



# *Slim* M I R A G E

## Installation manual Slim Jim espresso machines

(Original instructions)

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## CONTENTS

<b>Designation .....</b>	<b>1</b>
<b>Precaution .....</b>	<b>1</b>
<b>Installation manual .....</b>	<b>2</b>
Parts identification .....	2
<b>Installation resume .....</b>	<b>3</b>
Check location .....	3
Unpack.....	3
Install machine.....	3
Transfer machine to owner/user.....	3
<b>Water Quality .....</b>	<b>4</b>
<b>Water supply .....</b>	<b>5</b>
<b>Water treatment system.....</b>	<b>5</b>
<b>Waste/drain .....</b>	<b>5</b>
<b>Machine location .....</b>	<b>5</b>
<b>Surface.....</b>	<b>5</b>
<b>Pump location.....</b>	<b>5</b>
<b>Electric mains .....</b>	<b>6</b>
3-phase machine .....	6
single-phase machine.....	7
3-phase / single phase conversion .....	7
<b>Unpack.....</b>	<b>8</b>
<b>Connect to water supply.....</b>	<b>9</b>
<b>Connect to drain/waste .....</b>	<b>10</b>
<b>Connect pump cable .....</b>	<b>10</b>
<b>Connect electric mains .....</b>	<b>11</b>
<b>First fill.....</b>	<b>12</b>
<b>Heat up.....</b>	<b>14</b>
<b>Adjust mix-water temperature.....</b>	<b>18</b>
<b>Hand over machine .....</b>	<b>20</b>
<b>Maintenance.....</b>	<b>22</b>
<b>Contact information .....</b>	<b>22</b>

## Designation

This manual applies to the 2-group and 3-group Slim Jim Mirage espresso machines with touchpad or Bastone operation manufactured by Kees van der Westen Espressonistic Works B.V. A separate rotational pump with electric motor is part of the appliance.

## Precaution

- The appliance needs to be installed with the feet at a height of 95-100 cm above the floor.
  - The appliance has to be placed in a horizontal position on a sturdy and flat surface.
  - Intended use of the appliance is restricted to well-trained personnel only.
  - The appliance must be installed in locations where it can be overseen by trained personnel.
  - The mains electricity the appliance is connected to must include a residual-current-circuit-breaker of 30 mA.
  - Areas where a water-jet could be used are not suitable as location for the machine.
  - The appliance is not suited for outdoor use.
  - Ambient temperature for correct operation of the appliance is 10-35°C (50-95°F).
  - Precautions must be taken to prevent ambient temperatures below 5°C (41°F) to prevent freezing of water inside the machine. Note that the external rotational pump should be kept above freezing point of water as well.
- Whenever the machine and/or pump have suffered freezing conditions, ask a technician to start-up the appliance again.



## Installation manual

### Parts identification

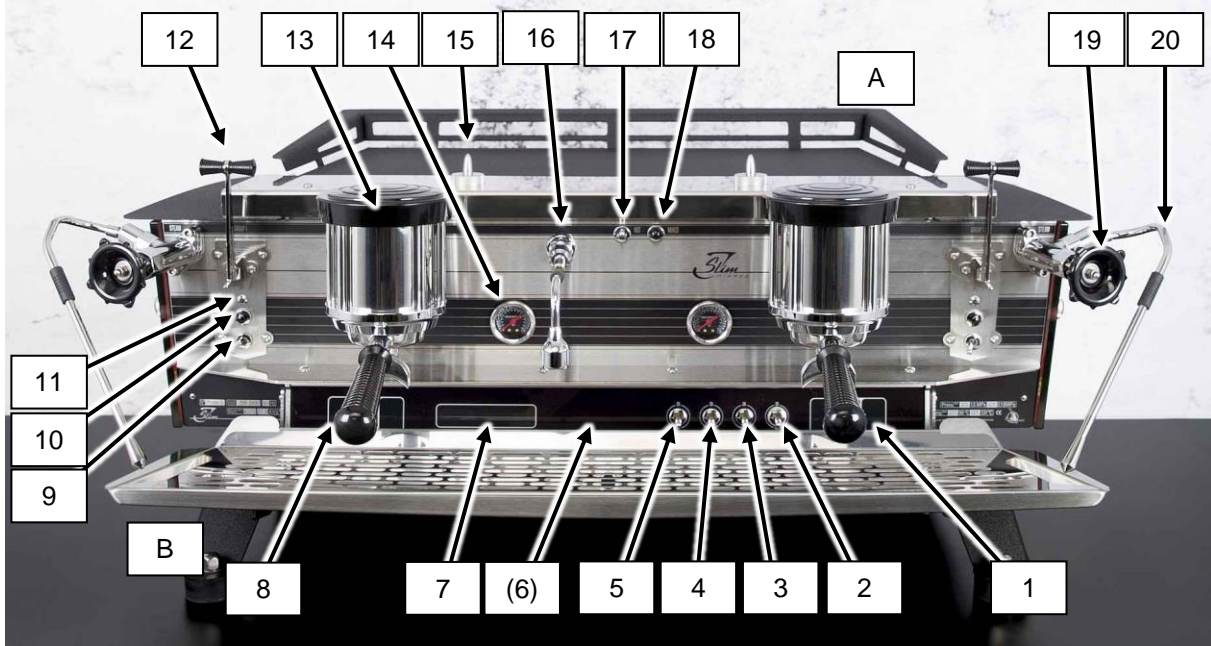


Figure 1. Showing main operational parts of the Slim Jim Duetto Bastone version. The Slim Jim Triplette has three groups but its functions are identical to the Duetto. On the Touchpad version, the group brewing lever units are replaced with touchpads.

1. Right hand group 3-digit display (shot-timer and/or temperature)
2. Main switch (switches power to everything but the heating circuits)
3. Switch circuit 3 (switches power to right group heating (Triplette only) and upper spiral in steam boiler)
4. Switch circuit 2 (switches power to right (Duetto) or centre (Triplette) group heating and middle spiral in steam boiler)
5. Switch circuit 1 (switches power to left group heating and lower spiral in steam boiler)
6. (Centre group 3-digit display; only on Triplette: shot-timer and/or temperature)
7. Capacitive interface and display of controller
8. Left hand group 3-digit display (shot-timer and/or temperature)
9. Volume switch (left group)
10. Program & continuous button (left group)
11. Group indicator light (left group)
12. Group brewing lever (left group)
13. Group (left)
14. Coffee brew pressure gauge (left group)
15. Two-stage pre-infusion cylinder
16. Hot water spout
17. Hot water toggle switch (hot water only)
18. Hot water button switch (mix water)
19. Steam valve (right)
20. Steam wand (right)
- A. Cup-rack
- B. Drip-tray

Not visible on this photo:

- Green indicator lights for heating spirals (one for each spiral; see page)
- Connection for external temperature probe (see page).



## Installation resume

### Check location

1. Check water quality.
2. Check water supply.
3. Have an adequate water treatment system installed.
4. (Flush water treatment system.)
5. Check water waste/drain.
6. Check countertop.
7. Check cupboard for pump location.
8. Check electric mains.

### Unpack

9. Lift top from crate.
10. Check accessories.
11. Check for transport damage.
12. Read installation manual.
13. Lift machine onto countertop.

### Install machine

14. Connect machine to water supply and waste.
15. Open water tap.
16. Plug power cord onto pump motor.
17. 3P-N-E versus P-N-E electric mains.
18. Connect machine to electric mains.
19. Fill machine with water with heating circuits OFF.
20. Run cold machine, check for leaks.
21. Switch heating circuits ON.
22. (Install and adjust grinder).
23. Program service telephone number into controller.
24. Adjust TIME/DAY (and perhaps Celsius – Fahrenheit)
25. Check main functions of machine.
26. Brew first coffee, adjust pump-pressure.
27. Check/adjust hot water temperature.
28. Write machine number, installation date and other specifics in User manual.

### Transfer machine to owner/user

29. Explain main features to new user(s) and manager.
30. Hand-over User manual.



## Water Quality

Have the local water tested and ask the water supply company if there can be seasonal changes in water quality and when so, in what order these changes occur.

Optimally, the water fed into the espresso machine would fall in the high end of the SCA “core zone”, see Figure 2, and have a pH of 7.0-7.5 (at 25°C).

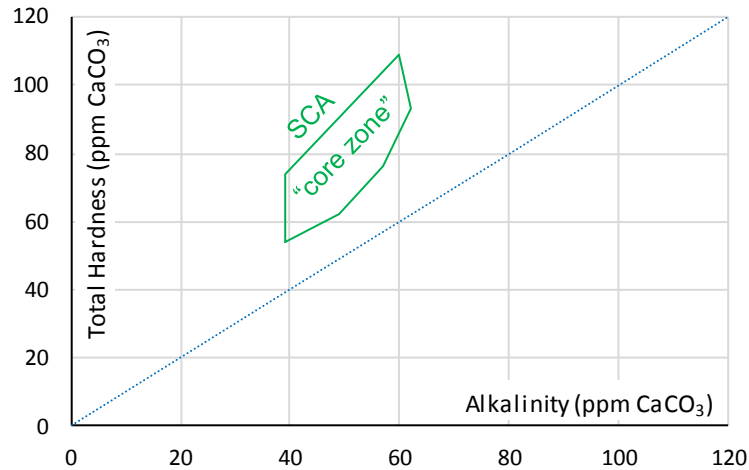


Figure 2. Alkalinity vs-Total Hardness graph showing the SCA “core zone” in green outline.

Besides the Alkalinity and Total Hardness requirements, the water should have the following properties:

Parameter	Target	Acceptable range	unit
Total Hardness	72	50-175#	ppm
Total Alkalinity	40*#	40-75#	ppm
pH	7.0*	6.5-7.5*, 6.5-8.0#	--
Electrical conductivity		< 3 times Alkalinity (in ppm) #	µS/cm <sup>1</sup>
Total Dissolved Solids	150*	75-250*	ppm <sup>1</sup>
Calcium Hardness	51-68*	17-85*	ppm
Sodium	10*	at or near 10*	ppm
Sulphate	30	0-50	ppm
Chloride	0	0-30	ppm
Silica	0	0-5	ppm
Odour and colour	clean*, fresh*, odour free*, clear*		
Taste influencing organic compounds*#	not present		
Chlorine#, Hypochlorite#, Chloramines#			
Iron#, Lead#, Manganese			

\* SCAA Technical Standards Committee, 2009: water properties for optimum taste.

# Values from “The SCAE water Chart” (2015?).

Table 1. Showing parameter values for water meant to brew coffee with.

Water with properties that lie within the SCA “core zone” and correct pH combines technical aspects enabling a safe operation and sensory aspects yielding a high-quality brew, provided the other parameters are met as well. Low brew-ratio’s, as for espresso, shift the optimum of total hardness and alkalinity towards higher values.

<sup>1</sup> The conversion from electrical conductivity to TDS depends heavily on the water composition and temperature, yielding results that can vary significantly. Additionally, even if the estimated TDS value is accurate, it does not contain any information about what the TDS is actually made up of.



## Water supply

Rated pressure: 0.1-0.5 MPa (1-5 bar)  
Rated flow: minimum 4 litre/minute

The water supply should be able to deliver a minimum amount of 4 litres per minute in the range 0.1-0.5 MPa (1-5 bar). The machine and accompanying rotary vane pump must be connected with the supplied new set of high-pressure hoses (two hoses, each 1.5 meter long), old hose-sets should not be re-used. The distance between water treatment system and pump and the distance between pump and machine cannot be greater than 1.5 meter unless there is appropriate material available to increase these distances.

**Note!** Not included in the shipment are supplies to make the connection between the water-tap and the water treatment system.

## Water treatment system

The water treatment system should also be able to deliver a minimum amount of 4 litres per minute and should at least have a carbon block that not only traps drug-remnants, Chlorine and organic compounds but also prevents rigid particles >30 µm to enter the pump.

If the resulting water does not fall into the SCA “core-zone” (see Figure 2) have additional treatment installed.

### Notes!

Flush the water treatment system according to the manufacturers instruction before connecting it to the pump-inlet.

Make sure that the functioning of the water treatment system will be checked on a regular basis.

## Waste/drain

The appliance has two drain hoses: one for the drip tray and one for the machine itself. These semi-flexible hoses have an external diameter of 20 mm (inner diameter: 16 mm). The hoses must slope downwards all the way from machine to waste to prevent clogging. The waste at the location should have a minimum inside diameter of 38 mm to accommodate for the two hoses and incorporate a water-lock to prevent smelly odours.

## Machine location

The machine is only to be installed in locations where it can be overseen by trained personnel. Areas where a water-jet could be used are not suitable as location for the machine.

## Surface

The countertop must be sturdy enough to easily support the machines' weight (when filled: up to 100kg) plus extra equipment (one or two coffee-grinders, tableware, ...). The surface should have a height of 95-100 cm and be smooth, flat and horizontal.

It is advised to think about the location of holes in the countertop where the water and waste hoses and electric cables should pass before the machine is installed.

## Pump location

There should be nearby space for the electric motor with rotary vane pump. The pump-assembly should not be able to touch the walls of the cabinet it is located in to prevent noise. Further noise reduction can be achieved by placing the assembly on a 2-4cm thick rubber-foam sheet with dimensions: 16x30cm (not supplied with machine). The pump will be electrically connected to the espresso machine with an approximately 2 m long cable.

Areas where a water-jet could be used are not suitable as location for the pump-assembly.

Make sure there is air-flow possible near the motor to prevent overheating.



## Electric mains

Rated voltage: ~230V / 3N~400V, 50 / 60Hz

Rated power: max. 34.7 (230V) / 13.4 (400V) Amp per phase, see Table 2 for details.

### ⚠ Danger

If the supply cord or the pump connection cord is damaged it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

The appliance is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30mA.

SlimJim peak power at 230 Vac	version  per phase		Duette		Triplette		Duette		Triplette	
			4800W steam power				6000W steam power			
			Watt	Amp	Watt	Amp	Watt	Amp	Watt	Amp
3-phase (3N~400V)	P1		2050	8.9	2050	8.9	2450	10.7	2450	10.7
	P2		2050	8.9	2050	8.9	2450	10.7	2450	10.7
	P3		2225	9.7	2675	11.6	2625	11.4	3075	13.4
	(N)		2225	9.7	2675	11.6	2625	11.4	3075	13.4
single phase (~230V)	P	P1	6325	27.5	6775	29.5	7525	32.7	7975	34.7
	(N)	P2	6325	27.5	6775	29.5	7525	32.7	7975	34.7

Table 2. Showing peak power in the different phases for different machine versions.

The machines' internal electrics consists of 3 heating circuits and an operation circuit. Each circuit is meant to function on 230Vac. The range in which it can function safely is 208-240Vac. Electric mains can be connected in two ways to the machine. Check if the electric mains of the location matches the configuration of the machine.

### 3-phase machine

What we call a three-phase machine must be connected to 3P-N-E power (3 Phases + Neutral + Earth, see Figure 3) with 120 degrees phase shift between phases. Such power is characterised by: 220-240Vac tension between each phase and neutral (or Earth) and 380-400Vac tension between the phases. For peak power, see Table 2.

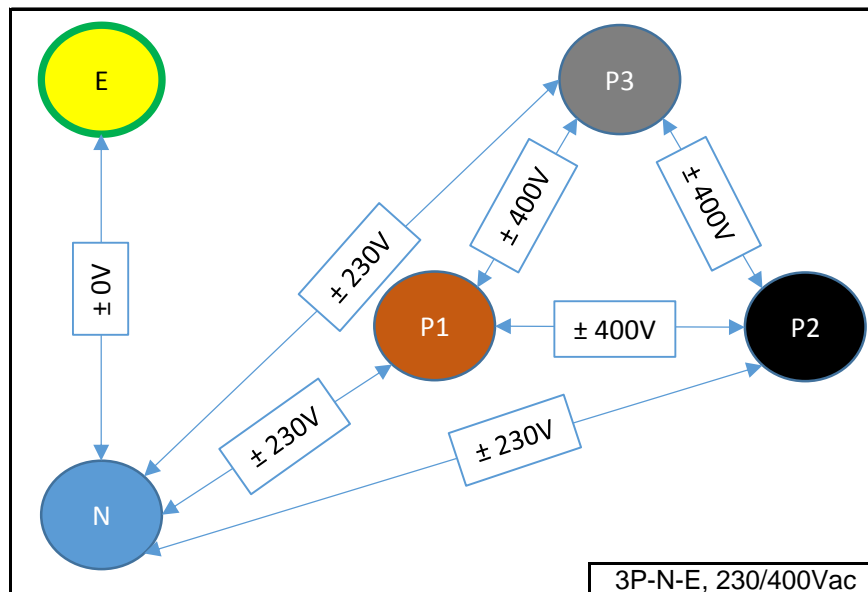


Figure 3. 3P-N-E electric mains. Peak current of the SlimJim is 9.7-13.4A per phase.



### single-phase machine

What we call a single-phase machine must be connected to P-N-E (single Phase + Neutral + Earth) or 2P-E (split Phase + Earth) power mains, see Figure 4. Note that the 2P-E configuration does NOT make use of the neutral wire of the electric mains. For peak power, see Table 2.

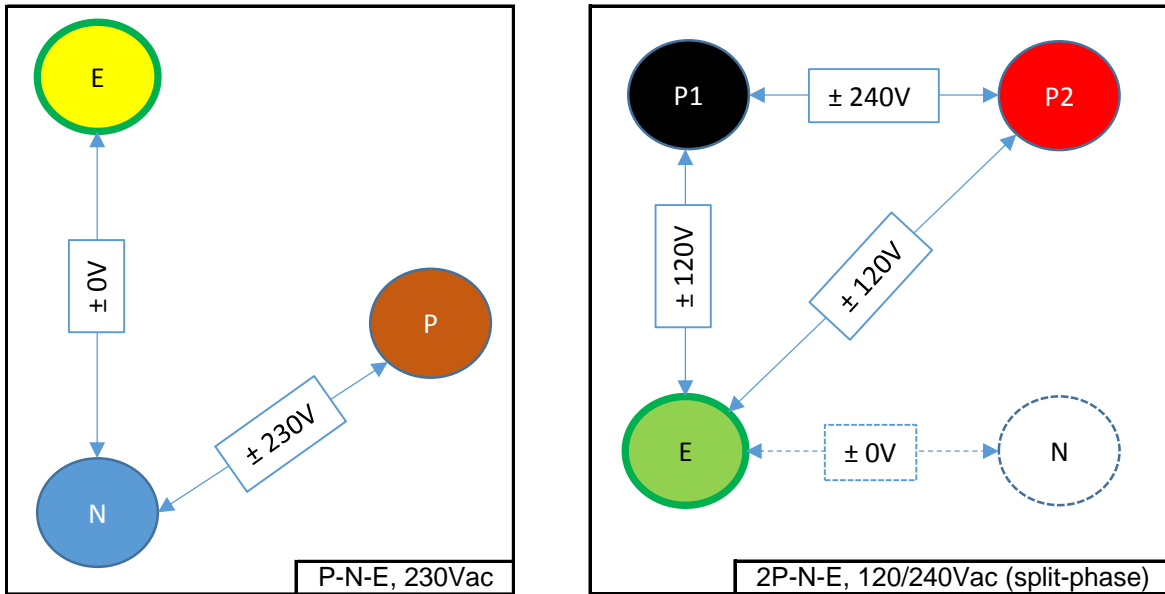


Figure 4. At left P-N-E, at right 2P-N-E. The machine can make use of P1 and P2 plus E (without N) of the right electric mains configuration. Peak current is 27.5-34.7A.

### 3-phase / single phase conversion

The machine will be prepared in the factory for connection to either 3P-N-E or P-N-E/2P-E power and will show respectively 3N~400V or ~230V on the identification tag.

Conversion is possible but requires replacement parts. Replacement parts and instruction for the conversion can be obtained at: [support@keesvanderwesten.com](mailto:support@keesvanderwesten.com).

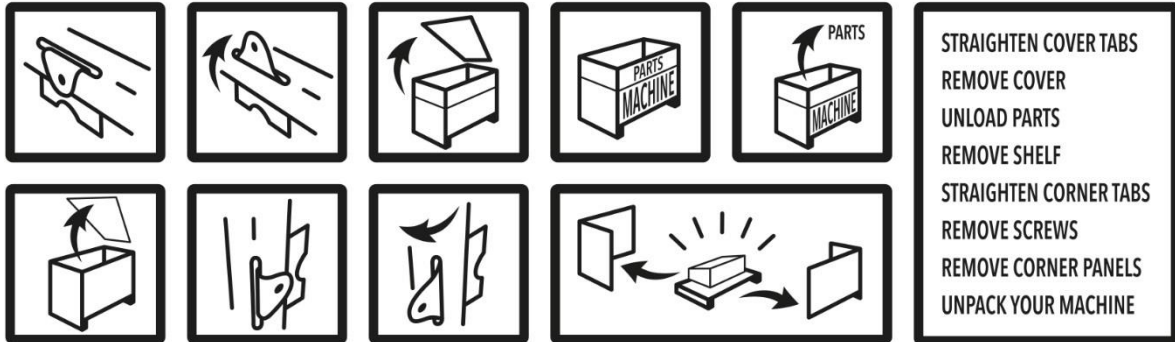
#### **Note!**

National rules/regulations may apply when the appliance is connected to the electric mains.



## Unpack

1. Straighten the tabs that fixate the lid to the wooden crate, then remove the lid.
2. Unpack only the loose materials inside the crate.
3. remove the shelf from the crate.
4. Straighten the tabs on the two diagonally ribs of the crate.
5. Undo the screws that hold the sides of the crate to the bottom.
6. Remove the sides of the crate from the bottom.



7. Check if all accessories are present.
8. Remove packing material from machine.
9. Check the machine for transport damage.
10. Get adequate help to lift the machine from the bottom of the crate onto the countertop.



## Connect to water supply

Rated pressure: 0.1-0.5 MPa (1-5 bar)  
Rated flow: minimum 4 litre/minute

The machine is equipped with a non-return valve that prevents water flowing back to the pump. The pump itself does not have a non-return valve.

**Note!**

When installing a new machine, always use new water supply hoses.  
Do not re-use the hoses from a replaced machine.

- Connect water tap to the inlet of the water treatment system (not included).
- Make sure the water treatment system has been flushed according to the manufacturers specifications.
- Close water mains.
- Use one of the supplied high-pressure hoses to connect the outlet of the water treatment system to the inlet of the pump. The connection on the hose is a 3/8" BSPP swivel-nut (wrench-size 20 mm).

**Note!**

National rules/regulations may apply when the appliance is connected to the water mains.

- Mount the high-pressure hose that is connected to the machine onto the outlet of the pump.
- Open water mains.  
As there now is water mains pressure onto the machine, the coffee boilers will start to fill while compressing the air inside the coffee system.

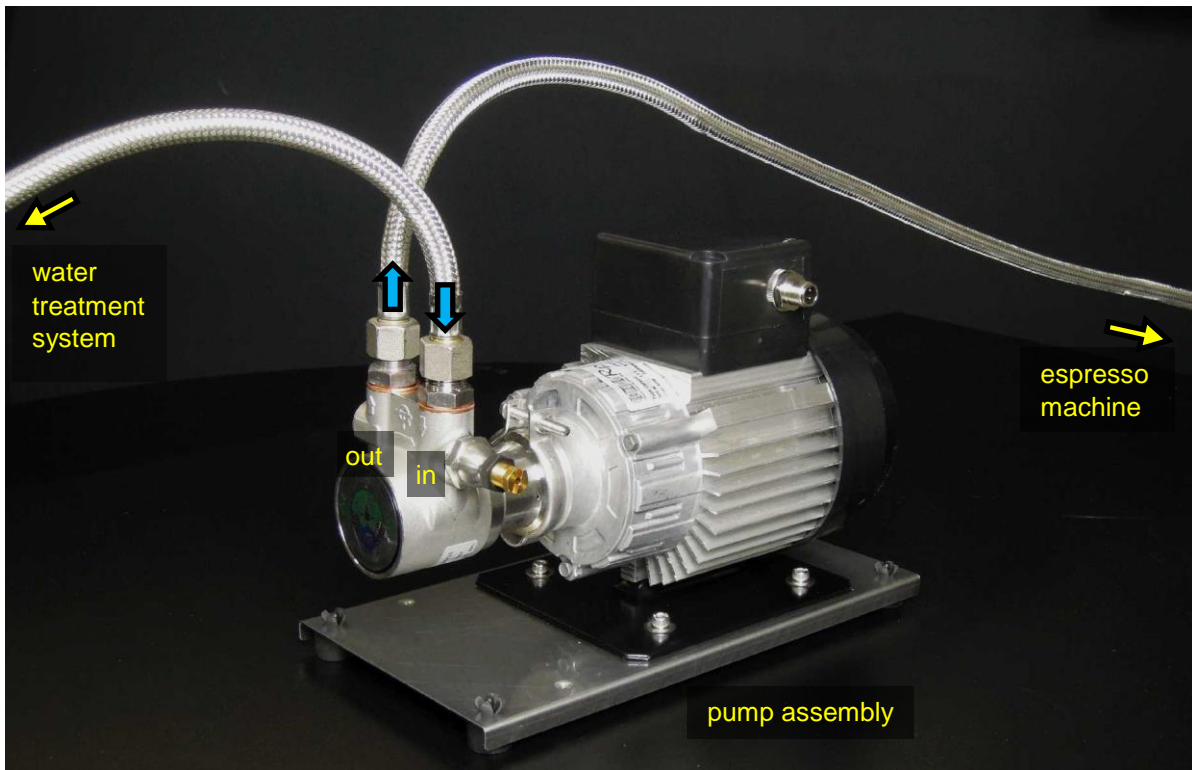


Figure 5. Showing the water connections on the pump. Water mains will be attached to water treatment system (not shown in the photo) and from there via the pump onto the espresso machine. Note that the water treatment system and supply hose are NOT included in the shipment.



## Connect to drain/waste

- Normally, the drain hose of the machine will already be mounted onto the machine.
  - Slide a hose clamp over the separate drain hose.
  - Push the end of that drain hose onto the pipe of the drip-tray and tighten the hose clamp.
- Lead the two drain hoses to the waste of the location (with water lock!). To prevent clogging and/or pinching, make sure the hoses slope down all the way between the machine and the waste and make sure the hoses do not make a sharp bend or are led over a sharp angle.
- The drain runs off best when the end of the hose is above water-level in the water lock.

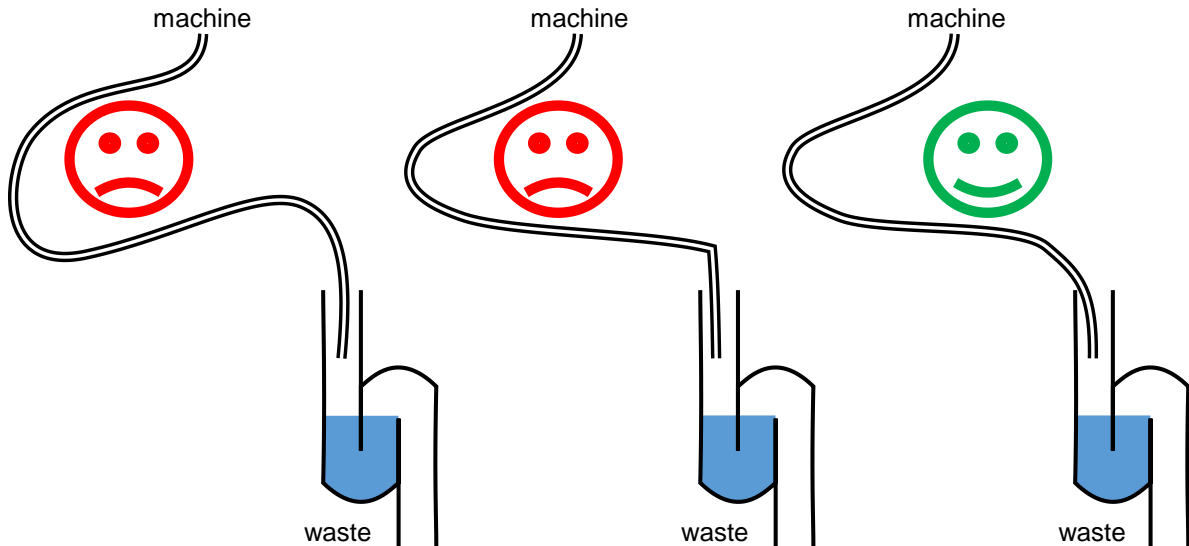


Figure 6. The drain hoses should not slope up (left) or make a sharp bend (centre).

## Connect pump cable

### ⚠ Danger

If the pump connection cord is damaged it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

- Mount the plug of the pump cable on the receptacle of the pump-motor.
- Tighten the plug with the latching ring (turn clockwise).

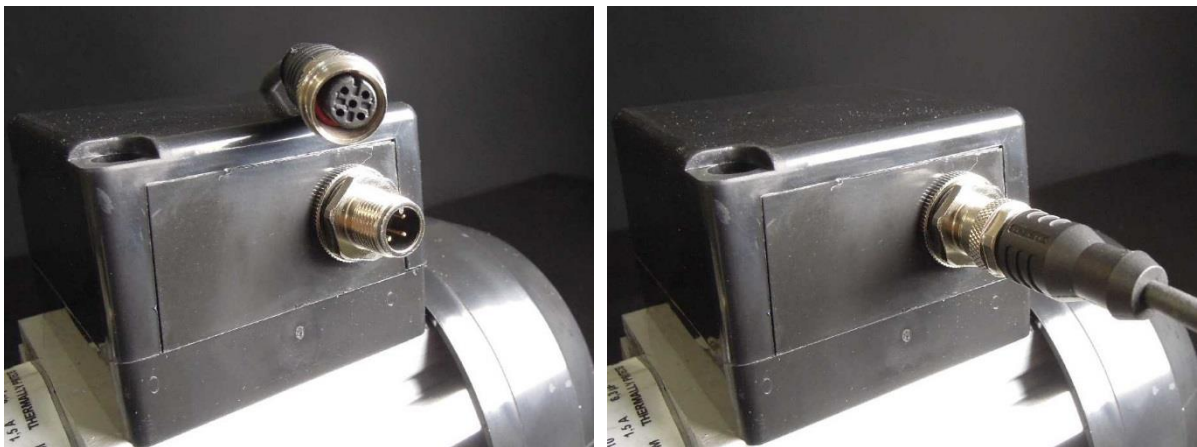


Figure 7. Plug the pump-cable onto the pump-motor and secure latching ring.



## Connect electric mains

Rated voltage: ~230V / 3N~400V, 50 / 60Hz

Rated power: max. 34.7 (230V) / 13.4 (400V) Amp per phase, see Table 2 for details.

The appliance is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30mA.

Normally the mains cable will not have a plug attached to it. This is to allow for a smaller hole in the countertop to feed the cable through.

The machine can be equipped with 3 different mains cables, see Figure 8.

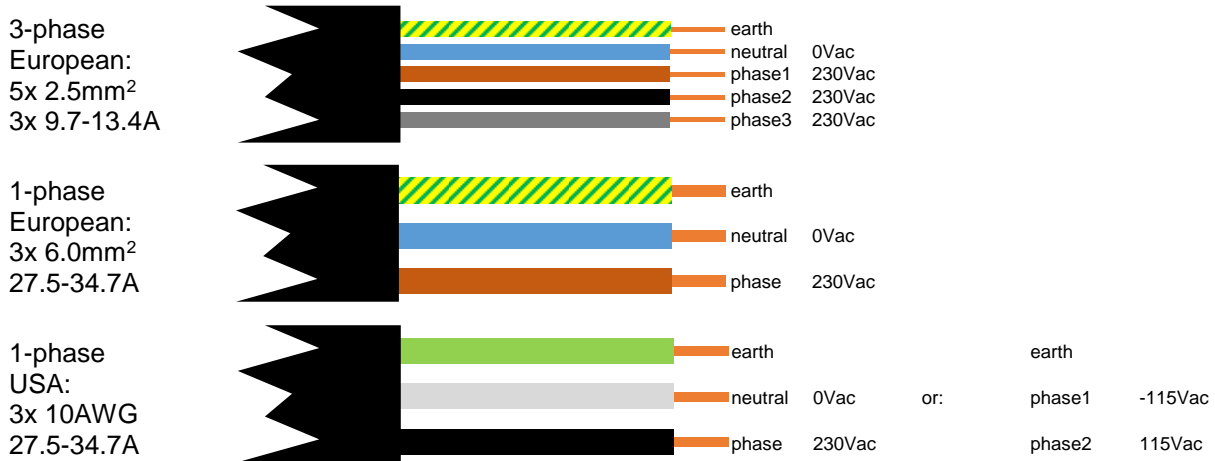


Figure 8. The 3 different main cables the machine can be equipped with. Note that in the “alternative” USA connection phase1 is described with -115Vac meaning in “counterphase to phase2”.

### **Danger**

If the supply cord is damaged it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

- It is advised to check an existing wall socket before mounting a plug on the mains cable.
- Disconnect electric power in the fuse box of the building if the machine is hooked straight into a wall box.
- Check if all switches on the machine are in the OFF position (toggle-lever pointing down).
- Mount the cable directly into the wall connection box or mount the correct plug on the mains cable and plug into existing wall socket.
- Re-connect electric power in the fuse box.

If a 16A CEE 3P-N-E plug is already mounted on a new three-phase machine it will be connected as in Figure 9.

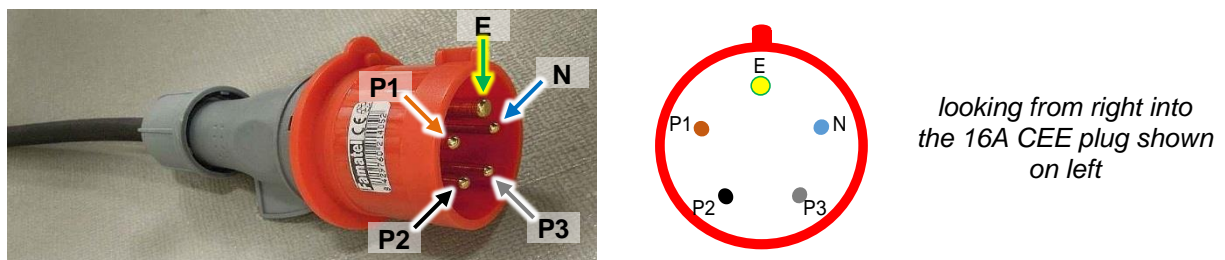



Figure 9. 16A CEE 3P-N-E plug mounted on mains cable.



## First fill

1. With the water-mains open and electric mains connected, turn the main switch ON (right hand side switch, toggle-lever up). The display will show a start-up window with software-version information and then turn to stand-by (“NO HEAT”).




<i>NO HEAT window</i>	<div> <div>SUNDAY 08 : 00</div> <div>TECH. ASSISTANCE</div> </div>	<div> <div>NO HEAT</div> <div></div> </div>	<div> <div>KEES VAN DER WESTEN</div> <div>SLIM JIM</div> </div>	<i>stand-by mode: the boilers will not heat up</i>
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2. At this point the pump will be activated and the steam boiler will start to fill. As the coffee system up to now has been filled at water mains pressure, this will continue to fill due to the increased water pressure. Listen if you can hear water flowing into the steam boiler. If you do not hear water flowing, there may be a blockage in the fill-system that has to be resolved before continuing.
3. The controller has a safety shut-down when the fill valve (actually any solenoid valve) is open for longer than 2 minutes. The steam boiler will not be completely filled yet after 2 minutes and the controller will thus shut down and the LED(s) on the Bastones or touchpads will start flashing. If you already touched the centre button the screen will look like this:

<i>operational window (Triplette)</i>	<div> <div>GROUP 1 18.6</div> <div>GROUP 2 18.7</div> <div>GROUP 3 18.5</div> <div>STEAM 18.6</div> <div>MENU</div> </div>	<i>temperature too low but no heating command</i>
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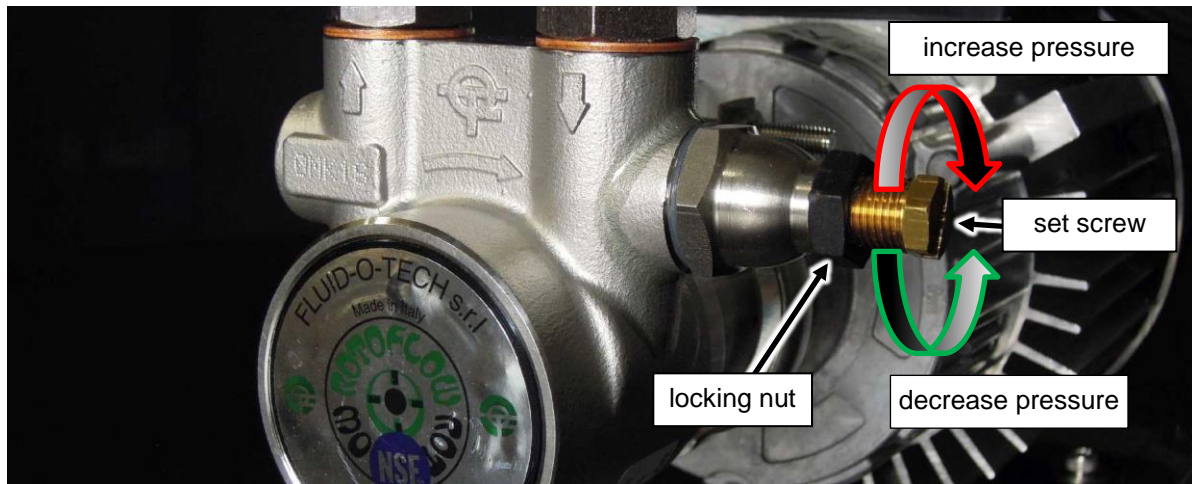
*On the Duette operational window, the GROUP 3 “button” is not present.*

4. Switch the main switch OFF (toggle-lever down) and wait for the displays to go blank, then turn the main switch ON again: the filling will continue after a few seconds.
5. During this second filling, touch the centre “button” on the controllers’ touchpad to get the machine in operational mode; the display will change to show temperatures of steam and coffee boilers.

<i>NO HEAT window</i>	<div><div><div>SUNDAY08 : 00</div><div>TECH. ASSISTANCE</div></div><div><div>NO HEAT</div><div></div></div><div><div>KEES VAN DER WESTEN</div><div>SLIM JIM</div></div></div> <div></div>					<i>touch the NO HEAT button in the centre</i>
<i>operational window</i>	<div><div><div>GROUP 1</div><div>18.6</div></div><div><div>GROUP 2</div><div>18.7</div></div><div><div>GROUP 3</div><div>18.5</div></div><div><div>STEAM</div><div>18.6</div></div><div><div>MENU</div><div></div></div></div>					<i>showing boiler temperatures and heating command</i>

6. Activate all groups (push-button on Bastone or upper button of touchpad) until water runs from the group, then de-activate the groups.
7. If the steam boiler is not yet filled after these 2 “runs”, the LED(s) will start flashing again; repeat the turning OFF-ON procedure.
8. **When the OFF-ON procedure has to be repeated more than 2 times, it is possible that the steam boiler does not fill (quickly enough) due to blockage in the system or very low pump-pressure setting. Check before continuing.**
9. When the filling has stopped without the LED(s) flashing the steam boiler is filled up to operational level.
10. On the touchpad, switch to operational mode by touching the centre button. Then re-check if water is flowing from all individual groups upon activation of the groups.



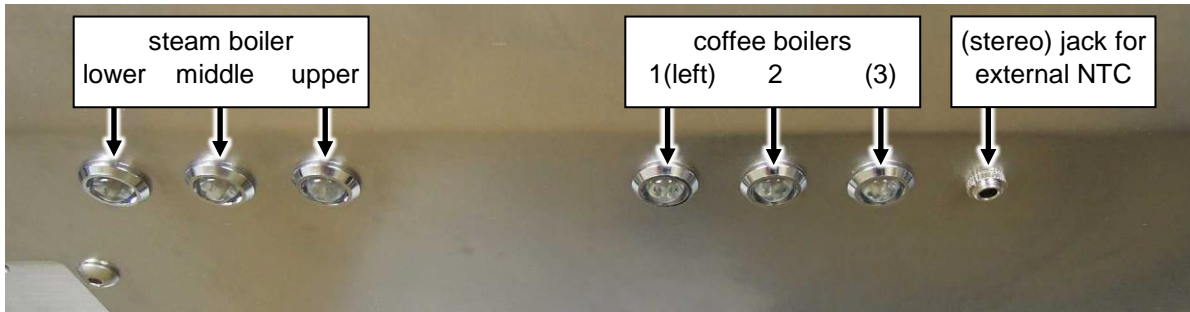


11. Mount a portafilter with blind-filter in one of the groups and activate that group. After the pre-infusion cylinder is filled the pressure should increase rapidly to about 9 bar on that groups' pressure gauge, if not, adjust the pump-pressure.  
Note that lowering the pump-pressure will not have an effect on the pressure gauge as there is a check-valve in the coffee system. De-activate the group, lower the pump-pressure and then re-activate the group to check. Remove the blind filter after this initial adjustment.
12. Press the mix-water button to see if water is flowing from the spout (this will be at very low flowrate as there is no steam pressure yet).
13. Check the machine for leaks.



## Heat up

1. Switch all three heat switches ON (lever up). This allows power to be fed onto the SSR's in the machine.
2. Check if all the green indicator lights underneath the electrics box are lighting up.
  - a. If a single indicator light does not light up, it is possible that the corresponding overheat safety switch has cut-out during transport:  
Turn the machine OFF, remove the appropriate body panel and press the central button of the overheat safety switch inward to re-set.
  - b. If corresponding indicator lights of a heat circuit (e.g. both most left lights of each set) do not light up it is possible that the corresponding auto-fuse has cut power to that circuit.  
Open the electrics-box to check the circuit breakers.



Indicator lights underneath the electrics box.



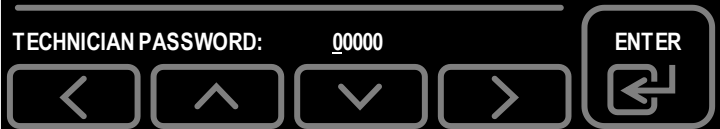
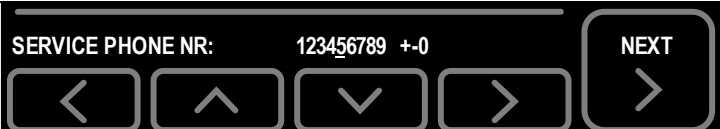

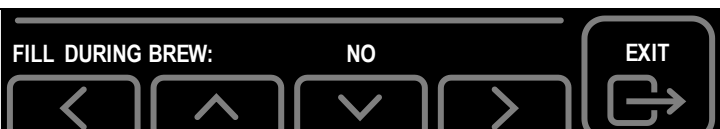
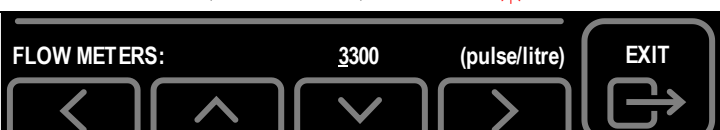
3. Check heating up: When all indicator lights are lit, the boilers will be heating up (unless the heating element is not functioning) and the temperature readings on the displays will increase. The steam boiler temperature will only rise very slowly as the sensor is located above the water level.

operational window	GROUP 1 45.7	GROUP 2 46.2	GROUP 3 45.9	STEAM 26.4	MENU	at start coffee boilers heat up faster
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4. Heating up from 20°C to operational temperature will take about 15 minutes, during this heat-up: Check expansion pressure: Make sure that all groups are filled with water (activate all groups and check if water flows from each group immediately). Mount a blind filter in the left group and activate that group using the “continuous button”. Pressure will rise to pump pressure rather quickly and then slowly rise to a maximum pressure: the expansion pressure. The cold water heating up is expanding which leads to increasing pressure until the expansion valve starts to spill drops of water into the drain. The expansion pressure should be in the range 11-13 bar (contrary to other machines we made the expansion pressure cannot be adjusted on this machine).
5. This would be a good moment to set/adjust a few parameters in the “technician level” of the controller:  
On the touchpad: touch the “menu” button, then the “settings” button, then the “technic. level” button. In the next window construct the technician password using the arrows (the number 66666), then touch “enter”. In the next windows a service telephone number can be stored, the level-probe sensitivity can be adjusted (low-medium-high, depending on water quality), the choice made between filling possible during brew or not, and the flow-meter type adjusted (after changing flow-meters).


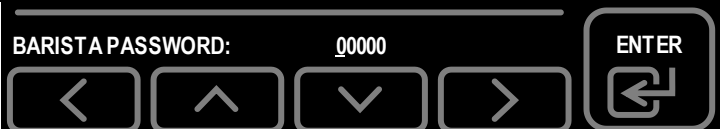
operational window	GROUP 1 60.3	GROUP 2 59.8	GROUP 3 60.1	STEAM 55.4	MENU	touch MENU
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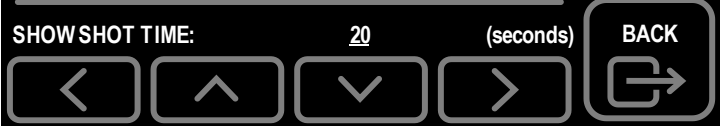


menu window		touch SETTINGS
settings window		touch TECHNIC LEVEL
enter technic level window		the digit to change is underlined the password is: 66666 use ^v to change values use <> to go to previous or next digit
construct telephone number		
adjust level probe sensitivity		use ^v to change values
make fill during brew (im)possible		use <> to go to previous or next window use EXIT to return to operational window
adjust controller to (new) flow meters		

0.7mm flow meters give 3300 pulse/litre  
1.15mm flow meters give 2000 pulse/litre


6. Adjust present time and weekday in the “barista level” (enter with password 33333), sub-menu “time / date”.

settings window		touch BARISTA LEVEL
enter barista level window		the password is: 33333



<i>barista sub-menu window</i>		<i>touch TIME DATE</i>
<i>adjust duration of shot time display after brew</i>		<i>use ^v or hh mm to change values</i>
<i>adjust present time</i>		<i>use &lt;&gt; to go to previous or next window</i>
<i>adjust present weekday</i>		<i>use BACK to return to barista sub-menu window</i>

7. If not set correct at the factory: adjust the temperature display from °C to °F or vice versa in the sub-menu “temp. setting”.
8. Check if the machine has warmed up to operational temperature on the “operational window” of the controller (the heating indicators -orange horizontal lines in the screens- have been off at some time).

<i>operational window</i>		<i>set temperatures are reached, only group 1 is heating shortly</i>
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9. Check the operational features of the machine:
  - a. Open the steam taps for 30 seconds to release the remaining air above the water level.
  - b. Operate the hot water dispensing button.
  - c. Activate each individual group.
  - d. Use a measuring cup (or scales) to check the “free flow rate” of each individual group
    - i. with 0.6mm jets it should be 110-130 ml in 15 seconds
    - ii. with 0.8mm jets it should be 175 - 195 ml in 15 seconds
    - iii. with 1.0mm jets it should be 225 - 250 ml in 15 seconds
  - e. Brew a first coffee on each group to test functioning of pre-infusion cylinders. This first coffee will not be very tasty as the grinder probably needs adjustment.
  - f. With correct grinder-setting and coffee-bed preparation check the pump-pressure again, adjust when necessary.
  - g. Measure the mix-water temperature (first make sure steam boiler is at operational temperature). Adjust temperature on inlet manifold when necessary (see page 18).
10. Check the machine for leaks.
11. Fill out the machine number and installation date in the user manual.



USER MANUAL – maintenance and service

**Service Record**  
 (machine number: J 2 0035 0419 , installation date: 25 / 06 / 2019 )

Date	Technician	Task	Comments
25/6/19	Rumba Espresso Service	installation	group restrictor size: 0.6mm BWT bestmax By-pass 30%



## Adjust mix-water temperature

The temperature of the mix-water depends on:

1. the steam boiler temperature,
2. the temperature of the cold water,
3. the amount of mixed-in cold water, which depends on:
  - a. pump-pressure,
  - b. cold-water orifice.
4. the temperature of the inlet-manifold.

Before adjusting the mix-water temperature make sure that the machine is (otherwise) fully operational and adjusted:

1. steam boiler at operational temperature,
2. pump-pressure adjusted to correct brew pressure.

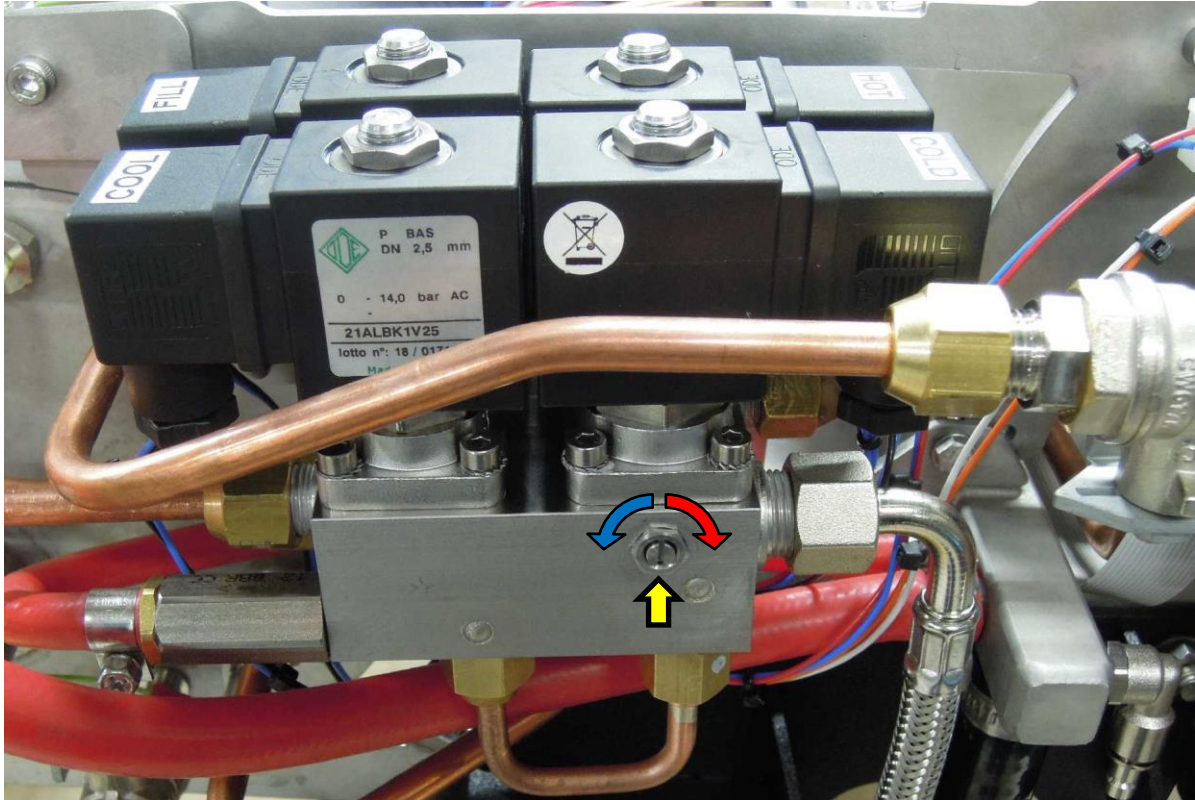
The temperature of the manifold changes during use of the machine and this variation cannot be compensated for. For that reason we suggest to measure the mix-water temperature of a second dispense (appr. 100 ml) very shortly after a first dispense (100 ml) of mix-water.

The cold-water orifice can be adjusted on the inlet manifold inside the machine. The left side-panel of the machine has to be removed to access the inlet manifold.



*Figure 10. Undo the nuts and remove the left-hand side panel (when glass side panels are mounted you have to remove the underlying support nuts as well to be able to remove the inner panel).*





*Figure 11. The location of the cold-water set-screw on the manifold. The locking nut prevents the set-screw from being dismantled and should not be loosened to adjust the set-screw.*






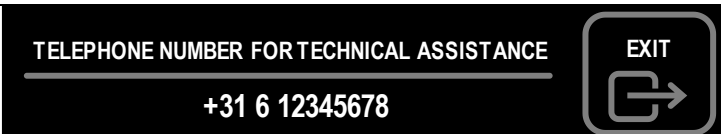
Turn the cold-water set-screw clockwise to increase the mix-water temperature and anti-clockwise to reduce the mix-water temperature. Note that water temperature is not fully constant over a dispense and depends also on the amount of use of the mix-water. Re-mount the side panel when the correct temperature is obtained.





## Hand over machine

Explain the new owner/user the most important functions of the machine. This should at least include:

1. Change machine from OPERATION to ECO and to NO-HEAT, show telephone number to call for technical assistance.

operational window		touch MENU
menu window		touch STAND BY
go to stand-by window		use NO HEAT or ECO MODE to go to stand-by
stand-by without heating		touch centre button to return to operational window
stand-by at lower temperature		touch left side to show telephone number
contact maintenance window		use EXIT to return to stand-by

2. Explain profits of ECO w.r.t. NO HEAT.
3. Change individual boiler to ECO and back.

operational window		touch-hold a group button for 6 seconds
operational window, group 1 at ECO		touch-hold again to return



4. Show how to enter the Barista menu (password: 33333) and:
  - a. how to change temperature settings
  - b. how to program shot-volumes:
    - i. with the touchpad/Bastone (left group is dominant)
    - ii. directly in the controller (left group is not dominant)
  - c. what is possible in TIMED ON/OFF
  - d. how to adjust present time/weekday
5. Convince the new owner of the importance of water quality and regular checking of the water treatment system.
6. Explain the owner about maintenance, preventative service and emergency repairs.
7. Tell the owner/user what to do when there seems to be a malfunction:
  - a. see user manual for checks that should be performed by the barista/owner before calling for help
  - b. show telephone number on controller
8. Illustrate that filling out the maintenance history helps to trace problems when a malfunction occurs.
9. Hand-over the User manual, urge them to read it.



## Maintenance

### ⚠ Warning!

Maintenance on the machine should be done by a qualified technician. Parts of the machine can reach a temperature of close to 130 °C (266 °F). The steam/hot water boiler contains water and pressurised steam of 125 °C at 1.35 Bar overpressure (257 °F at 20 PSI), temperature and pressure in the coffee system may reach up to 96 °C at 12 Bar overpressure (205 °F at 175 PSI).

When servicing the machine it is sometimes necessary to keep the machine connected to the AC power outlet and the machine switched "on". In both cases there is a possibility that you touch a live wire.

### ☠ Danger

We cannot be held responsible for damage and/or injuries resulting from actions performed on our machines by non-qualified personnel.

Any qualified technician working on the machine is urged to thoroughly read the latest edition of the "Technical manual" which can be obtained via:

[support@keesvanderwesten.com](mailto:support@keesvanderwesten.com)

When seeking contact with the e-mail address above, please forward the model and serial number of the machine in question.

## Contact information

### ***Kees van der Westen Espressonistic Works B.V.***

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5581WJ WAALRE  
The Netherlands*

Telephone +31 40 2223433  
Email [support@keesvanderwesten.com](mailto:support@keesvanderwesten.com)  
Website [www.keesvanderwesten.com](http://www.keesvanderwesten.com)

### ***Ordering replacement parts***

Order spare parts via:  
[spareparts@keesvanderwesten.com](mailto:spareparts@keesvanderwesten.com)

Please supply machine details (model and serial number) and full contact information when ordering.

