

# Jefferson®



## INDUSTRIAL MAGNETIC CORE DRILL

**JEFMAGD65HD/110**

User Manual  
v.1.3





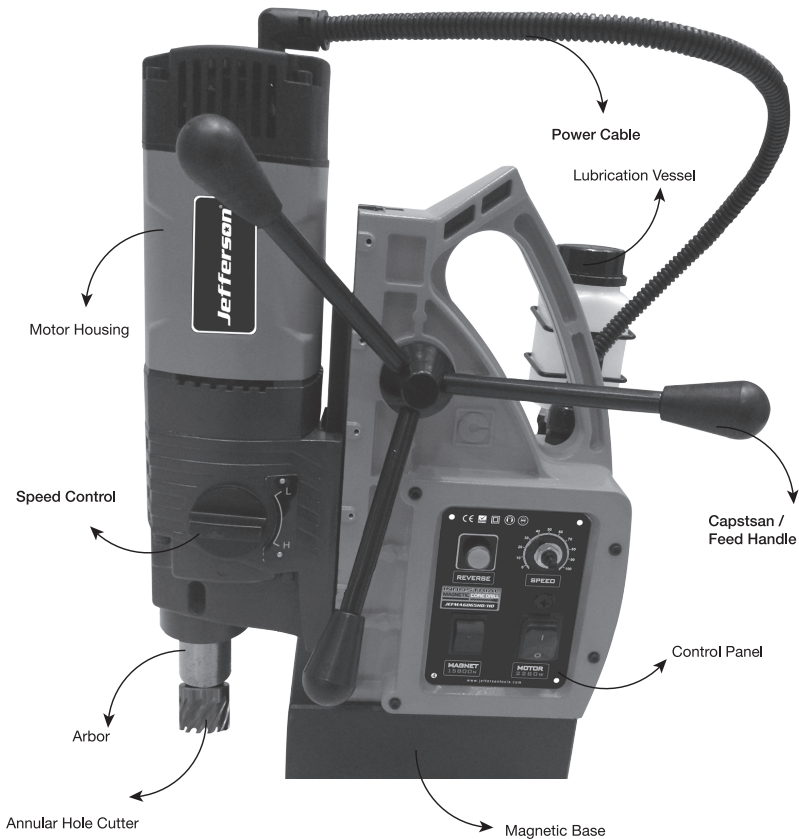
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## 1. Introduction

This magnetic drill is designed for drilling holes in steel fabrication work. It is an ideal portable drilling solution equally suited for use in building sites or the workshop environment and can be used to cut in horizontal, vertical and overhead positions.

The magnetic drill uses an annular hole cutter (sometimes called a slugger bit) to cut clean and accurate holes without pre-drilling or step drilling. After cutting through the steel the cutter produces a "slug" (a cylindrical lump of steel) that falls from the centre of the cut.



## 2. Safety Guidelines

**Important:** Ensure that you have read and understand the information contained in this manual before operating this equipment.

This appliance is not intended for use by persons with reduced physical, sensory or mental capabilities. The appliance must not be operated by children or by any persons who have not been instructed in the correct operation.

Children and pets should be kept away from the working environment at all times during operation.

**Please read these instructions carefully and keep in a safe location for future reference. Ensure that the manual is passed on should ownership of the equipment change at any time.**

Contact your nearest Jefferson Dealer for advice on correct usage, accessories (including compatible detergents), servicing and replacement parts.

Do not modify this equipment for any other purpose than those originally intended by the manufacturer.

**Ensure that the product is used in accordance with the guidelines described in this manual. Failure to do so can result in personal injury and may void the warranty.**

Ensure that you disconnect from the power supply before carrying out any adjustments maintenance or servicing on this equipment.

### Working Environment

Ensure that the working environment is kept clear and uncluttered. There should be plenty of light available for safe operation.

Do not use this equipment in wet or windy conditions or damp or wet conditions.

Do not use this equipment in the presence of flammable liquid or gases.

Protect against electric shock by preventing contact with earthed or ground surfaces (e.g. pipes, radiators, cookers and refrigerators).

Jefferson recommend using a suitable residual current device (RCD) for electrical safety when using this equipment.

Store idle tools when not in use in a dry and secure location, out of reach of children.

Do not force the tool during operation or use the equipment for a larger job than which it was designed.

### Personal Protection Equipment (PPE)

Do not wear loose clothing or jewellery during operation in case they get caught in moving parts.

Wear protective hair covering to prevent long hair getting caught up in the tool.

Ensure that suitable safety equipment is worn during use these include:

- Safety glasses
- Ear defenders
- Protective gloves

Wear a hard hat (if working with magnetic drill above head height to prevent injury from ejected slugs after cutting). Use a face or dust mask if cutting operations create dust. Non-slip, steel toecap footwear is recommended.

Cutters are sharp. Wear gloves when installing or removing cutter from the arbor. Do not grab a rotating cutter.

Keep tools sharp and clean for better and safer performance. Do not use dull or broken cutters.

Follow safety instructions for lubricating and changing accessories (always check compatibility of annular cutters before use). Inspect tool cords periodically and, if damaged, have them repaired by a qualified electrician or an authorised Jefferson Repair Centre.



## 3. Specifications

Model Number:	<b>JEFMAGD65HD/110</b>
Maximum Tapping Diameter:	M20mm
<b>Maximum Twist Drill Diameter:</b>	25mm
Maximum Cutting Depth:	50mm
Input Voltage / Frequency:	110V
Magnetic Adhesion:	1580N
Motor Power / Speed:	1890W
No Load Speed:	100-220/490rpm
Dimensions:	39 x 11 x 39cm
Weight:	23kg

## 4. Operation Guide

1. Make sure the workpiece is suitable for magnetic adhesion and that both the surface of the workpiece and the magnetic base of the drill are clean and free of dirt, grease and debris.
2. Secure the magnetic drill to the unit to workpiece with safety chain provided.
3. Position the drill by sliding it and gently feeding the arbor so that pilot pin is in contact with the centre of the hole you need to cut.
4. Activate the magnet by pressing the magnet button to the **ON** position.
5. Turn the Feed Handle, raising the annular cutter until the pilot pin is above the work surface.
6. Open the cutting fluid valve.
8. Make certain that the annular cutter is clear of the workpiece and turn the motor on by pressing the motor button to the **ON** position.
9. Feed the cutter slowly onto the workpiece. Carefully establish a cutting depth of about 1/16" before using the full force of the drill on the cut by turning the feed handle to lower the arbor as required.
10. Ease up on feed pressure as the cutter starts to break through the workpiece.
11. When you have completed the cut, turn off the motor by pushing the motor button into the **STOP** position.
12. Turn feed handles to raise the arbor away from the hole. This will cause the slug to fall free (if it hasn't already) so take care to ensure it does not fall in a way that can cause bodily harm to the operator or any other persons in the vicinity.
13. Turn the magnet **OFF** by pushing the magnet button to the **OFF** position. As the magnet de-activates the base should lift up off the work surface.
14. Disconnect the equipment from the power source.
15. Remove any chips or debris from the cutter and the magnet wearing a pair of protective working gloves and a set of pliers to protect your hands from sharp materials.
16. Disconnect the safety chain and carefully remove the drill to complete the procedure.

**Important:** The magnetic strength of the drill base is related to the thickness of the steel, or other ferrous metal, in the workpiece. Magnetic adhesion can also be affected by the cleanliness of the metallic surface you are fixing to. Material that is clean and free from coatings will offer the best surface for the magnet.

Factors that can reduce the effectiveness of the magnet and safe operation of the equipment include:

- Coatings or paint layers on material
- Material less than 3/8" thick
- Workpieces with dirt, grease or debris between the magnet and the metallic surface
- Curved or uneven work surfaces (The surface of the workpiece should be flat. For pipe applications, a pipe adapter should be used.)
- Workpieces that are smaller than the dimensions of the metallic base.

## 5. Cleaning & Maintenance

- Keep the machine, the cutter and electric cables clean from drilling debris.
- Always turn off the machine and unplug from the mains before carrying out any cleaning.
- Clean the motor by means of dry compressed air.
- Clean and grease any sliding surfaces regularly.
- Carbon brushes should be replaced after approximately 250 hours running time.
- When not in use the magnetic drilling machine should be stored securely in the transport case lying flat in a dry storage space.

**Note:** Excessive sparking may indicate the presence of dirt in the motor or worn out carbon brushes.

We recommend that you periodically check the brushes for wear and tear and replace them when they reach 6mm. Keep moving parts lubricated.

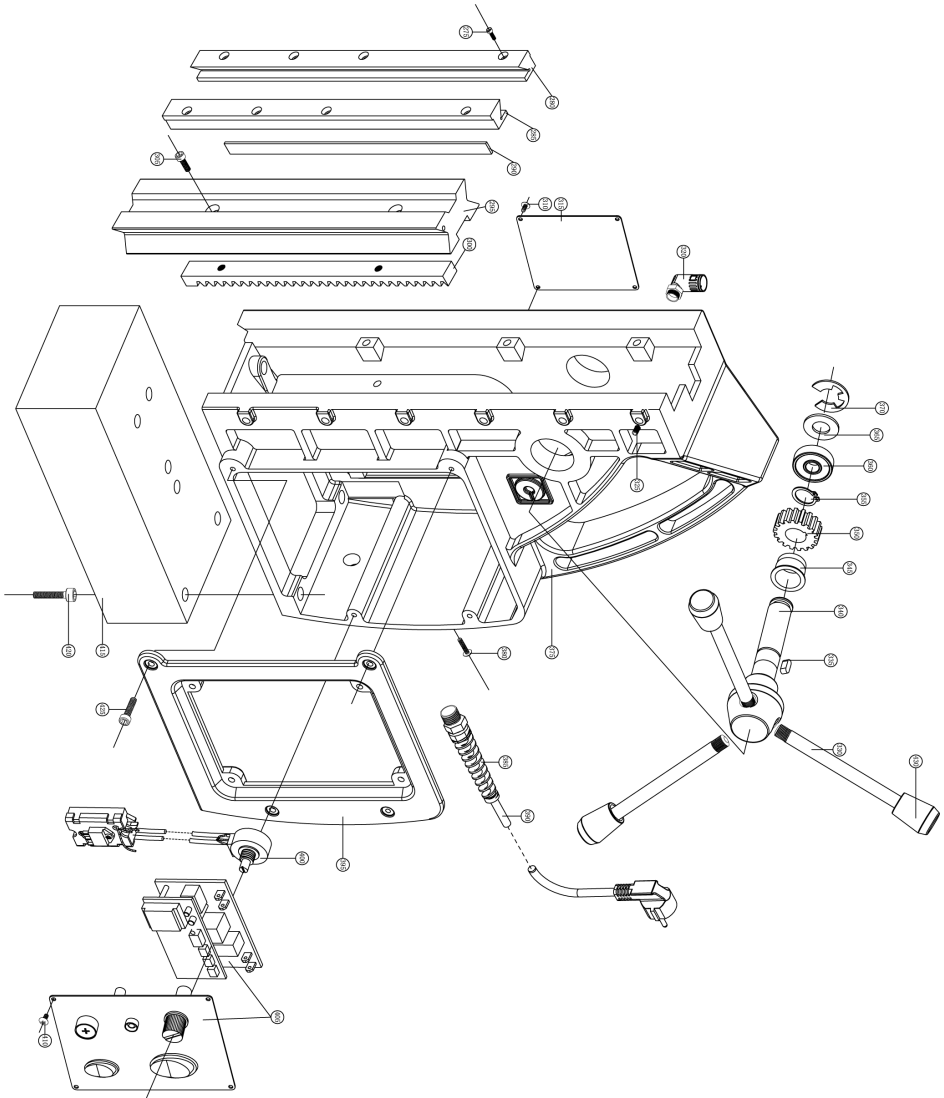
Maintenance, checks and repairs should only be made by qualified electricians or a Jefferson approved technician.

We recommend that the machine should be serviced after approximately 250 hours running time.

**Only use genuine spare parts. A full list is available at the end of this manual. Contact your nearest Jefferson dealer for further information.**

## 6. Parts Diagrams

## Frame & Magnet Components







## 7. Parts List

### Frame & Magnet Components

235	Brush house	2
240	Carbon Brush	2
245	M4*16/ Philip's head screw M4*16	4
250	Clamp ring	2
255	Cover	1
260	Hose coupler	1
265	M6*50-2 M6*45-2	4
275	M4X16 /inner hexagon screw M4X16	6
280	Left rail track bar	1
285	Right rail track bar	1
290	Bar	1
295	Lifting board	1
300	Rack	1
305	M6X20/ hexagon screw M6X20	2
310	M3X6/ Philip's head screw M3X6	4
315	Back panel	1
320	Hose coupler	1
325	M5X8/ inner hexagon screw	5
330	Rocker	3
335	Pin	1
340	Lifting shaft	1
345	Composite bearing	1
350	Lifting shaft	1
355	Clamp ring	1
360	Bearing 6903	1
365	Flat gasket	1
370	E clamp ring	1
375	Frame	1
380	M4X16/ inner hexagon screw M4X16	1
385	Anti-bending joints	1
390	Power wire	1
395	Panel frame	1
400	Speed regulstor	1
405	Panel assembly	1
410	M3X6/ Philip's head screw M3X6	4
415	Magnetic disk	1
420	M6X30-2 M6*50-2 / inner hexagon screw M6X30-2 M6*50-2	4
425	M4*16/ inner hexagon screw M4X16	4
430	Handle	3

### Motor Components

005	Spindle	1
010	Ball bearing	2
015	Spring	1
020	Inside calliper	1
025	Washer	1
030	Bearing	1
035	Wrench	2
040	Inner hexagon screw	1
045	Metal bar	1
050	M6x140-2 m6x120 -2/ inner hexagon screw m6x140-2pcs m6x120 -2pcs	4
055	Spring washer	4
060	Flat gasket	4
065	Gearbox	1
070	M4*8/ inner hexagon screw m4*8	1
075	Shift gasket	1
080	Clamp ring	1
085	O-ring	1
090	Shift knob	1
095	Shift pin	1
100	Rivet	2
105	Clamp ring	1
110	Bearing	1
115	Flat board	1
120	Clamp ring	1
125	Paddle shift	1
130	Shift gear	1
135	Clamp ring	1
140	Bearing 608	1
145	Bearing 6001	1
150	Gear	1
155	Bearing 608	1
160	Bearing 6000	1
165	Armature gear	1
170	608/Bearing 608	1
175	Intermediate board	1
180	Bearing 6201	1
185	Armature	1
190	Bearing 6000	1
195	Break wind ring	1
200	M5X65/ inner hexagon screw M5X65	2
205	Stator	1
210	Gasket	1
215	Stator Shell	1
220	Plastic Cover	1
225	M5*16/ inner hexagon screw M5*16	4
230	Carbon brush holder	1

## Limited Warranty Statement

Jefferson Professional Tools & Equipment, or hereafter "Jefferson" warrants its customers that its products will be free of defects in workmanship or material. Jefferson shall, upon suitable notification, correct any defects, by repair or replacement, of any parts or components of this product that are determined by Jefferson to be faulty or defective.

This warranty is void if the equipment has been subjected to improper installation, storage, alteration, abnormal operations, improper care, unauthorised service or repair.

### Warranty Period

Jefferson will assume both the parts and labour expense of correcting defects during the stated warranty periods below.

All warranty periods start from the date of purchase from an authorised Jefferson dealer. If proof of purchase is unavailable from the end user, then the date of purchase will be deemed to be 3 months after the initial sale to the distributor.

#### 1 Year

- All Jefferson magnetic drills

#### 90 Days

- All replacement parts purchased outside of the warranty period

**Important:** All parts used in the repair or replacement of warranty covered equipment will be subject to a minimum of 90 days cover or the remaining duration of the warranty period from the original date of purchase.

### Warranty Registration / Activation

You can register and activate your warranty by visiting the Jefferson Tools website using the following address: [www.jeffersontools.com/warranty](http://www.jeffersontools.com/warranty) and completing the online form. Online warranty registration is recommended as it eliminates the need to provide proof of purchase should a warranty claim be necessary.

### Warranty Repair

Should Jefferson confirm the existence of any defect covered by this warranty the defect will be corrected by repair or replacement at an authorized Jefferson dealer or repair centre.

### Packaging & Freight Costs

The customer is responsible for the packaging of the equipment and making it ready for collection. Jefferson will arrange collection and transportation of any equipment returned under warranty. Upon inspection of the equipment, if no defect can be found or the equipment is not covered under the terms of the Jefferson warranty, the customer will be liable for any labour and return transportation costs incurred.

These costs will be agreed with the customer before the machine is returned.

\* Jefferson reserve the right to void any warranty for damages identified as being caused through misuse.

## Warranty Limitations

Jefferson will not accept responsibility or liability for repairs made by unauthorised technicians or engineers. Jefferson's liability under this warranty will not exceed the cost of correcting the defect of the Jefferson products.

Jefferson will not be liable for incidental or consequential damages (such as loss of business or hire of substitute equipment etc.) caused by the defect or the time involved to correct the defect. This written warranty is the only express warranty provided by Jefferson with respect to its products.

Any warranties of merchantability are limited to the duration of this limited warranty for the equipment involved.

Jefferson is not responsible for cable wear due to flexing and abrasion. The end user is responsible for routine inspection of cables for possible wear and to correct any issues prior to cable failure.

## Claiming Warranty Coverage

The end user must contact Jefferson Professional Tools & Equipment (Tel: +44 (0) 1244 646 048) or their nearest authorised Jefferson dealer where final determination of the warranty coverage can be ascertained.

### Step 1 - Reporting the Defect

#### Online Method:

- Visit our website [www.jeffersonstools.com/warranty](http://www.jeffersonstools.com/warranty) and complete the Warranty Returns form. You can complete the form online and submit it to us directly or download the form to print out and return by post.

#### Telephone Method:

Contact your Jefferson dealer or sales representative with the following information:

- Model number
- Serial number (usually located on the specification plate)
- Date of purchase

A Warranty Returns form will be sent to you for completion and return by post or fax, together with details of your nearest authorised Jefferson repair centre. On receipt of this form Jefferson will arrange to collect the equipment from you at the earliest convenience.

### Step 2 - Returning the Equipment

It is the customer's responsibility to ensure that the equipment is appropriately and securely packaged for collection, **together with a copy of the original proof of purchase**. Please note that Jefferson cannot assume any responsibility for any damage incurred to equipment during transit. Any claims against a third party courier will be dealt with under the terms & conditions of their road haulage association directives.

**Please note:** *Jefferson will be unable to collect or process any warranty requests without a copy of the original proof of purchase.*

### Step 3 - Assessment and Repair

On receipt, the equipment will be assessed by an authorised Jefferson engineer and it will be determined if the equipment is defective and in need of repair and any repairs needed are covered by the warranty policy. In order to qualify for warranty cover all equipment presented must have been used, serviced and maintained as instructed in the user manual.

Where repair is not covered by the warranty a quotation for repair, labour costs and return delivery will be sent to the customer (normally within 7 working days).

Note: If the repair quotation is not accepted Jefferson Professional Tools & Equipment will invoice **1 hour labour time at £30 per hour plus return carriage costs (plus VAT)**.

In cases where no fault can be found with the equipment, or, if incorrect operation of the equipment is identified as the cause of the problem, a minimum of 1 hour labour at **£30 per hour plus carriage costs** will be required before the equipment will be despatched back to the customer.

Any equipment repaired or replaced under warranty will normally be ready for shipment back to the customer within 7 working days upon receipt of the equipment at an authorised Jefferson Repair centre (subject to part availability). Where parts are not immediately available Jefferson will contact you with a revised date for completion of the repair.

### General Warranty Enquiries

For any further information relating to Jefferson warranty cover please call **+44 (0) 1244 646 048** or send your enquiry via email to **warranty@jeffersontools.com**

# Jefferson®

## Parts & Servicing

For Jefferson approved replacement parts contact your  
nearest dealer or contact Jefferson tools

Telephone: +44 (0)1244 646 048

Fax: +44 (0)1244 241 191

Email: [warranty@jeffersontools.com](mailto:warranty@jeffersontools.com)

### **Disclaimer:**

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## EC Declaration Of Conformity

We, Jefferson Professional Tools & Equipment, as the authorised European Community representative of the manufacturer, declare that the following equipment conforms to the requirements of the following Directives:

2006/42/EC (as amended) **Machinery Directive**  
2006/95/EC (as amended) **Low Voltage**  
2004/108/EC (as amended) **Electromagnetic Compatibility**

**Equipment Category:** Magnetic Drill  
**Product Name/Model:** JEFMAGD65HD/110

**Notified Body:** ECM. (No. 1282)  
Via Ca' Bella, 243/A - loc. Castello di Serravalle  
40053 Valsamoggia (BO)  
Country : Italy

**Signed by:** Stephen McIntyre  
**Position in the company:** Operations Director  
**Date:** 8 December 2014  
**This technical document is held by:** Jimmy Hemphill



*Technical file holder's address as shown below*

**Name and address of manufacturer or authorised representative:**

Jefferson Tools, Herons Way, Chester Business Park, Chester, United Kingdom, CH4 9QR  
Telephone: +44 (0)1244 646 048 Fax: +44 (0)1244 241 191 Email: enquiries@jeffersonstools.com

**Notes:**

## **IMPORTANT! SAFETY FIRST!**

Before attempting to use this product please read all the safety precautions and operating instructions outlined in this manual to reduce the risk of fire, electric shock or personal injury.



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