



# CARBON BLACK



DESIGN AND PRODUCTION OF  
INSTRUMENTS AND APPARATUS  
FOR QUALITY CONTROL  
ON MATERIALS



These instruments are made in  
compliance with CE health and  
safety requirements



**Scope**

The apparatus allows the determination of Carbon Black content in polyethylene and polypropylene, which is made gravimetrically after pyrolysis of the sample in pure nitrogen environment; the method is applicable only to specimens where carbon is present in a free state. According to standards, the Carbon Black content in the sample is calculated by the weight difference of the specimen before and after treatment in the apparatus.

**Standard**

The instrument is designed and built to meet the following standards:  
ASTM D 1603  
and other equivalent standards.

**Technical Features**

The apparatus consists of the following items:

- Tubular furnace, working range + 300°C to 700°C the furnace is fitted with a temperature programmer for the heating element with the following characteristics:
  - programmable up to 8 segments
  - PID action
  - temperature up to 700°C
  - accuracy  $\pm 1^\circ\text{C}$
  - display showing set temperature and true temperature in  $^\circ\text{C}$
  - manual - automatic switch
- The test temperature is therefore stabilized to the values required by standards and programmed accordingly
- The measuring unit, including:
  - wash bottle (code 6305.032)
  - U-shaped drying tube (code 6305.022)
  - dry-ice scrubbing group (code 6305.002)
  - scrubber (code 6305.003)
  - metal supports set, fittings and joints
- Flowmeter to monitor nitrogen flow into combustion tube with regulating valve ( $\text{N}_2$  flow  $1.7 \pm 0.3$  L/min)
- Combustion tube in opaque quartz  $\varnothing 42 \times 600$  mm, enclosures with rubber connectors, for nitrogen flow and temperature sensor housing
- Porcelain combustion vessel (code 0500.033)
- Temperature sensor for actual working temperature inside the combustion tube, complete of protective cover and connecting cable

**Optional**

- Quartz combustion vessel (code 0500.032) to be used instead of porcelain vessel

**Spare parts**

- Combustion tube, quartz made, outside diameter 42 mm, length 600 mm (code 6305.033)
- 6 glass blown pyrex wash bottle (code 6305.032)
- U-shaped tubes, glass blown pyrex, complete of enclosures (code 6305.022)
- Dry-ice scrubbers (code 6305.002 and 6305.003)
- Porcelain vessels (code 0500.032)
- Quartz vessels (code 0500.033)

Technical Data	
• Overall dimensions (WxDxH) mm	1200 x 400 x 500 approx.
• Weight kg	18 approx.
• Supply	230 V - 50/60 Hz Singlephase (110 V on request)
• Power kVA	2.2
• Paint	fuchsia Ral 4006 - gray Ral 7035

"Due to the continuous development policy of CEAST's Research and Development Department, changes may be introduced without notice"



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