement of the nozzle bricks and the air stages in coking ovens. Measurements are made from the oven roof after opening the heating flue. For this, the optical path of the measuring instrument is modified in such a way that the nozzle brick can be targeted without difficulty through the small viewing opening and can even be accurately measured at a distance of up to 12 m.

For easy sighting, a circular measuring field is marked in the viewfinder, which represents the size of the object to be measured. The correct measuring distance is found by

adjusting the focusable optics until the item under test is sharply focused. The temperature indication can be viewed directly in the viewfinder.

Using the one-button operation the instrument can be quickly switched on, or a measurement value can be saved. With up to 2,000 measurement values including date and time. Prior to the measurement, a series of measurements can be defined, which for example correlate with the heating flues of an oven.

This storage configuration facilitates later evaluation, even if the data is transferred to a PC via the included software. The data can then be both displayed graphically or imported into a spreadsheet program such as Excel.

**Fields of application:**

- Coking plants
- Blast furnaces



## Technical Data

Temperature range:	600 ... 1600 °C
Spectral range:	1.58 ... 1.8 µm
Detector:	InGaAs photodiode
Interface:	Infrared interface to pyrometer, USB interface to PC
Data storage:	2000 meas. values with date and time
Resolution:	1 °C / °F
Lenses:	Focusable optics, adjustable from a = 1...12 m
Measurement functions:	Instantaneous meas. value, max. meas. value, average temperature measurement
Data storage:	2000 measurement values, storage of: measurement value, date, time
Emissivity ε:	0.1 ... 0.99 (adjustable in steps of 0.01)
Exposure time t <sub>90</sub>	10 ms

Accuracy:	0.75% of measurement value (ε=1, T <sub>amb.</sub> =25 °C, t <sub>90</sub> =1 s)
Repeatability:	< 0.3% of measurement value (ε=1, T <sub>amb.</sub> =25 °C, t <sub>90</sub> =1 s)
Power supply:	6 x AA batteries 1.2 V; 1,800 mA; NiMH
Sighting system:	Viewfinder with measurement value in eyepiece and circular measuring field marking
Ambient temp.:	0 ... 50 °C
Storage temp.:	-10 ... 65 °C
Humidity:	Non-condensing conditions
Dimensions:	260 x 70 x 70 mm (L x W x H)
Protection class:	IP54 (to DIN 40 050)
Weight:	approx. 1.3 kg with batteries
CE label:	According to EU directives about electromagnetic immunity

## Focusable Optics

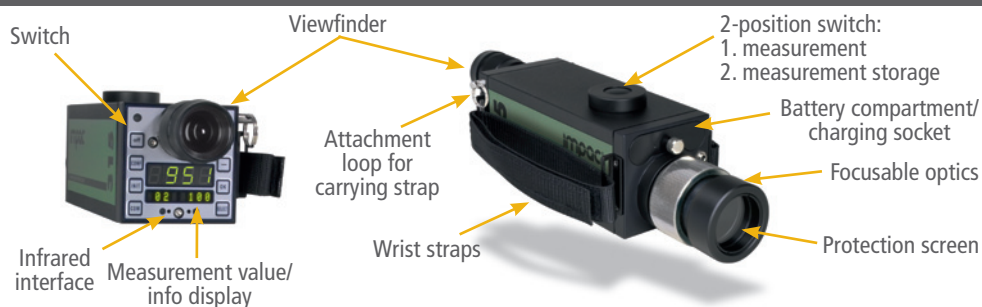
The pyrometer is equipped with high-quality focussable optics. These are adjusted to the distance of the object to be measured and therefore achieve the measuring field sizes stated as examples in the measuring field table. The setting is made by sharply focussing the object to be measured in the viewfinder. Intermediate measuring distances or measuring field diameters can be determined by interpolation.

<b>Measuring distance [m]:</b>	1	2	3	4	5	6	7	8	9	10	11	12
<b>Spot size diameter [mm]:</b>	4.5	7	9.5	12	14.5	18	22	26	30	34	38	42

## Reference Numbers

48315-10010	<b>Basic equipment:</b> IGA 315-K; battery set with 6 x AA NiMH batteries; thermal protection sleeve; neutral density filter, mounting screw for neutral density filter; high temperature protective screen; carrying straps; charger for internal charging; factory certificate; manual.	33151-10010	Set of 6 x NiMH batteries
48315-10020	<b>Complete equipment</b> with carrying case: includes additional infrared IRS 315 interface with mains adapter and software; Voltcraft UFC-8 charger for external charging; additional rechargeable battery set, carrying strap with carabiner.	33151-10020	ASC 410 charger for internal charging
33154-10010	Carrying case, infrared interface / software, 6 x NiMH batteries, charger, carrying strap	33151-10030	Voltcraft UFC-8 charger for external charging
33154-10040	Carrying strap with carabiner	33151-10040	IRS 315 USB infrared interface with software
		33152-10020	Neutral density filter (eye protection filter)
		33152-10030	Pipe wrench for neutral density filter
		100903	Borofloat protective screen, D 37.8 x 2
		33152-10040	Thermal protection sleeve
		33152-10010	Thermal protection visor
		33154-10030	Wrist strap

## Features



Complete equipment in case

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