A choice of control systems is available including controllers which simply heat up the oven and hold at one temperature indefinitely as well as more complex programming systems. Access to parameters is simple and easy to understand and is customised to present only those parameters which need to be viewed or adjusted.

Model TDH 02 Controller
The TDH 02 is available as either a wall or a floor standing instrument and is ideal for controlling and monitoring the temperature within the oven. The temperature controller has a large digital display. The controller continually corrects for drift and this gives high precision in controlling the temperature against supply voltage fluctuations. Power feedback is used to stabilise the output power and hence the advanced PID control which provides precise control with the advanced PID control algorithms giving stable ‘straight-line’ control of the processes.

The Eurotherm 2416 CG is an advanced setpoint programming temperature controller which incorporates an 8 segment programmer. It provides precise control, stability and rapid response to process changes.

Overtemperature Protection
An independent alarm instrument type 2116, with thermocouple incorporated into the heating element circuit, is the standard protection. In the event of an overtemperature of the oven, element circuit and, in the case of a multi-element circuit any element which is switched on will automatically shut down the oven safely.

Lenton Traceable Products
All products are manufactured to comply with the relevant safety standards to EN 61010-1:1993 & 61010-2-010:1995. All products carry the CE mark which indicates compliance with appropriate safety directives; ie Low Voltage Safety Directive and Electromagnetic Compatibility directive.
The side mounted control panel avoids damage from accidental conductivity, ensuring very efficient insulation. This also ensures material has a very low thermal mass and thermal temperature. Digital temperature control the front control panel on all models.

The chamber ventilation and exhaust vent are easily adjustable from adjustable air ventilation.

The outer cases are fabricated from corrosion resistant zinc coated stainless steel. All units are provided with non-tilt bright nickel wire heat treatment processes and long term stability testing of materials or components.

The WELLAND series of ovens and incubators has been designed and engineered using the latest computer aided design systems to facilitate production of all metal components on the latest CNC controlled production equipment.

Both gravity and forced air circulation models are available in four sizes with a maximum operating temperature of 300°C. Incubators have a maximum temperature of 80°C.

The designs are constructed from polished stainless steel. All units are provided with non-tilt bright nickel wire strength and robustness.

The outer cases are fabricated from corrosion resistant zinc coated stainless steel. All units are provided with non-tilt bright nickel wire strength and robustness.

The chamber ventilation and exhaust vent are easily adjustable from adjustable air ventilation.

Increased power and low thermal mass enclosed fibre insulation ensure both fast heat up times and reduced recovery times. Reduced holding power once at set temperature, together with the insulation, makes the range economical and outer case temperatures have been significantly reduced.

Both gravity and 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 vapours, a stoving and curing option is available. Also, where processes involve the use of large amounts of water, a moisture extraction option is available.

Options
- Range of counterpoint protection systems in accordance with EN144-6 Part 2
- Mixing and curing options
- Microprocessor control
- Evacuating operation of removable cover
- Timers, Process Stages: Mechanical or electronic time switches
- External temperature
- Rolling frame
- Lockable door latchs
- * Three options may affect chamber uniformity

Stock and robust
The outer cases are fabricated from corrosion resistant zinc coated stainless steel and finished in two tone rubber and epoxy powder coating. The inner case is constructed from polished stainless steel. All units are provided with non-tilt bright nickel wire strength and robustness.

The chamber ventilation and exhaust vent are easily adjustable from adjustable air ventilation.

Increased power and low thermal mass enclosed fibre insulation ensure both fast heat up times and reduced recovery times. Reduced holding power once at set temperature, together with the insulation, makes the range economical and outer case temperatures have been significantly reduced.

Both gravity and 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 vapours, a stoving and curing option is available. Also, where processes involve the use of large amounts of water, a moisture extraction option is available.

Options
- Range of counterpoint protection systems in accordance with EN144-6 Part 2
- Mixing and curing options
- Microprocessor control
- Evacuating operation of removable cover
- Timers, Process Stages: Mechanical or electronic time switches
- External temperature
- Rolling frame
- Lockable door latchs
- * Three options may affect chamber uniformity

Welland Series

The WELLAND series of ovens and incubators has been designed and engineered using the latest computer aided design systems to facilitate production of all metal components on the latest CNC controlled production equipment.

Both gravity and forced air circulation models are included in the Welland series. The bench mounted models are available in four sizes with a maximum operating temperature of 300°C. Incubators have a maximum temperature of 80°C.

The designs are constructed from polished stainless steel. All units are provided with non-tilt bright nickel wire strength and robustness.

Both gravity and 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 vapours, a stoving and curing option is available. Also, where processes involve the use of large amounts of water, a moisture extraction option is available.

Options
- Range of counterpoint protection systems in accordance with EN144-6 Part 2
- Mixing and curing options
- Microprocessor control
- Evacuating operation of removable cover
- Timers, Process Stages: Mechanical or electronic time switches
- External temperature
- Rolling frame
- Lockable door latchs
- * Three options may affect chamber uniformity

Ovens
This modern range of ovens provides a combination of excellent performance and reliability.

The chamber ventilation and exhaust vent are easily adjustable from adjustable air ventilation.

The outer cases are fabricated from corrosion resistant zinc coated stainless steel. All units are provided with non-tilt bright nickel wire strength and robustness.

The chamber ventilation and exhaust vent are easily adjustable from adjustable air ventilation.

Increased power and low thermal mass enclosed fibre insulation ensure both fast heat up times and reduced recovery times. Reduced holding power once at set temperature, together with the insulation, makes the range economical and outer case temperatures have been significantly reduced.

Both gravity and 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 vapours, a stoving and curing option is available. Also, where processes involve the use of large amounts of water, a moisture extraction option is available.

Options
- Range of counterpoint protection systems in accordance with EN144-6 Part 2
- Mixing and curing options
- Microprocessor control
- Evacuating operation of removable cover
- Timers, Process Stages: Mechanical or electronic time switches
- External temperature
- Rolling frame
- Lockable door latchs
- * Three options may affect chamber uniformity

Incubators
The incubators are of the same basic construction as the ovens and have a maximum operating temperature of 80°C. Minimum operating temperature is 10°C above ambient. Both gravity convection and fan assisted versions are available.

All units have an integral sealed glass door to facilitate product inspection and are designed for long term accuracy and reliability. As with all products in the Welland range, a wide choice of control and programming options and other optional features can be included.

Heat up times are excellent and temperature stability with microprocessor three term control varies from ±0.2°C to ±0.5°C, depending on the model type.

The incubator range comprises six models covering the need for: dry heat treatment processes and ovens. All units meet the relevant UK and European health and safety standards.

The outer cases are fabricated from corrosion resistant zinc coated stainless steel. All units are provided with non-tilt bright nickel wire strength and robustness.

The chamber ventilation and exhaust vent are easily adjustable from adjustable air ventilation.

Increased power and low thermal mass enclosed fibre insulation ensure both fast heat up times and reduced recovery times. Reduced holding power once at set temperature, together with the insulation, makes the range economical and outer case temperatures have been significantly reduced.

Both gravity and 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 vapours, a stoving and curing option is available. Also, where processes involve the use of large amounts of water, a moisture extraction option is available.

Options
- Range of counterpoint protection systems in accordance with EN144-6 Part 2
- Mixing and curing options
- Microprocessor control
- Evacuating operation of removable cover
- Timers, Process Stages: Mechanical or electronic time switches
- External temperature
- Rolling frame
- Lockable door latchs
- * Three options may affect chamber uniformity

The chamber ventilation and exhaust vent are easily adjustable from adjustable air ventilation.

The outer cases are fabricated from corrosion resistant zinc coated stainless steel. All units are provided with non-tilt bright nickel wire strength and robustness.

The chamber ventilation and exhaust vent are easily adjustable from adjustable air ventilation.

Increased power and low thermal mass enclosed fibre insulation ensure both fast heat up times and reduced recovery times. Reduced holding power once at set temperature, together with the insulation, makes the range economical and outer case temperatures have been significantly reduced.

Both gravity and 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 vapours, a stoving and curing option is available. Also, where processes involve the use of large amounts of water, a moisture extraction option is available.

Options
- Range of counterpoint protection systems in accordance with EN144-6 Part 2
- Mixing and curing options
- Microprocessor control
- Evacuating operation of removable cover
- Timers, Process Stages: Mechanical or electronic time switches
- External temperature
- Rolling frame
- Lockable door latchs
- * Three options may affect chamber uniformity

The chamber ventilation and exhaust vent are easily adjustable from adjustable air ventilation.

The outer cases are fabricated from corrosion resistant zinc coated stainless steel. All units are provided with non-tilt bright nickel wire strength and robustness.

The chamber ventilation and exhaust vent are easily adjustable from adjustable air ventilation.
The WELLAND series of ovens and incubators has been designed and engineered using the latest computer aided design options to facilitate production of all metal components on the latest CNC controlled production equipment.

Both gravity convection and forced air circulation models are included in the Welland series. The bench mounted models are available in four sizes with a maximum operating temperature of 300°C. Incubators have a maximum temperature of 80°C.

The ovens are constructed for long term reliability. Depending on the choice of optical systems, these can perform simple drying processes or more complex and demanding heat treatment processes and long term stability testing of materials or components.

**Outstanding features**

- **Digital temperature control**
- **Adjustable air ventilation**
- **Stainless steel**
- **Epoxy/polyester coating**
- **Polished inner case**
- **Corrosion resistant zinc coated outer cases**
- **Totally encased fibre insulation**
- **Standing frame**
- **Lockable door latch**
- **Top access port for independent probe**
- **Timers: Process timers**
- **Flow meter & needle valve**
- **Air inlet filter**
- **Interior light**
- **Cable entry port**
- **Sealed inner chamber for vapours**
- **Air Exchanges**

**Ovens**

This modern range of ovens provides a combination of excellent performance and reliability.

Increased power and low thermal mass encased fibre insulation ensure both fast heat up times and reduced recovery times. Reduced holding power once at set temperature, together with the insulation, makes the range economical and outdoor case temperatures have been significantly reduced.

Both gravity and 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 vapours, a stoving and curing option is available. Also, where processes involve large amounts of water, a moisture extraction option is available.

**Heat up Times**

<table>
<thead>
<tr>
<th>Model</th>
<th>60°C (mins)</th>
<th>80°C (mins)</th>
<th>100°C (mins)</th>
<th>240 V 80°C (mins)</th>
<th>240 V 100°C (mins)</th>
<th>240 V 200°C (mins)</th>
<th>240 V 300°C (mins)</th>
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<tbody>
<tr>
<td>WIN30</td>
<td>1</td>
<td>2.5</td>
<td>3</td>
<td>18</td>
<td>25</td>
<td>35</td>
<td>665</td>
</tr>
<tr>
<td>WIN60</td>
<td>1.5</td>
<td>3</td>
<td>3.5</td>
<td>25</td>
<td>35</td>
<td>52</td>
<td>765</td>
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<tr>
<td>WIN120</td>
<td>2</td>
<td>3.5</td>
<td>4</td>
<td>30</td>
<td>40</td>
<td>57</td>
<td>965</td>
</tr>
<tr>
<td>WIN200</td>
<td>2.5</td>
<td>4</td>
<td>5</td>
<td>40</td>
<td>50</td>
<td>67</td>
<td>1250</td>
</tr>
<tr>
<td>WIF30</td>
<td>1</td>
<td>2</td>
<td>2.3</td>
<td>16.5</td>
<td>23</td>
<td>34</td>
<td>330</td>
</tr>
<tr>
<td>WIF60</td>
<td>1.5</td>
<td>2.5</td>
<td>3</td>
<td>21</td>
<td>30</td>
<td>45</td>
<td>550</td>
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<tr>
<td>WIF120</td>
<td>2</td>
<td>3</td>
<td>3.5</td>
<td>30</td>
<td>40</td>
<td>52</td>
<td>750</td>
</tr>
<tr>
<td>WIF200</td>
<td>2.5</td>
<td>4</td>
<td>5</td>
<td>50</td>
<td>70</td>
<td>100</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Temperature Stability**

<table>
<thead>
<tr>
<th>Model</th>
<th>±0.5°C (°C)</th>
<th>±0.2°C (°C)</th>
<th>±0.1°C (°C)</th>
<th>±0.05°C (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIN30</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
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<tr>
<td>WIN60</td>
<td>300</td>
<td>300</td>
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<td>WIN120</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>WIN200</td>
<td>300</td>
<td>300</td>
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<td>300</td>
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<td>WIF30</td>
<td>300</td>
<td>300</td>
<td>300</td>
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<td>WIF60</td>
<td>300</td>
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<td>300</td>
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<tr>
<td>WIF120</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
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<tr>
<td>WIF200</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
</tbody>
</table>

**Power Rating**

<table>
<thead>
<tr>
<th>Model</th>
<th>WIN30</th>
<th>WIN60</th>
<th>WIN120</th>
<th>WIN200</th>
<th>WIF30</th>
<th>WIF60</th>
<th>WIF120</th>
<th>WIF200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holding Power</td>
<td>300</td>
<td>480</td>
<td>720</td>
<td>1160</td>
<td>350</td>
<td>600</td>
<td>800</td>
<td>1250</td>
</tr>
<tr>
<td>at 240 V (watts)</td>
<td>330</td>
<td>392</td>
<td>492</td>
<td>592</td>
<td>292</td>
<td>392</td>
<td>492</td>
<td>592</td>
</tr>
</tbody>
</table>

**Safety standards**

All units meet the relevant US and European health and safety at work legislation and the performance of EN 61010:91. They are manufactured to comply with EN 41010:91 safety standard and also the low voltage and EMC European Directives.

**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 running costs, making them economic to operate once set temperature has been reached.

**Control panel**

The control panel controls all functions. These include control of temperature, time and rate of heating or cooling. A temperature set point is programmed into the microprocessor which starts the heating or cooling cycle as programmed. The microprocessor three term control varies from ±2.3°C to ±0.5°C, depending on the process type.

**Model WIN30 WIN60 WIN120 WIN200 WIF30 WIF60 WIF120 WIF200**

- **Max Temp**
  - **°C**
    - 300

- **Chamber Dimensions (mm)**
  - **D**
    - 320
  - **K**
    - 27

- **Chamber Capacity (litres)**
  - 28

- **Weight (Kg)**
  - 20

- **Power Rating (at 240 V (watts))**
  - 665

- **Heat Up Times (mins)**
  - 60

- **Recovery Times (mins)**
  - 37

- **Exhaust**
  - b) With optional exhaust fan
  - a) With standard fan

- **Temperature Uniformity (at max. temp (watts))**
  - ±1.0

- **Temperature Stability (at max. temp (watts))**
  - ±1.0

- **Performance**
  - 100°C
  - 8.5

- **Exhaust fans**
  - b) With optional exhaust fan
  - a) With standard fan

- **Air Exchanges / Hour**
  - 50

- **Exhaust fans**
  - b) With optional exhaust fan
  - a) With standard fan

- **Air inlets**
  - 20

- **Tablets**
  - 22

- **Dimensions (mm)**
  - 470

- **Weight (Kg)**
  - 30

- **Power Rating (at 240 V (watts))**
  - 330

- **Heat Up Times (mins)**
  - 60

- **Recovery Times (mins)**
  - 37

- **Temperature Uniformity (at max. temp (watts))**
  - ±1.0

- **Temperature Stability (at max. temp (watts))**
  - ±1.0

- **Performance**
  - 100°C
  - 8.5

- **Exhaust fans**
  - b) With optional exhaust fan
  - a) With standard fan

- **Air Exchanges / Hour**
  - 50

- **Exhaust fans**
  - b) With optional exhaust fan
  - a) With standard fan

- **Air inlets**
  - 20

- **Tablets**
  - 22

- **Dimensions (mm)**
  - 470

**Incubators**

The incubators are of the same basic construction as the ovens and have a maximum operating temperature of 80°C. Minimum operating temperature 10°C above ambient. Both gravity convection and fan assisted versions are available.

All units have a integral sealed glass door to facilitate product inspection and are designed for long term accuracy and reliability. As with all products in the Welland range, a wide choice of control and programming options and other optional features are available.

Heat up times are excellent and temperature stability with microprocessor three term control varies from ±0.2°C to ±0.5°C, depending on the model type.
Outstanding features

The WELLAND series of ovens and incubators has been designed and engineered using the latest computer aided design systems to facilitate production of all metal components on the latest CNC controlled production equipment.

Both gravity-convection and forced air circulation models are included in the Welland series. The bench mounted models are available in four sizes with a maximum operating temperature of 300°C. Incubators have a maximum temperature of 80°C.

The ovens are constructed for long term reliability. Depending on the choice of control system, they can perform simple drying processes or more complex and demanding heat treatment processes and long term stability testing of materials or components.

**Ovens**

This modern range of ovens provides a combination of excellent performance and reliability.

Increased power and low thermal mass increase film insulation ensuring very efficient insulation. This also ensures gentle closure. The door seal design includes a newly formulated silicone compound, providing longer life and durability for processes involving large amounts of water, a moisture extraction option is available.

Options

- Range of counterbalanced protective systems in accordance with EN1601-3 Part 2
- Timing and recording options
- Stops and indicators for monitoring elevation of temperature line on the graph
- Timers: Process timers - manual or automatic, Mechanical or electronic timer switches
- Fan control
- Overtemperature protection
- Stowing and curing option
- Flow meter & needle valve
- Exhaust fan
- Variable speed fan
- Overtemperature protection
- Door switch
- Glass viewing window
- Optional accessories for use with inert gases
- Sealed inner chamber for vapours
- Air inlet filter

**Incubators**

The incubators are of the same basic construction as the ovens and have a maximum operating temperature of 80°C. Minimum operating temperature 10°C above ambient. Both gravity convection and fan assisted versions are available.

All units have an integral sealed glass door to facilitate product inspection. They are designed for long term accuracy and reliability. As with all products in the Welland range, a wide choice of control and programming options and other optional features are available.

Heat up times are excellent and temperature stability with microprocessor three term control varies from ±0.2°C to ±0.5°C, depending on the model type.

### Specifications

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ovens</td>
<td>250 550 675 1000</td>
<td>60 120 240</td>
<td>250 550 675 1000</td>
<td>250 550 675 1000</td>
<td>27 58 115 215</td>
<td>±0.2 °C to ±0.5 °C</td>
<td>±0.2 °C to ±0.5 °C</td>
</tr>
<tr>
<td>Incubators</td>
<td>240 V 80°C</td>
<td>60</td>
<td>240</td>
<td>80</td>
<td>27</td>
<td>±0.2 °C to ±0.5 °C</td>
<td>±0.2 °C to ±0.5 °C</td>
</tr>
</tbody>
</table>

Note: A uniformity of ±1% = ±1°C at 100°C.

* With standard fan
* With optional exhaust fan

**Features**

- Adjustable air ventilation
- Door action
- Lockable door latch
- Top access port for equipment
- Chart recorders
- Timers: Process timers - manual or automatic
- Mechanical or electronic timer switches
- Cable entry port
- Stoves & trolleys
- Stowing and curing option
- Flow meter & needle valve
- Exhaust fan
- Variable speed fan
- Overtemperature protection
- Door switch
- Glass viewing window
- Optional accessories for use with inert gases
- Sealed inner chamber for vapours
- Air inlet filter

**Safety standards**

All units meet the relevant US and European health and safety at work legislation and the performance criteria of 89/336 and 89/106 EEC. They are manufactured to comply with BS EN 4100: safety standard and also the low voltage and EMC European Directives.

**Economy and efficiency**

Insulation around the oven chamber utilizes totally finished film material. The material has a very low thermal mass and thermal conductivity, ensuring very efficient insulation. This also ensures reduced drying times, making the equipment economical to operate once set temperature has been reached.

**Control panel**

This also protected control panel avoids damage from accidental spillage.

**Dimensions**

<table>
<thead>
<tr>
<th>Model</th>
<th>External dimensions (mm)</th>
<th>Internal dimensions (mm)</th>
<th>Chamber Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ovens</td>
<td>45 550 670 920</td>
<td>470 570 670 920</td>
<td>470 570 670 920</td>
</tr>
<tr>
<td>Incubators</td>
<td>22 2 2</td>
<td>22 2 2</td>
<td>22 2 2</td>
</tr>
</tbody>
</table>
Temperature Control Systems

A stand and trolley are available to convert bench mounted ovens to floor standing models.

A variety of control options is available. Please refer to Temperature Control Systems information for further details.

A choice of communications software is available. Please ask for details.

Standard Electrical Supply

When ordering always quote the model, controller and the preferred type of electrical supply from the list. Please indicate the frequency (50 or 60 Hertz) and the number of phases. For single phase supplies, please state whether a neutral is available. Single phase-to-neutral voltages, eg 240/127V; typical single phase phase-to-phase voltages are 220, 380, 415 and 440V. 3-phase voltages without neutral are typically 220, 380, 415 and 690V. 3-phase phase-to-phase voltages vary with voltage, eg 380/220V (if so, please quote both the phase-to-phase and the phase-to-neutral voltages, eg 380.220V). Typical single phase phase-to-neutral voltages are 100, 110, 200, 208, 220, 240 and 254V. 3-phase voltages with neutral are typically 220/127, 380/220, 415/240 and 440/254V. Three phase voltages with neutral are typically 220/127, 380/220, 415/240 and 440/254V.

When ordering always quote the model, controller and the preferred type of electrical supply from the list. Please indicate the frequency (50 or 60 Hertz) and the preferred type of electrical supply from the list. Please indicate the frequency (50 or 60 Hertz) and the number of phases. For single phase supplies, please state whether a neutral is available. Single phase-to-neutral voltages, eg 240/127V; typical single phase phase-to-phase voltages are 220, 380, 415 and 440V. 3-phase voltages without neutral are typically 220, 380, 415 and 690V. 3-phase phase-to-phase voltages vary with voltage, eg 380/220V (if so, please quote both the phase-to-phase and the phase-to-neutral voltages, eg 380.220V). Typical single phase phase-to-neutral voltages are 100, 110, 200, 208, 220, 240 and 254V. 3-phase voltages with neutral are typically 220/127, 380/220, 415/240 and 440/254V. Three phase voltages with neutral are typically 220/127, 380/220, 415/240 and 440/254V.

Note

A choice of control systems is available including controllers which simply heat up the oven and hold at one temperature indefinitley as well as micro complex programming systems. Access to parameters in simple and easy to understand and is customised to present only those parameters which need to be viewed or adjusted.

Standard Electrical Supply

When ordering always quote the model, controller and the preferred type of electrical supply from the list. Please indicate the frequency (50 or 60 Hertz) and the number of phases. For single phase supplies, please state whether a neutral is available. Single phase-to-neutral voltages, eg 240/127V; typical single phase phase-to-phase voltages are 220, 380, 415 and 440V. 3-phase voltages without neutral are typically 220, 380, 415 and 690V. 3-phase phase-to-phase voltages vary with voltage, eg 380/220V (if so, please quote both the phase-to-phase and the phase-to-neutral voltages, eg 380.220V). Typical single phase phase-to-neutral voltages are 100, 110, 200, 208, 220, 240 and 254V. 3-phase voltages with neutral are typically 220/127, 380/220, 415/240 and 440/254V. Three phase voltages with neutral are typically 220/127, 380/220, 415/240 and 440/254V.

Note

A choice of control systems is available including controllers which simply heat up the oven and hold at one temperature indefinitley as well as micro complex programming systems. Access to parameters in simple and easy to understand and is customised to present only those parameters which need to be viewed or adjusted.

Temperature Control Systems

The laboratory high temperature range of ovens operating at temperatures up to 1200°C is offered in three styles. All models are capable of continuous operation at maximum temperature.

For more details, please contact us.

Eurotherm 2416 CG

The Eurotherm 2416 CG is an advanced setpoint programming temperature controller, with eight segments, any of which can be a ramp, step or dwell. It is housed in a compact DIN size measuring 68 x 68 mm. It provides precise control with the advanced PID control algorithm giving stable ‘straight-line’ control of the process. Power feedback is used to stabilise the input power and hence the controlled temperature against supply voltage fluctuations. The controller continually corrects for drift and the gain high stability and rapid response to process changes.

Overtemperature Protections

An independent alarm instrument type 2116 has been incorporated as a standard feature as the controller is lock-out safe. In the case of overtemperature of the oven, element circuit and, in the case of the Eurotherm 2416 CG, the independent alarm instrument type 2116 and thermocouple are an independent alarm instrument type 2116 and thermocouple are an independent alarm instrument type 2116 and thermocouple. The Eurotherm 2416 CG is furnished as a standard setpoint programming temperature controller, with eight segments, any of which can be a ramp, step or dwell and is housed in a compact DIN size measuring 68 x 68 mm.

Eurotherm 2408 CP

The Eurotherm 2408 CP contains the same controller as type 2416, but housed in a 1/8 din size measuring 48 x 96 mm. The outer case is fabricated from corrosion resistant zinc coated mild steel and finished in two tone hard wearing epoxy/polyester coating.

Eurotherm 2416 CG

The Eurotherm 2416 CG contains the same controller as type 2416, but housed in a 1/8 din size measuring 48 x 96 mm. The outer case is fabricated from corrosion resistant zinc coated mild steel and finished in two tone hard wearing epoxy/polyester coating.

Eurotherm 2408 CP

The Eurotherm 2408 CP contains the same controller as type 2416, but housed in a 1/8 din size measuring 48 x 96 mm. The outer case is fabricated from corrosion resistant zinc coated mild steel and finished in two tone hard wearing epoxy/polyester coating.

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Note

A choice of control systems is available including controllers which simply heat up the oven and hold at one temperature indefinitley as well as micro complex programming systems. Access to parameters in simple and easy to understand and is customised to present only those parameters which need to be viewed or adjusted.

Ovens & Incubators

Lenton also manufactures a range of chamber & tube furnaces up to 2000°C. Lenton also manufactures a range of chamber & tube furnaces up to 2000°C. Lenton also manufactures a range of chamber & tube furnaces up to 2000°C. Lenton also manufactures a range of chamber & tube furnaces up to 2000°C. Lenton also manufactures a range of chamber & tube furnaces up to 2000°C.
The laboratory high temperature range of ovens operating at temperatures up to 1000°C is offered in three sizes. All models are capable of continuous operation at maximum temperature.

The heater elements and fans are fitted as standard. The models are fabricated from stainless steel which provides resistance to chemical attack, and are housed in stainless steel enclosures. All units are provided with stainless steel shelves with multi-position settings for convenient loading and unloading. Maintenance free heating elements and fan unit are fitted.

The outer cases are fabricated from corrosion resistant zinc coated mild steel and finished in a two tone hard wearing epoxy/polyester coating. The inner chamber is constructed from mild steel and finished in a two tone hard wearing stoved epoxy/polyester coating. The single skin construction provides a cool safe outer case.

Low thermal mass insulation materials are used throughout in order to achieve rapid heating and to allow efficient energy utilisation. The heavy duty fan ensures optimum temperature uniformity throughout the working chamber. Double skin construction provides a cool safe outer case.

A variety of control options is available. Please refer to Temperature Control Systems information for further details.

A stand and trolley are available to convert bench mounted ovens to floor standing models.

### Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>Heat up Time</th>
<th>Dimensions (mm)</th>
<th>Usable Volume (litres)</th>
<th>Power (watts)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHT4/120</td>
<td>50</td>
<td>300 x 570 x 920</td>
<td>120</td>
<td>2250</td>
<td>179</td>
</tr>
<tr>
<td>WHT5/120</td>
<td>75</td>
<td>400 x 670 x 920</td>
<td>120</td>
<td>2250</td>
<td>179</td>
</tr>
<tr>
<td>WHT6/120</td>
<td>120</td>
<td>650 x 920 x 1190</td>
<td>120</td>
<td>3000</td>
<td>179</td>
</tr>
</tbody>
</table>

### Communications Software

A choice of communications software is available. Please ask for details.

### Overtemperature Protections

An independent alarm instrument type 2116 and thermocouple are supplied as standard. Power to the elements is switched off with lockout action if overtemperature of the oven, element circuit and, in the case of 10-kilowatt models, the advanced PID control algorithm gives stable ‘straight-line’ control of the process.

It provides precise control with the following features:

- **Cascade Control**: Where process changes are frequent.
- **Multi-Step Controllers**: Where process changes are infrequent.
- **Segment Programmers**: Where process changes are very infrequent.
- **Process Timers**: Where long-term scheduling is required.

### Standard Electrical Supply

When ordering always quote the model, controller, and the preferred type of electrical supply from the list. Please indicate the frequency (50 or 60 Hertz) and number of phases. For single-phase supplies (phase to neutral), please state whether a neutral is available.

- **Single Phase**: Suitable for 100, 110, 200, 208, 220, 240 and 380V. 3-phase voltages with neutral are typically 400, 415, and 440V. 3-phase voltages without neutral are typically 220, 240, and 415V (if so, please quote both the phase-to-phase and the phase-to-neutral voltages, eg 380.220V).

### Compatibility directive

Welland manufactures in compliance with the relevant safety standards to BS EN 61010-1:1993 & 61010-2-010:1995. All products carry the CE mark which indicates conformity with all relevant European safety directives.

Lenton also manufactures a wide range of chamber & tube furnaces up to 2000°C.

As a result of continuous product development, we reserve the right to alter specifications and illustrations. In the unlikely event of one of our standard products not meeting your requirements, we have the capability to design and manufacture a unit specifically tailored to meet your needs.

Note

- All products carry the CE mark which indicates conformity with all relevant European safety directives. For low Voltage Directive and Electromagnetic Compatibility directive.

### Other Options

Other options are typically 220/127, 380/220, 415/240 and 440/254.

- **220, 380, 415 and 440V. 3-phase voltages with neutral**: Typically 380.220V.
- **220, 380, 415 and 440V. 3-phase voltages without neutral**: Typically 220, 240, and 415V.

### Power Feedback

Power feedback is used to stabilise the output power and hence the controlled temperature against supply voltage fluctuations. The controller continually monitors for drifts and the gain high stability and rapid response to process changes.

### Temperature Control Systems

A choice of controllers is available including controllers which simply heat up the oven and hold at one temperature independently, as well as more complex programable systems. Access to parameters is simple and easy to understand and is customised to present only those parameters which need to be viewed or adjusted.

Model 1988-24 Controller

The Eurotherm 2416 CG is an advanced setpoint and process temperature controller with eight segments, any of which can be a ramp, step or dwell. It is housed in a compact 1988 din size measuring 48 x 48mm. It provides precise control with the advanced PID algorithm giving stable ‘straight-line’ control of the process.

### Communications Software

A choice of communications software is available. Please ask for details.

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Model 1988-24 Controller

The Eurotherm 2416 CG is an advanced setpoint and process temperature controller with eight segments, any of which can be a ramp, step or dwell. It is housed in a compact 1988 din size measuring 48 x 48mm. It provides precise control with the advanced PID algorithm giving stable ‘straight-line’ control of the process.

### Communications Software

A choice of communications software is available. Please ask for details.

### Standard Electrical Supply

When ordering always quote the model, controller, and the preferred type of electrical supply from the list. Please indicate the frequency (50 or 60 Hertz) and number of phases. For single-phase supplies (phase to neutral), please state whether a neutral is available.

- **Single Phase**: Suitable for 100, 110, 200, 208, 220, 240 and 380V. 3-phase voltages with neutral are typically 400, 415, and 440V. 3-phase voltages without neutral are typically 220, 240, and 415V. 3-phase voltages with neutral are typically 220, 240, and 415V.