

# GM

# Series 6

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## UNDERCOUNTER GLASSWASHER



# 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.

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Service 1 800 622 216  
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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

### **Power Cord Replacement**

- ◆ If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person in order to avoid a hazard
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# Installation

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**WARNING**

Installer must be suitably qualified and ensure compliance with all local codes and standards including AS/NZS 3500.1.

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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. Adjacent surfaces should be heat resistant and moisture proof, especially benchtop lower surfaces above undercounter machines. 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.

## Water Supply

Hot water temperature	65°C ± 5°C
Pressure	200 KPa = 30 Psi.
Connection	20 mm (3/4" BSP) male
Flow rate minimum	20 litres per minute
Hot water consumption	2.2 litres per cycle
Cold water supply	same pressure and flow rate as above
Backflow prevention	DCV = Dual Check Valves supplied with machine

Pressure limiter may be required. . Don't use small diameter plastic supply lines. FLUSH supply line before connection. Connect supplied DCV to water supply. Poor quality supply or excessive water hardness may affect performance or damage machine – filtration and/or softening is recommended. Optional rinse booster pump available for very low pressure.

## Waste

40 mm gravity drain – refer point B on installation diagram – run waste directly behind the machine or through hole in base.

## Power

Electrical supply required is 15A 240V 50Hz via switched outlet adjacent to machine, which is supplied with cord set including 15A plug.

## Detergent

Insert detergent pump inlet hose into container of commercial low foam detergent. Open machine door and switch machine on. Press and hold detergent prime switch behind front cover until chemical flows into machine. Commercial detergents can be hazardous – read instructions and handle with care.

## Installation Checklist

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

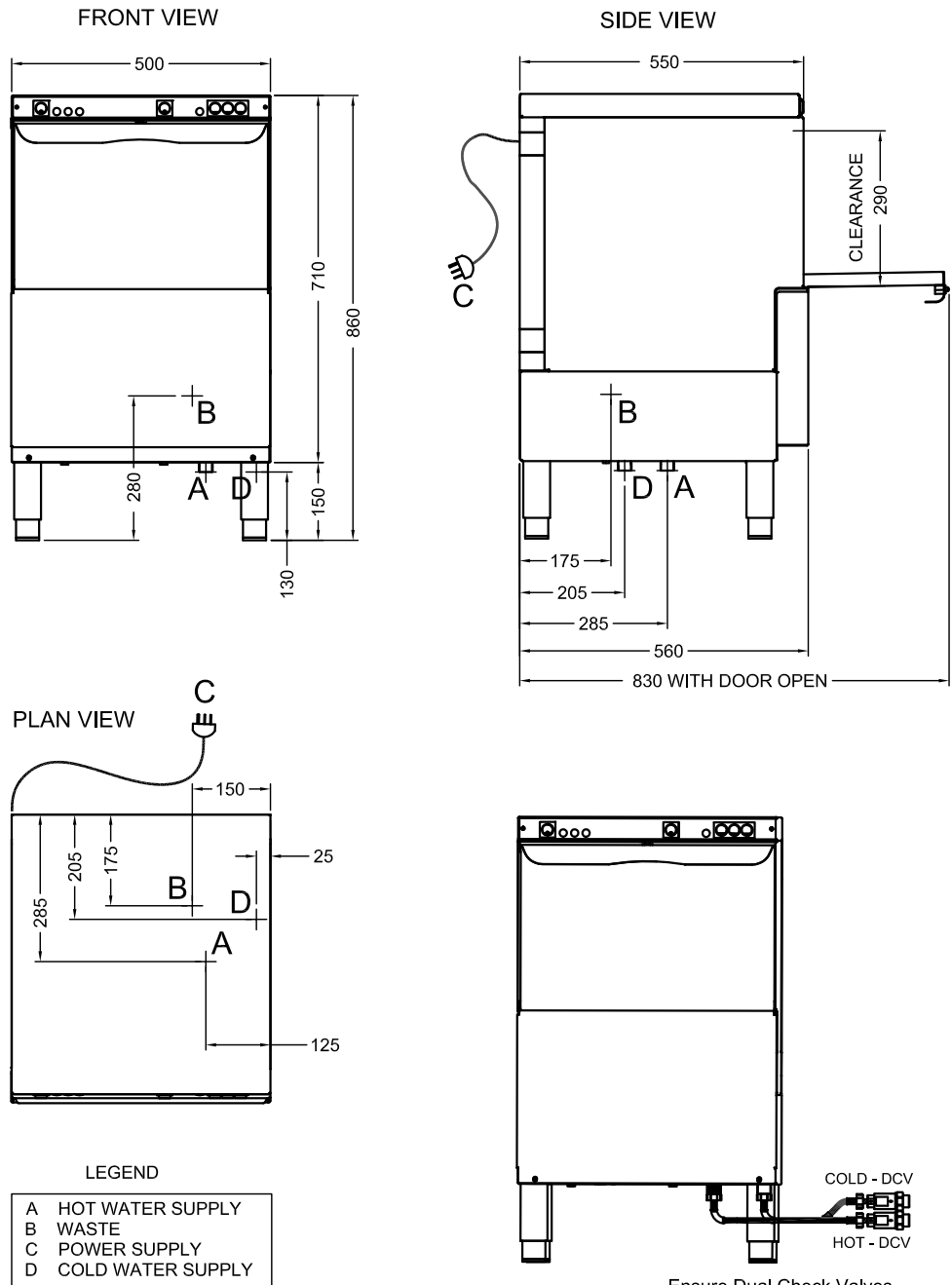
## Troubleshooting

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

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# GM6 (W) INSTALLATION DIAGRAM

GM6-W 22-04-10 3 A



All dimensions in millimetres

# Installation Checklist

CHECK OK / NOTES

## Delivery

Supplied complete  no transit damage

## Position

Level and stable  on sound, waterproof, self draining floor

## Water

Isolator valve fitted	<input type="checkbox"/>	Accessible, all fittings sound, no leaks
DCVs fitted (Washtech only)	<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"/>	200-350 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 350 kpa
Hardness	<input type="checkbox"/>	Filter or softening if required

## Power

Isolating switch	<input type="checkbox"/>	Fitted, functional and accessible
Supply as specified	<input type="checkbox"/>	Voltage, current, circuit breaker

## Waste

Usually 40 mm	<input type="checkbox"/>	Sound, no leaks
Air gap on pumped drain	<input type="checkbox"/>	

## Chemicals

	product name	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"/>

## Machine operation

Run several cycles	<input type="checkbox"/>	
Confirm correct operation	<input type="checkbox"/>	Including correct fill levels

## Operator training

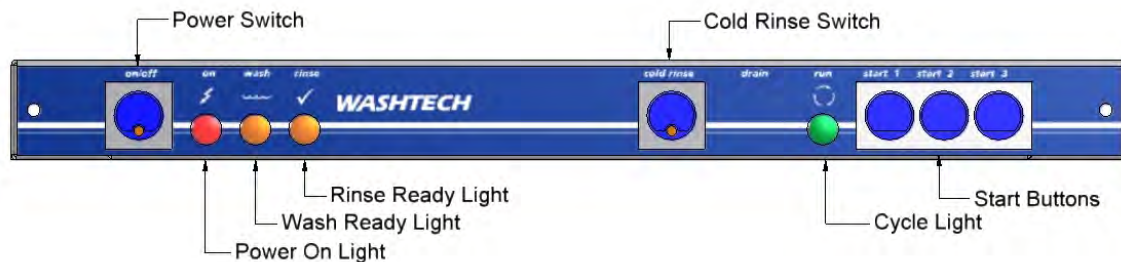
Confirm Operator has copy of Operator Manual and is familiar with procedures

Start-up	<input type="checkbox"/>	Model / Serial	<input type="checkbox"/>
Pre-rinse and racking	<input type="checkbox"/>	Owner	<input type="checkbox"/>
Machine operation	<input type="checkbox"/>	Location	<input type="checkbox"/>
Drain	<input type="checkbox"/>	Technician	<input type="checkbox"/>
Clean	<input type="checkbox"/>	Date	<input type="checkbox"/>
Shut-down	<input type="checkbox"/>	Signed	<input type="checkbox"/>

# Operation

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## Description of Controls



## Operating Instructions

### Start up

Fit drain upstand, wash pump filter, scrap trays and shut door.  
Turn wall and machine power switches on.  
Power light glows red and machine fills automatically.  
Wash Ready light glows amber when wash tank is ready.  
Rinse Ready light glows amber when the machine is up to required temperature and ready to run.

### Operation

Load rack into machine and shut door.  
When required, turn Cold Rinse switch on for cold final rinse.  
Press Start button 1, 2 or 3 for 1, 2 or 3 minute cycle accordingly.  
Cycle light glows green while machine operates.  
When Cycle light goes out, cycle is complete.  
Remove rack. Close door.  
NOTE: Machine will not operate unless Ready lights are on.

### Shut down every night

#### Standard machine without Drain Pump

Turn machine and wall power switches off.  
Remove drain upstand to drain wash tank.  
Remove wash pump filter, scrap trays and rinse clean.  
Replace drain upstand, wash pump filter and scrap trays.

#### Drain Pump fitted

Open the door and turn Drain switch on.  
After drain starts remove drain upstand when the top of the upstand is above the surface of the water.  
Allow to drain for approximately 1 minute.  
Turn Drain and Power switches off.  
Remove filters and rinse clean. Replace filters and drain upstand.

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# Dishwashing Procedures

for best results

Note: these are general instructions to assist in getting the best performance from Starline 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

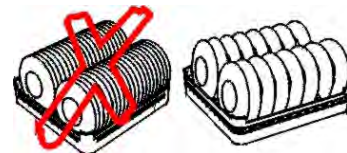


Pre-soak cutlery in warm water, preferably containing cutlery pre-soak compound - refer your chemical supplier.

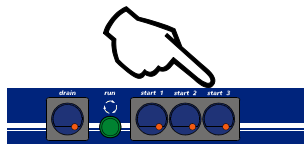
Do not overfill cutlery containers. Cutlery should be loose with handles down. Sort after washing rather than before. Cutlery of only one type nests together and obscures wash water.

## 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

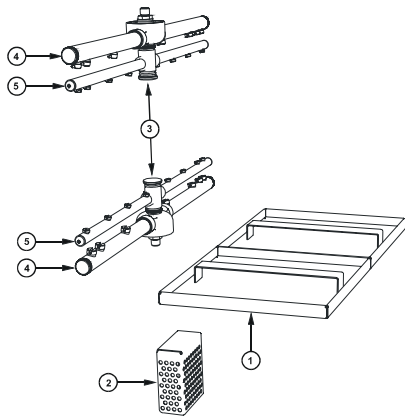


Single tank commercial dishwashers do not have a drying cycle. However, the machines do rinse at high temperatures which promote fast drying particularly when drying agents are used. We recommend prompt removal of the rack from the machine - leave the rack on the bench for 2 to 3 minutes before emptying. 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 trays<sup>①</sup> and wash pump inlet filter<sup>②</sup>, where fitted, and rinse or brush clean.

Remove wash and rinse arms by undoing the central thumbscrews<sup>③</sup>. If necessary, remove the end cap screws<sup>④</sup> from the wash arms and the end screws<sup>⑤</sup> 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.

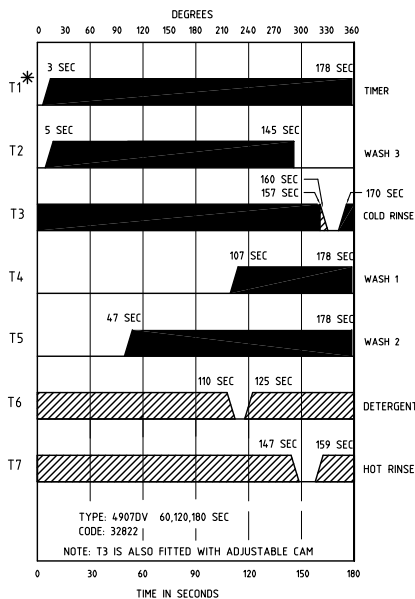
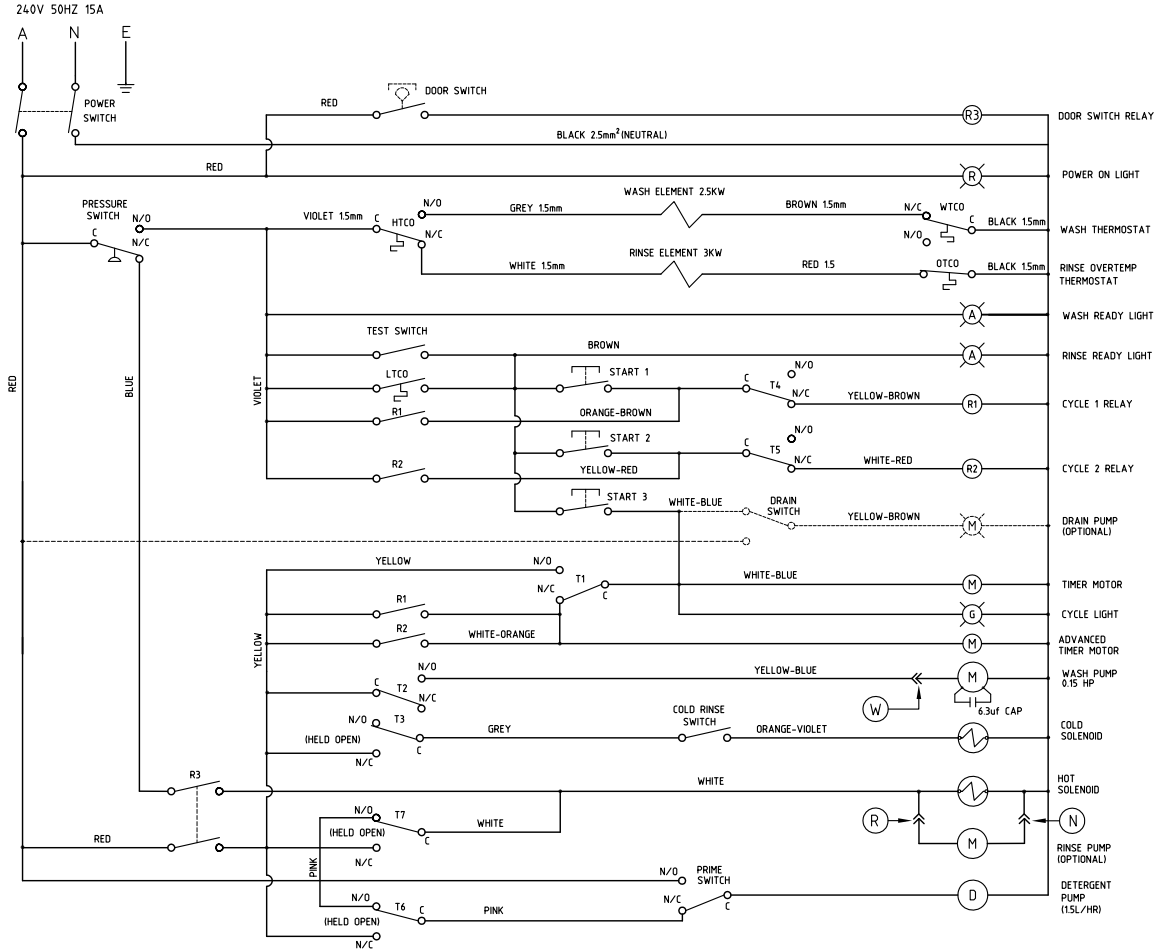
Please contact Washtech or your Authorised Service Provider to organize regular servicing of the dishwasher - discuss a Preventative Maintenance Agreement for optimum performance and long machine life.



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

# GL5/GM6(W) SCHEMATIC DIAGRAM

060157 19/04/10 1 F



## DETERGENT AND RINSE AID CONNECTION OPTIONS

Cycle active feed

- Wash Active - refer W - connection to wash pump
- Rinse Active - refer R - connection to hot solenoid
- Neutral - refer N - connection to hot solenoid

For rinse aid injection. Washtech part # C620120 is recommended and operates hydraulically.

- \* T1 IS CAM CLOSEST TO 180 SEC. TIMER MOTOR
- \* ADJUST T6 AS REQUIRED FOR DETERGENT CONTROL

KEY	
□	ADJUSTABLE CAM
■	PRESET CAM

Date	Change	Issue
12-12-06	CHANGE RINSE AND WASH ELEMENT CIRCUITS	1-C
16-04-07	ADD OPTIONAL RINSE PUMP	1-D
9-10-08	CHANGE DETERGENT INJECTION TIME. ADD OPTIONAL CONNECTION POINTS	1-E
19-04-10	ADD GM6 TO DESCRIPTION	1-F

# Notes

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