

# USER'S MANUAL & INSTALLATION GUIDE



Dear valued customer,

Thank you very much for purchasing Washmatic products.

Before operating this unit, please read the instructions carefully to ensure the best possible performance of your Washmatic products.

Be sure to read "Notes for safe operation" and use the unit safely. Keep the instruction manual in a safe place and read it when necessary.

The manufacturing serial number is important for quality control. Please check the manufacturing number on the left side/ back of this unit and note it down.

In case of any service needs, please contact our service department at

[service@washmaticindia.com](mailto:service@washmaticindia.com)

or call us at +91 99100 88680

Yours truly

Jacob George

CEO

## Contents

1.	Recommended applications . . . . .	1
2.	Optional accessories . . . . .	1
3.	Special features . . . . .	1
4.	Safety instructions . . . . .	1
5.	Installation, connections and commissioning . . . . .	2-4
6.	Operating and indicating parts. . . . .	5
7.	Circuit diagram . . . . .	6-8
8.	How to use . . . . .	9-11
9.	Technical data . . . . .	11-14
10.	Installation Guide . . . . .	15
11.	Packing list. . . . .	16
12.	Trouble shooting chart. . . . .	17
13.	Product registration. . . . .	18

### **Notes regarding this manual:**

The contents of this manual  
shall not be reprinted or redistributed  
in any form without prior consent.

The contents of this manual or the specifications  
and external appearance of this unit  
may be altered without prior notice.

Illustrations used in this manual  
may differ slightly from the actual shape of this unit.

## **1. Recommended Applications**

The DISH WASHER may be used for washing plates, glasses and dishes of various kinds, using drinking water.

The device may only be used for this purpose, and in accordance with these assembly and operating instructions.

## **2. Optional accessories**

- Temperature display of boiler and tank
- Automatic detergent dispenser
- Automatic rinse injector
- Water softener
- Pressure booster pump
- Extra racks
- Vapour hood
- Drain trough grating
- Pre rinse spray unit
- Trash bin
- Detergent & rinse concentrate
- Feeding tables
- Exit tables
- Roller tables
- Angular loader
- Overhead rack shelf
- Wall mounted rack shelf
- 5 tier SS storage rack

## **3. Special features**

- Machine stops and heaters get disconnected automatically when the door is opened to avoid water flowing out.
- Easy to service due to quicker access to control panel, heaters, etc.

## **4. Safety instructions**

The device is safe to operate provided you follow the instructions below:

- Only use this device once you have been instructed in its operation and workings
- Only operate the device as described in these operating instructions
- Do not open any parts of the device, which require the use of a tool.
- Check to make sure the available current and voltage supply coincides with

that given in technical data

- Never touch the machine with wet or damp hands or feet or when you are barefoot on the floor
- Never use extensions in areas in which there is water.

## **5. Installation, connections and commissioning**

Installation and connection of the machine to the customer's electricity connections and water connections is to be carried out in accordance with national and local criteria by qualified engineers.

The machine must be connected to electric supply, water supply and drain, prior to testing the machine.

### **Electric input wire colour code:**

Red	: Phase 1
Yellow	: Phase 2
Blue	: Phase 3
Black/Grey	: Neutral
White/Green	: Earth

**Conveyor machines are supplied without main inlet wire. Use 16mm<sup>2</sup> Cu cable for connecting the machine to the mains**

### **Place of installation**

When positioning the machine, make sure that:

- The ambient temperature is between 10°C and 35°C
- It is not installed outside
- It is not located in wet environments, near sprays or jets of water

### **Connections required for operation**

To operate the machine must be connected to:

- The power mains
- The water supply
- The water drain
- Rinse Aid concentrate
- Detergent concentrate

**In certain cases and for certain machine models, it may be necessary to connect the machine to other supplementary accessories such as :**

- The water softener
- The booster pump that increases water flow pressure
- Drain pump
- Inlet / Exit tables
- Limit switch

## **Wiring**

**Before connecting the machine to the power supply make sure that :**

- The mains power supply is compatible with the rated voltage
- The mains power supply installation is adequate for the maximum wattage absorbed by the appliance during the operating phase
- The appliance is connected to a suitable earth (ground) system
- A cut off switch is positioned upstream of the appliance's installation point with an opening distance of the contacts that is at least 3mm (in compliance with current safety regulations)

## **Water pipes**

The connection to the mains water supply must be carried out by qualified personnel in compliance with the manufacturer's instructions. Before connecting the machine to the mains water supply make sure that :

- The mains water supply is for human consumption (potable water)
- The water is supplied at a temperature between 40°C & 55°C
- Operating pressure is between 2 bar and 4 bar
- Between the mains water supply and the appliance's supply pipe a stopcock is installed so that the water supply can be disconnected if required.
- A water softener is installed on the supply pipe if the water is hard
- If there are solid elements (e.g. sand, etc) a mechanical filter is installed in a position that enables it to be inspected and cleaned as necessary
- **Never cut off the water supply whilst the appliance is operating**

## **Drains connection**

While connecting the discharge pipe ensure that it is connected to an open drain. Connect the waste pipe onto the pipe located at the backside of the machine by

applying moderate manual pressure and tighten the clamp using a tool. The above 1.5m waste pipe is also supplied with the machine.

### **Water softener connection (optional)**

To ensure the long life of your machine, only use 'soft water' (hardness below 40mg) for washing. To know the hardness of your water supply, contact your town council or drinking water utility.

It is important that a 20 LPM water softener is installed with the machine to achieve maximum washing power.

### **Booster pump (optional)**

In the event of the water supply pressure being below 2 bars, it is best to fit an auxiliary pump to increase the pressure. At the time of ordering, depending on the model, the machine can be supplied with an optional booster pump.

### **Drain pump (optional)**

If the washing water drainage trap is located high up, we recommend fitting a drain pump. At the time of ordering, depending on the model, the machine can be supplied with an optional drain pump.

### **Check for completeness**

After unpacking the machine, first check the delivery against the delivery note to ensure that it is complete and inspect for damage that may have occurred during transportation. Immediately report any damage to the carrier, the insurance company and the manufacturer.

When setting up the machine make sure the electricity supply is properly connected and all the switches are in off position and water valve is closed.

Some models are fitted with single phase preventor for additional protection. Interchange any two phases if the machine doesn't start and try again.

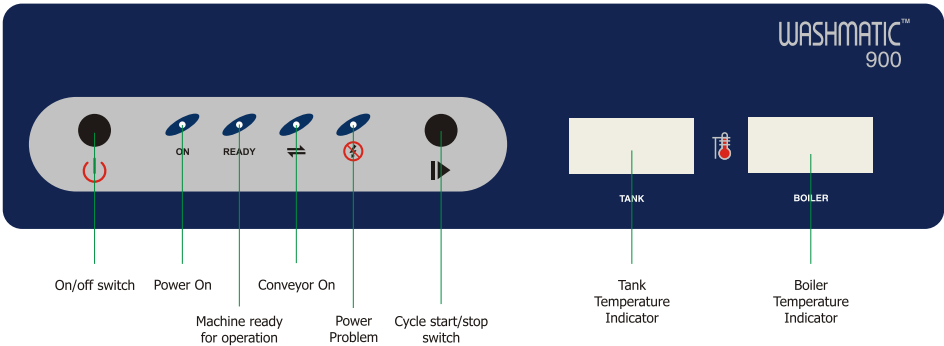
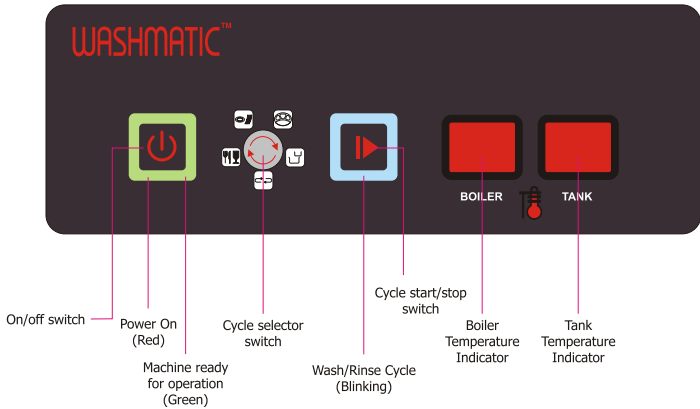
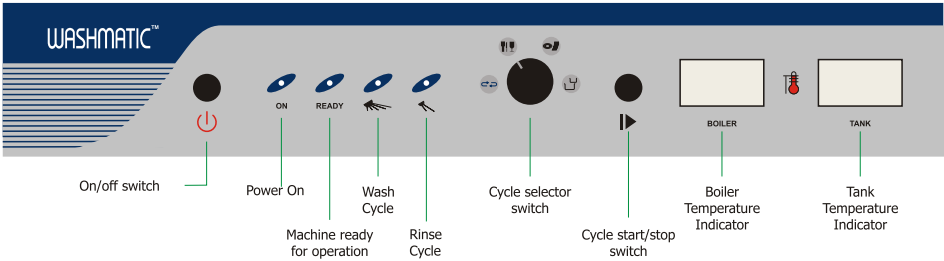


### **Attention**

The machine should not be regarded isolated from the power supply unless switched off at the customer's main switch.

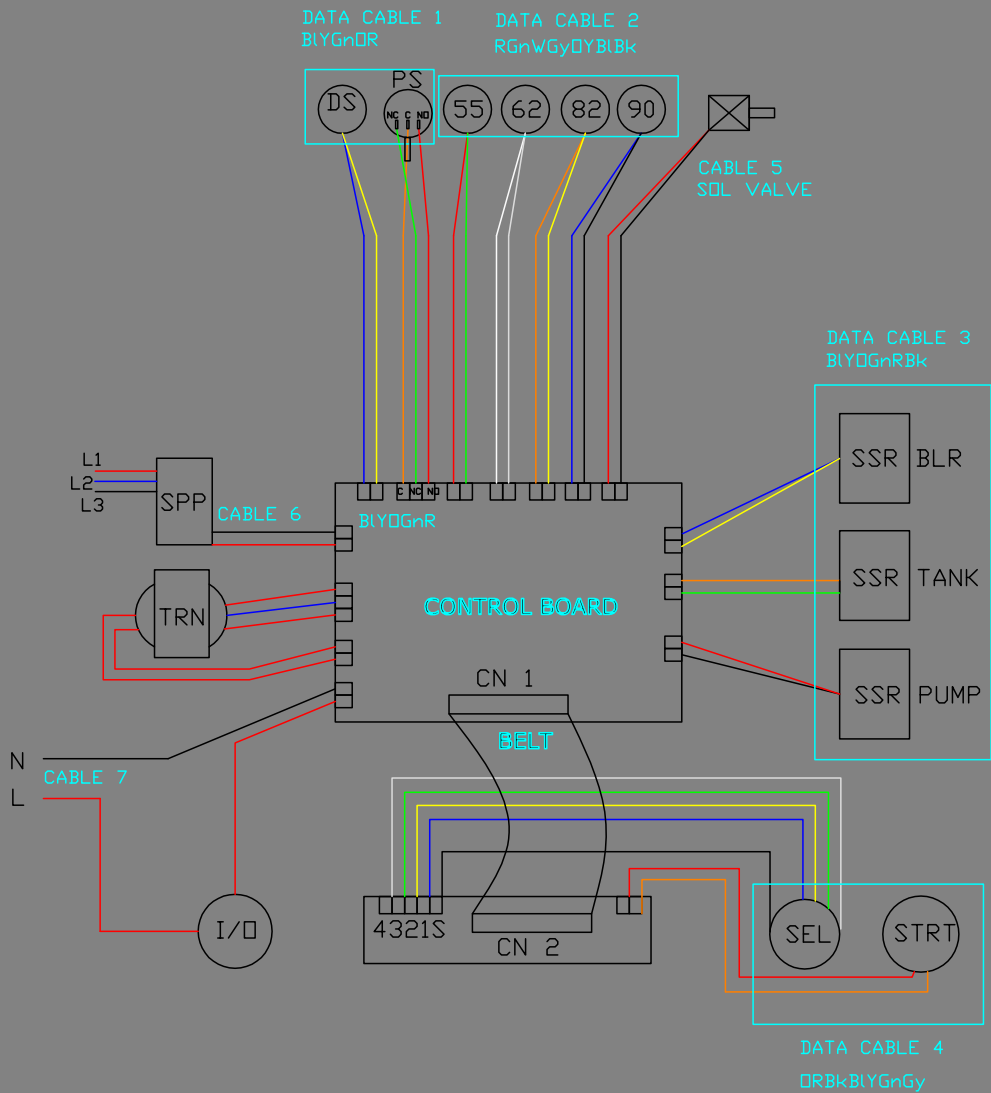


6. Operating and indicating parts

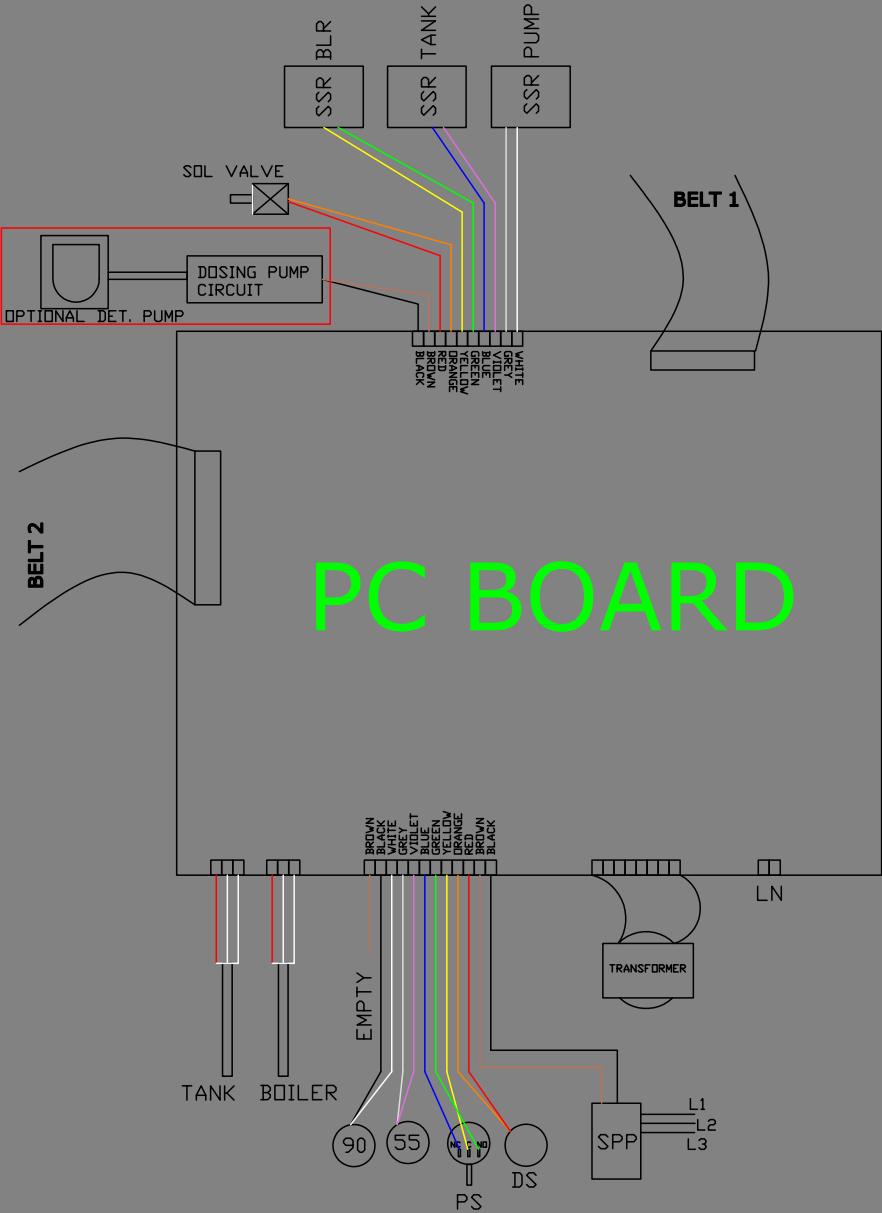


7. Circuit diagrams

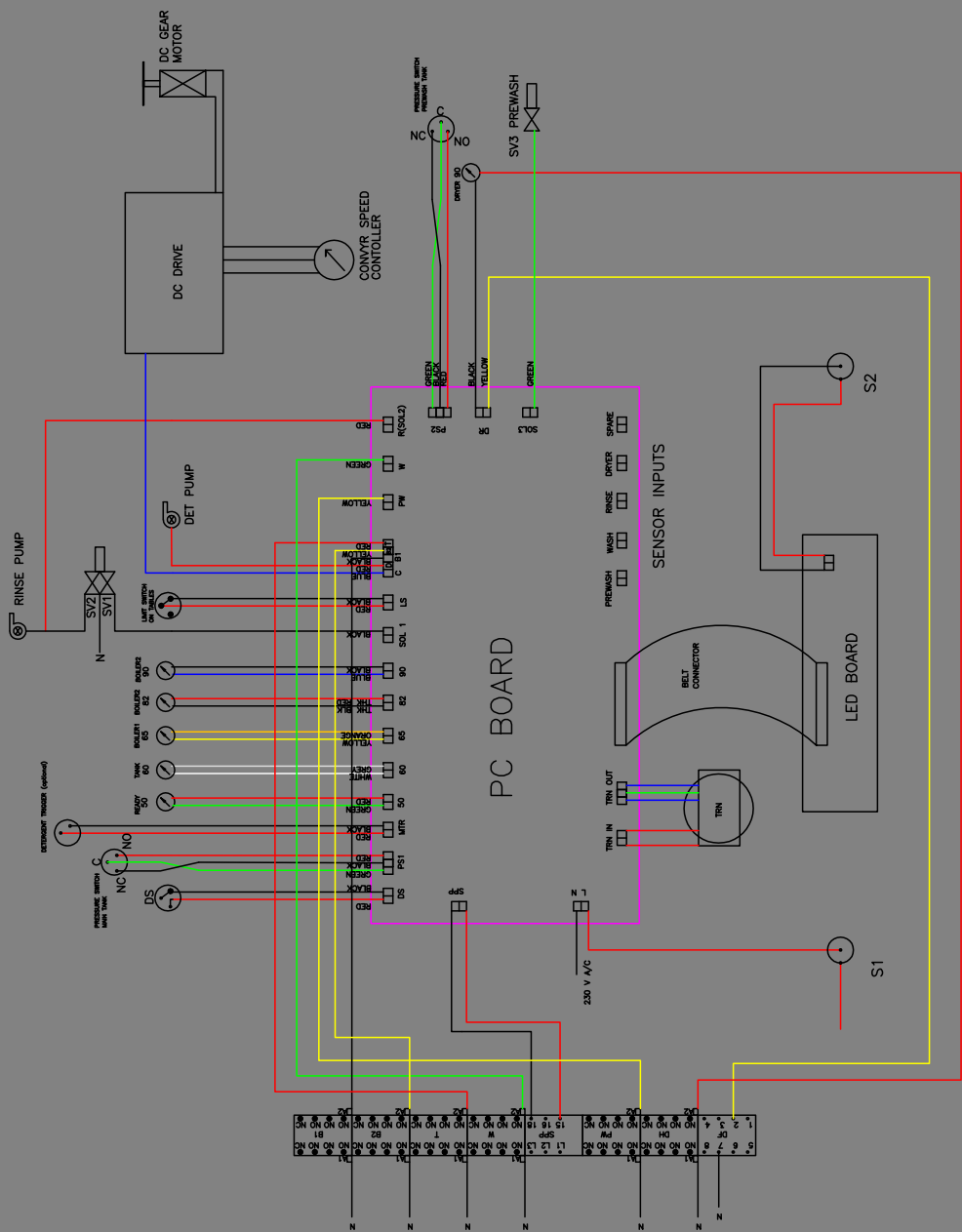
Undercounter / Hood Type ELE Models



Undercounter / Hood DIG Models



# Conveyor Models



## 8. How to use

### Check filter and over flow pipe

- With the machine disconnected from the power mains, open the door and remove the basket
- Put the overflow pipe in its seating inside the tank
- Ensure that the pump filter is properly set into its housing making sure this is properly secured to the bottom of the machine  
N.B. We recommend that the machine is not used without the filter in place
- Make sure that wash / rinse arms can rotate freely
- In conveyor models make sure that there are no obstructions to the conveyor mechanism
- Immerse detergent / rinse inlet tubes into the respective cans (optional).

### Water supply connections and preparing for washing (water loading):

- Open the water supply tap
- Fit the plug in the power socket
- Switch on the main supply
- Make sure that the door is fully closed
- From the machine control panel, press the machine switch-on button to run water into the tank.

After about 10/20 minutes the ready-light automatically lights up and the machine is ready for the first washing cycle.

### Detergent

The detergent needs to be an absolutely **NON-FOAMING** type and suitable for use in industrial glass and dishwashing machines.

We recommend the use of Washmate Plus liquid detergent. Correct dosage is most important for achieving good washing results and for proper operation and long life of the machine. In dosing the detergent, always follow the manufacturer's instructions (dosage of washmate plus is 3ml / ltr). Doses can vary according to the hardness of the water and the amount of dirt/grease still on the dishes (the greater the hardness and the dirt, the greater the amount of detergent).

## Machine without detergent dispenser

The detergent must be added about every five washes in the quantity suggested by the selected supplier:

- Open the loading door and put the detergent inside the tank
- Close the door again

## Machine with detergent dispenser

The detergent is added automatically during operation.

- Before starting the machine, make sure there is detergent in the can and that the suction pipe is fully immersed in the detergent.

### **IMPORTANT:**

Never soak naked hands in the washing solution containing the detergent.

## Basket loading

While loading the basket with glasses, plates or dishes in general, a number of important factors must be taken into consideration

- Ensure proper pre-wash to remove solid particles.
- Load the dishes upside down in the baskets in a stable position and possibly without these touching one another
- Make sure the sprayer arms can rotate freely
- Use glasses and dishes suitable for washing in dishwashers
- The plates must be placed in the basket in a forward inclined position
- Push the basket in and make sure it is completely inserted in the machine / conveyor mechanism grips the rack.
- Close the door (undercounter / hood type machines)

## Starting the washing cycle

The start work function setting and stop of the washing cycle is done by means of the controls on the control panel on each machine as described in this manual. With the machine ready for cycle start (green indicator on) perform the following operations in sequence.

### **Cycle start:**

- By means of the switch select the most suitable washing cycle (undercounter / hood type machines)
- Press the 'Cycle Start' button the machine starts the washing cycle automatically.
- In conveyor machines pre-wash / wash / rinse / drying functions are automatically done by means of sensors in the machine

### **At the end of the washing cycle**

- All the machines are set to stop automatically at the end of the cycle. Stop is indicated by the indicators of wash and rinse cycles going off.
- At the end of the cycle wait for 5 seconds, open the door, take out the basket with the washed glasses or dishes and remove these.

### **At the end of the day:**

- Switch off the machine
- Move the master switch to "OFF" position
- Remove the overflow pipe, empty the machine and clean the interiors / nozzles / filters
- Leave the door open.

## **9. Technical data**

### **General**

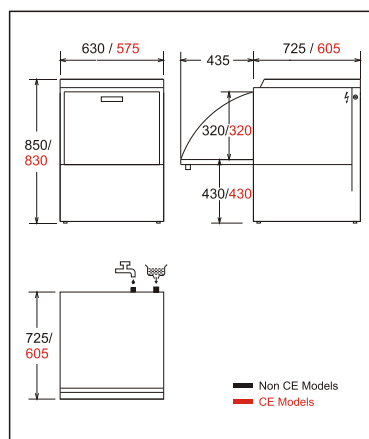
Construction	AISI 304 Grade SS
Water Connection	1/2" BSP
Required flow rate	20 LPM @ 2bar pressure
Water Drain	50mm
Current Frequency	50 Hz

## Undercounter Dishwashers

Model No.	300 ECO	300 ELE	300 DIG
Capacity (Racks / Hr.)	60	60	60
Wash cycles	2	2	5
Temp. Display	--	Yes	Yes
Controls / Display	LED	Analog	Digital
Electrical Load	4.75 1Ø	4.75 1Ø	4.75 1Ø
Tank Capacity	25L	25L	25L
Deep Drawn Tank	Yes	Yes	Yes
Temp. Interlock	--	Yes	Yes

Model No.	400 ECO	400 ELE	400 DIG	344 E
Capacity (Racks / Hr.)	60	60	60	60
Wash cycles	2	2	5	2
Temp. Display	--	Yes	Yes	--
Controls / Display	LED	Analog	Digital	LED
Electrical Load	6.75 3Ø	6.75 3Ø	6.75 3Ø	5.65 3Ø
Tank Capacity	25L	25L	25L	33L
Deep Drawn Tank	Yes	Yes	Yes	--
Temp. Interlock	--	Yes	Yes	--

Model No.	300 / 400	344E
Theoretical capacity (racks per hr.)	60 / 30 / 20	60 / 20
Program duration (secs)	60/120 / 180	60 / 180
Rack dimensions (mm)	500 x 500	500 x 500
Clear entry height (mm)	320	320
Overall size (mm)	630x725x850	575x605x830
Tank capacity (litres)	25	33
Tank temperature	60°C	60°C
Boiler temperature	82°C	82°C
Rinse water requirement at 3 bar pressure	3 litres/rack	3 litres/rack
Net weight (kg)	70	60
Gross weight (kg)	90	63
Shipping size (mm)	800x900x1000	700x700x1000

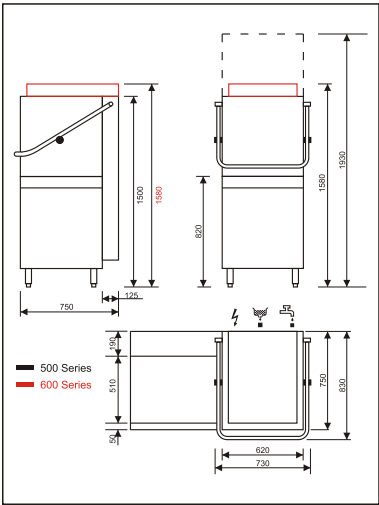




### Hood Type Dishwashers

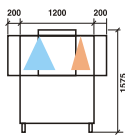
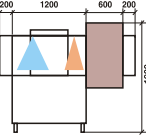
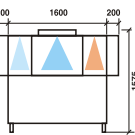
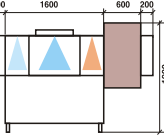
Model No.	500 ECO	500 DIG	644 E
Capacity (Racks / Hr.)	60	60	60
Wash cycles	5	5	2
Temp. Display	Yes	Yes	--
Controls / Display	Digital / Bottom	Digital / Bottom	Analog / Bottom
Electrical Load	5.75 3Ø	7.2 3Ø	8.15 3Ø
Tank Capacity	25L	25L	20L
Deep Drawn Tank	Yes	Yes	Yes
Temp. Interlock	--	Yes	--

Model No.	600 ECO	600 ELE	600 DIG
Capacity (Racks / Hr.)	60	60	60
Wash cycles	4	4	5
Temp. Display	--	Yes	Yes
Controls / Display	LED / Top	Analog / Top	Digital / Top
Electrical Load	5.75 3Ø	7.2 3Ø	7.2 3Ø
Tank Capacity	25L	25L	25L
Deep Drawn Tank	Yes	Yes	Yes
Temp. Interlock	--	Yes	Yes



Theoretical capacity (racks per hr.)	60/30/20/15
Theoretical capacity (plates per hr.)	1080/540/360/270
Program duration (secs)	60/120/180/240
Rack dimensions (mm)	500 x 500
Clear entry height (mm)	420
Total electrical load with hot water connection at 55°C (kw)	5.75/7.2
Overall size close/open (mm)	620x750x1580/1930
Tank capacity (litres)	25
Tank temperature (°C)	60
Boiler temperature (°C)	82
Rinse water requirement at 3 bar pressure (litres/rack)	3
Net weight (kg)	170
Gross weight (kg)	245
Shipping size (mm)	825x925x1650

## Conveyor Dishwashers

Model	WASHMATIC 901	WASHMATIC 902	WASHMATIC 903	WASHMATIC 904
				
<b>ZONES</b>				
P	—	—	Pre Wash	Pre Wash
W	Wash	Wash	Wash	Wash
R	Rinse	Rinse	Rinse	Rinse
D	—	Dryer	—	Dryer
<b>OUTPUT (RACKS/HR.)</b>	90	90	135	135
<b>TANK TEMPERATURE (°C)</b>	60	60	60	60
<b>BOILER TEMPERATURE (°C)</b>	82	82	82	82
<b>PREWASH</b>				
Wash Pump (HP)	-	-	1.0	1.0
Tank Capacity (L)	-	-	40	40
<b>WASH</b>				
Wash Pump (HP)	2	2	2	2
Tank Capacity (L)	100	100	100	100
<b>Rinse</b>				
Water consumption (L/Hr.) at 3 bar Pressure	300	300	300	300
<b>Dryer</b>				
Fan (HP)	-	1	-	1
Heaters (KW)	-	6	-	6
<b>Rack Dimensions (mm)</b>	500 x 500	500 x 500	500 x 500	500 x 500
<b>Clear Entry Height (mm)</b>	400	400	400	400
<b>Tank Heating (KW)</b>				
- Hot Water Supply	6	6	6	6
- Cold Water Supply	9	9	9	9
<b>Boiler Heating (KW)</b>				
- Hot Water Supply	12	12	12	12
- Cold Water Supply	18	18	18	18
<b>Total Connected Load (KW)</b>				
- Hot Water Supply	20	27	21.5	28.5
- Cold Water Supply	29	36	30.5	37.5
<b>Dimensions (WxDxH)(mm)</b>				
Door Closed	1600x750x1575	2200x750x1800	2000x750x1575	2600x750x1800
Door Open	1600x750x1900	2200x750x1900	2000x750x1900	2600x750x1900
<b>Net weight</b>	175	183	225	233
<b>Gross weight</b>	215	235	270	295
<b>Shipping size</b>	1700x850x1675	2300x850x1900	2100x850x1675	2700x850x1900

All specifications are subject to change without notice

## 10. Installation Guide

1. Unpack the machine.
2. Remove racks, rack holder, legs, manual, inlet pipe, drain pipe etc from the wash tank.
3. Tighten the legs properly\*.
4. Connect inlet and drain pipes to the machine.
5. Open the back cover and take out the main lead, detergent\* and rinse inlet\* tubes through the openings provided.
6. Connect the inlet pipe to the water connection and check for any leakages.
7. Connect the drain pipe to an open drain (2/3 Nos\*. for conveyor).
8. Immerse the detergent / rinse inlet tubes in their respective cans\*.
9. Place the machine and level using a spirit level.
10. Install the inlet and outlet tables.
11. Ensure proper exhaust of the area using duct / exhaust hood.
12. Connect the main lead to the power socket as per colour code as below.

### 3 Phase

Red	: Phase 1
Yellow	: Phase 2
Blue	: Phase 3
Black/Grey	: Neutral
White/Green	: Earth

### Single Phase

Red	: Phase
Black	: Neutral
White/Green	: Earth

13. Open the door and put the overflow pipe in its seating.
14. Secure the pump filter in its place.
15. Place the rack holder inside the tank\*.
16. Close the door, open water supply and then power supply.
17. Switch on the machine.
18. Water will start flowing into the machine.
19. In case it doesn't start interchange any two phases and try again.
20. Once water is fully filled the water flow stops automatically and heating starts.
21. It takes around 10-20 minutes to reach the boiler ( $>82^{\circ}\text{C}$ ) and tank ( $>60^{\circ}\text{C}$ ) temperature.
22. Once both temperatures are reached the ready signal is on.
23. In machines without detergent dispenser put adequate amount of detergent into the wash tank (dosage of Wahsmate plus is 3ml per litre).
24. Prepare the rack by placing plates, glasses etc. and perform pre-rinse to remove solid particles.
25. In hood / undercounter machines open the door and place the rack inside, close the door.

26. In conveyor machines push the rack 6-8 inches into the machine and make sure that the conveyor mechanism grips the rack.
27. Select the appropriate cycle time (hood / undercounter type) and push the start button.
28. In conveyor machine pre wash / wash / rinse / drying functions are performed automatically.
29. When the cycle is complete open the door and remove the rack\*.
30. Place next rack and close the door, the cycle will start automatically.
31. Change wash tank water when dirty by removing the overflow pipe inside the wash tank.

## 11. Packing list

### **Undercounter / Hood type**

- |                          |            |
|--------------------------|------------|
| 1. Inlet pipe            | 1          |
| 2. Drain pipe with clamp | 1          |
| 3. Dish washing racks    | as per BOQ |
| 4. User manual           | 1          |
| 5. Over flow pipe        | 1          |
| 6. Rack holding frame    | 1          |

### **Conveyor type**

- |                                          |            |
|------------------------------------------|------------|
| 1. Inlet pipe 901/902/903/904            | 1/1/2/2    |
| 2. Drain pipe with clamp 901/902/903/904 | 1/2/2/3    |
| 3. Dish washing racks                    | as per BOQ |
| 4. User manual                           | 1          |
| 5. Over flow pipe 901/902/903/904        | 1/1/2/2    |
| 6. Limit switch                          | 1          |
| 7. Curtains 901/902/903/904              | 5/5/7/7    |

## 12. Trouble shooting chart

PROBLEM	CAUSE	REMEDY
The machine does not start-up	Main switch is not switched on Faulty supply line	Switch on the main switch  Check the supply line/interchange phases
	Door not closed No water supply	Close the door Check water supply
Noise	External particles in tank/pump housing	Open and clean. If it still continues, call Washmatic service.
Taking too much time to reach the set temperature	Voltage not adequate Water very cold	Give proper voltage (415V) Provide hot water supply (50°C)
	Problem still exist	Contact Washmatic service
Water overflowing continuously	Tank water held for long time	Change wash tank water
	Foreign particles in level sensor	Cleaning / call Washmatic service.
Washing not proper	Dirty wash tank water Inadequate detergent Inlet pressure below 2 bar	Change water Add more detergent Install pressure boosting pump
Dishes not drying completely	Material not suitable for machine wash	Bone china / glass will dry completely, steel almost, acrylic partially-use appropriate material
Spots on dishes, Scale build-up in water	Hard water	Install water softener
Stains on dishes	Acidic water / dissolved metals in water	Use neutraliser / ion exchange

### 13. Product Registration

Thank you for purchasing our Washmatic product, we hope it provides many years of service to you. We would appreciate if you would take a few minutes and register your purchase. This allows us to send you important updates, service information and helpful hints as well as makes it easier should you ever need to call in for Technical Support. Washmatic values your privacy and rest assures we will never share your information with other companies.

Please email the following data to [service@washmaticindia.com](mailto:service@washmaticindia.com)

The subject line of email should be "product registration".

Machine Model No. \_\_\_\_\_

Machine Serial No. \_\_\_\_\_

Contact Name \_\_\_\_\_

Complete Address with phone nos. \_\_\_\_\_

Email ID \_\_\_\_\_

Date of Purchase \_\_\_\_\_

Dealer's name and address \_\_\_\_\_

**Machine Sr. No.**

**Machine Type :**

- ☐ Conveyor  
☐ Hood  
☐ Undercounter

**Machine Model :**

- |                              |                              |
|------------------------------|------------------------------|
| <input type="checkbox"/> 300 | <input type="checkbox"/> 901 |
| <input type="checkbox"/> 400 | <input type="checkbox"/> 902 |
| <input type="checkbox"/> 500 | <input type="checkbox"/> 903 |
| <input type="checkbox"/> 600 | <input type="checkbox"/> 904 |

**Total Connected Load (KW)**

- |                               |                               |
|-------------------------------|-------------------------------|
| <input type="checkbox"/> 3.75 | <input type="checkbox"/> 29.0 |
| <input type="checkbox"/> 6.75 | <input type="checkbox"/> 36.0 |
| <input type="checkbox"/> 7.5  | <input type="checkbox"/> 30.5 |
| <input type="checkbox"/> 10.5 | <input type="checkbox"/> 37.5 |

**Power Supply AC 50 Hz**

- ☐ 230V  
☐ 415V

**Water Inlet Pressure 2-4 Bar @55°C**

**Hardness 40-100 ppm**

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