CHIPPER

INSTALLATION, OPERATING AND MAINTENANCE MANUAL

PLEASE LEAVE WITH OPERATOR

CHIPPER – CS-C1 SERIES 3

Imperial Machine Company Limited
Unit 1, Abbey Road
Wrexham Industrial Estate
Wrexham LL13 9RF
Tel: +44 (0)1978 661155
Fax: +44 (0)1978 729990
Service Fax: +44 (0)1978 667766
Spares Fax: +44 (0)1978 667759
E-mail: sales@imco.co.uk
Website: www.imco.co.uk

A34/038 R9 **ECN 8404 Nov 2015**

CHIPPER

EC DECLARATION OF CONFORMITY
(Guarantee of Production Quality)

We, Imperial Machine Company Limited of:
Unit 1, Abbey Road, Wrexham Industrial Estate, Wrexham, LL13 9RF
Declare under our sole responsibility that the machine

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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).

Approved by E Plumb, Engineering Manager

Signed at Wrexham, Date November 2015

CHIPPER

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GUARANTEE

This equipment is guaranteed by IMC for 2 years from the date of its purchase from IMC, or from one of its stockists, dealers or distributors. 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.

Please observe these instructions carefully.

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

DELIVERY

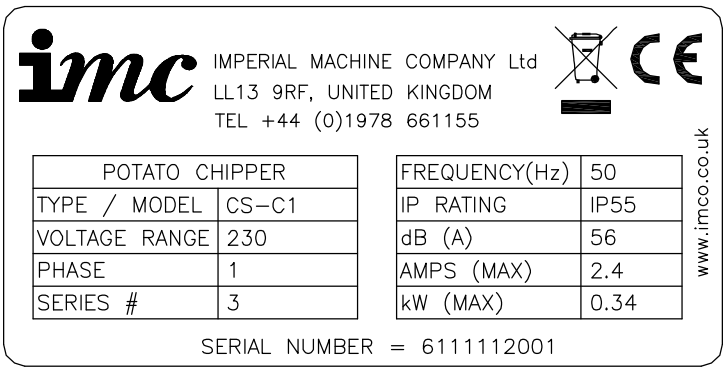
The packaged machine consists of:

Chipper Unit, Comprising:	1
Hopper	1
Knife Block	1
Main Unit	1
Instruction Booklet	1
Wall Plaque	1
Guarantee / Registration Card	1

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 plate, is suitable for the supply available. The rating plate is located on the right hand side of the case.

SAMPLE RATING LABEL

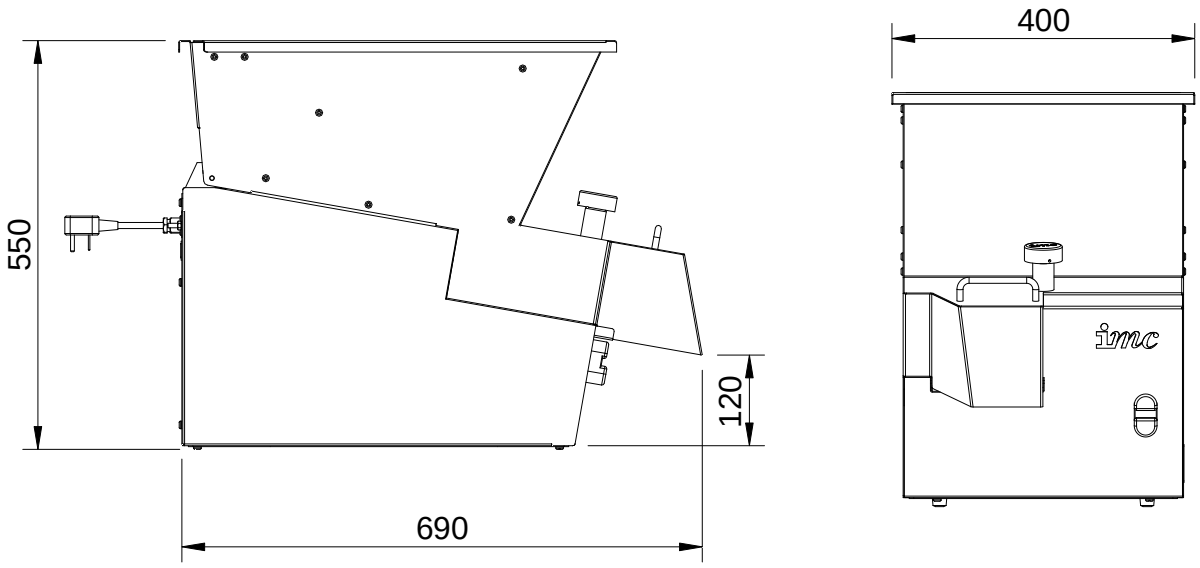


INTRODUCTION

The Chipper is intended for cutting peeled potatoes into chips, in a batch process.

CHIPPER DIMENSIONS

All dimensions are in mm.



INSTALLATION

For the Installer:

These Instructions contain important information designed to help the user obtain the maximum benefit from the investment in an IMC Chipper.
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 installation of the machine is complete.

Procedure

The unit is designed to stand on a bench, table, or on a draining board. Ensure that whatever is used for this purpose is sturdy and rigid and not more than 750 mm high. A higher table makes it difficult to load the machine.

The Chipper should be placed where supplies of peeled potatoes from the peeling machine are readily accessible, after which the output of chips need to be in easy reach of the fryer.

The IMC Chipper has a top loading hopper into which potatoes can be tipped from either side or from the front. The discharge of chips is from the chute at the front of the machine, and the machine should be placed so that this chute is directly over a receiving container.

ELECTRICITY SUPPLY CONNECTION

A Wiring Diagram is shown on Page 8.

The electricity supply connection should be made to a power outlet socket or isolator mounted on the wall close to the machine. This socket or isolator must be accessible once the machine is installed. Before connecting, check that the voltage shown on the rating is correct for the electricity supply you have available. The outlet should be fused at 13 amps.

NOTE: The plug is fitted with a 10amp fuse.

WARNING: This machine must be earthed

Should the supply cord become damaged then an approved electrician must fit a replacement. The IEE Codes of Practice must be observed.

An equipotential bonding terminal is provided at the back of the unit near the cable outlet for external earth bonding. Provision of an earth bond does not remove the requirement for an earth in the electrical supply.

COMMISSIONING

Open the hopper by fully unscrewing the interlock knob at the front and lifting up until the hopper is fully resting back on its hinges. Turn the rotor by hand to ensure that it is completely free to rotate. Check that the knife block assembly is in the correct position and screwed down firmly. Replace the hopper and screw down the interlock knob until it is tight.

It is now safe to switch on at the wall socket and to start the machine by pressing the start button on the front of the machine (green button). To stop the machine press the red button.

The IMC Chipper features safety interlock devices that ensure the machine cannot run unless both the knife block and the hopper are properly and fully in position. This makes it impossible for the operator to touch the spinning rotor whilst it is running.

To confirm that the interlock is operating correctly press the start button to switch the machine on. Then whilst it is still running, unscrew the hopper interlock knob. After two or three turns the machine should switch off, but there are still two or three further turns of the knob necessary before the hopper can be opened. The rotor should be stationary within 2 seconds of the hopper being opened. If the knife block is not in place, another interlock will prevent the machine from running.

OPERATION

With the machine running, feed peeled potatoes into the hopper. It will hold approximately 15kg of potatoes, which self feed into the mechanism of the machine and discharge as cut chips from the chute. Always turn the chipper off once all potatoes have been cut.

Some care is necessary when loading, as the rotor will not accept abnormally large potatoes, so these must be cut into two. The hopper is specially designed not to pass potatoes which are over size and which could otherwise clog the mechanism. It is also essential that only potatoes be fed in to this machine.

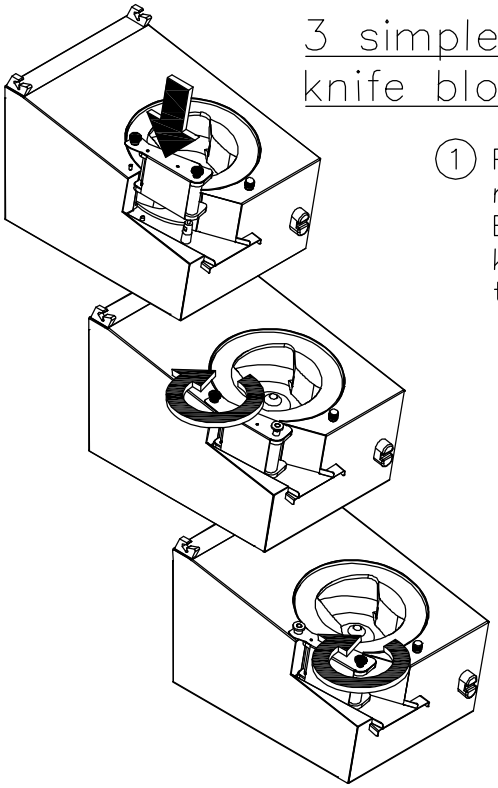
NOTE: Take great care to ensure that there are no stones mixed in with the potatoes.

A stone or any other foreign object will damage the cutting knives and could cause the machine to jam. In this event the machine has an inbuilt protection device, which will switch it off before the electric motor burns out. This overload protection feature will automatically reset itself when it cools down but it is necessary to wait a few minutes for this to happen. After clearing the jam resume operation by pressing the start button. Should a stone damage the knife blades they must be replaced as further use could break the blades.

The motor is also fitted with a thermal trip that will stop the machine if the motor overheats. This protection feature will automatically reset itself when it cools down but it is necessary to wait a few minutes for this to happen.

The machine will switch itself off in the event of failure of the electricity supply whilst operating. When the supply is restored the machine must again be switched on. It is fitted with no-volt release.

KNIFE BLOCK FITTING



3 simple steps to fitting your knife block

1. Place the knife block in the recess on the chipper. Ensure the base of the knife block fits correctly on the location pins

2. Push down on the rear knife block fixing knob whilst screwing down firmly to tighten

3. Tighten the front knob to fully secure the knife block

CHANGE CHIP SIZES

To change to a different size of chip, change the knife block assembly. Spare knife block assemblies are available from IMC. Open the hopper, un-screw the knife block and replace with the alternative selected. Knife blocks are available in the following sizes from the standard range: 8mm, 12mm, 14mm and 14 x 17mm.

CLEANING

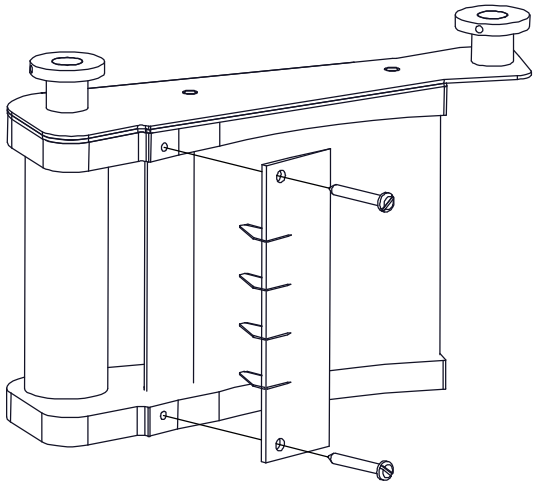
It is essential to clean the machine at least once a day, preferably at the end of each period of operation.

1. Switch off at the socket or isolator
2. Fully unscrew the interlock knob, open the hopper and lift it out of its hinge seating at the back.
3. Clean the hopper in a sink, dishwasher, pot wash or by hosing with a spray
4. Remove the knife block by fully un-screwing and lifting upwards, off its locating dowels
   NOTE: Take care when handling the knife block. The blades are sharp.
5. Clean the knife block under a spray or running tap and remove any residual pieces of potato. **DO NOT use any metallic objects**, such as a knife or screwdriver, to un-block the knife block. Visually inspect all blades for wear or damage, and replace the knife pack as necessary. Do not attempt to straighten a bent blade - bent blades should be replaced immediately.
6. Lift the rotor carefully off its spindle.
7. Clean the rotor in a sink, pot wash, etc.
8. Clean out the interior of the base unit and wipe over the exterior with a damp soft cloth. Do not hose down the exterior of the machine.
   DO NOT USE CLEANING MATERIALS CONTAINING ABRASIVES OR BLEACHES.
9. Reassemble the machine, reversing the above disassembly procedure. When replacing the rotor, ensure that it is put back square on its spindle. Make sure that it is properly seated on its cross pin by turning it slowly until it drops onto this seating. When replacing the knife block ensure it is screwed down firmly.

CHANGING KNIFE BLADES

The knife blades are supplied as a pack and individual blades cannot be changed. Change the knife blade pack as soon as it is damaged or blunt. To change the knife blade pack remove the knife block and undo the two screws securing the knife blade pack. Dispose of the old blades carefully and screw the new knife blade pack in place. See diagram below.

For optimum performance IMC recommend changing the blade pack every 6 months, or sooner depending on usage.



NOTE: Take care when handling the knife block. The blades are sharp.

MAINTENANCE

Details of IMC Service Contracts are available on application.

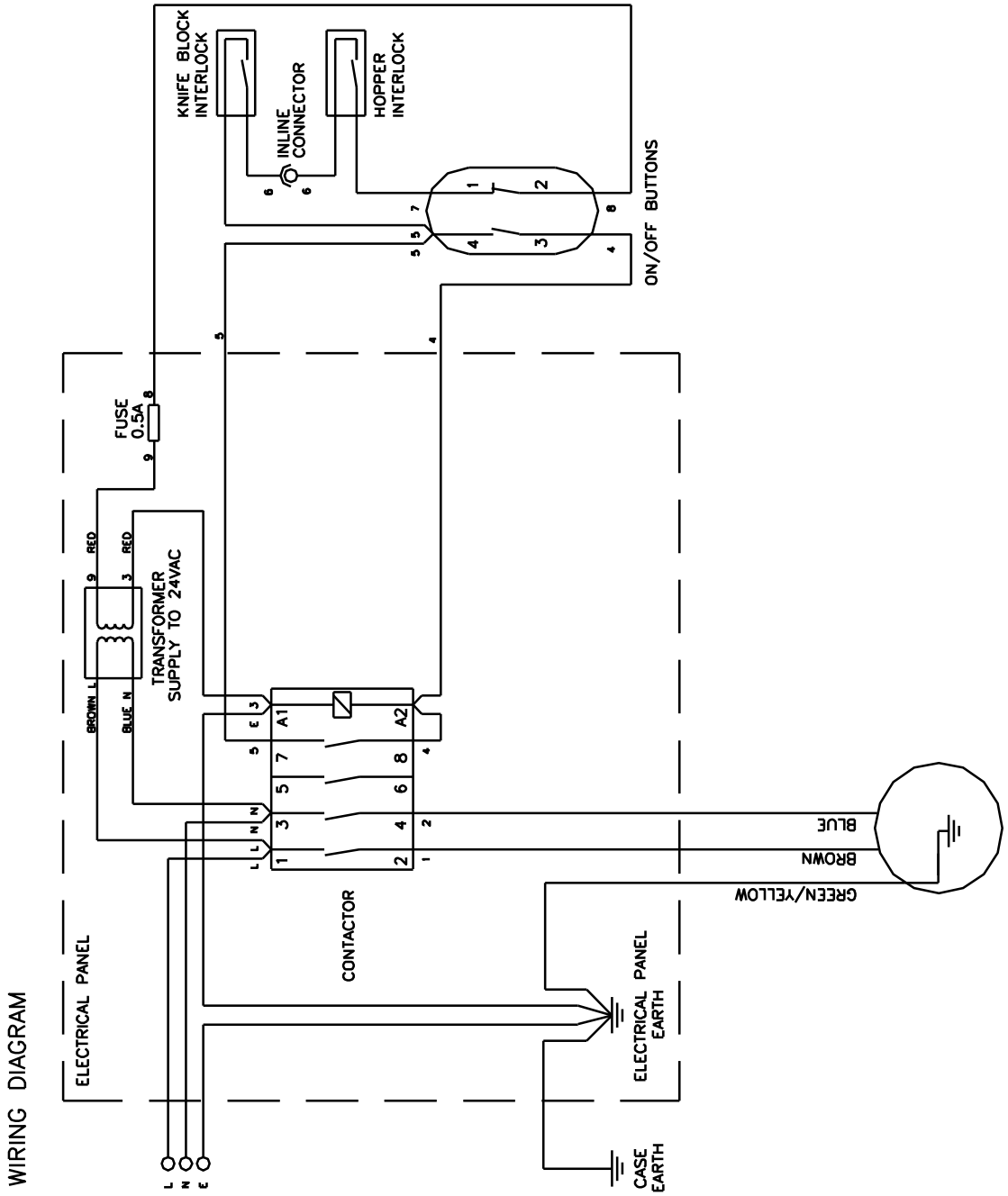
ORDERING SPARE PARTS

In the event that spare parts or accessories need to be ordered, please always quote the SERIES AND 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.

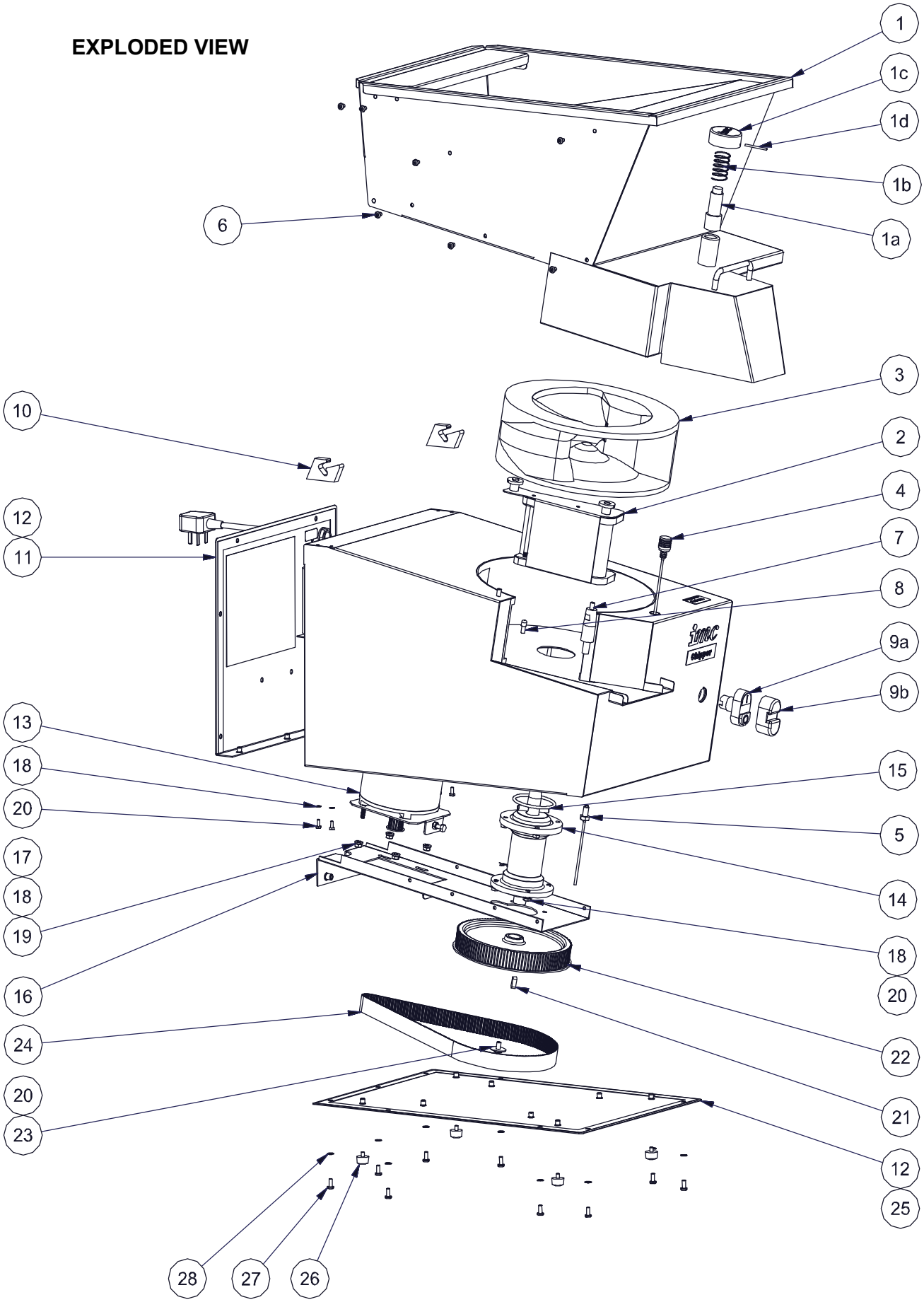
For information on IMC spares and service support (if applicable), please call IMC on +44 (0)1978 661155. Alternatively, contact us via email or fax:

IMC Service Desk	Fax: +44 (0)1978 667766 E-mail: service@imco.co.uk
IMC Spares Desk	Fax: +44 (0)1978 667759 E-mail: spares@imco.co.uk

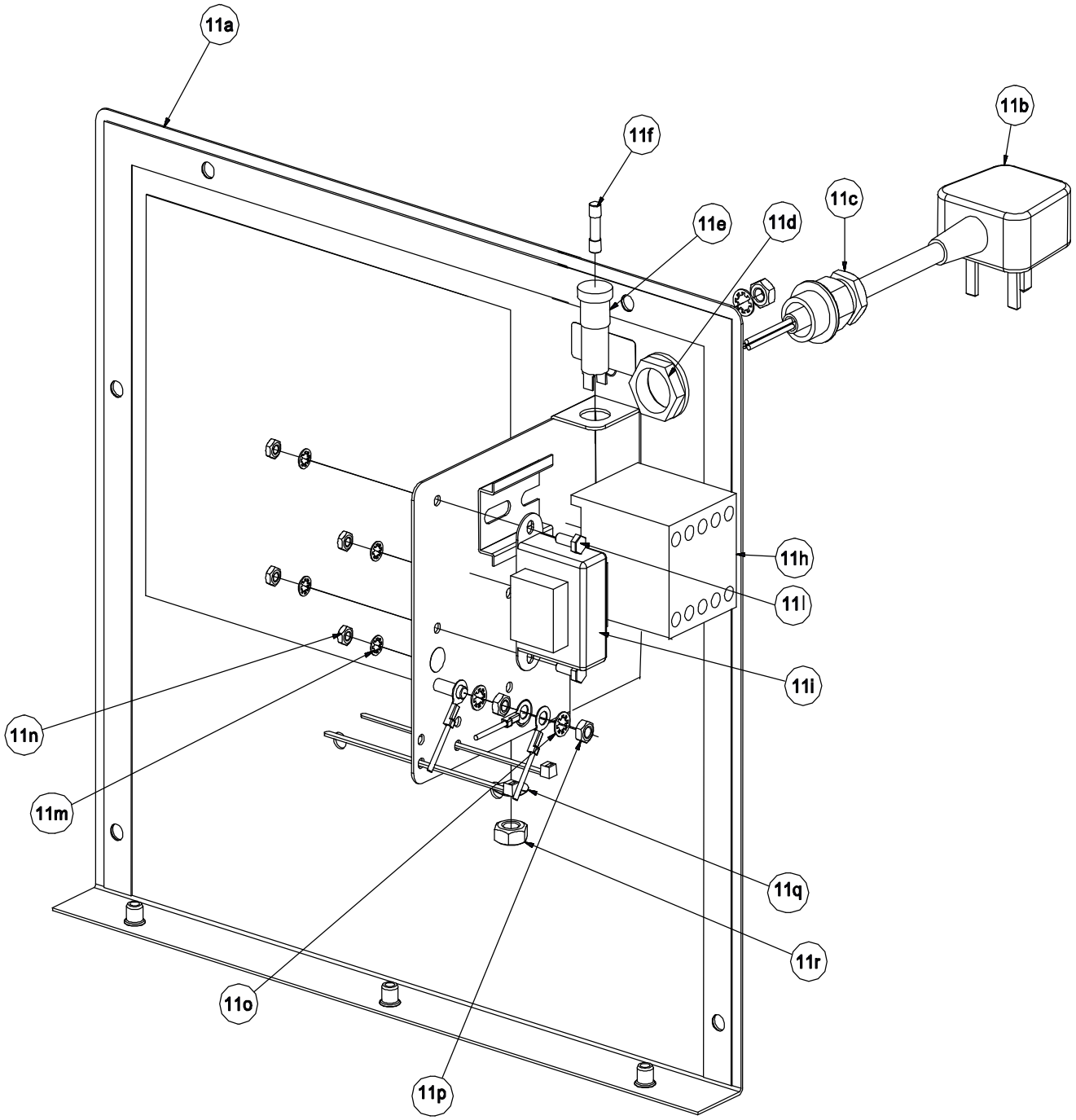
WIRING DIAGRAM FOR CHIPPER



EXPLODED VIEW



Electrical control parts



PARTS LIST

ITEM	PART NO	DESCRIPTION
1	S61/150	Hopper assembly, incorporating:
1a	M81A	Interlock body
1b	A12/011	Interlock spring
1c	L61/024	Interlock knob
1d	D26/017	Interlock pin
2a	S61/184	21x17mm knife block assembly
	S61/145	12mm Knife block
	S61/151	14mm Knife block
	S61/144	14x17mm Knife block
2b	S61/183	21x17mm knife pack assembly
	S61/134	Knife blade pack 12mm
	S61/129	Knife blade pack 14mm
	S61/128	Knife blade pack 17mm
3	C61/002 M1 Z	Rotor
4	S61/178	Hopper switch assembly
5	S61/179	Knife block switch assy.
6	D19/138	M5 X 8 skt button head
7	L61/009	Knife block locating pin, incorporating:
7a	D25/003	M10 spring washer SS
7b	D20/015	M10 full nut SS
8	L34/005	Knife block short pin, incorporating:
8a	D25/052	M6 Plain washer SS
8b	D20/013	M6 Full nut SS
9	G45/109	On / off button, incorporating:
9a	G45/110	Button protective boot
9b	G45/111	Button contacts NO & NC
10	A13/024	Hopper hinge, incorporating:
10a	D25/033	M4 Shakeproof washer SS
10b	D19/120	M4x8 Hex screw SS
11	S61/176	Electric panel assembly, incorporating:
11a	E61/133	Rear panel
11b	G60/101 M4	Mains cable with plug
11c	A10/266	Strain relief gland
11d	A10/224	Back nut
11e	G35/012	Fuse holder
11f	G35/004	Fuse 5x20 0.5A
11h	G30/343	Contactor 24V ac
11i	G60/427	Transformer terminated
11l	D19/110	M4x10 Hex screw SS
11m	D25/033	M4 Shakeproof washer SS
11n	D20/011	M4 Full nut SS
11o	D25/004	M5 Shakeproof washer SS
11p	D20/038	M5 Full nut SS
11q	D25/062	M8 Lock washer SS
11r	D20/014	M8 Full nut SS
12	K08/043	Gasket strip

Parts list continuedé		
13	S61/177	Motor assembly, incorporating:
13a	E61/014	Motor mounting plate
13b	D19/032	M5x12 Hex screw SS
13c	D19/115	M6x30 Hex screw SS
13d	D20/013	M6 Full nut SS
13e	A06/099	Drive pulley (keyed not pinned)
13f	L61/041	Bush (for drive pulley)
13g	D19/142	M4x25 Hex screw SS (for drive pulley)
13h	G60/323	Motor Cable Assembly
14	S61/118	Bearing housing assembly
15	A02/068	O ï Ring
16	E61/015	Drive plate
17	D25/052	M6 Plain washer SS
18	D25/005	M6 Shakeproof washer SS
19	D20/013	M6 Full nut SS
20	D19/038	M6x12 Hex screw SS
21	D27/031	Drive key
22	A06/090	Driven pulley 114-5M-25
23	D25/019	M6 25OD plain washer
24	A05/041	Timing belt 850-5M-25
25	E61/107	Base plate
26	A13/108	Plastic foot
27	D21/044	M5x12 Pan screw SS
28	D25/004	M5 shakeproof washer SS