



Hindustan Apparatus Manufacturing Co.

12/2, Patel Indl Estate, Behind Range Office, Vasai East, Mumbai- 401208, India.

0091-9168656961,9167498493 09867054026, 7977637260, Email: hamco17@gmail.com,

HAMCO6E Automatic Bomb Calorimeter With Printer **As Per Astm D 4809**



Test method: - determines the 'gross Calorific value 'of any solid or liquid sample by determining the water equivalent by burning 1 gm of known CV sample.

Standard: - confirm to the specification ASTM D 4809, D 240, DE711, IS -1350- 1966, BS 1016 PART 5-1967, IP 12/63 T.

Features & benefits: -

- 1) Type of method: - isothermal.
- 2) Method of detecting temp. Rise : automatic
- 3) Method of detecting calorific value : automatic
- 4) Touch Screen PLC.
- 5) Automatic measurement and calculation of Calorific value / water equivalent.
- 6) 21 x 4 character lcd display
- 7) Thermal printer interface with printout report.
- 8) Auto alarm on completion of test.
- 9) Pc interface for data recording.
- 10) Weight of the sample to be filled by keyboard.
- 11) Calorimeter vessel made of SS
- 12) Bomb support to ensure correct positioning of bomb in vessel.
- 13) Ambient working temp range : 15 to 35 degree c
- 14) Heat capacity :- 5800 to 6500 cal/deg c
- 15) Process time: - 10 to 12 minute.
- 16) Temperature resolution :- 0.001 deg c
- 17) Oxygen bomb endure pressure : 300 kg/cm
- 18) Humidity requirement : less than 85%
- 19) Power supply: 230a VC, 50 Hz, 10 amp.



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20) Heating load: 2 kW.

21) Control panel/display :-

- a. Digital display of temperature.
- b. Auto temp. Rise detection based on microprocessor chip based. User has to press one button and is free for doing other thing while microprocessor will take reading automatically.
- c. Automatic reading for temp. Rise calculation.
- d. All the necessary interlock for stirrer, ignition wire continuity, wire loose, over load etc.
- e. Electrode short indication.
- f. Continuity test indication.
- g. Auto stop of the stirrer after completion of test.
- h. Buzzer horn after completion of the test.

22) Safety interlocks/ relay :-

- a. Over load protection.
- b. Electrode short protection & indication.
- c. 1-phase indication lamp.
- d. Emergency switch off

23) Construction :-

- a. Double walled construction, thermally insulated by pouring approx. 18 ltr water in the outer jacket.
- b. Made of full stainless steel.

Accessories will be supplied with equipment: -

1. SS bomb (cat no : hamco 6ac 1)
2. Calorimeter vessel with bomb support.
3. Insulated outer jacket with calorimeter vessel support.
4. Combined lid for outer jacket & calorimeter vessel.
5. Connecting tubes (copper / flexible) for filling oxygen in the bomb: 3 nos.
6. Spanner for oxygen valve & copper tube connection.
7. Oxygen control valve. (cat no : hamco 6ac 2)
8. Pressure gauge on stand with bomb lid stand.
9. Safety device.
10. Pellet press. (cat no : hamco 6ac 3)
11. Stirrer unit
12. Automatic electronic firing unit with digital Beckmann thermometer. (microprocessor based)
13. Connecting wire [electrical].
14. Hook for lifting bomb. (cat no : hamco 6ac 4)



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15. Crucible. [stainless steel] (cat no : hamco 6ac 5)
 16. Cotton reel(cat no : hamco 6ac 6):01 no. (approximately 200 meters)
 17. Bomb 'o' ring (cat no: hamco 6ac 7): 01 no.
 18. Teflon tape: 01 no.
 19. Valve body 'o' ring (cat no: hamco 6ac 8): 01 no.
 20. Ignition wire (cat no: hamco 6ac 9): 100 meters.
 21. Schrader valve (cat no: hamco 6ac 10): 01 nos.
 22. Bursting discs for safety device 12 nos: 1 set. (cat no : hamco 6ac 11)
 23. Benzoic acid of known calorific value. { 6319 cal / gram }
 24. Valve key. {4 sided key used for replacing/tightening Schrader valve, see (p) in precautions on page 12}
 25. Printer
 26. Pc interface cable.
 27. Operating manual.

Spares required for 5 year trouble free operation: -

- 1) Cotton reel (cat no: hamco 6ac 6):05 no. (approximately 200 meters)
- 2) Bomb 'o' ring (cat no: hamco 6ac 7): 02 no.
- 3) Valve body 'o' ring (cat no: hamco 6ac 8): 02 no.
- 4) Ignition wire (cat no: hamco 6ac 9): 100 meters.
- 5) Schrader valve (cat no: hamco 6ac 10): 01 nos.

Electrical requirement –

- 220-240v, 50/60hz, single phase, 10.9a
- Or 115v, 50/60hz, single phase, 20.8a

Dimension: - ixwxh,in.(cm)

16"x21.5"x14.5" (41x55x37)

net weight: 64 lbs (29kg)

Shipping information: -

Shipping weight: 78 lbs (35kg)

dimensions: 8.2 cu. Ft.



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Ordering information: -

| Catalogue no | Product description | Electrical requirement |
|--------------|--|------------------------|
| Hamco 6b | Semiautomatic bomb calorimeter without printer | 220-240v, 50/60hz |
| Hamco 6bexp | Semiautomatic bomb calorimeter without printer | 115v, 50/60hz |
| Hamco 6ac1 | SS bomb | |
| Hamco 6ac2 | Oxygen control valve | |
| Hamco 6ac3 | Pellet press | |
| Hamco 6ac4 | Hook for lifting bomb | |
| Hamco 6ac5 | Crucible | |
| Hamco 6ac6 | Cotton reel | |
| Hamco 6ac7 | Bomb 'o' ring | |
| Hamco 6ac8 | Valve body 'o' ring | |
| Hamco 6ac9 | Ignition wire | |
| Hamco 6ac10 | Schrader valve | |
| Hamco 6ac11 | Bursting disc | |