GREWER FURNACE APPARATUS

DETERMINATION OF THE AUTOIGNITION TEMPERATURE IN A HOT AIR-STREAM

Model: GRO-1

ver. 1.4, 2018

STANDARD REFERENCES:

- **VDI 2263 part 1, point 1.4.1** - Autoigniton, Testing as per Grewer.

MAIN FEATURES:

- six 8-ml wire-mesh baskets placed in a heated air stream
- six thermocouples placed in wire-mesh baskets and connected to control block
- DAQ (National Instruments® circuit) installed in the control block
- 2l/min air flow adjusted and measured
- **ANKO ReqTemp®** program is used to register and process temperature data and in PC computer

GREWER FURNACE:

Body & metal parts	stainless steel
Wire-mesh baskets	x6
Thermocouples	Inconel® shielded silicone cables type K 6x - sample glass tubes 1x - oven temp. control
Electric heater	long life design Kanthal® wire applied
Temperature	up to 350°C
Power supply	110 or 230VAC 1400 W

TEMPERATURE CONTROL & DAQ BLOCK:

Oven temperature	PID controller
Rotameter	air flow 2l/min read-out flow control needle valve
DAQ card	7-ch temp. registration
Navigation keys	auto-tuning temperature adjustment
Control mode	manual mode & PC mode
USB socket	PC control

ACCESSORIES & SERVICES:

Wire-mesh baskets	6 pcs.
Manuals :	instruction/maintenance installation guide.

ADDITIONAL OPTIONS:

Calibration - accredited laboratory certificate

Installation assistance and training on-site

TEST METHOD:
The method is designed to determine the auto ignition temperature in a hot air-stream.
Five test substances and the same quantity of inert powder (e.g. graphite), as reference, are heated up at a linear rate of 1°C/min. in hot air stream 2l/min blown through them up to 350°C.
Auto-ignition temperature of the sample:
Registered furnace temperature at which the test sample temperature starts to rise faster than of the inert reference sample.

ANKO ReqTemp® SOFTWARE:

Temperature registration - long periods.

User defined sampling speed - from 1s.

Test file export to txt format - available.

Screen/area enlargement of selected data.

Test protocol & diagram printing.

Data field for test/sample description.

The information given in this document represents the state of engineering at the time of publishing. We reserve the right to make modifications to above specifications.