

# Magnetic Base Drilling Machine

## **EQ35**



## **Operators Instruction Manual And Spare Parts Listings**

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## Introduction

Congratulations on the purchase of your new, lightweight multi-purpose magnetic base drill. This is a high quality product with unique features that make it the perfect solution for your entire hole drilling requirements.

- Easy to use and rugged design makes the EQ35 a cost effective solution to drilling clean, accurately positioned holes in your work piece.
- Powered by a powerful electronic UNI 1 MOTOR
- Revolutionary quick release arbor speeds up cutter change time.

## Chapter 1. Technical Overview.

Machine	EQ35
Speed (rpm)	360
Clamping force (Kg)	400
Size (LxWxH) (mm)	300x240x400
Cutter Capacity (mm)	12 - 32
Power Consumption (Watts)	960
Weight (Kg)	12

## Chapter 2. Warnings and Safety Instructions.

Read these instructions carefully before operating, maintaining or servicing this tool.  
Please keep these instructions in a safe accessible place.



Read to fully understand and observe the following safety precautions and warnings. Careless or improper use of this equipment may result in serious or fatal injury.



Always wear eye, head and ear protection equipment, when using this tool



### **WARNING!**

Indicates instant possibility of severe personal injury or loss of life, if instructions are not followed.



### **CAUTION!**

Indications a possibility of personal injury or equipment damage, if instructions are not followed.

### **Operator Safety**

- Always read the instructions carefully so as to avoid any injury or damage when unfamiliar with this equipment.
- Always wear a safety face shield or goggles.
- Wear ear defenders when using this equipment.
- Always wear heavy clothing, boots and gloves. Do not wear loose clothing, short pants, sandals etc. and ensure that long hair is tied up above shoulder length.
- Do not operate this equipment when tired, ill or under the influence of alcohol, drugs or medication.
- Never allow an inexperienced person operate this equipment.
- Never operate the equipment in damp, or water logged area.
- Keep all carrying handles and levers free from oil.

### **Tool Safety**

- Inspect the entire piece of equipment before use.
- Replace damaged components, lubricate where necessary and ensure that all fasteners are secure.
- Always use a safety chain to secure the equipment when it is being used above the ground.
- Use only accessories that have been recommended by the manufacturer. Failure to do so could result in damage to the tool and may invalidate the warranty.



### **WARNING!**

Never modify the tooling any way. Do not use your equipment for any job other than for which it is intended.

- Keep hands away from the cutter when it is rotating. Ensure that it has stopped rotating and is disconnected from the power source before touching the cutter.
- Do not attempt to gain access into the electrical panel. There is risk of electrical shock.
- Never use a larger diameter cutter than specified for use with this equipment.
- Do not attempt to connect the equipment to a power source other than that specified by the manufacturer.
- Ensure that the cutter being used is sharp and free from damage.

### **Maintenance safety**

- Maintain according to the manufacturers recommended procedures.
- Disconnect the equipment from the power source before attempting any maintenance.
- Use only genuine replacement components as recommended by the manufacturer.

### **Transport and Storage**

- Before moving the tool, ensure that the cutter has stopped rotating.
- Carry the tool with the cutter pointing away from the body to avoid laceration.
- After use, clean the equipment and it's accessories and store in a dry place.
- Store the equipment along with the maintenance tools in its correct carrying case when not in use.

## Chapter 3. Operating Instructions.



Ensure that the unit is disconnected from the power before working on the machine.

- **Insert Pilot Pin.**

The pilot pin is used to align the cutter and eject the slug on completion of the cut. Slide the pilot through the hole in the centre of the cutter shank.

- **Fit the Cutter.**

Due to the revolutionary QUICK RELEASE ARBOR Fitting the cutter has never been easier.

Simply rotate the outer sleeve in a clockwise direction. Insert the cutter shank in to the arbor and release the outer sleeve. Rotate the cutter until it clicks into position and finds the shanks flat.

The cutter is now located.

(A cutter with a shank diameter of 19.05mm/3/4" and cutting diameter of no larger than 32mm/1 1/4" must be used).



- **Mark the centre of the required hole.**

- **Position the Machine.**

Ensure that the workpiece is clean and flat. Position the machine by aligning the pilot with the holes centre mark.



- **Fit the safety chain.**

- **Connect the machine to the power source.**

Switch on the power by depressing the RED power switch on the side panel.



- **Energise the magnet.**

Switch on the magnetic base by depressing the YELLOW magnet switch.

CHECK that the pilot is still aligned with the hole centre mark, as energising the magnetic base can cause the machine to move.



- **Apply Coolant**

A 500ml bottle of cutting oil is supplied with the machine. Using cutting oil can increase the tool life and ensures that the slug is ejected cleanly.

Fill or part fill the side mounted oil reservoir and turn on the tap at the bottom of the bottle. Fluid should now flow through the arbor and on to the cutter.

Check for fluid flow before you begin cutting and adjust the flow using the tap.

- **Start Cutting**

ALWAYS ENSURE THAT CUTTING GUARDS ARE IN PLACE.

Start the drill by depressing the GREEN drill switch. Lower the cutter to the surface by turning the handle; and with light pressure cut an initial groove.

Increase pressure until motor is loaded then maintain steady pressure until cut is complete.



- **Finish Cutting**

When the cut is complete the slug will be ejected from the cutter. Raise the cutter again; stop the motor and switch of the magnet.

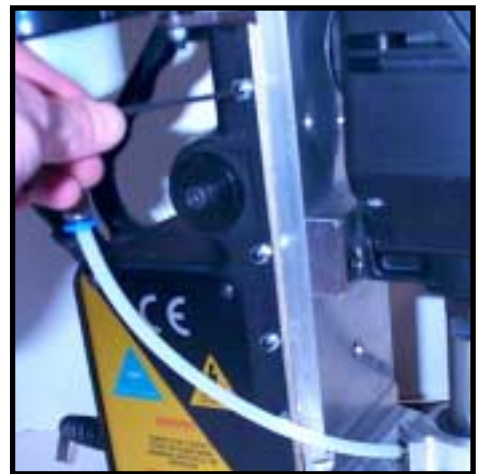
**NOTE: –**

- Applying too much pressure will not speed the cut, it will reduce the life of the tool and may cause damage to the motor.
- If swarf becomes blue in colour then more cutting oil is required.
- If the power is interrupted during the cut, the magnet must be reset before the motor will restart.



## Chapter 4. Maintenance Instructions

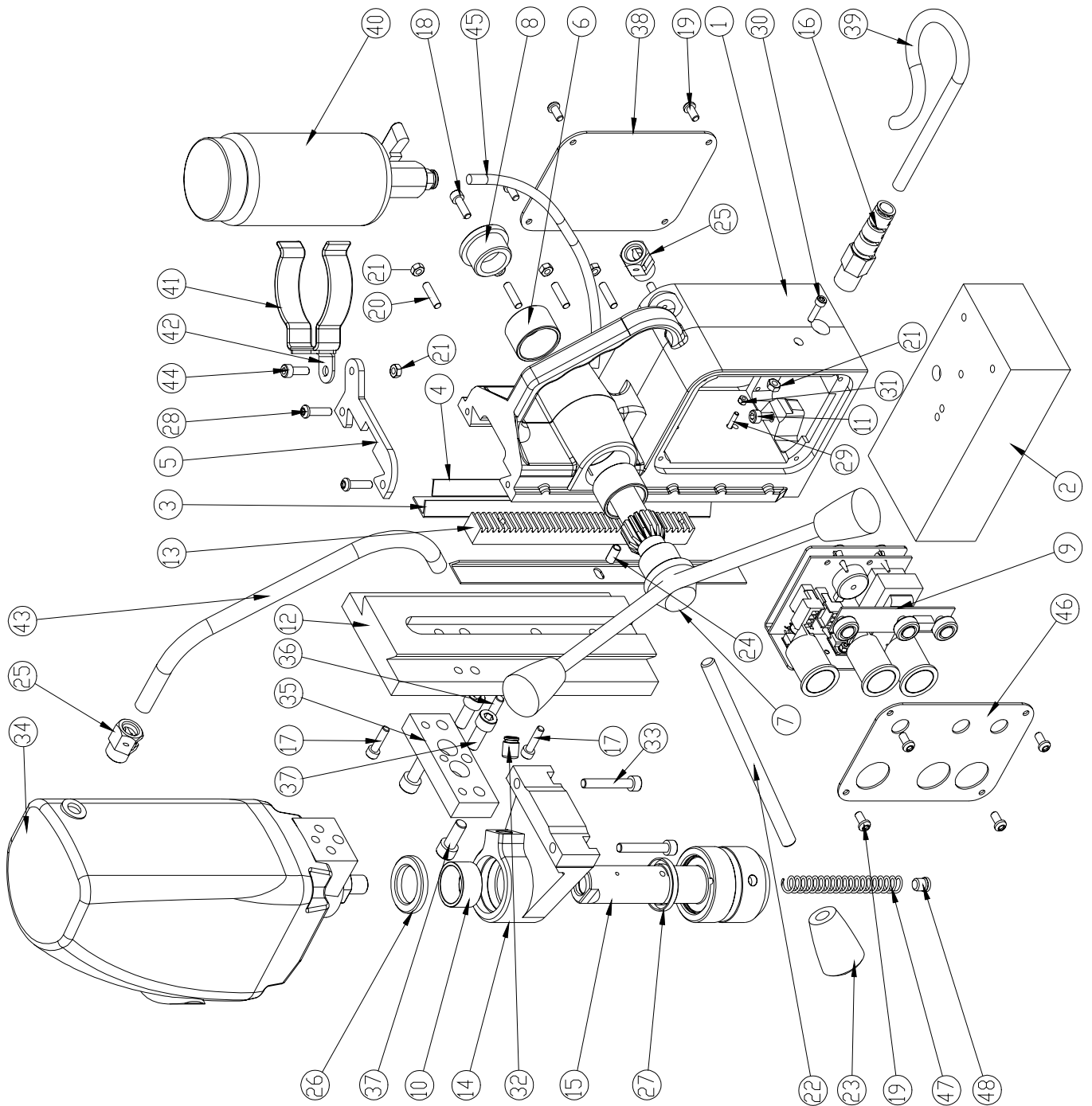
- Occasionally apply a few drops of oil to the rack toothing.
- The bearings of the feed shaft are self-lubricating and must not be greased
- Grease the sliding surface of the carriage with MOLYCOTE grease.
- When not in use or being transported the unit should be kept in the case supplied.
- After use ensure unit is clean of swarf and dirt.
- Parts that are worn or damaged should be replaced immediately with original UNIBOR replacements.
- Ensure all cutting edges are sharp when in operation. Using blunt cutting tools may lead to an overload of the motor.
- After repeated use, the cradle may become loose. This is remedied by adjusting the tension screws on the side of the body.  
Put 2.5mm Allen Key into head of cradle retaining nuts, using 8mm Spanner undo the locking nuts anti-clockwise holding the Allen key without moving grub screws. Using the Allen Key gently tighten screws in series until the cradle moves freely in the slide but does not allow the motor to wobble.  
When adjustment is complete re-tighten locking nuts clockwise.



## Chapter 5. Component Listing.

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	M0001	BODY MB30 (BLACK)
2	1	M0031	MAGNET BASE (SMALL)
3	2	M0101	BRASS STRIP (MB30)
4	1	M0441	G.F.S (MB30)
5	1	M0811A	OILFEED TOP BRACKET
6	2	M0081	BUSH (PINION)
7	1	M0041	PINION - MB30 (SMALL)
8	1	M0072	PINION END CAP (DEEP)
9	1	PANELP	NEW PANEL (NO FACIA)
10	1	M0521	BUSH (MB30 - STEADY)
11	3	SC525CAP	M5 X 25 CAP SCREW
12	1	M0106	SLIDE - EQ35/MBQ35
13	1	M0831	RACK (MB30)
14	1	M0107	STEADY - EQ35/MBQ35
15	1	ARBQR02	QUICK RELEASE ARBOR ASSEMBLY
16	1	10231	M16 STRAIN RELIEF CABLE GLAND
17	2	SC520CAP	M5 X 20 CAP SCREW
18	1	SC516CAP	M5 X 16 CAP SCREW
19	8	SC510BUT	M5 X 10 BUTTON HEAD SCREW
20	5	SC5GRUB	M5 X 20 GRUB SCREW
21	7	NUT-M5	M5 NYLOC NUT
22	3	M0061	HANDLE (10MM SMALL)
23	3	M0841	HANDLE KNOB (10MM KNOCK ON)
24	2	SELPIN420	SELOC PIN DIA 4 X 20 LONG
25	2	M0451	CABLE GLAND (MAGTRON)
26	1	M0050-1	STEADY OIL SEAL (TOP)
27	1	M0050-2	STEADY OIL SEAL (BOTTOM)
28	2	SC520BUT	M5 X 20 BUTTON HEAD SCREW
29	2	SC316CSK-X	M3 X 16 C'SINK SCREW
30	1	SC416CAP	M4 X 16 CAP SCREW
31	2	NUT-M3	M3 NYLOC NUT
32	1	M0066	DIA 6 PUSH FIT OIL FEED FITTING
33	2	SC640CAP	M6 X 40 CAP SCREW
34	1	EIB09	EIBENSTOCK UNI 1 -N - 110V MOTOR
35	1	M0108	MOUNTING BLOCK - EQ35/MBQ35
36	1	DWL-6X30	DIA 6 X 30 LONG DOWEL
37	4	SC820CAP	M8 X 20 CAP SCREW
38	1	M0111	WARNING PLATE - EQ35/MBQ35
39	1	10237-1	MAINS CABLE - YELLOW (110V)

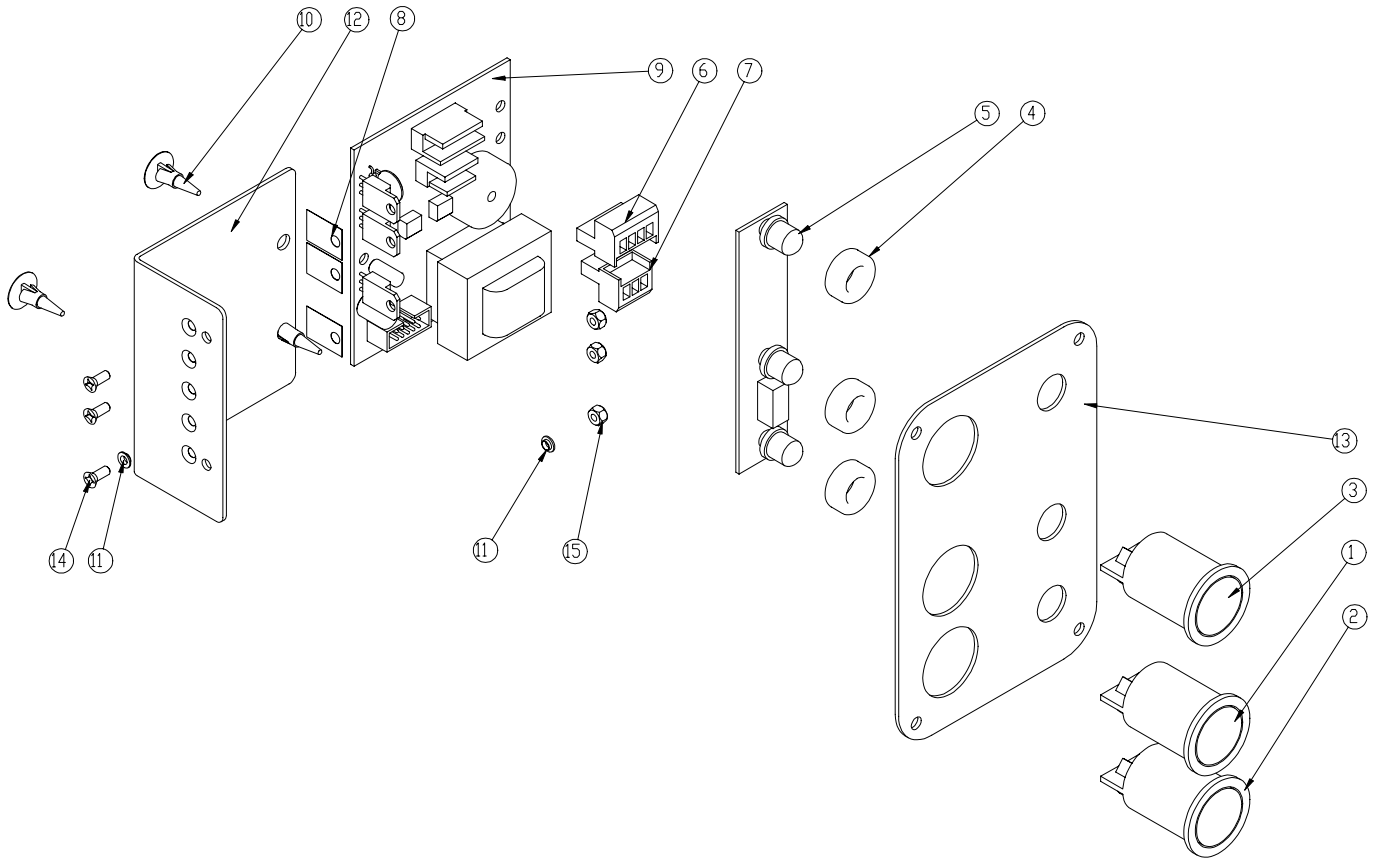
40	1	30046A	SMALL OIL RESERVOIR - BLACK TOP
41	1	10076	OIL RESERVOIR CLIP
42	1	10060	OIL RESERVOIR CLIP MOUNTING PLATE
43	1	M0444	CONDUIT (BLACK)
44	1	SC515CAP	M5 X 15 CAP SCREW
45	1	OIL PIPE	DIA 6 OIL PIPE
46	1	M0109	SWITCH PLATE - EQ35
47	1	SPRI01	ARBOR SPRING
48	1	10205A	ARBOR EJECTION PLUG



## Additional Parts (Not Shown)

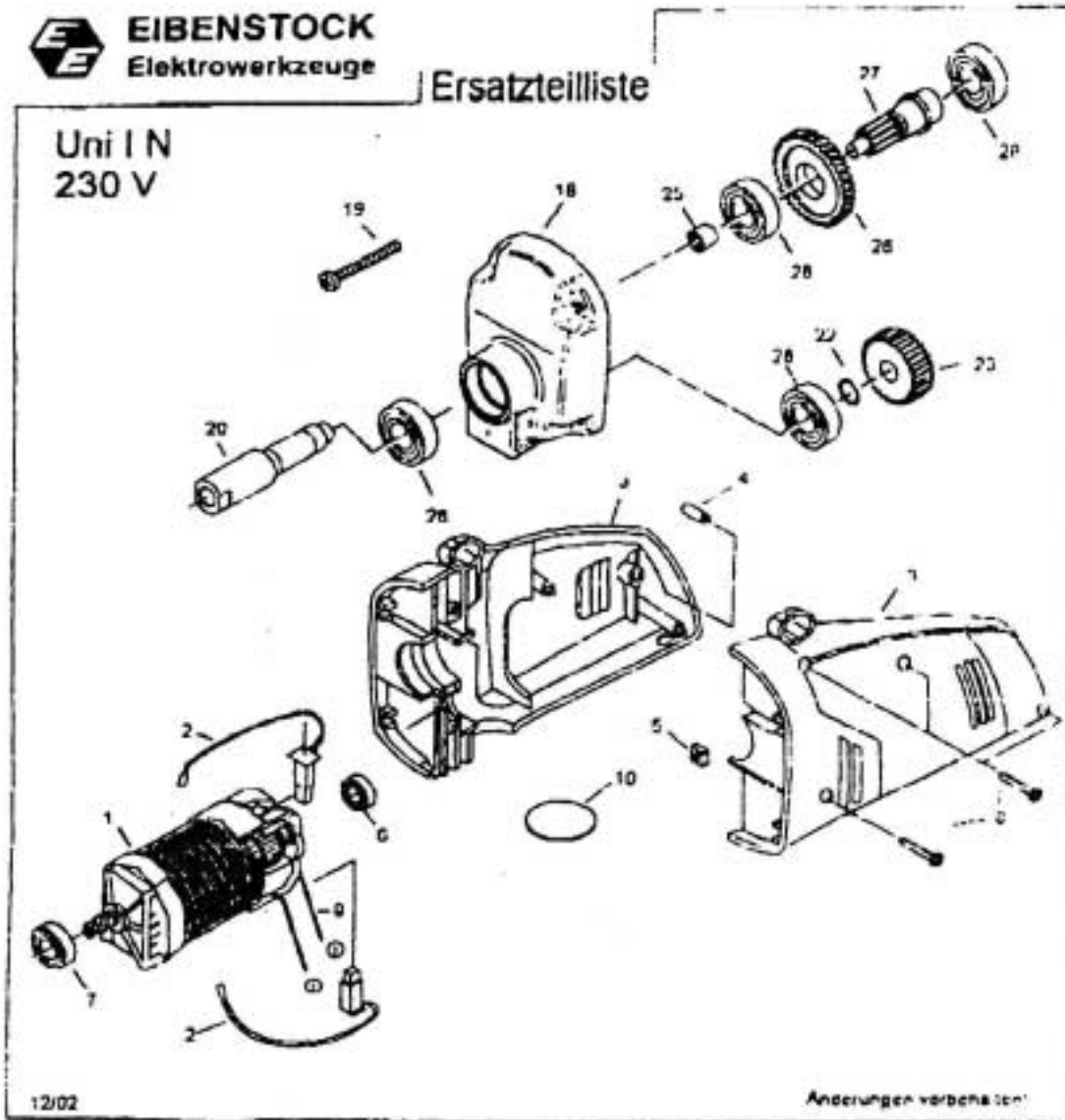
ITEM NO.	QTY.	PART NO.	DESCRIPTION
-	1	M0960	HITACHI DRILL CHUCK & KEY
-	1	STRAP01	POLYESTER WEBBING SAFETY STRAP
-	1	OIL09	COOLCUT 500ML OIL BOTTLE
-	1	KEY01	ALLEN KEY 2.5MM
-	1	KEY03	ALLEN KEY 4MM
-	1	KEY04	ALLEN KEY 5MM
-	1	M0961	HITACHI D HANDLE
-	1	CASE01	CARRYING CASE - MINIBOR - PLASTIC
-	1	BOX05	BOX (MINIBOR SLEEVE)
-	1	VISO14	GUARD TO SUIT EQ35/MBQ35
-	1	10091	M10 GUARD LOCKING NUT - HITACHI

# PANEL COMPONENT LIST

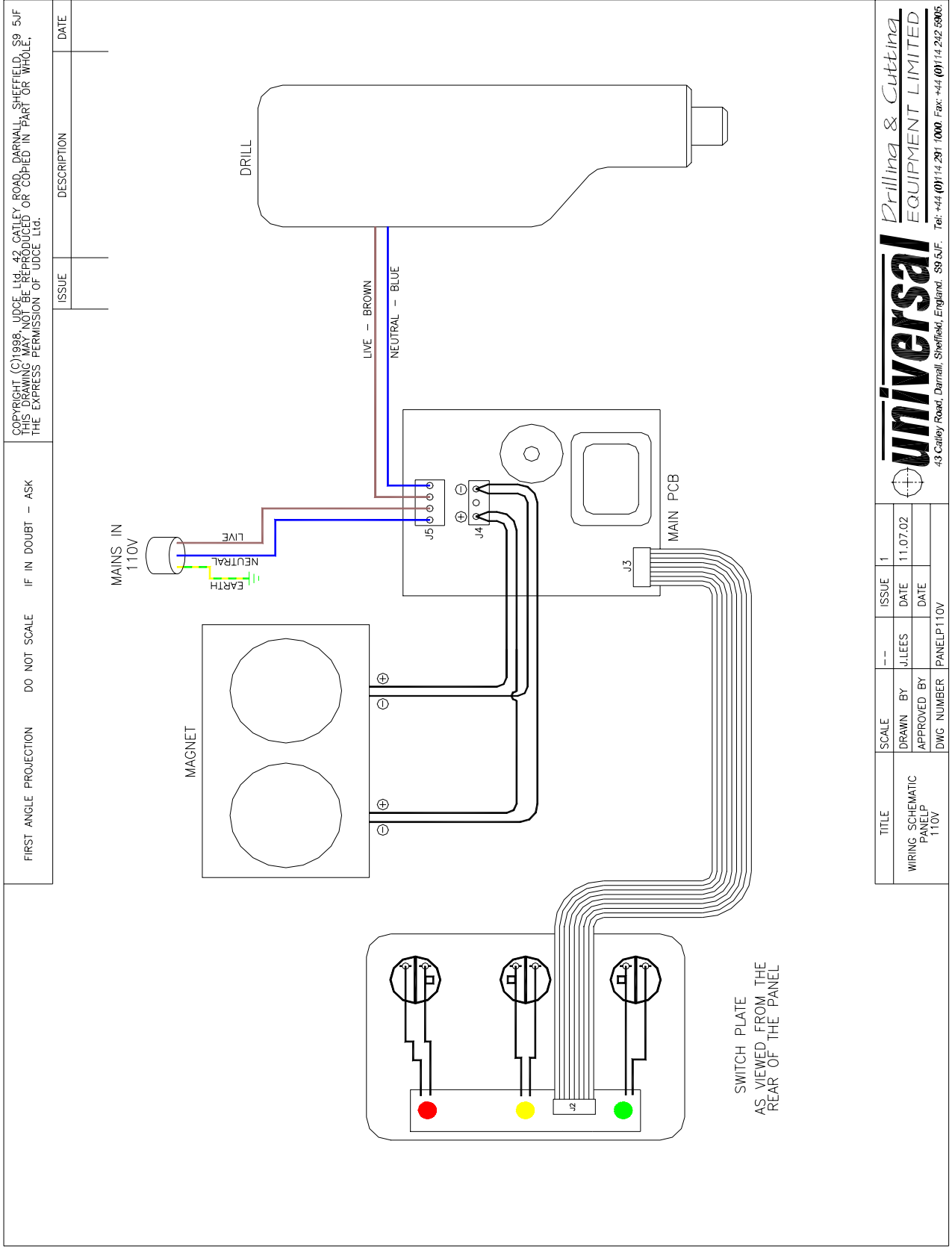


Item No.	Stock Code	Description	Quantity
1	MM1-1	MM1 MAGNET BUTTON - YELLOW	1
2	MM1-2	MM1 MOTOR BUTTON - GREEN	1
3	MM1-10	MM POWER BUTTON - RED	1
4	MM1-3	MM1 L.E.D. GROMMET	3
5	MM1-4	MM1 LED BOARD – C/W LEDs	1
6		<b>NO LONGER REQUIRED</b>	
7		<b>NO LONGER REQUIRED</b>	
8		<b>NO LONGER REQUIRED</b>	
9	IMI-MM1-5	REPLACEMENT PCB BOARD	1
10	MM1-16	STAND OFF CLIP FOR NEW PANEL	2
11		<b>NO LONGER REQUIRED</b>	
12	MM1-17	PCB SUPPORT PLATE	1
13	M0241B	SWITCH PLATE	1
14	SC316CSK-X	M3 x 16 PHILIPS HEAD SCREW	3
15	NUT-M3	M3 LOCK NUT	3

# Motor Parts Breakdown



# Wiring Diagrams



TITLE	SCALE	DRAWN BY	APPROVED BY	DWG NUMBER	ISSUE	DATE	DATE
WIRING SCHEMATIC PANEL P 110V	--	JILEES		PANELP110V	1	11.07.02	

**universal**  
*Drilling & Cutting*  
**EQUIPMENT LIMITED**  
-43 Catley Road, Darnall, Sheffield, England. S9 5JF. Tel: +44 (0)114 291 1000. Fax: +44 (0)114 292 8906.