CA03 SMOKE OPTICAL DENSITY CHAMBER

TECHNICAL DATASHEET

Complying with:
ISO 5659-2, IMO FTPC Part 2, CEN/TS 45545-2, AITM 2.0007 B

Determination of the specific optical density of smoke generated from the combustion of solid materials either in HORIZONTAL position.
A photometric system determines the transmittance variations of smoke generated from the sample inside the airtight chamber.
The test data and the specific optical density are processed, Toxicity data (AITM) can be elaborated by spectroscopy (not included).

Test data and specific optical density are displayed on a PC Notebook includes.
Toxicity data (AITM 2.0007) can be elaborated by spectroscopy (not included)

Technical features:

Corrosion-proof Test Chamber,
Inner dimensions: mm 914 x 610 x 914 h
Wide door and window for a clear observation during the tests – with shutter curtain.
- Two windows of optical glass D 75 mm vertically aligned. the lower window is heated to about 50 ° C and rigidly connected to the upper window by means of three stainless steel rods D14.
- Temperature sensor mounted in the center of the rear wall
- On the upper wall quick connection for any Gas Sampling Analysis.
- Photometric system
Light source: incandescent lamp 6.5 V, powered at 4.2 Volts stabilized
Optics for collimated beam diameter of 51 mm
Photo detector: Photo multiplier Hamamatsu with spectral response S-4 low dark current
Removable attenuation filter ND2 and fixed compensation filter
Shutter
Transmittance measuring range 100 / 0.00001 – auto scale
Automatic zero-setting

Furnace
Cone-shaped furnace allowing an adjustable radiation in the range 10/50 Watt/mq
Pressure gauge, control of the pressure inside the chamber and overpressure discharge when needed.

Radiometer Pipe type, Calibration Certificate traceability to NIST
Accommodation for Radiometer provided with the circuit for cooling and reading in millivolts and kW / sqm.

Fume discharge pneumatically-operated, complete with centrifugal fan.
Fume drawing connections on the upper part of the chamber, to allow gas toxicity analysis according to AITM 2.0007. Complete test requires the use of a dedicated equipment (see optional accessories).
Photometric system realized by vertical luminous beam with parallel optics.
Light source: incandescent lamp 6.5 V, powered at 4.2 Volts stabilized
Heated bottom optics,
Photo detector: Photo multiplier Hamamatsu with spectral response S-4 low dark current
Transmittance measuring range 100 / 0.00001 in four scales- Automatic zeroing
Flow meters for air flow regulation, with precision needle valve flow: 500 cc/min and pipe SV18.
For gas flow regulation with needle valve flow: 50 cc/min, pipe, fluid: propane
Set of n. 3 filters for N.D. value 3.0,
Control Panel Indication machine status - display 7"color
- Main switch thermomagnetic
- Source to turn
- Open / close vents interior
- Flow air and propane with needle valve adjustment
- Gas ignition button
- Vacuum cleaner power switch
- Data Acquisition 24-bit - USB output
Software DATA Link for data processing and all opening and closing valve functions, specimen positioning, beam calibration, as well as for automatic performance of the test USB output for connection to PC and printer.

Supply requirements:
- Air : dry, filtered, 3 bar
- Propane gas : 0.5 bar
- Power : 230 V 800V/A stabilized

Code	Description
10093103	CA03 Smoke Optical Density Chamber
00100201	Software data Link DO
40991093	Radiometer

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