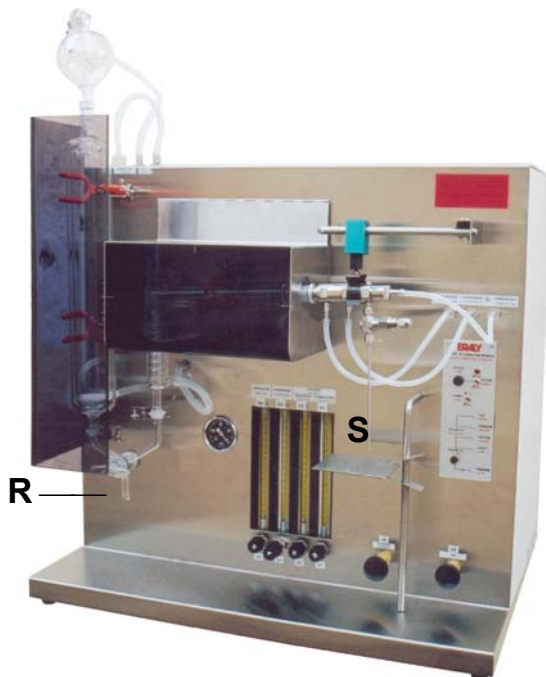


# OXYHYDROGEN GAS BLOWPIPE COMBUSTION APPARATUS

(Wickbold Method)



**Wickbold  
combustion apparatus**

ISO 4260 / NF.EN 24260  
/ ASTM 2784 and 2785 / EN 41

## PRINCIPLE

The sample (S) is drawn and burnt into the flame of an oxyhydrogen burner. The combustion products are absorbed in the suitable reagent. They are then recuperated (R) for a separated titration.

## APPLICATIONS

Liquid or gaseous samples mineralization (essentially petroleum products) for sulphur or chlorine analysis.

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Catalogue quotation: \_\_\_\_\_ of / /

## EQUIPMENT

- 1 STAINLESS BURNER (B) which allows a temperature up to about 2000°C.  
A quartz burner can be provided (on request).
- 1 QUARTZ COMBUSTION CHAMBER (C) water-cooled.
- 1 PYREX ABSORBER (A), similarly cooled, having a frit (G), and a 3-way valve at the base.
- 1 GLASS SPHERE (E) to retain the vapours from the absorbent.
- 5 FLUID CONNEXIONS :
  - . 1 Hydrogen
  - . 1 Oxygen
  - . 1 vacuum
  - . 2 cooling water (input and free exhaust)
- 4 FLOWMETERS (D) WITH THEIR CONTROLS :
  - . D1 = combustion O<sub>2</sub>
  - . D2 = purging O<sub>2</sub>
  - . D3 = Hydrogen
  - . D4 = total flow of gas in the apparatus
- 1 MERCURY MANOMETER (M) to measure the total pressure drop
- 1 DRY VACUUM PUMP (P) with a flow of about 3.000 l/h integrated in the apparatus (graphite vanes pump).

## TECHNICAL CHARACTERISTICS

### Advantages of the method :

- A very high combustion temperature in over oxygen atmosphere, insuring a nearly perfect combustion.
- Possibility of important specimens (several ten cc) allowing very low measurement thresholds ( $\approx 1$  ppm Sulphur)

### A very high level of safety :

- passive : using a stainless burner / Flame shutoff frit (F) / Glasses protected by caps.
- active : «Security» functions shutting off Oxygen automatically by locking electrovalves (EV) in case of :
  - a/ decrease of cooling water pressure
  - b/ decrease of oxygen pressure
  - c/ decrease of depression
  - d/ protection cap opening

Dimensions : breadth 68 cm, height 65 cm, depth 48 cm, weight  $\approx 50$  kg

Electricity : 220 V – 50 Hz – 500 W

Gases : Oxygen and Hydrogen

### Notice :

- 1/ **According to ISO 4260, the stainless burner must be used for light olefins**
- 2/ The titration part is not provided with the apparatus. The possible methods (visual or automatic colorimeter, conductimetry...) have to be determined on the contents to measure (cf ISO 4260)
- 3/ **For out-standard mineralization applications, refer to our *MINERALYSEUR* documentation**

