

# M2

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PASSTHROUGH DISHWASHER



# Operator Manual



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**WARNING**

Before installation and commissioning, you must read the safety instructions and warnings carefully and all the warning labels attached to the equipment.

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**IMPORTANT**

Failure to comply (even partially) with the instructions given in this manual will invalidate the product warranty and relieves the manufacturer of any responsibility.

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**IMPORTANT**

The alteration of machine operation, design or the replacement of parts not approved by the manufacturer may void warranties and approvals.

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We have checked that the contents of this document correspond to the model described. There may be discrepancies nevertheless, and no guarantee can be given that they are completely identical. The information contained in this document is reviewed regularly and any necessary changes will be included in the next edition. We welcome suggestions for improvement.

Document subject to change without prior notice.

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# Safety Instructions

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## **WARNING**

Equipment contains dangerous voltages and can be hazardous if installed or operated incorrectly. Non-compliance with **Warnings** or failure to follow the instructions contained in this manual can result in loss of life, severe personal injury or serious damage to property.

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### **Installation**

- ◆ Use qualified, skilled personnel
- ◆ Follow installation instructions
- ◆ Connect to correct voltage and supply current
- ◆ Provide fully accessible Electrical Isolation Switch

### **Training and Supervision**

- ◆ Read and Understand the Operating instructions
- ◆ Train all staff
- ◆ This appliance is not intended for use by young children, who must be supervised to ensure they do not play with the appliance
- ◆ This appliance is not intended for use by infirm persons without supervision
- ◆ This appliance is not intended for use as a stepladder

### **Hot Surfaces**

- ◆ Be aware some surfaces can be hot

### **Chemicals**

- ◆ Commercial dishwashing detergents are hazardous
- ◆ Read and follow the safety information found on the labels of detergent containers and Material Safety Data Sheets
- ◆ Handle with care
- ◆ Use protective eyewear and clothing if decanting containers

### **Hot Water**

- ◆ Door safety switches are designed for emergency use only
- ◆ Wait for the green cycle light to go out before opening the door
- ◆ Wash water is 60°C and contains caustic detergent so DO NOT put hands in wash water

### **Cleaning**

- ◆ DO NOT hose down the machine or splash water over the exterior
- ◆ Watch for broken glass etc when cleaning the inside of the machine

# Installation

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## **WARNING**

Installer must be suitably qualified and ensure compliance with all codes and standards including AS/NZS3500.1. Failure to comply even partially with installation instructions may void the warranty.

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### **Positioning**

Unpack machine, check for damage and complete delivery. Install machine on sound waterproof self-draining floor and use adjustable feet to level machine. Allow room for detergent to one side of machine or in adjacent cupboard. 20litre container requires about 450H x 250W x 350D, but smaller containers are available from many suppliers.

### **Benchwork**

Refer Bench Details diagram.

In corner installations the front of the machine must face to the left of the corner. In corner installations high or angled bench return off wall may clash with door handle. Level and secure machine and benches. Adjust to ensure smooth travel of rack through machine.

### **Water Supply**

|                       |  |
|-----------------------|--|
| Hot water temperature | 65°C ± 5°C                             |
| Connection            | 20 mm (3/4" BSP Male)                  |
| Flow rate minimum     | 20 litres per minute                   |
| Consumption per cycle | 3 litres approximately                 |
| Backflow prevention   | DCV = Dual Check Valve fitted standard |
| Pressure              | 200-400 KPa = 30-60 Psi.               |

Above this range fit pressure limiter. Don't use small diameter plastic supply lines especially below this range when optional rinse booster pump may be required. FLUSH supply line before connection. Poor quality supply or excessive water hardness may affect performance or damage machine – filtration and/or softening is recommended.

### **Waste**

40 mm gravity drain – refer point B on installation diagram – run waste directly behind the machine or through open base. When 50mm drainage is required, bush out to 50mm downstream of trap.

### **Power**

Standard supply required is single phase 25A 240V 50 Hz, permanently wired via wall switch mounted adjacent to machine. May be changed on site by registered electrician to 15A single phase (disconnect blue wire from T2 terminal on heating contactor), OR to five wire 3 phase (3PN+E) 15A/phase, 415V 50Hz (remove red links from power supply connection terminal and connect 3 phases as per terminal label).

### **Installation Checklist**

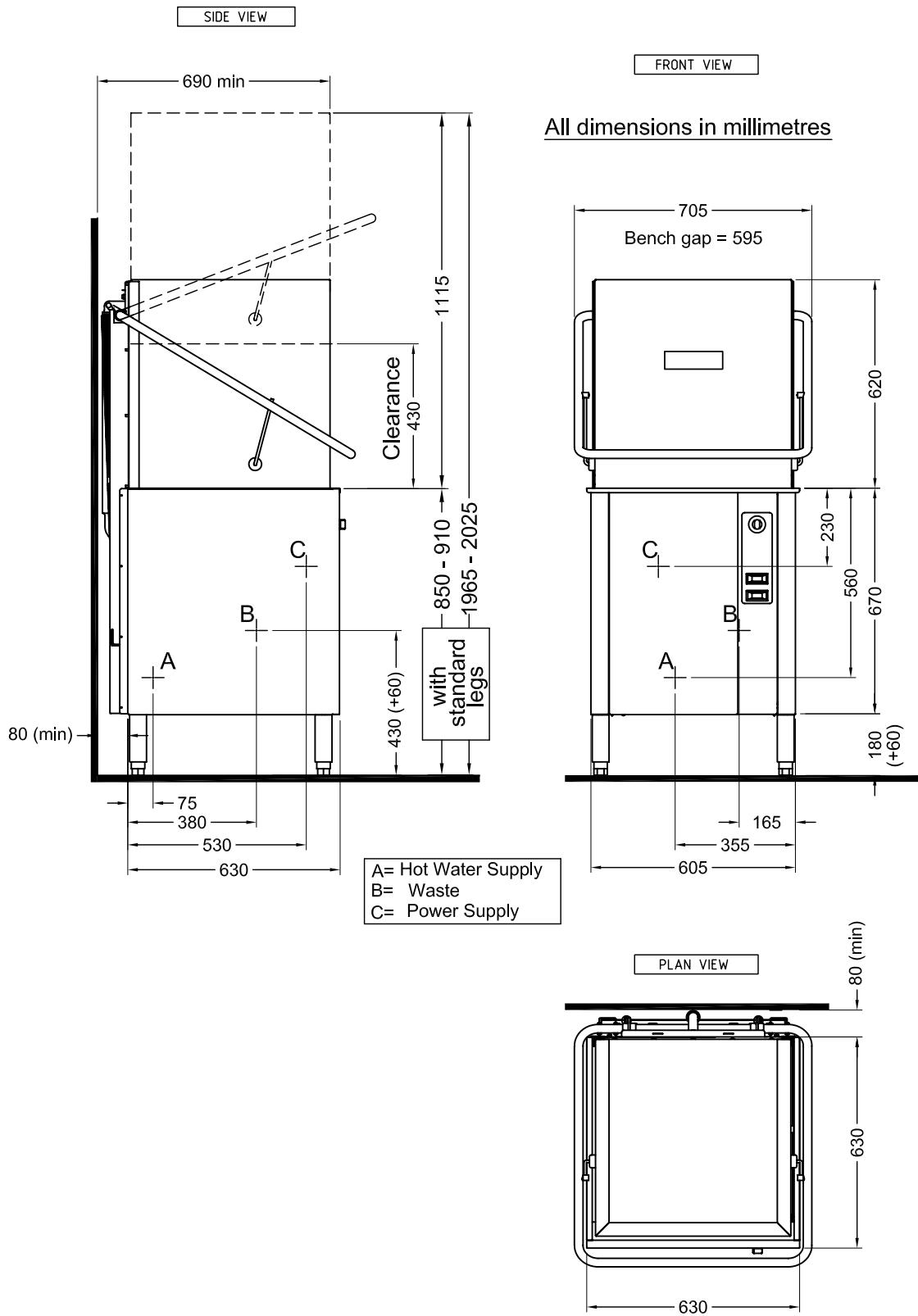
Complete attached Installation Checklist to ensure machine is installed and running correctly, and operator is familiar with operating procedures.

### **Troubleshooting**

If the machine doesn't fill after switching on the power, check and ensure that the hot water supply tap is open, water supply pressure is not below specification and Dual Check Valve is not faulty and correctly installed (arrows on the dual check valve's body specify water flow direction).

# M2-3(W) INSTALLATION DIAGRAM

M2-3W 24-09-06 3 A

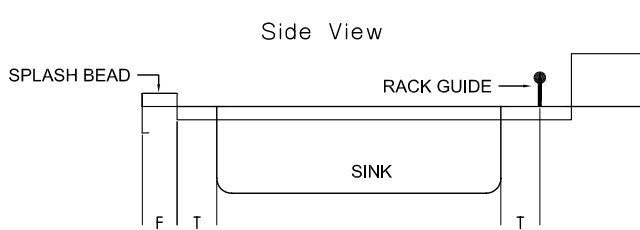
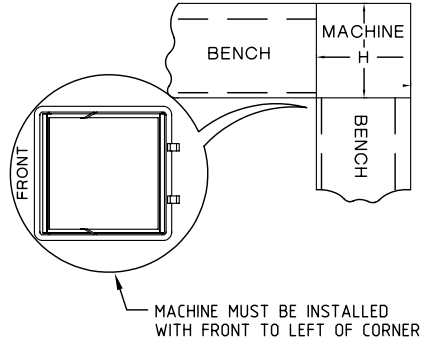


# AL/M2/ME/M1 BENCH DETAILS

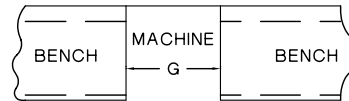
M2 0006 22-06-07 1 1

|   |  | M1  | M2/ME        | AL           | AL8          |
|---|--|-----|--------------|--------------|--------------|
| M | BENCH DEPTH<br>MINIMUM - for straight through only | 600 | 700<br>(650) | 750<br>(700) | 750<br>(700) |
| R | RETURN<br>MINIMUM - for straight through only      | 115 | 125<br>(90)  | 150<br>(125) | 150<br>(125) |
| G | BENCH GAP  | 510 | 595          | 640          | 790          |
| B | BENCH OPENING                                      | 460 | 535          | 550          | 550          |
| F | SPLASH BEAD<br>MINIMUM                             | 25  | 40<br>(25)   | 50<br>(25)   | 50<br>(25)   |
| D | RACK SIZE  | 435 | 500          | 500          | 500          |
| E | RACK PATH  | 450 | 520          | 520          | 520          |
| S | SINK WIDTH   | 350 | 450          | 450          | 450          |
| T | CLEARANCE  | 35  | 35           | 35           | 35           |
| H | DISTANCE TO WALL<br>FOR CORNER INSTALLATION        | 620 | 720          | 760          | N/A          |

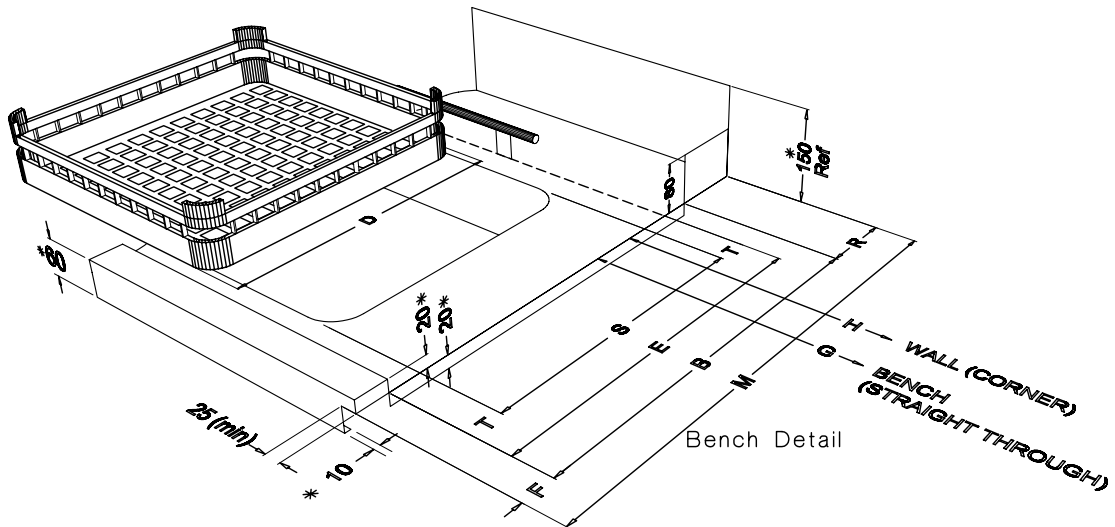
Corner Detail



Straight through detail



All dimensions in millimetres



- Notes:**
1. These dimensions are recommendations. They apply to straight through or corner installations. They are designed to ensure that the dishrack slides over an adjacent sink directly into the dishwasher. We recommend use of the sink size shown and a rack guide to keep the rack up against the splash bead and prevent it from falling into the sink. This arrangement is particularly suitable when a pre-rinse gun is used (as recommended).
  2. Bench depth can be reduced by reducing the size of the splash bead and in straight through installations (only) dimension R can be reduced to the minimum shown.
  3. Drawing is for the left of the machine - other side is mirror image (sink may be to either side).
  4. Dimension with \* are suggestions only and not critical.

# Installation Checklist

| CHECK  | OK / NOTES               |   |                          |                          |                          |
|--|--------------------------|---|--------------------------|--------------------------|--------------------------|
| <b>Delivery</b>  |                          |   |                          |                          |                          |
| Supplied complete  | <input type="checkbox"/> | no transit damage                               |                          |                          |                          |
| <b>Position</b>  |                          |   |                          |                          |                          |
| Level and stable   | <input type="checkbox"/> | on sound, waterproof, self draining floor       |                          |                          |                          |
| <b>Water</b>   |                          |   |                          |                          |                          |
| Isolator valve fitted  | <input type="checkbox"/> | Accessible, all fittings sound, no leaks        |                          |                          |                          |
| DCVs fitted  | <input type="checkbox"/> | Correct direction                               |                          |                          |                          |
| Temperature  | <input type="checkbox"/> | 65 ± 5°C  |                          |                          |                          |
| Flow rate  | <input type="checkbox"/> | Minimum 20 litres per minute                    |                          |                          |                          |
| Pressure   | <input type="checkbox"/> | 200-400 kpa, limiter fitted if above this range |                          |                          |                          |
|  | <input type="checkbox"/> | Booster fitted if below this range              |                          |                          |                          |
| Cold water when required   | <input type="checkbox"/> | Pressure not above 400 kpa                      |                          |                          |                          |
| Hardness   | <input type="checkbox"/> | Filter or softening if required                 |                          |                          |                          |
| <b>Power</b>   |                          |   |                          |                          |                          |
| Isolating switch   | <input type="checkbox"/> | Fitted, functional and accessible               |                          |                          |                          |
| Supply as specified  | <input type="checkbox"/> | Voltage, current, circuit breaker               |                          |                          |                          |
| <b>Waste</b>   |                          |   |                          |                          |                          |
| Usually 40 mm  | <input type="checkbox"/> | Sound, no leaks                                 |                          |                          |                          |
| Air gap on pumped drain  | <input type="checkbox"/> | Very important GLV and UD models                |                          |                          |                          |
| <b>Chemicals</b>   |                          |   |                          |                          |                          |
|  |                          | container                                       | no leaks                 | primed                   | conc.OK                  |
| Detergent  | <input type="checkbox"/> | <input type="checkbox"/>                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Rinse Aid  | <input type="checkbox"/> | <input type="checkbox"/>                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Machine operation</b>   |                          |   |                          |                          |                          |
| Run several cycles   | <input type="checkbox"/> |   |                          |                          |                          |
| Confirm correct operation  | <input type="checkbox"/> | Including correct fill levels                   |                          |                          |                          |
| <b>Operator training</b>   |                          |   |                          |                          |                          |
| Confirm Operator has copy of Operator Manual and is familiar with procedures |                          |   |                          |                          |                          |
| Start-up   | <input type="checkbox"/> |   |                          |                          |                          |
| Pre-rinse and racking  | <input type="checkbox"/> |   |                          |                          |                          |
| Machine operation  | <input type="checkbox"/> |   |                          |                          |                          |
| Drain  | <input type="checkbox"/> |   |                          |                          |                          |
| Clean  | <input type="checkbox"/> |   |                          |                          |                          |
| Shut-down  | <input type="checkbox"/> |   |                          |                          |                          |
|  |                          | Model / Serial                                  | <input type="checkbox"/> |                          |                          |
|  |                          | Owner   | <input type="checkbox"/> |                          |                          |
|  |                          | Location  | <input type="checkbox"/> |                          |                          |
|  |                          | Technician                                      | <input type="checkbox"/> |                          |                          |
|  |                          | Date  | <input type="checkbox"/> |                          |                          |
|  |                          | Signed  | <input type="checkbox"/> |                          |                          |

# Dishwashing Procedures

for best results

Note : these are general instructions to assist in getting the best performance from Washtech dishwashers – some comments and / or illustrations may not apply to every unit.

## Installation

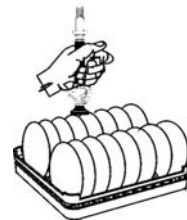


Read the Operator Manual. Correct installation, including an adequate supply of water at the correct temperature and pressure is essential for effective operation of your machine. Refer installation instructions for details. Drain hose outlet height is important on some models. Always install on a sound self-draining floor. Water softening is recommended in hard water areas - especially for glasswashing

## Pre-rinsing



Pre-scraping of dishes is required by hygiene regulations. The best method is to pre-rinse with a pre-rinse spray unit - or alternatively by scraping or dunking in water.



## Cutlery Procedures

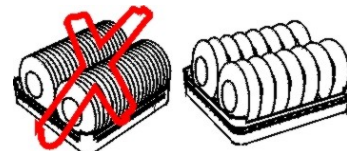


Pre-soak cutlery in warm water, preferably containing cutlery pre-soak compound - refer your chemical supplier.

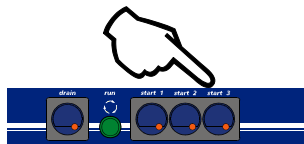
Do not overfill cutlery containers. Cutlery should be loose with handles down. Sort after washing rather than before. Cutlery of only one type nests together and obscures wash water.

## Racking Procedures

Do not overload racks, minimize the overlap of crockery. Cycle times are short and water consumption per cycle low - so there is no advantage in overloading racks.



## Cycle Times



For multi-cycle machine use the longest cycle whenever possible. Note that water consumption does not increase with longer cycles. Only choose shorter, faster cycles when necessary.



## Detergent

Use of correct type and quantity of low foaming commercial grade detergent is essential to the performance of the machine. We strongly recommend that you use a professional dishmachine chemical supplier - and will be pleased to recommend a supplier in your region. Discuss with them the use of cutlery pre-soak solution, detergent and drying agent.



# Dishwashing Procedures

for best results

## Drying

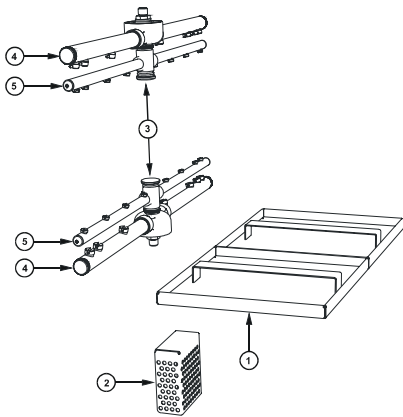


Single tank commercial dishwashers do not have a drying cycle. However, the machines do rinse at high temperatures which promote fast drying particularly when drying agents are used. We recommend prompt removal of the rack from the machine - leave the rack on the bench for 2 to 3 minutes before emptying. This time will be reduced with correct use of drying agent (rinse fluid) which reduces water surface tension and allows water to drain quickly from washware. For advice on drying agents and injectors refer to your chemical supplier.

## Daily Cleaning

It is essential that the machine is drained and cleaned at the end of each day. Drain the machine then remove, clean and replace filters as per the operating instructions. Regularly check the wash and rinse jets and clean them if necessary – see below.

## Regular Cleaning



Remove scrap trays① and wash pump inlet filter②, where fitted, and rinse or brush clean.

Remove wash and rinse arms by undoing the central thumbscrews③. If necessary, remove the end cap screws④ from the wash arms and the end screws⑤ from the rinse arms and flush the arms with water and/or use a toothpick or paperclip to clear jets.

Note: arms and filters vary with model and may appear different from this illustration e.g. those models with plastic wash arms have removable jets for ease of cleaning

## Regular Servicing

Regular servicing of the dishwasher is absolutely essential to keep the machine in top working condition and obtain the best performance.

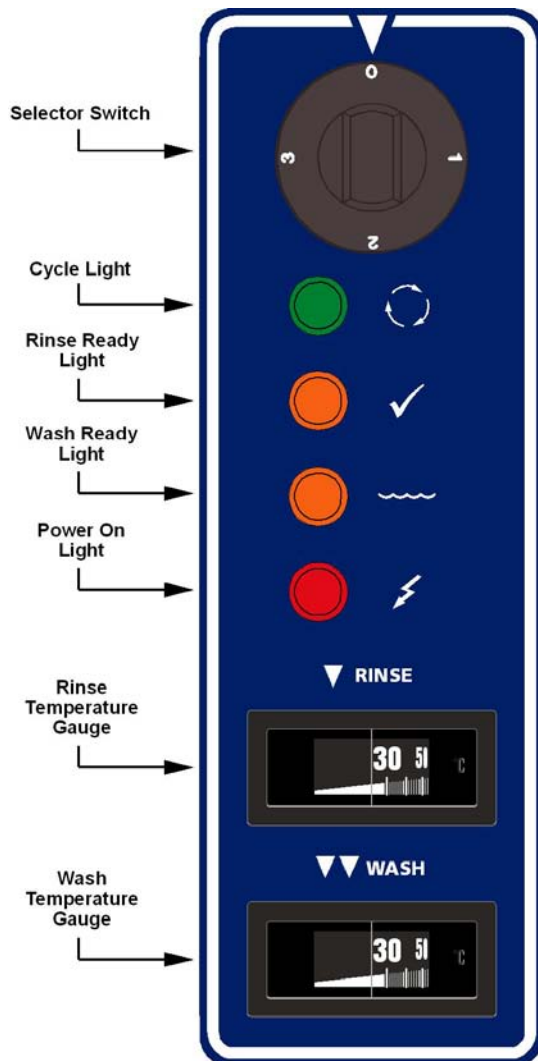
Please contact Moffat or your Authorised Service Provider to organize regular servicing of the dishwasher - discuss a Preventative Maintenance Agreement for optimum performance and long machine life.



Note : these are general instructions to assist in getting the best performance from Washtech dishwashers – some comments and / or illustrations may not apply to every unit.

# Operating Instructions

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## Start up

Fit drain upstand, wash pump filter, scrap tray and shut door.

Turn wall power switch on and select any cycle (1, 2 or 3).

Power light glows red and machine fills automatically.

Wash Ready light (water symbol) glows amber when wash tank is ready.

Rinse Ready light (tick symbol) glows amber when the machine is up to required temperature and ready to run.

## Operation

Select required cycle (1, 2 or 3 for 1, 2 or 3 minute cycle accordingly).

Try cycle 3 initially and switch to faster cycles only if necessary.

Load rack into machine and close door to start the machine.

Cycle light glows green while machine operates.

When Cycle light goes out, cycle is complete.

Open door and remove rack.

**After removing rack from machine, DO NOT shut door as machine will start up again.**

NOTE: Machine will not operate unless Ready lights are on.

## Shut down every night

Turn machine and wall power switches off.

Remove drain upstand to drain wash tank.

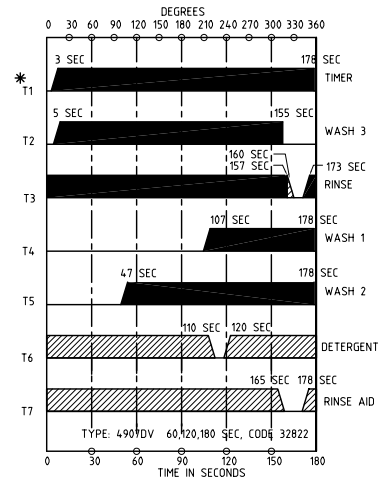
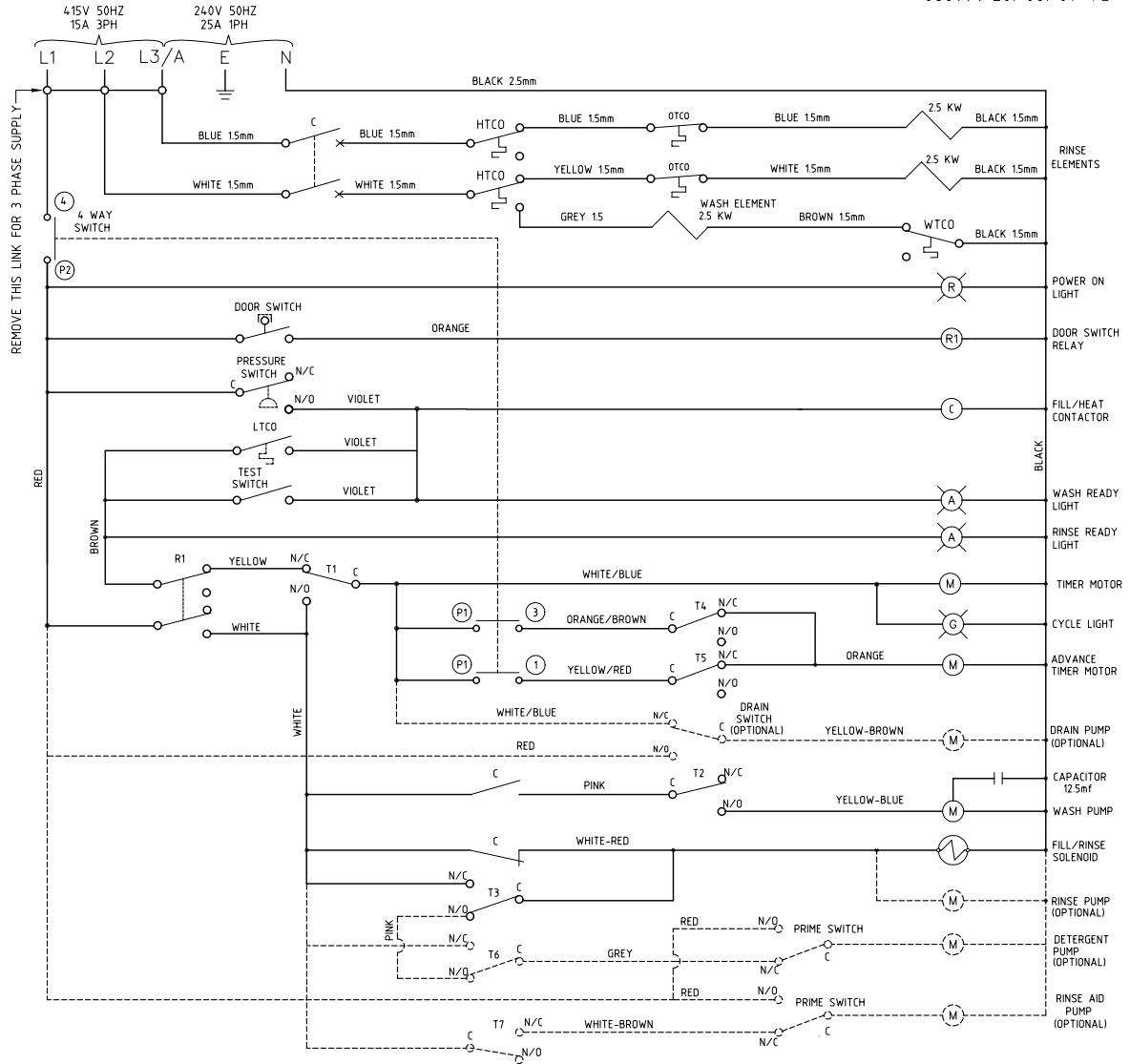
Remove scrap tray and wash pump filter and rinse clean.

Replace drain upstand, filter and scrap tray.

# Electrical Diagrams

## M2-3 (W) SCHEMATIC DIAGRAM

080144 20/08/07 1 D



| Date     | Change  | Issue |
|----------|---|-------|
| 20-08-07 | CHANGE 4 WAY SWITCH. ADD OPTIONAL DRAIN PUMP AND SWITCH | 1-D   |

KEY  
 [ ] ADJUSTABLE CAM  
 [ ] PRESET CAM