# OVENS

mrc

# OVENS 200°C Natural Convection

DNO-Series

- **Natural convection** heat distribution combines with adjustable air vents to provide excellent uniformity.
- **Double wall** construction, **fiberglass** insulation and **silicon rubber** door sealing reduce heat loss and power drain.
- **Stainless steel interior** chamber and shelves are corrosion resistant,durable & easy to clean.
- **Power coating exterior** is beautiful, durable, and corrosion resistant.

## Features:

- Simple keypad input allows easy temperature setting.
- LED digital display enable users to monitor the chamber temperature at any given time.
- Visual alarm indicator alerts users of abnormal conditions if the chamber temperature exceeds the setting point by 10°C.
- The temperature can be controlled and maintained to 200°C.
- Ovens feature a see-through window to view contents without opening.
- Adjustable shelves are included.
- The temperature stability is ±0.5°C at 100°C; ±1.0°C at 200°C.
- Optional cable port.
- Optional gas inlet.
- Optional forced air.

## DNO-D Series, Drying Oven With Natural Convection

Routine drying & sterilization applications up to 200°C and storage at precisely controlled elevated temperature are the strengths of DNO drying ovens.

- **Hot air ovens** are suitable for various applications in the fields of agricultural, and industrial researches for heating, drying, sterilizing and baking in laboratories, hospitals, and industries.
- **PID temperature control** provides automatic compensation after load changes, setting changes or door opening for excellent accuracy.

DNO-300

## Specifications:

| Model | DNO-20 | DNO-30 | DNO-50 | DNO-80 | DNO-150 | DNO-300 |
|---|---|---|---|---|---|---|
| Convection | Natural convection | | | | | |
| Working temperature | Ambient +5°C ~ 200°C | | | | | |
| Capacity (Liters) | 20 | 30 | 50 | 80 | 150 | 300 |
| Chamber DIM.(mm) | W300xD310xH230 | W325xD310xH315 | W380xD365xH390 | W420xD450xH463 | W625xD510xH500 | W625xD510xH1000 |
| Power watts | 500 | 700 | 1000 | 1200 | 1400 | 2000 |
| Dimensions (mm) | W412xD420xH500 | W425xD420xH610 | W480xD475xH695 | W522xD560xH770 | W725xD620xH795 | W725xD620xH1465 |
| Accessory | 2 Shelves | | | | | 4 Shelves |
| Optional accessory | Test tube basket | | | | | |
| Power supply | AC110V 60Hz or 220V 50/60Hz | | | | | |

## DFO-Series, 36 Liter, 80 Liter, 150 Liter, 240 Liter Ovens

DFO Series units are primarily used in applications needing rapid drying and sterilization. Totally homogenous temperature distribution and/or rapid dynamic response. This modern range of ovens is available in 4 sizes. DFO Series offers excellent uniformity and stability & are used for many applications as Glassware drying, warming, sterilizing, ageing, curing, softening, annealing, preheating and testing , drying slides. The inner case is constructed from polished stainless steel. All units are provided with wire plated shelves with multi-position settings. All models are with fan assisted air circulation, the chamber ventilation and exhaust vent are easily adjustable. Wide choice of control options is available, PID controller & timer is fitted as standard with dual display of measured value and setpoint.

**Options:**

- RS-232 / 485 communication model: 3216E
- 4 programs of 16 segments model: 2416P4
- 5 programs of 8 segments model: 3216CP
- 38, 50, 75, 100mm cable entry port
- Gas inlet
- Interior light.


**Typical oven applications include:**

- Drying of glassware
- Warming
- Sterilising
- Ageing
- Curing
- Burning-in
- Long term stability testing
- Softening
- Annealing
- Enamelling
- Baking
- Bending
- Tempering
- Pre-heating
- Soldering.


**Specifications:**

| Model | DFO-36 | DFO-80 | DFO-150 | DFO-240 |
|---|---|---|---|---|
| Temp. range | 5°C above ambient to - 250°C | | | |
| Temp. constancy | ±0.1°C | | | |
| Temp. uniformity | ±1°C at 100°C | ±1°C at 100°C | ±2°C at 100°C | ±2.5°C at 100°C |
| Temp. control | PID | | | |
| Circulation | Forced air - two speed selectable with a switch | | | |
| Heater: Oven | 1100W | 1500W | 1800W | 2200W |
| Inside Material | SUS-430 | | | |
| Timer | 1 minute to 99 hours an 59 minutes or continous | | | |
| Window (mm) | W200xH300 | | | W200xH500 |
| Safety devices | Short circuit breaker, over heat protector, sensor abnormality | | | |
| Inside dimensions (mm) | W400xD300xH300 | W500xD400xH400 | W600xD500xH500 | W600xD500xH800 |
| Outside dimensions (mm) | W525xD420xH595 | W620xD520xH620 | W720xD620xH720 | W720xD620xH1020 |
| Capacity (Liters) | 36 | 80 | 150 | 240 |
| Shelves | 2 | 2 | 2 | 3 |
| Max. No. of Shelves | 7 | 10 | 13 | 23 |
| Weight | 34kg | 52kg | 75kg | 85kg |

# OVENS 300°C Small Capacity Forced Air

FD 60-300

## FD-XXX-300 Series, 300°C Small Capacity Ovens

A new range of laboratory ovens that are intended for the thermal processing of materials up to a temperature of 300°C. Used for such processes as drying, heating, thermal testing, and aging in an air environment. Forced air circulation allows a homogenous temperature distribution to be achieved during all processes, which ensures optimal results.


FD 420-300

### Basic model:

- Forced horizontal air circulation
- Valve control of air extraction (operated via front panel)
- Chamber made of stainless steel
- Hermetically closed doors
- Microprocessor-controlled thermoregulator.
- Buzzer
- Protection against overheating
- Fan revolution controller
- Includes standard shelves
- High-quality, ecological thermal insulation material
- Low electric power usage
- Short heating up/cooling down period
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035).

### Options:

- Economical version (Ee) without a fan speed controller and buzzer
- Supplemental shelves
- Reinforced shelves
- Metal tray Reinforced bottom Digital timer
- Data recorder
- Computer connection via RS232/RS-485/USB
- Calibration of temperature measurement system
- Furnace exterior made of stainless steel
- Table for supporting the furnace
- Process observation window.

| Model | FD-20 | FD-60 | FD-120 | FD-220 | FD-420 |
|---|---|---|---|---|---|
| Temp. range | Up to 300°C | | | | |
| Volume (Liter) | 20 | 60 | 120 | 220 | 420 |
| Inside dimen. WxLxH(mm) | 240x280x340 | 380x380x420 | 550x400x580 | 730x500x620 | 1000x500x860 |
| Outside dimen. WxLxH(mm) | 460x680x640 | 600x760x720 | 750x780x880 | 930x880x915 | 1200x930x1200 |
| Power (Kw) | 1 | 2 | 2.2 | 4 | 6.2 |
| Voltage (V) | 230 | | | | 400 |
| No. of Shelves sets/max. | 2/5 | 3/7 | | | |
| Air Flow | ● | ● | ● | ● | ● |
| Weight (kg) | 34 | 50 | 70 | 102 | 155 |

# 200°C Large Capacity Forced Air, Programmer



## FD-600P, 200°C Large Capacity Oven


FD-600P

The FD-600P forced air drying ovens is engineered for aging, bonding, curing, heat treating annealing, stress relieving, burn-in, hardening and/or test purposes, and also perfectly suited for routing drying and sterilization applications up to 200°C.
FD-600P designed to provide accurate temperature uniformity, with minimized temperature overshoot. The oven can be programmed to run up to 9 different programs with 18 steps of temperatures and time segments.


### Features:

- Forced-air convection and three dimensional heating system ensure air circulation and dispersion.
- PID Microprocessor controller with 9 segments and 18 steps, only on 200°C models.
- Large LCD display.
- Optimized sample monitoring with threefold tempered safety glass window.
- Electropolished stainless steel inner chambers and round corners for easy cleaning and better air flowing.
- Safe protections: over-temperature limit protection, 2 separate over-current fuses, protection over electric leakage
- Extensive alarm system for power cut, sensor failure, high and low temperature.
- Automatic running recovery after a power interruption.
- Heat resistant gasket minimizes heat loss and tightly seals the chamber door.
- Adjustable electropolished stainless steel shelving provides air flow around samples for uniformed tempering and allow for easy cleaning.
- 2 shelves included as standard.

### Specifications:

| Model | FD-600P |
|---|---|
| Heating mode | Bottom Heating |
| Programmable control (9 Segment/18 steps) | Standard |
| Temperature range (°C) | Ambient +5~200 |
| Temperature accuracy (°C) | 0.1 |
| Temperature uniformity (%) | ≤±2.5 (200°C) |
| Alarm | Enabled |
| Settings | Digital |
| Display | LCD |
| Volume (L) | 600 |
| Shelve size (mm) (WxD) | 725 × 789 |
| Shelve | 2 (Maximum 5) |
| Chamber dimensions (mm) | W800xD780xH1000 |
| Outside dimension (mm) | W990xD910xH1470 |
| Packing dimension (mm) | W1110xD1030xH1640 |
| Net/Gross Weight (kg) | 210/255 |
| Power (W) | 3700 |
| Voltage | 220/240 Volt 50/60 Hz |
| Approval | CE, ISO |

# OVENS 250°C Large Capacity Forced Air


DFO-480

## DFO-270/480, Large Force Convection, Single Door

- Ideal for Large Volume Baking Electronic Parts, Drying, Conditioning and Sterilizing
- Inner case is SUS 430 and outside body is powder painting.
- Tempered Safety Glass Window to see inside without door opening
- Install double over temperature protection.
- All models are with fan assisted air circulation, air vent on both sides
- Brake wheels easy to move.

| Model | DFO-270 | DFO-480 |
|---|---|---|
| Temp. range | Ambient + 5°C-250°C | |
| Temp. Accuracy | ±1°C | |
| Temp. control / Display | PID | |
| Temp. Sensor | K type | |
| Volume | 270L | 480L |
| Timer | 1 minute to 99 hours an 59 minutes or continous | |
| Shelf (Adjustable) | 4 | |
| Power Voltage | 220V 50/60Hz 1PH | |
| Heater Watage | 4000W | |
| Inside dimensions (mm) | W600xD500xH900 | W800xD600xH1000 |
| Outside dimensions (mm) | W780xD620xH1520 | W980xD720xH1620 |
| Weight | 130kg | 200kg |

DFO-2160

## DFO-600/720/1008/2160, Large Force Convection, Double Door

- Ovens are used for many applications as baking, drying, conditioning, sterilizing, electroplate, plastic, chemical industry, printing, hard ware, pharmacy, tea fired, bake industry .... etc
- Inner case is SUS 430 and outside body is powder painting.
- Tempered Safety Glass Window to see inside without door opening
- Install double over temperature protection.
- All models are with fan assisted air circulation, air vent on both sides
- Brake wheels, easy to move
- Silent fan motor.

| Model | DFO-600 | DFO-720 | DFO-1008 | DFO-2160 |
|---|---|---|---|---|
| Temp. range | Ambient + 5°C-250°C | | | |
| Temp. Accuracy | ±1°C | | | |
| Temp. control / Display | PID | | | |
| Temp. Sensor | Thermocouple K type | | | |
| Volume | 600L | 720L | 1008L | 2160L |
| Timer | 1 minute to 99 hours an 59 minutes or continous | | | |
| Shelf (Adjustable) | 4 | | | |
| Power Voltage | 220V 50/60Hz 1PH | | 220V 50/60Hz 3PH | |
| Heater Watage | 6370W | | 8000W | 15000W |
| Inside dimensions (mm) | W1000xD600xH1000 | W1200xD600xH1000 | W1400xD600xH1200 | W1800xD1000xH1200 |
| Outside dimensions (mm) | W1250xD750xH1580 | W1450xD750xH1580 | W1650xD750xH1820 | W2000xD1200xH1980 |
| Weight | 300kg | 380kg | 450kg | 590kg |

## FX14–2/FX28–2, Large Capacity Forced Air 260°C Ovens


The MRC forced air ovens feature 13 or 27 cubic feet of economical oven space. The forced, blower-assisted airflow design offers excellent temperature uniformity and fast recovery. A turbo blower and heavy-duty motor combine to direct air over the shelves and samples for even, constant drying, curing and baking. These units are especially ideal for glassware drying.
The independent overtemperature safety feature is user adjustable and provides added safety.
There are several models to choose from in the MRC forced air product line, with varying sizes and control features. These large capacity units are perfect for high volume sample and drying applications, including production processes.

### Features:

- Three inch Adjustable Exhaust Port
- Stainless Steel Shelves
- Independent Overtemperature Safety
- Digital Timer.

FX14–2

### Applications:

While oven applications are very diverse, it is possible to break down their uses into three main categories: Drying, Baking and Curing. Common drying applications include drying glassware, paper and pulp, textiles, non-flammable crystalline chemicals solid materials and tissue. Ovens are also used for biochemical research, drug metabolism research, moisture content analysis, pre-heating containers, moisture elimination, chemical precipitation and proteins and starch digestion.

### Specifications:

| Model | FX14–2* | FX28–2* |
|---|---|---|
| Chamber capacity (Liters) | 387 | 781 |
| Temperature Recovery | 8min at 150°C | 10min at 150°C |
| Heat-up Time | 24min at 150°C | |
| Temperature Uniformity | ±3°C at 110°C | ±3.5°C at 150°C |
| Temperature Range | Ambient +15°C to 260°C | |
| External dimensions (mm) | W959xD864xH1220 | W953xD889xH1988 |
| Internal dimensions (mm) | W781xD628xH787 | W781xD635xH1574 |
| Shelves supplied | 3 Shelves | 6 Shelves |
| Maximum shelves | 8 Shelves | 16 Shelves |

* All specifications are determined by using average values on standard equipment at an ambient temperature of 25°C (77°F) and line voltages within ±10% of unit type (115V/230V). Temperature specifications follow DIN 12880 methodology. We reserve the right to change specifications at any time.

# OVENS 300°C Forced Air


PF-200

## PF-Series, 300°C Ovens

This modern range of ovens provides a combination of excellent performance & reliability. Increased power and low thermal mass encased fibre insulation ensure both fast heat up times & reduced recovery times. Reduced holding power once at set temp., together with the insulation, makes the range economical & outer case temperatures have been significantly reduced. Both gravity & forced air circulation models are available with a wide choice of control options allowing the most critical performance criteria to be met. Where processes involve the liberation of flammable VAPORs, a stoving & curing option is available. Also, where processes involve large amounts of water, a moisture extraction option is available.

## Features

The outer cases are fabricated from corrosion resistant zinc coated mild steel & finished in two tone hard wearing stoved epoxy/polyester coating. The inner case is constructed from polished stainless steel. All units are provided with non-tilt bright nickel wire plated shelves with multi-position settings for convenient loading & unloading.

## Adjustable air ventilation

The chamber ventilation and exhaust vent are easily adjustable from the front control panel, on all bench top models.

## Digital temperature control

The control module is able to house many variations of digital instrumentation with simultaneous display of measured and set temperature. Microprocessor based PID controllers are fitted as standard.

## Economy and efficiency

Insulation around the oven chamber utilizes totally encased fibre material. This material has a very low thermal mass and thermal conductivity, ensuring very efficient insulation. This also ensures reduced holding power, making the units economical to operate once set temperature has been reached.

## Door action

A flush fitting door latch with a concealed mechanism is both simple to use & provides a handle when unlatched. The lever action ensures gentle closure. The door seal design includes a newly formulated silicone compound, providing longer life & durability at maximum temp. The design also allows convenient replacement if necessary.

## Control panel

The side mounted control panel avoids damage from accidental spillage.

## Safety standards

All units meet the relevant European health and safety at work legislation & the performance criteria of BS 2648 & DIN 50-011. They are manufactured to comply with BS EN 61010: safety standard & also the low voltage & EMC European Directives.

## Options:

- Range of over temp. protection systems in accordance with DIN12-880 Part 2.
- Stoving & curing option available for processes involving liberation of flammable vapors.
- Timers: Process timers-manual or automatic. Mechanical or electronic time switches.
- Top access port for independent probe.
- Lockable door latch.
- Exhaust fan *
- Variable speed fan *
- Inert gas connection *
- Flow meter & needle valve.
- Viewing window in door *
- Interior light.
- Air inlet filter.
- Cable entry port *
- Door switch.
- Stands & trolleys.
- Chart recorders.

* These options may affect Chamber Uniformity

| Model | PF30 | PF60 | PF120 | PF200 |
|---|---|---|---|---|
| Max. Temp (°C) | 300 | 300 | 300 | 300 |
| Chamber Dimensions (mm) (H) | 300 | 400 | 500 | 750 |
| Chamber Dimensions (mm) (W) | 292 | 392 | 492 | 592 |
| Chamber Dimensions (mm) (D) | 320 | 420 | 520 | 520 |
| Outside Dimensions (mm) (H) | 470 | 570 | 670 | 920 |
| Outside Dimensions (mm) (W) | 665 | 765 | 865 | 965 |
| Outside Dimensions (mm) (D) | 470 | 570 | 670 | 670 |
| Chamber Capacity (Liters) | 28 | 66 | 128 | 230 |
| Weight (kg) | 30 | 45 | 60 | 75 |
| Shelves | | | | |
| Number Supplied | 2 | 2 | 2 | 2 |
| Max. Possible | 3 | 5 | 9 | 15 |
| Max. Dist load/shelf kg | 10 | 10 | 10 | 10 |
| Max load kg | 20 | 30 | 40 | 50 |
| Performance | | | | |
| Power Rating at 240V (watts) | 1000 | 1500 | 2000 | 2700 |
| Holding Power* at Max. temp. (watts) | 350 | 600 | 800 | 1250 |
| Temp. Uniformity* (at Max. temp. as a%) | ±1.0 | ±1.0 | ±1.0 | ±1.0 |
| Temp. Stability on/off control (°C) | ±1.0 | ±1.0 | ±1.0 | ±1.0 |
| Temp. Stability PID control (°C) | ±2.0 | ±2.0 | ±2.0 | ±2.0 |
| Heat up Times* 100°C (Mins) | 4.5 | 4.5 | 4.5 | 5.5 |
| 200°C | 12 | 12 | 12 | 14 |
| 240V | 25 | 25 | 25 | 30 |
| 300°C | | | | |
| Recovery Times* 100°C (Mins) | 1 | 1 | 1 | 1.5 |
| 200°C | 2.5 | 2.5 | 2.5 | 3 |
| Door Open 60sec 300°C | 4 | 4 | 4 | 5 |
| 240V | | | | |
| Air Exchanges vol (l/h) @ 100°C | 1400 | 1400 | 1400 | 1400 |
| Air Exchanges | 50 | 21 | 11 | 6 |

Note: A uniformity of ±1%=±1°C at 100°C *With vents closed.

PN60

## PN-Series, PEAK Natural Convection General Purpose Laboratory

Ovens with high specification. Suitable for general laboratory heating & drying applications yet with the versatility & optional accessories for more complex and demanding applications. Natural gravity convection offers greater economy and more gentle airflow within the chamber.

### Options:

- Over-temperature protection to DIN 12-880 class 2 (recommended to protect valuable contents & for unattended operation).
- Hydraulic over-temperature thermostat.
- MRC 301, PID controller with simple ramp to set-point function.
- Digital countdown timer to switch oven off.
- Top access port for independent thermocouple.
- Accessory shelves & runners.
- Cable access port.
- Viewing window door*.
- Through door illumination system*.
- Stacking frame.
- Key-lock door.
- Door switch.
- Floor stands & wheeled trolleys.
- Routine spares kit.

### Features:

- Economical natural convection models
- 300°C maximum operating temp.
- 27 to 215 Liters chamber volumes.
- TLK simple PID controller.
- Chemically resistant stainless steel liner.
- Two nickel-chrome plated wire shelves
- Lever latch door & airtight silicone seal.
- Compliant with safety standards BS EN 61010-2-010-1995 & BS EN 50014:1993.
- Meets "Electrically Heated Drying Oven" performance standard BS 2648.

PN200

| Model | Max. Temp. (°C) | Heat -up time to Max. (mins) | Temp. stability °C PID | Temp. uniformity 300°C (±°C) | Recovery time to Max. (mins) | Dimensions | | Shelves Fitted/ accepted | Shelf loading Each/ total (kg) | Vol. (Liters) | Max. Power (W) | Weight (kg) | Power Supply |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Internal HxWxD(mm) | External HxWxD(mm) | | | | Holding Power max W | | |
| **PN30** | 300 | 52 | ±0.5 | 7.0 | 8.5 | 255x330x320 | 470x665x470 | 2/3 | 10<br>20 | 27 | 750<br>300 | 30 | 230V single phase |
| **PN60** | 300 | 52 | ±0.5 | 7.0 | 8.5 | 350x392x420 | 570x765x570 | 2/5 | 10<br>30 | 57 | 1000<br>480 | 45 | |
| **PN120** | 300 | 52 | ±0.5 | 7.0 | 8.5 | 450x492x520 | 670x865x670 | 2/9 | 10<br>40 | 115 | 1500<br>720 | 60 | |
| **PN200** | 300 | 58 | ±0.5 | 7.0 | 10 | 700x592x520 | 920x965x670 | 2/15 | 10<br>50 | 215 | 2250<br>1160 | 75 | |

Minimum operating temperature approximately ambient plus 10°C. Uniformity is measured in an empty chamber with vents closed, after a stabilization period. Shelf loadings are based on evenly distributed weight.

# OVENS 300°C For Solvents


PF30-SC

## PF-SC Series, 300°C Ovens For Solvents

Most vapor explosions in ovens occur when materials that can absorb large quantities of solvent are being processed; typical examples being coils & similar electrical equipment, fibre board & textiles. Every flammable solvent has a lower & upper flammable limit, & unless the concentration of the solvent VAPOR is within this range it will not explode. The range widens, for most solvents, with increasing temp. Precautions must be taken to ensure that no substantial volume of vapor/air mixture within the range of flammability can occur in the oven. It is not sufficient to permit an explosive mixture to form and attempt to obtain safety by preventing foreseeable means of ignition. The precautions must be directed towards keeping the concentration of solvent VAPOR down and this is achieved by permitting only the minimum Quantity of solvent to enter the oven and by ventilating the oven continuously in use, to dilutes the solvent VAPORs emitted to one quarter of the lower flammable limit. The "flash-point" of a substance is the temperature at which it evolves sufficient VAPOR to form an ignitable mixture with air when tested under standard conditions. Thus, if the flash point of a liquid is below the temperature of the work room it will give off VAPOR until (and beyond) the point where the whole room is full of a flammable mixture, or until all the liquid has evaporated. If the flash point is higher than room temperature, then the liquid will never give off enough VAPOR to form a flammable mixture in the room. Low flash point solvents are thus intrinsically dangerous. However, the choice of a solvent with a high flash point will usually make no difference to the safety of the oven used to evaporate it, since the oven almost Inevitably has a working temperature higher than the flash point. It is still most desirable to choose solvents with the highest possible flash points to reduce danger at the dipping, spraying and other processes prior to the oven.

**Pre-Treatment:** The first step should be to limit as far as possible the amount of solvent entering the oven at each loading. Particular care is needed with articles which have been dipped in paint or varnish to give a thicker coating than is usually obtained by spraying. As much drying as possible should be carried out before the articles are added Into the oven. Where the process permits, it is a good practice, both for safety and economy of heat, to allow the load to remain for a short time in a semi-enclosure provided with mechanical exhaust ventilation, so that air at room temperature can remove some of the solvent. This arrangement also has the advantage that dripping in the oven is reduced, whereby the accumulation of paint and varnish residues in the oven became less of a problem.

**Ventilation:** Reliance on natural convection currents up the chimney is not normally an acceptable method of introducing sufficient fresh air into the oven to prevent a solvent/air explosion mixture forming. The oven should be fitted with mechanical exhaust ventilation. It is important that the exhaust draught should be applied at points in the oven where the rate of evaporation is a maximum, and that there are no dead spots in the oven space where there is Tittle air movement, with little dilution of the flammable VAPORs as a result. In order to improve the temperature distribution and to obtain an even flow of air throughout the oven it is normal to have some form of air recirculation. A proportion of the VAPOR and fume laden air should be extracted through a flue fitted with its own separate exhaust fan. Reliance on spillage of sufficient VAPOR and fume laden air through a rotund draught flue from the redirection system tends to be unsatisfactory. An interlock between the heat source and the exhaust ventilation is the normal method of ensuring that sufficient air is Introduced into the oven for safety.

**Explosion Relief & Door Fastening:** Although an oven may be provided with comprehensive precautions, explosions can still occur due to failure of components, inadequate servicing, or deliberate scotching of safety devices. The probability of fatal or serious injury to work people, or serious damage to the oven, can be reduced substantially if suitable explosion relief is provided, coupled with adequate securing of the doors of the oven to prevent their becoming missiles in the event of an explosion. It is recommended that explosion relief panels are fitted to all solvent evaporating ovens Irrespective of chamber volume. These notes cover the bare essentials of the requirements for solvent evaporating ovens used in stovlng and curing processes.

| Model | PF30-SC | PF60-SC | PF120-SC | PF200-SC |
|---|---|---|---|---|
| Max. Temp (°C) | 300 | 300 | 300 | 300 |
| Chamber Dimensions (mm) (H) | 300 | 400 | 500 | 750 |
| (W) | 292 | 392 | 492 | 590 |
| (D) | 320 | 420 | 520 | 520 |
| Outside Dimensions (mm) (H) | 470 | 570 | 670 | 920 |
| (W) | 665 | 765 | 865 | 965 |
| (D) | 470 | 570 | 670 | 670 |
| Chamber Capacity (Liters) | 28 | 66 | 128 | 230 |
| Weight (kg) | 30 | 45 | 60 | 75 |
| Shelves | | | | |
| Number Supplied | 2 | 2 | 2 | 2 |
| Max. Possible | 3 | 5 | 9 | 15 |
| Max. Dist load/shelf kg | 10 | 10 | 10 | 10 |
| Max load kg | 20 | 30 | 40 | 50 |
| **Performance** | | | | |
| Power Rating at 240V (watts) | 1000 | 1500 | 2000 | 2700 |
| Holding Power* at Max. temp. (watts) | 350 | 600 | 800 | 1250 |
| Temp. Stability on/off control (°C) | ±1.0 | ±1.0 | ±1.0 | ±1.0 |
| Temp. Stability PID control (°C) | ±0.2 | ±0.2 | ±0.2 | ±0.2 |
| Heat up Times* 100°C | 4.5 | 4.5 | 4.5 | 5.5 |
| (Mins) 200°C | 12 | 12 | 12 | 14 |
| 240V | 25 | 25 | 25 | 30 |
| 300°C | | | | |
| Recovery Times* 100°C | 1 | 1 | 1 | 1.5 |
| (Mins) 200°C | 2.5 | 2.5 | 2.5 | 3 |
| Door Open 60sec 300°C | 4 | 4 | 4 | 5 |
| 240V | | | | |
| Air Exchanges vol (l/h) @ 100°C | 10,000 | 10,000 | 10,000 | 10,000 |
| Air Exchanges (Exchanges/Hour) | 360 | 153 | 79 | 44 |

AX60

## AX–Series, APEX Ovens 250°C

An uncomplicated economical range of ovens, built to MRC's high standards, with safe external surface temperatures that conform to BSEN61010.

### Features:

- 250°C maximum operating temperature.
- 30, 60 or 120 Liters chamber volumes.
- Fan convected for rapid heating & excellent uniformity.
- Chemically resistant stainless steel liner.
- Two adjustable nickel–chrome plated wire shelves.
- Lever latch door & airtight silicone seal.
- Built to comply with BS EN 61010–2–010–1995 & BS EN 50014:1993.
- Meets "Electrically Heated Drying Oven" performance standard BS 2648.

### Options:

- Over–temperature protection to DIN 12–880 class 2 (recommended to protect valuable contents and for unattended operation).
- Digital countdown timer to switch oven off.
- Additional sets of shelves & runners.
- Key–lock door.
- Low voltage options for use below 220V.
- Routine spares kit.


| Model | Max. Temp. (˚C) | Heat –up time to Max. (mins) | Temp. uniformity 250˚C (±˚C) | Recovery time to Max. (mins) | Dimensions | | Shelves Fitted/ Accepted | Vol. (Liters) | Air changes /hr | Max. Power (W) | Weight (kg) | Power Supply |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Internal HxWxD(mm) | External HxWxD(mm) | | | | Holding Power max W | | |
| **AX30** | 250 | 23 | ±5.0 | 3 | 295x300x320 | 440x590x465 | 2/4 | 28 | 65 | 1000 320 | 24 | 230V single phase |
| **AX60** | 250 | 25 | ±5.0 | 3 | 395x400x420 | 540x690x565 | 2/6 | 66 | 28 | 1500 475 | 37 | |
| **AX120** | 250 | 26 | ±5.0 | 3 | 495x500x520 | 640x790x665 | 2/8 | 128 | 14 | 2000 650 | 55 | |

Minimum operating temperature approximately ambient plus 10°C. Uniformity is measured in an empty chamber with vents closed, after a stabilization period. Shelf loadings are based on evenly distributed weight.

LHT 58/350

## LHT 58/350, Chamber Ovens up to 350°C

Economical low temperature electric ovens that are intended for the thermal processing of various materials and parts up to a temperature of 350°C. The products can be used in scientific laboratories, educational institutions, medicine, and industry, Forced air circulation assures an even temperature distribution throughout the chamber, and high quality thermal processing occurs quickly.

### Basic model:

- Forced air circulation
- Regulated air intake and extraction
- Chamber made of regular or stainless steel
- Hermetically closed doors
- Microprocessor–controlled thermoregulator
- Includes standard shelves
- High–quality, ecological thermal insulation material
- Low electric power usage
- Short heating up/Cooling down period
- High degree of accuracy
- Exterior painted with powder coating (RAL 7035)
- Up to a 24 month guaranty period.

| Model | Vol. l | T max. °C | Chamber DIM. (mm) | | | Overall DIM. (mm) | | | Power (kW) | Voltage (V) | Weight (Kg) | Air Flow | Number of shelves | | Chamber Material | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Width | Length | Height | Width | Length | Height | | | | | Sets | Max. | Stainless steel | Mild steel |
| **LHT 58/350** | 58 | 350 | 390 | 380 | 360 | 685 | 675 | 615 | 2 | 230 | 40 | • | 3 | 7 | • | ○ |

# OVENS 600°C High Temperature

LHT 6/60

## LHT–Series, Laboratory High Temperature Ovens

### Standard features:

- 400°C, 500°C or 600°C Operating temperatures.
- 30, 60 & 120 Liter capacities.
- 301 PID controller with ramp to set point function.
- Heavy duty convection fan for good uniformity.
- Low thermal mass insulation for energy efficiency & rapid heating.
- Corrosion resistant, polished stainless steel interior .
- 2 Multi–position shelves.
- Suitable for continuous operation (see options*) .
- Double skin construction for cool safe outer case .
- Hard wearing, zinc coated & stoved epoxy polyester coated exterior.

### Options:

- Cable entry ports .
- Over temperature protection to DIN 12–880 class 2 (recommended to protect valuable contents & for unattended operation )*.
- A range of sophisticated digital control & multi segment programmers is available.
- Optional over temperature protection recommended for continuous operation & to protect valuable contents.
- Process timer.
- RS232/RS485 communications.
- Viewing window.
- Chamber illumination (requires viewing window)**.
- Variable speed fan.
- Floor stands & stacking frames.
- Routine spares kit.
- Extraction fan (may alter achievable uniformity).
- Stoving & curing upgrade for use with small volumes of volatile solvent or paint fumes (comprises over temperature protection, extraction fan and an explosion relief panel. **The stoving & curing option is not compatible with the viewing door or through door illumination options.

| Model | Max. Temp. (°C) | Temp. Stability (°C) | Temp. Uniformity (°C) @250°C | Heat–up time to Max. (mins) | Recovery time to Max. (mins) | Dimensions | | Shelves Fitted/ Accepted | Volume (Liters) | Max. Power (W) | Weight (kg) | Power Supply |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Internal HxWxD(mm) | External HxWxD(mm) | | | | | |
| **LHT4/30** | 400 | ±0.5 | ±5.0 | 50 | 10 | 300x300x305 | 570x860x550 | 2 | 30 | 1000 | 73 | 230V single phase |
| **LHT4/60** | 400 | ±0.5 | ±5.0 | – | 16 | 400x400x405 | 670x930x670 | 2/3 | 60 | 1500 | 99 | 230V single phase |
| **LHT4/120** | 400 | ±0.5 | ±5.0 | – | 20 | 645x455x405 | 920x1060x650 | 2/4 | 120 | 2250 | 179 | 230V single phase |
| **LHT5/30** | 500 | ±0.5 | ±5.0 | – | 10 | 300x300x305 | 570x860x550 | 2 | 30 | 2000 | 73 | 230V single phase |
| **LHT5/60** | 500 | ±0.5 | ±5.0 | 50 | 16 | 400x400x405 | 670x930x670 | 2/3 | 60 | 2250 | 99 | 230V single phase |
| **LHT5/120** | 500 | ±0.5 | ±5.0 | – | 20 | 645x455x405 | 920x1060x650 | 2/4 | 120 | 3000 | 179 | 230V single phase or 3 phase |
| **LHT6/30** | 600 | ±0.5 | ±5.0 | 70 | 10 | 300x300x305 | 570x860x550 | 2 | 30 | 2000 | 73 | 230V single phase |
| **LHT6/60** | 600 | ±0.5 | ±5.0 | – | 10(+) | 400x400x405 | 670x930x670 | 2/3 | 60 | 2250 | 99 | 230V single phase |
| **LHT6/120** | 600 | ±0.5 | ±5.0 | – | – | 645x455x405 | 920x1060x650 | 2/4 | 120 | 3000 | 179 | 230V single phase or 3 phase |

3 phase (uses 2 phases & neutral of 380/220V – 415/240V supply)
(+) Recovery to 500°C set –pomt

# 600°C Heavy Duty, High Temperature OVENS

HT6/220

## HT4/5/6–Series, HT Industrial High Temperature

Ideal for applications such as tempering, glass annealing, preheating and stress relieving these small scale industrial ovens are able to operate efficiently up to 600°C.

### Features:

- 400°C, 500°C or 600°C maximum operating temperature.
- 28, 95 or 220 or 350 Liter capacity.
- 301 controller providing single ramp to set point or countdown process timing.
- Rugged well proven design.
- Excellent performance & reliability.
- Door locks easily operated whilst wearing gloves.
- Stainless steel liner.
- Steel section construction.
- Stainless steel mesh shelves.

### Options:

- Over-temperature protection to DIN 12-880 class 2 (recommended to protect valuable contents & for unattended operation).
- Digital process timer.
- Programmable controller.
- Additional shelves.
- Stoving & curing kit to extract volatile fumes.
- Chart recorders & paper free digital acquisition (DAQ) devices.
- Viewing window.
- Fixed or castor mounted floor stands.
- Standard spares kit.
- Bespoke specifications are available for AMS 2750 (NADCAP).


HT6/350

| Model | Max. Temp. (°C) | Temp. stability (±°C) | Heat -up time to Max. (mins) | Temp. uniformity (±°C) | Recovery time to Max. (mins) | Dimensions | | Shelves Fitted/ accepted | Shelf loading Each/ total (kg) | Vol. (Liters) | Max. power (W) | Power Supply |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Internal HxWxD(mm) | External HxWxD(mm) | | | | | |
| **HT4/28** | 400 | ±0.5 | 60 | ±5.0 | 10 | 305x305x305 | 880x675x885 | 2/2 | 10<br>20 | 28 | 1000 | Single phase |
| **HT4/95** | 400 | ±0.5 | 60 | ±5.0 | 10 | 455x455x455 | 1010x880x1120 | 3/4 | 15<br>30 | 94 | 3000 | Single phase |
| **HT4/220** | 400 | ±0.5 | 60 | ±5.0 | 10 | 610x610x610 | 1160x1030x1280 | 3/4 | 25<br>50 | 227 | 4500 | Single phase |
| **HT4/350** | 400 | ±0.5 | – | ±5.0 | – | 700x700x700 | 1665x1710x1200 | 3/4 | 25<br>50 | 343 | – | Single phase or 3 phase |
| **HT5/28** | 500 | ±0.5 | 60 | ±5.0 | 16 | 305x305x305 | 880x675x885 | 2/2 | 10<br>20 | 28 | 2500 | Single phase |
| **HT5/95** | 500 | ±0.5 | 60 | ±5.0 | 16 | 455x455x455 | 1010x880x1120 | 3/4 | 15<br>30 | 94 | 3000 | Single phase |
| **HT5/220** | 500 | ±0.5 | 60 | ±5.0 | 16 | 610x610x610 | 1160x1030x1280 | 3/4 | 25<br>50 | 227 | 4500 | Single phase or 3 phase |
| **HT5/350** | 500 | ±0.5 | – | ±5.0 | – | 700x700x700 | 1665x1710x1200 | 3/4 | 25<br>50 | 343 | – | Single phase or 3 phase |
| **HT6/28** | 600 | ±0.5 | 75 | ±5.0 | 20 | 305x305x305 | 880x675x885 | 2/2 | 10<br>20 | 28 | 2000 | Single phase |
| **HT6/95** | 600 | ±0.5 | 70 | ±5.0 | 20 | 455x455x455 | 1010x880x1120 | 3/4 | 15<br>30 | 94 | 4500 | Single phase or 2 phase |
| **HT6/220** | 600 | ±0.5 | 90 | ±5.0 | 20 | 610x610x610 | 1160x1030x1280 | 3/4 | 25<br>50 | 227 | 6000 | Single phase or 3 phase |
| **HT6/350** | 600 | ±0.5 | – | ±5.0 | – | 700x700x700 | 1665x1710x1200 | 3/4 | 25<br>50 | 343 | 9000 | 3 phase |

Minimum operating temperature approximately ambient plus 10°C. Uniformity is measured in an empty chamber with vents closed, after a stabilization period. Shelf loadings are based on evenly distributed weight.

# OVENS 250°C Clean Room

## CR-Series, Class 100 Clean Room Ovens

CR/70

All sources of particulate contamination are fully sealed. The sealed stainless steel interior and gloss white epoxy finish make the ovens easily cleaned.

### Standard features:

- Designed for operation within Class 100 environments (US FED STD 209E) .
- 250°C maximum operating temperature .
- 30 to 1790 Liter chamber volumes.
- Fully sealed low thermal mass insulation to avoid shedding fibres .
- Fully enclosed brush less fan motor .
- PID controller, with single ramp to set-point facility .
- Smooth easily cleaned gloss epoxy exterior
- Polished stainless steel sealed interior enables use of inert gas atmosphere.
- Perforated stainless steel shelves .
- Particle free silicone rubber door seal.
- Membrane control panel with clear bright LED display.
- Double skin construction for cool safe outer case temperature .
- Fully adjustable chamber ventilation.

### Options:

Over-temperature protection to DIN 12-880 class 2 (recommended to protect valuable contents & for unattended operation) • HEPA filtered airflow available • Digital process control timers & multi segment programmers available • Paperless DAQ (Data Acquisition) graphical recorders available • Top access port for independent thermocouple • Cable access port • Viewing window door • Through door illumination system • Stacking frame to enable units to be stacked one upon another • Key-lock door • Door switch to cut off power when the door is open • Fully customized through wall (flange fitted) designs are available.

CR/30

| Model | Max. Temp. (°C) | Temp. Stability (°C) | Temp. Uniformity (°C) @250°C | Heat-up time to Max. (mins) | Recovery time to Max. (mins) | Dimensions | | Shelves Fitted/ Accepted | Shelf Loading Each/ Total (kg) | Volume (Liters) | Max. Power (W) | Power Supply |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Internal HxWxD(mm) | External HxWxD(mm) | | | | | |
| **CR/30** | 250 | ±0.2 | ±3.0 | 35 | 4 | 310x310x310 | 655x460x670 | 2/3 | 10<br>20 | 30 | 1000 | 230V single phase |
| **CR/70** | 250 | ±0.2 | ±3.0 | 35 | 4 | 310x470x470 | 655x620x820 | 2/5 | 10<br>30 | 68 | 1500 | 230V single phase |
| **CR/130** | 250 | ±0.2 | ±4.0 | 35 | 4 | 550x470x470 | 895x620x820 | 3/9 | 10<br>40 | 121 | 2000 | 230V single phase |
| **CR/180** | 250 | ±0.2 | ±5.0 | 58 | 5 | 770x470x470 | 1115x620x820 | 3/15 | 10<br>50 | 170 | 2500 | 230V single phase |
| **CR/220** | 250 | ±0.2 | ±5.0 | 75 | 4 | 610x610x610 | 1130x780x850 | 3/5 | 15<br>45 | 227 | 3000 | single phase |
| **CR/330** | 250 | ±0.2 | ±5.0 | 80 | 6 | 915x610x610 | 1440x780x850 | 4/8 | 15<br>60 | 340 | 4500 | single phase or 3 phase |
| **CR/450** | 250 | ±0.3 | ±5.0 | 75 | 9 | 1220x610x610 | 1750x780x850 | 5/11 | 15<br>75 | 450 | 6000 | 3 phase |
| **CR/840** | 250 | ±0.3 | ±5.0 | – | – | 1525x915x610 | 2050x1065x850 | 6 | 15<br>– | 850 | 12000 | 3 phase |
| **CR/1790** | 250 | ±0.3 | ±5.0 | – | – | 1220x1220x1220 | 1750x1420x1450 | 5 | 15<br>– | 1810 | 18000 | 3 phase |

Minimum operating temperature approximately ambient plus 200°C. Uniformity values are measured in an empty chamber, with vents closed after a stabilization period. Shelf loadings are based on evenly distributed weight

## HTCR-Series, HTCR High Temperature Clean Room

All sources of particulate contamination are fully sealed, whilst the sealed stainless steel interior and gloss white epoxy finish make the ovens easily cleaned. Bespoke ovens are available with pass through construction or with flanges for through wall mounting into the clean room area.


HTCR 6/28

### Features:

- Designed for operation within Class 1000 environments (US FED STD 209E).
- 400°C, 500°C or 600°C maximum operating temperatures.
- 28 to 1000 Liter chamber volumes.
- Fully sealed low thermal mass insulation avoids shedding fibres.
- Fully enclosed brush less fan motor.
- 301 controller, with single ramp to set-point facility.
- Smooth easily cleaned gloss epoxy exterior.
- Polished stainless steel sealed interior.
- Perforated stainless steel shelves.
- Particle free silicone rubber door seal.
- Membrane control panel with clear bright LED display.
- Double skin construction for cool safe outer case temperature.
- Fully adjustable chamber ventilation.

### Options:

• Over-temperature protection to DIN 12-880 class 2 (recommended to protect valuable contents & for unattended operation) • Digital process control timers & multi segment programmers available • Paperless DAQ (Data Acquisition) graphical recorders available • Top access port for independent thermocouple • Cable access port • Viewing window door • Through door illumination system • Stacking frame • Key-lock door • Door switch • Fixed or castor mounted floor stands • Through wall (flange fitted) as well as fully bespoke designs are available.

| Model | Max. Temp. (°C) | Heat -up time to Max. (mins) | Temp. stability °C | Temp. uniformity 250°C (±°C) | Recovery time to Max. (mins) | Dimensions | | Shelves Fitted/ accepted | Shelf loading Each/ total (kg) | Vol. (Liters) | Max. Power (W) | Power Supply |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Internal HxWxD(mm) | External HxWxD(mm) | | | | | |
| **HTCR4/28** | 400 | 50 | ±0.5 | ±5.0 | 10 | 305x305x305 | 580x675x885 | 2/2 | 10<br>20 | 28 | 1000 | 230V single phase |
| **HTCR4/95** | 400 | 90 | ±0.5 | ±5.0 | 10 | 455x455x455 | 1010x810x1120 | 3/5 | 15<br>30 | 95 | 3000 | 230V single phase |
| **HTCR4/220** | 400 | 75 | ±0.5 | ±5.0 | 16 | 610x610x610 | 1160x1030x1280 | 3/5 | 10<br>50 | 220 | 6000 | 230V single phase |
| **HTCR4/500** | 400 | - | ±0.5 | ±5.0 | - | 800x800x800 | 1305x1115x1450 | 3/5 | - | 500 | 7500 | single phase or 3 phase |
| **HTCR4/1000** | 400 | - | ±0.5 | ±5.0 | - | 1000x1000x1000 | 1310x1530x1635 | 3/5 | - | 1000 | 12000 | 3 phase |
| **HTCR5/28** | 500 | 75 | ±0.5 | ±5.0 | 16 | 305x305x305 | 880x675x885 | 2/2 | 10<br>20 | 28 | 2000 | 230V single phase |
| **HTCR5/95** | 500 | 110 | ±0.5 | ±5.0 | 16 | 455x455x455 | 1010x810x1120 | 3/5 | 15<br>30 | 95 | 3000 | single phase |
| **HTCR5/220** | 500 | 105 | ±0.5 | ±5.0 | 16 | 610x610x610 | 1160x1030x1280 | 3/5 | 10<br>50 | 220 | 4500 | single phase or 3 phase |
| **HTCR5/500** | 500 | - | ±0.5 | ±5.0 | - | 800x800x800 | 1305x1115x1450 | 3/5 | 10<br>20 | 500 | 9000 | single phase or 3 phase |
| **HTCR5/1000** | 500 | - | ±0.5 | ±5.0 | - | 1000x1000x1000 | 1310x1530x1635 | 3/5 | 15<br>30 | 1000 | 15000 | 3 phase |
| **HTCR6/28** | 600 | 110 | ±0.5 | ±5.0 | 20 | 305x305x305 | 880x675x885 | 2/2 | 10<br>50 | 28 | 2000 | 3 phase |
| **HTCR6/95** | 600 | 110 | ±0.5 | ±5.0 | 20 | 455x455x455 | 1010x810x1120 | 3/5 | 10<br>20 | 95 | 4500 | 3 phase |
| **HTCR6/220** | 600 | 120 | ±0.5 | ±5.0 | 20 | 610x610x610 | 1160x1030x1280 | 3/5 | 15<br>30 | 220 | 6000 | 3 phase |
| **HTCR6/500** | 600 | - | ±0.5 | ±5.0 | - | 800x800x800 | 1305x1115x1450 | 3/5 | - | 500 | 12000 | single phase or 3 phase |
| **HTCR6/1000** | 600 | - | ±0.5 | ±5.0 | - | 1000x1000x1000 | 1310x1530x1635 | 3/5 | - | 1000 | 15000 | 3 phase |

Minimum operating temperature approximately ambient plus 10°C. Uniformity is measured in an empty chamber with vents closed, after a stabilization period. Shelf loadings are based on evenly distributed weight.

# OVENS Vacuum, Small Capacity, 210°C

1407DIG

## Analog Model For Accuracy and Economy

The Models 1407-2/1408-2 feature hydraulic thermostats & corrosion resistant stainless steel interior. A 13mm thick tempered glass observation window resists breakage under vacuum & permits easy viewing of the chamber interior. Glass viewing windows are "spring mounted" which allows the door to close squarely, thus ensuring a tight seal around the oven door. Furthermore, the door gasket has a beaded edge which also ensures vacuum integrity. Door gaskets are designed to be easily removable & interchangeable. The standard gasket supplied with all models is made of highly resistant SILICONE rubber. Also available as optional accessories are application specific gaskets. The BUNA-N gasket is available for solvent applications & is limited to a maximum temperature of 125°C. The Fluorosilicone gasket is available for applications involving acids & is limited to a maximum temperature of 200°C.

## Digital Model for Top Performance & Accuracy

The Model 1407DIG feature PID (Proportional Integral Differential) controllers. This controller delivers precise temp. stability & repeatability. Dual digital display of setpoint & actual chamber temperature.

## 1407-2/1408-2, Small Vacuum Ovens

Vacuum ovens are used for a wide variety of vacuum drying, curing and moisture content testing. Common applications include drying heat sensitive samples, moisture determination, & drying heat sensitive samples under a controlled atmosphere.

MRC vacuum ovens are specifically designed for unparalleled performance when utilized for these, and other, applications. Since there is no air in the vacuum chamber, heat is transferred from the heating elements to the interior chamber wall, then to the shelves, and finally to the samples.

MRC Vacuum ovens maximize conductive heat techniques. To minimize conductivity resistance, ALUMINIUM shelves are provided with all MRC vacuum ovens. The oven chambers are wrapped in high temperature insulation which aids overall performance and promotes energy efficiency. MRC offers both standard ANALOG vacuum ovens with mechanical thermostat & Digital PID controlled models. Both ranges include unique design features which enhance the overall performance of the ovens. These features include durable construction with corrosion resistance stainless steel chambers, true vacuum valves, cross-flow ventilation through the oven chamber, and interchangeable door gasket for application specific use. Independent, resettable circuit breakers prevent any electrical overload.

1408-2

## Options:

- Temperature Programer 4 programs of 16 segments, Model: Eurotherm 2416P4.
- RS-232/485 communication. Model: Eurotherm 3216E.
- Oil vacuum pump.
- Oil Free vacuum pump.


## Specifications:

| Model Analog | 1407-2 | 1408-2 |
|---|---|---|
| Model Digital | 1407DIG | 1408DIG |
| Chamber Capacity (Liters) | 16 | 47 |
| Temperature Range | Ambient 15-210°C | |
| Temperature Uniformity | ±3°C @ 60°C, ±9°C @ 120°C, ±13°C @ 200°C | |
| Heat up time, Minutes | 90 minutes to 150°C | |
| Shelves Supplied | 3 | 2 |
| Outside dimensions(mm) | H572xD483xW394 | H642xD705xW470 |
| Inside dimensions(mm) | H228xD304xW228 | H304xD508xW304 |
| Weight | 27Kg | 50Kg |
| Watts/Amps-230Volt | 550/2.4 | 1200/5.2 |
| Cycle | 50/60 Hz | |
| Phase | Single | |

1425-2

## 1425-2/1445-2/1465-2, Small/Medium Vacuum Ovens

All our vacuum ovens are built with a stainless steel chamber for exceptional durability. Our double plenum design meets UL, CSA and EU safety requirements resulting in a cool outer surface. The doors on these units have positive latch handles with spring-loaded glass to facilitate a good vacuum seal without hinge binds that shorten the gasket life. A selection of gaskets (for specific applications) and a small bench top footprint increase the versatility of these ovens. The unique cross-flow ventilation forces inert gas to fill the entire chamber. To achieve required vacuum levels, users can choose from a 3/8 inch orifice or a KF25 fitting to withstand heavy use & minimize draw-down time. Maximum permitted end vacuum is 10 µ. Leak rate is 10 µ per hour.


1445-2/1465-2

### Features:

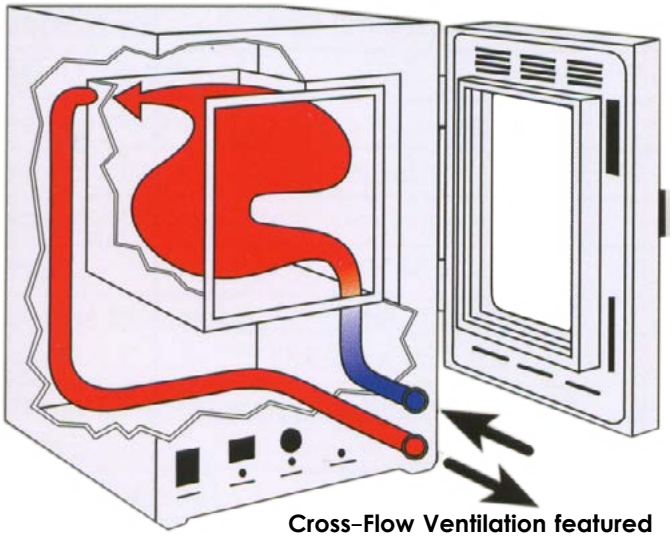
- Fully Programmable Watlow Temperature Control
- Capable of 40 Step Ramp and Soak Profiles or 4 Files With 10 Steps Per File
- Digital Vacuum Gauge
- RS485 Communication.

### Applications:

- Moisture Determination
- Out Gassing Solids
- Aging Tests
- Plating
- Chemical Resistance Studies
- Drying of Paper
- Rubber and Textiles
- Desiccating
- Dry Sterilization
- Out Gassing Liquids
- Vacuum Storage
- Electronic Process Control.


Back


1425-2


Cross-Flow Ventilation featured in all Vacuum Ovens

### Precise Temperature Control:

- Heat-up Time 90 minutes to 150°C
- Temperature Adjustable by 0.1°C
- Temperature Uniformity ±6% of Set Point
- Temperature Range Ambient +10°C to 220°C.

### Specifications:

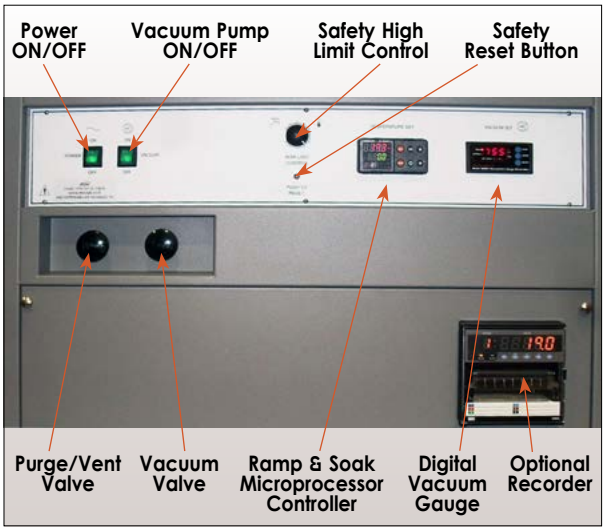
| Model | 1425-2 | 1445-2 | 1465-2 |
|---|---|---|---|
| Capacity (Liters) | 16 | 47 | 127 |
| Chamber dimensions (mm) | W228xD304xH228 | W304xD508xH304 | W457xD609xH457 |
| Outside dimensions (mm) | W445xD578xH597 | W520xD750xH667 | W673xD876xH819 |
| Temp. Range / Uniformity | 10°C above ambient to 220°C / ±6% of set point | | |
| Electrical Specifications | Volts: 120V Hertz: 50/60 Hz Watts: 850W Amps: 7.0A | Volts: 120V Hertz: 50/60 Hz Watts: 1100W Amps: 9.0A | Volts: 120V Hertz: 50/60 Hz Watts: 1500W Amps: 12.5A |
| Temperature Control | 0.1°C | | |
| Heat-up (min) | 90 minutes at 150°C | | |
| Shelves | 3 Supplied | | |

# OVENS Vacuum, Large Capacity, 200°C


## Features/Benefits:

- Large capacity is efficient and accommodating
- Ramp and Soak Controller
- Stainless Steel Interior
- KF40 Fitting Included
- All stainless steel construction
- Programmable Controller
- Digital Vacuum Gauge for accuracy
- Cross-flow ventilation allows for a dry oxygen free environment.
- System ready to receive vacuum pump.

## Panel:




## Applications:

- Vacuum drying & curing
- Moisture determination
- Out-gassing solids & liquids
- Aging tests
- Electronic process control
- Vacuum embedding
- Vacuum storage
- Plating

## 1495D, Large Vacuum Oven

**Unique Design.** The 1495D Model is a general purpose vacuum oven specially designed for professional and industrial use. The combination of the oven and a ruggedly constructed mobile stand creates an ideal vacuum application station.
The stand is designed for mounting a vacuum pump at the base. All vacuum plumbing and KF25 connections are provided (vacuum pump not included).
**Precision Controllers.** The Waltow 981 temp. controller, programmable and microprocessor-based, offers multiple ramp and soak capabilities, including storing and running up to 24 temperature profiles. The controls are easily adjustable and the control panel is user friendly. A digital vacuum gauge shows chamber vacuum level in measurements of Torr and m/Torr. The display range is 760 Torr down to 0 mil Torr. A secondary independent high limit controller provides over temperature safety protection.
**Rugged Construction.** High grade stainless steel construction is used for the exterior and chamber interior. Vacuum valves incorporate 3/8" brass orifices to withstand heavy use.


**Introduced Gas Saturates Chamber Uniformly.**
Our unique cross-flow ventilation design forces nitrogen or other inert gases to fill the entire chamber. Gas is forced across the greatest distance of the chamber, purging the chamber as it passes over the samples. Corrosion-resistant stainless steel tubing is used for the gas purge piping system. Use this feature to reduce effects of oxidation.
The oven chamber is wrapped in high temperature insulation which aids overall performance and promotes energy efficiency. Powder coat construction, true vacuum valves and cross-flow ventilation through the oven chamber enhance total performance. The vacuum oven is secured to a ruggedly constructed mobile stand to create a vacuum pump at the base. Although the oven is not supplied with a vacuum pump, all vacuum plumbing and KF25 connections are provided.

| Model | 1495D |
|---|---|
| System Type | Vacuum Oven Station |
| Controls/Display | Digital mProc. |
| Chamber Capacity (Liters) | 264 |
| Temperature range | Amb. +5°C to 220°C |
| Temp. uniformity | ±7.0°C at 150°C |
| Heat up (min) | 90 minutes at 150°C |
| High Limit Control | Yes-Independent |
| Outside DIM. (mm) | W915xD1182xH1575 |
| Inside DIM. (mm) | W711xD609xH609 |
| Vacuum Gauge | Digital-m/Torr Scale |
| Standard Gasket Material | Viton |
| Shelves Supplied | 3 Aluminium |
| Maximum Shelves | 7 Shelves |
| Shipping Weight in kilograms | 445kg |
| Element Wattage | 3500 |
| Electrical Requirements: Max. Amp draw at 220Vac Power Frequency/Phase | 16 50-60 Hz/ Single Phase |

* – 2 Denotes 220V

VHT 75/550

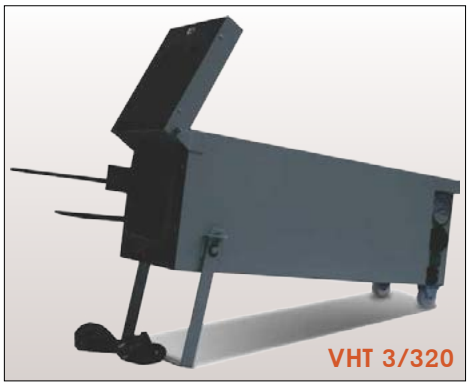
## VHT 75/550, Electrode Oven

Shaft furnace (loading from the top) is designed for welding electrodes heating and drying up to 550 °C.

- Maintains up to 40 kg of 45 cm electrodes
- 15 containers are inside for electrodes storage
- Temperature range + 50–+550 °C, temperature adjustable
- Micro processor temperature controller
- Door opening to the top
- Chamber is made from stainless steel
- Exterior is treated and painted with a powder paint RAL 7035, abrasion and corrosion resistant finish
- Durable Steel construction means long product life
- Natural air convection
- Thermal insulating wool makes oven energy efficient and keeps electrodes hot and moisture-free.


Baskets Inside

| Model | Capacity | T °C | Chamber dimensions (mm) | Overall dimensions (mm) | Power | Voltage | Weight |
|---|---|---|---|---|---|---|---|
| | l | Max | W×D×H | W×D×H | kW | V | kg |
| VHT 75/550 | 75 | 550 | 340×390×550 | 870×660×850 | 6.00 | 230 | 100 |


VHT 3/320

## VHT 3/320, Electrode Oven

The dry storage container is for dry /dry storage / transportation of welding electrodes.

- Maintains up to 10 kg of 45 cm electrodes
- 2 containers for electrodes storage are inside
- Temperature range + 60–+320 °C, temperature adjustable
- Exterior is treated and painted with a powder paint RAL 7035, abrasion and corrosion resistant finish
- Durable Steel construction means long product life.
- Oven is comfortable for transport to the job
- fitted wheels and handle help to transport electric oven and place it to the right place in the work area
- Thermal insulating wool makes oven energy efficient and keeps electrodes hot and moisture-free.

| Model | Capacity | T °C | Chamber dimensions (mm) | Overall dimensions (mm) | Power | Voltage | Weight |
|---|---|---|---|---|---|---|---|
| | l | Max | W×D×H | W×D×H | kW | V | kg |
| VHT 3/320 | 3 | 320 | 100×500×125 | 230×770×435 | 1.00 | 230 | 14 |


VHT 4.9/100

## VHT 4.9/100, Electrode Oven

Portable electrode oven is designed for dry storage and transportation of welding electrodes.

- Maintains up to 5 kg electrodes of 40 cm
- Temperature range + 60 – +140 °C, temperature non-adjustable
- Durable, stainless steel construction means long product life
- Oven design protects electrodes during transfer from the holding oven to the job
- Light weight oven makes for easy transport to the job
- Square shape gives greater stability vertically or horizontally while working
- Thermal insulating wool makes oven energy efficient and keeps electrodes hot and moisture-fr.

| Model | Capacity | T °C | Chamber dimensions (mm) | Overall dimensions (mm) | Power | Voltage | Weight |
|---|---|---|---|---|---|---|---|
| | l | Max | W×D×H | W×D×H | kW | V | kg |
| VHT 4.9/100 | 4.9 | 140 | 110×90×440 | 150×180×510 | 0.18 | 230 | 6 |