

METCALFE 56SS POTATO PEELING MACHINE

INSTRUCTION MANUAL AND

BREAKDOWN DRAWINGS



EC DECLARATION OF CONFORMITY

(Guarantee of Production Quality)

As described in the attached technical documentation is in conformity with the Machine Safety Directive 98/37/EC and is manufactured under quality system BS EN ISO 9001. It is also in conformity with the protection requirements of the Electro Magnetic Compatibility Directive 2004/108/EEC and is manufactured in accordance with harmonised standards EN 61000-6-1 Immunity and EN 61000-6-3 Emissions (plus product specific standards).

It also satisfies the essential requirements of the Low Voltage Directive 2006/95/EC and is manufactured in accordance with harmonised standard EN 60204-1 Safety of Machinery (Electrical Equipment).

GUARANTEE

This equipment is guaranteed by METCALFE CATERING EQUIPMENT LTD. for 1 year from the date of its purchase from METCALFE CATERING EQUIPMENT LTD., The guarantee is limited to the replacement of faulty parts or products and excludes any consequential loss or expense incurred by purchasers. Defects which arise from faulty installation, inadequate maintenance, incorrect use, connection to the wrong electricity supply or fair wear and tear are not covered by the guarantee. Any damages/shortages must be reported to METCALFE within 24 hours of accepting delivery. No claims for damages will be considered if the goods have been onward delivered by you.

Please observe these instructions carefully.

The guarantee applies in this form to installations within the United Kingdom only.

DELIVERY

The packaged machine consists of:

Peeler Unit, with lid, control box and mounting bracket	1
Peeling plate	1
Water supply pipe and 2 hose clips	1
1m long 3" flexible waste hose and hose clip	1
Instruction Booklet	1

If any accessories have been ordered they may be supplied in separate packages.

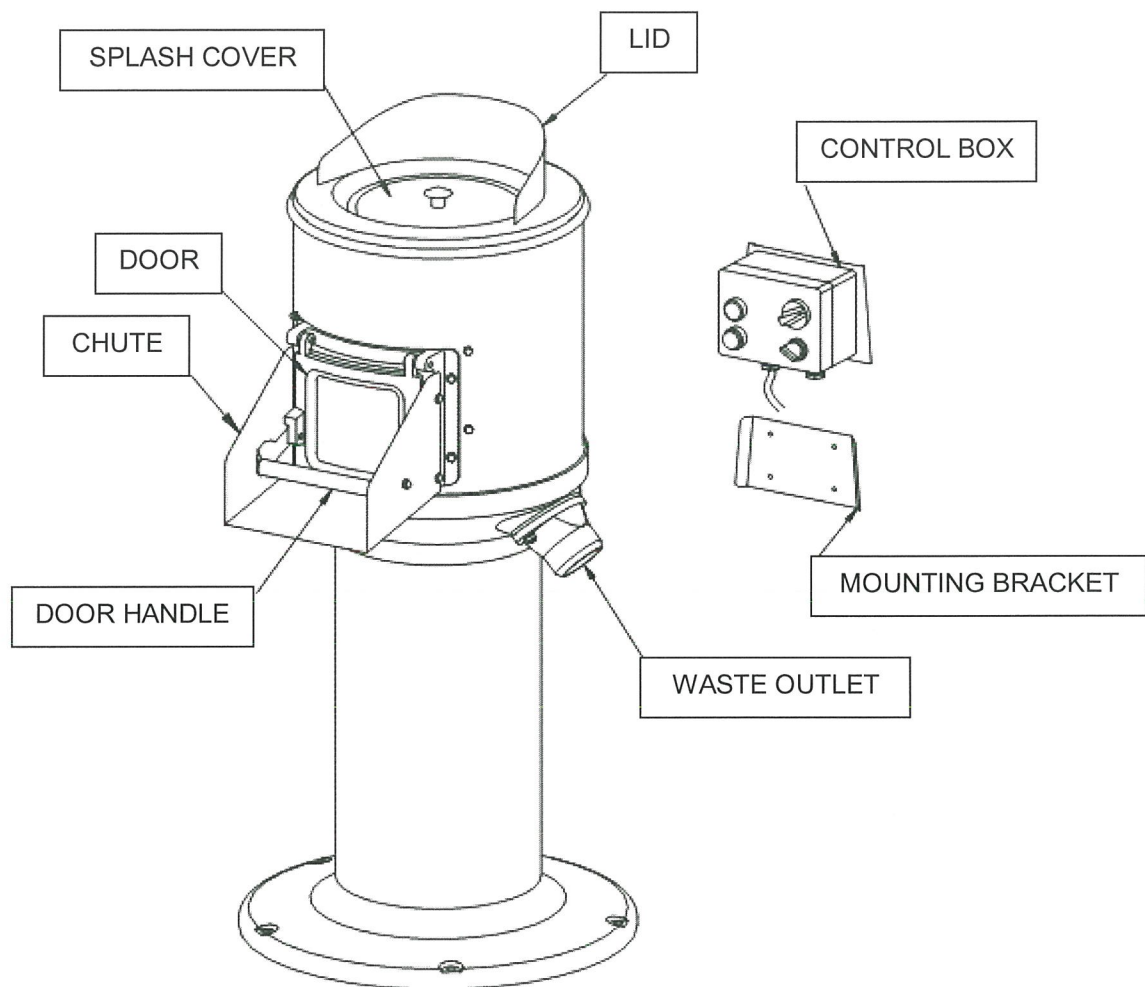
Please notify both the carrier and the supplier within three days of receipt if anything is missing or damaged.

Check that the correct machine has been supplied and that the voltage, marked on the rating label, is suitable for the supply available. The rating label is located at the back of the cylinder near the supply cable inlet.

INTRODUCTION

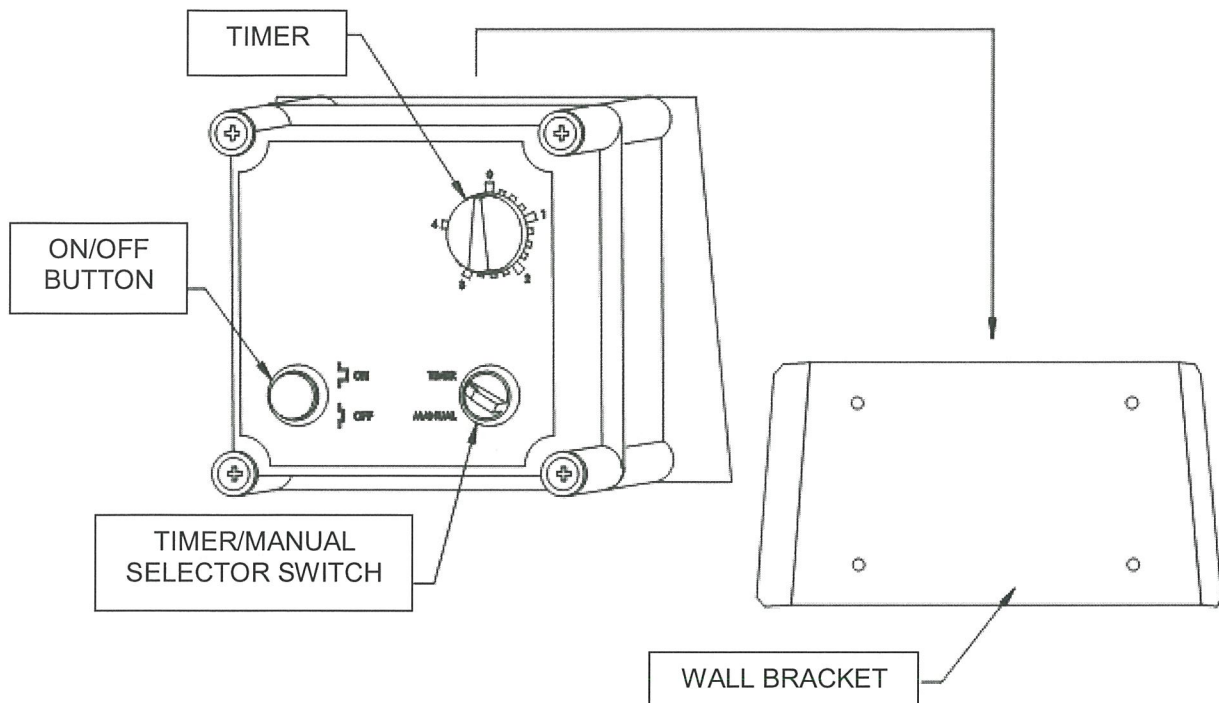
This machine is intended for peeling potatoes. Its use may be extended to other root vegetables. It is not recommended to use this machine for peeling onions.

YOUR PEELER



CONTROLS

The peeler has a separate box for mounting on a wall bracket near the machine.



Please note: Control boxes for 3 Phase machines have separate on and off buttons.

INSTALLATION

For the Installer:

These Instructions contain important information designed to help the user obtain the maximum benefit from the investment in a METCALFE Peeler.

Please read them carefully before starting work, and consult with the supplier in the event of any queries.

Be sure to leave this Instruction Manual with the user after the installation of the machine is complete.

Procedure:

The METCALFE Range is supplied with a pedestal and is designed to be bolted to the floor. The control box is designed to be mounted on a wall bracket so that it is easily accessible once the machine is installed.

Place the machine in its desired location and mark through the pedestal base the location of the five floor fixing holes. Remove the machine and prepare the floor for rawlbolts or other suitable floor fixings. Replace the unit into working position and fit the rawlbolts or other fixings. Tighten up the fixings.

Place the control box bracket in the desired location and mark through the four screw holes. Remove the bracket and prepare the wall for rawlplugs or other suitable wall fixings. Replace the bracket and secure in place with four screws. Slide the control box onto its wall bracket.

WATER SUPPLY

Connect the water supply pipe to the water inlet located on the top of the lid, and secure using the supplied hose clips. Fit the other end of the supply pipe to a cold water supply that incorporates a tap or shut off valve that can be used to regulate the water flow to approximately 3 – 4 litres per minute. The water inlet is fitted with a baffle to improve the distribution of water into the cylinder. This may cause minor splashing on the surface of the lid; if this becomes severe, reduce water flow as required. The maximum water pressure for the supply is 10 bar. Ensure that the hose supplied with the machine is used and that an old hose is not reused.

PLEASE NOTE: these machines are fitted with an air-break to prevent back syphonage into the mains supply. Some local authorities may nevertheless require connection is made to a storage cistern rather than direct to the mains supply.

This applies to UK installations only. Overseas customers should install the machine in accordance with local regulations.

If in doubt, check with your local authority

WASTE OUTLET CONNECTION

The peeler has two possible waste outlet locations. If it is required to change the waste outlet location, remove both the existing waste outlet and the blanking plate on the opposite side. Refit both the waste outlet and the blanking plate in their new positions.

A flexible hose, supplied with the machine, can be fitted over the waste outlet to direct the waste into a gully or intercepting tank. If required, secure with the hose clip supplied. Longer lengths of flexible hose are available from METCALFE on request.

The waste outlet also incorporates a 2" BSP female thread for connection to standard 54mm (2") waste pipe. DO NOT reduce the diameter of the waste pipe to below 54mm. The length of the pipe should be kept to a minimum and the pipe must have a fall of at least 1:15. Changes of direction should be made by swept bends rather than elbows and cleaning eyes should be fitted where possible in accordance with standard plumbing practice.

A trap is not necessary if the discharge is into a gully or an intercepting tank, although a trap must be provided in the outlet pipe from the intercepting tank. If a trap is required it should be made with 45° bends and not with a 'U' or 'P' bend or with a bottle trap.

WASTE EJECTOR

The waste ejector is an optional fitting that dilutes the waste sludge to enable it to flow easily through the drains without fear of blockage.

Waste Ejectors are not recommended in the follow circumstances;

- A pipe run exceeding 15m between the machine and main drain
- When a fall of 1:15 cannot be achieved
- When piping is exceptionally complex

In any of the above cases an interceptor tank is recommended.

FITTING THE WASTE EJECTOR

If the waste ejector is not fitted to the peeler when it arrives, it can be fitted as follows:

Remove the existing waste outlet. Decide on which side the outlet pipe is to be connected and, if necessary, remove the blanking plate and gasket from the alternative waste outlet position and refit to the other side. Fit the waste ejector and gasket in place of the waste outlet.

The waste ejector has a ½" BSP connection for the water supply on each side of the unit. Select which is to be used for the water connection and utilise the plug for sealing off the other. Connect the hose between the connector at the top of the waste ejector and the water inlet on the peeler lid.

WASTE EJECTOR ADJUSTMENTS

When the pipework is complete set the ejector adjustments to give the correct water flow through the machine. Two adjusting screws and lock nuts are provided for this purpose. The top one controls flow through the peeler and the lower one controls the jet to the waste pipe. Adjust the top screw until the flow through the machine is between 2.25 and 7 litres per minute, then tighten the lock nut. Set the lower screw to allow a jet of water into the waste pipe of 2.25 to 3.5 litre per minute, then tighten the lock nut.

ELECTRICITY SUPPLY CONNECTION

Before connecting, examine the rating plate attached to the machine to ensure that the characteristics shown are correct for the supply available. Any changes to the supply or new mains runs should be carried out by a qualified electrician and in accordance with the IEE Codes of Practice.

1 Phase machines come supplied with a three pin plug. The socket used should be away from any splash area and be accessible with the peeler installed. A dedicated supply to the socket is recommended and it should be protected by a C or D class circuit breaker rated at 16A for the METCALFE Peeler.

3 Phase machines should be connected to a 16A isolator providing at least 3mm separation in all poles. The isolator should be fused at 10A.

The supply to the machine must also be protected by a 30mA RCD.

The mains lead fitted to the machine is the minimum required for individual connection to the mains supply. Site conditions may vary with additional length of cable run, encapsulation in trunking, etc. being required. Should this apply, a qualified electrician must alter the lead in accordance with the IEE Codes of Practice.

WARNING: This machine must be earthed

The wires in the mains lead for single phase supply are coloured:

Green and Yellow	Earth
Brown	Live
Blue	Neutral

The wires in the mains lead for three phase supply are coloured:

Green and Yellow	Earth
Brown	Phase 1
Black	Phase 2
Grey	Phase 3

The 3 phase machines do not have a neutral wire. If the supply has a neutral wire isolate it and only wire the unit to the 3 phases and earth. An Equipotential earthing point is located on the back of the cylinder near the cable outlet if equipotential bonding is required.

Should the mains lead become damaged, it must be replaced by a METCALFE service agent or qualified electrician in order to avoid a hazard.

COMMISSIONING

After making the electrical connection, switch on the machine, and check that the direction of rotation of the peeling plate is CLOCKWISE when viewed from above.

The direction of rotation of 1 Phase units is set at the factory. If it is not rotating in the correct direction contact METCALFE. To change the direction of rotation of 3 Phase units, switch off the machine, isolate the supply and interchange any two phase wires.

OPERATION

1. Fit the peeling plate, ensuring that it is properly located on the drive shaft.
2. Measure out the potatoes into a container which holds a known measured weight of 25kg. Check for stones which could damage the abrasive. Should this happen, the noise will indicate the presence of stones. Switch off immediately and remove them. The top of the liner can also be used as a maximum loading line.
3. Set the run time required on the control panel - two minutes is normally more than adequate – or select manual operation, and press the green start button. Turn on the water supply.
4. Ensure that the chute discharge door is closed.
5. Load the potatoes into the peeler and place the splash cover onto the top of the cylinder.
6. The machine is now operating. Remove the splash cover to check the progress of peeling process.
7. The peeler can be stopped at any time by pressing the Stop button, or it will stop on completion of a timed cycle.
8. Turn off the water supply, open the chute door and while keeping the door open, press the Start button to evacuate the potatoes, press the Stop button when the peeler is empty.
9. Keep the peeled potatoes under water until required for cooking.



ON NO ACCOUNT put a hand or implement into the machine, or wedge the door open while discharging.

SAFETY

All peelers are controlled so that if the electricity supply is interrupted the machine will not restart automatically.

All single phase controls are fitted with a thermal trip. This ensures that the controls cannot overheat and become damaged. If the thermal trip cuts in, the machine will not run until it has cooled down and the peeler is switched off and on again. The controls will not overheat in normal usage.

Do not put hands into the machine while it is running.

On single phase machines **do not** unplug the unit with wet hands.

CLEANING

It is essential to clean the machine at least once a day, preferably at the end of each period of operation.

1. Switch off at the socket or isolator.
2. Remove the lid and splash cover.
3. Lift out the peeling plate.
4. Clean the peeling plate and cylinder in a sink, potwash or by hosing with a spray.
5. Rinse the inside of the peeling chamber and base with warm water, using a mild detergent if necessary to remove starch build up.
6. Wipe the exterior of the machine with a damp cloth, again using a mild detergent if required.

DO NOT USE CLEANING MATERIALS CONTAINING ABRASIVES OR BLEACHES.

DO NOT STEAM CLEAN.

DO NOT CLEAN WITH A WATER JET.

DO'S and DON'TS

Do	Install on a level service.
Do	Ensure power supply isolator or socket is accessible with the peeler installed.
Do	Clean the machine after each period of use.
Don't	Sit or stand on top of the peeler.
Don't	Place hands inside unit while discharging or peeling.
Don't	Use the unit outside.

MATERIAL CONTENT

The METCALFE Peeler contains the following materials:

Metals	Stainless steel, Mild steel (inc plated), Aluminium and copper.
Plastics and rubber	Polycarbonate, Nylon, Neoprene rubber.
Other	Aluminium oxide, electrical components.

MAINTENANCE

Other than regular cleaning the METCALFE Range of peelers require no maintenance by the end user. It is recommended that the unit is serviced by a METCALFE approved engineer at least once a year.

The motor in the single phase units is controlled via an inverter. The following warnings must be observed before working on this unit.



WARNING. Only suitably qualified personnel should service this equipment, after becoming familiar with all safety notices, installation, operation and maintenance procedures related to the inverter.



WARNING. Risk of electric shock. The capacitors in the inverter remain charged for 5 minutes after power has been removed. Do not open the control box until 5 minutes after power has been removed.



WARNING. Repairs to the inverter may only be carried out by Toshiba Service, or by repair centres authorised by Toshiba.

Details of Service Contracts are available on application.

ORDERING SPARE PARTS

In the event that spare parts or accessories need to be ordered, please always quote the SERIAL NUMBER of the machine. This is to be found on the rating plate located near the supply cable.

For installations outside the UK please contact your supplier.

FOR INFORMATION ON SPARE PARTS AND SERVICE SUPPORT (IF APPLICABLE)

CONTACT METCALFE CATERING EQUIPMENT LTD. ON TEL. NO. 01766 830456

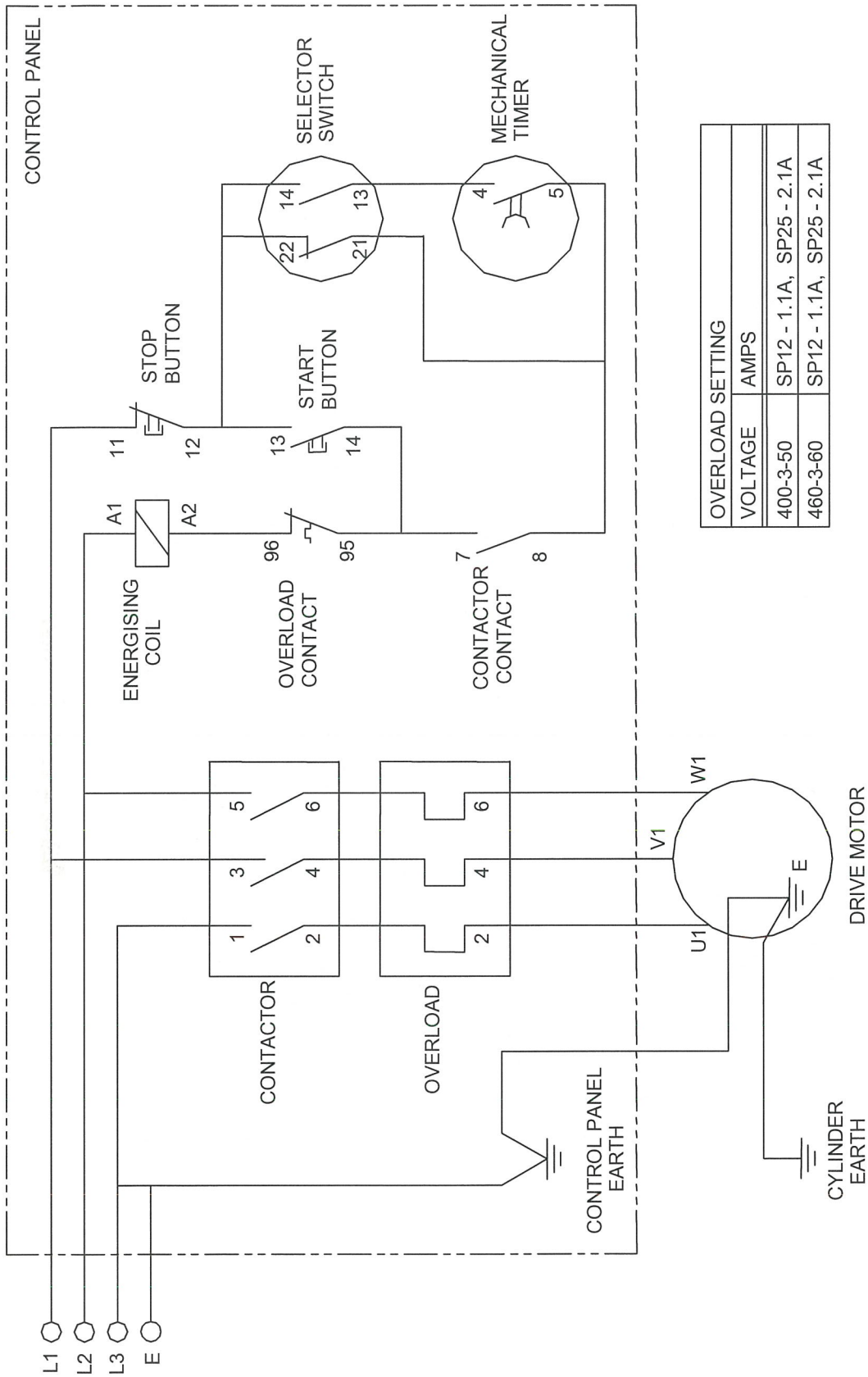
Fitting of Guarded Discharge Chute To METCALFE 56SS POTATO PEELING MACHINE



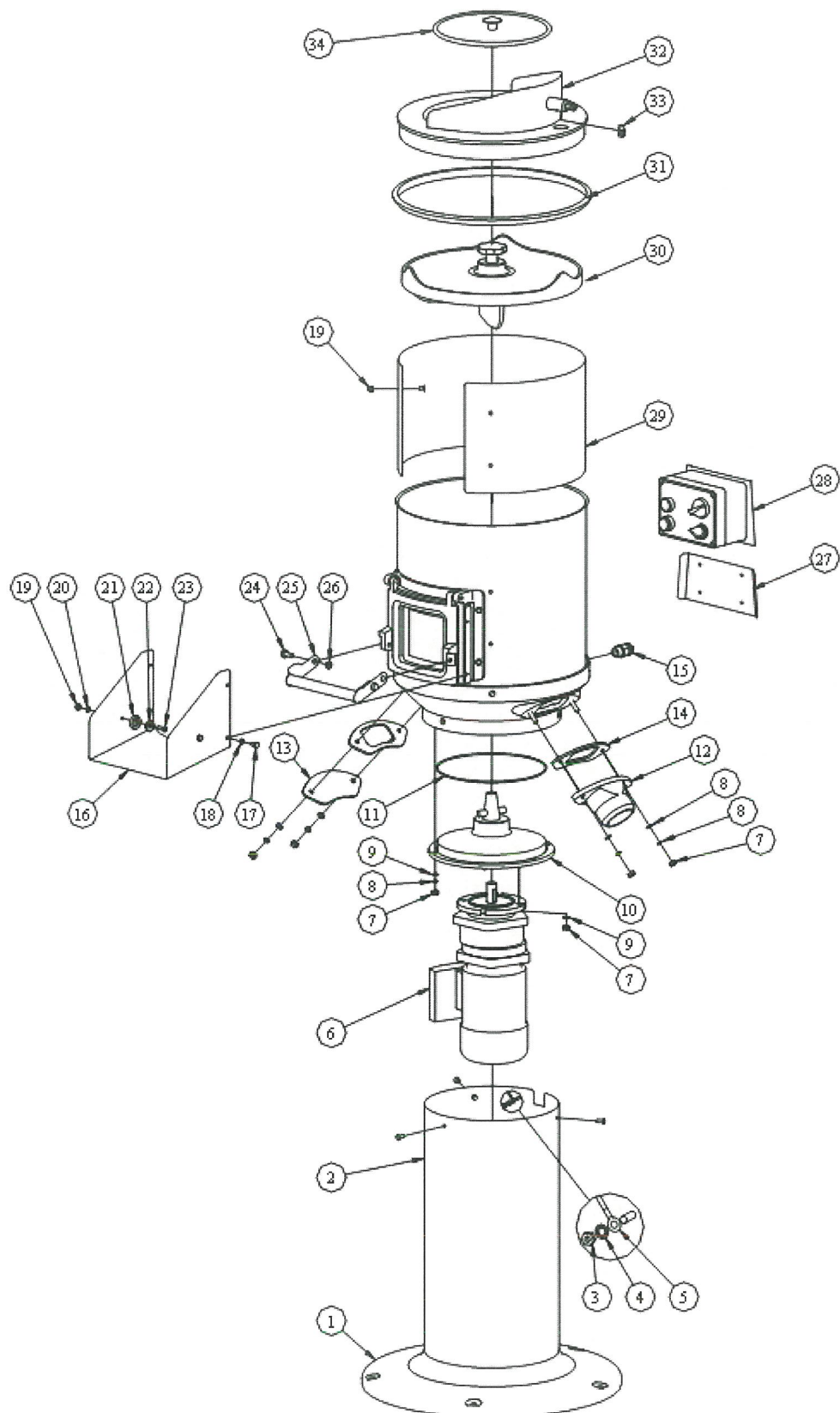
The diagram illustrates the electrical connections for a motor control system. It includes a power supply (E, L, N), an inverter (U/T1, V/T2, W/T3), a control box (TIMER, SELECTOR SWITCH, ON/OFF SWITCH), and a drive motor (U1, V1, W1). The connections are as follows:

- Power Supply:** E (Earth), L (Line), and N (Neutral) lines enter the system.
- Inverter:** The inverter has terminals for U/T1, V/T2, W/T3, and a common terminal. It is connected to the drive motor and the control box.
- Control Box:**
 - TIMER:** A 5-terminal timer (1, 2, 4, 5) connected to the inverter and the ON/OFF SWITCH.
 - SELECTOR SWITCH:** A 4-terminal switch (1, 2, 3, 4) connected to the inverter and the ON/OFF SWITCH.
 - ON/OFF SWITCH:** A 4-terminal switch (1, 2, 3, 4) connected to the inverter and the drive motor.
- Drive Motor:** A 3-phase motor with terminals U1, V1, and W1. It is connected to the inverter and the ON/OFF SWITCH. The motor is also connected to a CYLINDER EARTH.
- Cable Screen:** A cable screen is shown connecting the inverter to the drive motor.

WIRING DIAGRAM 3 PHASE MACHINE



PARTS ILLUSTRATION



SPARE PARTS LIST

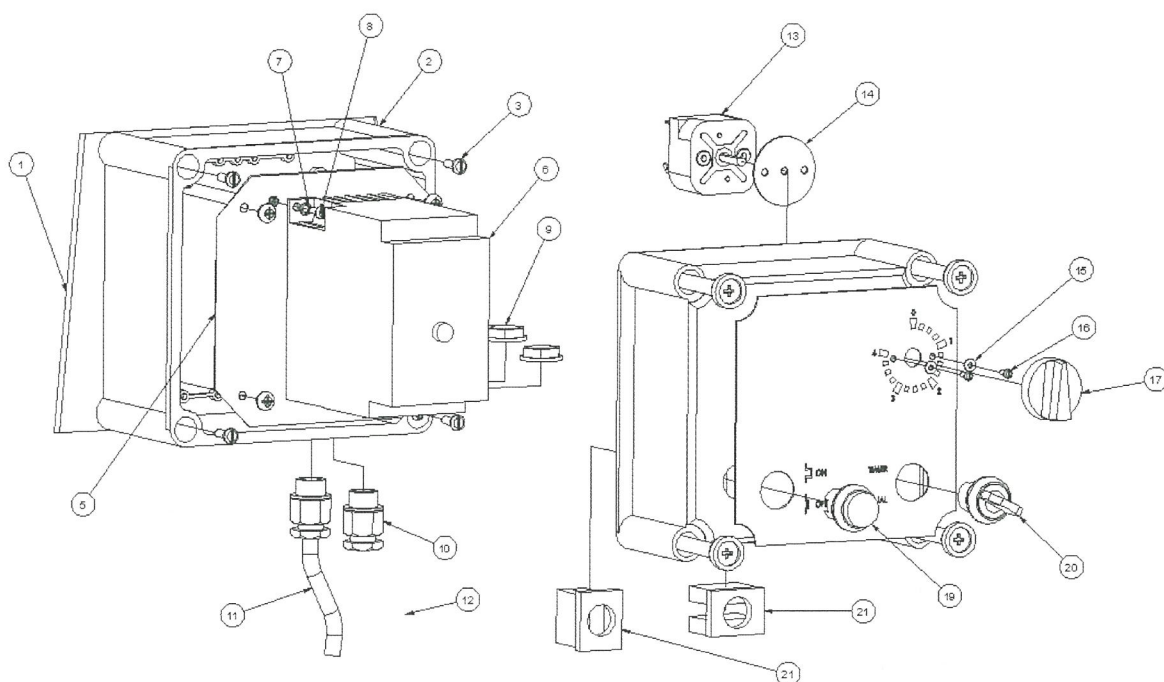
Item	28SS PEELER		56SS PEELER	
	Part No.	Description	Part No	Description
1	E58/055	28SS Low Pedestal	E58/057	56SS Low Pedestal
	E58/056	28SS High Pedestal	E58/058	56SS High Pedestal
2	D18/050	Screw M6 x 16 CSK SS	D18/050	Screw M6 x 16 CSK SS
3	D20/038	M5 Full Nut SS	D20/038	M5 Full Nut SS
4	D25/004	M5 Shakeproof Washer SS	D25/004	M5 Shakeproof Washer SS
5	G60/369	Earth Wire, Motor to Pedestal	G60/369	Earth Wire, Motor to Pedestal
6	G48/205	Motorgearbox 0.37kW	G40/206	Motorgearbox 0.75kW
	G60/372	Motor cable (1ph)	G60/372	Motor cable (1ph)
	G60/373	Motor cable (3ph)	G60/373	Motor cable (3ph)
	G86/003	Ferrite (1ph only)	G86/003	Ferrite (1ph only)
7	D18/050	M8 Full Nut SS	D18/050	M8 Full Nut SS
8	D25/079	M8 Spring Washer SS	D25/079	M8 Spring Washer SS
9	D25/068	M8 Plain Washer SS	D25/068	M8 Plain Washer SS
10	S58/549	Bearing Housing Assembly	S58/549	Bearing Housing Assembly
11	A02/070	O Ring	A02/070	O Ring
12	C28/023 M1 Z2	Waste Outlet, Machined	C28/023 M1 Z2	Waste Outlet, Machined
13	E58/059	Waste Outlet Cover Plate	E58/059	Waste Outlet Cover Plate
14	A11/026	Waste Outlet Gasket	A11/026	Waste Outlet Gasket
15	G80/029	Cable Gland	G80/029	Cable Gland
16	E58/081	Chute	E58/081	Chute
17	D20/031	Screw M6 x 12 Hex SS	D20/031	Screw M6 x 12 Hex SS
18	D25/052	M6 Plain Washer SS	D25/052	M6 Plain Washer SS
19	D20/031	M6 Dome Head Nut	D20/031	M6 Dome Head Nut
20	D25/005	M6 Shakeproof Washer SS	D25/005	M6 Shakeproof Washer SS
21	M79	Door Roller	M79	Door Roller
22	L21/048	Eccentric	L21/048	Eccentric
23	D18/051	Screw M6 x 20 CSK SS	D18/051	Screw M6 x 20 CSK SS
24	D21/057	Screw M8 x 20 Pan SS	D21/057	Screw M8 x 20 Pan SS
25	E72/005	Door Handle	E72/005	Door Handle
26	A00/058	Nylon Shoulder Washer	A00/058	Nylon Shoulder Washer
27	E58/096	Wall Bracket (1ph)	E58/096	Wall Bracket (1ph)
	E58/111	Wall Bracket (3ph)	E58/111	Wall Bracket (3ph)

SPARE PARTS LIST

	28SS PEELER		56SS PEELER	
Item	Part No.	Description	Part No	Description
28	S58/573	28SS Control Box 1Ph (Inc. Wall Bracket & Cables)	S58/574	56SS Control Box 1Ph (Inc. Wall Bracket & cables)
	S58/557	28SS Control Box 3Ph (Inc. Wall Bracket & Cables)	S58/559	56SS Control Box 3 Ph (Inc. Wall Bracket and Cables)
	G60/370 M1	Mains cable and plug (1ph)	G60/370 M1	Mains cable and plug (1ph)
	G60/371	Mains cable (3ph)	G60/371	Mains cable (3ph)
29	E58/113 Z	28SS Liner	E58/114 Z	56SS Liner
30	S58/545	28SS Peeler Plate	S58/546	56SS Peeler Plate
31	M58/011 M1	28SS Rim Moulding	M58/011 M2	56SS Rim Moulding
32	S58/543	28SS Lid assembly (Including Spray Nozzle)	S58/544	56SS Lid assembly (Including Spray Nozzle)
33		Spray Nozzle	J04/324	Spray Nozzle
34	S58/541	28SS Splash Cover	S58/542	56SS Splash Cover
	28SS PEELER ACCESSORIES		56SS PEELER ACCESSORIES	
	A29/003	Splash Cover Retaining Strap	A29/003	Splash Cover Retaining Strap
	S58/568	Integral Filter Basket	S58/568	Integral Filter Basket
	S58/569	Floor Standing Interceptor Tank	S58/569	Floor Standing Interceptor Tank
	S58/570	Waste ejector	S58/570	Waste ejector

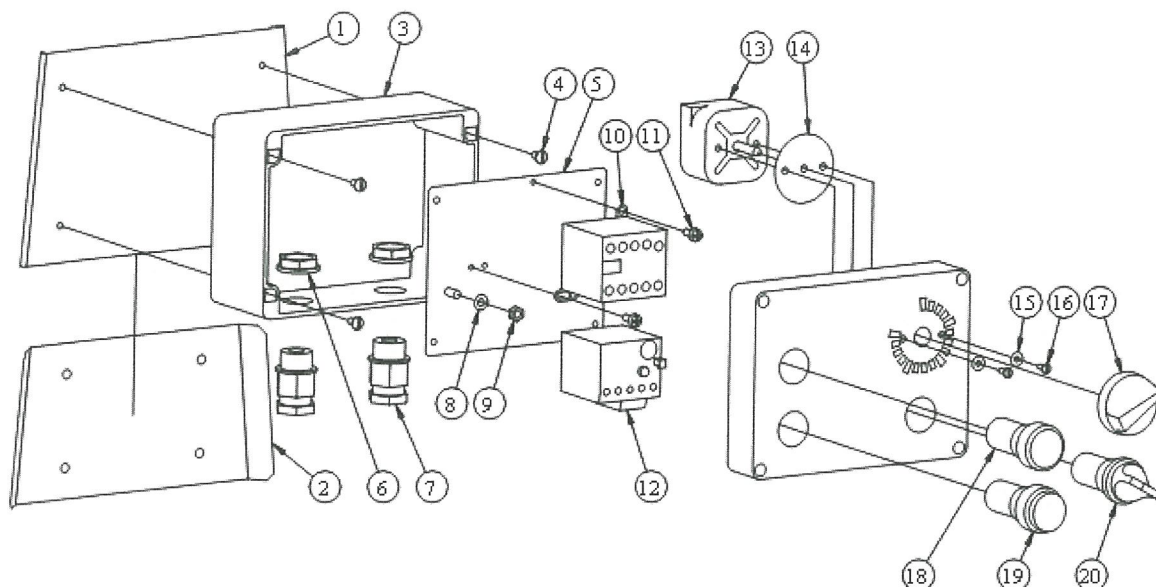
**When ordering spare parts or accessories always quote the
SERIAL NUMBER of the machine, found on the rating label.**

1 PHASE CONTROL BOX SPARE PARTS LIST



	28SS PEELER		56SS PEELER	
Item	Part No.	Description	Part No	Description
1	E58/096	Mounting Bracket	E58/096	Mounting Bracket
	E58/097	Wall Bracket (Not shown)	E58/097	Wall Bracket (Not shown)
2	G76/031 M1	Control Box (Including lid & label)	G76/031 M1	Control Box (Including lid & label)
3	D21/052	Screw M6 x 16 Pan SS	D21/052	Screw M6 x 16 Pan SS
4	D20/043	M6 Nyloc Nut SS	D20/043	M6 Nyloc Nut SS
5	A08/641	Inverter Box Label	E58/015	Control Box Plate
6	G30/408	Inverter 0.37kW (Toshiba)	G30/407	Inverter 0.75kW (Toshiba)
7	D25/033	M4 Shakeproof Washer SS	D25/033	M4 Shakeproof Washer SS
8	D21/038	Screw M4 x 12 Pan SS	D21/038	Screw M4 x 12 Pan SS
9	A10/224	Cable Gland Nut	A10/224	Cable Gland Nut
10	G80/029	Cable Gland	G80/029	Cable Gland
11	G60/3712	Motor cable 1ph	G60/3712	Motor cable 1ph
12	G60/370 M1	Mains cable and plug 1ph	G60/370 M1	Mains cable and plug 1ph
13	G34A	Timer	G34A	Timer
14	A11/219	Timer Gasket	A11/219	Timer Gasket
15	D25/066	M3 Seloc Washer	D25/066	M3 Seloc Washer
16	D21/031	Screw M3 x 8 Pan SS	D21/031	Screw M3 x 8 Pan SS
17	G45/066	Timer Knob	G45/066	Timer Knob
18	A08/641	Inverter Box Label	A08/641	Inverter Box Label
19	G45/113	Push Button Black	G45/113	Push Button Black
20	G45/114	Selector Switch	G45/114	Selector Switch
21	G45/111	Button contacts and holder	G45/111	Button contacts and holder

3 PHASE CONTROL BOX SPARE PARTS LIST



28SS PEELER			56SS PEELER	
Item	Part No.	Description	Part No	Description
1	E58/110	Mounting Bracket	E58/110	Mounting Bracket
2	E58/111	Wall Bracket	E58/111	Wall Bracket
3	G76/024 M4	Control Box (inc lid)	G76/024 M4	Control Box (inc lid)
4	D21/097	Screw M4 x 8 Pan SS	D21/097	Screw M4 x 8 Pan SS
5	E58/112	Control Box Plate	E58/112	Control Box Plate
6	A10/224	Cable Gland Nut	A10/224	Cable Gland Nut
7	G80/029	Cable Gland	G80/029	Cable Gland
8	D25/004	M5 Shakeproof Washer	D25/004	M5 Shakeproof Washer
9	D20/038	M5 Full Nut SS	D20/038	M5 Full Nut SS
10	G30/316	Contactor 400V (3ph)	G30/316	Contactor 400V (3ph)
11	D22/022	Screw No. 8 x 1/2"	D22/022	Screw No. 8 x 1/2"
12	G30/318	Overload (3Ph)	G30/299	Overload (3Ph)
13	G34A	Timer	G34A	Timer
14	A11/219	Timer Gasket	A11/219	Timer Gasket
15	D25/066	M3 Seloc Washer	D25/066	M3 Seloc Washer
16	D21/031	Screw M3 x 8 Pan SS	D21/031	Screw M3 x 8 Pan SS
17	G45/066	Timer Knob	G45/066	Timer Knob
18	G45/099	Green Push Button	G45/099	Green Push Button
19	G45/100	Red Push Button	G45/100	Red Push Button
20	G45/102	Selector Switch	G45/102	Selector Switch
	G60/371	Mains supply cable 3ph	G60/371	Mains supply cable 3ph
	G60/373	Motor cable 3ph	G60/373	Motor cable 3ph

**When ordering spare parts or accessories always quote the
SERIAL NUMBER of the machine, found on the rating label**



Metcalfe Catering Equipment Ltd
Haygarth Park, Baisau Ffestniog, Gwynedd
LL41 3PP, Great Britain
t +44 (0)1766 830 456
f +44 (0)1766 831 170
e enquiries@metcalfecatering.com
w www.metcalfecatering.com

metcalfe WARRANTY

All **METCALFE** products are guaranteed against defects in material and workmanship for a period of one year from date of Invoice, except where specially noted.

The Company's obligation under this warranty is limited to repairing or replacing, without charge, any part or parts found to be defective under normal use, in accordance to the specified operations manual and capacity ratings.

On all return to factory warranty items, it is the responsibility of the purchaser to return the entire unit to the factory, properly packed and labelled.

All repairs, alterations or replacement of materials or parts not authorised by **METCALFE** will automatically void all warranties in their entirety.

There is a limited **6-month warranty** on the following

- Mixer attachments (beater, whisk and dough hook)
- Parts purchased or supplied for the repair of **METCALFE** equipment

This warranty does not cover the following

- Failure due to neglect, abuse, careless handling or misuse of machine
- Failure caused due to improper maintenance
- Blender clutches
- Knives and gears on can openers
- Sharpening of slicer blades

METCALFE and its suppliers reserve the right to make changes in design and specification to any product without prior notification.



Registered England 386634
VAT Registration W668148006471

ELECTRICAL PAT. TEST CERTIFICATE

TEST DETAIL	RESULTS
ITEM:	
CLASS, eg CLASS 1, CLASS 2:	
DATE	
APPLIANCE ID:	
USER ID:	M.C.E.
VISUAL:	
EARTH CURRENT eg 25amps, 0.1amps	
EARTH RESULT	Ω
INSULATION (500V):	M Ω
LOAD:	KVA
LEAKAGE:	MA
POLARITY (leads only):	

TEST DETAIL	RESULTS
ITEM:	
CLASS, eg CLASS 1, CLASS 2:	
DATE	
APPLIANCE ID:	
USER ID:	M.C.E.
VISUAL:	
EARTH CURRENT eg 25amps, 0.1amps	
EARTH RESULT	Ω
INSULATION (500V):	M Ω
LOAD:	KVA
LEAKAGE:	MA
POLARITY (leads only):	