



**BRICK CLEANING MACHINES**  
Australia



**USE AND MAINTENANCE**  
**SPARE PARTS CATALOGUE**

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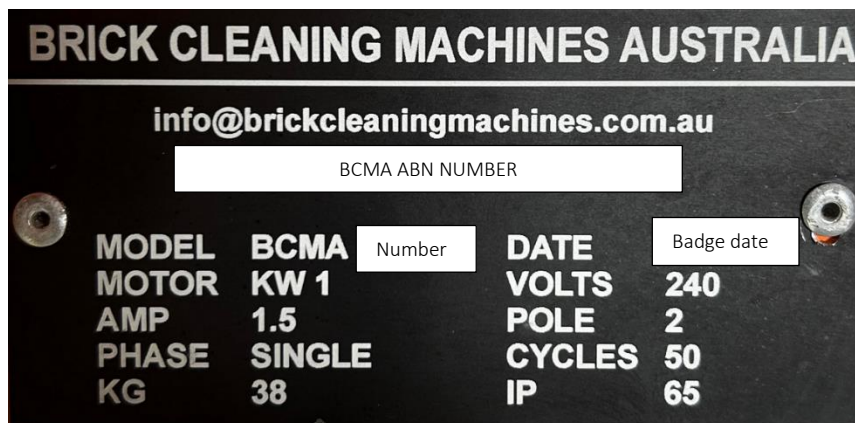
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# 1 General Regulations

- 1.1 The user instruction manual is exclusively reserved for anyone who uses the machine and who is in charge of worksite safety. It should therefore be kept in excellent condition and always close to the machine so that it is easily accessible whenever needed (should it be mislaid a copy can be requested from [Brickcleaningmachines.com.au](http://Brickcleaningmachines.com.au))
- 1.2 This machine should only be used by expert personnel who are familiar with everything contained in this booklet.
- 1.3 The machine was built solely for cleaning bricks, tiles or other cement-affected items.
- 1.4 Extraordinary and ordinary maintenance, use and repairs must be performed in adherence to the warnings contained in this manual, otherwise BCMA cannot be held liable for any responsibility to the effects of the safety of the brick cleaner.
- 1.5 The brick cleaner must be correctly connected to the equipotential grounding system and all the legally required protection devices that guarantee the automatic interruption of the power supply must be mounted upstream of the machine. In the event that these obligations are not respected the manufacturer cannot be held liable for any negligence. The electrical system must, of course, adhere to the regulations AS/NZS 3820.
- 1.6 All of the repair interventions must be carried out by specialised personnel or by a retailer specifically authorised by BCMA. If this is not the case, the responsibility will fall exclusively to the operator, who will also be held responsible if original spare parts are not used. Particular attention should be paid when performing maintenance on the machine electrical system - only specialised personnel are authorised to perform this intervention, using only original material or material of excellent quality recommended by the manufacturer.
- 1.7 The worker assigned to using the machine must be thoroughly trained on its correct functioning, with particular emphasis on the fact that the machine must never be started unless the correct split leather gloves and the glasses provided. The worker can choose where the machine is to be positioned, ensuring that it is placed on a solid and level foundation. The machine can be left outdoors (this does not pose a problem as it is protected externally by sheet metal housing). Obviously, when stored it should be placed in a covered area, or be covered with a canvas when not in use, which will ensure that the paintwork will last longer
- 1.8 Before beginning a job check that the brick cleaner is positioned on a compact ground and that there is at least 2 metres of space all around so that movements are

not obstructed (it is recommended to work outside with this machine, and on non-cemented ground. Bare ground is perfectly acceptable)

- 1.9 The worker is obliged to wear all of the items of clothing beneficial for ensuring his/her own safety, such as protective gloves, anti-accident shoes and goggles.
- 1.10 When the operator begins the work he must ascertain that the electricity cable is of a suitable diameter (4mm 2+E at a maximum of 20m in length), is neither corroded or rolled up, and is not lying on the ground, especially if there is the possibility of dampness or even worse, puddles of water.
- 1.11 The BCM by Lion's Den T&J must be used to scrap the cement and lime mortar from old bricks that are to be reused, or from tiles or anything else with cement-based incrustations to be removed. The utensils are used for this operation, depending on the hardness and quantity of cement to remove. For the hardest cement, the smallest utensil is used while, if there is not an excessive amount of cement on the face of the brick, the largest utensil can be used straightaway, which we have called "170 Flat or Notched ". Once the cement has been scraped, by sliding the brick along the utensil from top to bottom at a suitable angle, you will be able to refine the face of the brick that will be visible by rubbing it on the circular steel brushes.
- 1.12 The CE certification data are written on the plate, and the plate is applied on each machine.



## 2 Technical Characteristics

### 2.1 Machine measurements

Height.....	92 cm.
Width.....	61 cm.
Length.....	61 cm.
Weight.....	38-45 Kg

### 2.2 Electrical Supply

THREE-PHASE MOTOR 1 Kw  
SINGLE-PHASE MOTOR 1 Kw  
Qty/ 2 PHASES 50Hz 230 VOLTS +/- 10%  
Qty/3 PHASES 50Hz 400 VOLTS +/- 10%

### 2.3 Noise Data

Sound weighted pressure levels A (L'pA)= 74.0 dBA  
Level of weighted background noise A= 64,6 dBA  
Correction of background noise K1A= 0,5 dBA  
Local environmental correction K3A= 0.004

$$LpA = L'pA - K1A - K3A = 74,0 \text{ dBA}$$

All of the measurements were performed on 7-02-2020, at the premises of BCMA.

### 2.4 The optimal temperature conditions in which the machine can be used range from 4 to 41 C° at up to 95% humidity.

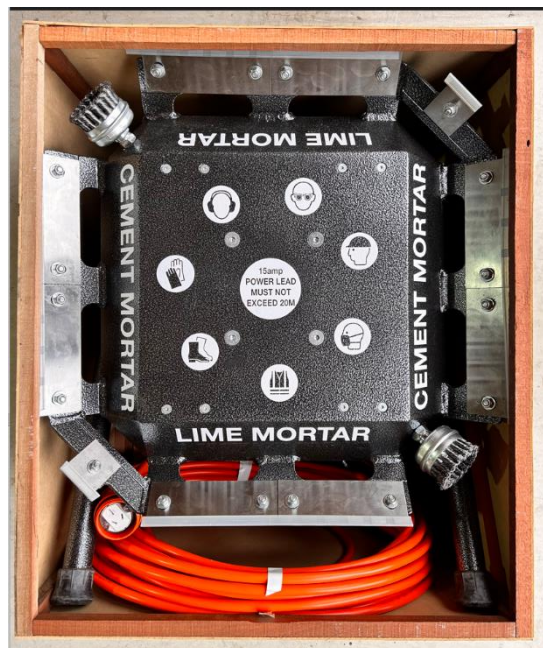
## 3 Lifting Brick cleaning Machine

### 3.1 Two people are needed to move the machine, using the utensil keeper holders.

To lift the machine, lifting slings with a diameter suitable for withstanding its weight (50 Kg) are hooked onto the keeper cut outs.

## 4 Installation

- 4.1 The machine is composed of two separate assembled parts: the part that vibrates is divided by four compression vibration mounts and the upper part, on which are fastened all the utensils and the two brushes (above) and the eccentric ground electric vibrator (below).  
Everything is fastened via the 4 vibration mounts to the lower part that supports the main switch and the 4 sloping legs that rest on the ground. The operator must not carry out any adjustment and must only switch on the motor using the main switch. The sole adjustment an operator may choose to perform is to vary the height of the machine by pulling out the 4 legs and choosing one of two positions, securing them with the self-locking nuts and bolts.
- 4.2 Before connecting the machine to the power supply, check that there is an RCD on the power supply circuit.  
The characteristics of the protection devices for the automatic interruption of the electricity must comply with the regulations CEI 64.8 del 10-92. The power supply cable must be a suitable type, (check diameter and length 4mm<sup>2</sup>+E 20m max) do not use any power leads other than the size specified or join leads over a distance. This will void any warranty. For distances over 20m please call BCMA for specifications.
- 4.3 The brick cleaner is ready to use upon leaving the factory, is packaged and freighted in a wooden box. See picture later in the manual.  
The machine can easily withstand light weights during transport; however, upon arrival always check that it has not suffered any damage that could compromise its reliability.



## 5 Use

- 5.1 To activate the brick cleaner, it must first be positioned at the most comfortable height for the operator at a distance no greater than 20m from the 15amp RCD power supply, in accordance with his/her stature and on solid ground.

Lay out the entire 20m cable supplied avoiding tight loops and trafficable pathways and plug the cable into the BCM first and then into 15amp RCD protected power supply.

From that moment you can begin working. The machine does not have any rotating parts. However, the two non rotating wire brushes could scratch anyone passing close to the machine, therefore a safe work zone area must be coned off or temporary fencing or markings to avoid injury.

Flat utensils will not harm the operator if used in accordance with the cleaning of bricks. Eye protection, ear protection, gloves and protective clothing must be worn when operation the BCM.

- 5.2 There are 3 types of utensils: the brushes and the spring steel 170mm and 50mm utensils. Vibrating, the brushes produced perfectly clean brick faces. The utensils function by vibration and are not, therefore, in any way dangerous for the operator. However, anyone operating this machine is strictly obliged to wear particularly tough work gloves (in split leather for example) and goggles.

- (a) The Large 170x2 Flat utensil(B) and/or a notched utensil (available for purchase) can be used by positioning the brick at an angle, as in **Figure A**, placing pressure at the point of the joint between the cement to remove and the surface of the brick, pushing from the top downwards.
- (b) The 50mm Frog utensils(A) can be used with the same sloping gradient as the large utensil, but this should be implemented for removing more stubborn cement or cement concentrated in narrow points. (See **Figure B**)
- (c) Hardwire brushes (C) are needed to smooth away residue from the surface of the brick or tile, or for dusting off the most fragile materials, those not overly encrusted with cement, or dirt that can be easily removed, such as lime. (See **Figure C**)

- 5.3 With this type of machine, the worker is not subjected to any danger in regards to the high values of the acoustic pressure levels and the sound power levels as they are absolutely negligible



**Figure A**

Cleaning the mortar off the brick in a downward motion with medium pressure against the 2x170mm flat and notched utensil.



**Figure B**

Cleaning lime mortar and heavier cement mortar from the frog of the brick using medium pressure against the 50mm frog. utensil.



**Figure C**

Brushing the mortar-free brick or tile on the hard wire brush for a clean like new finish.



## 6 Maintenance

- 6.1 The only maintenance that is performed on a regular basis following use is the replacement of utensils in the event of visible wear or a serious loss of efficiency. Replacement of these parts are extremely simple, as they are essentially fastened by means of commonly used bolts.

The vibrator does not require maintenance as it is sealed closed. Only a general cleaning is necessary every now and again to avoid the build-up of pieces of encrusted cement.

Always check that the power cable does not have cuts or abrasions. Check the main switch especially in the release mechanism.

**ATTENTION:**

**The manufacturer cannot be held liable for any damage deriving from failure to observe the prescriptions provided.**

- 6.2 The brick cleaner is fitted with a thermo-magnetic switch with IP 55 insulation. As the motor is protected from thermal overloads, in the case of an electrical supply irregularity (either a surge or drop) the circuit breaker trips to prevent damage, in this case a certain period of time is required before activating the switch again (cooling time). If there is a requirement to calibrate the thermo-magnetic device by a Registered small motor technician, use a small flat screwdriver inside the DOL Switch to calibrate no greater than 1.7 (an operation that is promptly performed with the machine disconnected from the power supply).

## 7 Machine Not in Use

- 7.1 In the case of setting the machine aside for an extended period of time, all and any power supply connections must be disconnected, and the machine moved to an indoor location or protected with a suitable cover.

## 8 Scrappage

- 8.1 Whenever it is decided not to use this machine any longer, it should be made inoperative, by removing the electrical control parts. The parts that could prove to be a source of danger, such as the switch and electrical motor, should be removed to render them harmless. Assess the classification of the goods according to the level of disposal. Scrap as scrap aluminium and deposit it at suitable collection centres.

**ATTENTION**

**The user is reminded that the scrappage legislations in force are to be respected.**

## 9 Attachments

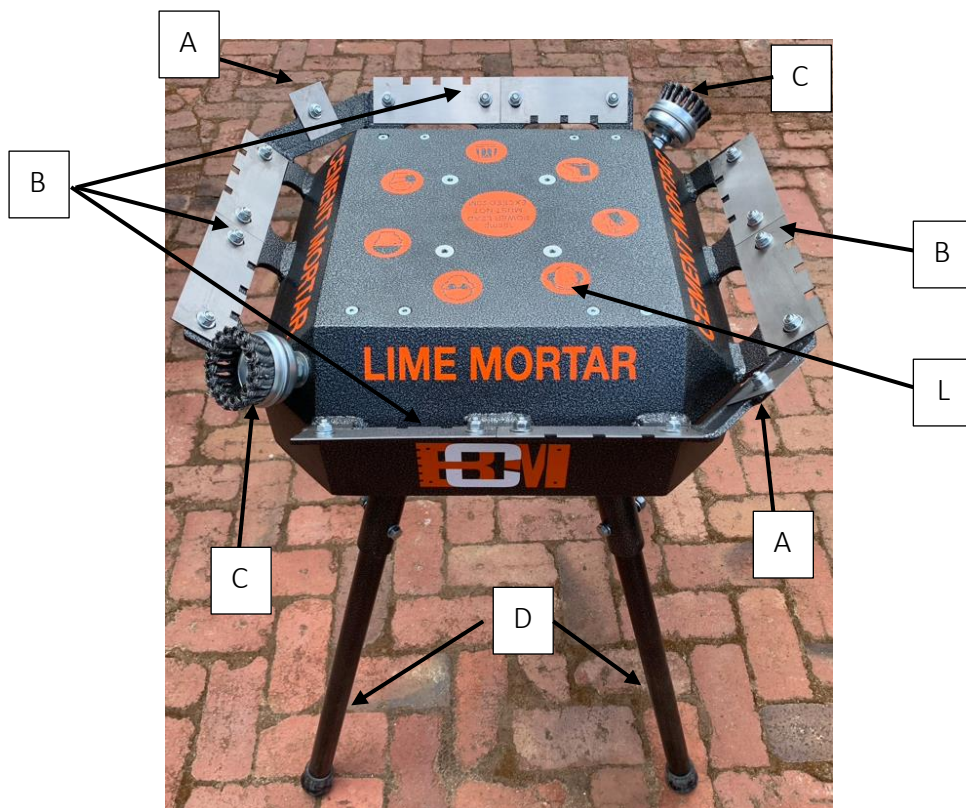
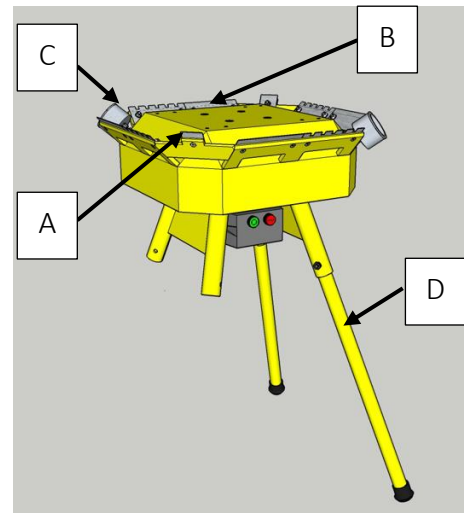
### 9.1 Utensil replacement

Utensils A, B and C, in case of wear, can be easily replaced by undoing the nyloc nuts and washers that locate them in position. Be sure that the new utensil is sitting firmly on the rebated ledge on the keeper.

### 9.2 Leg height adjustment

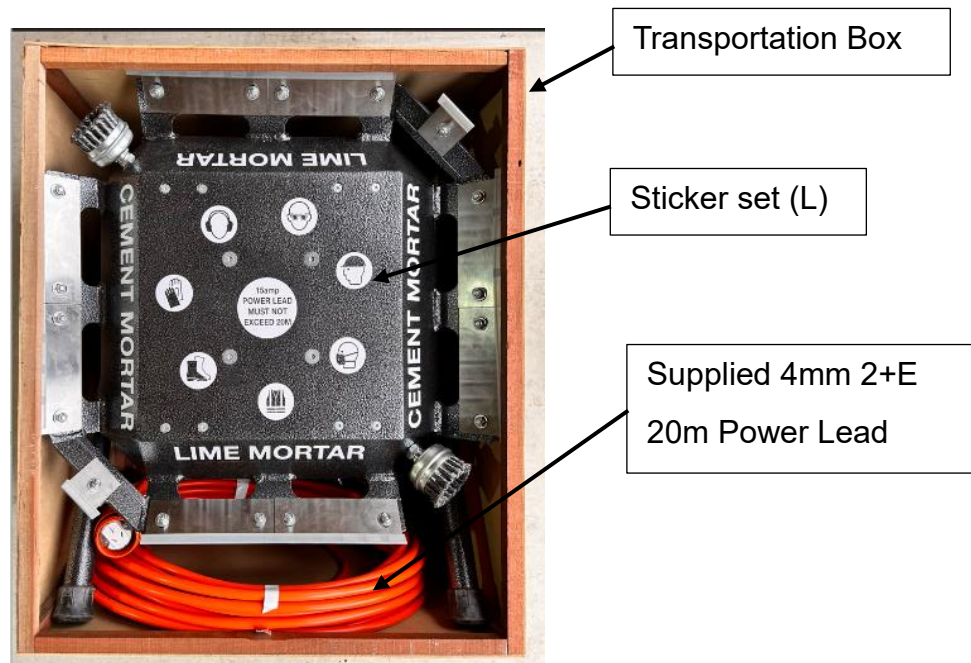
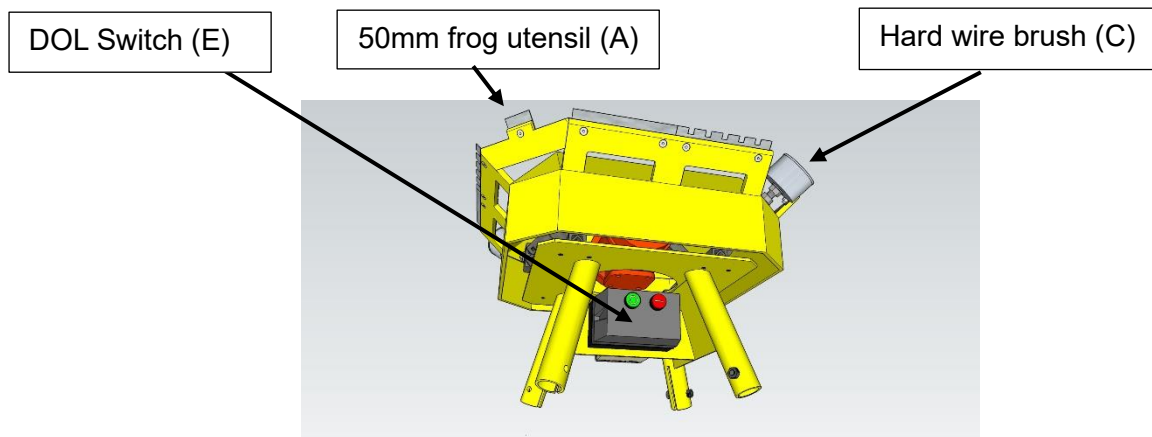
The four legs F can be pulled out and adjusted in 2 positions by means of the designated screws.

<b>A</b>	<b>50mm Frog Utensils</b>
<b>B</b>	<b>170mm x2 Utensils</b>
<b>C</b>	<b>Hardwire brushes</b>
<b>D</b>	<b>Legs</b>
<b>L</b>	<b>Sticker set</b>

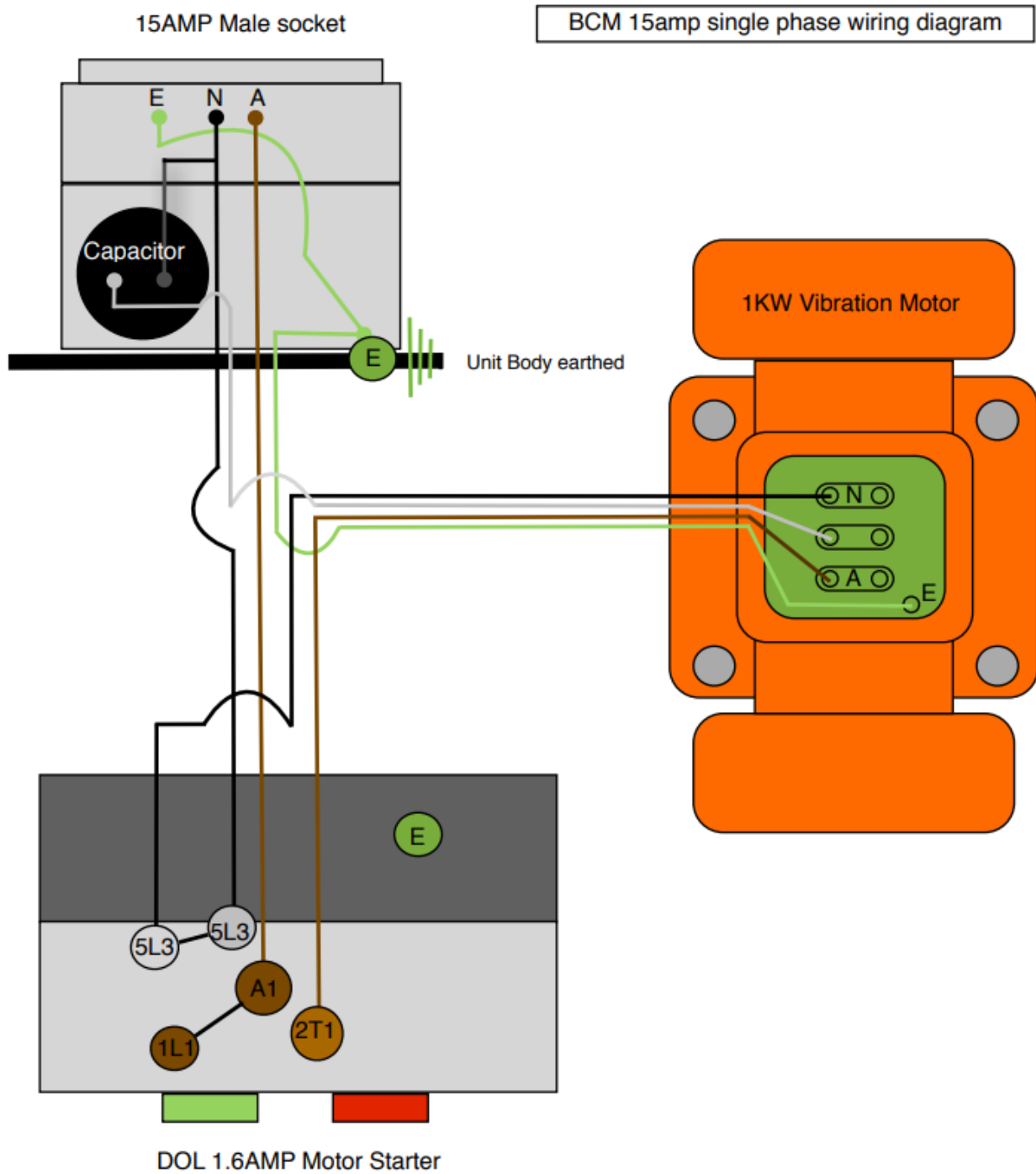


### 9.3 Switch

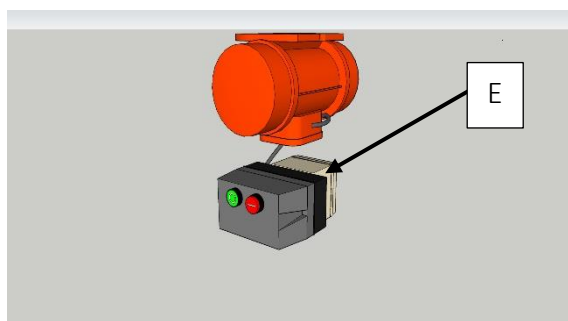
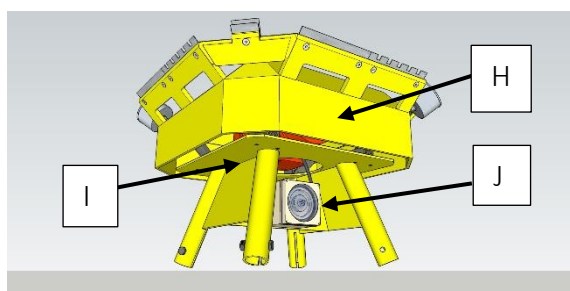
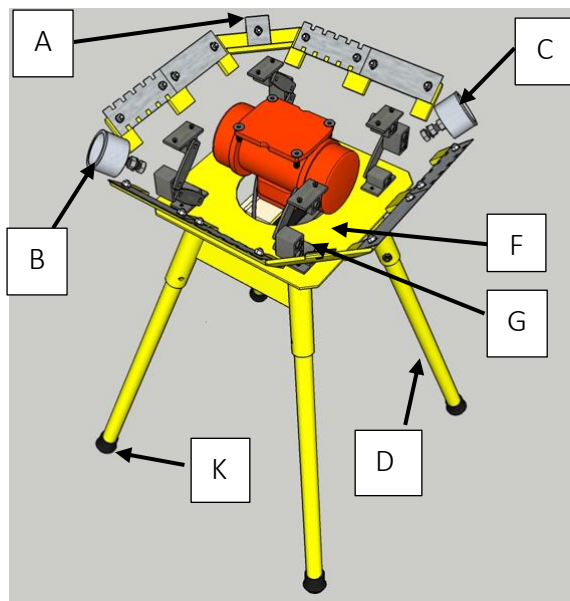
The purpose of the thermo-magnetic switch (E) with release coil is to prevent the machine from starting after the electricity has been interrupted. It also has the function of protecting the motor from possible overheating. To restart, just wait until the motor cools down.



# 10 BCM Brick Cleaner Wiring diagram



## 11 Spare parts table – BCM Brick Cleaner



<b>A</b>	<b>50mm Frog Utensils</b>
<b>B</b>	<b>170mm x2 Utensils</b>
<b>C</b>	<b>Hardwire brushes</b>
<b>D</b>	<b>Legs</b>
<b>E</b>	<b>DOL Switch</b>
<b>F</b>	<b>Motor</b>
<b>G</b>	<b>Vibration Mounts</b>
<b>H</b>	<b>Hood</b>
<b>I</b>	<b>Base</b>
<b>J</b>	<b>15amp Socket</b>
<b>K</b>	<b>Leg rubber cap</b>

## 12 BCM Brick Cleaner - Spare Parts

	<b>Description</b>	<b>Email for quotation</b>
1.	50mm Frog (A)	
2.	170mm Flat (B)	
3.	170mm Notched (available)	
4.	Brush (C)	
5.	Legs (D)	
6.	Main Switch (E)	
7.	Vibration Motor (F)	
8.	Vibration Mount (G)	
9.	Hood (H)	
10.	Base (I)	
11.	Socket (J)	
12.	Rubber Leg Cap (K)	
13.	Sticker set (L)	

### 13 Certificate of product Warranty

**Lions Den Timber & Joinery** guarantees that the BCM BRICK CLEANING MACHINE has been tested and verified at the factory. The warranty covers the mechanical parts of the machine and its accessories for a duration of 12 months from the date of delivery.

All faulty parts, resulting despite user's normal use, will be repaired and/or replaced at no charge during the warranty period.

According to the previous experience, the life expectancy of the machine is around 5 years.

The warranty does not include the on-site assistance of a technician from the head office. In case of on-site service, all costs will be the responsibility of the buyer.

The warranty provides the free repair or replacement of any defective parts.

The warranty will be voided if the parts show signs of excessive and unnecessary force.

If any of the malfunctions are caused by user carelessness, inadequate maintenance, or natural disaster, we will provide repair and/or replacement services for a fee regardless of warranty period.

**IMPORTANT:** when the machine is delivered, please make sure it has not been damaged during the shipping.

**The warranty becomes void:**

If the machine is not used according to the instructions written on the manual.

If the damage to the machine is due to lack of proper maintenance.

If the machine is used for different purposes other than those specified in this manual.

If, as a result of repairs performed by the user without the consent of **Lions Den Timber & Joinery** or due to the installation of non-original parts, the machine has undergone changes and the damage is caused by such changes.

In the event our product does not prove suitable for your application you can return the product for an exchange or refund.

To claim, the product must be returned in good condition. Before returning a product, please contact and provide us a serial number. The customer is responsible for all shipping costs.

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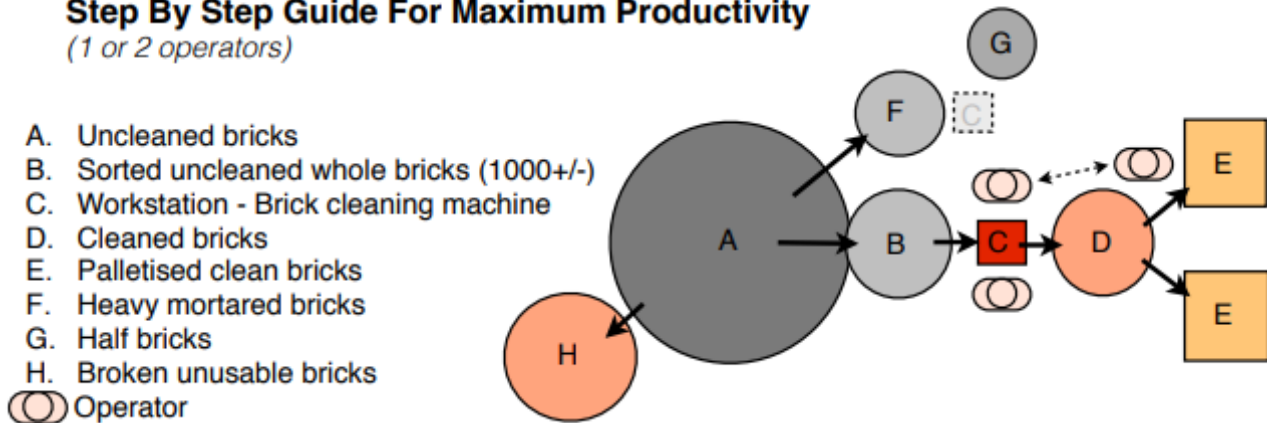


## 15 Step by Step Guide for maximum Productivity

### BRICK CLEANING MACHINES AUSTRALASIA

#### Step By Step Guide For Maximum Productivity

(1 or 2 operators)



#### Step 1

Workstation **C** should be set up 2 metres away from the pile of uncleaned bricks. The power lead should be placed away from brick stacks and traffic areas.

#### Step 2

Uncleaned bricks **A** should be sorted into 4 stacks prior to commencement.  
Stack **B** Whole uncleaned bricks with light/medium mortar (approx. 1000 bricks).  
Stack **F** Whole uncleaned bricks with heavy mortar.  
Stack **G** 1/2 and 3/4 bricks.  
Stack **H** Unusable broken bricks.

#### Step 3

Commence cleaning bricks from stack **B** and place in section **D**.  
Once pile **B** has been cleaned and placed in section **D**, pile **D** can then be palletised.  
Repeat step 2.

**Two-person operation** - while the bricks are being sorted by one operator the second operator should commence cleaning. When pile **B** is 3/4 cleaned then the second operator should commence palletising and resorting as per Step 2. This task should be job shared on rotation to avoid fatigue.

#### Step 4

When pile **A** has been completely sorted and pile **B** has been cleaned and palletised, move workstation **C** between stack **F** and **G** for cleaning as per step 3.  
When bricks have exceptionally hard or excessive concrete/mortar additional tools (Axe, Hammer & Chisel) should be used to assist the cleaning process.

**Note: If a brick requires more than 60 seconds to clean consider throwing it away.**



**[Brickcleaningmachines.com.au](http://Brickcleaningmachines.com.au)**

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