

# metos

Serving trolley

Multigen

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Installation and operation manual

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## 1. TABLE OF CONTENTS

1.	<b>TABLE OF CONTENTS</b>	<b>2</b>
2.	<b>INTRODUCTION</b>	<b>3</b>
3.	<b>PRODUCT IDENTIFICATION</b>	<b>4</b>
4.	<b>TROLLEY IDENTIFICATION</b>	<b>4</b>
5.	<b>INTRODUCTION</b>	<b>5</b>
6.	<b>SAFE MODE</b>	<b>6</b>
7.	<b>CORRECT USE</b>	<b>6</b>
8.	<b>WORKING ENVIRONMENT</b>	<b>6</b>
9.	<b>ECOLOGICAL DISPOSAL</b>	<b>6</b>
10.	<b>STANDARDS AND CERTIFICATION</b>	<b>7</b>
11.	<b>PACKAGING, HANDLING, FORWARDING AND TRANSPORT</b>	<b>8</b>
12.	<b>TROLLEY DESCRIPTION</b>	<b>9</b>
13.	<b>SAFETY FEATURES</b>	<b>10</b>
14.	<b>CONNECTING TO THE POWER SUPPLY</b>	<b>11</b>
15.	<b>CONTROL PANEL</b>	<b>12</b>
16.	<b>DISPLAY ON GANTRY M1 or M2 SOFTWARE</b>	<b>13</b>
17.	<b>PROGRAMMING</b>	<b>14</b>
18.	<b>AUTOMATIC TIMER MODULE</b>	<b>16</b>
19.	<b>AUTOMATIC TIMER MODULE CONTINUED</b>	<b>17</b>
20.	<b>PROGRAMMING THE AUTOMATIC TIMER SETTINGS</b>	<b>18</b>
21.	<b>PROGRAMMING THE AUTOMATIC TIMER SETTINGS CONTINUED</b>	<b>19</b>
22.	<b>PROGRAMMING A NEW EPROM AND LO CONDITION</b>	<b>20</b>
23.	<b>PROGRAMMING THE CYCLES AND SET UP D4 AND M1 (DISP. ON GANTRY)- PLATE WARMER &amp; AMBIENT OPTION</b>	<b>21</b>
24.	<b>PROGRAMMING THE CYCLES AND SET UP D5 AND M2 (DISP. ON GANTRY)- REFRIGERATION OPTION</b>	<b>22</b>
25.	<b>EXTERNAL FOOD PROBE</b>	<b>23</b>
26.	<b>SPECIAL FEATURES</b>	<b>24</b>
27.	<b>OPERATING INSTRUCTIONS</b>	<b>25</b>
28.	<b>OPERATING INSTRUCTIONS CONTINUED</b>	<b>26</b>
29.	<b>FOOD SERVICE</b>	<b>27</b>
30.	<b>POST SERVICE PROCEDURE</b>	<b>27</b>
31.	<b>COOK FREEZE : COOK CHILL - FLOW CHART</b>	<b>28</b>
32.	<b>HOT LINE - FLOW CHART</b>	<b>29</b>
33.	<b>DAILY CLEANING PROCEDURE</b>	<b>30</b>
34.	<b>CLEANING SCHEDULE</b>	<b>30</b>
35.	<b>REFRIGERATION FILTER</b>	<b>31</b>
36.	<b>POWER WASHING</b>	<b>32</b>
37.	<b>CLEANING BY HAND</b>	<b>32</b>
38.	<b>TOWING ATTACHMENT</b>	<b>33</b>
39.	<b>TOWING PROCEDURE FOR THE MULTIGEN</b>	<b>33</b>
40.	<b>TOWING PROCEDURE FOR THE MULTIGEN DOLLIES</b>	<b>34</b>
41.	<b>TOWING SAFETY MULTIGEN</b>	<b>35</b>
42.	<b>FAULT FINDING</b>	<b>36</b>
43.	<b>FAULT FINDING CONT.</b>	<b>37</b>
44.	<b>SAFETY PARAMETERS</b>	<b>38</b>
45.	<b>MAINTENANCE</b>	<b>38</b>
46.	<b>REGULAR MAINTENANCE</b>	<b>39</b>
47.	<b>REGULAR MAINTENANCE CONT.</b>	<b>40</b>
48.	<b>CHARGING THE COMPRESSOR DOUBLE REFRIGERATION</b>	<b>41</b>
49.	<b>CHARGING THE COMPRESSOR SINGLE REFRIGERATION ELECTRICAL SAFETY TESTING</b>	<b>42</b>
50.	<b>ELECTRICAL SAFETY TESTING</b>	<b>43</b>
51.	<b>TECHNICAL ASSISTANCE AFTER SALES SERVICE</b>	<b>44</b>
52.	<b>WARRANTY AND SERVICE CALLS</b>	<b>45</b>
53.	<b>SPARE PARTS</b>	<b>46</b>
54.	<b>DOLLY</b>	<b>47</b>
55.	<b>DIMENSIONS</b>	<b>48</b>

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<b>56.</b>	<b>DIMENSIONS CONTINUED</b>	<b>49</b>
<b>57.</b>	<b>INSTALLATION</b>	<b>50</b>
<b>58.</b>	<b>INSTALLATION CONTINUED</b>	<b>51</b>
<b>59.</b>	<b>ELECTRICAL SPECIFICATION</b>	<b>52</b>
<b>60.</b>	<b>WIRING DIAGRAM</b>	<b>53</b>

## 1. Introduction



In choosing Burlodge, you have at your fingertips the most advanced purpose designed unit of its kind available today and with careful use and regular maintenance, your unit will give you many years of trouble free use.

## 2. Product Identification

MANUFACTURER	BURLODGE Srl
ADDRESS	Via CÁ BERTONCINA No 43 24068 Seriate (BG) Tel. 0039 035 302974 Fax 0039 035 302994
TYPE OF DOCUMENT	Operating and Maintenance Instructions
TYPE	Regeneration/Hot Line Multi-Portion Hostess Trolley
MODEL	Multigen
SERIAL NUMBER	
YEAR OF MANUFACTURE	

## 3. Trolley Identification

A data plate as shown below is attached to the rear panel of the trolley and contains all the data necessary for the identification of the trolley.

Under no circumstances should this plate be removed, as this would invalidate the warranty. It would also no longer be possible to identify the trolley for future technical assistance and correct spare parts.

<b>BURLODGE S.r.l.</b> ITALY - 24068 SERIATE (Bergamo) Via Cá Bertoncina		
Series / Série		
Model / Modèle		
Date / Date		
Serial n. / N. de Série		
Refrigerant/Réfrigérant		oz
Pressure / Pression	High / Haut Psi	Low / Bas Psi
Rating / Puissance et alimentation		
	Oven / Four Refrigerat. Options	Oven / Four Refrigerat. Options
Volts		
Phases		
Hertz		
Amps		
Watts		

#### 4. Introduction

This manual is an integral part of the safety of your trolley and a guide for all operators and maintenance staff. It contains important information on the operation and maintenance of your Burlodge trolley.

Ensure all personnel read this manual carefully, are fully conversant with its contents, and receive any additional training that may be required to enable them to operate and maintain the trolley in a safe and correct manner. Pay particular attention to the safety information included in the text.

Keep this manual in a safe place where it is accessible to all personnel at all times. This manual is a guide only and will be supplemented by on-site training designed for your individual requirements.

It is important to note that the program settings in this manual are purely an example and will vary to the actual settings for your trolley and site. When you receive your trolley, it will be programmed to the standard default factory settings but will be re-programmed to suit your specific conditions.

Please Note: Before installing or using your Burlodge trolley, the power supply must be checked to ensure the voltage and frequency correspond with the data plate. Refer to the instructions given in the "Installation" section.

it must be checked by a licensed electrician to ensure that it will be connected to an appropriate power supply. The voltage and frequency must correspond with the data plate. Refer to the instructions given in the "Installation" section.

It is important to use the trolley only in the way that is described in this manual. Burlodge will not be responsible for any damage that may result through incorrect use or failure to follow the instructions in this manual.

This manual relates to the Multigen 1 : Multigen 2 and Minigen series.

The following abbreviations are used in this manual to identify each individual model and options:

- Multigen I      ■ □
- Multigen II    ■ ■
- Minigen        ■
- Options        ◆

The following symbols are used in this manual to highlight important text:



**Read carefully highlights text that is important to safety**



**Electrical Caution Required**



**Caution Required**



**Correct action or procedure**



**Prohibited action or procedure**

## 5. Safe Mode



It is essential to have the trolley in a safe condition before any cleaning or maintenance of the trolley takes place. This is referred to in this manual as the **SAFE MODE**.

The trolley is in the **SAFE MODE** under the following conditions:

- Full isolation from any power source.
- The plug is stored correctly in the holder, which is located on the front of the trolley.
- Oven section is at ambient temperature i.e. below 86 °F / 30 °C.
- Plate warmer ♦ section is at ambient temperature i.e. below 86 °F / 30 °C.
- Heated top plate and gantry elements ♦ are at ambient temperature i.e. below 86 °F / 30 °C.
- Folding tray rail ♦ is in the down position.
- Lateral shelf ♦ is removed from the trolley.
- Brakes are applied on the swivel castors.
- Oven fans are stationary.

## 6. Correct Use

Your Burlodge trolley has been designed for the following uses:

- Regeneration of Multi-portion chilled meals from +37°F to +167°F / +3°C to +75°C.
- Regeneration of Multi-portion frozen meals from -37°F to +167°F / -38°C to +75°C.
- Maintaining of Multi-portion meals above +145°F / +63°C.
- Meal service of hot and cold foods.
- Holding of cold Multi-portion meals prior to regeneration and service.

It is not recommended that the trolley be used for any other purpose than described above.

## 7. Working Environment

In order to guarantee the correct and safe functioning of your Burlodge trolley, it should be used in a clean, dry environment with temperatures between +10°C (+50°F) and +30°C (+86°F) and with a maximum relative humidity of 65%.

Your Burlodge trolley must be protected from external weather conditions at all times.

## 8. Ecological Disposal

It is the responsibility of the user to ensure that local laws and regulations are complied with when dismantling the trolley and disposal of all packaging and freight materials.

If your trolley is fitted with the **Battery Display System** option remove the battery and dispose of it correctly, before dismantling the trolley.



Do not dispose of it into a fire it may explode.



Do not short circuit.



Do not tamper or damage it.

## 9. Standards and Certification

### Technical Standards Applied

The Multigen has been designed to the following standards.

#### Low voltage directives

- EEC 73/23\*
- EEC 93/68\*

#### EMC directives

- EEC 89/336\*
- EEC 92/31\*

#### Technical safety standards

- EN 60335-1\*
- EN 60335-2-24\*
- EN 60335-2-42\*
- EN 60335-2-49\*
- UL 471\*\*
- UL 197\*\*
- CAN/CSA C22.2 No. M109-1981\*\*
- CAN/CSA C22.2 No. 120-M91\*\*

#### Technical EMC standards

- EN 55014\*
- EN 55022\*
- EN 55104\*
- EN 61000-3-2\*
- EN 61000-3-3\*

#### Technical noise emission standards

- ISO 3744\*
- ISO 12201\*

#### Sanitary standards

- N.S.F. C2\*\*\*
- \* 50 Hertz models
- \*\* 60 Hertz models
- \*\*\* all models





## 10. Packaging, Handling, Forwarding and Transport

When received, all shipments must be inspected for any damage to the pallets or packaging. Any damage found or any discrepancy in the number of items delivered must be noted on the carrier's consignment note. This document shows the number of pallets and packages delivered while an itemised description of the goods is listed on the Burlodge packing slip attached to the consignment note. This documentation may vary.

If the packaging is not removed while the carrier is present, the terms "Unopened" or "contents unexamined" or similar should be noted on the consignment note. The goods must be thoroughly checked for any physical signs of damage and any damage found must be reported to Burlodge by fax or telephone within 2 days from date of delivery. A written confirmation must follow within 5 working days together with a photocopy of the accompanying document on which the Model and Serial number of the damaged trolley/goods must be indicated.

Unloading and handling in the Shipping/Receiving warehouse is the responsibility of the client. Burlodge is not responsible for any damage that may occur within this area. For unloading and unpacking, proceed as follows:

### Unloading:

- Unloading must be carried out by qualified staff (forklift operator) using a forklift truck with a suitable load-bearing capacity for the weight of the trolley, which is indicated on the packaging.
- The trolley is packed on a single pallet and may contain other small items inside the trolley.

The following data is indicated on the packaging:

- Destination
- Order no.
- Pallet no.
- Gross weight
- Sender
- Contents

### Unpacking:

Proceed as follows:

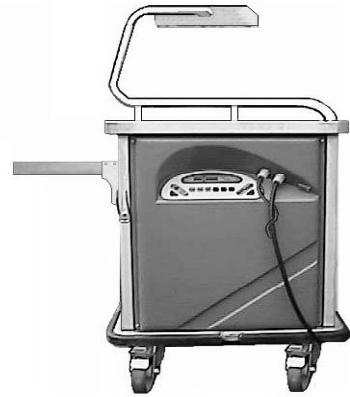
- Carefully cut the nylon straps.
- Remove the cardboard box.
- Cut the nylon straps holding the trolley to the wooden pallet.
- Remove the wooden slats blocking the castors.
- Unlock the brakes on the front swivel castors.
- With the use of a ramp, carefully push the trolley from the pallet. Remove the plastic bubble-wrap from the trolley.
- At least 2 people may be required to unload the trolley from the pallet. Ensure that protective clothing and eyewear are worn and that the correct tools are used to carry out the above operation.
- NB: the consignee, in compliance with the local laws and regulations, must dispose of packaging material.

Cleaning: The trolley should be cleaned prior to being used. Follow the instructions that are given in the "Cleaning Procedure" section. If the trolley is to be stored, it must be repacked and protected by the original packaging.

## 11. Trolley Description



**Multigen 2 side view**



**Multigen 1-2 Front View**



**Multigen 1 Side View**



**Minigen Front View**



**Dolly and Module**

## 12. Safety Features



Your Burlodge trolley includes the following built-in safety features:

### Active Safety Features:

- High limit temperature thermostats.
- Microprocessor based software.
- Scrolling temperature displays of all functions.
- Thermally protected motors.
- Castors with brakes.
- Error codes.
- Auto shut down for oven probe failure.
- Low voltage control panel.

### Passive Safety Features:

- Fixed fan guards.
- A.B.S. door panels for impact protection. ♦
- All-round rubber bumpers to absorb impacts.
- Positive door latches.

### 13. Connecting to the Power Supply



#### Connecting

Proceed as follows:

- Ensure that the power supply is switched off before introducing the plug to the socket.
- Allow adequate space around the trolley so that it is safe and accessible
- Apply the brakes on the swivel castors.
- Ensure that the power cord is clear of any hazards and not being stretched.
- Hold the plug firmly in your hand.
- The green LED on the control panel will confirm power to the unit.

#### Disconnecting

Proceed as follows:

- Ensure that the brakes on the swivel castors are still applied.
- Hold the plug firmly, and withdraw it from the socket.
- Place the plug in the holder on the front of the trolley.
- The above are given as general guidelines, but may vary depending on the type of plug and socket used. Therefore it is essential that you follow the instructions given by the manufacturer of the specific type and model of plug and socket used.



- Always check the power cord before every use.
- Always hold the plug body and not the power cable to withdraw the plug.
- Always store the plug in the plug holder.



- Never use the trolley if there are any signs of damage or fraying to the power cord.
- Never use wet hands and ensure that both the plug and wall sockets are dry.
- Never disconnect the trolley during a retherm cycle. ALWAYS stop the cycle and turn the trolley off before disconnecting from the power supply.

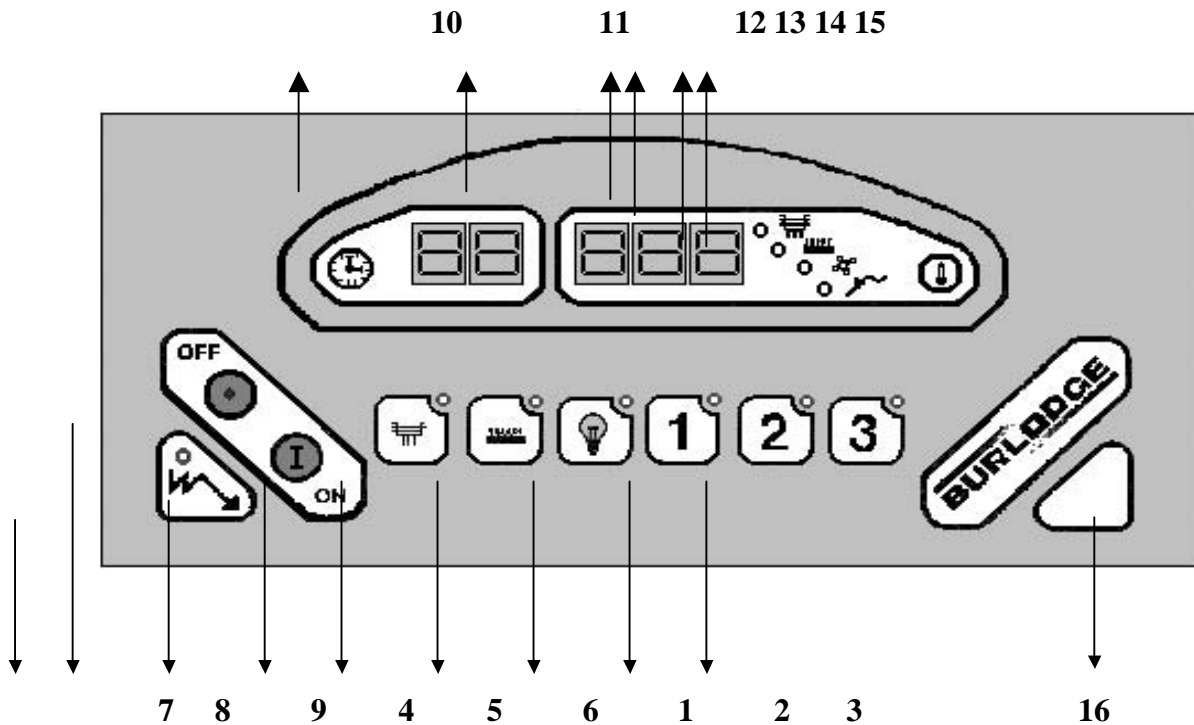
## 14. Control Panel



### Touch Pads Controls And Displays

The Multigen I, Multigen II and Minigen, all have the control panel shown in the following Figure 15.1

Some of the functions are optional and may not be available or operational on your trolley. In this case the relative functions and touch pads are disabled.



### Key

**Figure 15-1 Control Panel**

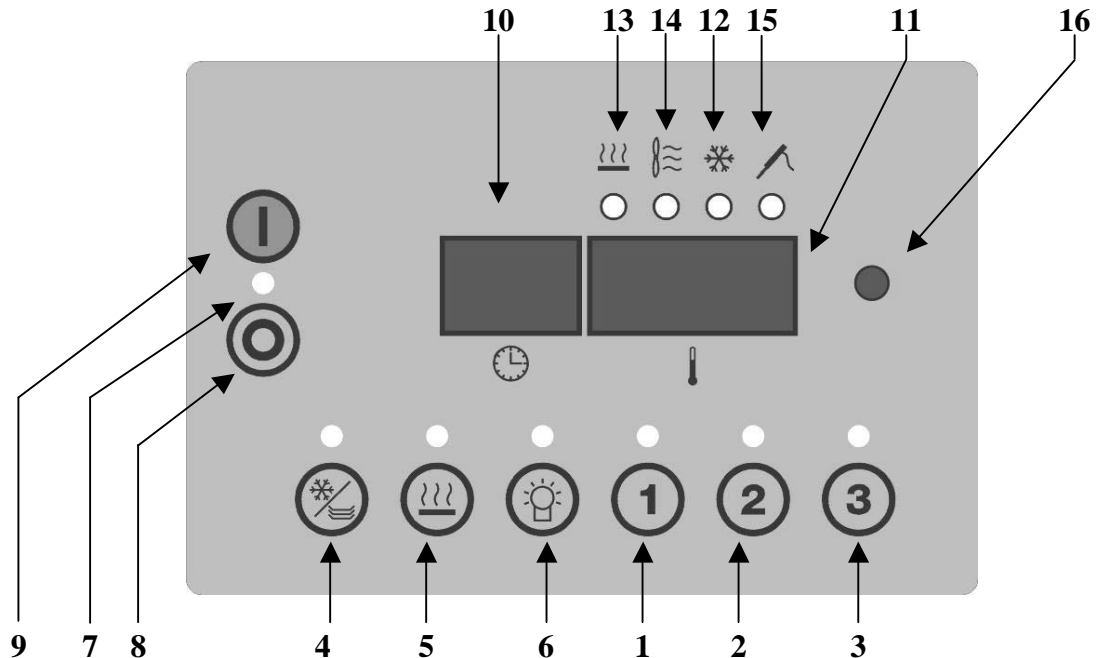
1. Start/Stop Pad for regeneration cycle 1
2. Start/Stop Pad for regeneration cycle 2
3. Start/Stop Pad for regeneration cycle 3
3. Start/Stop Pad for maintaining cycle (press and hold for 5 seconds)\*
4. On /Off Pad for Plate warmer or Refrigeration
5. On /Off Pad for Heated top plate (press once all of the top plate press twice for half top plate)\*
6. On /Off Pad for cold Lights
7. Mains power indicator LED
8. Display Off Pad
9. Display On Pad
10. Display 1 indicating cycle time or error/fault messages
11. Display 2 indicating temperatures of programmed functions
12. LED indicating that the temperature of Plate warmer or Refrigerated compartment is currently being displayed
13. LED indicating that the temperature of Heated top plate is currently being displayed \*
14. LED indicating that the temperature of Oven is currently being displayed.
15. LED indicating that the temperature of External food probe is currently being displayed
16. Hit system data download LED

**Split Plate Warmer with refrigeration Models have a separate switch to the side of the controls to operate the Plate Warmer section.\* Refer to special features**

## 16. Display on Gantry M1 or M2 software

### Touch Pads Controls And Displays

The Multigen I, Multigen II and Minigen, may have the control panel on gantry shown in the following Figure 15.2. Some of the functions are optional and may not be available or operational on your trolley. In this case the relative functions and touch pads are disabled.



### Key

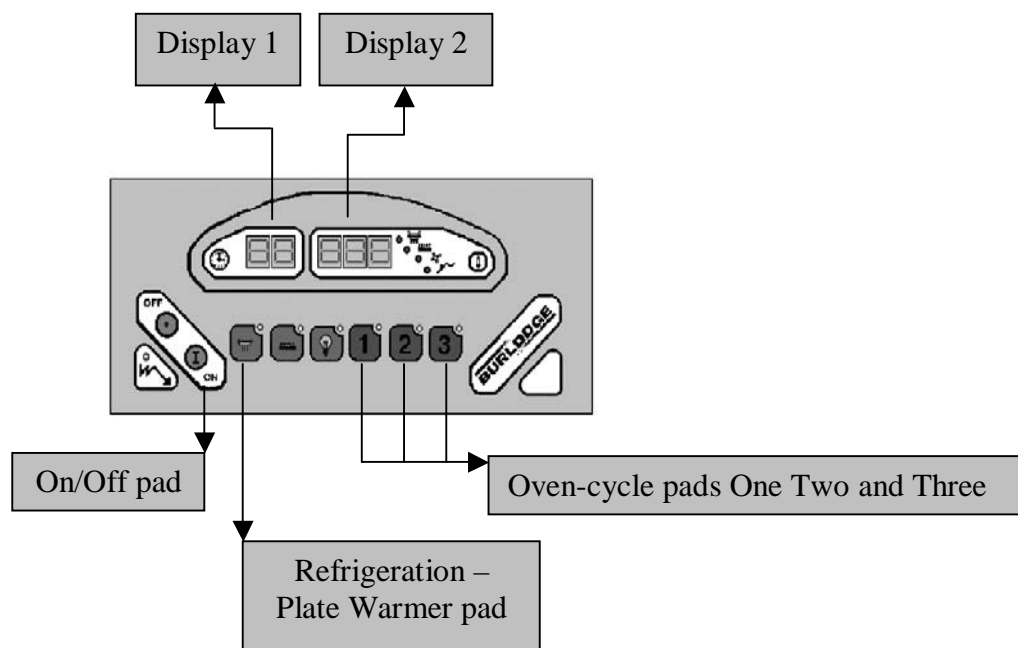
**Figure 15-2 Control Panel on Gantry**

1. Start/Stop Pad for regeneration cycle 1
2. Start/Stop Pad for regeneration cycle 2
3. Start/Stop Pad for regeneration cycle 3
- 3 Start/Stop Pad for maintaining cycle (press and hold for 5 seconds)\*
4. On /Off Pad for Plate warmer or Refrigeration
5. On /Off Pad for Heated top plate (press once all of the top plate press twice for half top plate)\*
6. On /Off Pad for cold Lights
7. Mains power indicator LED
8. Display Off Pad
9. Display On Pad
10. Display 1 indicating cycle time or error/fault messages
11. Display 2 indicating temperatures of programmed functions
12. LED indicating that the temperature of Plate warmer or Refrigerated compartment is currently being displayed
13. LED indicating that the temperature of Heated top plate is currently being displayed \*
14. LED indicating that the temperature of Oven is currently being displayed.
15. LED indicating that the temperature of External food probe is currently being displayed
16. Hit system data download LED

**Split Plate Warmer with refrigeration Models have a separate switch to the side of the controls to operate the Plate Warmer section.\* Refer to special features**

## 17. Programming

### Control Panel Functions when in Programming Mode



#### Special Touch Pad Functions and Displays in Programming Mode.

When in programming mode the touch pads on the control panel take on different functions compared to normal use.

- Display 1 indicates a two-digit number; the first digit refers to the group and the second to the sub group
- Display 2 indicates the value of the parameter which is being modified or entered.
- Cycle 1 touch pad reduces the set value of the parameter.
- Cycle 2 touch pad increases the set value of the parameter.
- Cycle 3 touch pad confirms the set value of the parameter and advances to the next parameter.
- Refrigeration/Plate Warmer pad this must be kept pressed to enter the set up under parameter O

#### Access to Programming Mode

- Apply the brakes on the castors.
- Connect the trolley to the power supply. The green LED will illuminate.
- Simultaneously firmly press cycle 1 and cycles 2 and 3 touch pads, press the "ON" touch pad and "P" appears on window 1. Release cycle 1, 2 and 3 and immediately (within 5 seconds) enter the programming code
- Pressing cycle 3 and cycle 2 then cycle 1 in quick succession for set up and oven cycle programming.
- Pressing cycle 1 and cycle 2 then cycle 3 in quick succession for auto start timer programming.
- If any errors have been made in the above procedure, the panel will revert to its normal operating mode. If these instructions have been carried out correctly "0" will appear on display 1.

#### Special Touch Pad Functions and Displays in Programming Mode.

When in programming mode the touch pads on the control panel take on different functions compared to normal use.

- Cycle 1 touch pad reduces the set value of the parameter.
- Cycle 2 touch pad increases the set value of the parameter.
- Cycle 3 touch pad confirms the set value of the parameter and advances to the next parameter.

When programming mode is accessed, display 1 indicates a two-digit number; the first digit refers to the group and the second to the parameter. Display 2 indicates the parameter which is being modified or entered and represents the time in minutes or the temperature in degrees centigrade.

### **Grouping of Parameter Settings**

In order to facilitate the entry of the parameters that can be set, they have been divided into four groups as shown below:

- Group “0” = settings for technical functions
- Group “1” = settings for the regeneration Cycle 1
- Group “2” = settings for the regeneration Cycle 2
- Group “3” = settings for the regeneration Cycle 3
- Group “4” = settings for the maintaining Cycle
- Group “9”= section for the serial number of the machine (please note this can only be accessed and seen when reprogramming a new Eprom or when reprogramming After LO.

### **Logical Entry Sequence For Entering Parameters In Each Group**

The various parameters to be entered for each group are numbered and follow the logical sequence shown below:

- Group “1” parameter “1” oven temperature setting.
- Group “1” parameter “2” total cycle time in minutes.
- Group “1” parameter “3” oven ventilation temperature setting.
- Group “1” parameter “4” duration in minutes of the ventilation cycle.
- For groups 2,3 and 4, repeat group 1 sequence.



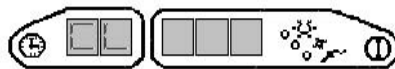
## 18. Automatic Timer Module

In order to facilitate the entry of the parameters that can be set, they have been divided into eight groups and further sub groups as shown below:

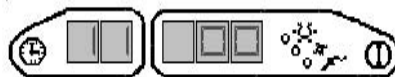
- Group “1” = settings for the first weekday start of a regeneration Cycle.
- Group “2” = settings for the second weekday start of regeneration Cycle.
- Group “3” = settings for the third weekday start of regeneration Cycle.
- Group “4” = settings for the first weekend start of regeneration Cycle.
- Group “5” = settings for the second weekend start of regeneration Cycle.
- Group “6” = settings for the third weekend start of regeneration Cycle.
- Group “7” = settings for the automatic change for daylight saving, actual time, and date.
- Group “8” = settings to correct the speed of the clock.

### Access To Programming Mode

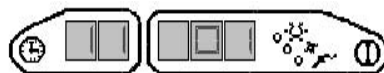
- Apply the brakes on the castors.
- Connect the trolley to the power supply. The green LED will illuminate.
- Simultaneously firmly press cycle 1, 2 and 3 touch pads, press the “ON” touch pad until “P” appears on display 1. Release cycles 1, 2 and 3 and immediately (within 5 seconds) enter the programming code by pressing cycle 1, then 2 and then 3 in quick succession
- 
- If any errors have been made in the above procedure, the panel will revert to its normal operational mode. If these instructions have been carried out correctly “CL” will appear on display 1.
- 
- The following is an example to set **cycle 1** for the 1st meal of the weekday and to start at **07.30**.
- Access the timer-programming mode



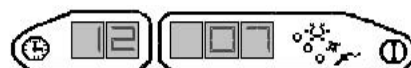
1. “CL” in display 1
2. Press Cycle 3 and advance to group 1, which are the weekday settings for the start of the 1st meal of the day.



3. Using cycle 1 and cycle 2 (decrease and increase values) select the cycle for the start for the 1st meal of the weekday **i.e.** Cycle one “01”. Press Cycle 3 to confirm the setting and to advance to the next sub group.



Using cycle 1 and cycle 2(decrease and increase values) select the value of the hour for the start of the 1st meal of the weekday **i.e.** “07”. Press cycle 3 to confirm the setting and to advance to the next sub group

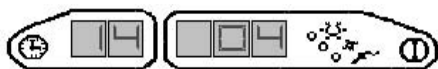


4. Using cycle 1 and cycle 2 (decrease and increase values) select the value of the minutes for the start of the 1st meal of the weekday **i.e.** “30”. Press cycle 3 to confirm the setting and to advance to the next sub group.



## 19. Automatic Timer Module continued

5. Using cycle 1 and cycle 2 (decrease and increase values) select the value of the hostess options for the start of the 1st meal of the weekday i.e. **cold light and refrigeration“04”**. Press cycle 3 to confirm the setting and to advance to the next sub group.



6. Continue programming all the functions to your requirements, (refer to programming data table) until you reach the actual date and time settings. **It is important to note** that the actual time (group 7.8 and 7.9) must be updated every time programming takes place as the clock is stopped when the program is accessed.
7. Press Cycle 3 to advance to group 8, this is the correction factor for the speed of the clock and should only be altered if the clock is gaining or losing time.
8. Press Cycle 3. Display 1 will now display “CL”



9. If any errors have been made or you wish to revise the data, you can re-access the timer program simply by pressing Cycle 3 and continue the procedure from point 2. After any revision has been made ensure you carry out the instructions in point 8.

Press the OFF pad and the new data will be stored into the memory.

Press the ON pad and the unit will now function as programmed. The display will now scroll between the actual temperatures of both the oven side and the cold side followed by the actual time, (top segment of the next display flashes intermittently when the actual time is displayed) followed by the start time of the next cycle. The next start cycle is indicated by the cycle LED which stays on at the same time as the cycle start time.

When making any changes to the program it is important to note that you must continue to the end of the program until “CL” is displayed. And that you press the OFF pad, otherwise the new data will not be stored and you may corrupt the unit and LO appears on the display 1 accompanied by an audible alarm.

**Important to note if the if LO is on the display then you must follow the instructions under the heading ‘Programming a New Eprom and LO’.**

**20. Programming the Automatic Timer Settings**

**Access To Programming Mode**

- Simultaneously firmly press cycle 1 and cycles 2 and 3 touch pads, press the “ON” touch pad and “P” appears on window 1. Release cycle 1, 2 and 3 and immediately (within 5 seconds) enter the programming code
- Pressing cycle 1 and cycle 2 then cycle 3 in quick succession.

NB: If any errors have been made in the above procedure, the panel will revert to its normal operating mode. If these instructions have been carried out correctly “0” will appear on display 1.

FUNCTIONS	GROUPS and SUB GROUPS	VALUES		
		Default Settings	Individual Settings	Permissible range
	Display 1	Display 2		
	C L			

Do not alter settings on any of the parameters from CL to 80 unless you require the auto start timer to function

Options in Sequence Each Time Cycle 3 is pressed						
<b>Weekday Settings</b>	1 <sup>st</sup> Meal Of the day	Cycle*	11	00		00 ⇔ 03
		Hour	12	07		01 ⇔ 23
		Minutes	13	00		00 ⇔ 59
		Options**	14	01		00 ⇔ 06
	2 <sup>nd</sup> Meal Of the day	Cycle*	21	00		00 ⇔ 03
		Hour	22	12		01 ⇔ 23
		Minutes	23	00		00 ⇔ 59
		Options**	24	01		00 ⇔ 06
	3 <sup>rd</sup> Meal Of the day	Cycle*	31	00		00 ⇔ 03
		Hour	32	17		01 ⇔ 23
		Minutes	33	30		00 ⇔ 59
		Options**	34	01		00 ⇔ 06
<b>Weekend Settings</b>	1 <sup>st</sup> Meal Of the day	Cycle*	41	00		00 ⇔ 03
		Hour	42	07		01 ⇔ 23
		Minutes	43	00		00 ⇔ 59
		Options**	44	01		00 ⇔ 06
	2 <sup>nd</sup> Meal Of the day	Cycle*	51	00		00 ⇔ 03
		Hour	52	12		01 ⇔ 23
		Minutes	53	00		00 ⇔ 59
		Options**	54	01		00 ⇔ 06
	3 <sup>rd</sup> Meal Of the day	Cycle*	61	00		00 ⇔ 03
		Hour	62	17		01 ⇔ 23
		Minutes	63	30		00 ⇔ 59
		Options**	64	01		00 ⇔ 06
<b>Clock</b>	Month for hour increase (+)		70	03		03
	Day for hour increase (+)		71	30		30
	Month for hour decrease (-)		72	10		10
	Day for hour decrease (-)		73	26		26
<b>Date/Time</b>	Year		74	00		
	Month		75	02		
	Day		76	21		
	Day of the week***		77	01		
	Hour		78	00		
	Minutes		79	00		
<b>Correction Factor</b>						
Minutes per year		8	00	Do not alter		

## 21. Programming the Automatic Timer Settings continued

### Programming Cycle Options for Auto Start Timer

CYCLE OPTIONS for Auto Start Timer	CODE
No cycle start	00
Cycle 1	01
Cycle 2	02
Cycle 3	03

HOSTESS OPTIONS	CODE
No options	00
Cold light only	01
Cold light plus all of the heated top plate and gantry	02
Cold light plus the left-hand half of the heated top plate and gantry	03
Cold light and refrigeration	04
Cold light and refrigeration **** and all of heated top plate and gantry	05
Cold light and plate warmer **** and all of heated top plate and gantry	05
Cold light and refrigeration ***** and the left-half of the of heated top plate and gantry	06
Cold light and plate warmer *****and the left-half of the of heated top plate and gantry	06
Cold light and refrigeration	04
The cold light option will switch on at the end of the cycle	
The refrigeration, plate warmer and top plate options will switch on 45 minutes prior to the cycle start time. The cold light option will switch on at the end of the cycle.	
**** D4 + M1 software for Multigen with the plate warmer option	
***** D5 + M2 software for Multigen with the refrigeration option	

Press the Off pad

**The trolley is now programmed to your requirements and ready to be used**

## 22. Programming a New Eprom and LO condition

When programming a new Eprom you may need to completely reprogram the unit to your own individual settings and to commence you may need to reset the Eprom.

**This sequence must be completed up to the end so that the sequence is memorized**

If you are using the HIT system it is essential to program the correct time and date in the automatic timer settings even if you do not require the machine to start automatically

Resetting LO And Entering The Serial No. of the Machine				
FUNCTIONS	GROUPS And SUB GROUPS	VALUES Default Settings	Individual Settings	Permissible range
Take Note of the Serial Number from the Data Plate at the Rear of the Machine				
	Display 1			
	LO			
Press Touch Pads Cycle 2, then 1 then 2 within 5 seconds				
	C L			
Press Cycle 3 and Hold Until Display Stops at Group 78				
	Display 1	Display 2		
	78	00		
Press <b>Cycle 3</b> and Advance to Group 79				
	79			
Press <b>Cycle 3</b> and Advance to Group 80				
	80			
Press <b>Cycle 3</b> And Advance to Group 0				
	0			
Press <b>Cycle 2</b> And Advance to Group 1				
	1			
Press <b>Cycle 2</b> And Advance to Group 2				
	2			
Press <b>Cycle 2</b> And Advance to Group 3				
	3			
Press <b>Cycle 2</b> And Advance to Group 4				
	4			
Press <b>Cycle 2</b> And Advance to Group 9				
	9			
Press <b>Cycle 3</b> And Advance to Group 91				
	91			
Keep Pressing <b>Cycle 2</b> Until You Have Entered The First 2 Digits Of The Serial Number				
	91	**		
Press <b>Cycle 3</b> And Advance to Group 92				
	92			
Keep Pressing <b>Cycle 2</b> Until You Have Entered The Second 2 Digits Of The Serial Number				
	92	**		
Press <b>Cycle 3</b> And Advance to Group 0				
	0			
Press the Off pad				

**23. Programming The Oven Cycles And Set Up D4 and M1 (display on gantry) – Plate Warmer & Ambient option**

Access the Set up Programming Mode

- Simultaneously firmly press cycle 1 and cycles 2 and 3 touch pads, press the “ON” touch pad and “P” appears on window 1. Release cycle 1, 2 and 3 and immediately (within 5 seconds) enter the programming code
- Pressing cycle 3 and cycle 2 then cycle 1 in quick succession.
- If any errors have been made in the above procedure, the panel will revert to its normal operating mode. If these instructions have been carried out correctly “0” will appear on display 1.
- Please note that the default settings may vary depending on the issue date of the Eprom.

FUNCTIONS	GROUPS and SUB GROUPS	VALUES		
		Default Settings	Individual Settings	Permissible Range °C ; °F
	Display 1	Display 2		
	0	°C-°F		

You must keep Refrigeration/Plate Warmer pad pressed Together with Cycle 3 pad while in the 0 parameters

System Settings	Plate Warmer Temperature	01	100 (212)		030 ⇔ 110 ; 086 ⇔ 230
	Heated Top plate ** (DO NOT ALTER)	02	80 (176)		030 ⇔ 080 ; 086 ⇔ 176
	Plate Warmer touch pad	03	01		000 (off) ⇔ 001 (on)
	Heated Top Plate	04	01		000 (off) ⇔ 002 (on)**
	Cold Light touch pad	05	01		000 (off) ⇔ 001 (on)
	Touch Pad Lock	07	00		000 (off) ⇔ 001 (on)
	Temp. (°C or °F)	08	00		000 (°C) ⇔ 001 (°F)

\*\*If set to 000 (off), the heated top plate touch pad is disabled. If set to 001 (on) permits the top plate to be selected in the split mode with only the left-hand half of the top plate working or the full mode with both halves of the top plate working as one. If set to 002 (on) permits the top plate to be selected only in the full mode with both halves of the top plate working as one.

		1				
Release Refrigeration pad Press Cycle 3 Each Time to Continue						
Oven Cycle Settings	Cycle 1	Oven Set Temp.	11	140	000 ⇔ 180	
		Total Cycle Time	12	045	003 ⇔ 099 Minutes	
		Ventilation Temp.	13	80	Oven set temp.-1°	
		Ventilation Time****	14	002	0 minutes ⇔ cycle time	
	2					
	Press Cycle 3 Each Time to Continue					
	Cycle 2	Oven Set Temp.	21	140	000 ⇔ 180	
		Total Cycle Time	22	045	003 ⇔ 099 Minutes	
		Ventilation Temp.	23	80	Oven set temp.-1°	
		Ventilation Time****	24	002	0 minutes ⇔ cycle time	
	3					
	Press Cycle 3 Each Time to Continue					
	Cycle 3	Oven Set Temp.	31	140	000 ⇔ 180	
		Total Cycle Time	32	045	003 ⇔ 099 Minutes	
		Ventilation Temp.	33	80	Oven set temp.-1°	
		Ventilation Time****	34	002	0 minutes ⇔ cycle time	
4						
Press Cycle 3 Each Time to Continue						
Maintaining Cycle	Oven Set Temp.	41	80	000 ⇔ 180		
	Total Cycle Time	42	030	000 ⇔ 099 Minutes		

\*\*\*\* Maximum ventilation time is the total oven cycle time less one minute.

Press the Off pad

The above table summarises both the range of values that can be modified and the pre-set default values of software D4D and D4U Eproms + MID Eprom. The default settings remain in the memory even if the microprocessor batteries become discharged.

**24. Programming the Oven Cycles And Set Up D5 and M2 (display on gantry) – Refrigeration option**

**Access the Set up Programming Mode**

- Simultaneously firmly press cycle 1 and cycles 2 and 3 touch pads, press the “ON” touch pad and “P” appears on window
- 1. Release cycle 1, 2 and 3 and immediately (within 5 seconds) enter the programming code
- Pressing cycle 3 and cycle 2 then cycle 1 in quick succession.
- If any errors have been made in the above procedure, the panel will revert to its normal operating mode. If these instructions have been carried out correctly “0” will appear on display 1.
- Please note that the default settings may vary depending on the issue date of the Eprom.

FUNCTIONS	GROUPS and SUB GROUPS	VALUES		
		Default Settings	Individual Settings	Permissible range
		Display 1	Display 2	
	0	°C-°F		

You must keep Refrigeration/Plate Warmer pad pressed Together with Cycle 3 pad while in the 0 parameters				
System Settings	Fridge Temp.	01	01 (34)	000 ⇔ 025 (off)
	Heated Top plate ** DO NOT ALTER	02	80-(176)	030 ⇔ 080
	Refrig. Hysteresis	03	02	002 ⇔ 005
	Heated Top Plate	04	01	000 (off) ⇔ 002 (on)**
	Cold Light T/ pad	05	01	000 (off) ⇔ 001 (on)
	Security 1	06	10-(50)	003 ⇔ 020(off)****
	Touch Pad Lock	07	00	000 (off) ⇔ 001 (on)
	Temp. (°C or °F)	08	00	000 (°C) ⇔ 001 (°F)
	Oven Cold Temp***	09	OFF	000 ⇔ 025 (off)

\*\*If set to 000 (off), the heated top plate touch pad is disabled. If set to 001 (on) permits the top plate to be selected in the split mode with only the left-hand half of the top plate working or the full mode with both halves of the top plate working as one. If set to 002 (on) permits the top plate to be selected only in the full mode with both halves of the top plate working as one.

\*\*\* If the oven cold temperature is set to the off position, security 1 is automatically switched off.

\*\*\*\*The minimum setting of security 1 is the fridge set temperature plus one step.

1					
Release Refrigeration pad Press Cycle 3 Each Time to Continue					
Oven Cycle Settings	Cycle 1	Oven Set Temp.	11	140	000 ⇔ 180
		Total Cycle Time	12	045	003 ⇔ 099 Minutes
		Ventilation Temp.	13	80	Oven set temp.-1°
		Ventilation Time ****	14	002	0 minutes ⇔ cycle time
	2				
	Press Cycle 3 Each Time to Continue				
	Cycle 2	Oven Set Temp.	21	140	000 ⇔ 180
		Total Cycle Time	22	045	003 ⇔ 099 Minutes
		Ventilation Temp.	23	80	Oven set temp.-1°
		Ventilation Time ****	24	002	0 minutes ⇔ cycle time
	3				
	Press Cycle 3 Each Time to Continue				
Cycle 3	Oven Set Temp.	31	140	000 ⇔ 180	
	Total Cycle Time	32	045	003 ⇔ 099 Minutes	
	Ventilation Temp.	33	80	Oven set temp.-1°	
	Ventilation Time ****	34	002	0 minutes ⇔ cycle time	
4					
Press Cycle 3 Each Time to Continue					
Maintaining Cycle	Oven Set Temp.	41	80	000 ⇔ 180	
	Total Cycle Time	42	030	000 ⇔ 099 Minutes	

\*\*\*\* Maximum ventilation time is the total oven cycle time less one minute.

Press the Off pad

The default settings remain in the memory even if the microprocessor batteries become discharged.

## 25. External Food Probe

### Detachable external food probe

The detachable external food probe is connected to the trolley by plugging it in to the external blue probe socket, which is located on the front panel next to the touch pads. The probe is used to check the temperature of food products prior to and after regeneration. The temperature read out of the probe will only be displayed when none of the regeneration cycles are selected, an audible bleep indicates that the temperature reading is below 10°C (50°F) or above 75°C (167°F).

### Detachable external food probe – HIT

The detachable HIT external food probe is connected to the trolley by plugging it in to the external blue probe socket, which is located on the front panel next to the touch pads. The probe is used to check and record the temperature of food products prior to and after regeneration. The temperature of the food product time and date is recorded by pressing the switch and then immediately releasing it. An audible bleep follows two seconds later to confirm that the data has been recorded. The temperature read out of the probe will only be displayed when none of the regeneration cycles are selected, a continuous audible bleep indicates that the temperature reading is below 10°C (50°F) or above 75°C (167°F).

**Do not hold the switch down for more than half a second or the display will revert to its normal mode.**

If the temperature exceeds 110°C (230°F) the display will no longer show the reading from the probe and will revert back to the normal display mode.

### Correct Use

- Ensure that the oven is not in cycle.
- Connect the food probe to the external blue socket on the trolley.
- Remove from one product at a time from the oven or cold side and close the door.
- Place the product on the top plate above the oven section
- Clean the probe with an antiseptic wipe
- Insert the probe into the centre of the food product.
- The product temperature will be displayed accompanied by an audible bleep if the product temperature is below 10°C (50°F). Or above 75°C (167°F).
- Press and release the switch immediately releasing it.
- An audible bleep follows two seconds later to confirm that the data has been recorded.
- Return the food product to its original compartment and close the door.
- Clean the probe with an antiseptic wipe. A new wipe should be used for each item tested.
- Repeat the above procedure for further temperature testing of food products.
- Make sure the probe has been cleaned before storing.



- **Do not place the probe or measure temperatures in side either the oven or cold chambers.**
- **Do not attempt to probe frozen products.**
- **Do not hold the switch down for more than half a second.**
- **Do not over stretch the cable.**
- **Do use for any other purpose than food temperature testing.**



- **Do use with care**
- **Do keep the probe clean**
- **Ensure that the probe is stored safely**

**This probe is a accurate measuring instrument and must be treated with great care.**

**Two clips on the front panel are provided to hold the probe while the trolley is in use. The sharp tip of the probe can represent a hazard if misused. Remove the probe from the trolley at the end of every meal service and store it away safely. The tip of the probe must be cleaned thoroughly using a sterile wipe before and after every use.**

**This feature must only be used with a Burlodge probe.**



## 26. Special Features

### Memorised Power Supply Failure

Various start-up procedures and oven cycle settings are kept in memory. In the case of a power failure (or if the “OFF” touch pad is pressed), the cycle will restart if you press the “ON” touch pad. The cycle will continue from where it was interrupted. During the interrupted cycle or power failure, if the temperature of the oven goes below 70°C (158°F) the oven cycle time is reset and a new cycle will need to be started.

### Audible Warning

Quick intermittent beeps denote the alarm status.

A slow intermittent beep denotes normal status i.e. end of a cycle.

A slow intermittent beep denotes if the optional external food probe registers a temperature below 10°C (+50°F) or above 75°C (167°F).

### Memory Back Up

The default settings remain in the memory even if the microprocessor batteries are discharged. Refer to the Programming Data Table that summarises both the permissible ranges of the values that can be modified and the pre-set default values. The battery has an expected life of eight years and it is recommended that it be replaced after seven years. Contact the Burlodge Technical Department.

### Maintaining Cycle

This function allows the oven to be used to maintain the temperature of the product in the oven section after regeneration or boosting in conjunction with the display light (the light is always automatically switched off if any of the other oven cycles are selected). This cycle can only be selected by pressing and holding oven cycle 3 for 5 seconds. **Please note the if the light has already been selected it will be initially switched off when the cycle is selected then come back on after 5 seconds.**

The temperature and time of maintaining cycle could be setted with parameters 41 and 42.

NB: To enable the boosting when CO is enabled use this sequence:

In sequence press cycle touch pad 3, ( CO ) will appear : press cycle 2, then 1 then 3, and keep depressed cycle 3 until maintaining cycle starts.

### Battery Display System ♦

This option allows the control panel to be switched on for a period of 20 seconds without the unit being connected to a power source. All the displays will function normally and permit the use of the external food probe for temperature product testing. The control panel will automatically be switched off after 20 seconds. This function can be repeated as many times as required.

### Split Heated Top Plate and Gantry

The Heated Top Plate can either be used with all the top plate heated or split use with one half heated for service of hot foods and the other half un-heated for the service of cold foods. Press the pad once for all of the top plate and the entire overhead gantry heating, the LED will remain on permanently. Press the pad for a second time and only half of the top plate and gantry will heat up (this will always be the section above the oven). The LED will continuously flash on and off to confirm this status.

### Touch Pad Lock (CO)





It restricts the use of the trolley to authorized personnel; the trolley can be programmed so that the cycle will not start until the starting code has been entered. The starting code is requested by the message “CO” which will appear in display 1 after a cycle touch pad has been pressed. To start a cycle: select the required cycle, press cycle touch pad 2 then 1 then 3 in quick succession. The refrigeration system will work as normal and will not be affected by this function.

## 27. Operating Instructions

### Connection to the Power Supply

Proceed as follows:

- Apply the brakes on the castors on the front of the trolley (always use your feet and never your hands).
- Ensure that the power supply is switched off.
- Holding the plug firmly in your hand, align and introduce the plug to the wall socket.
- Allow adequate space around the trolley so that it is safe and accessible.
- Ensure that the power cord is clear of any hazards and not being stressed.
- Switch on the wall socket. The green LED on the control panel will confirm power to the trolley.
- Press the “ON” touch pad and all displays will briefly switch on, followed in sequence on display 2 by the actual temperatures of both sections, and the heated top plate.
- The Icon LED indicates which function temperature is currently being displayed:
 

	Plate Warmer ♦ or Refrigeration ♦ depending on your trolley specification.
	Heated Top Plate ♦
	Oven Compartment
	External Food Probe

### Pre-Selection

45 minutes prior to the start of the cycle select the following options:

- Refrigeration ♦.
- Plate warmer ♦.

Place the Eutectic plate ♦ above the divider ♦ to pre chill the ambient section, optionally the Eutectic plate may be placed in the trolley at the same time as the food product. The Eutectic plate must have been frozen in a freezer at -20°C (-4°F) for at least 8 hours prior to it being used.

### Temperature Testing Pre-Loading

- Connect the food probe to the external blue socket on the trolley.
- Clean the probe with an antiseptic wipe.
- Insert the probe into the centre of the food product.
- The product temperature will be displayed accompanied by an audible bleep if the product temperature is below 10°C (50°F).
- Clean the probe with an antiseptic wipe. A new wipe should be used for each item tested.
- Make sure the probe has been cleaned before storing.
- **Caution the probe is not designed to be inserted into frozen products.**

### Food Product Loading

- Open the oven door.
- Ensure that all the grids have been placed into the trolley correctly.
- Load the food containers onto the grids. Remove lids from any containers that require browning or crisping and commence the loading process as described below.
- Ensure that the containers are evenly distributed throughout the oven compartment to allow air circulation between the containers.
- Special diets where small containers are used should be placed on the grid keeping the containers close together.
- Place any liquids, i.e. on the lower grids.
- Never overload the grids.
- Once loaded, close the oven door firmly.
- Ensure that both doors have been closed correctly.

## 28. Operating Instructions continued

### Hostess Function Selection



Split Heated Top Plate and overhead gantry heating. ♦

- Press the pad once for all of the top plate and the entire overhead gantry heating. The LED will remain on permanently. Press the pad for a second time and only half of the top plate and gantry will heat up. The LED will continuously flash on and off to confirm the selection of half of the top plate and gantry heating (Refer to split top plate and gantry in the Special Features section).



Cold Display Light ♦

- These functions remain memorised until the relevant function pad is deselected.
- Select the required serving functions i.e. Cold Display Lights ♦ and the Heated Top Plate ♦. The LED will illuminate next to the appropriate function accompanied by a single bleep (once selected, the function will remain in the memory).

### Starting Regeneration

- Select the required regeneration cycle e.g. Cycle 1. The LED in the top right hand corner will illuminate accompanied by a single bleep confirming the selection. The set time and temperature will be briefly displayed in the relevant displays.
- Display 2 will continuously scroll the temperatures of the functions, i.e. Plate warmer/Refrigerated section, Heated top plate and oven compartment while display 1 shows the countdown timer.
- Two minutes prior to the end of the cycle, the LED next to the selected cycle will commence to flash on and off to inform you that the cycle is near completion.
- At the end of the cycle the oven will automatically switch off, the buzzer will sound, the LED on the selected cycle will continue to flash and the countdown timer will also flash “00” until the cycle has been cancelled.
- To cancel the cycle and buzzer, press the cycle touch pad with the flashing LED.
- The cold display light, Heated top plate and Plate warmer/Refrigeration will now remain on unless the appropriate function was not selected prior to the regeneration cycle.

### Temperature Testing Post Regeneration

- Allow adequate time for the oven fan to stop before opening the oven door.
- Stand away from the oven door and partially open the door until all of the steam has escaped.
- Use additional caution when the oven door is open, as the inner face will be very **HOT**.
- Using gloves, remove the products from the oven.
- Never reach into the back of the oven instead pull the grid to about one third of the way out for ease of access to the containers at the back of the oven.
- Place the container on the heated top plate directly above the oven.
- Connect the food probe to the external blue socket on the trolley.
- Clean the probe with an antiseptic wipe.
- Insert the probe into the centre of the food product.
- Take care, not to stretch the probe cable.
- The product temperature will be displayed accompanied by an audible bleep if the product temperature is above 75°C(167°F).
- If required the three cycles can either be used manually to boost the oven, or automatically if the Boosting cycle has been programmed (refer to Boosting Cycle in the special features). This will allow a further five minutes regeneration time (carry out this procedure only if the food product has not reached the required temperature).
- Repeat the probe testing once the Boosting cycle has been completed.
- If the food product is at the correct temperature, you are now ready to serve.
- Make sure the probe has been cleaned before storing.

## 29. Food Service

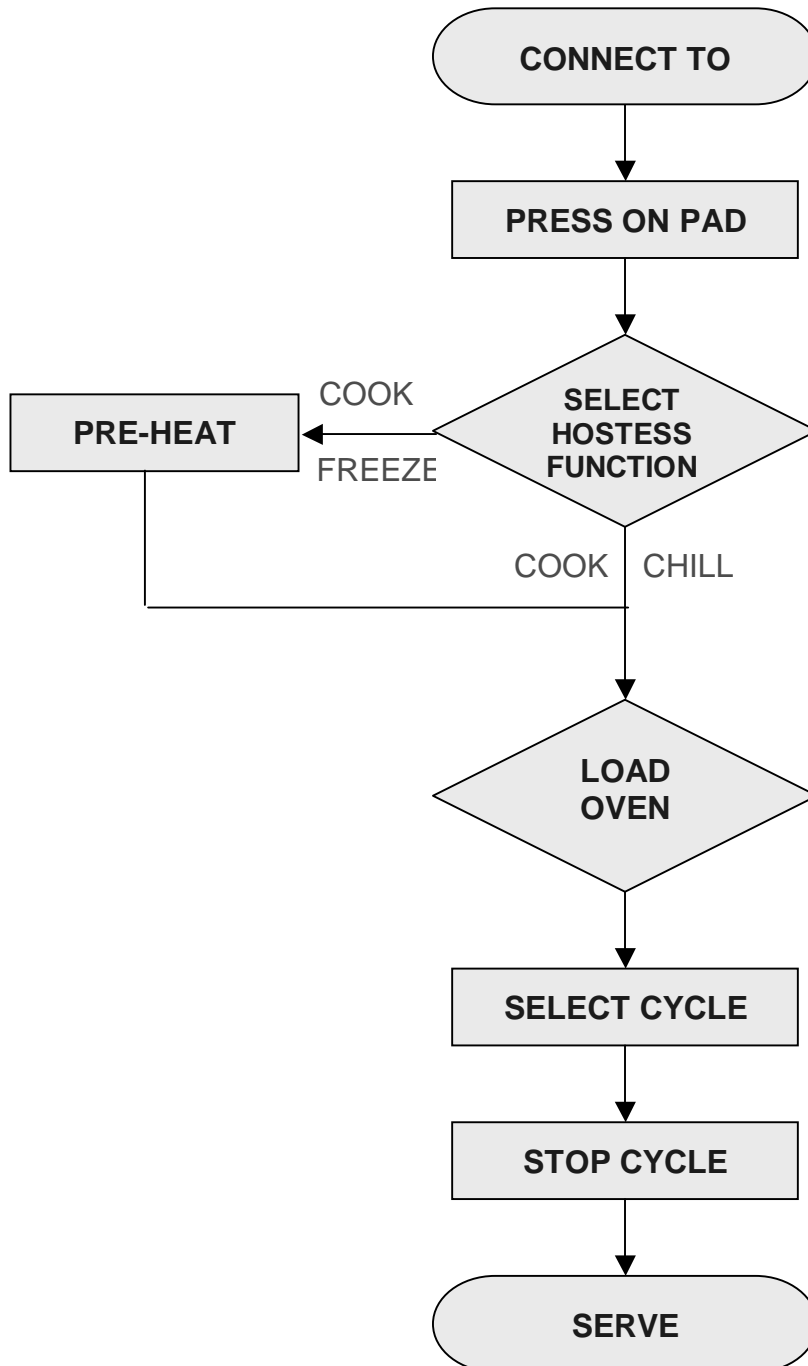
- Wheel the trolley to a suitable area ensuring that doors and passageways are not blocked.
- Engage the brakes on the trolley.
- Connect to the power supply and switch the trolley on.
- Ensure the serving functions have been selected.
- Allow adequate time for the oven fan to stop before opening the oven door.
- Stand away from the oven door and partially open the door until all of the steam has escaped.
- Use additional caution when the oven door is open, as the inner face will be very **HOT**.
- Using gloves, remove the products from the oven.
- Never reach into the back of the oven instead pull the grid to about one third of the way out for ease of access to the containers at the back of the oven.
- Only remove the items required, i.e. one of each product.
- Remove any lids from the containers. Remember the products are **HOT** so open the lid away from you to allow the steam to escape safely from the container.
- Place all hot food products onto the Heated top plate and ensure they are kept under the gantry ♦ to maintain food temperature.
- Decant any liquids, i.e. custard, soups and gravy, into flasks or jugs. This will help to reduce spillage.
- Cold products can be either served direct from the cold compartment ♦ or placed on the lateral shelf ♦.
- Do not place any items on top of the sneeze screen ♦.

## 30. Post Service Procedure

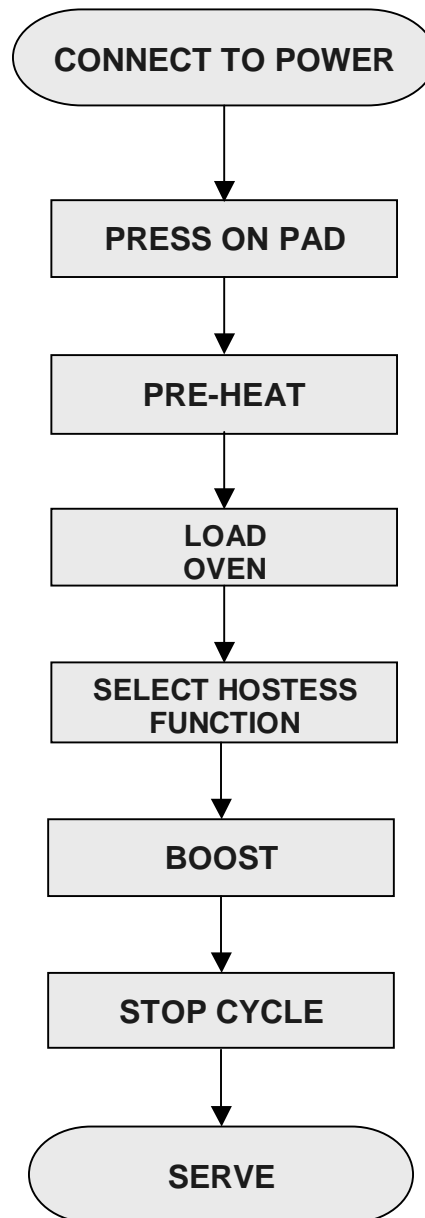
- Disconnect the trolley from the power supply.
- Place all containers and excess food into the oven compartment for safety during transport.
- Ensure that the power cable is stored correctly in its holder and that the tray rail ♦ is in the down position.
- Transport the trolley to the area that is designated for cleaning.
- Ensure that the trolley is completely isolated from the power supply and the plug has been returned to its holder on the front of the trolley and the trolley is in the **SAFE MODE**.

**Carry out Daily cleaning procedure.**

## 31. Cook Freeze : Cook Chill - Flow chart



## 32. Hot Line - Flow chart



### 33. Daily Cleaning Procedure

Move the trolley to a safe area before cleaning.

Ensure the trolley is in the **SAFE MODE** before commencing cleaning.

Remove all grids from the transfer modules.

Remove the transfer modules from both compartments.

Using a hot soapy solution wipe both compartments, then rinse with water. You must ensure that no soapy substances are left as these may taint the next food products.

Leave heavily soiled surfaces to soak for about fifteen minutes in order to allow ease of cleaning.

Clean the Heated Top Plate with hot soapy water, rinse and dry. It should then be cleaned with a sanitiser as this surface may come in direct contact with food products.

Clean the sneeze screen with a soft cloth using a suitable hard surface cleaner.

**Never use any types of abrasive pads or abrasive cleaners, as these will damage the surface of the Sneeze Screen.**

All exterior panels can be cleaned with hot soapy water and rinsed with clean water.

**Clean the control panel with a damp cloth only.**

Once all cleaning has been completed, reassemble the oven and Plate warmer/Refrigerated section.

Polish the exterior of the trolley with food safe stainless steel polish.

**Adjustable Divider.**

The divider should not be removed unless it becomes necessary for cleaning when has become heavily soiled Remove the adjustable divider from the Plate warmer/Refrigerated section by carefully pulling it towards you parallel to the supports.

Do not pull it out at an angle otherwise you may damage the gaskets. When returning the divider ensure you use the same care as when you remove it.

### 34. Cleaning Schedule

#### Cleaning Schedule After Every Meal Service

COMPONENT	HANDWASH	SANITIZE	DISHWASH	JETWASH	POLISH	NOTES
Oven Compartment	✓		×	×	×	Wipe dry after cleaning
Ambient Compartment	✓	✓	×	×	×	Wipe dry after cleaning
Interior Surfaces	✓	✓	×	×	×	Never use polish
Silicon Gaskets	✓	✓	×	×	×	Wipe dry after cleaning
Exterior A.B.S Panels	✓	✓	×	×	✓	Wipe dry after cleaning
Exterior St.Steel Panels	✓	✓	×	×	✓	Use non abrasive hard surface cleaner
Touch pad Controls	✓		×	×	×	Use slightly damp cloth only
ABS Front Panel	✓		×	×	✓	Use slightly damp cloth only
External Food Probe	✓	✓	×	×	×	Use sterile wipes
Trays	✓	✓	✓	×	×	Do not use abrasive cleaning pads
Plate Warmer Dividers	✓	✓	×	×	×	Place in baskets for dishwashing
Dolly	✓	✓	×	✓	✓	Wipe dry after cleaning
Transfer module	✓	✓	×	✓	✓	Wipe dry after cleaning
Refrigeration filter	✓	×	×	×	×	Must be refitted after cleaning

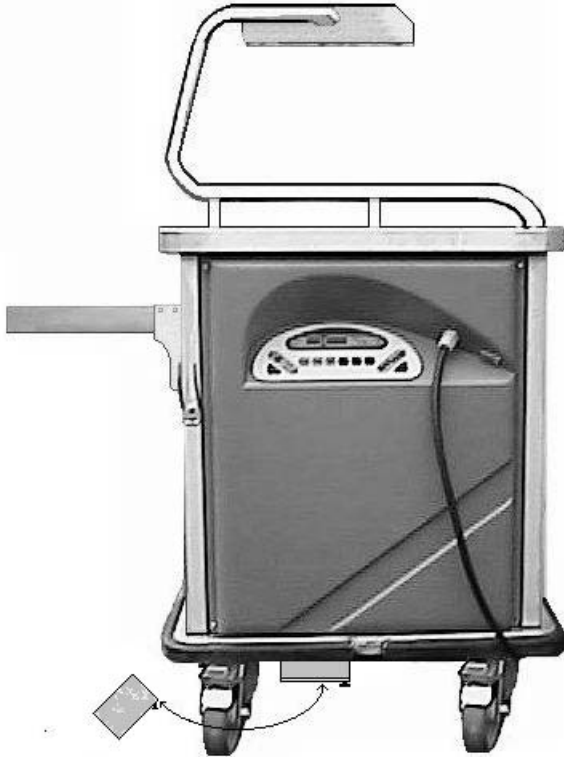
Refrigeration filter\* .The time interval between cleaning is dependent to the environment where the trolley is been used. In clean environment the cleaning interval may be increased to once a week.

Failure to carry out daily cleaning may lead to discoloration of the stainless steel and silicon gaskets.

Caution! Any over spray of polish or other cleaning products on the floor can cause a serious hazard.

Deep cleaning should be scheduled so that the trolley is maintained at the correct level of cleanliness. Under normal conditions, deep cleaning should be carried out at monthly intervals. This may be varied to suit site conditions. Remove the fan protection panels every six months for cleaning. For safety reasons, trained staff only should remove these panels, with the use of the correct hand tools.

### 35. Refrigeration Filter



Locate the filter and remove it by holding the black handle at the bottom of the filter as shown above.

Clean the filter with a soft brush taking care not to damage the mesh. Return the filter immediately making sure that you push it fully home and that the black handle is on the right hand side. The time interval between cleaning is dependent to the environment where the trolley is been used. In a clean environment the cleaning interval may be increased from daily to once a week.

If the filter is not cleaned regularly the trolley will go into alarm with error code F on the display. This will disable the refrigeration system.

To reset the trolley clean the filter as above and allow the trolley to cool down and press the refrigeration pad off and then on again Please note that if insufficient time has been allowed for the trolley to cool down it will stay in alarm mode.



### 36. Power Washing



Power washing is only recommended for the dolly and the transfer module and must not be carried out on the Multigen. When it is used on the dolly and transfer module it must be carried out by a competent operator using extreme care and must be confined to a designated area only.

- • Maximum permitted water pressure 1.5 bar (21 PSI).
- • Minimum permitted distance 0.5 meters (18 inches).
- • Power washing must only be carried out in areas that have been specifically designed for this process.
- • Dry thoroughly immediately after cleaning.
- • The use of hard water may cause a build up and leave a white residue.

If any of the electrical components are accidentally sprayed with water, (e.g. the power supply plug) under no circumstances should the trolley be used until it is completely dry and an authorised electrician has checked and passed it safe to use. Burlodge, or its authorised service agents, must carry out any repairs during the period of warranty. Failure to comply with these requirements may invalidate the warranty of the trolley.

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### 37. Cleaning By Hand



Use two containers: one containing water plus detergent and one containing clean warm water with an added sanitizer (hard water should be avoided wherever possible), with separate soft lint free cloths. Each cloth should be rinsed and wrung in its appropriate container.

Clean with a cloth using the water with the added detergent, wringing the cloth so that all the water is removed, then rinse with the clean cloth, using clean warm water in conjunction with a sanitising agent and dry.

If there is any spillage of water into the electrical components (e.g. the power supply plug) under no circumstances should the trolley be used until it is completely dry and an authorised electrician has checked and passed it safe to use. Burlodge, or its authorised service agents, must carry out any repairs during the period of warranty. Failure to comply with these requirements may invalidate the warranty of the trolley.

### 38. Towing Attachment

The Multigen can be fitted with a tow bar. The towing attachment has been designed and constructed to be used in conjunction with a towing hitch towing up to a maximum of two Multigenes at a time at a maximum speed of 7km / 4 miles per hour.

The Multigen transfer module dolly can also be fitted with a tow bar. The towing attachment has been designed and constructed to be used in conjunction with a towing hitch pin towing up to a maximum of four Multigen dollies at a time, at a maximum speed of 7km / 4 miles per hour.

### 39. Towing Procedure For The Multigen



#### Coupling

- Check the folding tray rail is in the down position and all other items including the lateral shelf have been removed from the trolley.
- Ensure all doors are closed correctly and the power cable has been stored.
- Check that all items that have not been secured are removed from the Multigen.
- Ensure the floor is flat and even.
- Release the brakes on the castors.
- Align the front of the Multigen to the rear of the towing hitch
- Lower and locate the tow arm ring on to the towing pin of the towing hitch.
- Secure the safety pin on the towing hitch
- If towing two Multigenes, align the front of the second Multigen to the rear of the first Multigen.
- Push the second Multigen and connect the tow arm ring to the rear towing pin of the first Multigen.
- Do not forget to use the safety pin.

#### Un-coupling

- Ensure the floor is flat and even.
- Remove the safety pin.
- Press down the foot pedal on the hook of the first Multigen and roll the second Multigen backwards.
- Press down the pedal on the tow arm section of the second Multigen and push the bar safely back underneath the Multigen until the arm locks into place.
- Repeat this operation for the first Multigen to uncouple it from the towing hitch (this part of the operation may vary slightly depending on the towing attachment fitted to the towing hitch).
- Apply the brakes before leaving the Multigen.

#### 40. Towing Procedure For The Multigen Dollies



##### Coupling

- Check that the locking pin has secured the transfer module to the dolly and fit the cover over the module.
- Release the brakes on the castors.
- Align the front of the dolly to the rear of the towing hitch.
- Raise the towing arm side ways to the upright position then pull the arm forward until it is slightly below the horizontal position and locate the tow arm ring on to the towing pin of the towing hitch.
- **Never tow more than four Dollies at a time**
- If towing more than one Dolly align the front of the second Dolly and follow the above procedure.

##### Un-coupling

- If there is more than one dolly always commence from the last dolly being towed.
- Ensure the floor is flat and even.
- Press down the towing arm and release it from the towing pin, raise the arm to the upright position then lower the arm side ways to its storage position.
- Caution! The towing arm is spring loaded, so take additional care when carrying out this procedure.
- Apply the brakes before leaving the Dolly.
  
- Repeat the above operation until there is only one dolly left. Uncouple this last dolly from the towing hitch (this part of the operation may vary slightly depending on the towing attachment fitted to the towing hitch).

## 41. Towing Safety Multigen

### Towing Safety Multigen



#### DO ENSURE

- Extra care is taken in areas where there are patients and pedestrians.
- The floor is flat and even.
- All doors are closed.
- All unsecured items have been removed from the Multigen prior to transportation.
- The cable is stored in the correct position and cannot be snagged during transportation.
- That the towing arm is fully extended and located correctly.
- The safety pin has been inserted.
- Reduce speed when negotiating corners and inclines.



#### DO NOT

- Tow more than two Multigens at one time.
- Uncouple the Multigens or the Dollies on uneven floors or inclines.
- Exceed the speed of 7km / 4 miles per hour.
- Tow Multigens outside or over rough or uneven surfaces including expansion joints.

### Towing Safety Multigen Dolly



#### DO ENSURE

- Extra care is taken in areas where there are patients and pedestrians.
- The floor is flat and even.
- All unsecured items have been removed prior to transportation.
- That the towing arm is fully extended and located correctly.
- Reduce speed when negotiating corners and inclines.
- The safety pin has been inserted.



#### DO NOT

- Tow more than four Dollies at one time.
- Uncouple the Dollies on uneven floors or inclines.
- Exceed the speed of 7km / 4 miles per hour.
- Tow outside or over rough or uneven surfaces including expansion joints.

## 42. Fault Finding

### Error Codes

The operator is informed of any abnormalities by a series of error messages that appear on the displays in code form. If the abnormality prevents the use of the trolley, it is accompanied by an audible alarm. The error codes are fully explained together with the possible causes and the suggested corrective action in the following table.

CODE	EXPLANATION	POSSIBLE CAUSE
<b>F</b>	Refrigeration filter alarm	Refrigeration filter is dirty and blocked.
<b>ACTION</b>	Remove and clean the filter carefully insert the filter back in to the holder ensuring that it is fully home. Reset the trolley by switching refrigeration pad off and on	
<b>CO</b>	Touch pads are locked.	Incorrect code used.
<b>ACTION</b>	Select required cycle and enter correct code by pressing touch pads cycle 2, 1, and 3 in that order.	
<b>H1</b>	Auto shut down of Refrigeration.	Probe failure or loose connection.
<b>ACTION</b>	Request Technical Assistance	
<b>H1</b>	Auto shut down of Refrigeration.	Temperature has exceeded the safety limit of 190°C / 374°F.
<b>ACTION</b>	Request Technical Assistance	
<b>H2</b>	Auto shut down of Heated Top Plate.	Probe failure or loose connection.
<b>ACTION</b>	Request Technical Assistance.	
<b>H2</b>	Auto shut down of Heated Top Plate.	Temperature has exceeded the safety limit of 190°C.
<b>ACTION</b>	Request Technical Assistance.	
<b>H3</b>	Auto shut down of all functions.	Oven probe failure or loose connection.
<b>ACTION</b>	Request Technical Assistance	
<b>H3</b>	Auto shut down of all functions.	Oven temperature has exceeded the safety limit of 190°C / 374°F.
<b>ACTION</b>	Request Technical Assistance	
<b>L3</b>	Oven set temperature has not been achieved during the cycle.	Program set incorrectly.
<b>ACTION</b>	Refer to the PROGRAMMING section to reprogram the trolley to the correct Settings.	
<b>OL</b>	Thermal Limit prevents the start of a Regeneration cycle	Continuous use of a Regeneration cycle.
<b>ACTION</b>	Allow the oven section to cool down below 60°C / 140°F then restart cycle	
<b>LO</b>	Auto shut down trolley in safe mode.	Electrical disturbances through power supply.
<b>ACTION</b>	Reset the trolley, press touch pads cycle 2, 1 and 2 in that order, this will reset the trolley to the standard default settings and allow it to be used. Refer to the PROGRAMMING section to reprogram to your requirements.	
<b>LO</b>	Auto shut down trolley in safe mode.	Microprocessor battery discharged.
<b>ACTION</b>	Request Technical Assistance	
<b>SC1</b>	Cycle will not start	Above set temperature in cold section
<b>ACTION</b>	Wait until cold side temperature 10°C / 57°F (default setting) is achieved	

**43. Fault Finding cont.**

The two tables below are a guide for authorised technical personnel and should only be carried out by a competent electrician.

Table one refers to checks that should be made before placing any service calls.

TABLE ONE		
PROBLEM	EXPLANATION	POSSIBLE CAUSE
No green LED	No power to the trolley.	Power supply failure.
ACTION Check power supply to wall socket.		
No green LED	No power to the trolley.	Power supply failure.
ACTION Check connections in the plug.		
No green LED	No power to the trolley.	Power supply failure.
ACTION Check power supply cable for any damage and continuity.		

Table two refers to checks that can only be carried out by Authorised technical personnel during the period of warranty.

TABLE TWO		
PROBLEM	EXPLANATION	POSSIBLE CAUSE
No green LED	No power to the trolley.	Line fuse blown.
ACTION Find and rectify cause for the failure, then replace the line fuse.		
No green LED	No supply from the transformer.	Transformer safety fuse blown.
ACTION Find and rectify cause for the failure, then replace transformer safety fuse.		
Green LED on but No display	Internal oven high limit thermostat tripped.	Temperature in the oven chamber has exceeded 195°C / 383°F.
ACTION Find and rectify cause of over temperature, then reset the oven high limit thermostat		
Green LED on but No display	Thermal refrigeration switch tripped	Condenser fan blocked or not working
ACTION clean or replace condenser fan and replace thermal fuse		
Green LED on but No display	Internal motor safety switch has tripped.	Motor overheat
ACTION Find and rectify cause for the failure. The thermostat will automatically reset when the temperature of the motor cools down		

#### 44. Safety Parameters

##### Refrigerated Models Only

##### Security 1: (SC1)

The regeneration cycle will not start if the temperature of the cold section is above the set temperature (i.e. 10° C (50°F) and “SC1” will be displayed on display 2 alternating with the cold side temperature. Selected time will be displayed on display one. Cycle will start automatically when the proper set temperature is achieved

##### Safety 2:

The refrigeration will not work if the temperature of either chamber is higher than 45°C (113°F).

##### Filter Alarm (F)

The refrigeration will not work if the filter becomes dirty and blocked

##### Compressor Delay

The compressor has been programmed with a 30-second start delay.

#### 45. Maintenance

##### Safety Precautions And Preparing For Maintenance

A maintenance program to maintain the trolley in optimal condition is clearly defined in four different categories.

- Daily cleaning (refer to Daily Cleaning Procedure and Cleaning By Hand sections)
- Periodic cleaning (refer to Daily Cleaning Procedure and Cleaning By Hand sections)
- User maintenance (refer to Interim Maintenance section)
- Maintenance schedule to manufacturer’s recommendations. Contact Burlodge Technical Department for specialised training.

##### Checks Before Every Use

EQUIPMENT	VISUAL	OPERATIONAL	NOTES
Power Supply Plug	✓		Do not use if there are any signs of damage
Power Supply Cable	✓		Do not use if there are any signs of damage
External Probe	✓	✓	Do not use if there are any signs of damage
Touch pad Controls	✓	✓	Do not use if there are any signs of damage
Cold Display light	✓	✓	Report any defect for immediate repair
Heated Top Plate	✓	✓	Report any defect for immediate repair
Plate Warmer	✓	✓	Report any defect for immediate repair
Door Latches	✓	✓	Report any defect for immediate repair
Refrigeration Unit	✓	✓	Report any defect for immediate repair
Tow Unit	✓	✓	Do not use if there are any signs of damage
Castors	✓	✓	Do not use if there are any signs of damage
Doors	✓	✓	Do not use if there are any signs of damage
Tray rail	✓	✓	Do not use if there are any signs of damage

The trolley operator should carry out the checks referred to in the above table.

##### SERVICING

All servicing must be performed by Burlodge authorised agents and must be to the manufacturer’s specification and at the required intervals.

Some of the functions are optional and may not be available or operational on your trolley. In this case the relative functions and touch pads are disabled.

## 46. Regular Maintenance



The maintenance checks listed in the table below should be carried out as an interim service between the full six monthly service. It is also valid as quarterly checks in the first twelve months of use. At the end of this period, a full service is required to the manufacturer's specification.

Multigen			
COMPONENT	VISUAL	OPERATIONAL	NOTES
Power Supply Plugs	✓		Check the plug for damage to the pins or strain relief and that all screws are tight.
Power Supply Cables	✓		Check for any damage, abrasion, cuts, or fraying which could compromise the insulation and the integrity of the power supply cable.
Cable Entry Connector	✓		Check the cable gland nut is tight and the power supply cable is firmly gripped in the connector.
External Probe	✓	✓	Check the cord is firmly inserted and secured and the probe tip is not damaged.
ABS Front Panel	✓		Check all the retaining screws are in place and not loose. Check the panel has not been damaged and is held firmly against the seal.
Touch pad Controls	✓	✓	Check the membrane is not damaged. Ensure all the displays, LED's and touch pads function correctly.
Door Latches	✓	✓	Check the latch for correct operation, loosen the setscrew on the striker plate to adjust the cone, tighten the screw after any adjustment.
Doors	✓	✓	Check that they close correctly against the silicon gaskets.
Door Hinges	✓	✓	Check for excessive wear in the bushings or in the up and down movement of the door.
Tray rail (Optional)	✓	✓	Check the hinges are not damaged and that the rail locks in the open position correctly.
Lateral shelf (Optional)	✓	✓	Check the support bar screws are tight and that it locates correctly on the end of the trolley.
Towing Unit Pole End (Optional)	✓	✓	Check the spring to ensure it holds the pole at the correct tension so that it does not drop down and it springs back instantly when pushed down. <b>The spring must be replaced annually</b>
Towing Unit Female End (Optional)	✓	✓	Check the retaining nuts are tight and that the safety pin is still attached.
Castors	✓	✓	Ensure the brakes function correctly and the wheels are free and not damaged. Check that the retaining nuts are tight and not entangled with mop strings or other materials.
Nylon rollers for transfer module	✓	✓	Clean and lubricate with food grade silicone spray.
Docking System	✓	✓	Check that both units align and dock correctly and that the locating pins are not damaged.

If any faults are found they should be reported immediately and the trolley should be not be used until the fault has been rectified.



## 47. Regular Maintenance Cont.

Multigen Transfer Module and Dolly			
COMPONENT	VISUAL	OPERATIONAL	NOTES
Towing Unit Pole End (Optional)	✓	✓	Check the spring to ensure it holds the pole at the correct tension so that it does not drop down and it springs back instantly when pushed down <b>The spring must be replaced annually</b>
Towing Pin (Optional)	✓	✓	Check the pin to make sure it is not damaged.
Castors	✓	✓	Ensure the brakes function correctly and the wheels are free and not damaged. Check that the retaining nuts are tight and not entangled with mop strings or other materials.
Transfer Module locking pin	✓	✓	Check to make sure the pin locates and locks the transfer module into place correctly
Locking Arm for the docking system.	✓	✓	Check to make sure it is not damaged and that it locates and locks correctly into the Multigen docking plate. Check tension of the spring.
Docking Arm and Pedal	✓	✓	Check to make sure it is not damaged and that it locates and locks correctly into the Multigen docking plate.
Docking Pin	✓	✓	Check the pin to make sure it is not damaged and that it locates correctly into the Multigen docking plate
Transfer Module	✓	✓	Clean the bottom nylon rollers and lubricate with food grade silicone spray. Ensure the module is not damaged.
Transfer Module	✓	✓	Check all support guides.

#### 48. Charging the Compressor Double Refrigeration

Instructions on how to charge the refrigeration system with R134a gas and set the expansion valves.

**IMPORTANT ADVICE** - It is essential that only fully qualified, licensed Refrigeration Engineers attempt the following procedures. All equipment used to service the system must have been used exclusively for R134a refrigerant (including the connection hoses) and not with any other refrigerant. It is also important to filter the refrigerant gas from the charging cylinder to eliminate any impurities.

Before to proceeding, it is essential that the calibration of the trolley probe is correct.

How to charge the gas in the refrigeration circuit - There are two cases where charging may be necessary – first, refrigerant has to be added to “top-up” the circuit and second, to charge the system when there has been a complete loss of the refrigerant charge.

**Partial Charge:** Set the refrigeration temperature with the touch-pad to 1°C and start the refrigeration. When the display indicates 1 degree the expansion temperature must be  $-24 / -26$  for the double refrigeration systems. If these values are different, add or remove a small quantity of refrigerant and wait a couple of minutes until the reading settles to the new value. If the new reading is different from  $-24 / -26$  repeat the above operation until the correct expansion temperature is achieved.

**Complete Charge:** When the compressor has been changed or a gas leak repaired it is very important to ensure a full vacuum is achieved before recharging. The vacuum operation must last at least 30 minutes and should be continued for up to 60 minutes. To be certain that the circuit is completely vacuumed, monitor for another 45 minutes. After turning off the vacuum pump the manometer needle should oscillate less than 0.2 to 0.3 bar (3 to 4.5 psi).

For new installations, when the vacuum cycle is complete, the manometer needle must remain steady after the pump is turned off.

When the vacuum cycle is complete, the refrigerant charge can start. With the compressor turned off slowly charge the system. About 50 grams (about 2.50 oz.) of gas will be needed to saturate the circuit. Insert the gas from the charging valve put on the high-pressure side. The complete charge is 230 grams (about 8.11 oz) for the double refrigeration systems. To finish the charge, close the manifold-charging valve and start the compressor. After running approximately half minute, very slowly add more refrigerant until the complete charge of 230 grams is reached.

**The expansion valves are pre-calibrated and should not be altered under normal conditions.**

**SETTING** –Setting the expansion (TX) valves is a delicate operation and must be done while monitoring the expansion temperatures read on the manometer. The minimum values set on the charge valve operate as follows:

Switch the trolley on, enter programming mode and set the refrigeration temperature at 1 degree in both sections. Switch off and on to start the trolley. The refrigeration will start to cool down the cold section first. Once the cold section set temperature has been achieved, the refrigeration will change over to cool the oven section.

First set the “cold” section – to complete this operation the trolley doors must be closed and the oven solenoid valve closed (disconnect plug CN5 from the power card).

Keep the refrigeration system running. When the indicated temperature on the display is  $+5 / 6$  °C ( $+41 / +45$ °F), the expansion temperature should be  $-24 / -26$  °C. If the reading differs from this values carefully adjust by turning the adjusting screw by fraction of turn at a time. Wait a couple of minutes until the expansion reading settles to the new value. If the new value still differs from  $-24 / -26$  °C, repeat the above procedure.

Reconnect CN5 and repeat the same operation for the oven side. The cold side set temperature has been achieved, the trolley will now cool down the oven section.

Keep the refrigeration system running. When the indicated temperature on the display is  $+5 / 6$  °C ( $+41 / 45$  °F), the expansion temperature should be  $-24 / -26$  °C. If the reading differs from these values carefully adjust by turning the adjusting screw by fraction of turn at a time. Wait a couple of minutes until the expansion reading settles to the new value. If the new value still differs from  $-24 / -26$  °C, repeat the above procedure.

Reprogram the refrigeration temperatures in both sections to the correct working values.

#### 49. Charging the Compressor Single Refrigeration

Instructions on how to charge the refrigeration system with R134a gas.

**NOTE:** These instructions are only for trolleys with Danfoss compressors.

**IMPORTANT ADVICE** - It is essential that only fully qualified, licensed Refrigeration Mechanics attempt the following procedures. All equipment used to service the system must have been used exclusively for R134a refrigerant (including the connection hoses) and not with any other refrigerant. It is also important to filter the refrigerant gas from the charging cylinder to eliminate any impurities.

How to charge the gas in the refrigeration circuit - There are two cases where charging may be necessary – first, refrigerant has to be added to “top-up” the circuit and second, to charge the system when there has been a complete loss of the refrigerant charge.

**Partial Charge:** Set the refrigeration temperature with the touchpad to 1°C and start the refrigeration. When the display indicates 1 degree the expansion temperature must be -22 / -24 degrees. If these values are different, charge the refrigerant gas until the value described above is reached.

**Complete Charge:** When the compressor has been changed or a gas leak repaired, it is very important to ensure a full vacuum is achieved before recharging. The vacuum operation must last at least 30 minutes and should be continued for up to 60 minutes. To be certain that the circuit is completely vacuumed, monitor for another 45 minutes. After turning off the vacuum pump the manometer needle should oscillate less than 0.2 to 0.3 bar (3 to 4.5 psi).

For new installations, when the vacuum cycle is complete, the manometer needle must remain steady after the pump is turned off.

When the vacuum cycle is complete, the refrigerant charge can start. With the compressor turned off slowly charge the system. About 50 grams (2.5 oz.) of gas will be needed to saturate the circuit. Insert the gas from the charging valve put on the high-pressure side. The complete charge is 180 grams (about 6,34 oz.). To finish the charge, close the manifold-charging valve and start the compressor. After running approximately half minute, very slowly add more refrigerant until the complete charge of 180 grams is reached.

**Calibration:** Set now the refrigeration temperature at 1°C and start the refrigeration. When the display indicates 5-6 degrees monitor the expansion temperature that must be -22 / -24 degrees. If these value is lower (-30, -40 and so on) add a small quantity of refrigerant, if this value is more (-15, -10 and so on), remove a small quantity of refrigerant and wait a couple of minutes until the expansion temperature settles. It should settle to -22 / -24 degrees. If settles to a different value repeat the procedure described above.

## 50. Electrical Safety Testing

### The tests

#### **Earth bond test.**

Applies a substantial test current, typically around 25A, down the Earth pin of the plug to an Earth test probe, which should be connected by the user to any exposed metalwork on the casing of the unit under test. From this the resistance of the Earth bond is determined.

#### **Insulation test.**

Applies a test voltage, typically 500Vdc, between the live and neutral bonded together and Earth, from which the insulation resistance is calculated.

Other tests offered include the following:

#### **Flash test.**

Tests the insulation at a higher voltage, typically 1.5KV for Class 1 appliances. From this test a leakage current indication can be obtained. This is a more stringent test of the insulation that can provide an early warning of insulation problems developing in the appliance. (It is recommended that this test should not be carried out more frequently than quarterly to avoid over stressing the insulation).

#### **Load test.**

Measures the load resistance between live and neutral to ensure that is not too low for safe operation.

#### **Operation test.**

A further level of safety testing which proves the preceding tests were valid (i.e. the unit was switched on) and ensures that an excessive current level is not drawn by the appliance.

#### **Earth leakage test.**

This is carried out during the "Operation test" as a further test of the insulation under its true working conditions. This test can also be useful to ensure that appliances are not responsible for nuisance tripping of Earth fault indicators.

#### **Fuse continuity test.**

This will test that the fuse is intact and that the appliance is switched on prior to carrying out other tests.

The procedures for portable appliance safety testing require that electrical tests are carried out upon the appliances to confirm the integrity of the earthing and the insulation. To simplify this task a competent person can use a portable appliance tester which combines all these tests (P.A.T currently available for 230V 50 Hertz) to perform these tests safely.

Current guidelines require that the trolley be P.A.T. tested at a minimum of 6 monthly intervals. This may vary dependent on local and national laws and to site conditions and should only be carried out by Burlodge or authorised personnel.

### **CAUTION:**

Electrical Safety Testing by untrained personnel may cause permanent damage to the electronics if not carried out correctly.

## **51. Technical Assistance After Sales Service**

### **Technical Assistance**

Burlodge offers a wide range of service contracts. Standard, Comprehensive and Fully Comprehensive contracts are available along with the option to have your in-house staff trained to act as Burlodge Service Agents. For further information and for specialised contracts contact our Service Department. The Burlodge support team is unrivalled in its experience in the field. Burlodge technical service has been designed to ensure our customers experience the minimum delay possible when a fault or problem is encountered. This brings you the benefit of after sales support with a strong technical network. Burlodge is well aware that down time must be minimised. Our Authorised Service Agents are in your locality to provide comprehensive, quick service.

### **Preventative Maintenance**

All equipment must be serviced at six monthly intervals. Correct preventative maintenance is essential to ensure the reliable and safe operation of the trolley and to ensure the longest economical life of the equipment. Competent and fully trained personnel only may carry out servicing to the manufacturer's specifications.

Burlodge offers a wide range of service contracts covering this equipment provided such equipment is operated and maintained in accordance with the manufacturer's recommendations. You will have the peace of mind that comes with having a fully trained service force able to support this product anywhere it is located through preventive maintenance contracts and after sales service.

For further information and for specialised contracts, please contact the Burlodge Technical Department.

## 52. Warranty And Service Calls

Before you contact the Burlodge Service Department or Authorised Service Agent, please make sure that a competent electrician has carried out the following checks:

- check the power supply
- check the power cable, plug and internal fuses
- check for any visual damage

Under no circumstances remove or interfere with any part of the Multigen, even if it is disconnected from the power supply. If the trolley still does not operate, contact your local service agent or Burlodge Service Department.

Please ensure that you give the following information when placing a call with the Service Department (refer to the rating plate at the rear of the trolley):

- The Series name (i.e., Multigen )
- Model code
- Date of manufacture
- Serial number
- The location of the equipment
- A detailed description of the problem
- Your name, department, position and phone number

### CAUTION !! :

Any electrical testing by untrained personnel is extremely hazardous and may cause permanent damage to the onboard electronics if not carried out correctly. Warranty

### Standard Warranty

The standard warranty is one-year parts and labor or as per contract. Commencing 14 months from the date of delivery or 12 months from the date of commissioning whichever ever expires first.

All equipment except china, trays and consumable components is covered against faulty material or workmanship. In the unlikely event of any valid failures, Burlodge or its authorised agents will repair the trolley free of any charges.

The following will not be covered by the warranty and may invalidate it.

- Damage during unloading or storage.
- Incorrect installation.
- Neglect or misuse of the equipment.
- Use of the trolley other than described in this manual.
- Fire, water or frost damage.
- Using parts not supplied by Burlodge/Authorised Service Agent.
- Service carried out by service companies not authorised by Burlodge.
- False calls.
- Voltage fluctuations exceeding  $\pm 10\%$  of the nominal voltage.
- Power failure.
- Damaged power cord or plug.
- Re-programming after commissioning and after initial training will not be covered by the warranty

Only authorized persons may carry out repairs during the warranty period or in compliance with the Burlodge contract. Should the Customer fail to comply with these requirements, both the initial warranty period and all certification of the trolley will automatically become invalid. This manual is provided to assist you to resolve some of the problems you may incur. Please make sure that you refer to this manual before placing a service call as we reserve the right to charge for any calls that could have been resolved by reading this manual.

### 53. Spare Parts



Use only original Burlodge spare parts, they are an exact replacement. Use of other spare parts may compromise the safety and performance of the trolley. Burlodge, or its authorised service agents, must carry out any repairs during the period of warranty. Failure to comply with these requirements may invalidate the warranty and all certifications of the trolley.

#### **How To Order Spare Parts**

The Spare Parts Table section is divided into different categories to assist you in identifying the parts you may require.

This table also highlights the parts that we recommend you keep in your stock.

Refer to the Diagrams in the Spare Parts section to initially identify the component.

When ordering spare parts or requesting technical assistance, always refer to the data plate to identify the trolley. This information is essential to identify correctly the parts required for the trolley.

Please supply the following information:

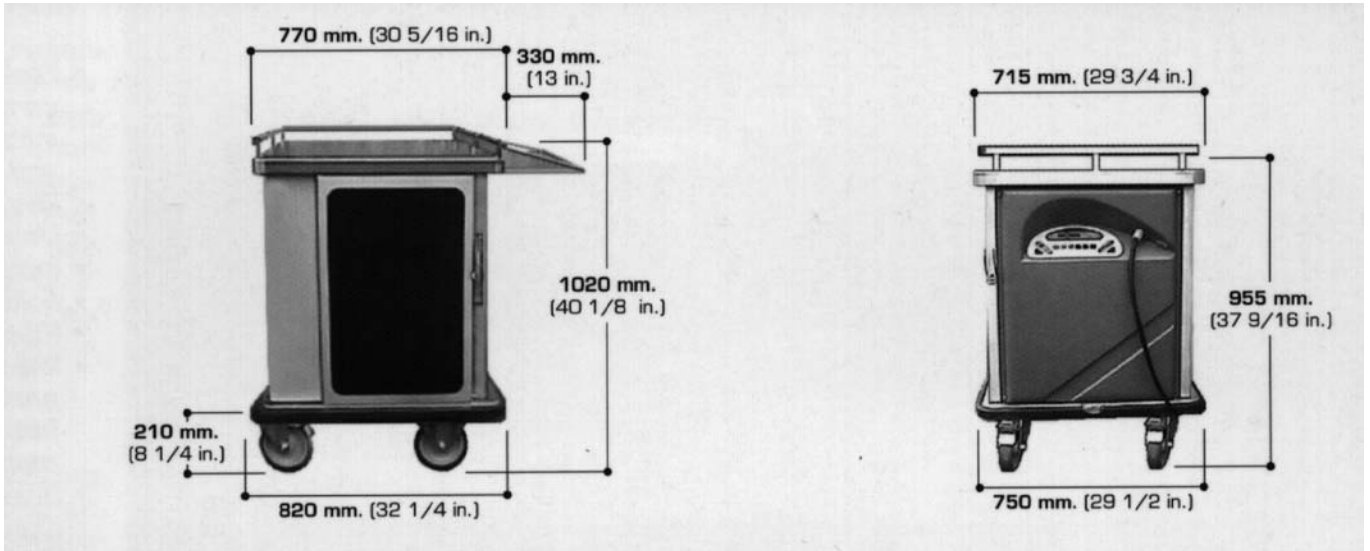
- The Series name (i.e., Multigen etc.)
- Model code
- Date of manufacture
- Serial number
- Part number
- Description of part
- Quantity required
- Your name, department, position and phone number
- Delivery address
- Invoicing address
- Purchase Order number

**54. Dolly**

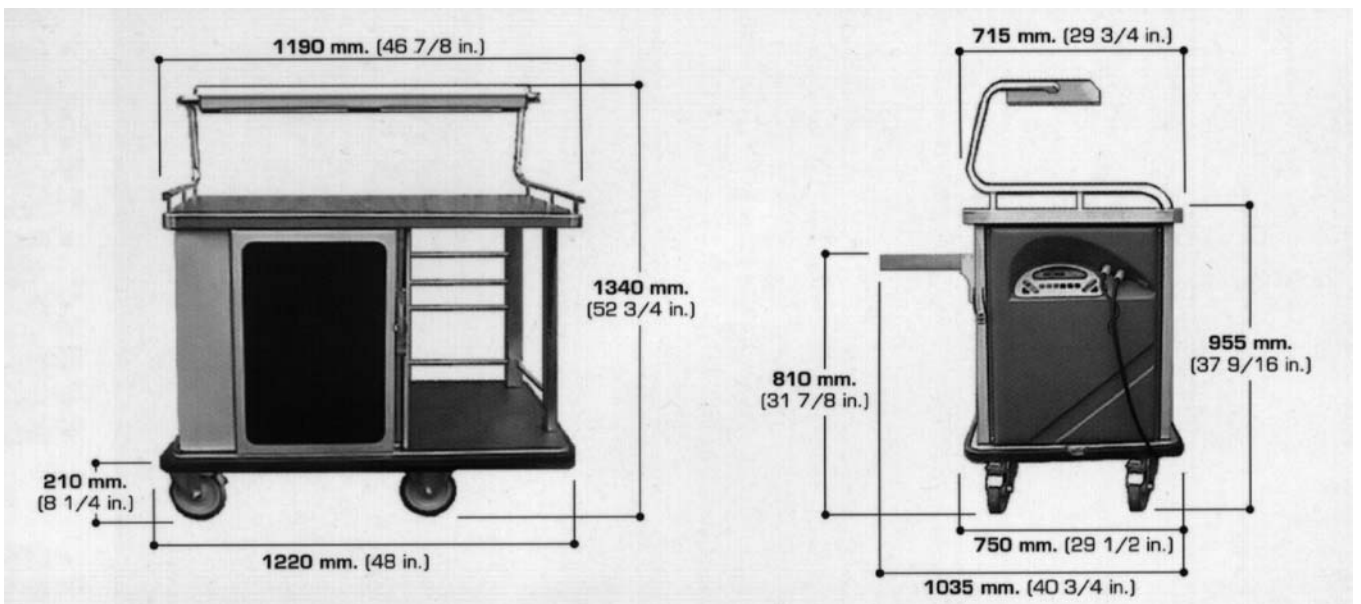


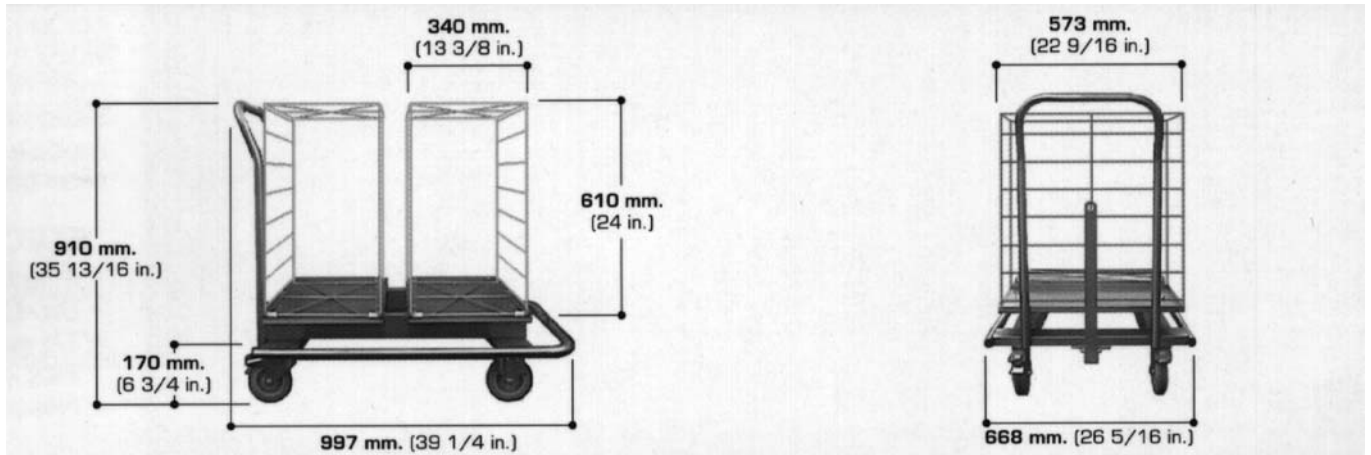
## 55. Dimensions

## Minigen



## Multigen 1 and 2



**56. Dimensions Continued****Dolly and Transfer Module**

## 57. Installation

The plug and cord on the trolley will be of a type and rating that meet the required electrical voltage and current requirements of the trolley. The measured supply voltage must be within 10% of the name plate rating. Check the rating plate on each piece of equipment for further details. If the power supply available does not suit the electrical requirements of the trolley, contact our Service Department or an Authorised Service Agent.

Check that the wall socket or cord set has been installed by a qualified electrician and is correctly connected to Earth. Ensure the power supply is compatible to that which is stated on the rating plate. Ideally, the trolley should be connected to a switched socket incorporating both an earth fault device and over current protection.

Ensure the socket or cord set is located so that the trolley cannot damage it, yet remains easily accessible to the operator without stressing the power cable.

The electrical installation must conform to the national and local Electrical Codes.

The transportation route and access should be checked for any obstructions that may cause damage to the trolley.

- Check the electrical compartment of the unit for a sachet of desiccant silica crystals. If has been included please remove it and dispose it in compliance with the local laws and regulations.

### Plug Connections Multigen 208v 60Hz 3P+N+E



NOTE. If your trolley is supplied without a plug on the power supply cable or the plug must be replaced, ensure that the plug is an exact NEMA replacement (L21-30P) and that it corresponds with the trolley data plate. The conductors must be connected to conform to the table below.

Three Phase, Neutral and Earth

<u>PLUG</u>		<u>SUPPLY</u>
Phase X :		Orange
Phase Y :		Black
Phase Z :		Red
Neutral N:		White
Earth G:		Green

### Extended Cables 208v 60Hz 3P+N+E



Always avoid long cables. It is much safer to reposition the socket to a more appropriate location.

## 58. Installation Cont.

### Plug Connections Multigen 400V 50Hz 3P+N+E

N.B.: If your trolley is supplied without a plug on the power supply cable or the plug is to be replaced, ensure that the plug is of the appropriate rating to correspond with the trolley data plate and that the conductors are connected to conform with the table below.

#### Three Phase, Neutral and Earth

Phase R :	Brown
Phase S :	Black
Phase T :	Black
Neutral N :	Blue
Earth E :	Yellow/Green

Cord set: (This will permit all of the functions of the Multigen to operate with the exemption of the heating elements in the oven compartment.).

#### Single Phase, Neutral and Earth

Phase R :	Brown
Neutral N:	Blue
Earth E:	Yellow/Green

### Extended Cables Multigen 400V 50Hz 3P+N+E



Always avoid long cables. It is much safer to reposition the socket to a more appropriate location.

## 59. Electrical Specification

### 60 Hertz Versions

DESCRIPTION	REFERENCE	GRID CAPACITY	ELECTRICAL SPECIFICATION			
			208v 60Hz 3P+N+E		120v 60Hz 1P+N+G	
			AMPS	KW	AMPS	KW
Multigen I	M21.100	8	15.5	5.4	14.3	1.7
Multigen II	M22.100	8	15.5	5.4	14.3	1.7
Minigen	M20.100	8	15.5	5.4	14.3	1.7

### 50 Hertz Versions

DESCRIPTION	REFERENCE	GRID CAPACITY	ELECTRICAL SPECIFICATION			
			400V 50Hz 3P+N+E		230V 50Hz 1P+N+E	
			AMPS	KW	AMPS	KW
Multigen I	M21.100	8	N/A	N/A	12	2.8
Multigen I	M21.300	8	12	7.8	N/A	N/A
Multigen II	M22.100	8	N/A	N/A	12	2.8
Multigen II	M22.300	8	12	7.8	N/A	N/A
Minigen	M20.100	8	N/A	N/A	12	2.8
Minigen	M20.300	8	12	7.8	N/A	N/A

### Optional Features

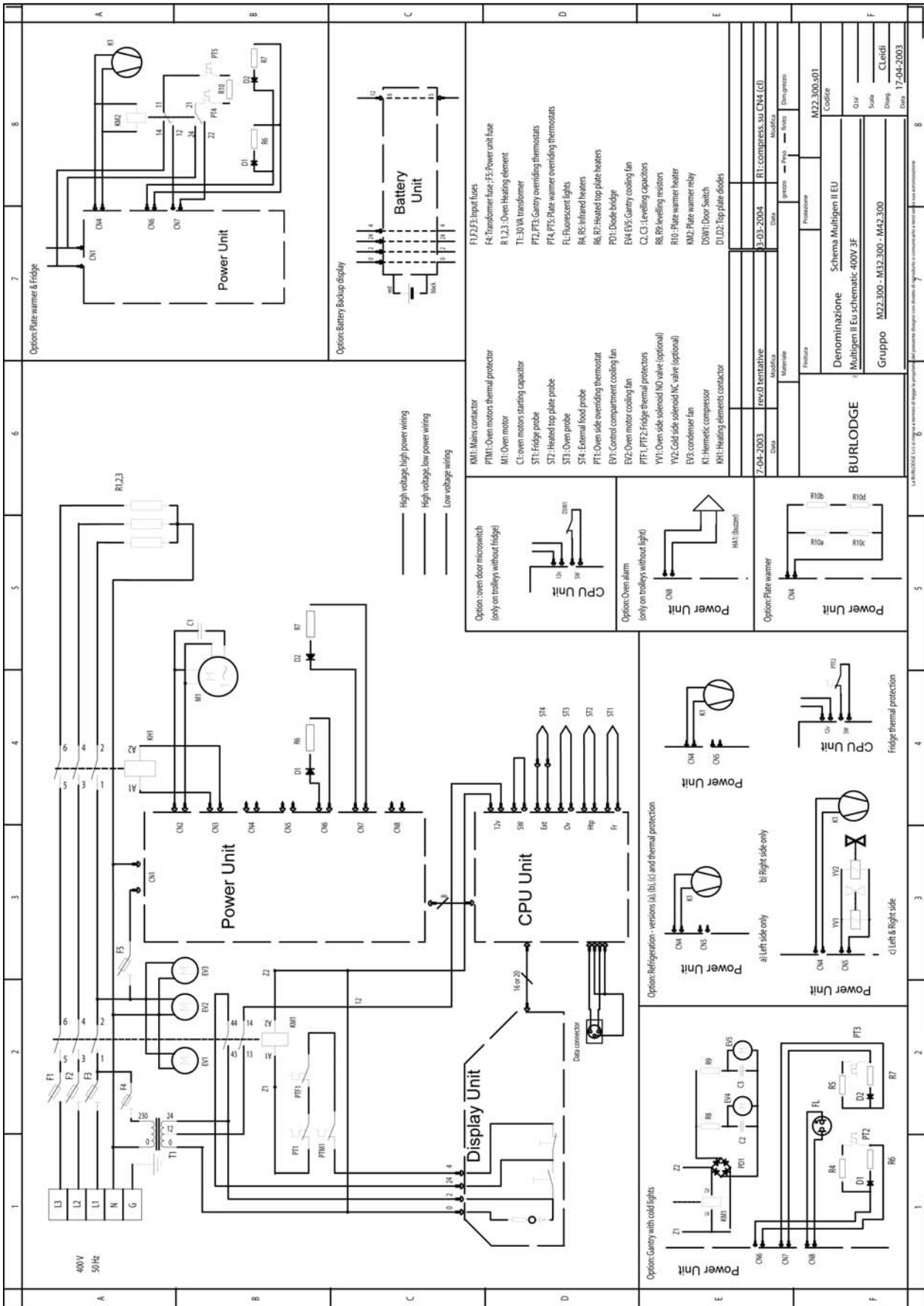
OPTIONAL FEATURES	MODEL	ELECTRICAL SPECIFICATION	
		50Hz VERSIONS	60Hz VERSIONS
		KW	KW
Heated Top Plate	Multigen	0.5	0.4
Heated Top Plate	Minigen	0.25	0.2
Infra-red Gantry Element	Multigen	1.0	0.8
Infra-red Gantry Element	Minigen	0.5	0.4
Plate Warmer	Multigen	0.2	0.2
Refrigerated Section	Multigen	0.6	0.6
Cold Display Light	Multigen	0.03	0.05
Cold Display Light	Minigen	0.03	0.05

## 60. Wiring diagrams

The wiring diagrams are enclosed in the trolley's electrical compartment. Should you require any further copies please contact our technical department.



Always cross-reference the wiring diagram document number with the seven digits of the model number on the rating plate.



Wiring diagram MultigenII\_Eu\_400V3F

