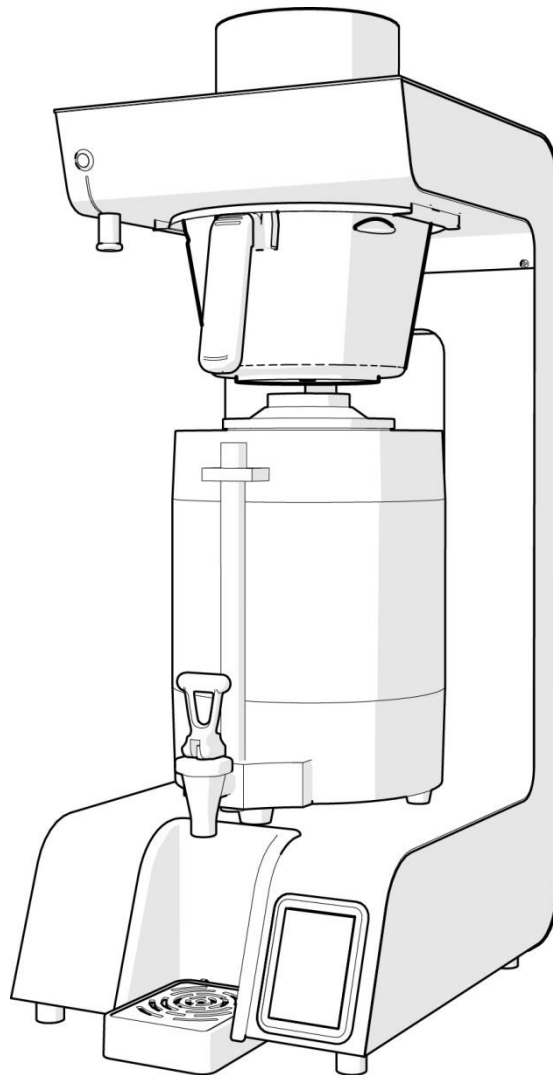




JET6 Shuttle Brewer

(#1000850, #1000851)

SERVICE MANUAL



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1. INTRODUCTION:

The information provided in this manual is intended to assist in the installation and maintenance of the Marco JET6 Shuttle Brewer System, consisting JET6 Shuttle Brewer, FCG6 Grinder and a 6 Litre Insulated Urn. Please read the instructions carefully to prevent accidents and ensure an efficient installation.

This manual is not a substitute for any safety instructions or technical data affixed to the machine or its packaging. All information in this manual is current at the time of publication and is subject to change without notice.

Only technicians or service providers authorised by Marco Beverage Systems should carry out installation and maintenance of these machines.

Marco accepts no responsibility for any damage or injury caused by incorrect or unreasonable installation or operation.

2. SAFETY INSTRUCTIONS:

When using electrical appliances, basic safety precautions should always be followed to prevent the risk of fire, electric shock, burns or other injuries or damages.

- Read all operating and safety instructions carefully.
- This machine must be earthed. If the moulded plug supplied is not used then ensure that the green/yellow cable is connected to a suitable earth.
- Risk of flooding: The hose supplied with the boiler is non-toxic food quality tested to 190psi. However, a hose is not a permanent connection. It is, therefore, advisable to switch off boiler and close the stopcock valve when boiler is not in use.
- The utmost care has been taken in the manufacture and testing of this machine.
- Failure to install, maintain and / or operate this machine according to the manufacturer's instructions may result in conditions that can cause injury or damage to property. If in any doubt about the serviceability of the machine always contact the manufacturer or your own supplier for advice.
- This machine is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

- Children should be supervised to ensure that they do not play with the machine.
- In the event any wires are damaged, such wires can only be replaced by experts or professional service staff from the manufacturer service department or similar functional departments.
- Installation, maintenance and use should only be carried out by authorised personnel.
- Installation should be in accordance with applicable regulations of the country of installation.
- Position on a flat, stable surface.

DO NOT:

- Touch hot surfaces.
 - Immerse the appliance in water.
 - Leave appliance unattended during operation.
 - Remove filter basket during use.
 - Use outdoors.
- Disconnect from power supply when appliance is not in use
 - Repairs and service should only be carried out by a service technician.
 - Appliance must be fully disconnected from mains power before removing any panels.
 - Before any attempt is made to move or service the brewer, ensure it is unplugged, drained and allowed to fully cool.
 - The ambient temperatures this unit should operate within are 5°C - 35°C.
 - This appliance should not be installed in a tightly enclosed area (such as a cupboard). Air should be able to freely circulate around it.
 - The appliance is designed for use as described in the instructions. Failure to install, maintain and/or operate this brewer according to the manufacturer's instructions may result in conditions that can cause injury or damage to property. If in any doubt about the serviceability of the brewer always contact the manufacturer or your own supplier for advice.

SERIAL NUMBER & MACHINE MODEL INFORMATION

Every unit will have a rating plate with a machine serial number. The format is MMYXXXXX

The first four digits of the serial number denote the month and year of manufacture. The remaining four digits represent a factory assigned identification number.

See example below. This machine was made in June 2014 and was machine number 1234

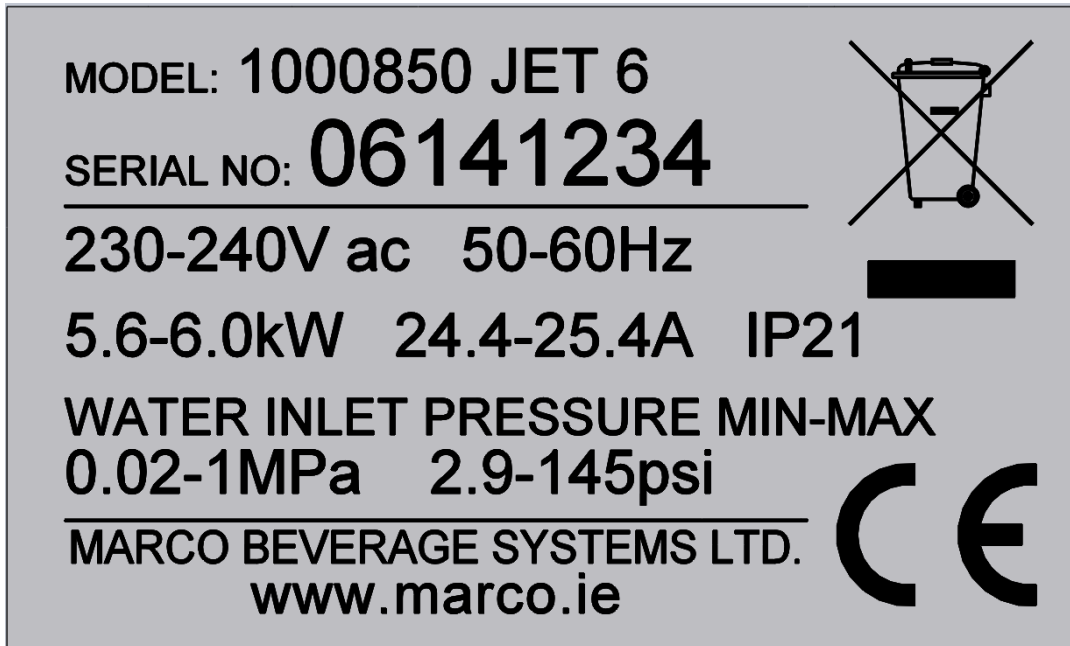


Figure 1.

3. SPECIFICATIONS:

1000851# Jet 6 2.8kW		
Electrical	Connection	2.8kW 230vac c/w 1.5m flex
Plumbing	Fittings Pressure	$\frac{3}{4}$ " BSP Food grade inlet hose supplied 5-50 psi (35-345 kPa) Standard inlet hose protrudes out 47mm measured from the flat back panel.
Dimensions	Height Width Depth (no plumbing or drip tray) Depth (including plumbing fitting, no drip tray) Depth (including plumbing fitting & including drip tray) Tap Height to counter Tap Height to drip tray	840mm 310mm 410mm 445mm 490mm 162mm 132mm
Performance	<u>Hot Water (if tap is installed):</u> Immediate Draw Off Total Recovery rate at 5.6KW	Approx. 4.3L + 0.47 litres/minute 0.47 litres/minute

1000850# Jet 6 5.6kW		
Electrical	Connection	5.6kW 230vac c/w 1.5m flex
Plumbing	Fittings Pressure	$\frac{3}{4}$ " BSP Food grade inlet hose supplied 5-50 psi (35-345 kPa) Standard inlet hose protrudes out 47mm measured from the flat back panel.
Dimensions	Height Width Depth (no plumbing or drip tray) Depth (including plumbing fitting, no drip tray) Depth (including plumbing fitting & including drip tray) Tap Height to counter Tap Height to drip tray	840mm 310mm 410mm 445mm 490mm 162mm 132mm
Performance	<u>Hot Water (if tap is installed):</u> Immediate Draw Off Total Recovery rate at 5.6KW	Approx. 4.3L + 0.93 litres/minute 0.93 litres/minute

Table 1.

4. INSTALLATION:

Electrical Installation - #1000851:

- Electrical specification: 2.8kW-230VAC-50/60Hz
- The machine comes with an integrated mains cable, fitted with a 13A 3-Pin Moulded plug. This should be plugged into a suitable 13A power outlet.
- When installing the machine, always observe the local regulations and standards.

Electrical Installation - #1000850:

- Electrical specification: 5.6kW-230VAC-50/60Hz
- The machine comes with an integrated mains cable. This should be hard-wired into a suitable 25A minimum switched power outlet or spur.
- When installing the machine, always observe the local regulations and standards.

Plumbing Installation:

- Mains water pressure required (limits): 5-50psi (35-345kPa) 0.5 – 5.0 bar
- Fit a stop Valve on a cold water line and attach a 3/4" BSP male fitting, (e.g. 3/4" x 1/2" 311 or washing machine type stop valve).
- For US versions use 3/8" NPT male fitting.
- **Connect straight tailpiece of the hose to the stop valve fitting. Make sure that the pre-attached sealing washer is fitted.**
- Turn on the water to flush any impurities, dust etc. from the inlet hose and water pipe. Allow several litres through.
- **Connect right-angled tailpiece of the hose to the inlet valve of the boiler (3/4" BSP). Make sure the sealing washer is fitted here also.**
- Turn on water and check for leaks.
- The JET6 is fully automatic and will fill and heat without any need to prime the machine.

LIMESCALE

In common with all water boiler manufacturers, service calls resulting from limescale are not covered by warranty. Fitting a scale reducer is recommended, especially in hard water areas. This can reduce the build-up of scale but may not stop it altogether. The frequency that descaling is required depends on the local water supply; hard water areas need more attention. Machines typically need descaling every 3-6 months. Descaling of the machine requires removal of panels and must only be carried out by qualified service personnel who must read the full warnings contained in this manual, and must contact the manufacturer for detailed descaling instructions. Aggressive descaling agents can damage the stainless steel tank. Citric acid based descaling agents are recommended. The tank must be fully flushed through at least twice to remove all residues.

It is recommended to de-scale the machine every 3 months in hard water areas and every 6 months in medium water areas. De-scaling should be carried out by a service agent.

It is also recommended to clean the coffee urn after each days brewing using a proprietary urn-cleansing compound.

5. PRODUCT SPECIFICATION SHEET:

JET

Filter Coffee Brewer/
Filter Coffee Grinder

FEATURES

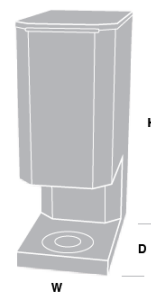
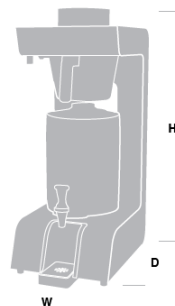
- Batches of 2.0 to 6.0 Litres coffee
- SCAE Gold Cup coffee quality
- Operator-friendly touch-screen interface
- Can automatically control grinder slave
- Portion control of water and coffee amounts
- Precision water volume and temperature
- Minimised footprint
- Built-in cup-well
- Best-in-class energy efficiency
- Sleek front-of-house design
- Versatile deployment (grinder, manual or pre-ground packs)
- Reduced operator error
- Hot water dispense



JET 6



JET FCG6



OPTIONS

For medium to high volume filter coffee requirements,
e.g. hotels, busy cafés, restaurants, canteens.

	Order Code	Full Brew	Cups Per Hour	Dimensions (DxWxHmm)	Power @230V	Weight (kg)	Packing (mm) Dimensions	Qty Pallet	Plumbing Requirements	Hot Water Draw Off*
JET 6 5.6kW	1000850	6.0L	189	444x303x810	5.6kW	24.0	620x440x850	6	¾" BSP	6.0L
JET 6 2.8kW	1000851	6.0L	189	444x303x810	2.8kW	24.0	620x440x850	6	¾" BSP	6.0L
Urn 6.0L	1700169			420x245x570		7.0	640x310x440	16		
JET FCG6	1000890			370x205x550	0.8kW	13.0	500x300x800	12		

*Disabled during brew

6. SETUP AND CALIBRATION:

Operating the JET6 Shuttle Brewer for the first time:

Ensure water and electrical connections are correct and turned on.

Toggle the Power switch, located at the base of the machine on the left hand side.

The machine will boot and the touch screen will show JET6 and the firmware revision. The number in brackets after the firmware revision can be disregarded.

Once the boot sequence is complete, the screen will show status information, as shown below.

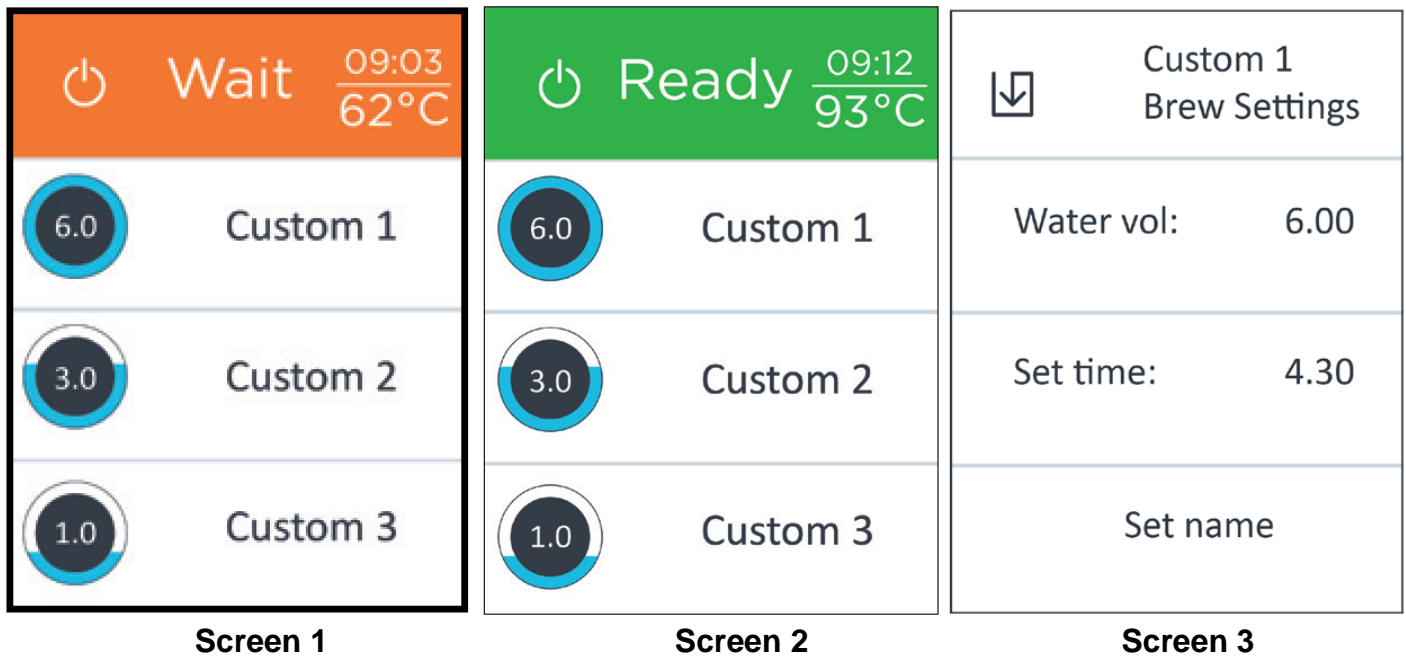


Figure 2.

Screen 1

The top status panel of this screen will appear Amber, showing the WAIT message. This is normal when heating and filling. When the machine has filled, heated and is ready to Brew, screen 2 will be shown.

Screen 2

The top status panel appears Green, showing the READY message. This indicates that the machine is ready to brew. Simply touch one of the three Brew Panels to start brewing.

Screen 3

Brew Settings adjustment. To change brew settings, hold the appropriate brew panel on Screen 2 for 5 seconds to access Screen 3. Touch each of the three panels, Brew Water Volume - Brew Time – Brew Name, to change the current value.

Touch the symbol at the top left corner of the screen to exit.

7. MENU NAVIGATION:

Menu Structure

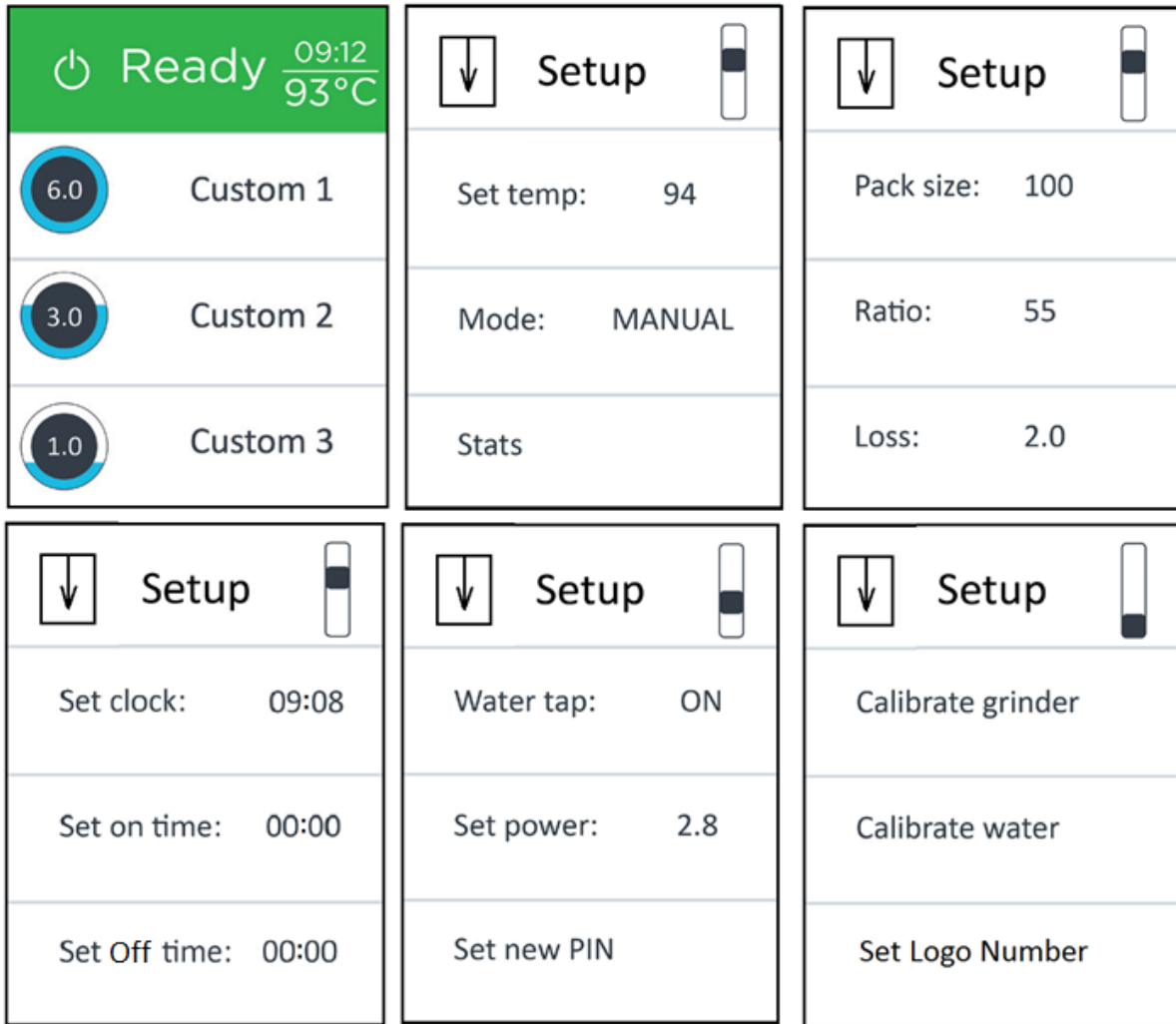


Figure 3.

Menu	Title	Default Setting	Options
1	Temperature	94°C	60 – 98°C
2	Mode	Grinder	Grinder - Packs - Manual
3	Stats		Clear
4	Pack Size	100	040 - 400
5	Ratio	55	20 - 70
6	Loss	2.0	0.0 - 4.0
7	Set Clock	Time	00:00 – 23:59
8	Set On Time	00:00	00:00 – 23:59
9	Set Off Time	00:00	00:00 – 23:59
10	Water Tap	On	On/Off
11	Set Power	Rating	2.2/2.8/3.6/4.4/5.6
12	Set New PIN	0000	0000 – 9999
13	Calibrate Grinder		0010 – 0200
14	Calibrate Water		0400 – 2500
15	Set Logo Number	0000	0000 – 9999
16	Save and Exit		

Table 2.

To access the Service Menu, shown in Figure 3 above, hold the top (green or brown) status panel for at least 5 seconds or until the Service Menu is shown.

If a PIN is required to enter the Service Menu but is not known, the **Back Door Code is 1793**.

To go to the next screen in the menu, touch the top right hand corner of the screen.

To select a function, touch that panel.

To exit to the standby screen at any time, touch the top left hand corner of the screen.

During installation, the water will need to be calibrated. Hold the top panel on the standby screen to enter the Service Menu.

Touch the top right hand corner of the screen to scroll to the calibration page of the menu.

Touch the Calibrate Water panel on the screen and follow the on-screen instructions.

After water has been dispensed and measured, enter the water volume dispensed in millilitres.

During water calibration, approximately 1060ml will be dispensed.

If the JET6 is to be used in grinder mode, the grinder must be calibrated.

Set the grind setting on the grinder for the required grind size and then proceed with the grinder calibration on the JET6 screen. Follow the on-screen instructions.

Weigh the coffee ground during the grinder calibration and enter the value in grams.

Approximately 60g of coffee will be ground.

Ensure all settings in the Service Menu are set according to requirements. See Table 2 above.

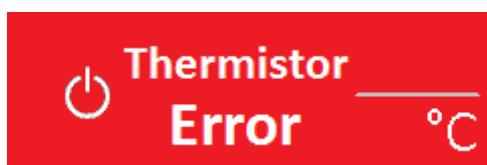
8. DIAGNOSTICS:

TROUBLESHOOTING – LCD DIAGNOSTIC GUIDE:

The Jet 6 uses an electronic diagnostic system to help determine faults. If an error is detected a message is displayed through the LCD screen.

Note: Back Door PIN Code is 1793 – used if PIN is activated but not known

THERMISTOR ERROR



Electronic check:

- This indicates that the thermistor is possibly measuring such a large resistance that it assumes the thermistor circuit is open.
- This indicates that the thermistor is possibly measuring zero resistance. It assumes the thermistor has failed short circuit.
- The element and inlet valve are turned OFF when this error is detected
- This is a recoverable error. When the correct range of resistance is measured, normal operation resumes

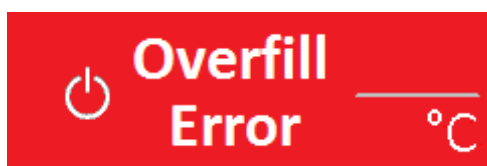
Probable causes:

1. The thermistor probe is unplugged from the 4way connector on the PCB or the thermistor has failed open circuit.
2. The thermistor has failed in a closed circuit manner.

Action required:

1. Check that the thermistor is plugged in to the PCB correctly. If it is, replace the thermistor.

OVERFILL ERROR



Electronic check:

- This indicates that the overflow water level probe has been reached
- The element and inlet valve are turned OFF when this error is detected

- This is a recoverable error. When the water drops off the overflow water level probe, normal operation resumes.

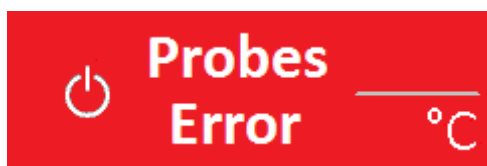
Probable causes:

1. The machine is wired incorrectly, e.g. the high level probe wire is connected to the overflow probe.
2. The tank has overfilled since the inlet solenoid has failed or is “weeping”. If the machine is turned off for a long time but still plumbed in this can cause it to fill.
3. The high level probe may have become coated in limescale and is allowing too much water in before it registers to stop.
4. If a brew is cancelled water circulating in the plumbing will return to the tank and possibly cause it to reach the low level probe (this is also more likely if the high level probe is scaled up)
5. Bubbles from the element can cause splashing inside the small tank which can trigger the overflow probe momentarily.

Action required:

1. Dispense some water via the hot water outlet and see if the problem recurs.
2. Descale the tank paying special attention to the high level probe.
3. Check water pressure, if it is too low the solenoid may allow small amounts of water in.
4. Check the solenoid for debris which may cause it to jam partially open.

PROBES ERROR



Electronic check:

- This indicates that the high level probe has been reached but the low level probe has not been detected.
- The element and inlet valve are turned OFF when this error is detected
- This is a recoverable error. If the low level probe is detected, normal operation resumes.

Probable causes:

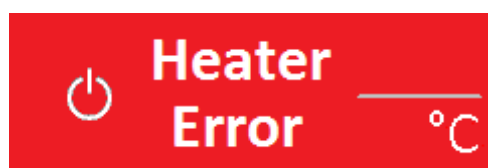
1. The low level probe is disconnected or has a faulty wiring connection. The probe will not function and so the machine will fill until the high level probe is reached.

2. The probes are connected incorrectly, so the water reaches the first/lowest probe but it is incorrectly wired as the high level probe.
3. The low level probe may have become coated in limescale and is not being detected so water continues to fill the machine until the high level probe is detected.

Action required:

1. Re-wire the probes correctly.
2. Repair the faulty probe/connectors/wiring
3. Descale the low level probe.

HEATER ERROR



Electronic check:

- This indicates that the tank temperature has not risen in 20mins

Probable causes:

1. The element is disconnected or has failed.

Action required:

1. Replace the element.
2. Re-wire the elements correctly, 2.8kW machines should have the lower element connected.

WAIT LOW PRESSURE



Electronic check:

- This indicates that the tank temperature has not dropped in 6mins while the inlet solenoid is trying to allow in water.
- This is a recoverable error. When water is allowed in a temperature drop will occur and normal operation resumes

Probable causes:

1. The water supply has been cut off or is lower than 2L/min. This could be a temporary event if some other appliances on the same water line is taking in a lot of water.
2. The inlet solenoid may have failed or is has a wiring error.

Action required:

1. Replace the solenoid.
2. Check incoming the water supply.

9. TROUBLESHOOTING:

TROUBLESHOOTING –GENERAL DIAGNOSTIC GUIDE:

The Jet 6 may have problems which the electronics are unable to detect.

LOW WATER OUTPUT

The brew water should exit the sprayhead at approximately 2.1L/minute. During water calibration it should discharge 1000-1200g of hot water (960-1150ml).

Probable causes:

1. The hose exiting the pump is kinked which restricts flow.
2. Other hoses exiting the upper circulation chamber are kinked which can effect flow.
3. The pump is faulty or is clogged/jammed.
4. Incorrectly calibrated.

Action required:

1. Check for kinks in all hoses.
2. Check pump operation. Although the pump may function it may not be outputting an adequate supply. During calibration it should output 1000-1200g of water, or if dispensing using the hot water dispense outlet it should be approximately 2L per minute. The tube coming from the pump may be temporarily removed from the metal Y piece and fed directly into the basket, this can rule out any plumbing issues, a higher flow rate of 4-6L/min will be expected from the pump when operated in this way.
3. Recalibrate the water dispense. If a faulty scales is used the volume will be incorrect.

HIGH WATER OUTPUT

The brew water should exit the sprayhead at approximately 2.1L/minute. During most brew cycles the solenoid valve feeding the sprayhead should close at which time no water should exit the sprayhead after a draining time of approx. 10 seconds after the solenoid closes.

Probable causes:

1. The valve feeding the sprayhead is faulty. The valve mounts onto a metal tube with some silicone tube. If too much tube is used it can rise up over the top of the metal mounting tube and cause the valve's plunger to be forced into an open position. As both the valve and silicone tube are transparent it may be possible to see if the silicone tube is past the top of the metal tube.

2. Kinks in any tubes can cause flow problems in the machine which could cause unusually high flowrates.
3. Incorrectly calibrated.

Action required:

1. Check the valve and remove and reseal it if necessary.
2. Check for kinks in all hoses.
3. Recalibrate the water dispense. If a dry basket is used during calibration then some water may be retained in the basket giving a lower estimate. If hot water is left to stand then some may evaporate giving a lower weight when weighed, so the machine will dispense too much as it thinks it has a lower flowrate than it actually has.

GRINDER OUTPUT

The grinder works on a timed basis, estimating how many grams are dispensed per second. During calibration if the grinder is empty and clean then grinds will cling to the grinder components and the 10 second calibration grind will dispense a lower weight than if the machine was in normal operation running for 10 seconds. So before calibrating a small amount of beans should be passed through the grinder.

Adjusting bean type, roast, humidity, grinder settings etc. can also result in higher/lower weights than expected.

10. ROUTINE MAINTENANCE:

It is a common occurrence for limescale to build up in the tank of a water boiler. The amount of limescale build up is relative to the water hardness in a particular area. The most common error indication on a boiler is the Ready light giving two red flashes between pauses, indicating that water can't be seen in the tank. This can be caused by a number of issues, most commonly, limescale or film build up on the water level probes.

Descaling Procedure:

- Isolate machine from power supply.
- Isolate machine from water supply.
- ALLOW TO COOL COMPLETELY!
- Drain water from machine.
- Remove all lids.
- Remove as much scale as possible by hand, paying particular attention to level probes (White plastic with steel tab). Be very careful not to damage any attachments.
- Use ScaleKleen, Marco part No. 8000270 or similar. Follow instructions carefully.
- Thoroughly clean and flush the machine before re-use.
- Clean water level probes with ScotchBrite
- Follow installation and first time operation instructions

NB: Always clean the water level probes after descaling and rinsing the tank.

To Clean Water Level Probes:

- Turn off water feed to unit
- Dispense as much water from unit as possible using two clicks at the head unit
- Turn off unit at wall socket or unplug from wall socket
- Remove top cover from boiler
- Remove tank lid from tank
- Identify water level probes – flat metal tabs inside water tank - 3 probes
- Thoroughly clean probes with ScotchBrite (or scouring pad)
- Replace tank lid and top cover
- Reconnect power and water to boiler and operate as normal

11. TECHNICAL BULLETINS:

Technical Bulletin

Topic: JET6 Firmware Revision 1.9 Update		TB No.: 10029	Date: 03/05/15
Affected Machines:	JET6 Shuttle Brewer	Priority: High	Created By: R. Daly
From Serial No.:	0515XXXX	Created For:	Service
From Date:	May 2015	Pages: 1/1	Revision 1

JET6 Firmware Revision 1.9 Update

Overview

Marco JET6 version of firmware is Revision 1.9, effective May 2015. Various improvements and additions have been made to the firmware since Revision 1.8.

All changes/updates are listed below.

This update was introduced on all JET6 Shuttle Brewer machines manufactured from May 2015.

The firmware Revision and font file number are shown on the touch-screen just after switch-on.

Marco Beverage Systems recommends that Revisions earlier than 1.9 be updated. See below for details.

Changes/Updates

Read cycle frequency updated to reduce possibility of SD Card data corruption.

Firmware reformatted to Modular Design Concept

Font file accessed is incremented during each power-on cycle

Setup Menu updated to include 3.6kW variant for Japan

Compatibility

Elements of the firmware revisions are contained on both the main control board and on the SD Card in the LCD display module.

Control Board PCB Revision 1.9 can only be installed with SD Card Revision 1.9. This setup implements all changes/updates listed above.

Control Board PCB Revision 1.8 can be installed with SD Card Revision 1.9. Updated read cycle will not be implemented.

Control Board PCB Revision 1.9 **CANNOT** be installed with SD Card Revision 1.8. This combination is not compatible.

Technical Bulletin

Topic: JET6 SD Card Replacement		TB No.: 10024	Date: 17/11/14
Affected Machines:	JET6 Bulk Brewer	Priority: Low	Created By: R. Daly
From Serial No.:	All JET6 Machines	Created For:	All Users
From Date:	March 2014	Pages: 1/1	

JET 6 Shuttle Brewer – SD Card Replacement

Overview

Marco has standardised all SD cards fitted to JET6 machines with the Phison brand SD card. If you need to change the SD card in a JET6 machine, follow the instructions below.

Procedure



Remove two screws and cup well



SD card accessible from side of display module

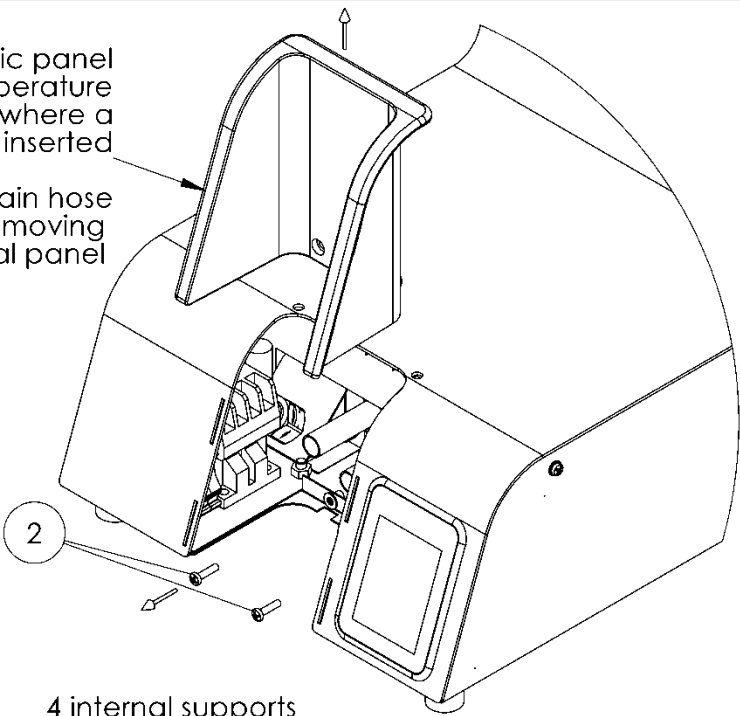


To remove SD card, push the card in to un-latch it and allow the spring to push out the card. Insert the replacement SD card and push in to latch it in place.

12. COMPONENT ACCESS:

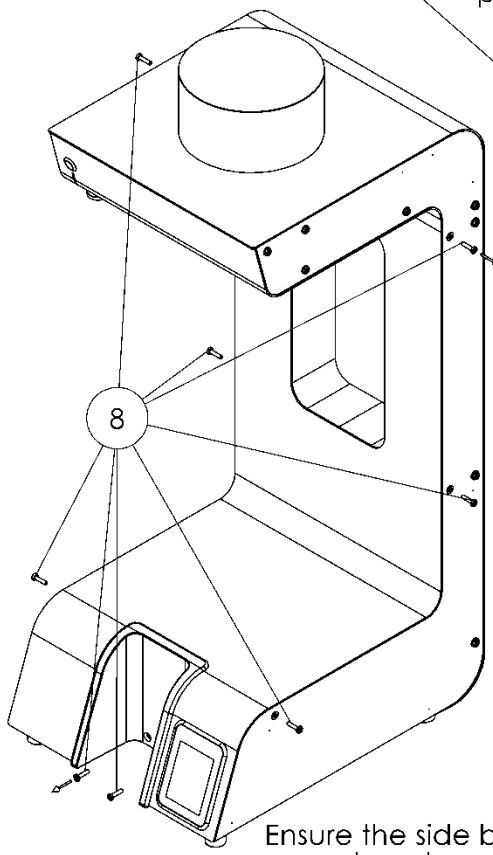
Removing only the plastic panel allows access to a tank temperature port above the elements where a thermometer probe can be inserted

The microsd card, and tank drain hose are also accessible without removing the full metal panel



This central panel is attached to the main front panel, so comes off with it.

4 internal supports help guide the centre panel (attached to the front panel) back into place



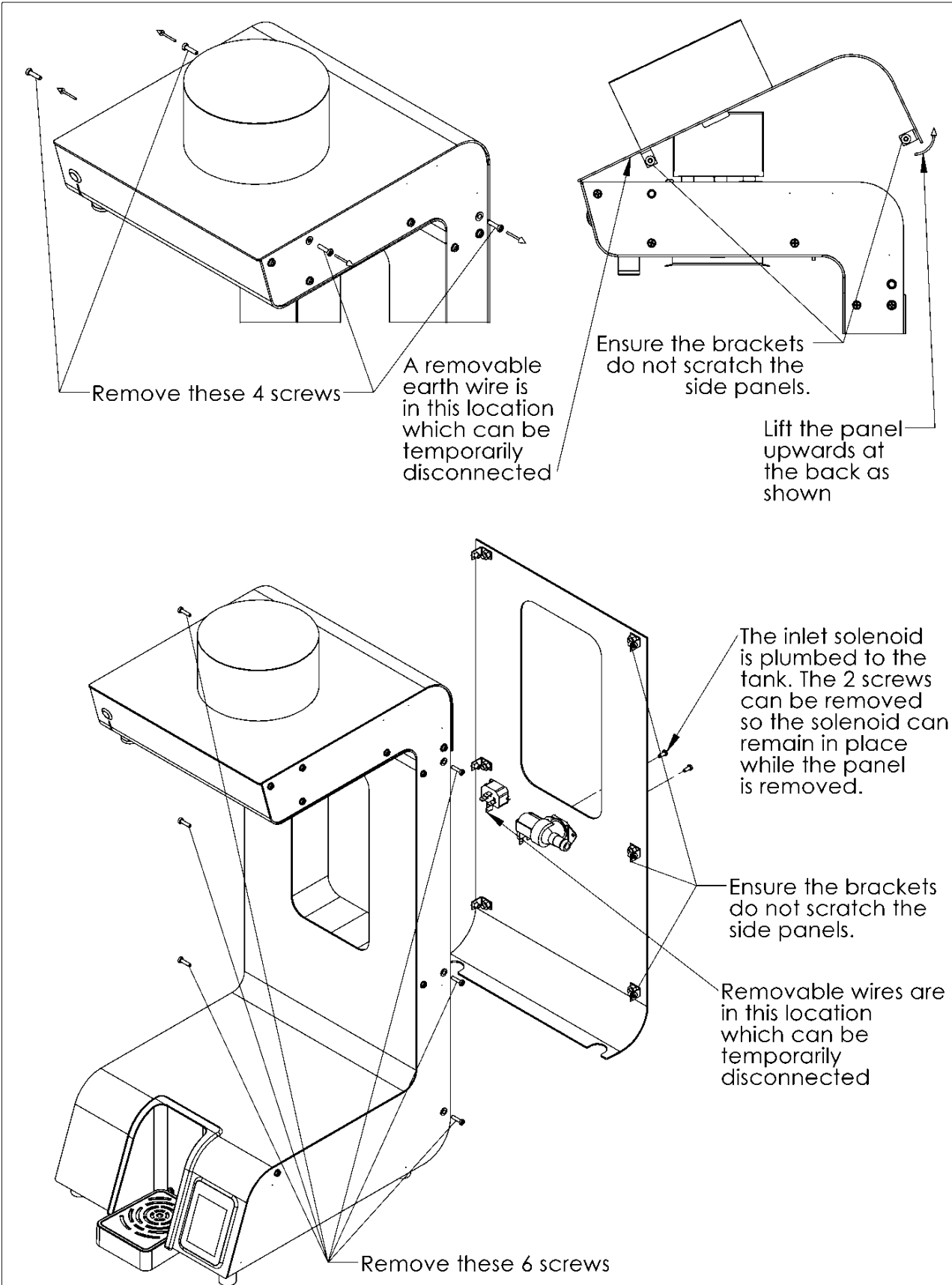
A removable earth wire is in this location which can be temporarily disconnected

Ensure the side brackets do not scratch the side panels.

Ensure no wires or tubes are trapped on either side when replacing the panel.

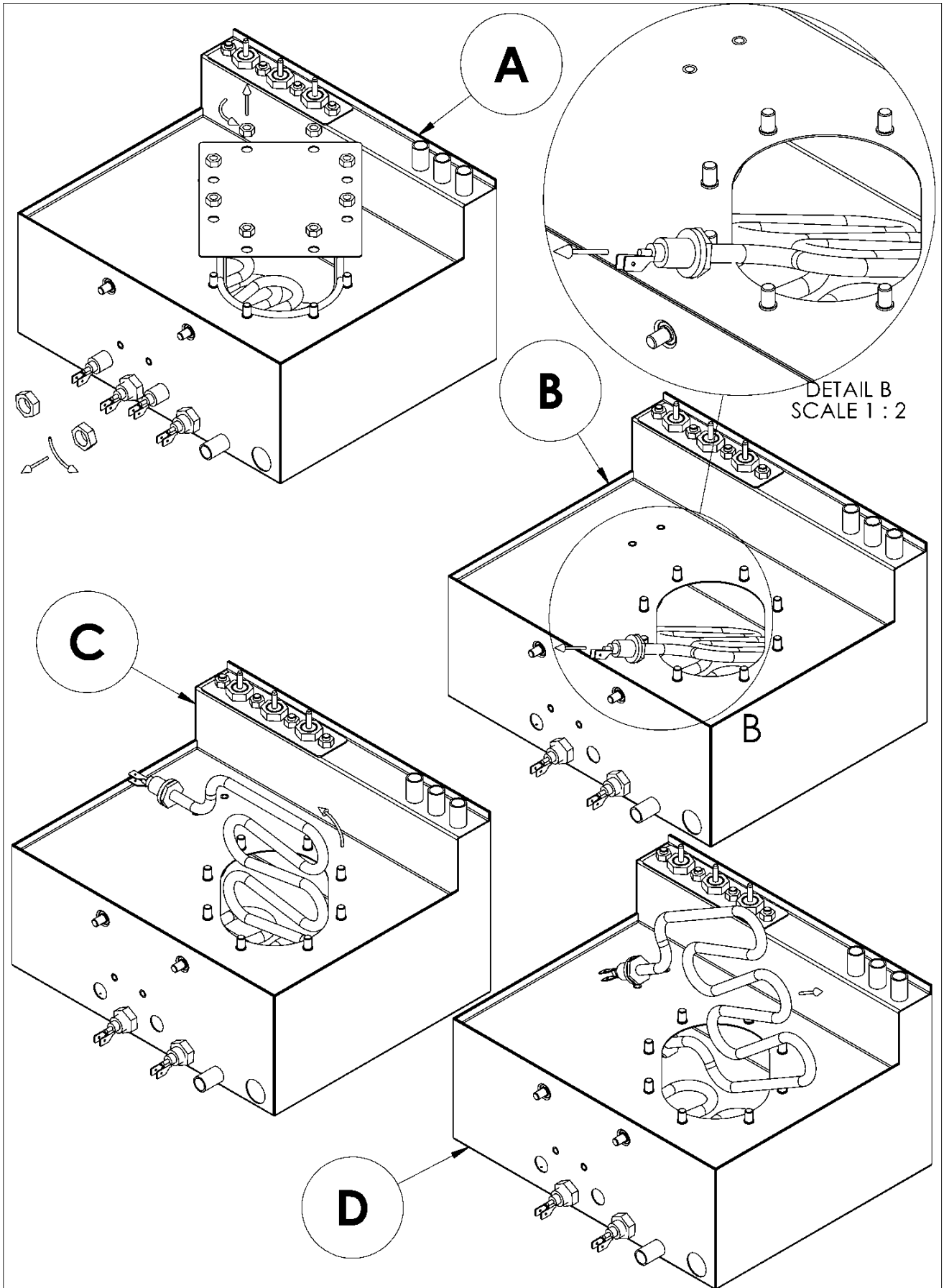
Applies to model(s) 1000850# & 1000851# (where # is blank, or one or more alphanumeric characters)

DESCRIPTION:	FRONT PANEL REMOVAL	DWG NO.:	JET6-030A-a	DRAWN BY:	PJT	20-08-14	C.O.	187
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Applies to model(s) 1000850# & 1000851# (where # is blank, or one or more alphanumeric characters)

DESCRIPTION: TOP PANEL & BACK PANEL REMOVAL	DWG NO.: JET6-031A-a	DRAWN BY: PJT	20-08-14	C.O. 187
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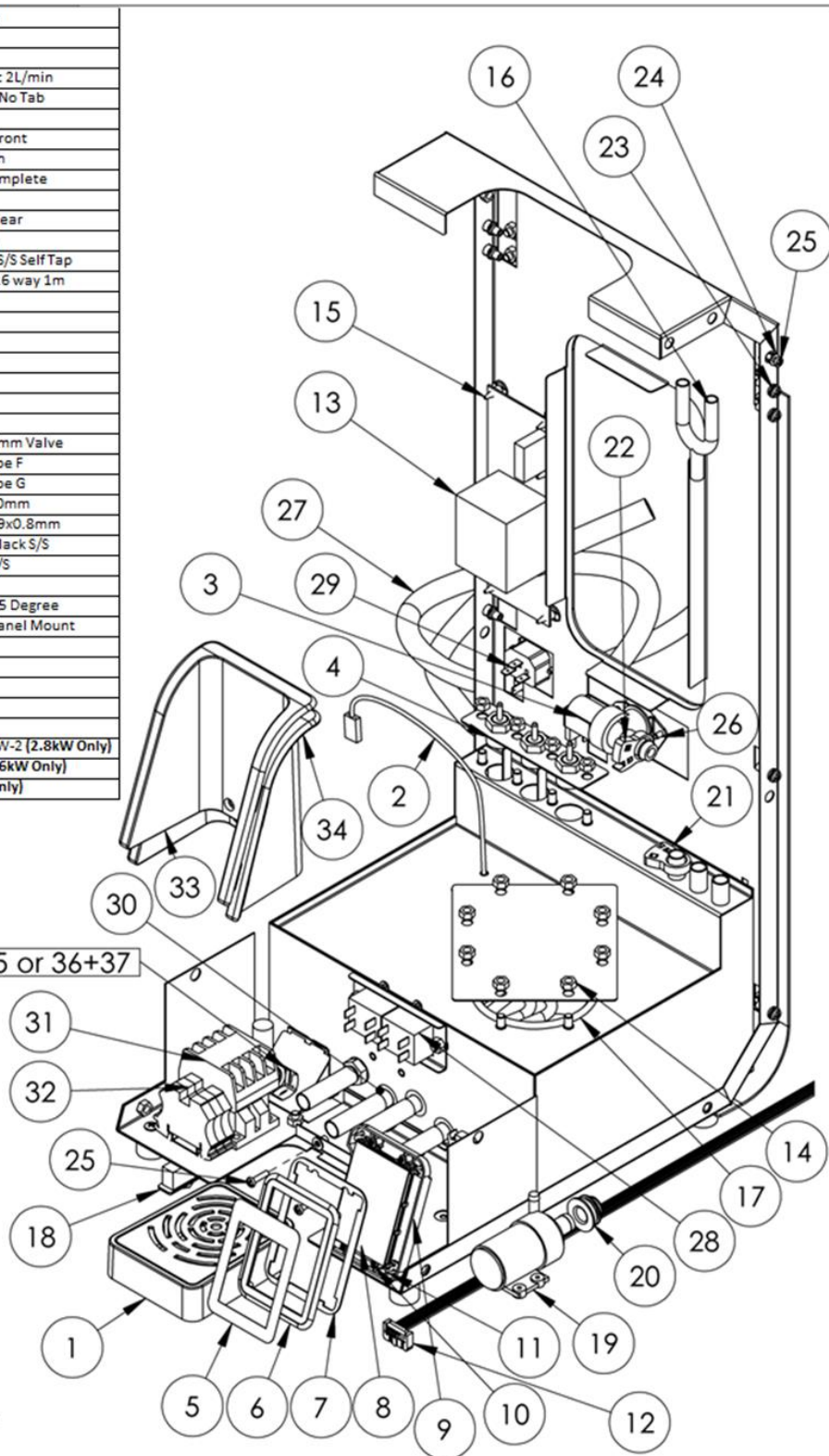


Applies to model(s) 1000850# & 1000851# (where # is blank, or one or more alphanumeric characters)

DESCRIPTION:	ELEMENT REMOVAL	DWG NO.:	JET6-032A-a	DRAWN BY:	PJT	18-08-14	C.O.	187
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13. SPARE PARTS SCHEMATICS:

Item No.	Part Number	Description
1	2300277	Drip tray Complete JET6
2	1600691	Thermistor Assembly
3	1502171	Valve Inlet 90 Degree 220vac 2L/min
4	2301338	Probe Triple 120mm/65mm/No Tab
5	1900225	Label Touchscreen 3.2 inch
6	2200627	Bezel Touchscreen 3.2 inch Front
7	1800337	Gasket Silicone Bezel 3.2 inch
8	1600200C	PCB Touchscreen 3.2 inch Complete
8A	1600200	PCB Touchscreen 3.2 inch
9	2200628	Bezel Touchscreen 3.2 inch Rear
10	1401723	Screw M2x6mm S/S Pozi Pan
11	1401727	Screw M3.6x10mm Pozi Pan S/S Self Tap
12	1501182	Cable Ribbon IDC 10 way to 16 way 1m
13	1600201	PCB Jet6 Control
14	1401150	Nut M6 Brass
15	1801230	Pillar Support PCB
16	1402202	Y-Piece Fitting
17	1800770	O-Ring 4" Red Silicone
18	1501216	Switch Power On/Off
19	1501559A	Pump Topsflo 24vdc
20	1502159	Mount Tank Wall Silicone 14mm Valve
21	1800540	Clip Hose Plastic 18.2mm Type F
22	1800550	Clip Hose Plastic 20.2mm Type G
23	1401877	Spacer Flange 9.2x5.2x7.9-10mm
24	1402442	Washer M4 Nylon Black 4.3x9x0.8mm
25	1401767	Screw M4 x 16mm Pozi Pan Black S/S
26	1401760	Screw M4 x 10mm Pozi Pan S/S
27	1800690	Hose Water Inlet 3/4" WRC
28	1502075	Thermal Switch Dual Pole 125 Degree
29	1501153	Socket IEC C13 10A Female Panel Mount
30	1500985	Element 2.8kW 230vac
31	1500840	Contactors B&J 240vac
32	1502000	Terminal 6mm
33	1801575	Plastic Cup Recess
34	1800336	Gasket Silicone Cup Recess
35	1801200	Strain Relief Bush Black SR-7W-2 (2.8kW Only)
36	1801202	Strain Relief Screw Adjust (5.6kW Only)
37	1800356	Locknut Nylon M20 (5.6kW Only)



Descal solution can be poured into the top of the tank through the probe holes using a funnel. For heavy scaling remove the cleanout door and remove scale by hand. The machine can be drained via the drain at the bottom of the tank near the pump

When replacing the cleanout door be careful not to overtighten the nuts as it could break the threaded studs on the tank.

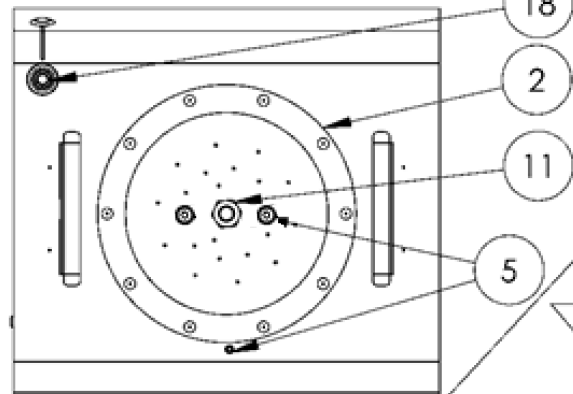
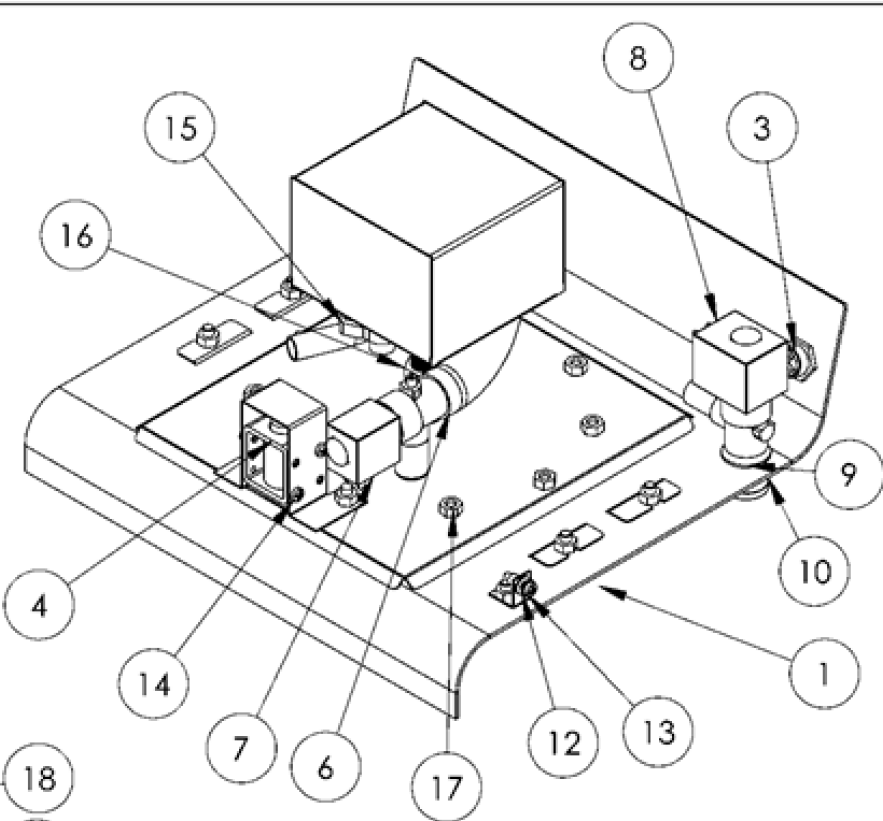
To remove the probes take off the 4 nuts and lift the probe assembly upwards out of the tank. Heavy scaling on the high level probe can cause the tank to overflow and may cause the overflow probe to be triggered

The pump is held in place by a friction fit in the silicone mount. To remove the pump drain the machine fully, hold the silicone mount against the tank & pull the pump directly out of the tank.

Applies to model(s) 1000850# & 1000851# (where # is blank, or one or more alphanumeric characters)

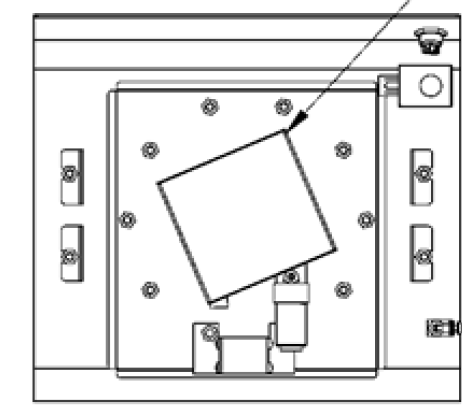
DESCRIPTION:	SPARE PARTS LOWER & DESCALING	DWG NO.:	JET6-033A-a	DRAWN BY:	PJT	20-08-14	C.O.	187
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Item No.	Part No.	Description
1	2300024	Basket Complete 233 x 136mm
2	1800301	Gasket Sprayhead 186 x 146 x 6mm
3	1501218	Push Button Metal Domed 16mm
4	1502260	Solenoid 24VDC Basket Lock
5	1800402	Grommet Silicone 4mm ID x 7mm Panel Dia
6	1502147	Valve Dispense Solenoid Plug M00849
7	1502158	Valve 12mm Bore 230vac 30E Vent Vend
8	1502151	Valve Dump 230vac
9	1502162	Mount Panel Silicone Red 14mm Valve
10	2301219	Tube 22.2mm OD x 19.8mm ID x 15mm 304SS
11	1400088	Adaptor 1/4" BSP M x 9.5mm 304SS
12	1402442	Washer M4 Nylon Black 4.3 x 9 x 0.8mm
13	1401767	Screw M4 x 16mm Pozi Pan Black SS
14	1401830	Screw M4 x 6mm SS Pan Pozi
15	1800545	Clip Hose Plastic 13mm Type E
16	1401000	Locknut 1/4" BSP Brass
17	1401150	Nut M6 Brass
18	2301204	Tube 9mm OD x 7mm ID x 18mmL 304SS
19	1800630	Hose Silicone 8mm ID x 12mm OD
20	1801175	Sprayhead Disc 156mm with grommets

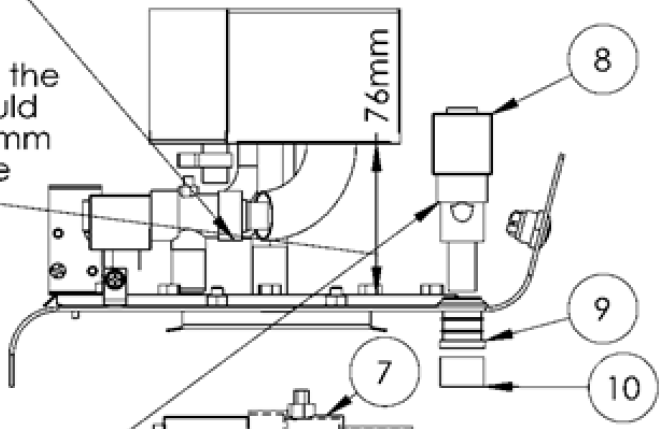


To change the sprayhead dispense valve first loosen the lock nut and twist the circulation chamber as shown. Place some absorbent material under the solenoid and peel back the solenoid plug. A small amount of retained water will drain out of the chamber

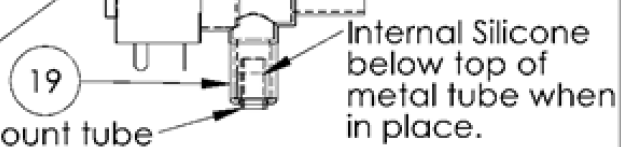
The solenoid can now be pulled up vertically off its metal mounting tube. When replacing the valve place the plug on the valve and peel it back, then twist the chamber into position and pull the plug over the large metal elbow.



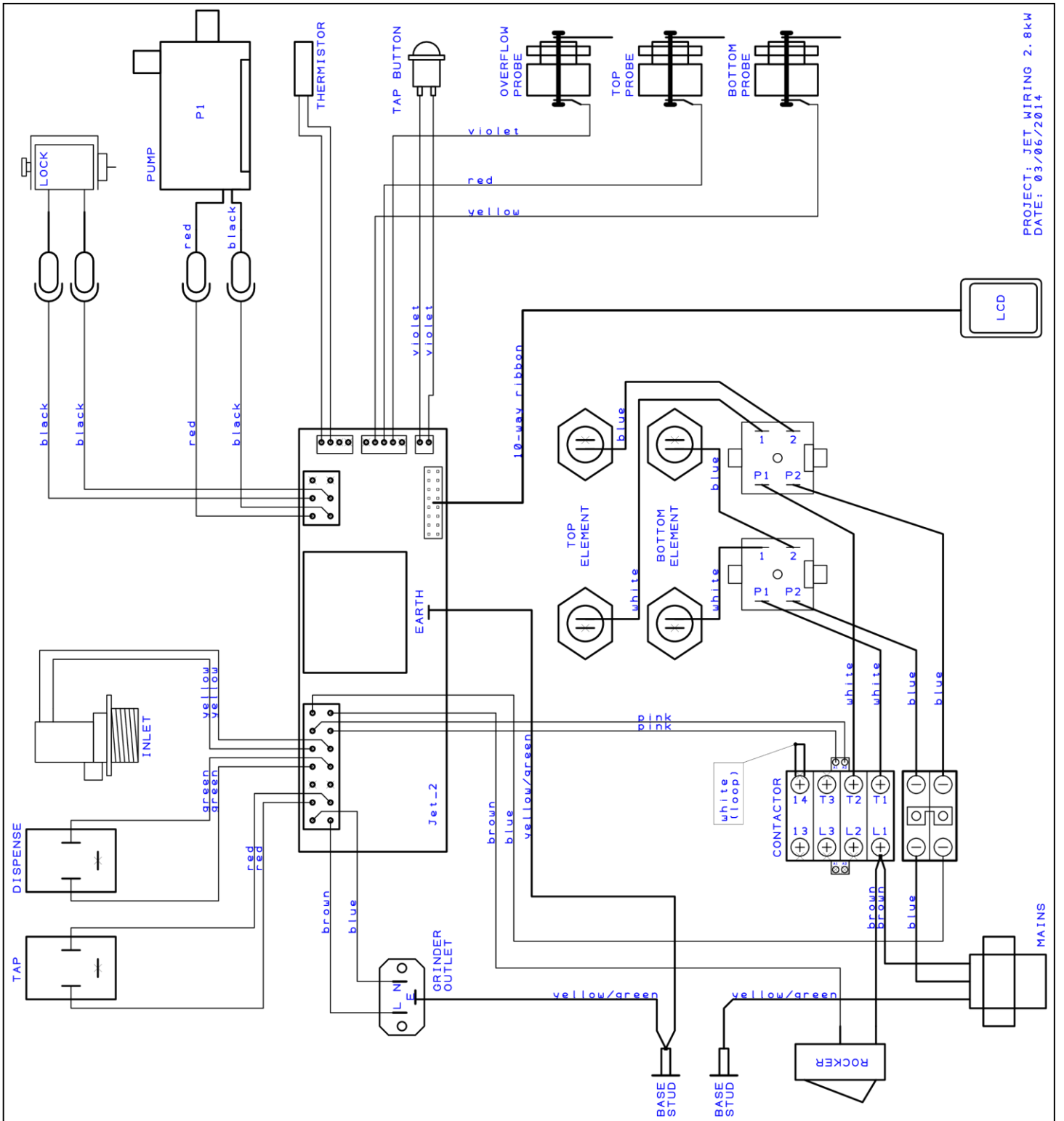
the bottom of the chamber should be approx 76mm away from the spray head



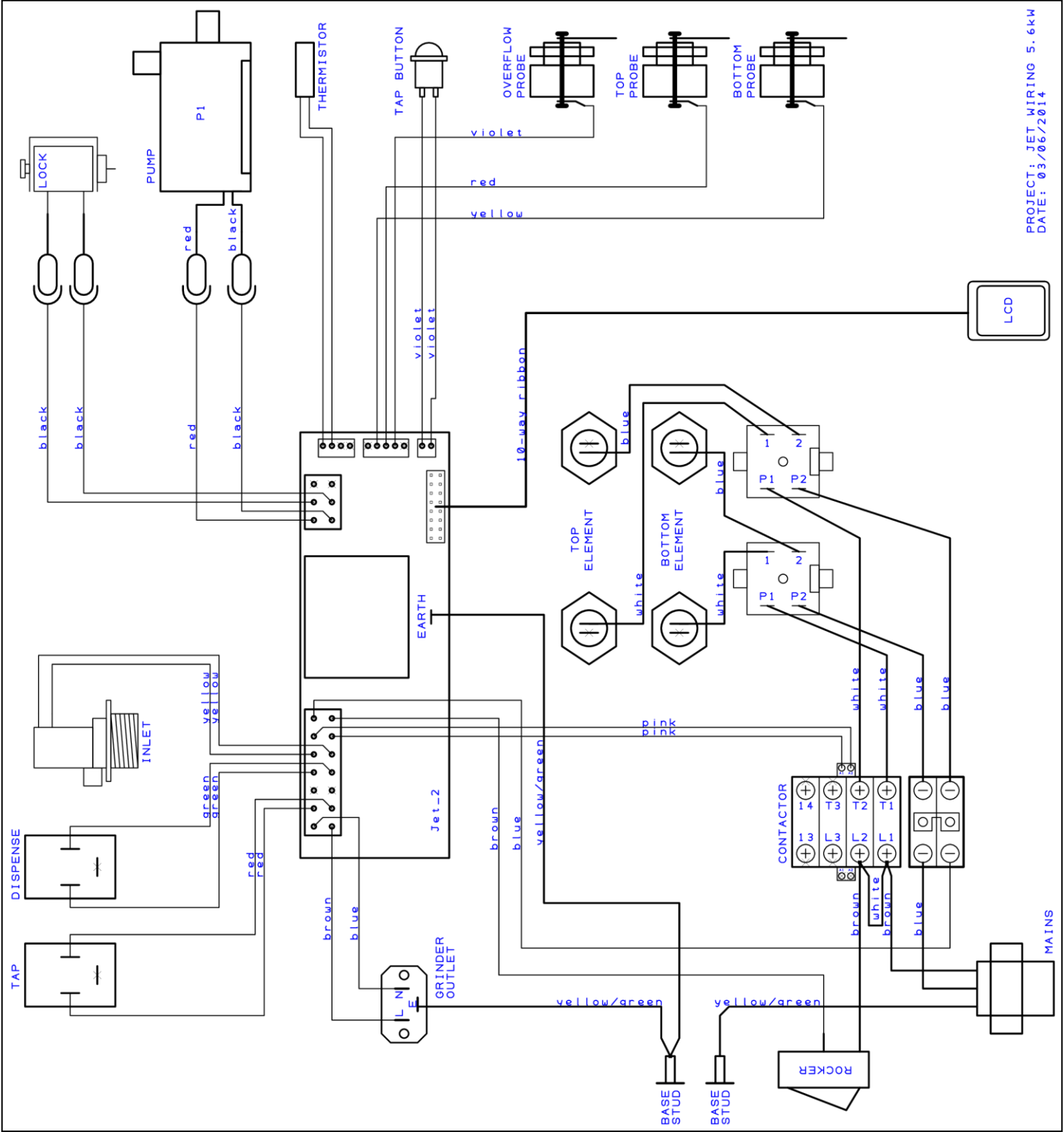
The water dispense valve is held in place by a compression fit into the silicone mount. To remove the valve pull it upwards with force. The metal shroud can come off and should be in place on the mount before reinsertion of the solenoid



14. ELECTRICAL SCHEMATICS:



PROJECT: JET WIRING 2.8KW
DATE: 03/06/2014

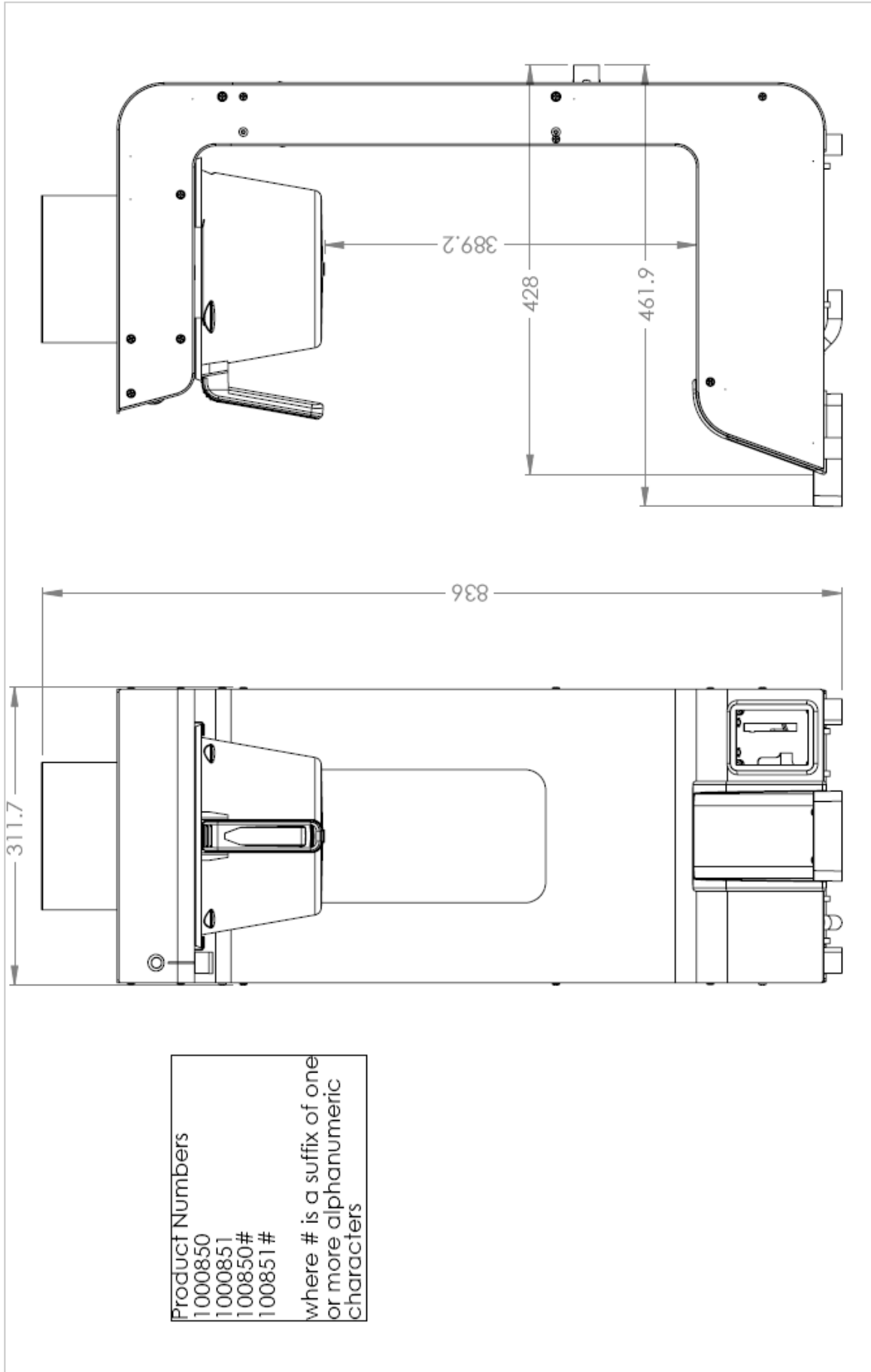


PROJECT: JET WIRING 5.6kW
DATE: 03/06/2014

15. RECOMMENDED SPARE PARTS:

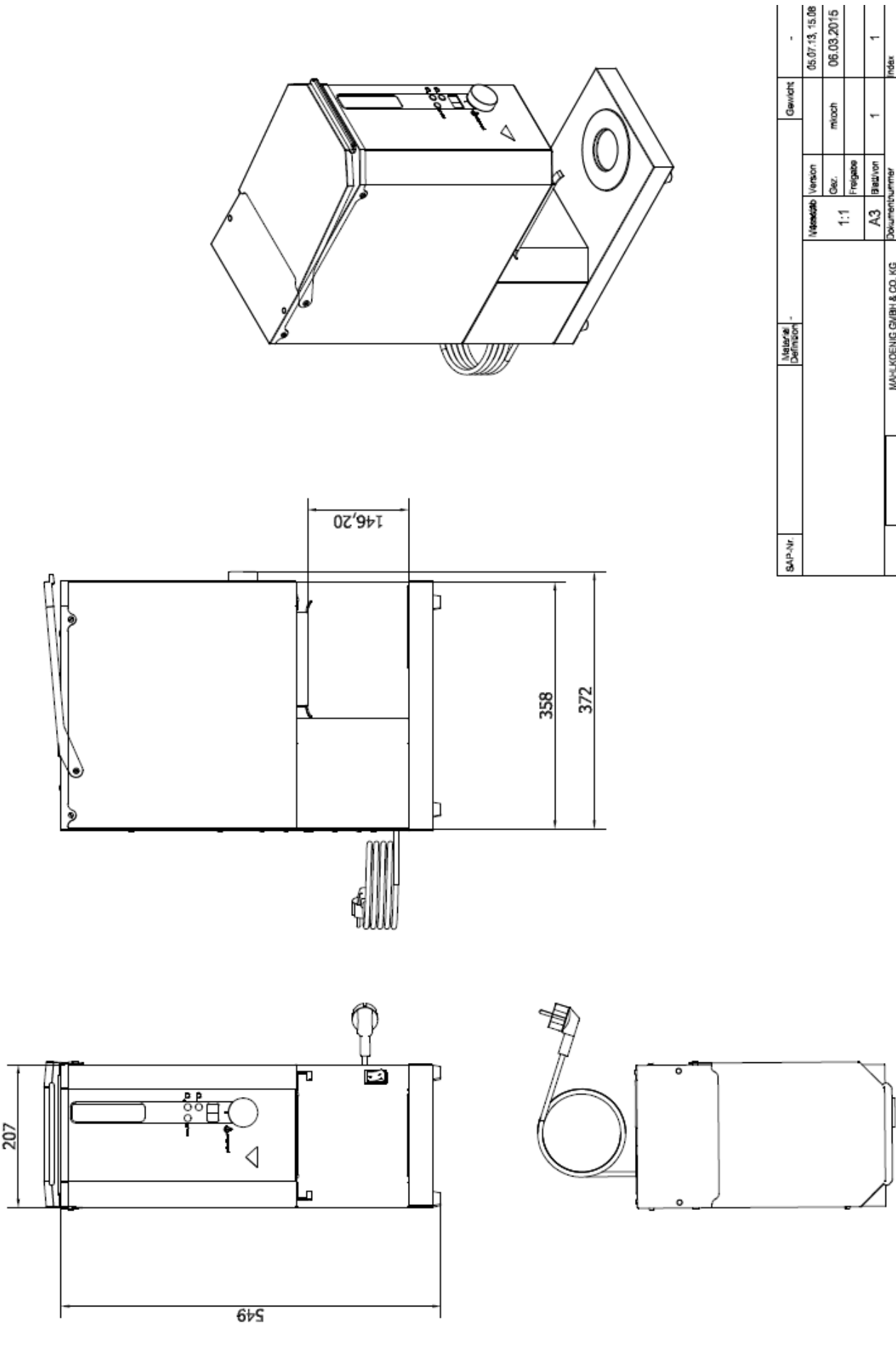
Part Number	Description
1500985	ELEMENT 2.8kW 230V
1600691	Thermistor Assembly
1502260	Solenoid 24VDC Basket Lock
1502158	Valve 12mm Bore 230V 30E Vent Vend
1801175	Sprayhead Disc 156mm with Grommets
1502151	VALVE DUMP 240Vac
1502171	Valve Inlet 90 Deg 220V - 2L/min
1800301	Gasket Sprayhead 186x146x6mm
1800690	Water Inlet Hose WRC
1501559A	Pump Topsflo 24V DC
1600201	P.C.B Jet Control
1600200C	P.C.B. Touchscreen 3.2inch Complete
1600205	SD Card
1501182	Cable Ribbon IDC 10way to 16Way 1m
1500840	CONTACTOR B&J 240V AC
1800770	O RING 4" RED SILICONE
2300024	Basket Complete 233x136mm
2300023	Basket Complete 233x136mm (with syphon)
2300277	Driptray Complete JET
1800402	Grommet Silicone 4mmID 7mmPanel dia
2301338	Probe Triple 120mm/65mm/no tab
1700169	Insulated Urn 6L
8000151	Filter Paper Jet 380-152 (52gsm)
8000240	Urn Cleanser (800g Tub)
2300029	Filter Paper Retainer - Brew Basket

16. DIMENSIONED DRAWINGS:



Product Numbers
 1000850
 1000851
 100850#
 100851#
 where # is a suffix of one
 or more alphanumeric
 characters

POURING PERFECTION <small>UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES: LINEAR: +/0.25mm</small>		DESCRIPTION: JET6 General Aspect Drawing DWG NO.: JET6-GA MATERIAL: mm	DRAWN BY: DW APPROVED BY: REVISION: A	CO: 146 SCALE: 1:1.5
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SAP-Nr.	Material Definition	Gewicht	Version		Index
			Messstab	05.07.13, 15.08	
			Ges.	06.03.2015	
			Freigabe		
			Blatt/nr	1	1
			Dokumentnummer		A
	MANUKOENIG GMBH & CO. KG TILSITER STRASSE 142 22047 HAMBURG GERMANY				
	Produktion / gips/ werk/ for/ an/ date/ abmonte/ in/ D/F/ 80/ 182/ 16				
IN ARBEIT - PRELIMINARY					

Marco Insulated Urn Dispenser 1700169 – Maintenance



WARNING – INSULATED URN DISPENSERS MAY BE HEAVY WHEN FILLED. CARE MUST BE TAKEN WHEN TRANSPORTING TO AVOID DROPPING OR SPILLING.

Use only coffee or water in the insulated urn dispenser. Do not use the insulated urn dispenser to dispense any other beverage. Preheating is recommended.

1. Place a clean and empty insulated urn dispenser centred under the basket of the coffee brewer.
2. Make sure the screen reads **READY TO BREW**.
3. Fill basket with the correct measure of ground coffee for the intended volume of brewed coffee.
4. Select the brew button that matches the brew volume and press to brew into the coffee dispenser.
5. Allow coffee in the basket to drip completely before removing the insulated urn dispenser.

SERVICING THE INSULATED URN DISPENSE R

1. Completely drain the unit of any coffee.
2. Allow insulated urn dispenser to cool.
3. Unscrew and remove the lid and tube assembly.

REPLACING THE GAUGE GLASS

The gauge glass can be removed for maintenance and cleaning. Refer to the illustration below for assembly sequence.

1. Unscrew the vented cap plug from the top of the gauge glass shield.
2. Carefully lift out the gauge glass tube from the shield and scrub inside the glass with a tube cleaning brush and mild detergent solution. Inspect the glass tube for cracks or chips. If broken, carefully remove all traces of glass and then insert a new gauge glass tube.
3. Check the top and bottom washers that make the tube water tight. Clean the washers. Make sure they are not leaking. Replace if necessary.
4. With the sight glass seated in the gauge glass shield, thread the cap plug onto the top of the shield. Do not over-tighten.

REMOVING THE BASE & BOTTOM COVER

To replace the silicone elbow fitting for repair or cleaning:

1. Remove the base assembly. Press down on the slide tab on the back side of the stand and lift off the insulated urn dispenser section.
2. Turn the insulated urn dispenser upside down and take off the plastic bottom cover. This will reveal the silicone elbow fitting.
3. Remove the wire hose clamps by squeezing the wire ears together. While holding the clamp open, loosen the soft silicone elbow from the liner drain pipe and the faucet shank and pull out elbow.
4. Check for leaks and replace with a new part if necessary.
5. Reverse these steps to assemble.



REMOVING THE FAUCET

The faucet will require periodic cleaning and maintenance.

1. Remove the faucet from the body of the insulated urn dispenser. Unscrew the large nut holding the faucet to the shank to take off faucet.
2. Disassemble the faucet. Unscrew the bonnet from the body of the faucet.
3. Remove the faucet handle by pressing inward on the seat cup (see photo) then unhooking the handle from the centre shaft.
4. The seat cup, centre shaft and spring will now separate from the bonnet. Clean these parts with a mild detergent solution.
5. While you have these parts for cleaning, check the seat cup for tearing or splitting. Make sure the faucet spring is free of corrosion. Replace with repair kit if necessary (item 13).





ASSEMBLY

Assemble the unit by reversing the steps for disassembly. Finger tighten only wing nut for faucet. Make sure clamps are fastened properly and silicone fittings are in good condition. Once assembled, check for leaks around the fitting and faucet.

CLEANING INSTRUCTIONS

CAUTION

Do not immerse in water.

Do not place in dishwasher.

Do not use harsh powders or cleansers containing chlorine.

These cleaning and sanitizing instructions are only a guide line to be used for the cleaning and sanitizing of the insulated urn dispenser. Your current in-house cleaning and sanitizing methods may be just as effective.

1. Daily – Rinse the unit between brews.

a. Rinse unit with hot water and empty completely.

b. Dry outside surfaces with a cleaning rag.

b. To preheat, fill the insulated urn dispenser with hot water and allow it to heat before emptying hot water. The empty server is now ready for brewing.

2. Cleaning the lid assembly.

a. Unscrew the top lid from the insulated urn dispenser and wash it in cleaning solution.

b. Using the supplied brush, clean inside the filling tube.

c. Rinse with clean water.

3. Cleaning and sanitizing body assembly.

a. Partially fill the insulated urn dispenser with cleaning solution. Use a sponge brush to thoroughly clean inside liner.

b. Rinse the unit using a fresh water rinse.

c. Pour sanitizing solution into the insulated urn dispenser. Allow to sit for 5 minutes then drain through the faucet.

d. Rinse by pouring water inside the unit, allowing rinse water to flow into a sink until water runs clear.

e. Wipe outside of unit with clean cloth moistened with a mild cleaning solution.

f. Place body assembly upside down on rack to thoroughly air dry.

4. Cleaning the faucet parts.

a. Remove faucet (see previous sections) and gauge glass from unit and brush out with cleaning solution.

b. Place in cleaning solution to soak for 5 minutes,

c. With the faucet removed, use the tube brush soaked in cleaning solution to insert through the faucet shank.

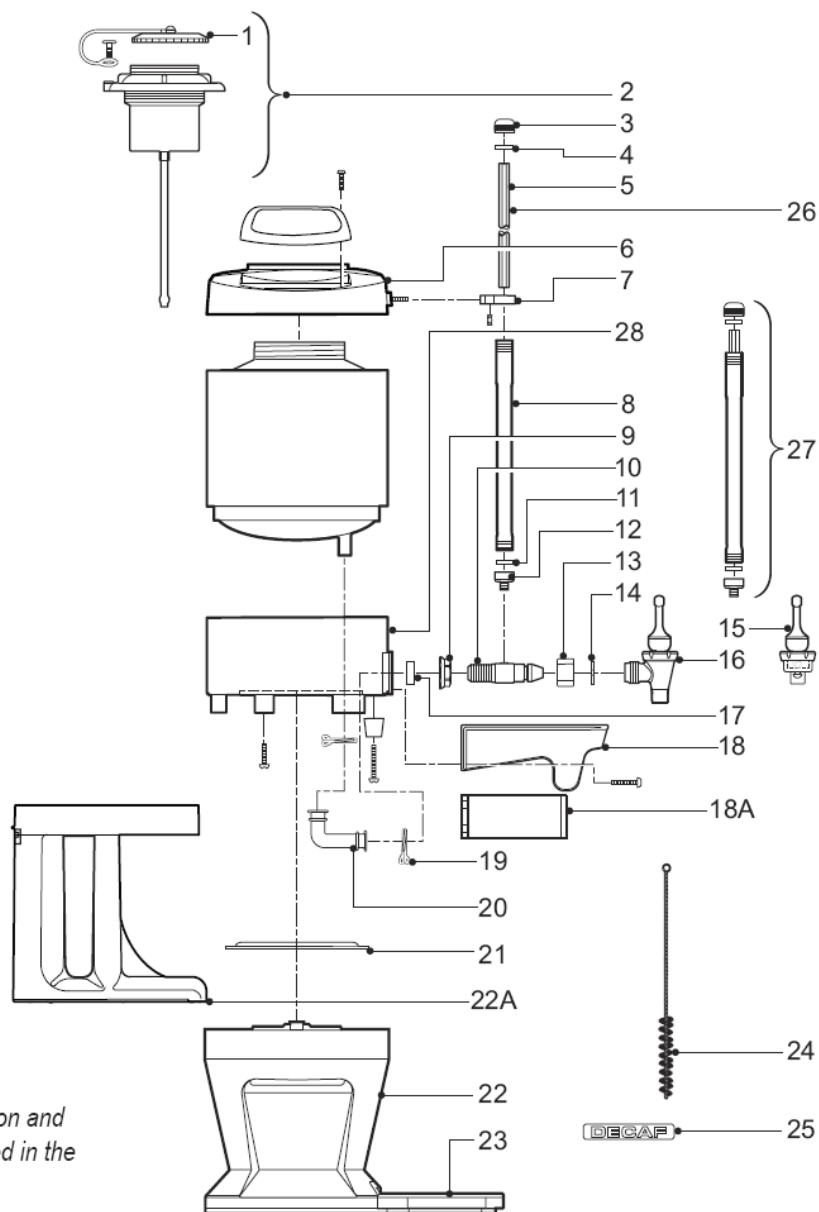
d. Rinse parts and dry.

5. Assemble parts that were removed.

URN CLEANERS

Marco Cafiza2 Urn Cleanser 900g

P/N: 8000235



Illustrated Parts List

All parts are common between the 1 gallon and 1½ gallon servers, except where indicated in the description (**Bold type**).

Index N°	Part N°	Description	Index N°	Part N°	Description
1	WC-37387	KIT, CAP, TETHER & SCREW TXSG	15	WC-3705	KIT, FAUCET REPAIR
2	WC-56025	LID ASSY, TLXSG15	16	WC-1841	FAUCET, ESP BLACK LOCKING
2A	WC-56024	LID ASSY, TLXGS01	17	WC-56026	WASHER, SLCN .45 ID X.79OD .14TH
3	WC-2001-101	SHIELD CAP, W/VENT 77-4 BLK CHR	18	WC-64079	GUARD, FAUCET TXSG ZINC
4	WC-2005	WASHER, SHIELD CAP 1/8"	18A	WC-64074	GUARD, FAUCET TXSG PLASTIC
5	WC-2027	GLASS, GAUGE 10" TLXSG15	19	WC-43091	CLAMP, WIRE HOSE
5A	WC-2025	GLASS, GAUGE 8" TLXSG10	20	WC-2456	ELBOW, SILICONE STRT SIDE SRV
6	WC-56028	TOP SERVER THREADED BLK	21	WC-58262	COVER, BOTTOM WHITE PLASTIC
7	WC-2063	BRACKET, GAGE GLASS RING	22	WC-56020	BASE ASSY SERVER STRT SIDE
8	WC-2012-101	SHIELD, GAGE GLASS 10" TLXSG15	22A	WC-56013	BASE ASSY, SERVER (OPTIONAL)
8A	WC-2010-101	SHIELD, GAGE GLASS 8" TLXSG10	23	WC-61689	DRIP, TRAY ASSEMBLY TLXS
9	WC-1939-101	NUT, FLANGED	24	WC-36076	BRUSH, GAGE GLASS
10	WC-1938	SHANK, PLASTIC	25	LABEL, DECAF	
11	WC-2006-101	WASHER, .188 X .188	26	WC-37396	KIT, GLASS GAUGE 10" 3PK TXSG15
12	WC-2004-101	SHIELD BASE GAGE GLASS BLACK	27	WC-37395	KIT, GAUGE ASSY 10" BLK TXSG15
13	WC-1903	NUT, UNION SHANK	28	WC-56030	BOTTOM, PLASTIC BLACK SERVER
14	WC-1906	C'RING .917 x .760 x .090			

Topic: Descale/Clean Water Tank		TB No.: 10020	Date: 28/05/14
Affected Machines:	All Water Boilers	Priority: Low	Created By: Raymond Daly
From Serial No.:	All Models Listed Above	Created For:	Customer/Field Service
From Date:	All Water Boilers	Page: 1/1	

How to Descale Water Tank and Clean Water Level Probes

It is a common occurrence for limescale to build up in the tank of a water boiler. The amount of limescale build up is relative to the water hardness in a particular area.

The most common error indication on a boiler is the Ready light giving two red flashes between pauses, indicating that water can't be seen in the tank. This can be caused by a number of issues, most commonly, limescale or film build up on the water level probes.

Descaling Procedure:

- Isolate machine from power supply.
- Isolate machine from water supply.
- ALLOW TO COOL COMPLETELY!
- Drain water from machine.
- Remove all lids.
- Remove as much scale as possible by hand, paying particular attention to level probes (White plastic with steel tab). Be very careful not to damage any attachments.
- Use ScaleKleen, Marco part No. 8000270 or similar. Follow instructions carefully.
- Thoroughly clean and flush the machine before re-use.
- Follow installation and first time operation instructions

NB: Always clean the water level probes after descaling and rinsing the tank.

To Clean Water Level Probes:

- Turn off unit at wall socket or unplug from wall socket
- Remove top cover from boiler
- Remove tank lid from tank
- Identify water level probes – flat metal tabs inside water tank, normally 2 or 3 probes
- Dispense as much water from unit as possible using tap
- Thoroughly clean probes with ScotchBrite or scouring pad
- Replace tank lid and top cover
- Reconnect power to boiler and operate as normal

