

# turbofan<sup>®</sup>

## Turbofan Convection Oven

30 Series

### Installation Manual

E33D5

Electric Convection Oven

Digital Control



# CONTENTS

## Preface

General information .....	2
Safety information .....	3
Warranty .....	4

## Specifications

Dimensions .....	5
Product information .....	6
Supply requirements .....	6
Clearances .....	6
Electrical schematic .....	7

## Installation and setup

Unpacking the oven .....	9
Assembling the oven .....	10
Positioning the oven .....	10
Levelling the oven .....	11
Connecting the water supply (if required) .....	11
Connecting the electrical supply .....	12
Adjustment and calibration .....	13

## Parts

Main parts .....	15
Accessories .....	16

## Commissioning

First use .....	17
Commissioning checklist .....	18

## General information

The drawings and diagrams in this manual are representative only and not to scale. They supplement the written instructions and specifications that they refer to.

## Copyright

### ! IMPORTANT

The reproduction or copying of any part of this manual by any means whatsoever is strictly forbidden unless authorised previously in writing by Moffat Limited.

## Warranty requirements

### ! IMPORTANT

Installations must be carried out by a certified or licensed service person only. Failure to comply will void any written or implied warranty.

### ! IMPORTANT

Unauthorised alterations to the oven may void warranties and approvals.

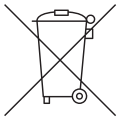
## Intended use and restrictions

### ! IMPORTANT

This appliance is intended for commercial use only, in kitchens of restaurants, canteens, and so on. It is not intended to be used in residential, outdoor, marine environments, or for the continuous mass-production of food.

- This oven must not be used by minors or adults with limited physical, sensory, or mental abilities.
- This oven must only be used by operators who are adequately trained in the purpose, limitations, and hazards of its operation. To avoid the risk of accidents or damage, operators should be regularly trained.

## Product disposal



This symbol on the oven indicates that this oven should not be treated as domestic or regular commercial waste, but must be correctly disposed of in order to prevent any negative consequences for the environment and human health. For further information on the recycling of this oven, contact your local city office or your waste disposal service.

- ☑ The oven is built with common electrical, electromechanical, and electronic parts. No batteries are used.
- ☑ The owner and operator are responsible for the proper and safe disposal of the oven.

## Safety information

Read the safety messages in this manual and follow the instructions carefully. Review them frequently.

Safety messages cannot cover every potential cause of injury or equipment damage but can highlight common causes of hazards. Read and understand all instructions in this manual prior to installing or servicing the oven and seek advice before operating the oven in a manner other than that described in this manual. Consult your authorised service technician before performing maintenance.

- Ensure that you and all operators of this appliance understand every safety message.
- Know and observe all safety rules that may apply to your work situation and your work site.
- Replace the user manuals and safety labels immediately if they are missing or damaged.

## Recognize safety information



Safety alert symbol.

When you see this symbol in the manual or on the oven, pay special attention to the instructions.



Read the instructions before using the oven.



Risk of electric shock.



Risk of burns—hot surface.



Equipotential bonding terminal—must be connected to equipotential bonding system.



Risk of burns—hot liquid products above height level.

This manual uses the following safety symbols to indicate the level of caution required when using the oven.

### ⚠ DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.

### ⚠ WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

### ⚠ CAUTION

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

### NOTICE

Indicates information considered important, but not hazard-related (for example, messages relating to property damage).

## General safety

### ⚠ WARNING

Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operation, and maintenance instructions thoroughly before installing or servicing this oven.

### ⚠ DANGER

Fire hazard. Do not use gasoline or other flammable substances in the vicinity of this oven. Do not spray aerosols in the vicinity of this oven while it is in operation.

### ⚠ WARNING

Fire hazard. The oven operator shall take great care to use the oven safely and guard against risk of fire. The oven must not be left unattended during use.

### NOTICE

The oven shall be regularly inspected by a competent service person to ensure that it is in safe and correct order for operation.

**⚠ CAUTION**

Do not operate this oven without the supplied legs fitted to it.

## Warranty

Moffat warrants all equipment supplied by Moffat against defects in material and workmanship for a period of 12 months from the date of purchase or 18 months from the date of manufacture, whichever comes first.

Visit [www.moffat.com](http://www.moffat.com) for warranty terms and conditions or contact our Customer Care team.

# SPECIFICATIONS

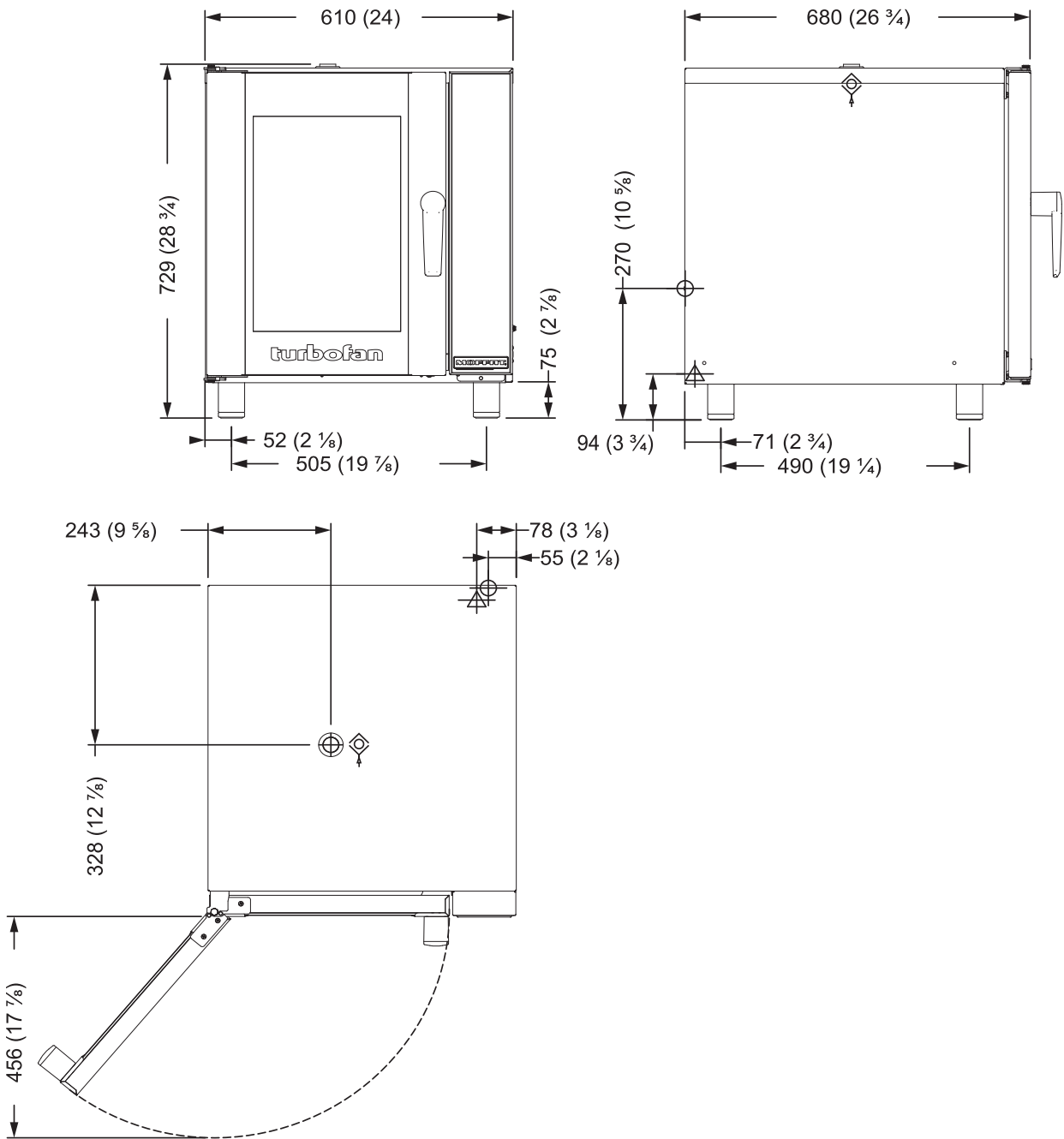
## Dimensions

☑ All dimensions are in mm (inches).

⊕ Air vent

⚡ Electrical supply entry point

⊕ Water supply entry point



## Product information

	E33D5
Capacity	5 shelves
Tray capacity	1/1 GN pan capacity
Tray spacing	85 mm (3 1/8 inches)
Net Weight	56.2 kg

## Supply requirements

### Electrical supply

	E33D5
Electrical Supply Specifications	220 V, 50/60 Hz, 6.0 kW 230-240 V, 50/60 Hz, 6.0 kW

### Electrical connection requirements

- An isolation switch must be mounted adjacent to, but not behind the oven and must be readily accessible to the operator. This switch must be clearly marked and readily accessible in case of fire.
- The branch supply line shall be individually overload protected to the correct current rating and the supply cord shall be protected against any mechanical or thermal damage.
- All wiring connections must be tight.
- The size of the cable supply to the oven shall be appropriate for the current drawn on the line. Refer to the appropriate wiring standards for the cable size required.
- A RCD (Residual Current Device) / GFCI (Ground-Fault Circuit Interrupter) is recommended for protection of the power supply to this oven.

### Water supply

Maximum Water inlet Pressure	80 psi (550 kPa)
Connection size	3/4 inch BSP male (with 3/4 inch GHT adaptor included)
Water quality	
Hardness	60-90 ppm
PH	Greater than 7.5
Chlorides	Less than 30 mm

## Clearances

Position the oven with the following minimum clearances:

Top	200 mm (8 inches)
Left	50 mm (2 inches)*
Right	75 mm (3 inches)*†
Rear	50 mm (2 inches)
Front (recommended)	600 mm (23 inches)*

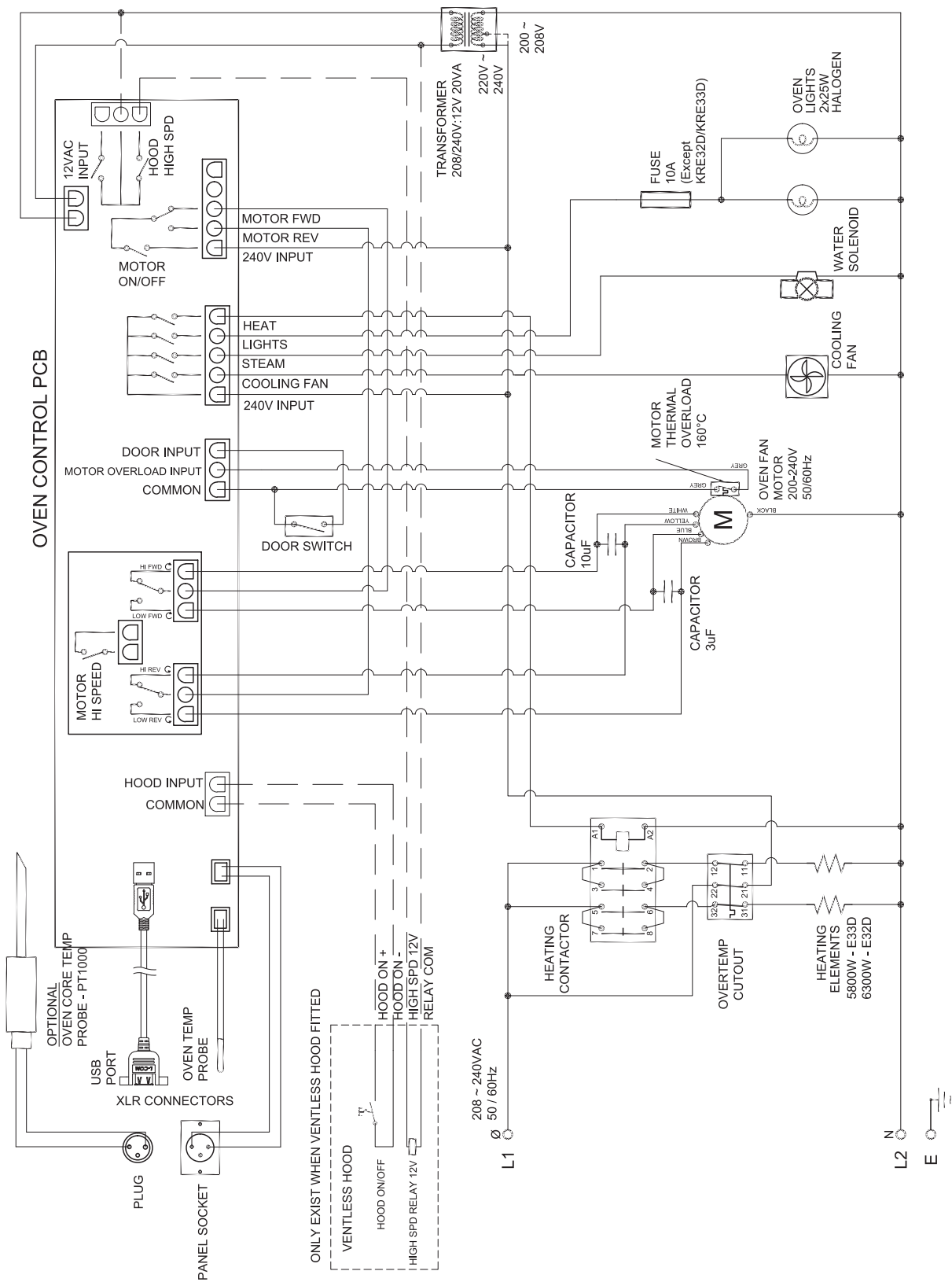
\* Door-side clearance. If the oven is fitted with a right-hand side door (RMD), swap the left- and right-hand side clearances.

† Fixed installations require at least 500 mm (20 inches) clearance on right-hand side of the oven for service access.

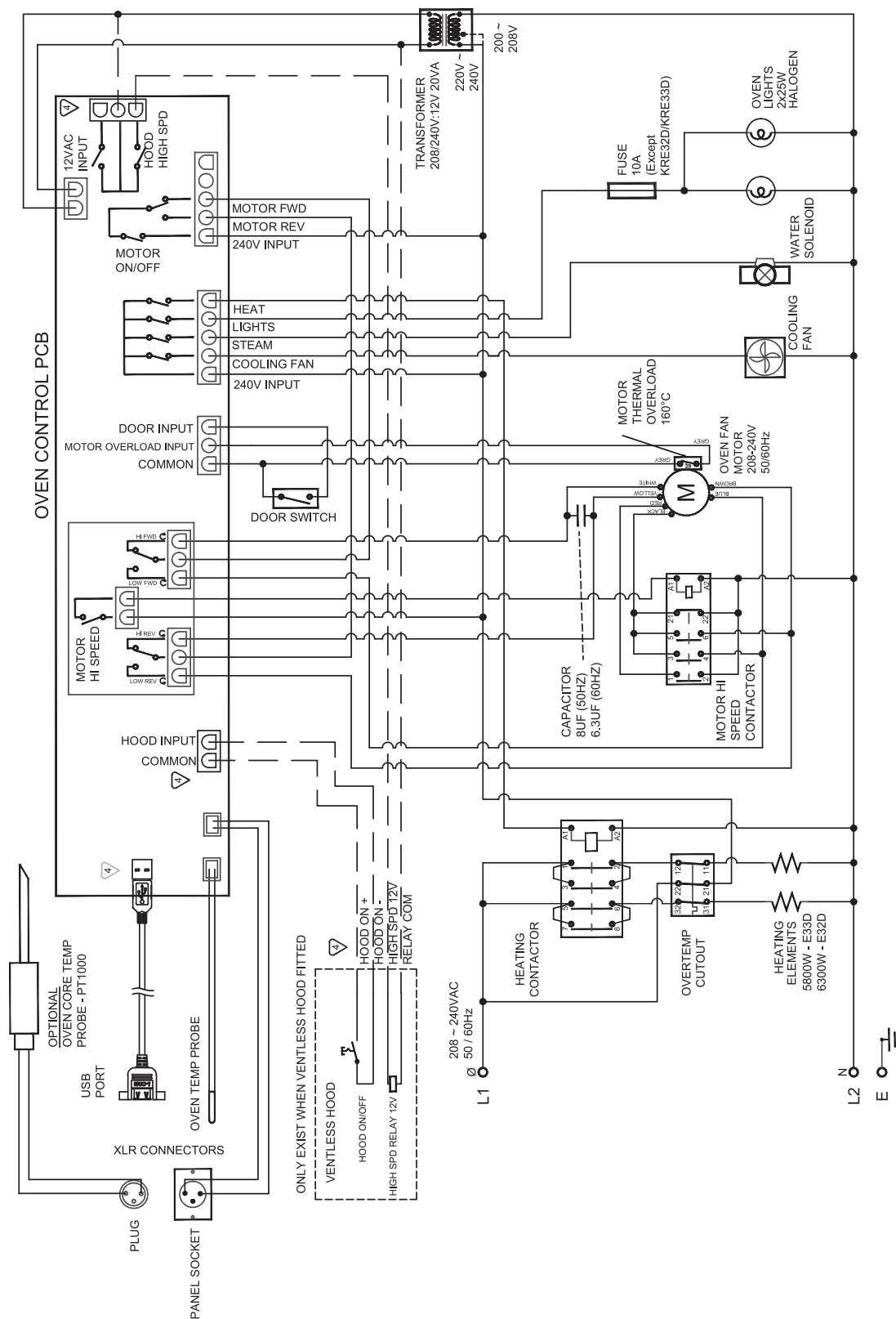
Do not place the oven close to a heat source. A minimum distance of 300 mm (12 inches) from the appliance sides and the heat source is required.

# Electrical schematic

## 2/4 pole, High speed motor (HANNING system)



## 4/8 pole, Low speed motor (FIR system)





# INSTALLATION AND SETUP

Your oven is designed to provide years of satisfactory service, and correct installation is essential for the best performance, efficiency, and trouble-free operation. It is of utmost importance that this oven is installed correctly and that operation is correct before use.

⚠️WARNING

Installations must be carried out by qualified service persons only. Failure to install equipment to the relevant codes and the manufacturer's specifications in this manual will void the warranty.

⚠️WARNING

Components that are paint-sealed during manufacture shall only be adjusted by an authorised service technician. They shall not be adjusted by the installer.

⚠️WARNING

The oven installation must conform to national installation codes and local and national codes for fire safety.

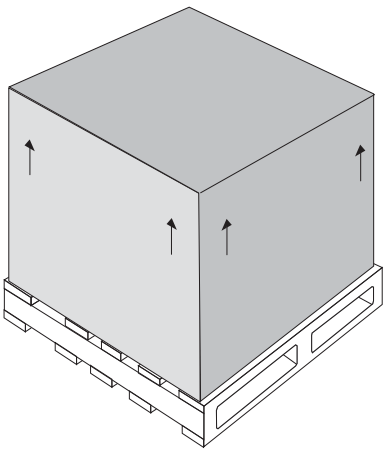
Australia and New Zealand	
AS/NZS 3000	Wiring Rules
United Kingdom	
BS 6173	Installation of Catering Appliances.
BS 5440 1 & 2	Installation Flueing & Ventilation.
BS 7671	Requirements for Electrical Installation.
US and Canada	
ANSI / NFPA70	National Electrical Code.
CSA C22.2	Canadian Electrical Code.

NOTICE

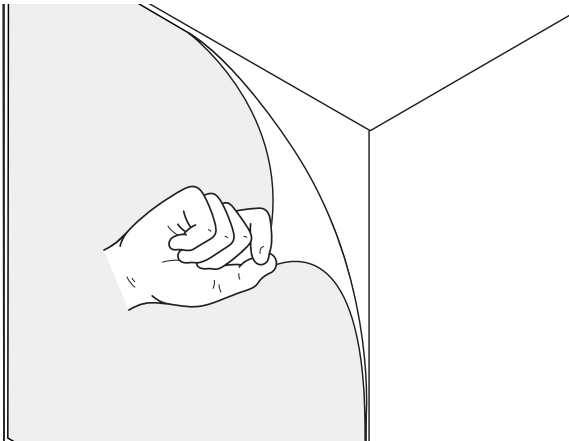
The oven installation must conform to national installation codes and local and national codes for plumbing and drainage.

Australia and New Zealand	
AS/NZS 3500	Plumbing & Drainage.
Europe	
EN 1717	Protections of water installations.

## Unpacking the oven



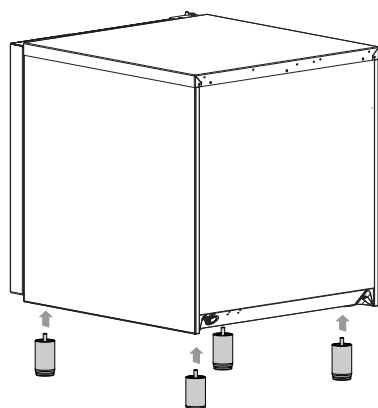
- Carefully remove all packaging and transit protection from the oven including all protective plastic coating from the exterior stainless steel panels.
  - Do not discard the carton and other packaging material until you have inspected the appliance for transit damage and have tested it for proper operation.
- Remove the protective film from the stainless steel panels, taking care not to scratch the surface if using a blade or shim.



- Check equipment and parts for damage. Report any damage immediately to carrier and distributor.
- Check that the supply specifications on the rating plate are correct for your location and installation requirements.
- Check that all parts are supplied with the product. See [Parts on page 15](#).

# Assembling the oven

## Fit the legs



## Positioning the oven

### NOTICE

This oven is intended to be installed on an elevated work surface, such as a bench top or onto the SK33 stand.

### CAUTION

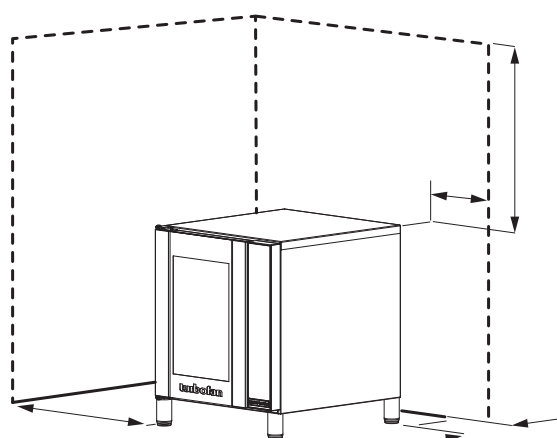
Position the oven so that the control panel and oven cooking area is easily reachable for loading and unloading.

### NOTICE

Do not place the oven close to a heat source. A minimum distance of 300 mm (12 inches) from the appliance sides and the heat source is required.

### WARNING

Do not block or obstruct the vent at the top of the oven.



## Clearances

Position the oven with the following minimum clearances:

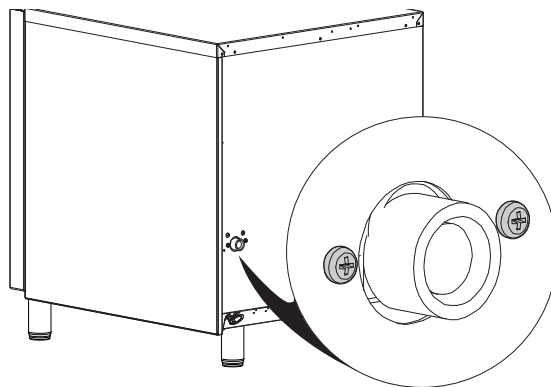
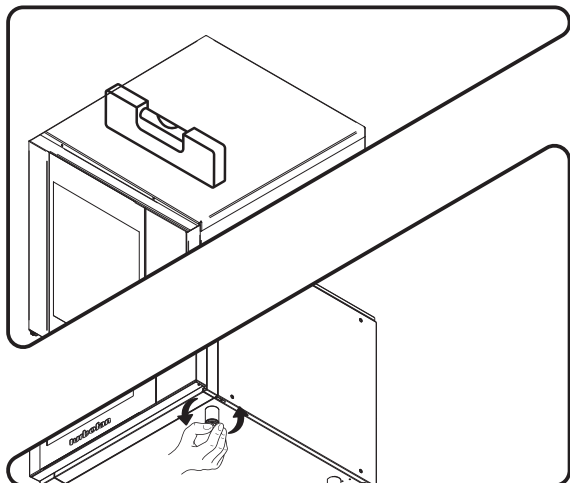
Top	200 mm (8 inches)
Left	50 mm (2 inches)*
Right	75 mm (3 inches)* †
Rear	50 mm (2 inches)
Front (recommended)	600 mm (23 inches)*

\* Door-side clearance. If the oven is fitted with a right-hand side door (RMD), swap the left- and right-hand side clearances.

† Fixed installations require at least 500 mm (20 inches) clearance on right-hand side of the oven for service access. Do not place the oven close to a heat source. A minimum distance of 300 mm (12 inches) from the appliance sides and the heat source is required.

## Levelling the oven

Correctly locate the oven into its final operating position and, using a spirit level, adjust the oven feet so that the oven is level and at the correct height.



2. Connect a cold water supply (R ¾ inch connector) to the water connection on the oven.
3. Turn on the water supply and check for leaks.

## Connecting the water supply (if required)

To activate steam-assisted cooking or baking for this oven it must be permanently connected to the mains water supply.

### NOTICE

Water connection shall be installed in accordance with local water regulations in force and the applicable standard or code (for example, PCA in Australia, EN 1717 in UK / IE, and so on).

### NOTICE

The water supply shall meet the requirements for use in Convection Oven systems. See [Supply requirements on page 6](#).

1. Tighten the two screws securing the water connection at the rear of oven.
  - ☑ The securing screws are unfastened during manufacture to prevent damage to the water connection during transit.

## Connecting the electrical supply

Ensure that you meet the electrical connection requirements. See [Electrical connection requirements on page 6](#)

### ⚠ WARNING

The oven must be earthed (grounded).

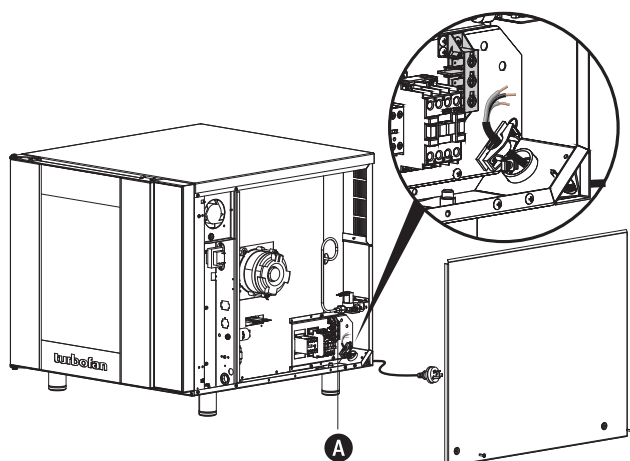
### ⚠ WARNING

If the power supply cord is damaged, it must be replaced by a suitably qualified person in order to avoid a hazard.

### NOTICE

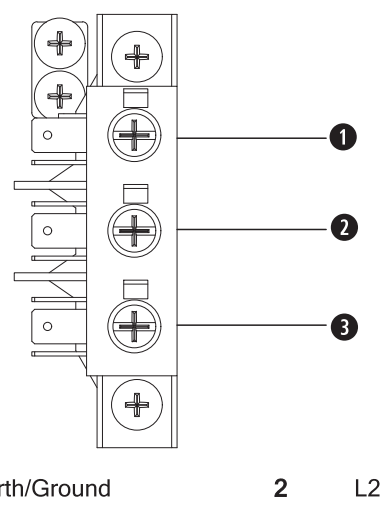
Each oven should be connected to an adequately protected power supply with an appropriate power cord.

- ☑ Check that the electricity supply is correct as shown on the oven's rating plate.
- ☑ Ensure that a grommet is fitted around the wiring entry hole into the oven.



1. Remove oven right hand side panel.
2. Bring the supply cable through the compression gland at the back of oven.
3. Connect the mains supply to the appropriately marked terminals on the terminal block (A).
4. Connect supply plug to mains outlet.
5. Turn on the mains supply and ensure that the controller is powered-up.

## Terminal block wiring connection



## Adjustment and calibration

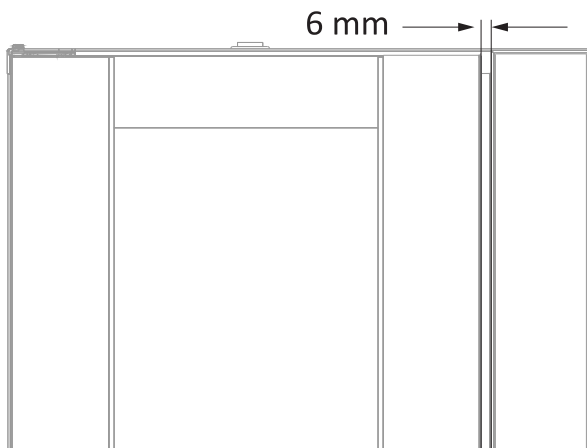
### ⚠ WARNING

Always turn off the electrical power at the mains supply before you access the oven's internal components.

### Adjusting the door

#### Align the door with the chassis

- ☑ A correctly aligned door has a nominal gap of 6mm from the edge of the door to the side of the control panel.

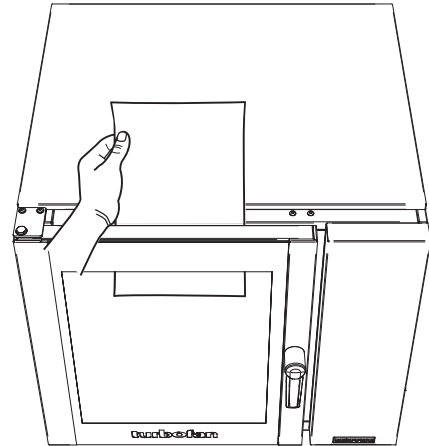


1. Loosen the screws from the upper and lower hinge plates.
2. Adjust the position of the door horizontally and vertically until the door is correctly aligned.
3. Fasten the screws at the hinge plates and ensure that the door closes correctly.

#### Adjust the door catch

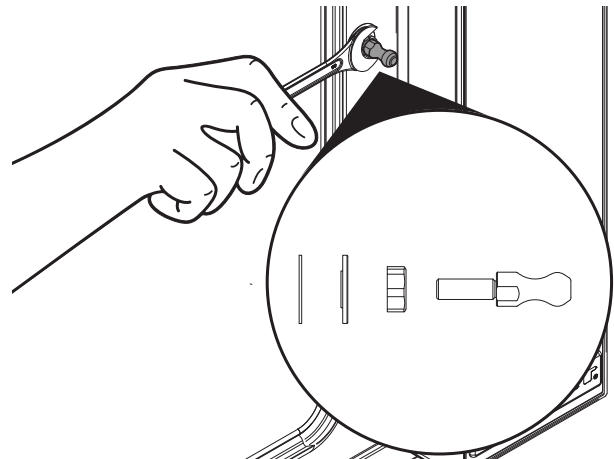
To check that the door seals correctly when it is closed:

1. Place a sheet of paper between the door and the seal.
  2. Close the door on the paper and attempt to withdraw the paper by firmly tugging on the paper.
- The paper should just pull out with some resistance but without tearing.



To adjust the door catch:

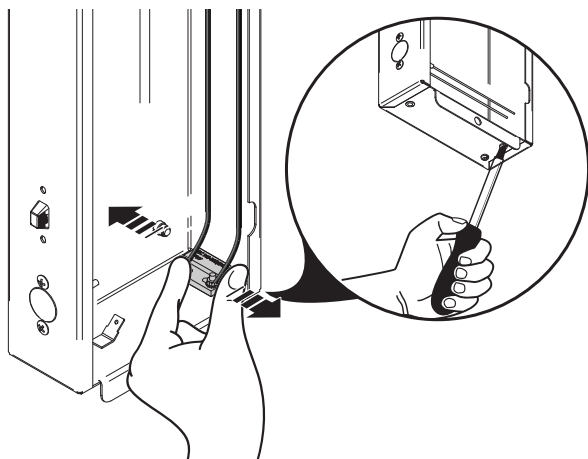
- If the paper withdraws easily, screw the door catch in by a ½ turn and repeat the test above until the door is adjusted correctly.
- If the paper cannot be withdrawn and the door springs open, screw the door catch out by a ½ turn and repeat the test above until adjusted correctly.



### Adjusting the door reed switch

To adjust door reed switch position:

1. Slacken the two screws securing the reed switch to the bottom of the control panel.
2. Adjust the reed switch position.
3. Open and close the oven door and check that the reed switch operates correctly.

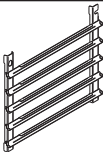
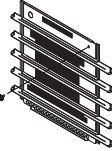
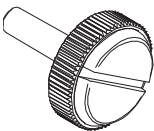


# PARTS

## Main parts

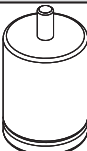
### Supplied parts (fitted)

These accessories are supplied fitted with your oven, depending on your oven model and region.

	Part No.	Description	Quantity
	237109	Side Rack LH 5 Tray (1/1 GN)	1
	238727	Side Rack LH 4 Tray (Half US Pan)	1
	237015	Side Rack RH 5 Tray (1/1 GN)	1
	238728	Side Rack RH 4 Tray (Half US Pan)	1
	233552	Thumbscrew (for side rack)	1


### Supplied parts (unfitted)

These accessories are supplied unfitted with your oven. See [Assembling the oven on page 10](#).

	Part No.	Description	Quantity
	232379	Adjustable Leg 3 inches (76 mm)	4

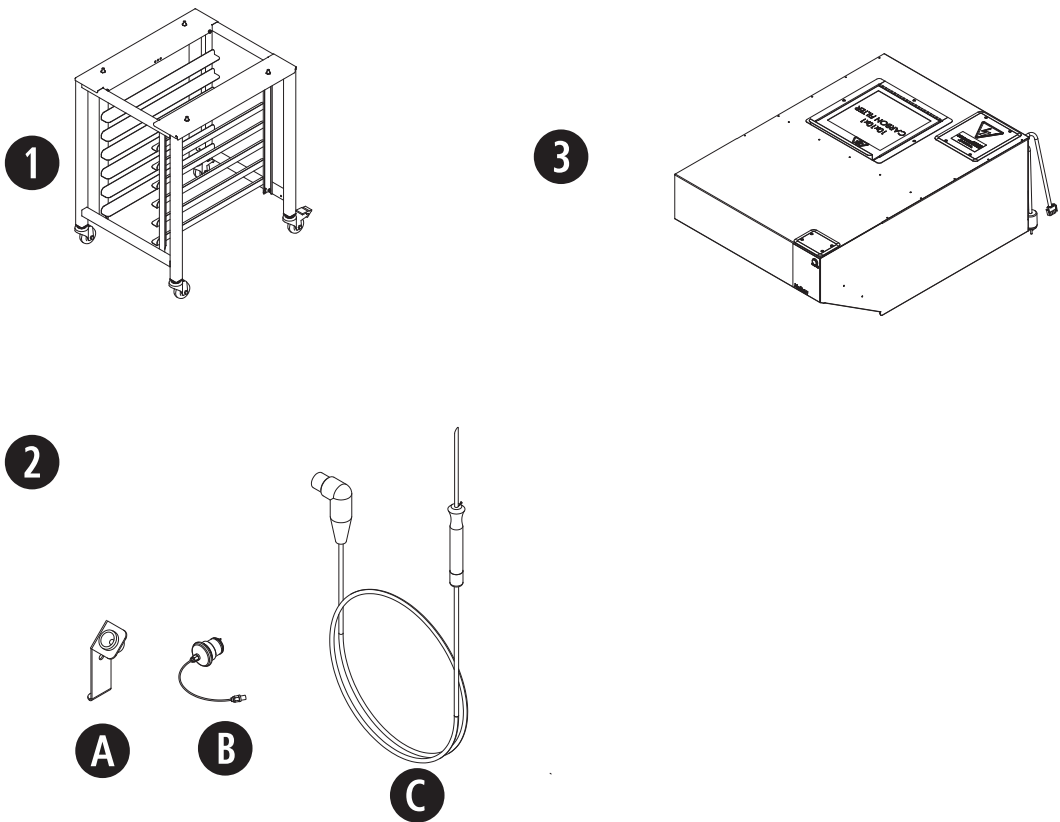
### Supplied parts (optional)

These accessories may be optionally supplied, unfitted, with your oven.

	Part No.	Description	Quantity
	236057	Rack	5

Accessories

Accessories (add-on)



	Part No.	Description
1	—	SK33 Stand
2	236060	Core Temperature Probe Kit
3	—	Ventless Hood
		<div><b>❗ IMPORTANT</b> The ventless hood cannot be installed on double-stacked units.</div>
Not shown	—	DSKE33C Double Stacking kit - Fitted With Castors
Not shown	—	DSKE33 Double Stacking kit - Fitted With Adjustable Feet



# COMMISSIONING

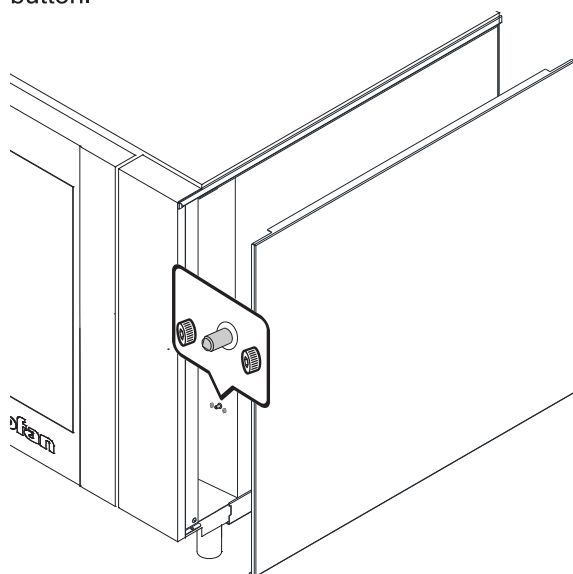
## First use

### ⚠ CAUTION

Ensure that all packaging material has been removed from inside the Convection Ovenoven before using it for the first time.

Before using your new oven, operate the oven for about one hour at 200 °C (400 °F) to remove any fumes or odours which may be present.

- ☑ If the oven does not start on initial start-up, check that the over-temperature thermostat has not tripped during transit. Remove the side panel on the controller-side of the oven and press the over-temperature thermostat reset button.



## Commissioning checklist

Before leaving the new installation, check that the oven functions in accordance with the operating instructions specified in the Use and Care manual. Complete the following checklist.

☑ If the oven does not operate correctly, turn off the oven, disconnect the power supply at the mains and contact the supplier of this oven.

Date \_\_\_\_\_

Installer \_\_\_\_\_

### Pre-installation

- ☐ Delivered intact with all parts and accessories.
- ☐ No noticeable damage to the interior or exterior of the oven.

### Installation

- Positioning and fitting
  - ☐ Adequate separation and/or isolation from other appliances and/or heat sources.
  - ☐ Adequate ventilation in installation area.
  - ☐ Correct door alignment including seals and hinges.
  - ☐ The oven is level with respect to the floor.
- Electrical connection
  - ☐ Adequate supply voltage.
  - ☐ Correctly grounded outlet.
  - ☐ Correct current draw and loading.
- Water connection
  - ☐ Adequate water supply pressure.
  - ☐ Water supply quality meets requirements.
  - ☐ Correctly sized water connector.

### Operation

- Functionality
  - ☐ The oven lights work.
  - ☐ Thermostat functions correctly.
    - ☐ Check that the oven stops heating when it reaches the set temperature.
  - ☐ The oven controller operates correctly.
  - ☐ The door sensors function correctly.
    - ☐ Open the oven door and ensure that the controller displays *door*; close the door and ensure that the controller returns to normal operation.
    - ☐ With the oven operating at a set temperature, open the door and check that the oven stops heating and the heating fan is off.
  - ☐ The oven heats to the set temperature.
    - ☐ Check that the oven set temperature matches the actual temperature.
  - ☐ The heating fan operates correctly.
  - ☐ The oven door seals correctly.
  - ☐ The oven door is correctly aligned.
- Operator training
  - ☐ The operator has been instructed in correct operation and safe shutdown of the oven.



# TURBOFAN CUSTOMER CARE

## **New Zealand**

Moffat Limited  
www.moffat.co.nz  
Tel: +64 (3) 983 6600  
Fax: +64 (3) 983 6660  
Email: sales@moffat.co.nz

## **Canada**

Serve Canada  
www.servecanada.com  
Sales: 800 551 8795  
Service: 800 263 1455  
Email: info@servecanada.com

## **International**

Moffat Limited  
www.moffat.com  
Tel: +64 (3) 983 6600  
Fax: +64 (3) 983 6660  
Email: export@moffat.co.nz

## **Australia**

Moffat Pty Ltd  
www.moffat.com.au  
Tel: +61 (03) 9518 3888  
Service: 1300 264 217  
Fax: +61 (03) 9518 3833  
Email: vsales@moffat.com.au

## **United Kingdom**

Blue Seal Limited  
www.blue-seal.co.uk  
Tel: 0121 327 5575  
Service: 0121 332 6647  
Fax: 0121 327 9711  
Email: sales@blue-seal.co.uk

## **United States**

Moffat Inc  
www.moffat.com  
Tel: 1 800 551 8795  
Fax: 336 661 9546  
Email: sales@moffat.com

an Ali Group Company



the spirit of excellence