

VACUUM OVEN STANDARD/GMP MODEL :



The Purpose of Vacuum Oven is to provide heating under vacuum condition or in some inert atmosphere to stop oxidising the product.

HAMCO Make GMP vacuum oven are especially built to Pass FDA and ICH Q1A compliance standards and have a reputation for reliability, quality and performance. Exceed FDA/ICH guidelines for long term , intermediate and accelerated stability studies.

SPECIFICATIONS :-

- Temperature Range 40 °C above ambient to 250.0 °C. Accuracy +/- 0.5 °C. Uniformity +/- 1.0 °C
- Temperature Display : Digital LED 3 ½ digit, Resolution 0.1 deg C
- Heating system: Heating coil mounted on fibre glass cloth wounded on the chamber.
- Two Valve Provided to do vacuum or inert atmosphere.
- Time require to reach temperature value is approximately 50 min.

- Pressure Range will be 933×10^2 to 1×10^2 Pa, Ambient to < 133 Pa, Pull down time-within 7 min.
- Atmospheric pressure recovery time Within 4 min

CONSTRUCTION :-

- Double walled , gap between walls filled with glasswool Insulation.
- Standard Model : Stainless steel Mirror polished chamber and heavy guage Powder- coated CRC exterior.
- GMP Model : Stainless steel Mirror polished chamber and exterior of dull finish stainless steel.
- Glass door : Front door mounted with glass door for Full observation of the chamber.
- 3" Thick glasswool Insulation.
- Stainless steel Trays. Adjustable Tray Height adjustment.
- Unit Mounted on castor wheels with front lock arrangement for hamco106e and above model.
- Inlet R ¼ inch, max. pressure 0.05 mPa ($0.5 \text{ kg/cm}^2 \text{ G}$) or less
- Exhaust port OD \varnothing 28 mm, rubber hose connection port

CONTROL PANEL :-

- Microprocessor based PID temp. controller with auto tune facility for precise control of temperature .
- Temp. Sensor : PT- 100.
- Dedicated safety thermostatic controller to cut off the supply in case of overshoot of temperature .
- Recorder data bank to store and print set values , process values , date and time of master controllers with variable print time intervals (Optional)
- Alarm : Audio visual alarm if temperature deviates from the preset temperature.
- PC Interface communication card with RS 485 for temperature control system (Hardware only) (optional)

SAFETY FEATURES :-

- Over heat temperature cut off with alarm.
- Electrical short circuit breaker.
- Three heat switch to reduce the heater capacity for low temperature Option.

DATA RECORD :-

- 21 CFR Part 11 compliant software with audit trail (who did what and when is recorded)
- Multilevel Passwords.
- Data storage device has online and offline capabilities.

- Multi chamber data acquisition on single software.
- Tabular and graphical report, alarm deviation report.
- Mean Kinetic temperature report and alarm deviation report.
- Audit trial report.
- Attractive reports and graphs.
- Alarm report.
- Time synchronisation.

ORDERING INFORMATION :-

| MODEL NO. | | CAPACITY | | DIMENSION IN CMS | | SHELVES | WT IN KG | | POWER | |
|----------------|----------------|--------------|--------|------------------|--------------|---------|----------|-----------------------|--------|-------|
| Standard | GMP | Chamber Type | Litres | Chamber | Over All | | Unit | Packed in wooden case | VAC Hz | Watts |
| HAMCO106S -11 | HAMCO106G -11 | Round | 11 | 22.5 x 30 | 55 x 45 x 40 | 2 | 20 | 32 | 230,50 | 1000 |
| HAMCO106S -26 | HAMCO106G -26 | Round | 26 | 30 x 38 | 63 x 54 x 50 | 2 | 32 | 47 | 230,50 | 1200 |
| HAMCO106S -50 | HAMCO106G -50 | Round | 50 | 38 x 45 | 71 x 63 x 60 | 2 | 45 | 60 | 230,50 | 1500 |
| HAMCO106S -12 | HAMCO106G -12 | Rectangle | 12 | 20x20x30 | 54 x 40 x 65 | 2 | 35 | 49 | 230,50 | 1000 |
| HAMCO107S -27 | HAMCO107G -27 | Rectangle | 27 | 30x30x30 | 64 x 50 x 65 | 2 | 38 | 53 | 230,50 | 1200 |
| HAMCO107S -40 | HAMCO107 G -40 | Rectangle | 40 | 30x30x45 | 64 x 50 x 80 | 3 | 50 | 66 | 230,50 | 1500 |
| HAMCO107S -63 | HAMCO107 G -63 | Rectangle | 63 | 35x35x50 | 64 x 50 x 80 | 3 | 60 | 79 | 230,50 | 2000 |
| HAMCO107S -90 | HAMCO107 G -90 | Rectangle | 90 | 45x45x45 | 74 x 60 x 75 | 3 | 70 | 92 | 230,50 | 2500 |
| HAMCO107S -121 | HAMCO107G -121 | Rectangle | 121 | 45x45x60 | 80 x 65 x 95 | 3 | 80 | 98 | 230,50 | 3000 |
| HAMCO107S-200 | HAMCO107G-200 | Rectangle | 200 | 60x60x60 | 95 x 80 x 95 | 4 | 100 | 130 | 230,50 | 4500 |

| OPTIONAL ACCESSORIES | |
|----------------------|---|
| Catalogue No | Description |
| PCI-1 | PC Interface communication Card with RS 485 convertor (Hardware) for temperature and humidity control system |
| RCR-11 | Data Bank to record, store and print set values, Process values, Date & time of master controllers with variable print time intervals |
| SOFTW-21 | “HAMCO” CFR 21 Part 11 compliance windows based communication software for data management. Complete with RS 485 multi dropping to monitor multiple chambers to one software. |
| V-4 | Vacuum Pump Suitable for all model for 121 ltr ,pumping speed-200L/min L(50Hz), 240 L/min (60Hz), Ultimate pressure 6.7×10^{-1} Pa Fittings – Leveling feet and casters (free wheel) 4 pc each, Time signal terminals 2 pcs. Shelves No.:- 2pcs Inside Dimension W 450 x H 450 x D 450 mm, Outside Dimension W 902 x H 1392 xD 782 mm Weight- 300 - 350 Kg Allowable |

| | | |
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| | ambient conditions - +12 to +35°C Power supply: - 220V AC 1 Ø 50/60Hz 13.2 A, Motor-220V AC 1 Ø 50/60Hz 550W | |
| V-6 | Vacuum Pump Suitable for all model including 121 ltr with all necessary tubing nozzle capable to reach vacuum upto 760 mm of Hg | |