

M1C

Operator Manual



STARLINE[®]
PROFESSIONAL WASH SYSTEMS



WARNING

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



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



IMPORTANT

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



IMPORTANT

This machine is intended for commercial use only.

CONTENTS

Safety Instructions.....3

Installation.....4

Installation Diagram.....5

Operating Instructions.....6

User Programming.....7

Troubleshooting.....8

Wiring Diagram.....9

Accessories.....10

Notes.....11

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.

Specifications and document subject to change without prior notice.

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Parts 09 829 0930



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Safety Instructions



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.

Installation

- Use qualified, skilled personnel
- Follow installation instructions
- Connect to correct voltage and supply current
- Provide fully accessible electrical Isolation Switch & water supply valves

Training and Supervision

- Read and understand the Operating instructions and train all staff
- This appliance must not be operated by children or infirm persons
- Machine panels must only be removed by suitably qualified and trained personnel – internal hazards include live electrics and very hot surfaces
- This appliance is not intended for use as a stepladder

Hot Surfaces

- Some surfaces may be hot or very hot

Chemicals

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

Hot Water

- Do not put hands in wash water which may be over 60°C and contain hazardous caustic detergent
- Rinse water can be over 90°C
- Door safety switches are designed for emergency use only

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

Service/repair

- Under no circumstances the user should attempt to carry out repairs
- All service/repair work must be carried out by qualified personnel only

Installation Checklist



WARNING

Installer must be suitably qualified and ensure compliance with all codes and standards including AS/NZS3500.1.

Unpack

- Unpack the machine, check for damage and complete delivery.

Positioning

- Place machine on sound waterproof self draining floor and adjust feet to level
- Allow room for adjacent chemical containers

Water

- Flush supply lines before connection
- Connect hose supplied to adjacent accessible isolator valve - 20 mm 3/4 male
- Flow rate required - 15 litres per minute
- Temperature - Less than 20 °C
- Consumption per cycle - 2.6 litres
- Pressure required - 200-350 kPa - fit limiter above this pressure
- Back Flow - Dual Check Valve (DCV)
- Potable water quality is required - filter or soften if necessary

Water Quality Requirements

Hardness		ppm				pH
min		20				7
max		100				8
Ions	Cl ⁻	SO ₄	Fe	Mn	Cu	Cl ₂
Max mg/L	100	400	0.1	0.5	0.05	0.1

Power

- Three phase 15 A per phase 400V 50Hz

Waste

- Connect drain pump hose supplied to vented upstand or sink waste connection

Detergent

- Insert hose into container of commercial dishwasher low foam detergent
- Adjust detergent dosing and prime detergent using the keypad (refer to page 7)
- Use good quality chemicals and regularly check containers

Rinse Fluid

- Insert hose into container of commercial dishwasher rinse fluid
- Adjust rinse fluid dosing and prime rinse aid using the keypad (refer to page 7)
- Use good quality chemicals and regularly check containers

Operation

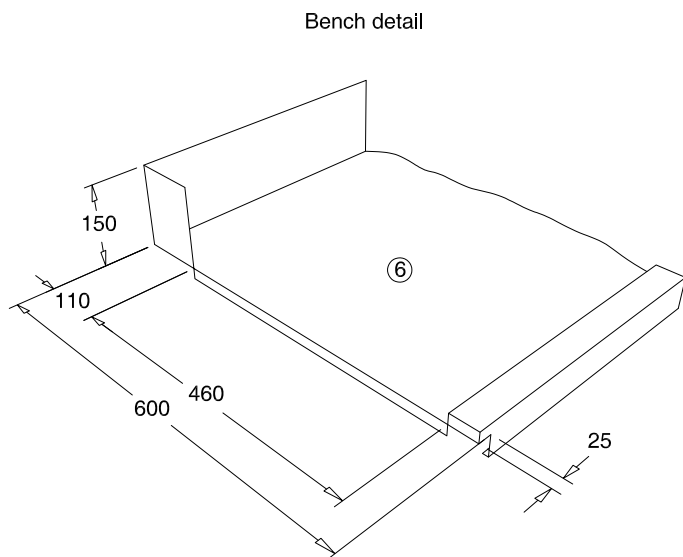
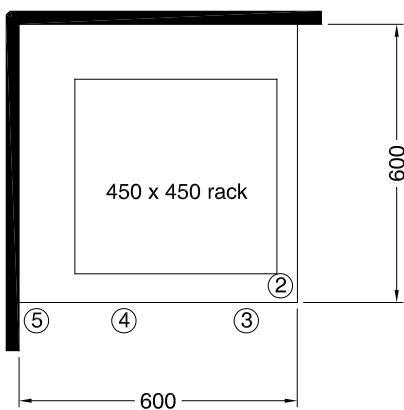
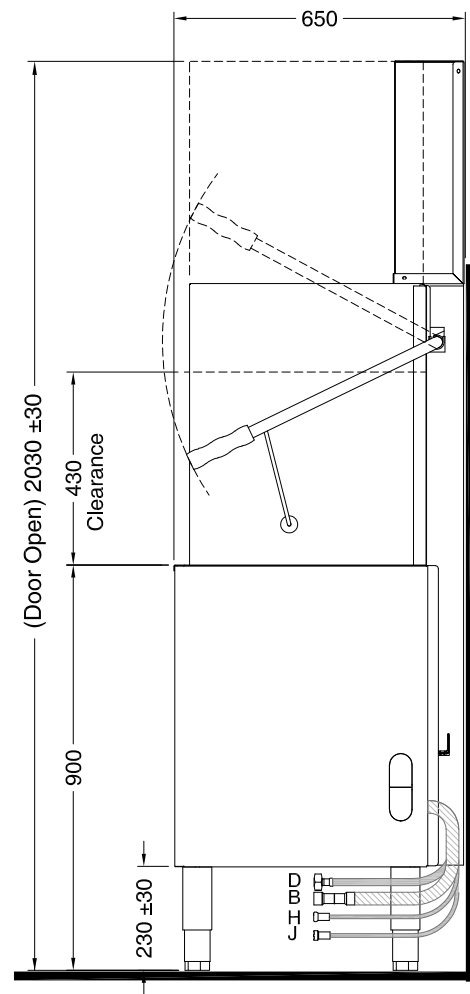
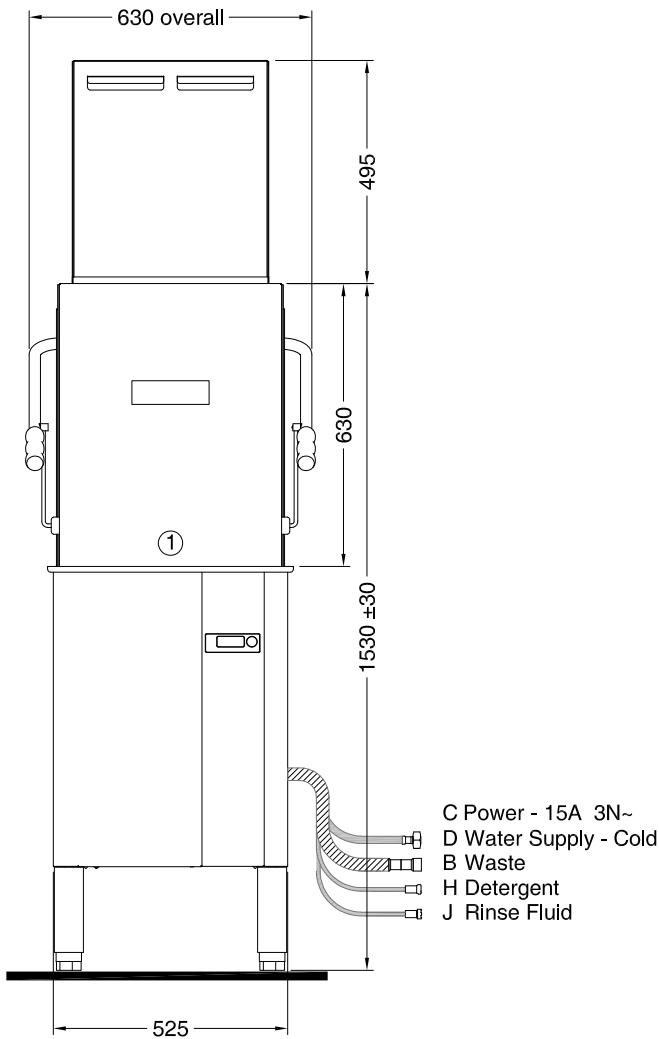
- Run several cycles, ensure that operator has read and understands instructions

Troubleshooting Installation

- If machine doesn't fill after switching on power, check & ensure that hot water supply tap is open, water supply pressure is not below specification.

M1C Installation Diagram

M1C INST 10-11-16 3 C



In-line Installation

① Bench gap 510

Corner Installation

② wall to front inside corner of wash tank 600

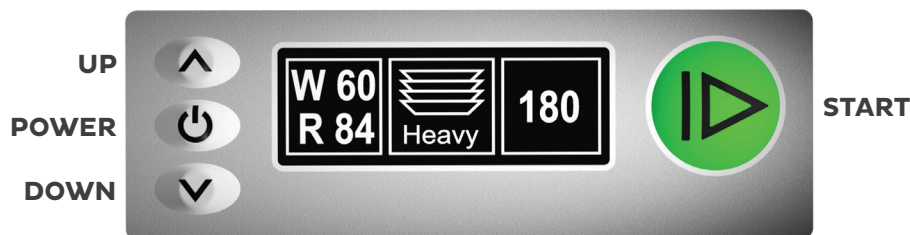
③ machine must face left for access to controls

④ allow 300 clearance beneath bench to front for service access

⑤ splashback return no higher than 150

⑥ left side is mirror image

M1C Operating Instructions



START

- Turn on at wall
- Ensure the Filter (2) is in place
- Ensure the Upstand (1) is in place and shut door
- Press Power button for 3 seconds to turn machine on and begin the fill cycle

OPERATION

- Select cycle using Up/Down buttons (use the Heavy cycle whenever possible)
- Press Start button (once this is Green or Orange) to begin washing
- Timer counts down to 00 then resets after door is opened

START BUTTON COLOURS

- ▶ White = machine is filling
- ▶ Red = cycle is running
- ▶ Green = rinse water is up to temperature
- ▶ Purple = door is open
- ▶ Orange = machine is heating
- ▶ Blue = power saving mode

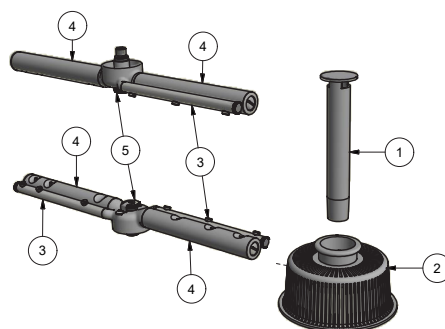
NOTE: The machine may be started while Orange light is on and while rinse water is being heated and the timer will pause at 22 seconds until rinse water is up to 83 degrees

SHUT DOWN – EVERY NIGHT

- Select Drain cycle via Up or Down buttons
- Remove drain Upstand (1) and shut door
- When Drain cycle is finished after 100 seconds, remove and rinse Filter (2) before replacing back in machine along with Upstand (1)

CLEANING – AT LEAST ONCE A WEEK

- Remove, rinse and replace:
- Upstand 1
- Filter 2
- Wash/Rinse Arm 3/4
- Thumbscrews 5
- Inspect and clear all jets in the wash and rinse arms



SUGGESTED BEST PRACTICE

- Pre-rinse Scrape and/or rinse plates and glasses in cool water
- Chemical Use good quality non foaming commercial detergent and drying agent
Do not use domestic detergent which will cause the machine to foam

User Programming

The **User Settings** menu is accessed by pressing the UP and DOWN keys simultaneously for 5 seconds, the screen should then change to:



Press the POWER button to scroll between settings.
Press the UP and DOWN keys to change a specific setting,
Press the START button to return to the operator screen.

The programming options are specified in the table below:

User Settings	Factory Setting	Selection
Power Save	ON	ON/OFF
Detergent Prime	OFF	ON/OFF
F-Detergent Injection Time	40	0 - 180 secs
W-Detergent Injection Time	15	1 - 30
Rinse Aid Prime	OFF	ON/OFF
W-Rinse Aid Time	12	1 - 30
Display Contrast	27	10 - 40

Power Save function reduces the rinse temperature setting by 10°C when the machine is idle for 5 minutes or more. The temperature settings return to the set value when door is opened or START/STOP key is pressed.

Detergent Prime function allows manual operation of the detergent pump to fill the detergent hose with chemicals. Press UP key to switch the detergent pump on, DOWN key to switch the pump off. If the detergent pump is turned on and left running, it will stop automatically after 1 minute of operation.

F-Detergent Time controls the operation time of the detergent pump during the fill of the wash tank. The factory settings for passthrough models – 80 seconds.

W-Detergent Time sets the injection time of the detergent pump at the beginning of each wash cycle. Ex-factory setting is 15 seconds as board default.

Rinse Aid Prime function allows manual operation of the rinse aid pump to fill the rinse aid hose with chemicals. Press UP key to switch the rinse aid pump on, DOWN key to switch the pump off. If the rinse aid pump is turned on and left running, it will stop automatically after 1 minute of operation.

W-Rinse Aid Time controls the injection time of the rinse aid peristaltic pump. The rinse aid pump is set to operate at the beginning of each wash cycle. Ex-factory setting is 12 seconds as board default.

Troubleshooting

If an error message appears on the control display first try turning the machine OFF for 30 seconds and then back ON - If the error message remains call for service.

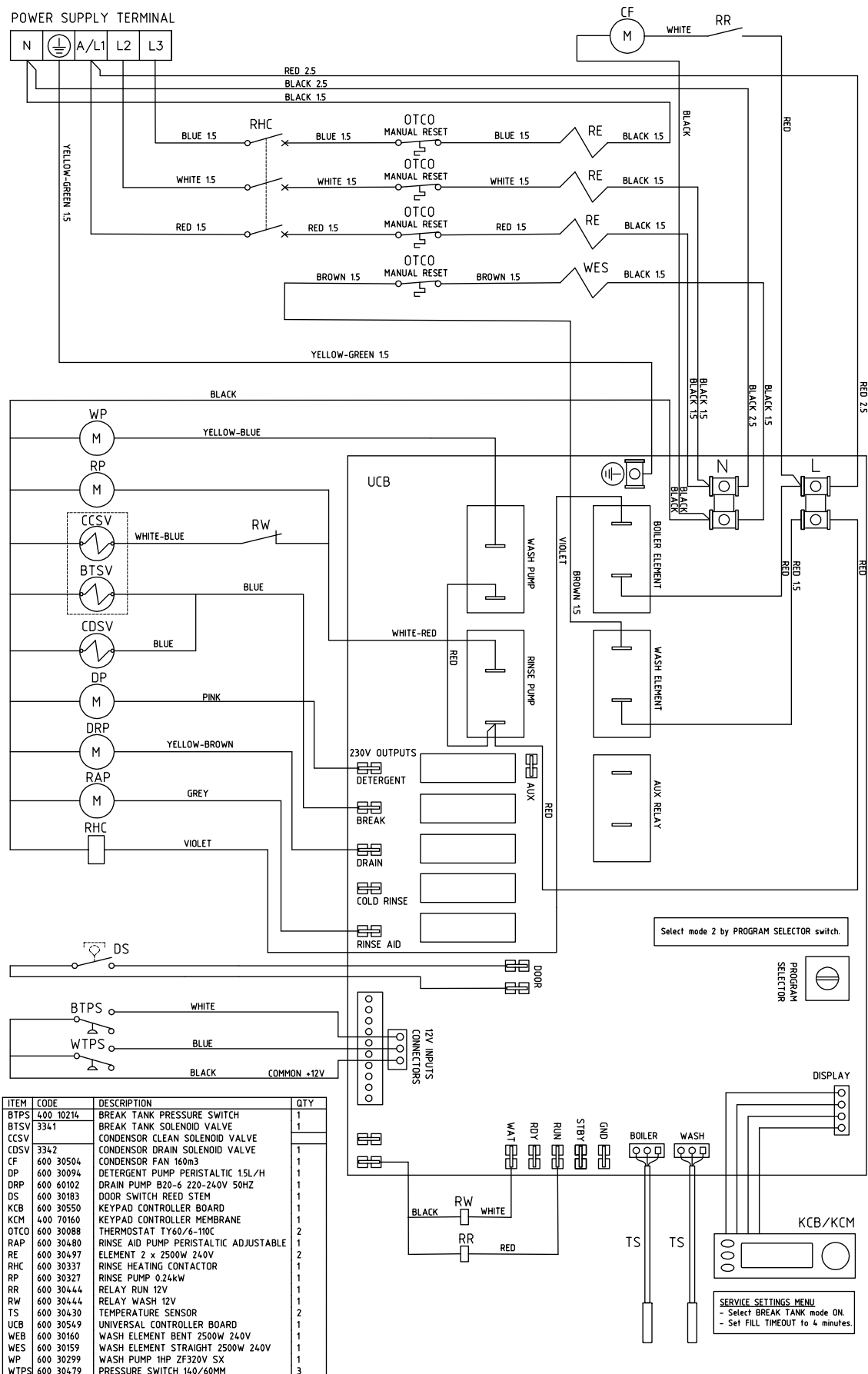
Issue	Resolution
Error 7	Fill failure - check drain upstand is fitted & water supply is turned on and good flow rate.
Error 8	Drain failure - check drain upstand is removed & drain hose is not kinked or blocked
Not Filling	Check water supply is on and door is closed
Refills During Wash	Check drain upstand is fitted
Cycle Does Not Start	Check door is closed
Foaming Wash	Excessive use of rinse fluid and/or low wash temperature can cause foaming
Poor Results	Read and carefully follow the machine installation, operating and care procedures

All of the following is actually in the instructions on previous pages of this manual

Pre-scrap and pre-rinse washware
Do not overload dishracks - avoid overlap of plates, wash cutlery unsorted, handles up
Use quality low foam detergent and rinse fluid - check containers and adjustment
Use heavy cycle - Baked on soil requires pre-scraping and/or pre-soaking
Remove and check wash & rinse arms & jets are clean and arms rotate freely
If plates are not pre-rinsed wash water may need changing regularly
Check wash and rinse temperatures
Remove rack when cycle ends and leave on bench a few minutes for drying

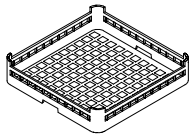
M1C Wiring Diagram

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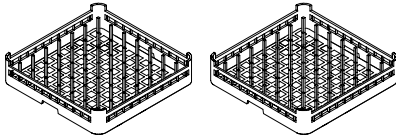


ITEM	CODE	DESCRIPTION	QTY
BTPS	400 10214	BREAK TANK PRESSURE SWITCH	1
BTSV	3341	BREAK TANK SOLENOID VALVE	1
CCSV		CONDENSATOR CLEAN SOLENOID VALVE	1
CDSV	3342	CONDENSATOR DRAIN SOLENOID VALVE	1
CF	600 30504	CONDENSATOR FAN 160m3	1
DP	600 30094	DETERGENT PUMP PERISTALTIC 15L/H	1
DRP	600 60102	DRAIN PUMP B20-6 220-240V 50HZ	1
DS	600 30183	DOOR SWITCH REED STEM	1
KCB	600 30550	KEYPAD CONTROLLER BOARD	1
KCM	400 70160	KEYPAD CONTROLLER MEMBRANE	1
OTCO	600 30088	THERMOSTAT TY60/6-110C	2
RAP	600 30480	RINSE AID PUMP PERISTALTIC ADJUSTABLE	1
RE	600 30497	ELEMENT 2 x 2500W 240V	2
RHC	600 30337	RINSE HEATING CONTACTOR	1
RP	600 30327	RINSE PUMP 0.24kW	1
RR	600 30444	RELAY RUN 12V	1
RW	600 30444	RELAY WASH 12V	1
TS	600 30430	TEMPERATURE SENSOR	2
UCB	600 30549	UNIVERSAL CONTROLLER BOARD	1
WEB	600 30160	WASH ELEMENT BENT 2500W 240V	1
WES	600 30159	WASH ELEMENT STRAIGHT 2500W 240V	1
WP	600 30299	WASH PUMP 1HP ZF320V SX	1
WTPS	600 30479	PRESSURE SWITCH 140/60MM	3

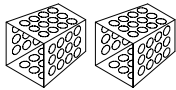
Accessories



600 70080
CUPRACK 450mm PLASTIC



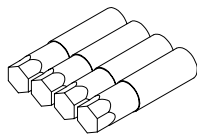
600 70081
DISHRACK 450mm PLASTIC



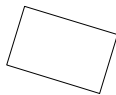
C660503
CUTLERY CONTAINER G



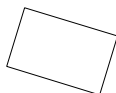
600 60080
HOSE SS 2M



600 90154
SS LEG 63D x 225 - 325mm x M12



WIRING DIAGRAM (UNDER FRONT COVER)



OPERATOR MANUAL

Warranty Conditions

WASHTECH warrants that new STARLINE products are free from defects in material or workmanship for a period of one year from the date of purchase.

EXTENT OF WARRANTY

- Washtech shall repair or, at its discretion, replace any part of the machine found to be defective.
- The labour for the repairing or the replacement of defective parts shall be provided during normal office hours at no cost to the user.
- Washtech shall not otherwise be liable for any other loss or damage arising out of any person's use or inability to use the machine.
- Washtech shall not be liable for the cost of work done outside normal office hours, and for travel costs outside regional centres.
- Washtech shall not be liable for detergent related issues, including detergent pump adjustment or squeeze tube replacement, drain pump blockages and other related damages.

CONDITIONS OF WARRANTY

This warranty shall not be binding on Washtech unless the warranty registration card is completed and received by Washtech within 30 days from the date of purchase

This warranty shall be void if:

- The equipment has not been properly installed by an authorised Washtech Service Provider.
- Persons other than Washtech Service Providers have undertaken repairs or attempts at repair.
- The equipment has not been operated and maintained in accordance with the Operator Manual.
- Damage has resulted from shipment, handling, fire, water, accident, abuse, detergent equipment
- fitted by others or any other event beyond the control of Washtech.

Any defect must be notified to Washtech or its authorised dealer within 30 days of the discovery of the defect.

IF YOU WISH TO MAKE A WARRANTY CLAIM

- First check the things you can do for yourself. Refer to the Operator Manual provided to ensure that the machine is correctly installed and that you are familiar with its operation. If a service technician calls and determines that the equipment is not defective you will be charged with the cost of the call-out.
- If you need service during the warranty period, first contact the dealer from whom you purchased the equipment. The Dealer will arrange service by Washtech or an authorised Starline Service Provider.
- If you have a problem contacting your dealer or if your dealer is unable to assist, then please contact the Service Department, Washtech, telephone 09 829 0923.
- When you write or call you will need to provide your name and address, the model and serial number (refer lower front cover) and the date of purchase so that your warranty claim may be validated.

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ISO9001

All Washtech products are designed and
manufactured by Washtech using the
internationally recognised ISO9001 quality
management system, covering design,
manufacture and final inspection, ensuring
consistent high quality at all times.

In line with policy to continually develop and
improve its products, Washtech Ltd reserves the
right to change specifications and design without
prior notice.

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