



Compact Technical Manual




Vernacare

www.vernacare.com

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Declaration of Conformity

In accordance with EN ISO / IEC 17050-1:2010

Object of the declaration:

Product	Medical pulp disposal unit
Model/type	Vernacare Compact
Batch/serial no.	5010100001 onwards 5020100001 onwards
Manufacturer	Vernacare Ltd
Address	Folds Road, Bolton BL1 2TX. United Kingdom

This declaration is issued under the sole responsibility of the manufacturer

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

2006/42/EC	The Machinery Directive
2014/30/EU	The Electromagnetic Compatibility Directive
2011/65/EU	The Restriction of Hazardous Substances Directive

Conformity is shown by compliance with the applicable requirements of the following documents:

Reference & Date	Title
EN ISO 12100:2010	Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)

Signed for and on behalf of:	Vernacare Ltd
Place of issue:	Folds Road, Bolton BL1 2TX. UK
Date of issue:	6th June 2017
Name:	Matthew Miller
Position:	CEO

Signature:



The technical documentation for the machinery is available from:

Name:	Vernacare Ltd
Address:	Folds Road, Bolton BL1 2TX. United Kingdom

1. Warranty Information

1.1. Warranty terms

- I. The warranty is for 12 months from the date of commissioning or 18 months from the date of delivery, whichever is the shortest period.
- II. The warranty will cover parts and labour.
- III. The warranty will not cover customer damage or abuse.
- IV. Warranty requests should be submitted in writing, quoting the machine number, date of commissioning and the machine fault.
- V. The warranty will not affect your statutory rights, or rights given in the company's Terms and Conditions of Sale.
- VI. Extended warranties are available. Contact Vernacare for further details.

1.2. Conditions of warranty

- I. The Compact must be installed to the instructions provided in this technical manual.
- II. The Compact must be commissioned by a person authorised by Vernacare, failure to do so may invalidate the warranty.
- III. Unauthorised modifications may invalidate the warranty if not carried out by a person authorised by Vernacare.

The above warranty details should be read in conjunction with the Company Terms and Conditions of Sale, copies of which are included with your invoice, or available upon request from Vernacare:

Telephone: +44(0)1204 555988

Fax: +44(0)1204 523595

E-mail: service@vernacare.com

Alternatively you can contact your local distributor for further information.

1.3. Service Contracts

To ensure continued reliability and performance, service contracts are available.

All warranty and service contract work will be carried out by Vernacare Technical Services, a division of Vernacare Limited OR in the case of an overseas installation, warranty and service contract work will be carried out by a Vernacare approved technician.

2. Specifications

2.1. Capacities and usage

The “Vernacare Compact” macerator will dispose of a single “Vernacare” disposable product such as a bedpan liner, bottle etc. together with its contents in a single cycle.

Do not stack products inside each other or attempt to dispose of more than one item in a single cycle as this will impair the effective operation of the machine and in severe cases, may cause the motor to stall. It is considered good practice to operate the machine each time a product is placed into the machine.

Do not place string, wipes, plastic or metal items inside the machine as these may damage components.

Note: Vernacare “Senset” wipes can be disposed of in the Compact macerator.

2.2. Handling

The weight of the “Vernacare Compact” complete with pallet and packaging is 58 kg (machine only 50 kg). The “Vernacare Compact” should be moved to the point of installation by fork, pallet or sack truck whilst still attached to the pallet provided.

2.3. Electrical specification

The machine is supplied with a 3-meter length of 1.5mm flex, which shall be connected to either:

230 Volt Machine – 10 Amp MCB to BS EN60898 Type C or alternatively fused 10 Amp to BS EN60269-1. An appropriate I.E.C Approved 10 Amp isolator shall be installed in both cases.

110 Volt Machine – 16 Amp MCB to BS EN60898 Type C or alternatively fused 16 Amp to BS EN60269-1. An appropriate I.E.C Approved 16 Amp isolator shall be installed in both cases.

It is recommended that the disposal unit is supplied by a dedicated circuit.

Where supplementary protection is provided by an RCD/RCBO, this should be rated at 30mA.

Note: The machine *should not* be switched off at the mains supply in mid-cycle except in case of emergency, as this will impair the effective operation of the machine and may cause damage to the components

2.4. Motor

0.25 KW; 3 Phase; 220-240v 50Hz/ 380-420v 50Hz; IP55; D63 frame size. Rating at peak load 4.57 amps (nominal).

2.5. Inverter

AC inverter with either 110v or 230v supply voltage, 230v motor output and utilising current monitoring.

2.6. Pump

0.27 kW; 24vdc; 50 cycles. Protected by a 5 amp fuse.

2.7. Water requirements

Inlet supply: Cold water **ONLY** with flow rate of 4 l/min minimum. Nominal overall usage; 12 litres (+/- 10%) per cycle.

$\frac{3}{4}$ " BSP connections (male)

2.8. Drainage

A 1 $\frac{1}{2}$ " inch/ 40mm drain pipe to be connected either directly, or via a swept bend, to a standard 1 $\frac{1}{2}$ "in/40mm drain pipe with a 1 in 25 or suitable fall into a soil drain.

3. General Description

3.1. General description

The Vernacare Compact disposal unit is designed to dispose of Vernacare single use products, human waste, toilet tissue and maceratable wipes. No other materials should be placed in the machine. Items to be disposed of are placed in the hopper; the disposal cycle breaks down the contents of the hopper and disperses it in water to form a fine slurry. During the cycle the contents of the hopper are sealed inside the machine by the lid seal and the drain valve. At the end of the cycle the slurry is discharged to the drains by opening the drain valve.

The lid is opened and closed by use of a foot sensor, the operator places a foot below the machine on the spot of light projected on the floor to open or close the lid. There are two modes of operation: as standard the machine will be in auto-start mode in which case the disposal cycle will start automatically each time the lid is closed; in manual mode the disposal cycle is started by pressing the start button.

The disposal cycle lasts around 3 minutes during which time water is added to the hopper and the waste materials are broken down by the cutter motor blades. At the end of the cycle the drain valve opens to allow the contents to drain and the inside of the machine is rinsed with clean water and deodoriser is added.

3.2. Safety related control functions

The cutter blades in the base of the hopper are potentially hazardous. To prevent operators or maintainers being exposed to the hazard of moving blades there is a safety control system. The control system will not allow the motor to be energised until the lid is closed and locked. There is a magnetic sensor that switches when the lid is in the closed position and a micro-switch that switches when the lid lock is in the locked position. There is a second independent control which inhibits the inverter (variable frequency drive) output to the motor. Interfering with or attempting to defeat any of these safety related components is potentially dangerous. Any work on the control system should only be carried out by an authorised Vernacare technician.

3.3. Compact Normal Cycle Sequence

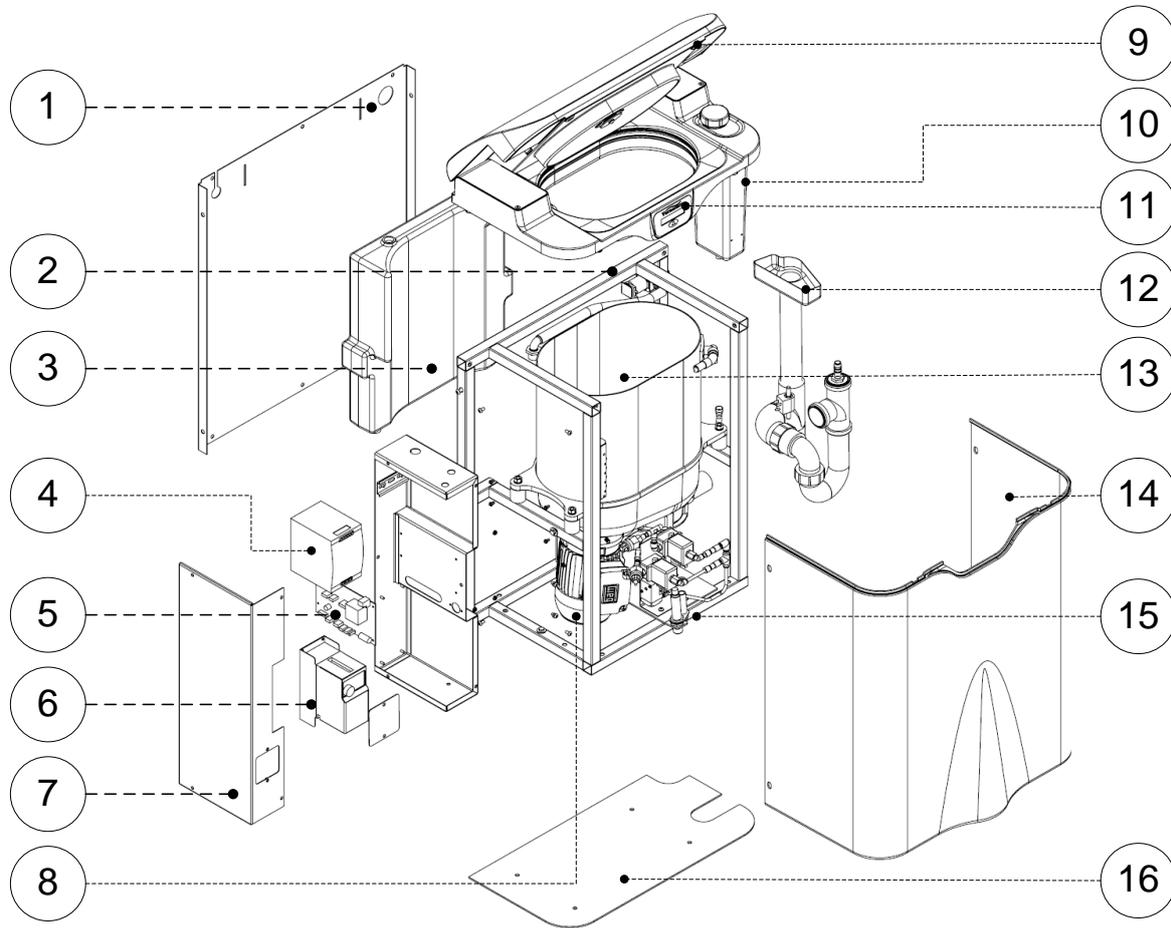
Start Button Pressed

- Lid Interlock Activated
- Air Pump On- Drain Valve Closed and Lid Seal On
- Water Pump On
- Water Pump Off
- Motor On
- Drain Valve Vented & Opened
- Motor Off
- Deodoriser Pump On (for 2 seconds)
- Motor On
- Water Pump On- (for Cleaning)
- Lid Seal Vented

Cycle Completed

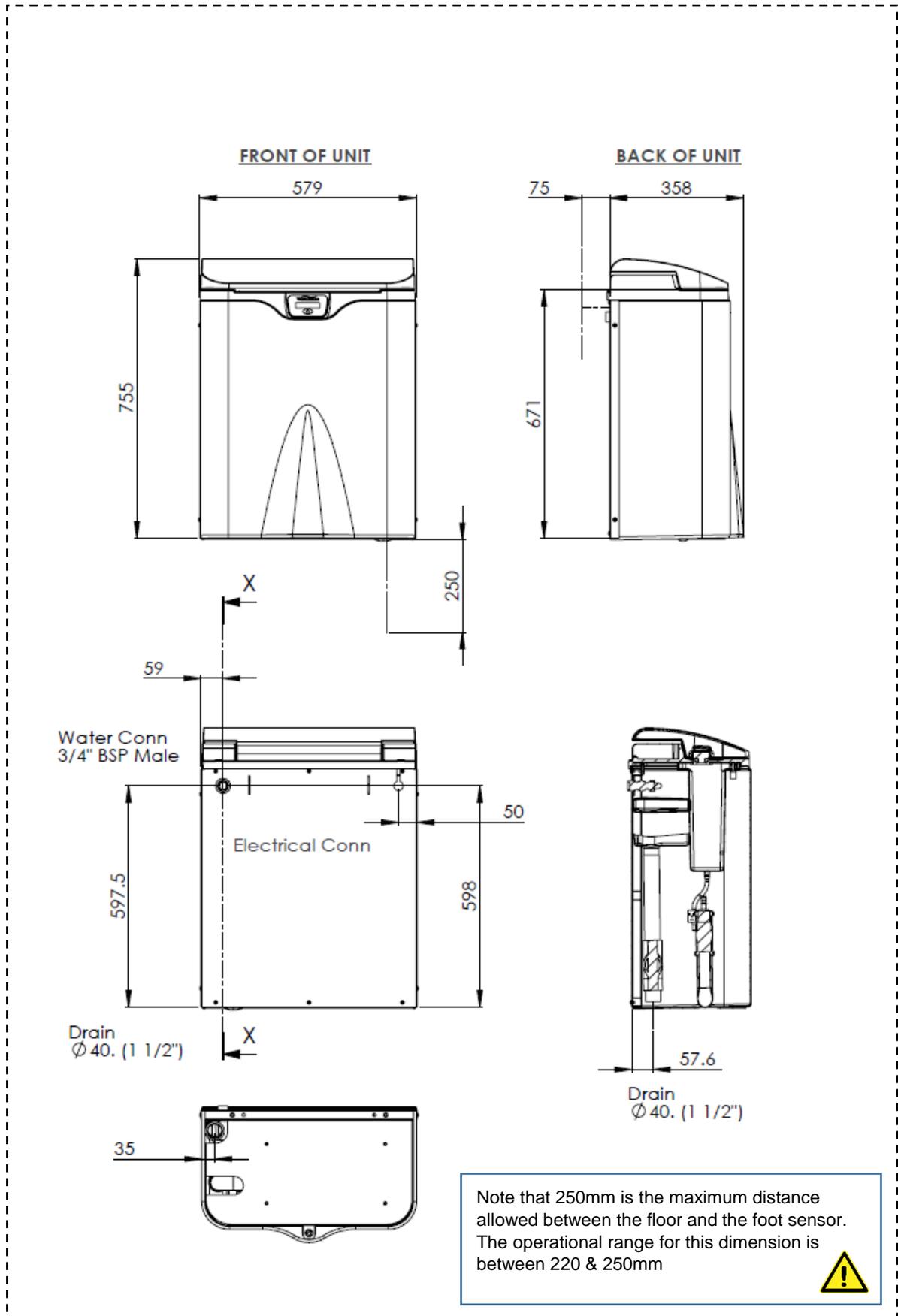
3.4. General Assembly

This image is for familiarisation only, to see full detail on subassemblies and part numbers please view the 'Subassemblies and Spares' section (5).



REF	DESCRIPTION
1	Back Panel
2	Frame
3	Water Tank
4	Power Supply Unit
5	PCB
6	Mitsubishi Inverter
7	Electrical Cabinet
8	3 Phase AC Motor
9	Lid Assembly
10	Deodoriser Tank
11	Display
12	Overflow & Assembly
13	Hopper
14	Front Panel
15	Foot Sensor
16	Base Panel

3.5. Dimensions of the Vernacare Compact



4. Installation / Commissioning

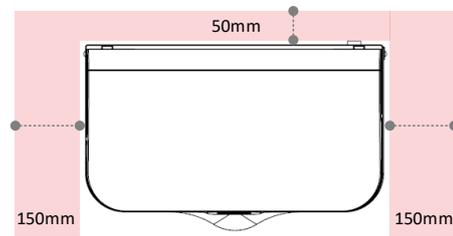
4.1. Installation Instructions

Note: Installation of this equipment should only be carried out by a suitable qualified person.

4.1.1. General Installation Information

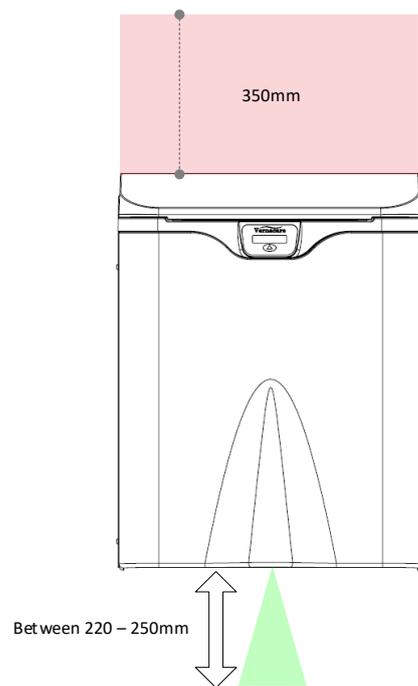
SIDE & REAR MACHINE CLEARANCE

- A minimum of 50mm clearance is required at the back of the machine. This allows for access to the water inlet and electrical connection at the rear of the machine.
- A minimum of 150mm clearance is required either side of the Compact. This allows tool access during adding/removing of the front panel. Servicing and maintenance procedures may also be carried out without having to move the machine.



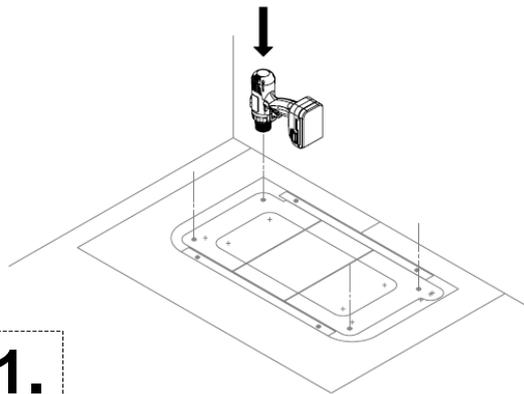
LID CLEARANCE & MACHINE HEIGHT

- A minimum of 350mm clearance is required above the Compact lid. Items fitted to the wall directly above the machine may restrict the lid from opening and operating effectively.
- For the foot sensor to operate the machine MUST measure between 220 & 250mm from the floor to the sensor as shown, this is the effective operation range of the ultrasonic sensor.
- If there are circumstances preventing the machine from being fitted at this height it may be possible to have a service engineer teach the sensor a new nominal position, however this should be avoided if possible.



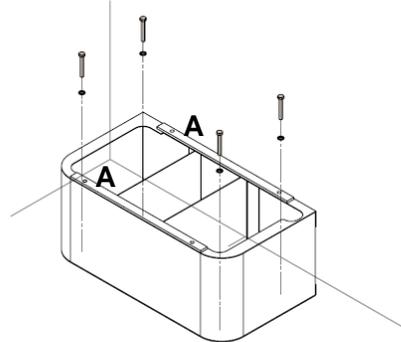
4.1.2. Plinth

- Place the provided template on the floor in the desired Compact location.
- Drill the floor mounting holes marked out on the template as shown.
- These holes accommodate M8 size bolts.



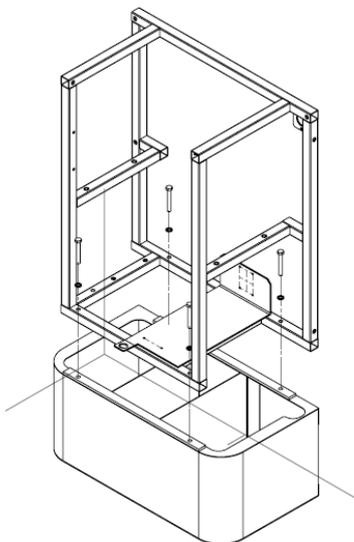
1.

- Remove the template and place the plinth onto the floor ensuring the mounting holes line-up with those on the plinth.
- Fasten the plinth to the floor. The fasteners are not supplied or specified by Vernacare as building materials vary upon location.
- Add the 2 rubber strips to the plinth as highlighted (A) (These may already be fitted to the base of the machine, in this case proceed to stage 3)



2.

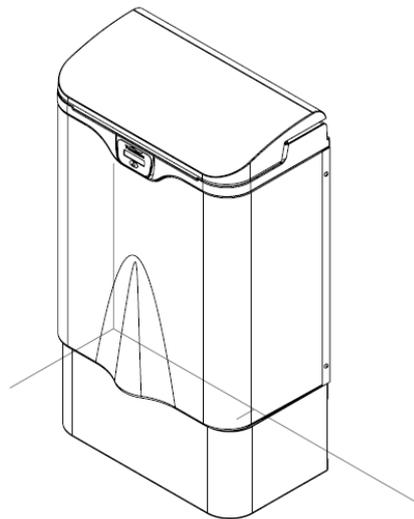
- Remove the front cover from the machine and place it onto the plinth.
- Note that the Compact exceeds 50Kg in weight and is too heavy for a single person to lift without an aid.
- Use the provided M6 x 40 bolts and washers to fasten the frame to the plinth as shown below.



3.



- The machine is now installed and the front cover can be fitted.
- Please note that Vernacare recommends bolting the plinth to the floor, if this and other mounting options are not possible please ensure the unit is secured to the wall to prevent tipping.



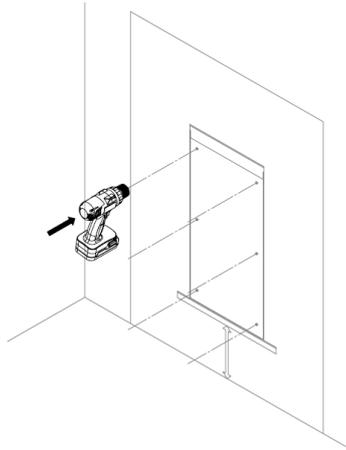
4.

4.1.3. Wall Bracket (for solid walls)

- Place the template provided in the desired Compact location.
- Use the identified holes as a drilling template for your wall fixings.

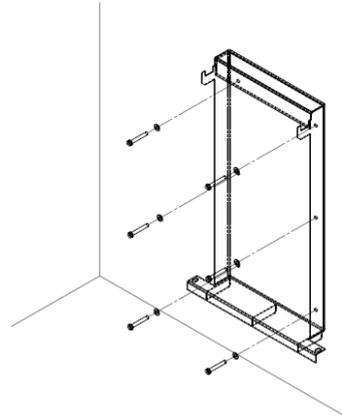
!IMPORTANT!

If your unit requires a support stand, please follow the instructions on the next page.



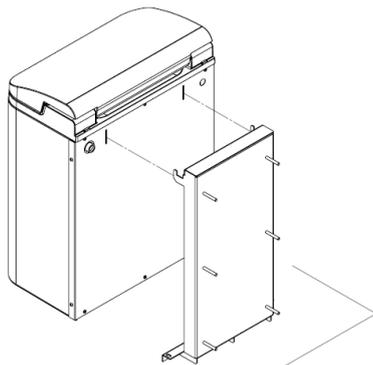
1.

- Use the 6 holes to secure the bracket to the wall.
- The holes suit M8 size fasteners, these are not supplied or specified by Vernacare as building materials vary upon location.



2.

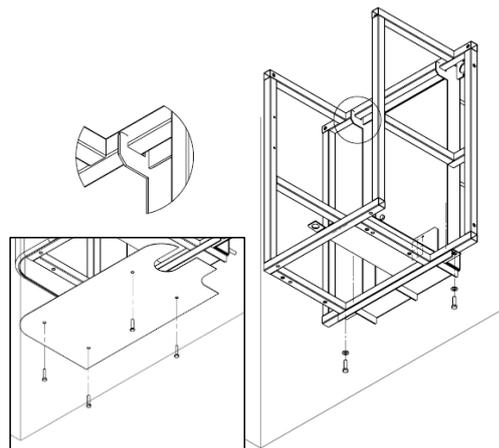
- Remove the front cover from the machine.
- Remove the 2 rubber strips from the bottom of the frame.
- The Compact can now be hung onto the wall bracket, the 2 hooks on the bracket locate within the slits on the unit back panel as shown.
- Note that the Compact exceeds 50Kg in weight and is too heavy for a single person to lift without an aid.



3.



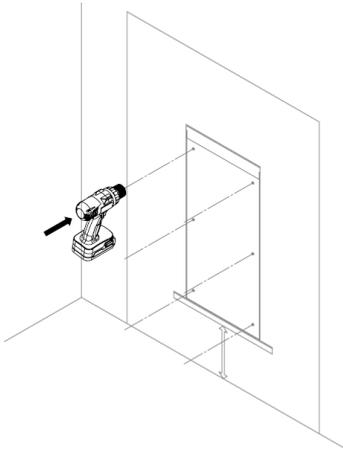
- Check that the frame is properly seated within the hooks as shown.
- Use the 2 provided M8 x 25 bolts and washers to fasten the Compact to the bracket as shown.
- Fasten the base plate to the machine (shown bottom left) using the 4 M6 x 15 screws.
- Fit the front cover back onto the machine, the installation is now complete.



4.

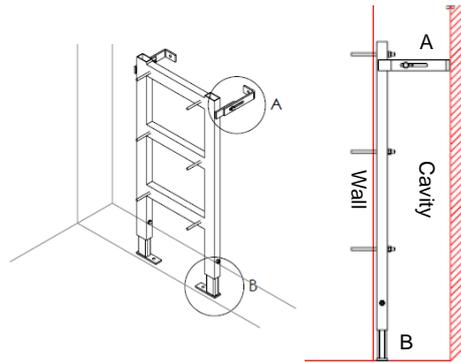
4.1.4. Wall Bracket & Support Stand (for hollow walls)

- Place the template provided in the desired Compact location.
- Use the identified holes as a drilling template for your wall fixings.



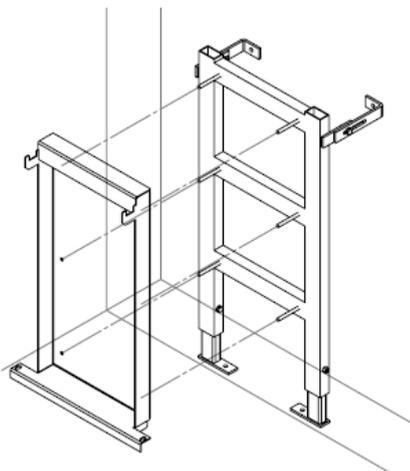
1.

- Place the support stand in the wall cavity with the studs located through the drilled holes.
- Adjust the sliding brackets (A) to come into contact with the back of the wall and secure.
- Adjust the feet (B) to come into contact with the floor and secure.
- The 4 mounting points (x2 'A' wall & x2 'B' floor) fit M8 size fasteners, these are not supplied or specified by Vernacare as building materials vary upon location.



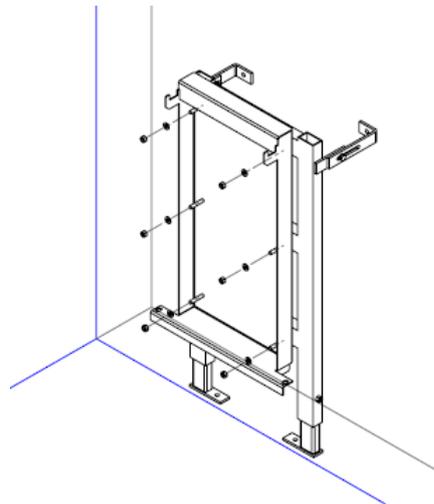
2.

- Fit the wall bracket onto the support stand as shown, this should locate itself onto the 6 M8 studs.



3.

- Use the M8 nuts and washers provided to firmly secure the wall bracket to the support stand.
- Please view steps 3 & 4 on the previous page for instructions on fitting a Compact to the wall bracket.



4.

4.2. Siting and fixing

The Vernacare Compact disposal unit should be positioned adjacent to the following:

- a) A suitable power supply point.
- b) An adequate water supply line.
- c) A suitable drainage connection.

The machine must be securely fixed using the recommended installation methods as shown in section 4.1.

Ensure that adequate space is maintained at each side of the Macerator to allow for access. Vernacare recommend a gap of 150 - 200mm per side and a minimum of 50mm away from the wall at the back.

Check that the unit is level in both directions.

230 Volt Machine – 10 Amp MCB to BS EN60898 Type C or alternatively fused 10 Amp to I.E.C 60269-4. An appropriate I.E.C Approved 10 Amp isolator shall be installed in both cases.

110 Volt Machine – 16 Amp MCB to BS EN60898 Type C or alternatively fused 16 Amp to I.E.C 60269-4. An appropriate I.E.C Approved 16 Amp isolator shall be installed in both cases.

Where supplementary protection is provided by an RCD/RCBO, this should be rated at 30 mA.

For all installations, an I.E.E. approved disconnection device must be fitted to the final installation. This device shall be positioned in close proximity to the Compact and within easy reach of the operator & shall also be clearly marked as being the disconnecting device for the machine.

4.3. Plumbing

4.3.1. Water supply

The machine should be connected to a suitable cold water supply as follows:-

The connection to the machine water tank is made at the rear of the machine on the top right hand side corner of the machine. It is a standard connection to a $\frac{3}{4}$ " BSP male fitting. Flow rate should be 4 litres per minute minimum.

Note: The inlet flow valve is supplied already fitted with a flow restrictor in place. The restrictor should be left in place on tank fed installations with heads above 50ft or mains fed installations with pressures above 1.5 bar (25psi). In all other circumstances the flow restrictor is not required.

4.3.2. Drain connection

The drain is connected by inserting a 40mm pipe into the blue flexible outlet and fitting & tightening the clip provided. Please note there is a P trap integrated into the machine so an external one is not required.

Points to Watch

- Ensure that the supply line to the unit is at no point less than 15mm - larger if available head is low.
- Ensure that the water supply cannot be starved by any other fittings.
- Fit an easily accessible, full way isolating valve close to the unit.
- For installations with dirty water supplies it is recommended that an in-line filter is fitted.
- Ensure that the route taken to soil drain is the shortest, with minimum number of bends.
If necessary, use long radius or 'swept' bends - never short or 90' elbows.
- The waste must be run separately to the soil stack or drain.
- Ensure that there is a fall of a minimum of 1 in 25 or a sufficient fall to maintain a self-cleansing velocity.
- Provide easy access for roding.
- Ensure a clean run inside the pipework - leave no burrs or reducing shoulders.
- With plastic pipework, ensure that there is no reduction in the bore size and that there is adequate support for horizontal runs to prevent sagging. Remember, ceiling voids can get very warm.
- Avoid running the drain line near or across hot water pipes.
- Anti-syphon precautions should be in line with general practice.

4.4. Electrical

4.4.1. Single-phase electrical system (230v, 1 Ph, 50 HZ) (110v, 1 ph, 60 HZ)

The machine is supplied with a 3 metre length of 1.5mm flex to BS6500 which shall be connected to:

- 230 Volt Machine – 10 Amp MCB to BS EN60898 Type C or fused 10 Amp to IEC 60269.
- 110 Volt Machine – 16 Amp MCB to BS EN60898 Type C or fused 16 Amp to IEC 60269.

Notes:

1. All electrical installation to comply with current I.E.E. regulations.
2. Mains supplies to be protected by:
1 Phase 230v 10 Amp approved I.E.C. fuse.
1 Phase 110v..... 16 Amp approved I.E.C. fuse.
3. For all installations, an I.E.E. approved disconnection device **must** be fitted to the final installation. This device shall be positioned in close proximity to the Compact and within easy reach of the operator & shall also be clearly marked as being the disconnecting device for the machine.

4.4.2. Back-up generator tests / mains electrical supply surges.

Damage to internal electrical components of the Compact macerator can occur as a result of voltage surges / spikes occurring in the electrical supply to the machine. The likelihood of such damage occurring is increased when frequent testing of back-up electrical supplies are carried out.

To prevent such damage, Vernacare recommends that transient voltage suppressors (in accordance with IEC class 3 surge protection) be installed in the electrical supply to the machine.

4.5. Environment

Indoor use only. Altitudes up to 2000m. Temperatures 5°C to 40°C.

Maximum relative humidity 80% for temperatures up to 31°C, decreasing linearly to 50% relative humidity at 40°C.

Mains supply voltage fluctuations not to exceed +/- 10% of nominal voltage.

4.6. Commissioning

After installation, to ensure warranty validity the machine should be commissioned by a Vernacare approved technician. The machine should not be run until after this check has been done.

Important

The machine MUST be bolted down before use. The machine should be run once - empty - to prime the pipework.

Note: For warranty, service or repair please quote the machine serial number which can be found clearly marked on the rating plate which is positioned on the RH side, bottom front of the machine.

4.7. Warning labels and icons – explanations



Please refer to the technical manual prior to installation, maintenance or operation of this equipment.



Symbol indicates presence of 230/110 V 50/60 Hz



Start Cycle – Press this button to start the machine. An auto-start option is also available. Contact Vernacare for more information

4.8. Cycle Counter

At the end of each cycle the LCD screen will briefly display the TOTAL cycle count for the machine and also the SERVICE count which is the number of cycles since the machine was last serviced.

The TOTAL cycle display counts every machine cycle and is not resettable (unless the machine is reprogrammed).

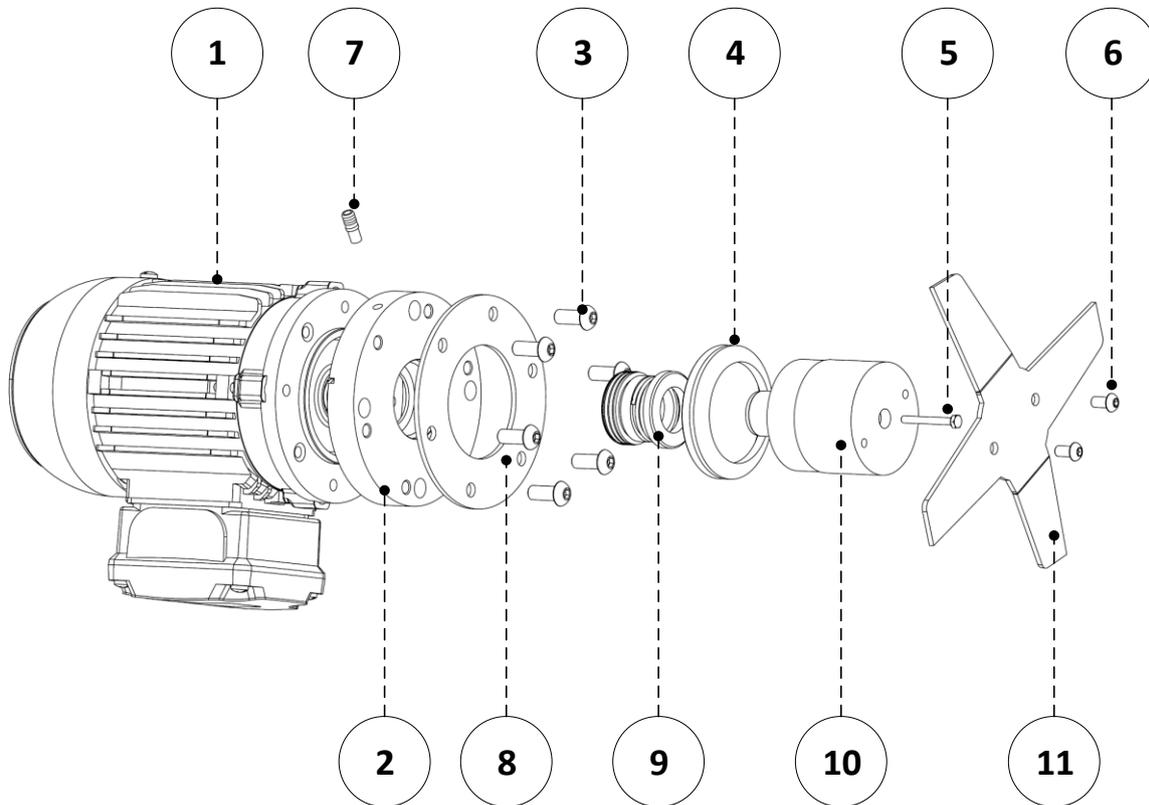
The SERVICE count is reset by the engineer when the machine is serviced. The service count will also trigger a “Service” message on the LCD display once 5,000 cycles have been completed since the last service visit.

4.9. Display screen icons and warning messages – explanations

	<p>The machine has started and the cycle has commenced. A progress bar will be displayed.</p>		<p>An interruption to the electrical supply has occurred during the cycle.</p>
	<p>The cycle has ended and is now ready to re-use.</p>		<p>The hopper has not drained properly, the outlet may be blocked.</p>
	<p>The inverter has detected an overload due to a blockage of the cutter blades.</p>		<p>A fault/obstruction is preventing the lid from opening.</p>
	<p>The pressure sensor has detected a pressure rise in the hopper due to a blocked drain outlet.</p>		<p>A fault/obstruction is preventing the lid from closing.</p>
	<p>There is insufficient water within the water tank to allow a cycle to commence.</p>		<p>The inflatable seal has failed to operate correctly.</p>
	<p>The deodoriser level is low and should be refilled at the next opportunity. The machine will still run.</p>		<p>The lid interlock has failed to operate effectively.</p>
	<p>The drain (diaphragm) valve has failed to operate effectively.</p>		<p>The lid is unable to open or close.</p>

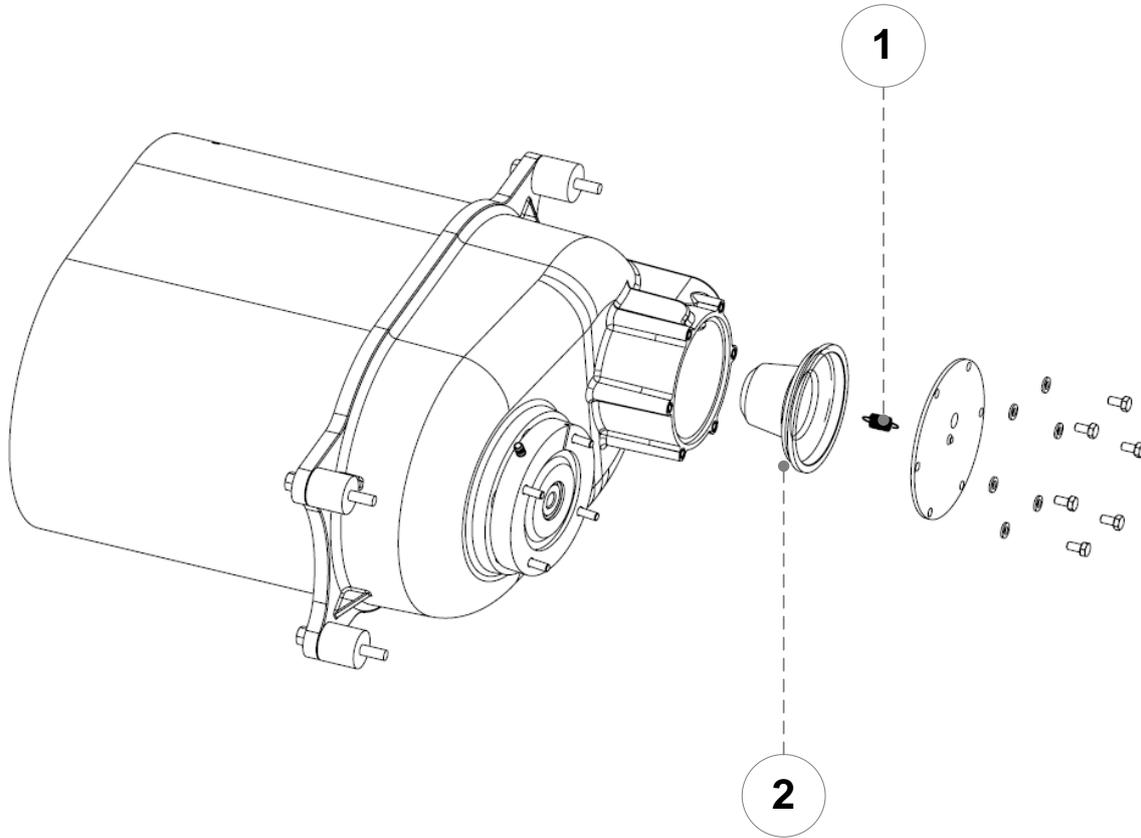
5. Subassemblies & Spares

5.1. Motor Assembly



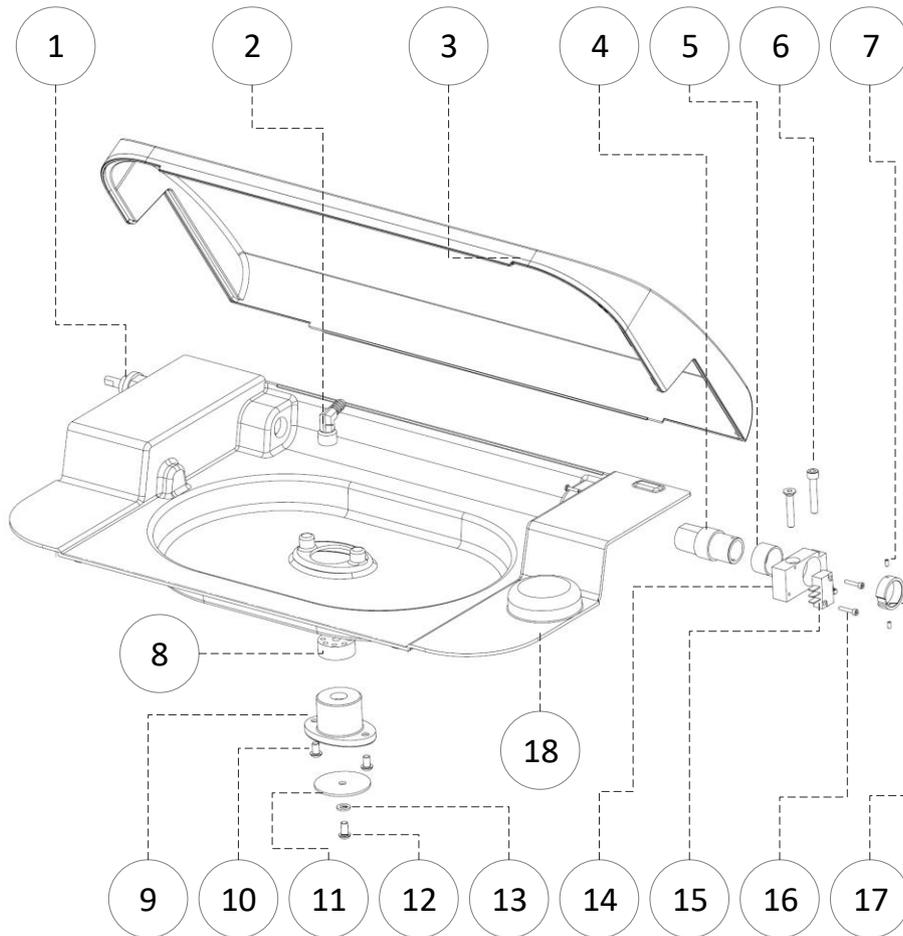
REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		9210301	
1	Compact Motor AM63 0.25KW B14		9210121
2	Motor Mounting Flange		9210024
3	M8 x 35 Button Hd Screw (x6)		9210077
4	'V' Seal		9753000
5	M4 x 45 Hex Hd Screw (x1)		9210094
	M4 Nordlock Washer (x1)		9210060
6	M6 x 12 Button Hd Screw (x2)		9210073
	M6 Nordlock Washer (x2)		9210071
7	Barbed Seal Flush Fitting		9750100
8	Motor Gasket		9220077
9	Mechanical Seal		9210092
10	Cutter Adapter Coupling		9210026
11	Cutter Blade		9210033

5.2. Diaphragm Assembly



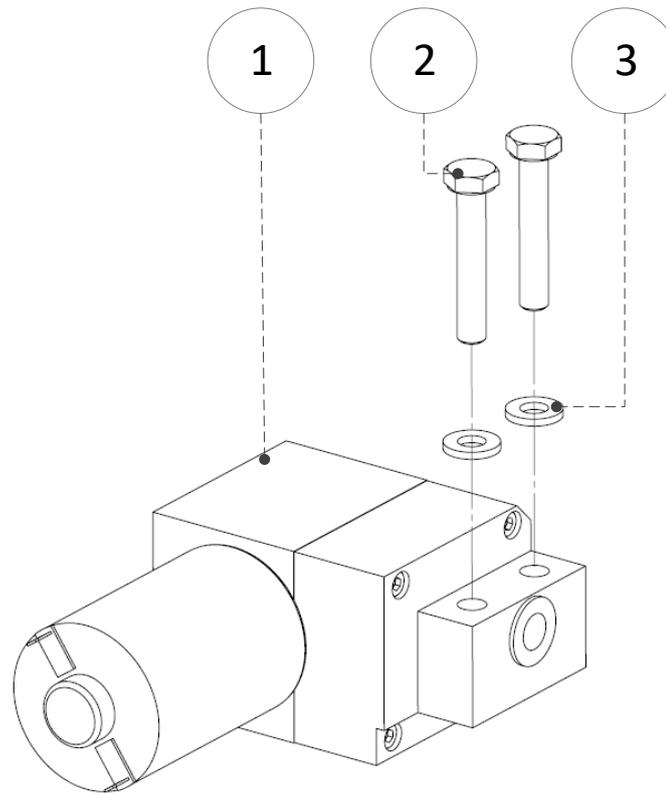
REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		9210306	
1	Diaphragm Spring		9210055
2	Diaphragm		9210091

5.3. Lid Assembly



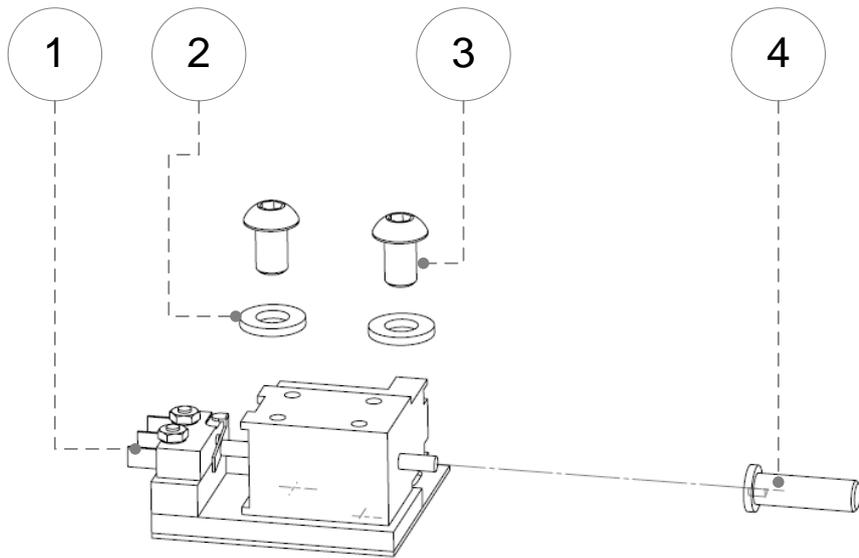
REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		9210303	
1	Drive Motor Shaft		9210018
2	Hose Tail Elbow		9210163
3	Lid Top Moulding		9210003
4	Idle Shaft		9210053
5	Idle Shaft Bearing		9210054
6	M6 x 35 Hex Hd Screw (x2)		9210079
7	M3 x 6 Grub Screw (x2)		9210108
8	Spray Nozzle		9210017
9	Spray Washer Housing		9210016
10	M6 x 20 Cap Hd Screws (x2)		9210076
11	Spray Washer		9210028
12	M8 x 12 Button Hd Screw		9210080
13	M8 Spring Washer		9750033
14	Idle Shaft Hinge Block		9210023
15	Limit Switch		9210175
16	M3 x 25 Cap Head Screw (x2)		9210101
17	Micro Switch Cam Ring		9210009
18	Lid Bottom Moulding		9210002

5.4. Lid Motor Assembly



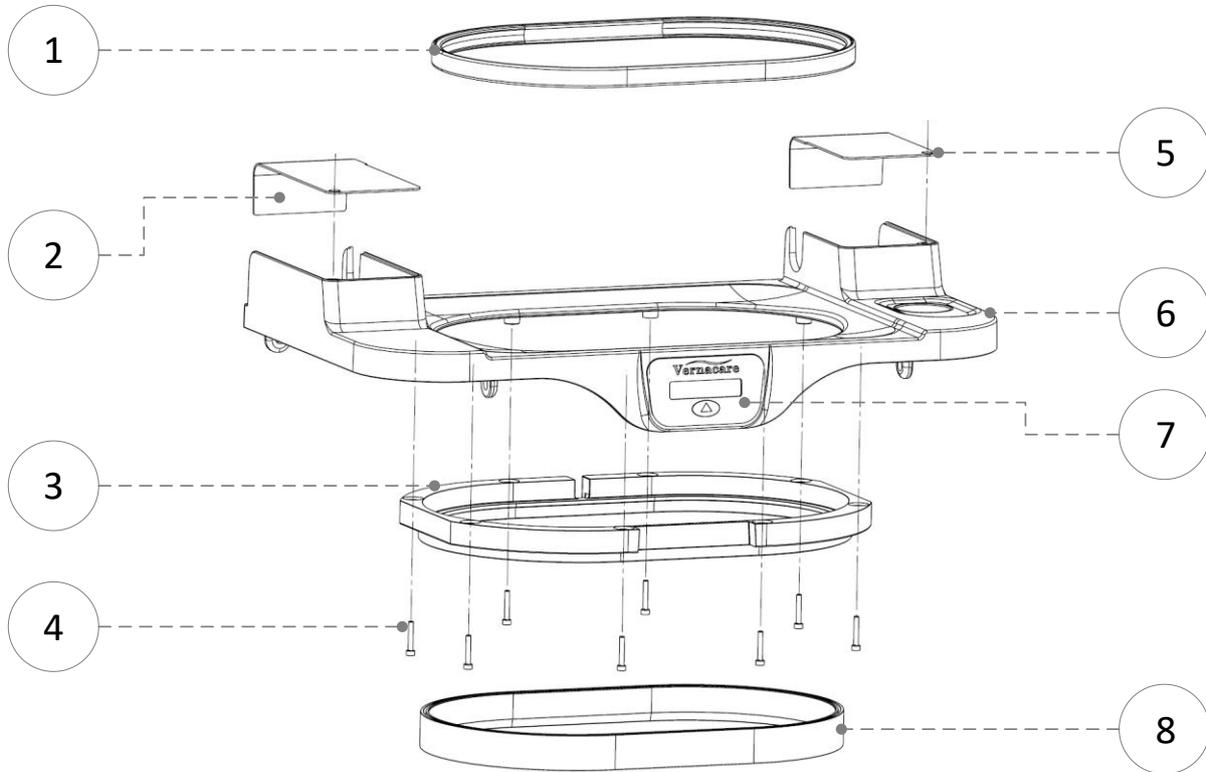
KIT	REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
			9210304	
	1	EMS Lid Motor		9210134
	2	M6 x 35 Hex Hd Screws (x2)		9210079
	3	M6 Plain Washers (x2)		9750024

5.5. Interlock Assembly



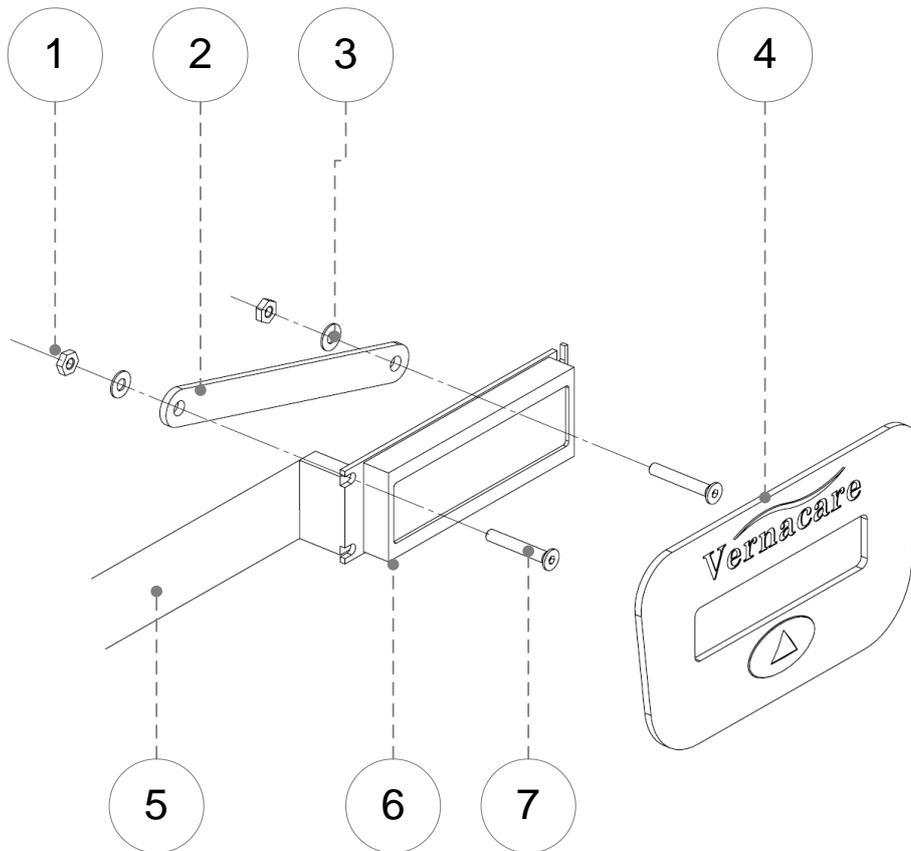
REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		9210305	
1	Interlock Solenoid Assembly		9210135
2	M5 Plain Washer (x2)		9750011
3	M5 x 8 Pan Posi Hd Screw (x2)		9210105
4	Interlock Pin		9210021

5.6. Top Cover Assembly



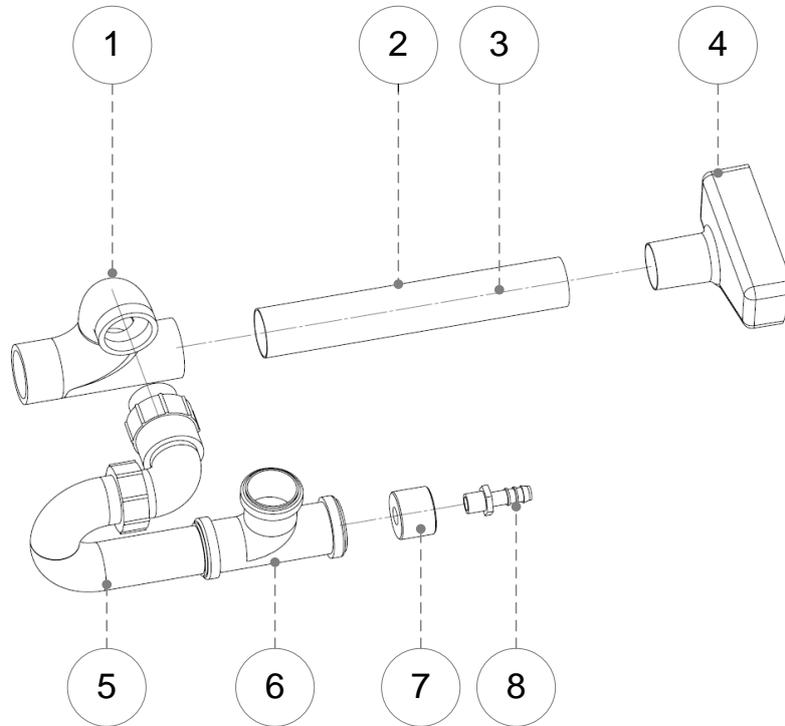
REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		9210302	
1	Inflatable Lid Seal		9210099
2	Lid Motor Cover Panel (with captive screw)		9210047
3	Clamp Ring		9210001
4	M4 x 20 Cap Hd Screw (x8)		9210063
5	Hose Cover Panel (with captive screw)		9210046
6	Top Cover		9210000
7	Display Assembly (see 5.7 for full detail)	9210307	
8	Seal		9210097

5.7. LCD Display Assembly



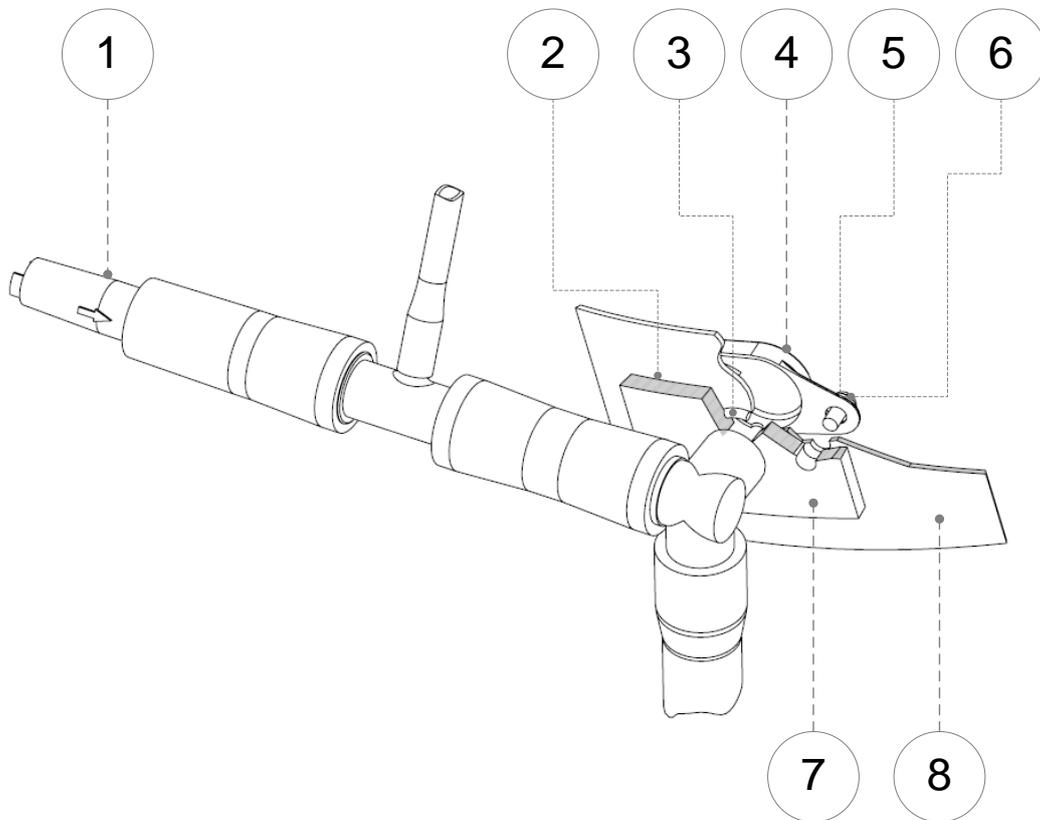
REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		9210307	
1	M3 Nut (x2)		9750062
2	Display Strap		9210184
3	M3 Plain Washer (x2)		9210056
4	Start Switch Membrane		9210031
5	Ribbon Cable		N/A
6	LCD Display		N/A
7	M3 x 16 CSK Screw (x2)		9210058

5.8. Overflow Assembly



REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		9210310	
1	Moulded Elbow		9210098
2	Copper Pipe		N/A
3	In-Line Non Return Valve		9210167
4	Overflow Funnel		9210007
5	40mm (1 1/2") P Trap		9210144
6	40mm Swept Tee		9210145
7	P Trap Plug		9210029
8	Straight Nozzle 3/8" BSP x 12mm		9210172

5.9. Vent Assembly



REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		9210300	
1	Munster Simms valve		9757030
2	Vent Gasket		9210093
3	'O' Ring 16.6 ID x 2.4 DIA Nitrile		9752018
4	Vent Cowl		9200325
5	M4 x 10 Pan Hd Screw (x2)		9210062
6	M4 Plain Washer (x2)		9200540
7	Vent Connector		9200334
8	Compact Hopper Tube		9210034

5.10. Plumbing Loom Kit

REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		9210308	
1	Mini Hose Clamps 7-9mm S/S		9210157
2	Mikalor Clips 40-60mm		9210160
3	Restrictor Disc		9210030
4	(x2) 15-6-15 Norma 'T'		9200943
5	6-5 Plastic Reducer		9210164
5	Size 31 Jeppe Clips		9210168
7	25mm PVC Elbow		9210169
8	FBS Clips		9210170
9	15mm PVC Elbow		9210174
10	31 OD 24 ID PVC Tube (various)		N/A
11	22 OD 16 ID PVC Tube (various)		N/A
12	9 OD 5.5 ID PVC Tube (various)		N/A
13	11 OD 7.5 ID PVC Tube (various)		N/A
14	16 OD 12 ID Silicone Tube (various)		N/A
15	18 OD 12 ID Silicone Tube (various)		N/A
16	6 OD 4 ID PVC Tube (various)		N/A
17	ABA Mini Hose Clips Size 11		9210095
18	ABA Mini Hose Clips Size 14		9210096

5.11. Pneumatic Tubing & Fittings Kit

REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		9210309	
1	(x1) 1/4" BSP (M) x 6 Swivel Elbow		9210157
2	(x2) 3/2 Valve		9210181
3	(x3) 6mm PIF Tee Connector		9210183
4	(x2) 6mm 1/8" BSP PIF 90° Elbow		9210186
5	(x2) SMC (F) R1/8 x 6 Male Elbow		9210187
6	(x2) SMC Check Valve 6mm		9210188
7	(x2) 6mm PIF Elbow Connector		9210189
8	(x2) SMC - PSPP Adapter (1/4" to 6mm)		9210190
9	6mm Nylon Tubing (various lengths)		N/A

5.12. Miscellaneous Spares

REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		N/A	
1	Munster Simms valve		9757030
2	Barbed Fitting (for the motor flange)		9750100
3	'V' Seal (cutter motor adapter)		9753000
4	Compact Front Panel		9210008
5	Cutter Blade		9210033
5	Start Switch Membrane		9210031
7	Threaded Plug (deodoriser cap)		9210052
8	Mechanical Seal		9210092
9	Inflatable 'D' Seal		9210099
10	Water Pump		9210132
11	Floor LED		9210139
12	Deodoriser Pump		9210133
13	40mm P Trap		9210144
14	3/2 Valve		9210181
15	Compressor Pump		9210131
16	PCB		N/A

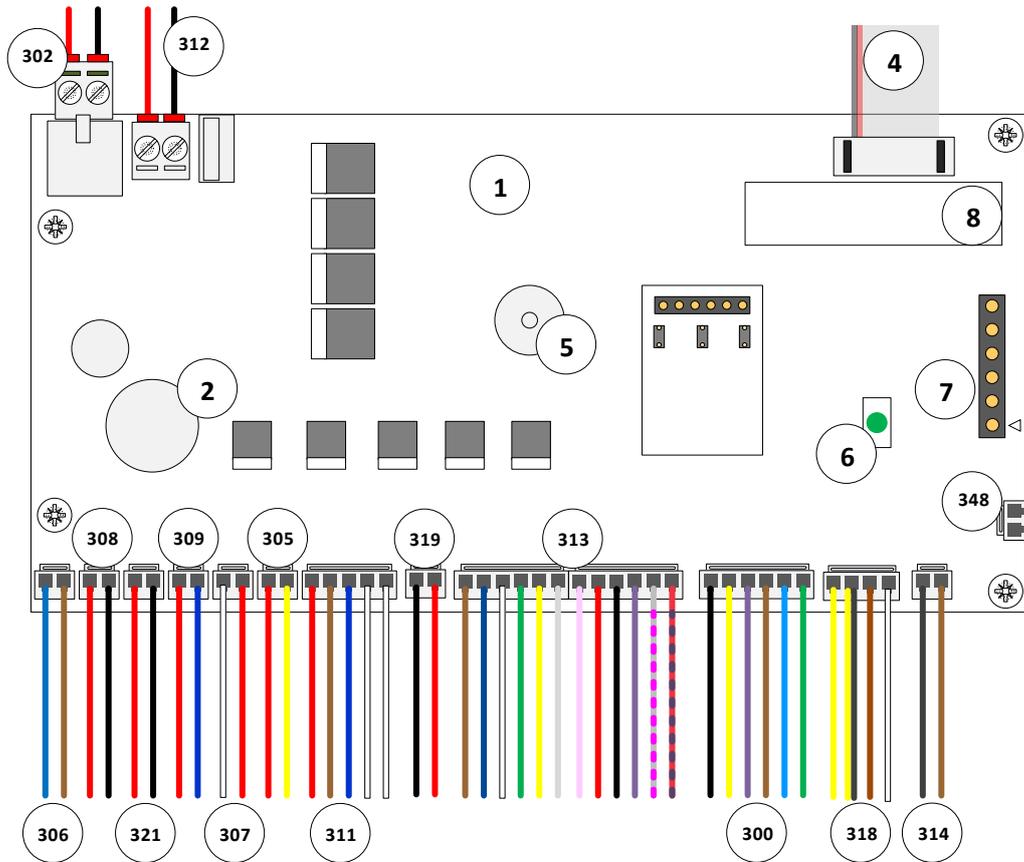
5.13. Cable Spares

REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		N/A	
1	Mains Cable		N/A
2	M12 (F) to M8 (M) Jumper Cable		9210128
3	M8 (F) to M8 (M) Jumper Cable		9210129

5.14. Sensor & Switch Spares

REF	PART DESCRIPTION	KIT NUMBER	ITEM NUMBER
		N/A	
1	Magnetic Sensor (Lid Safety Sensor)		9200834
2	Pressure Switch (Lid Seal & Drain Valve)		9210137
3	Capacitive Sensor		9210127
4	Magnetic Sensor (Lid Open/Close)		9210136
5	Pressure Transducer (Drain Switch)		9210212
6	Ultrasonic Foot Sensor		9210130

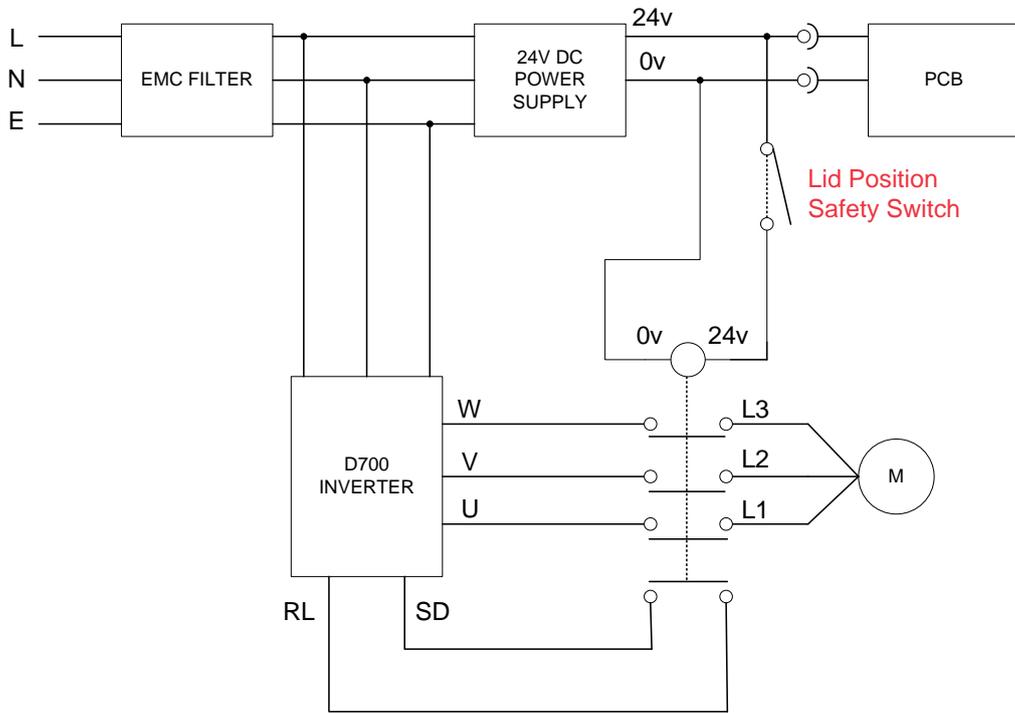
6. PCB Layout



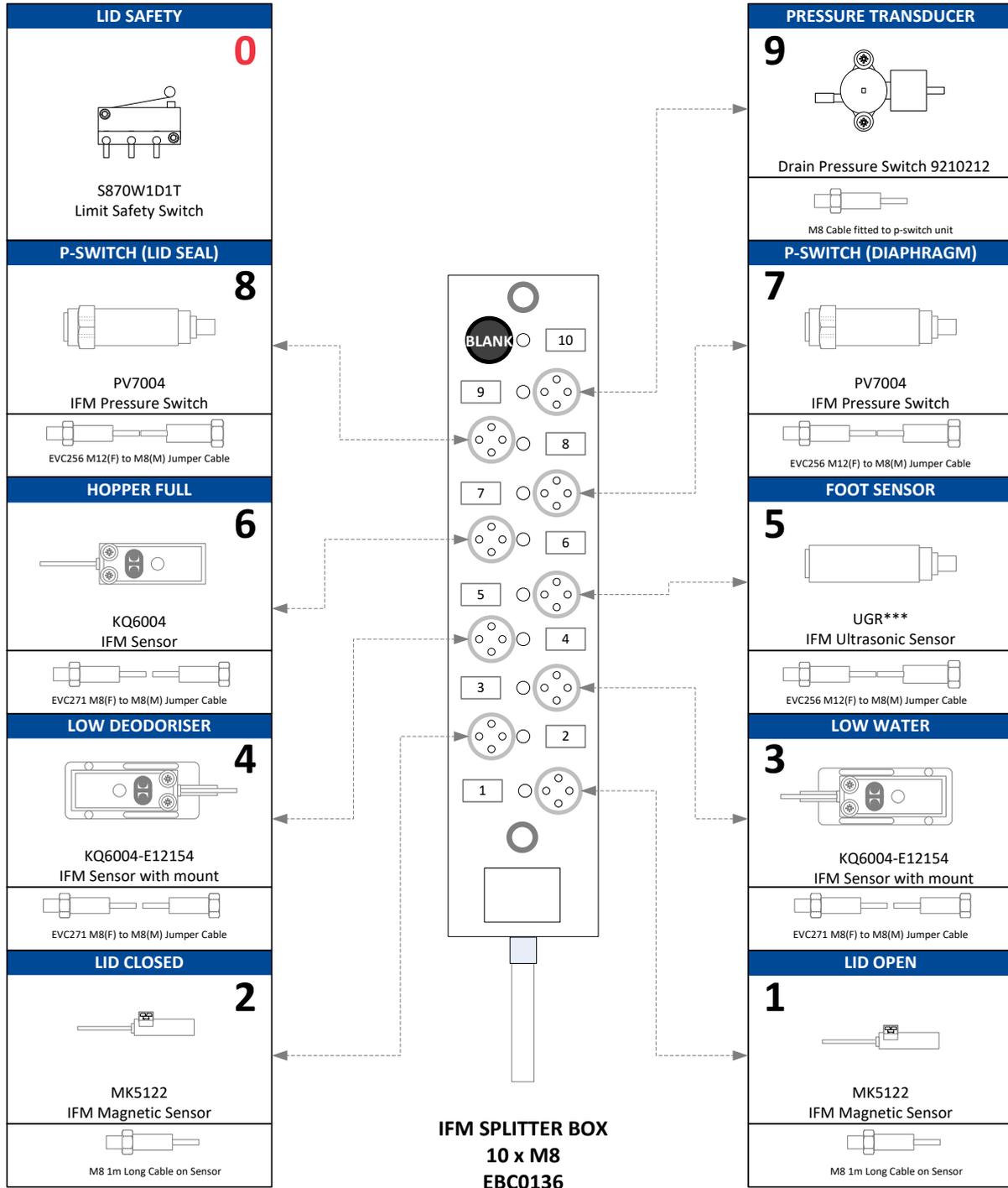
REF	PART DESCRIPTION
1	PCB Board
2	Internal Clock Battery
348	RFID Compatible Terminal
4	Display Ribbon Cable
5	Audible Buzzer
6	PCB Health Check LED
7	Software Update Fob Connection Point
8	Serial Number Text Area
300	AC Motor Cable
302	PCB Power Supply Cable
305	Air Pump Cable
306	Lid Motor Cable
307	Main Water Cable
308	Drain Valve Cable
309	Deodoriser Pump Cable
311	Lid Interlock cable
312	Water Pump Cable
313	IFM Cable
314	'ENGINEER MODE' Push Button Cable
318	Start Button & Toggle Switch Cable
319	Floor LED Cable
321	Lid Seal Valve Cable

7. Electrical Enclosure

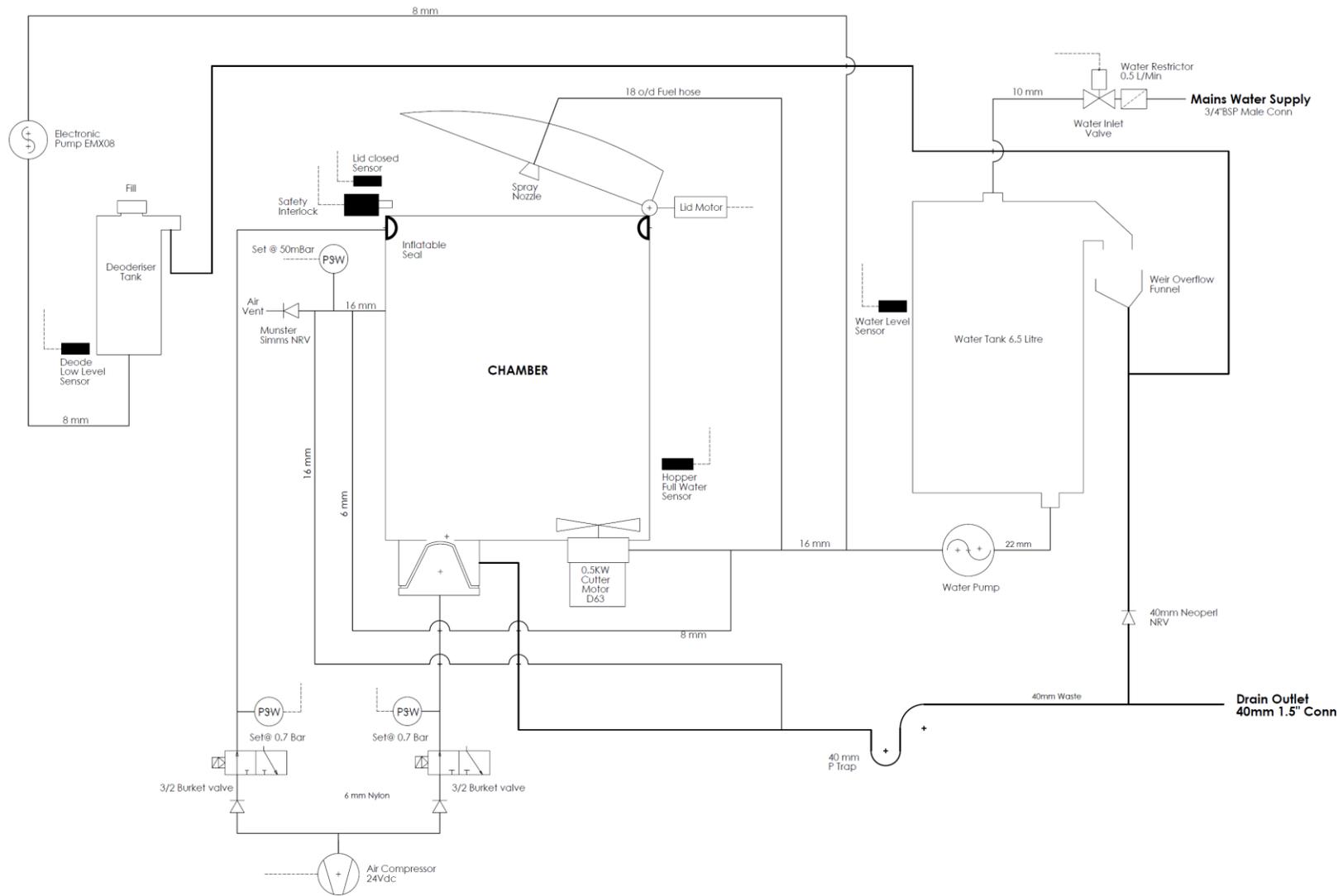
MAINS
SUPPLY
1PH 230/110v



8. Sensor Arrangement

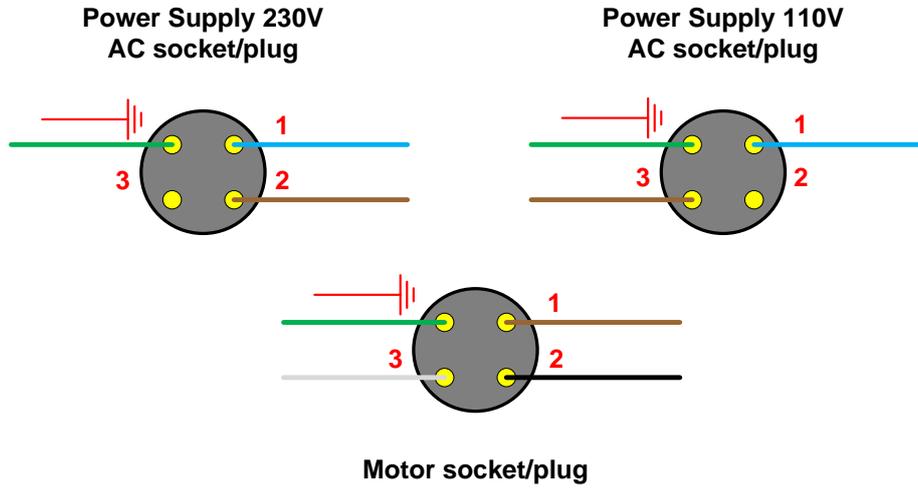


9. Air & Water Distribution



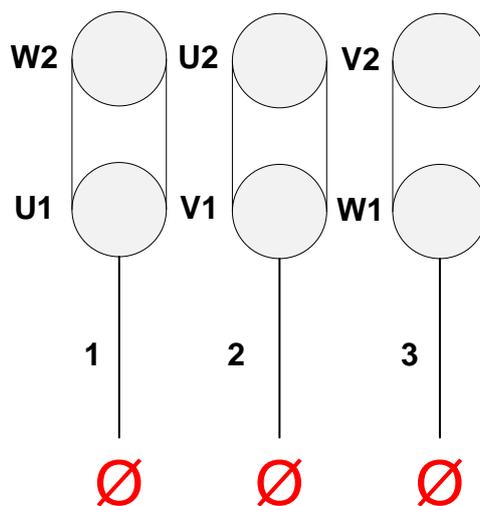
10. AC Motor Information

10.1. Motor Electrical Box Plug & Socket Connections



10.2. Motor terminal Wiring Diagram

Motor wired in Delta for 220 volt input from the inverter unit.



11. Fault Finding

FAULT	EXPLANATION	OPERATOR CORRECTIVE ACTIONS	MAINTENANCE CORRECTIVE ACTIONS
<p>'BLOKED BLADES' Error Message Displayed</p>	<p>Something is jamming the blades and overloading the motor, too many items or non-maceratable items may have been placed in the machine.</p>	<p>Press start button to clear error and resume the cycle. If incorrect items have been place in the hopper or the problem persists call maintenance</p>	<p>Abort cycle (press and hold start button). Open lid and check for and remove foreign objects or more than 1 disposable. Check for textiles wound around the hub.</p> <p>Check mechanical seal and motor bearings (signs of water leakage, noise from bearings)</p>
<p>'BLOKED DRAIN' Error Message Displayed</p>	<p>A build-up of pressure in the drains has been detected which could indicate a blockage</p>	<p>Press start button to clear error and resume the cycle. If the problem persists call maintenance</p>	<p>Abort cycle (press and hold start button), open lid and check hopper drains freely (use engineering functions to open drain and rinse if required)</p> <p>Check vent pipe is clear</p> <p>Check pressure switch operates correctly</p>
<p>'REFILLING WATER please wait...' Error Message Displayed</p>	<p>The water tank has not refilled, the cycle will continue when the tank fills</p>	<p>No corrective action required</p>	<p>N/A</p>
<p>'LOW WATER' Error Message Displayed</p>	<p>The water tank has not refilled</p>	<p>Press the start button to clear the error and restart the cycle, If the problem persists call maintenance</p>	<p>Check water connection, valve and supply pressure</p> <p>Check sensor operates correctly</p>
<p>'REFILL DEODORISER' Error Message Displayed (alternating message)</p>	<p>The deodoriser has run out and needs topping up. The machine will continue to run as normal</p>	<p>We recommend using Vernacare deodoriser for best performance</p>	<p>Check sensor operates correctly</p>

FAULT	EXPLANATION	OPERATOR CORRECTIVE ACTIONS	MAINTENANCE CORRECTIVE ACTIONS
<p>'POWER FAIL' Error Message Displayed</p>	<p>The electricity supply was interrupted</p>	<p>Press the start button to resume the cycle. If the problem persists call maintenance</p>	<p>Check electrical supply</p> <p>Check 24 V DC power supply unit</p>
<p>'HOPPER FULL' Error Message Displayed</p>	<p>There is liquid in the hopper from a previous cycle, possibly due to something blocking the drain outlet</p>	<p>Open lid and check for liquid in the hopper. If the hopper does not drain call maintenance.</p>	<p>Check sensor operates correctly, recalibrate if necessary</p>
<p>'LID CANNOT OPEN' Error Message Displayed</p>	<p>Something is obstructing the lid</p>	<p>Check nothing is on top of the lid, press start button to clear the error. If the problem persists call maintenance</p>	<p>Check lid open and lid closed sensors for correct operation.</p> <p>Check magnetic clutch for slipping</p> <p>Check lid motor is working</p>
<p>'LID CANNOT CLOSE' Error Message Displayed</p>	<p>Something is obstructing the lid</p>	<p>Check nothing is obstructing the lid, press start button to clear the error. If the problem persists call maintenance</p>	<p>Check lid open and lid closed sensors for correct operation.</p> <p>Check magnetic clutch for slipping</p> <p>Check lid motor is working</p>
<p>'DRAIN VALVE' Error Message Displayed</p>	<p>The drain valve has not closed properly</p>	<p>Call maintenance</p>	<p>Check pressure sensor for correct operation.</p> <p>Check airline connections for leaks</p> <p>Check Solenoid valve for correct operation.</p> <p>Check diaphragm valve integrity</p>

FAULT	EXPLANATION	OPERATOR CORRECTIVE ACTIONS	MAINTENANCE CORRECTIVE ACTIONS
'LID SEAL' Error Message Displayed	The lid seal has not inflated properly	Call maintenance	<p>Check pressure sensor for correct operation.</p> <p>Check airline connections for leaks</p> <p>Check Solenoid valve for correct operation.</p> <p>Check lid seal integrity</p>
'LID ERROR CALL ENGINEER' Error Message Displayed	The lid cannot open or close	Call maintenance	Check lid open and lid closed sensors for correct operation.
Hopper Base Not Clean At End of Cycle	Overloading the machine	Running a cycle with the machine empty will remove any residue	N/A
Hopper Sides/ Lid Not Clean At End of Cycle	The lid spray is not working correctly	Call maintenance	Remove and clean the lid spray
Water Leaking From Machine	N/A	Call maintenance	<p>Water leaking from the lid – Check vent pipe for blockage, check pressure switches operating correctly, check for debris on seal, check seal for damage</p> <p>Water leaking from tank – Check level sensor for correct operation, check solenoid valve for leaks</p> <p>Water leaking from pipework, check the integrity of the tubing & hose clips.</p> <p>Water leaking from flange, check the mechanical seal</p>

FAULT	EXPLANATION	OPERATOR CORRECTIVE ACTIONS	MAINTENANCE CORRECTIVE ACTIONS
<p>Disposable Products Not Cut At End of Cycle</p>	<p>Overloading machine</p> <p>Insufficient water in hopper</p> <p>Blades not turning</p>	<p>Run another cycle, if issues persist, call maintenance</p>	<p>Check pump for correct operation (use engineers function). Check in-line fuse to pump.</p> <p>Check pipework for blockages</p> <p>Check drain valve is sealing correctly</p> <p>Check if motor turns. Check that safety switch is operating correctly. Check for error codes on inverter</p>
<p>Lid Does Not Move</p>	<p>Foot sensor not working</p> <p>Lid interlock stuck or not working</p> <p>Lid motor not working</p> <p>Magnetic clutch worn/not working</p> <p>Drive shaft broken or damaged</p>	<p>Call maintenance</p>	<p>Check foot sensor operation, recalibrate if required</p> <p>The lid can be manually opened by removing the front cover and manually withdrawing the lid lock using the lever beneath the lock. The lid can then be opened against the magnetic clutch.</p> <p>Open the small covers next to the hinges to check operation of the lock, motor, clutch and to inspect the connection between motor and lid</p>