



# Dishwasher

## Instruction manual



**Model:  
DW319**

## Safety Tips

- Position on a flat, stable surface.
- A service agent/qualified technician should carry out installation and any repairs if required. Do not remove any components on this product.
- Consult Local and National Standards to comply with the following:
  - Health and Safety at Work Legislation
  - BS EN Codes of Practice
  - Fire Precautions
  - IEE Wiring Regulations
  - Building Regulations
- DO NOT immerse the appliance in water.
- Always switch off and disconnect the power supply to the appliance when not in use.
- Not suitable for outdoor use.
- Keep all packaging away from children. Dispose of the packaging in accordance to the regulations of local authorities.
- Children should be supervised to ensure they do not play with, or operate the Dishwasher
- The function of this Dishwasher is the washing of Dishes and similar ONLY.
- Do not use cleaning agents that contain Chlorine, Bleach or Hypochlorite
- Only use commercial grade detergents and rinse aids in your Dishwasher
- Wear the correct personal protective equipment when handling chemicals and observe all safety notes
- Damage to the Dishwasher caused by lime scale or poor water quality will NOT be covered by the manufacturers warranty – fitting of a water softener is recommended
- The installer and user are responsible for ensuring the installation and operation of this Dishwasher
- Ensure the base of the unit is never submerged or standing in water when operating the Dishwasher
- Do not use electrical extension lead(s) to supply power to your Dishwasher
- If the power cord is damaged, it must be replaced by a BUFFALO agent or a recommended qualified technician in order to avoid a hazard.
- This appliance can be used by children aged from 8 years and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and if they understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

## Introduction

Please take a few moments to carefully read through this manual. Correct maintenance and operation of this machine will provide the best possible performance from your BUFFALO product.

## Pack Contents

The following is included:

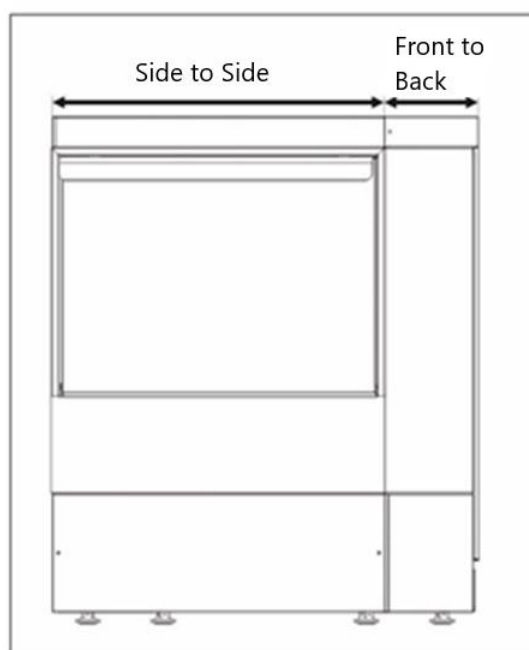
BUFFALO Dishwasher  
2 x Washbaskets  
1 x Cutlery Container  
Water Inlet Hose  
Water Drain Hose  
Instruction Manual

BUFFALO prides itself on quality and service, ensuring that at the time of packaging the contents are supplied fully functional and free of damage. Should you find any damage as a result of transit, please contact your BUFFALO dealer immediately

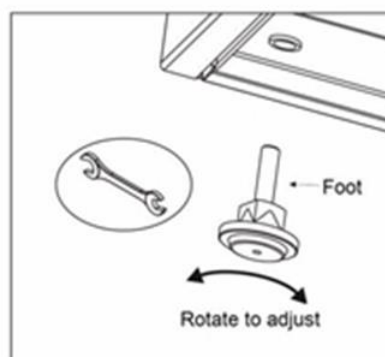
## Installation

### Levelling

Install the leveling feet, following the below instructions.



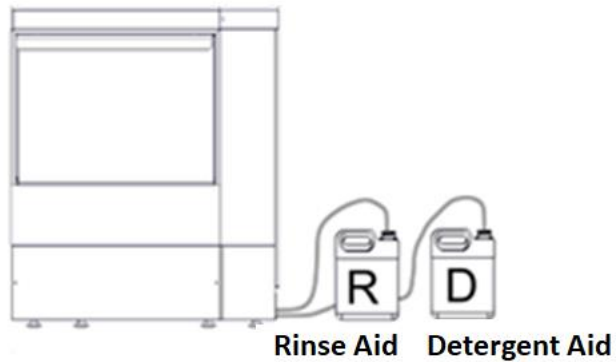
Adjust the feet to level the machine  
side-to-side and front-to-back



Exploded view foot detail

## Chemical Feeder Tubes

Before placing the Dishwasher in its permanent position extend the chemicals feeder tubes making sure not to kink.



Chemical Feeder Tubes

R: Rinse Aid – Blue Pipe

D: Detergent – Clear Pipe

Note - Do not add extensions to chemical feeder tubes

Note - Chemical supply containers must be placed as close to the machine as possible and must NOT be elevated

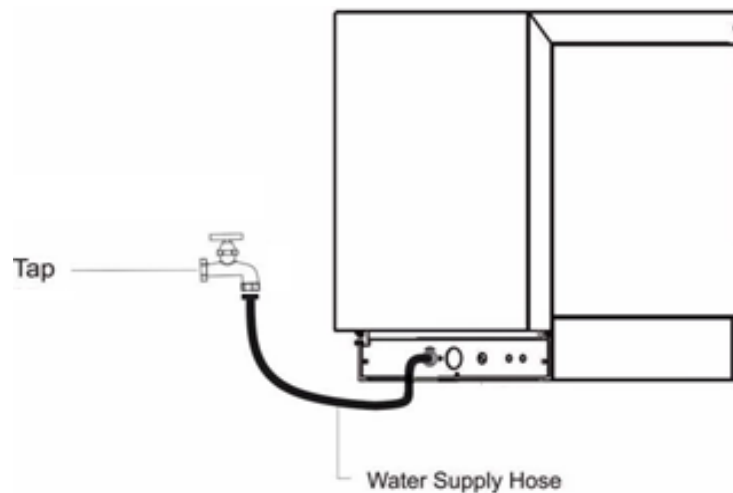
Note - Reposition the chemical tubing at the back of the machine, ensuring there are no kinks, before placing the machine in its permanent position

## Plumbing Connection

### Water Connection

Note - Plumbing connections must be made in such way that will allow the machine to be removed for service and cleaning.

1. Connect the hose supplied with the machine to the inlet at the rear of the machine and the  $\frac{3}{4}$ " NPT fitting on the water supply line.
2. Check the water inlet pressure is between 2-4 bar (29-58 psi) (not static). If it is more a PRV (pressure reducing valve) must be installed. If it is less a booster pump will be required



### Descaling

In hard water areas limescale can build up within the appliance after prolonged use. For best taste and extended appliance life, descale it regularly. Installation of a water filtration system is also recommended.



**Note: Use a suitable de-scaler and always follow the instructions on the container.**

**BUFFALO recommend that this appliance is de-scaled every 3 months or more frequently in hard water areas.**

## Chemical Feeders Priming

Your Buffalo Dishwasher has a detergent pump and a rinse-aid pump for use with containers of **NON-FOAMING** liquid detergent.

1. Insert the hoses of the pumps in the correct chemical container (clear tube for detergent, blue tube for rinse aid).
2. Ensure both of the hoses are at the bottom of the containers of the chemicals.

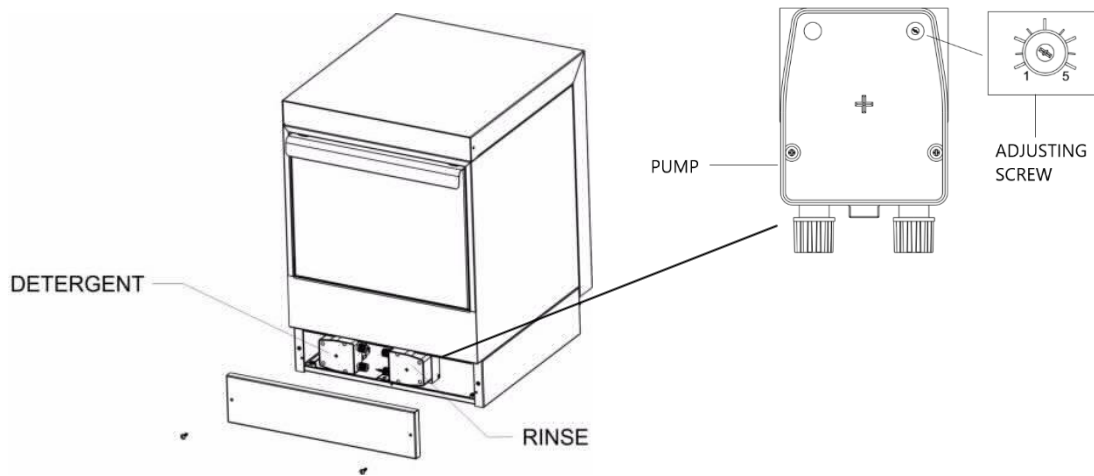
Note - The chemicals to be used should be suitable for Dishwashers. The detergent shall be the **No Foam type**, suitable for Dishwashing machines.

Note - We recommend that you use detergent and rinse aid from the same manufacturer. Jantex Dishwash detergent (GM981) & Jantex Dishwash rinse aid (CF977) are recommended.

Note - When the machine is installed from new or when the containers are allowed to run dry, the full priming takes place after 8-10 washing-rinsing cycles.

## Detergent and Rinse Aid Pump Adjustment

1. Open the stainless steel front cover (remove 2x screws).
2. The pumps are ready for adjustment.



### Detergent Pump

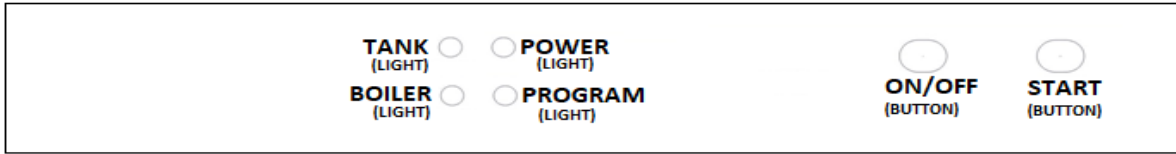
Detergent amount required is dependent on soil and water hardness. Dosage can be regulated by a screw above and on the right of the glass cover. The regulation can be from 0 lt/hour to 3.0 lt/hour. Adjust the quantity by regulating the dosing. Turning the adjustment screw counterclockwise, the flow is reduced (-), turning it clockwise the flow is increased (+). The detergent pump is factory set at the maximum (3.0 lt/hr).

### Rinse Aid Pump

Rinse Aid amount required is dependent on water hardness. Dosage can be regulated by a screw above and on the right of the glass cover. The regulation can be from 0 lt/hour to 0.7 lt/hour. The rinse aid pump suctions 0.7 ml per rotation of the rotary mechanism. Adjust the quantity by regulating the dosing. Turning the adjustment screw counterclockwise, the flow is reduced (-), turning it clockwise the flow is increased (+). The rinse-aid pump is factory set at the maximum (0.7 lt/hr).

# Operation

## Control Panel – DW319



## Starting the Washing Procedure

1. Check that there are sufficient detergents in the chemical containers and that the drain and overflow pipe has been replaced in the correct position if it was removed for cleaning.
2. Close the door and turn on the Dishwasher by using the on/off button.
3. The Dishwasher will fill automatically and both the tank and booster will begin to heat. The tank and boiler indicator lights will illuminate showing that the water is being heated.

Note - The full heating process is finished when warming light is off.

## Loading the Basket

Load dishes into the basket ensuring all debris is removed.



Open the door and place basket in the machine.

Note – Empty debris dishes into sink/receptacle. DO NOT EMPTY IN THE MACHINE.

## Starting a Wash Cycle

1. Close the door. Ensure the door is closed properly. The Dishwasher will not start if the door is not closed
2. Press the start button to initiate the washing cycle. The program light indicator will illuminate while washing cycle is in progress
3. When the full washing cycle finishes, the program light indicator turns off and you can remove the basket.

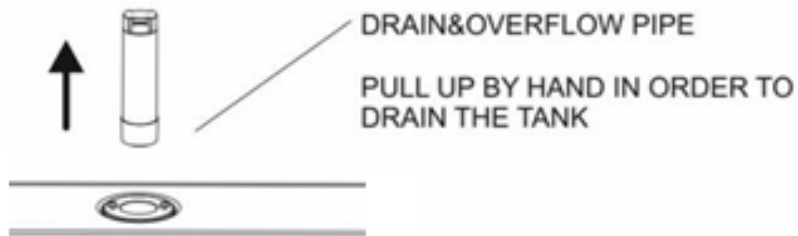
Note - Pay attention when removing the basket after the washing cycle as it may be hot!

Note - Let the dishes dry out of the glasswasher



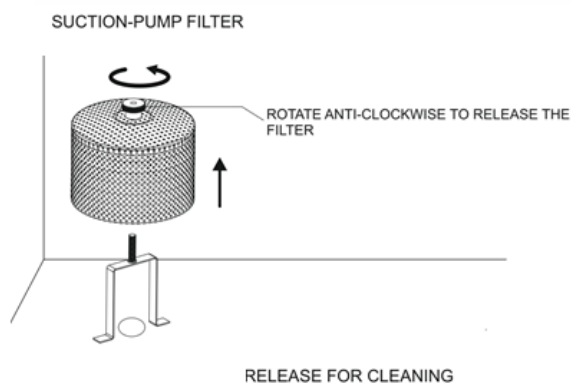
## Shutting Down and Draining

1. Turn off the power switch (on/off button)
2. Remove the overflow pipe and let the machine drain



## Cleaning the Filter

1. With the machine fully empty, rotate the suction-pump filter anti-clockwise to remove
2. Clean the filter under running water
3. Replace the filter and secure by rotating clockwise

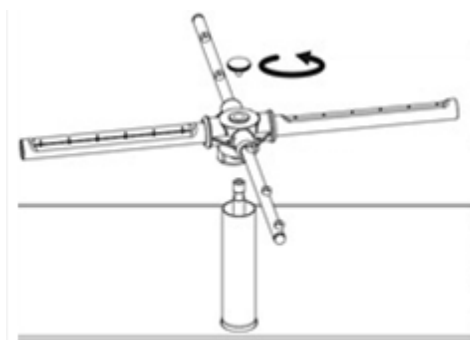


**Note** - Allow to cool before removing filter

**Note** - Do not run a washing program without filter securely in place

## Cleaning the Wash Arm

1. Rotate the retaining nut anti-clockwise to release the wash arm
2. Clean with warm soapy water
3. Reposition the wash arm and tighten the nut clockwise



## Troubleshooting

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
The machine does not turn on	Connection interruption	Check the connection and the safety fuse of the cabling
	The moulded plug or the wires are damaged	Disconnect the machine from the power supply and contact your authorized local dealer or the manufacturer. The machine must be repaired by qualified personnel
	The machine's door is open	Close the door in order to activate the door switch
	There is no water supply to the water input valve	Check the plumbing network of your facilities
	The filter of the water input valve is blocked	Clean the valve's filter
	The on/off switch doesn't function	Contact your authorized local dealer or the manufacturer
The machine is not filling with water	The machine's door is open	Close the door in order to activate the door switch
	The filter of the water input valve is blocked	Clean the valve's filter
	Problems with the plumbing	Contact your water provider or your plumber
The machine is not starting the washing-rinsing cycle	The machine's door is open	Close the door in order to activate the door switch
	The on/off switch has not been activated	Press the button of the on/off switch
	The start switch was pressed momentarily	Press the button of the start switch continuously in order to start the washing-rinsing cycle
The water of the machine is not warming (the warming indicator is not going out and staying continuously on)	The thermofuse (boiler or tank) of the machine has broken the circuit of the heating	Press the button of the thermofuse (boiler or tank) in order to reset it

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
The water of the machine is not warming (the warming indicator is not lighting up)	The machine has not stopped the filling of the water	Wait for the filling of the water to stop. Check that the overflow pipe is at the correct position to avoid constant filling
	The thermostats (boiler or tank) are set at a lower temperature than required	Increase the thermostat temperature
The washing pump is very noisy	The filter of the input of the pump is blocked	Unscrew the filter retaining nut-remove the filter and wash it with clean water. Carefully check for blockages caused by glass fragments
	The washing arms or the sprayers are blocked	Unscrew the sprayers or remove the arms from the cross and wash them
	Something has interrupted the rotation of the cross or the arms	Remove the basket and make sure that everything is at the proper position. Also check the arms or the cross if they are broken down
The rinsing is insufficient	The inlet pressure of the installation is under 1.5 bar	Check your water supply-check your water pipe network. A booster pump may be fitted.
	There is no water supply to the water input valve	Check the plumbing network of your facilities
	The rinsing sprayers are blocked	Unscrew the sprayers or remove the arms from the cross and wash them
	Something has interrupted the rotation of the cross or the arms	Remove the basket and make sure that everything is at the proper position. Also check the arms or the cross if they are broken down

PROBLEM	CAUSE	SOLUTION
The finish washing result is inadequate		
	The suction of the liquid detergent-rinse aid doesn't take place according to the recommendation of the manufacturer	Check both the peristaltic pumps and regulate them according to the recommendation of the manufacturer of the machine and the manufacturer of the detergent-rinse aid
	The hardness of the water is higher than 9 degree clark	Communicate with your water provider to learn about the hardness of the water of your area. A water softener may be fitted
There is too much foam	The machine isn't warming sufficiently	Check if the warming indication has gone out or is still on
	Foaming detergent been used	always use <b>non-foaming</b> detergent for ware washing machines
	There is incorrect regulations to the peristaltic pumps	Regulate them according to the recommendation of the manufacturer of the machine and the manufacturer of the detergent-rinse aid

PROBLEM	CAUSE	SOLUTION
The dishwasher does not drain	The drain and overflow valve is still at the drain base	Remove the drain and overflow valve
	Something has blocked the draining pipe	Check the draining pipe for folds or for blockages
	The filter of the drain is blocked (for machines with draining pump)	Clean the drain's filter
	The inlet of the drain is higher than the drain of the machine	Reposition the machine or install drain pump
The machine's washing-rinsing cycle is interrupted	The drain and overflow valve is not properly positioned or it is set upside down	Place the overflow valve at the right position
	There is high temperature inside the machine's tank and water has evaporated	Check the tank's temperature and regulate the thermostats accordingly
	The tank has not been emptied from the previous day	Check carefully the tank at the end of the day
The machines door leaks	The washing or the rinsing sprayers are blocked	Clean the sprayers
	There is too much foam in the tank	Check the detergent is <b>non-foaming</b> and that dosage is set correctly
	Something has interrupted the rotation of the cross or the arms	Remove the basket and make sure that everything is at the proper position. Also check the arms or the cross if they are broken down
	The level of the tank's water is higher than the right one	Check the overflow drain pipe

## Technical Specifications

Model	Voltage	Power	Pressure	Dimensions h x w x d mm	Weight
DW319	220-240V 50Hz	6600W	2-4 Bar (29-58 psi)	570 x 600 x 830	55Kgs

## Electrical Wiring

Your Dishwasher must be installed by a qualified electrician

**DW319 is supplied wired for installation to a single phase 230v 30A power supply.**

DW319 can also be rewired by a qualified electrician to work on a single phase 230v 13A supply (Power reduced to 2600w) or three phase 400v 12.2A power supply.

# Converting Single phase 30A to Single Phase 13A

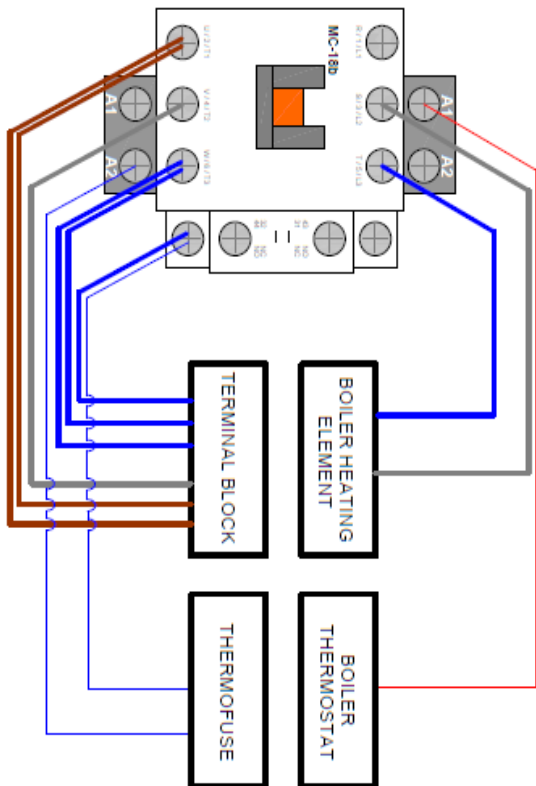
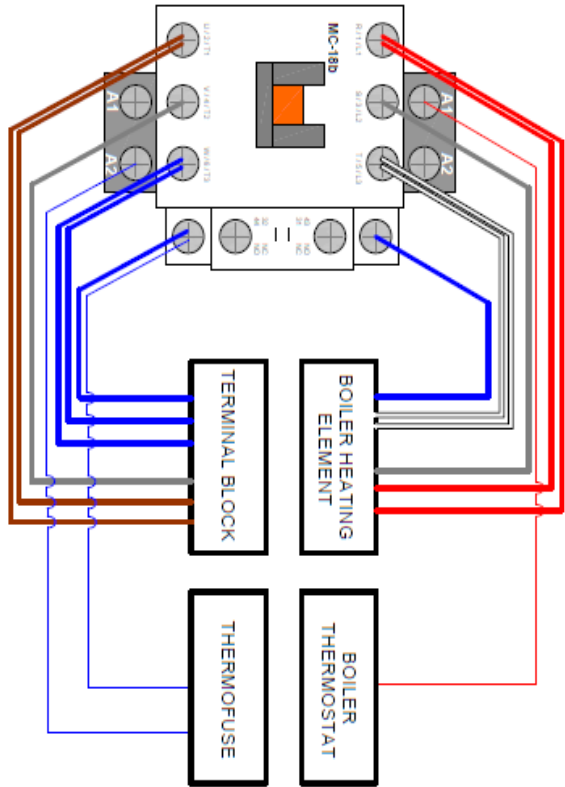


## CIRCUIT CONVERSION 30A SINGLE PHASE TO 13A SINGLE PHASE



STEP\_1 - SINGLE PHASE 30A

STEP\_1 - SINGLE PHASE 13A



TO CONVERT THE SINGLE PHASE MACHINE WITH 30 AMPERE TO THREE PHASE MACHINE WITH 12.2 AMPERE DISCONNECT THE TWO 2.5mm<sup>2</sup> RED CABLES FROM THE MAGNETIC CONTACTOR FROM R/1/L1 AND THE WHITE CABLES FROM T/5/L3. MOVE THE BLUE CABLE FROM THE CONTACT 43 NO TO T/5/L3.

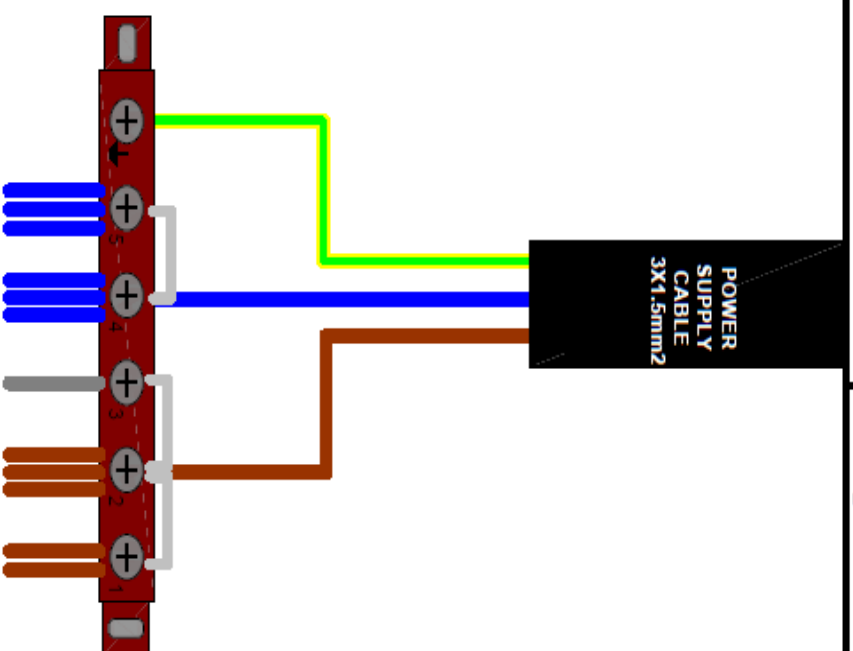
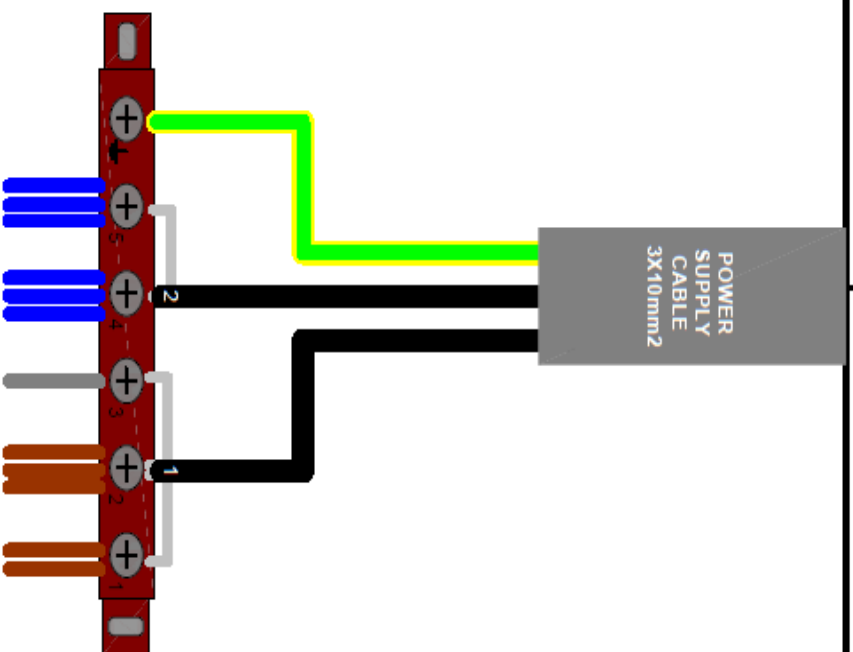


## CIRCUIT CONVERSION 30A SINGLE PHASE TO 13A SINGLE PHASE



STEP\_2 - SINGLE PHASE 30A

STEP\_2 - SINGLE PHASE 13A



REPLACE THE POWER SUPPLY CABLE FROM 3X10mm<sup>2</sup> TO 3X1.5mm<sup>2</sup>.





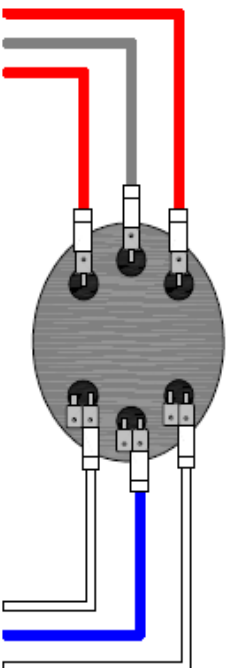
## CIRCUIT CONVERSION 30A SINGLE PHASE TO 13A SINGLE PHASE



STEP 3 - SINGLE PHASE 30A

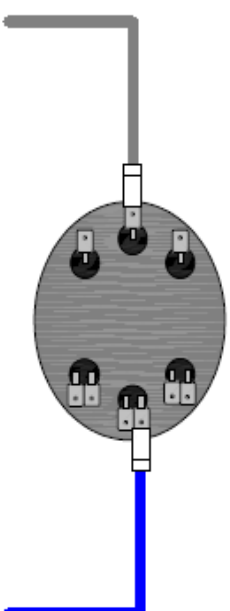
STEP 3 - SINGLE PHASE 13A

HEATING ELEMENT POWER : 6000 W



A THREE-PHASE RESISTANCE THAT IS CONNECTED SINGLE-PHASE. EACH RESISTANCES' LINE IS CONNECTED SINGLE-PHASE. THAT MEANS, EACH LINE IS CONNECTED WITH A PHASE AND A NEUTRAL.

HEATING ELEMENT POWER : 6000 W  
FUNCTION : 2000 W

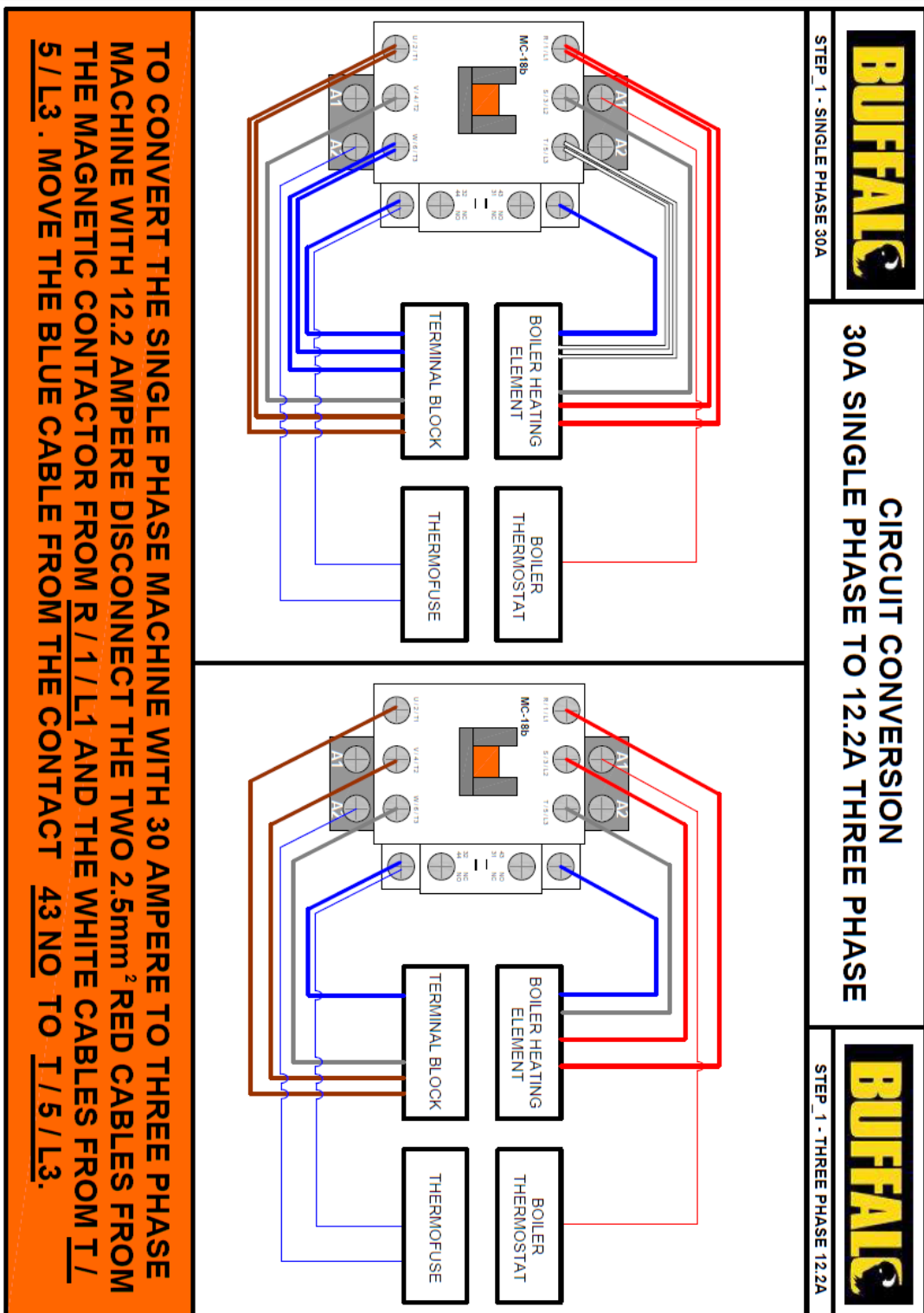


A THREE-PHASE RESISTANCE AND WE ACTIVATE ONLY THE ONE OF THESE THREE LINES.

**DISCONNECT THE TWO RED AND TWO WHITE CABLES FROM THE RESISTANCE.**

## Converting Single phase 30A to Three Phase 12.2A

For this conversion you will need the 2 x Cable Bridge (Grey) and 1 x Power supply cable 5x2.5mm supplied.



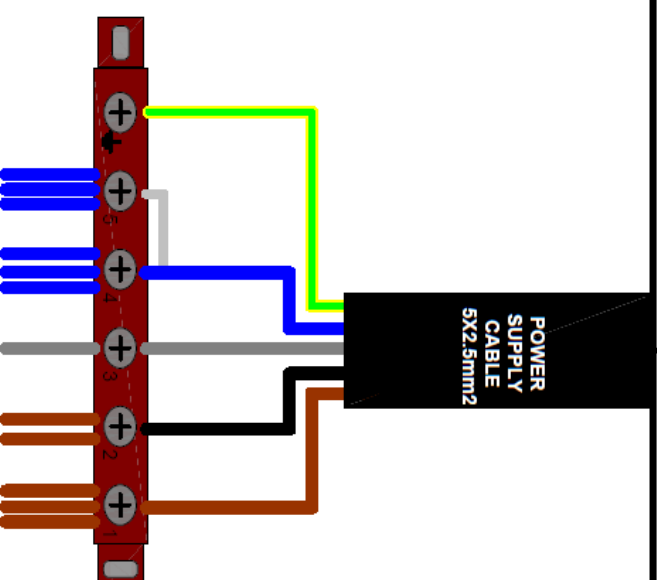
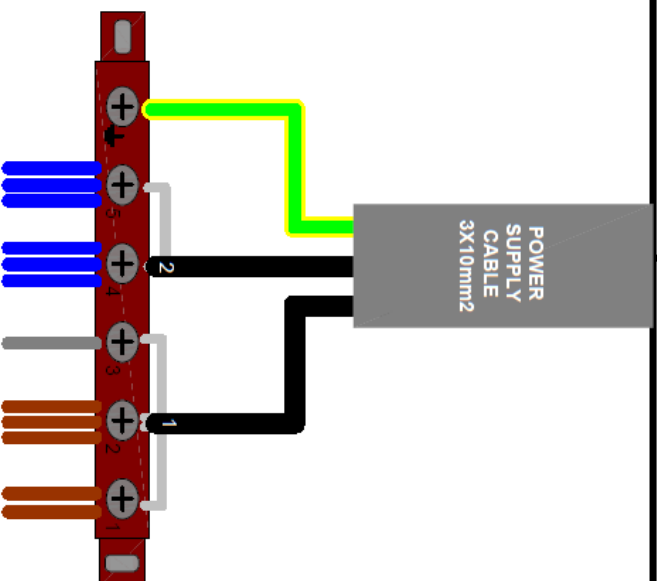


## CIRCUIT CONVERSION 30A SINGLE PHASE TO 12.2A THREE PHASE



STEP 2 - SINGLE PHASE 30A

STEP 2 - THREE PHASE 12.2A



REPLACE THE POWER SUPPLY CABLE FROM 3X10mm<sup>2</sup> TO 5X2.5mm<sup>2</sup>. WHEN DISCONNECT THE 3X10 SUPPLY CABLE, WE REMOVE THE TWO METAL BRIDGES BETWEEN 1,2 AND 3 CONTACTS ON THE TERMINAL BLOCK.



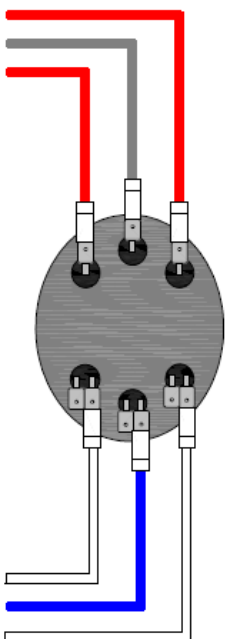
# CIRCUIT CONVERSION 30A SINGLE PHASE TO 12.2A THREE PHASE



STEP 3 - SINGLE PHASE 30A

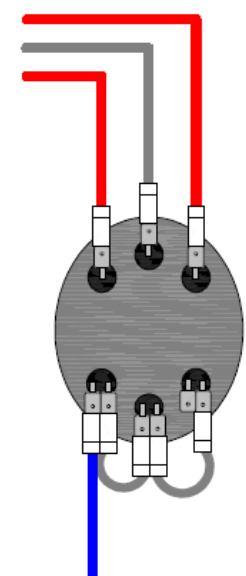
STEP 3 - THREE PHASE 12.2A

HEATING ELEMENT POWER : 6000 W



A THREE-PHASE RESISTANCE THAT IS CONNECTED SINGLE-PHASE. EACH RESISTANCES' LINE IS CONNECTED SINGLE-PHASE. THAT MEANS, EACH LINE IS CONNECTED WITH A PHASE AND A NEUTRAL.

HEATING ELEMENT POWER : 6000 W



A THREE-PHASE RESISTANCE WITH STAR (Y) CONNECTION. WITH THE TWO GRAY BRIDGES, EDIT A COMMON POINT OF RESISTANCE TO MAKE THE STAR (Y) CONNECTION.

**DISCONNECT THE TWO WHITE CABLES FROM THE RIGHT SIDE OF RESISTANCE. AFTER THAT WE PLACE THE TWO GRAY BRIDGES TO THE RIGHT SIDE OF RESISTANCE AS THE SCHEME. WE PLACE THE TWO BRIDGES TO EDIT A COMMON POINT TO MAKE THE STAR (Y) CONNECTION.**

## Compliance

The WEEE logo on this product or its documentation indicates that the product must not be disposed of as household waste. To help prevent possible harm to human health and/or the environment, the product must be disposed of in an approved and environmentally safe recycling process. For further information on how to dispose of this product correctly, contact the product supplier, or the local authority responsible for waste disposal in your area.



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