

**KBM 35X**

CE Certified



## Original Instructions



Read instructions before operating Magnetic Core Drilling Machine.



**EIBENSTOCK**  
**POSITRON**

*... the company's most successful product range*



**KBM 35X**

**PRIOR TO USE :-**

Please read these operating and safety instructions carefully and completely. For your own safety, before using this Magnetic Core Drill check that the voltage is correct and that all handles and parts are firmly secured. If you are uncertain about any aspect of using this Magnetic Core Drill, contact your Dealer.

**Appropriate Use**

This Magnetic Core Drill is designed specifically for drilling holes in steel using annular cutters. We recommend **EIBENSTOCK POSITORN** annular TCT cutters. Please consult your Dealer for a complete range of sizes.

DO NOT modify and / or use your **EIBENSTOCK POSITORN** magnetic core drill for any application other than for which is intended.

For additional safety instructions, read general safety rules from the book provided with this operational manual.

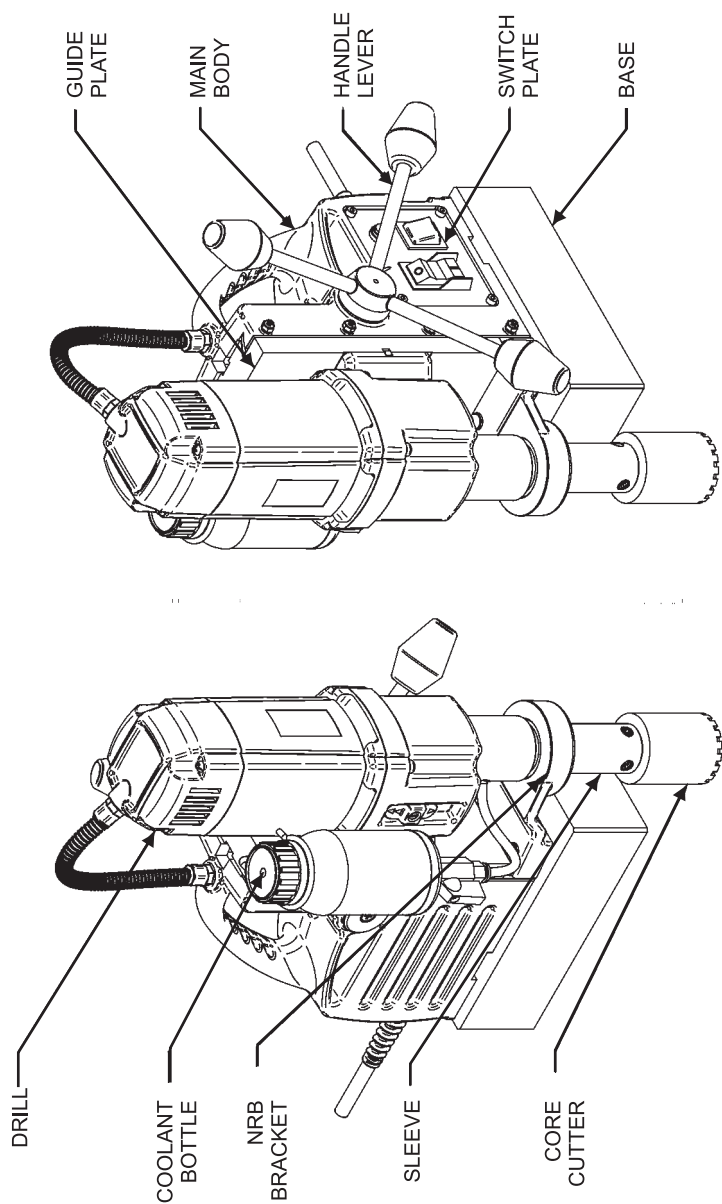
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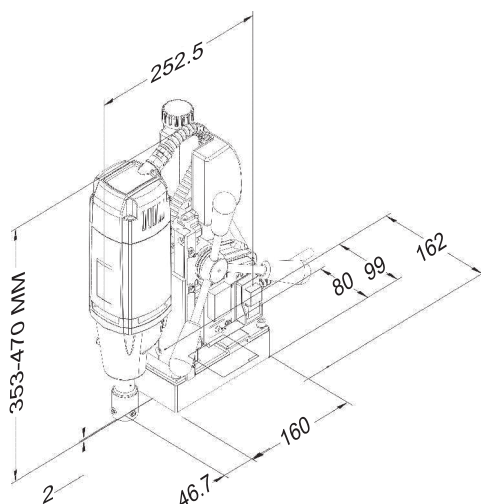
**NOTE**

- As our engineering is striving for the constant research and development to improve the quality, shape or specification of our product can be changed without prior notice.
- Available in 110V on special request.
- Core Bit is not a part of standard accessory.

## 1. MAGNETIC CORE DRILL PARTS INTRODUCTION



## 2. OVERALL DIMENSIONS



**KBM 35X**

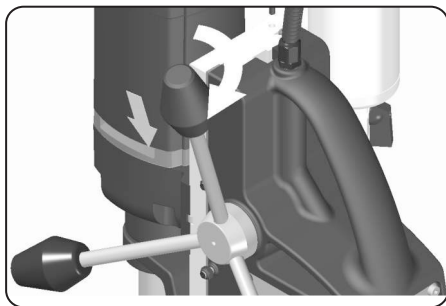
### Technical Specification :

| Parameters                 | KBM 35X         |
|----------------------------|-----------------|
| Input supply voltage (V)   | 220-240         |
| Motor Input (W)            | 1050            |
| Core Cutting Capacity (mm) | 12 to 35        |
| Core Cutting Depth (mm)    | 50              |
| Rated speed (rpm)          | 400             |
| Weight (Kg)                | 8.0             |
| Twist Drilling             | Ø 10            |
| Direct Arbor               | 19 mm<br>Weldon |

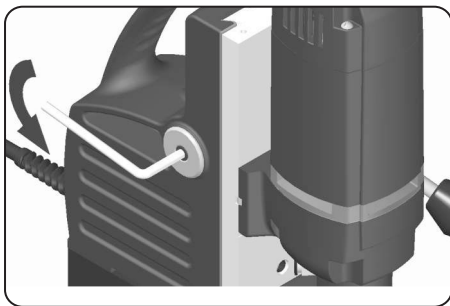
### 3. ASSEMBLY

#### Attaching Handle Levers SA :-

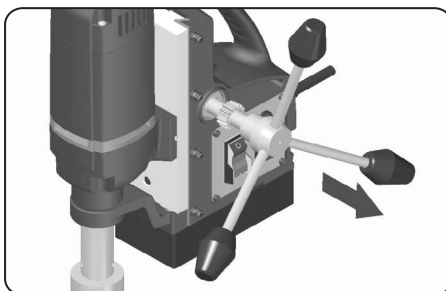
1. To align & tightening the handle lever Refer (Fig. 1) Tighten securely.
2. For repositioning of Handle Lever SA.
  - a) Loosen the opposite side screw (Fig. 2)
  - b) Remove the spindle SA (Fig. 3)
  - c) Reposition through opposite side of body (Fig. 4) & tight the spindle SA with allen screw.



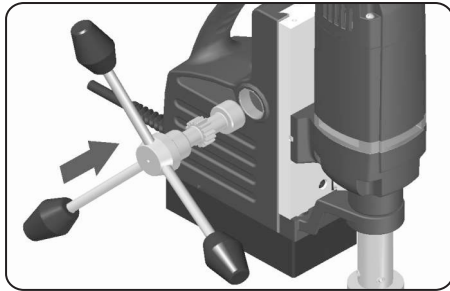
**Fig. No. 1**



**Fig. No. 2**



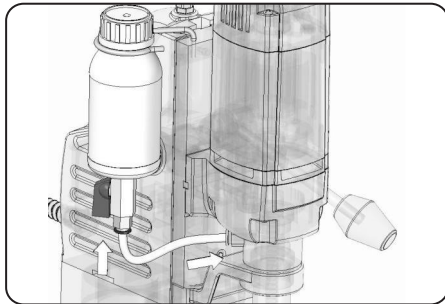
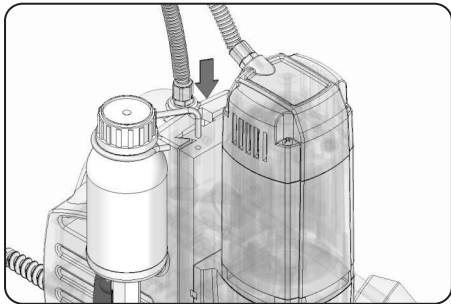
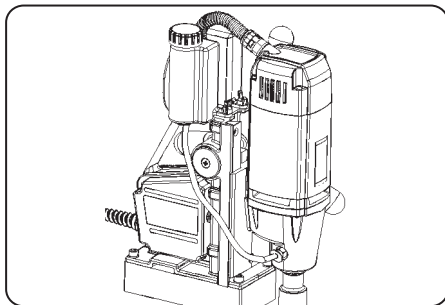
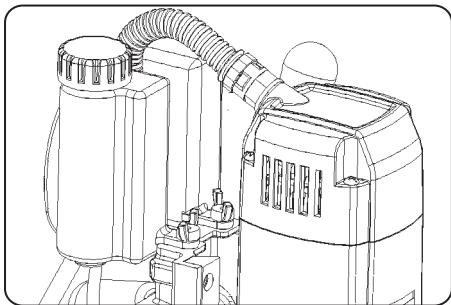
**Fig. No. 3**



**Fig. No. 4**

**Coolant Bottle SA :-**

1. Use transparent flexible pipe to join coolant bottle SA & spindle sleeve. (Fig. 5 & 7)
2. Hang the coolant bottle SA to guide plate. (Fig. 6)
3. Fix the coolant bottle SA on body with allen screws (Fig. No.8)

**Fig. No. 5****Fig. No. 6****Fig. No. 7****Fig. No. 8**

## Cutter Assembly

1. The install / remove cutter.
  - A. Move up the drill motor to its highest position.
  - B. Insert cutter into drill spindle with the two (2) flats of the cutter aligned with grub screws (Fig No. 9 & 10). Make sure the center pin is inserted into the cutter.

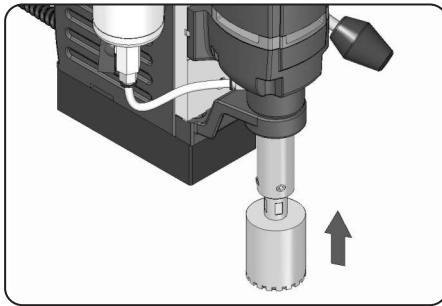
**NOTE :** Cutter should be fully placed into drill spindle.

C. Tighten set screws with M4 Allen key provided.

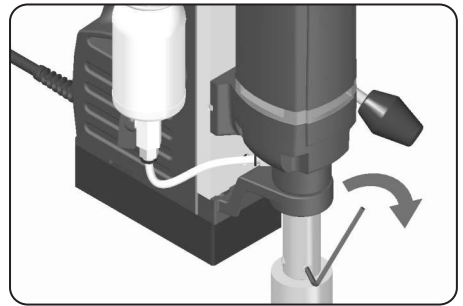
D. Reverse procedure to remove cutter.

- ⚠ Do not remove cutter unless slug is removed. Slug may eject unexpectedly. Avoid contact with cutter tips. Periodically inspect the cutter tips for loose or damaged tips.

TCT Universal cutter : TCT cutter shank has one flat that must be aligned with any of the grub screw in sleeve holder, the screw must be tightened evenly.



**Fig. No. 9**



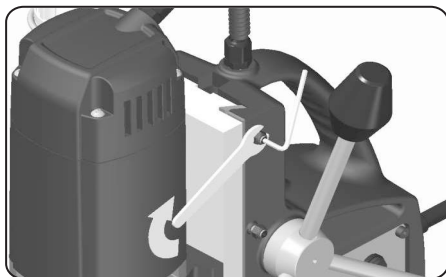
**Fig. No. 10**

## GIB Assembly Setting

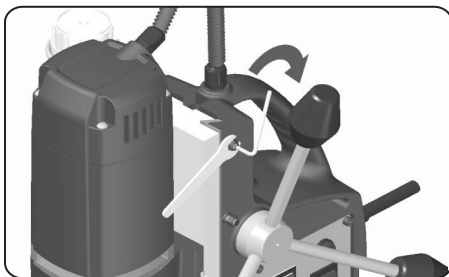
1. To adjust the GIB, Use M5 Allen Key & M6 spanner to loosen or tighten the Allen screws & Lock nut provided on side of the Main body.
2. Tightening the allen screws as per shown in (Fig. 11) increases friction on the slide & The lock nut as shown in (Fig.12) prevents loosening of Allen screws from main body.

All adjustment allen screws should be set to provide smooth and even travel over the entire length of Guide plate movement.

Additional adjustment of the GIB may be required over time with extended use of the tool.



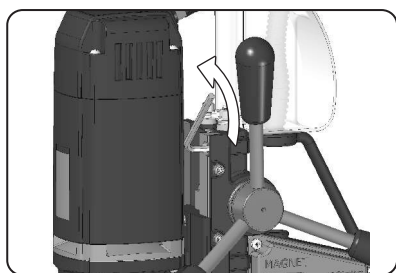
**Fig. No. 11**



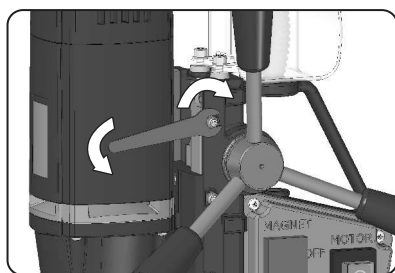
**Fig. No. 12**

### **GIB Assembly Setting**

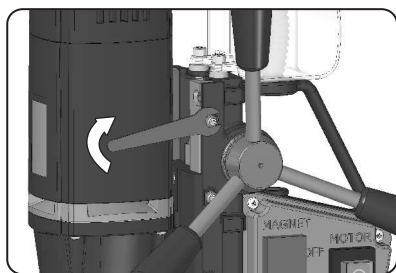
1. To set the Gib, use following tools 4 mm, 2.5 mm Allen key & M5 Spanner
2. Loose front side all allen Bolts as shown in (Fig. 13)
3. Hold Grub Screw by 2.5 mm Allen Key & then loose M5 Nuts by Spanner, Tight Grub Screw towards Gib (Fig. 15),  
All Grub Screws should be set to provide smooth & even travel of Guide Bed over the entire length of Gib.
4. To prevent loosening of Grub Screw tight Lock Nut M5 by Spanner (Fig. 14) (Hold Grub Screw by Allen Key).
5. After adjustment of Gib, Tight front side all allen bolts as shown in (Fig. 16)



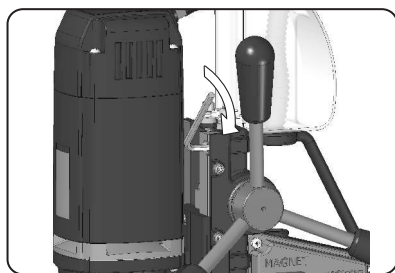
**Fig. No. 13**



**Fig. No. 14**



**Fig. No. 15**



**Fig. No. 16**



## General Safety Rules



**WARNING! Read all instructions.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

**SAVE THESE INSTRUCTIONS.**

### 1) Work area

**a) Keep work area clean and well lit.** Cluttered and dark areas invite accidents.

**b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.

**c) Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

### 2) Electrical safety

**a) Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.

**b) Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.

**c) Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.

**d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.

**e) When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.

### 3) Personal safety

**a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.

**b) Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

**c) Avoid accidental starting. Ensure the switch is in the off position before plugging in.** Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.

**d) Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

**e) Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.

**f) Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.

**g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust related hazards.

#### **4) Power tool use and care**

**a) Do not force the power tool. Use the correct power tool for your application.**

The correct power tool will do the job better and safer at the rate for which it was designed.

**b) Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

**c) Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

**d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.

**e) Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

**f) Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

**g) Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

#### **5) Battery tool use and care**

**a) Ensure the switch is in the off position before inserting battery pack.** Inserting the battery pack into power tools that have the switch on invites accidents.

**b) Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

**c) Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

**d) When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.

**e) Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

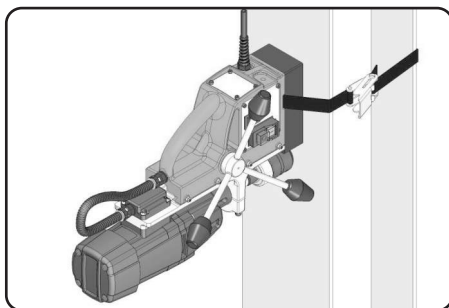
#### **6) Service**

**a) Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

# SAFE OPERATION FOR MAGNETIC CORE DRILLS

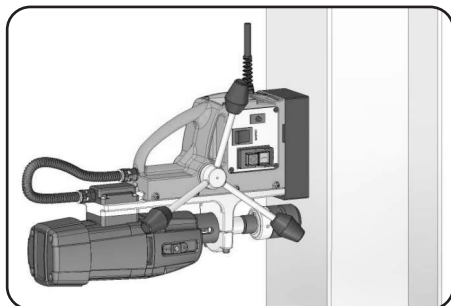


## Safety Belt Assembly

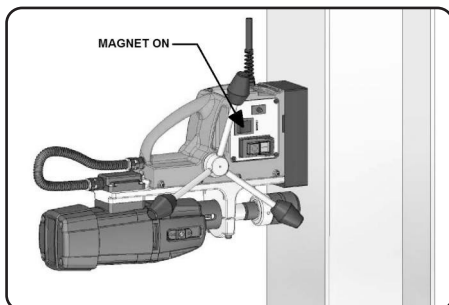


**ALWAYS USE THE SAFETY BELT WHEN USING MAGNETIC CORE DRILL VERTICALLY OR UP-SIDE DOWN POSITION.**

The safety belt prevents the drill unit from falling, in the event of a power failure or if the magnet breaks loose from the work surface. The safety belt attaches to the drill by running the safety belt through the gap provided between drill body & magnet of the unit and then continuing around the material and/or work surface. Adjust the belt so it is tight and secure.



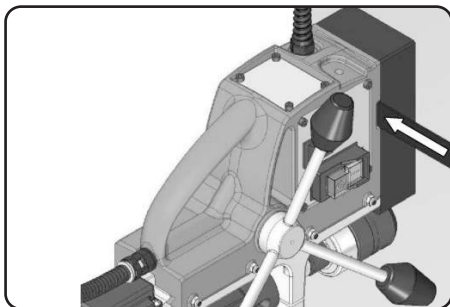
**Keep the stand at proposed location.**



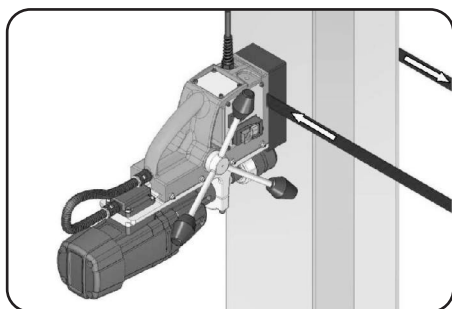
**Switch on the magnet.**



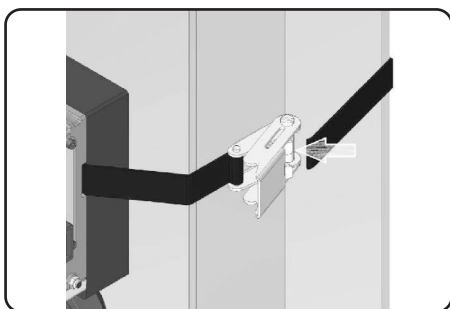
Hold the stand by hand.



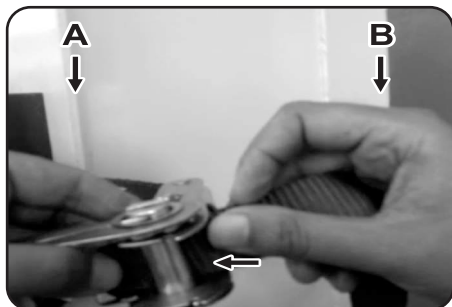
Pass the safety belt through the opening provided in the body.



Wrap the safety belt around the work piece.



Insert the belt through clamping slot.



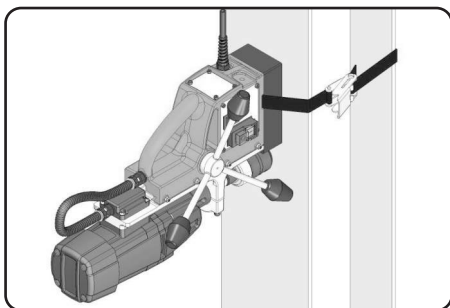
Hold clamp A by left hand insert the belt through slot provided on clamp shaft.



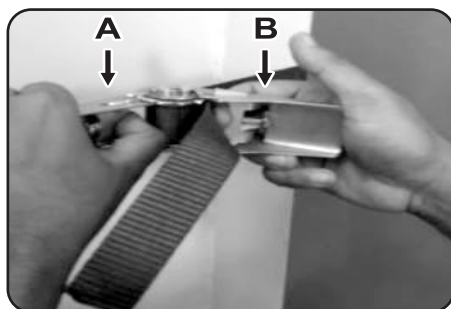
Hold clamp A & tighten the belt by adjusting clamp B.  
Stop the locking when securely tighten the belt.



Lock the clamp.



Now magnetic core drill is ready for vertical / overhead drilling application.



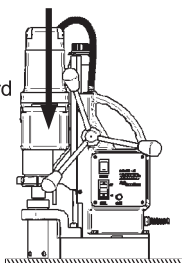
After completion of drilling. Hold the stand and disengaged the belt.  
(Press the two A & B lock mechanism & remove the belt.)

## OPERATING INSTRUCTIONS

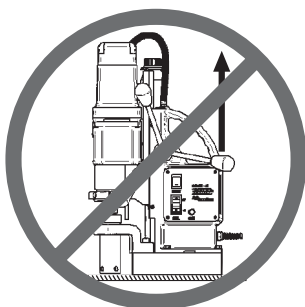


When drilling, especially in horizontal or overhead positions, always apply feed pressure toward the work surface. Never pull away from the work surface as this can weaken magnetic holding power.

Use handles to feed toward work surface

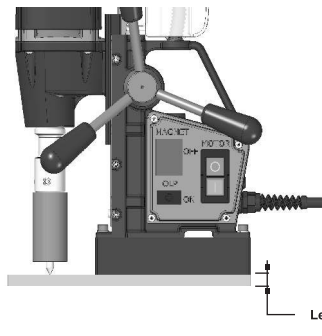


Never pull handles away from work surface

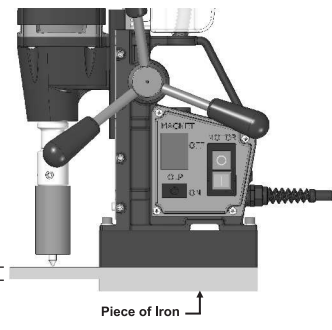


## 5. PRECAUTIONS OF USE :-

- a) Prior to all operations, mount coolant unit.
- b) The Place of installation for the base SA must be clean and rust free. Paint rust, scale or uneven surfaces decreases the holding strength of Magnet.
- c) Disconnect the plug from the power source before making any adjustment, changing accessories or storing the tool.
- d) Do not execute any electric welding on the work piece, on which the Magnetic Core Drilling Machine is used.
- e) The drill's magnetic adhesion depends on the thickness of the work-piece, as shown in fig. No. 1, 1/2" (12mm) is the minimum thickness for safe operation.
- f) If workpiece under drilling is thin. use an iron plate larger than base as shown in fig. No. 17, 18.



**Fig. No. 17**



**Fig. No. 18**

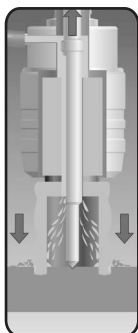
- g) Do not attempt to drill a work-piece, which is thicker than the maximum cutting depth of the cutter being used. Never exceed the cutter diameter.
- h) Always provide a method of catching slug, where ejected slug may cause injury (slug ejects at end of cut).
- i) Do not force tool, Use correct tool for the application.
- j) If the cutter jam in the work-piece, stop the machine immediately. Isolate the machine at the main supply. Loosen the cutter rotating the Sleeve Holder. Do not attempt to free cutter by startig and stopping the motor.
- k) The slug ejects at the end of cut and is very hot. Dont touch with barehand.

## 6. OPERATING INSTRUCTIONS :

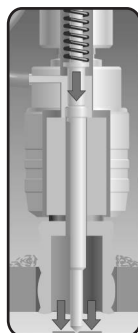
1. Position the center pin directly over the desired cutting location. (Fig. 19)
2. Cutting fluid must be used at all times to enhance the quality of cut and prolong the cutting tool life. Cutting fluid is applied through small holes located at the top / shank end of the Sleeve Holder and feeds via gravity. (Fig. 20)



**Fig. No. 19**

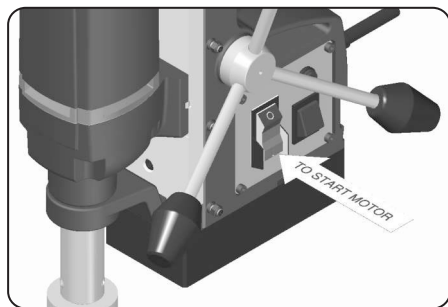


**Fig. No. 20**

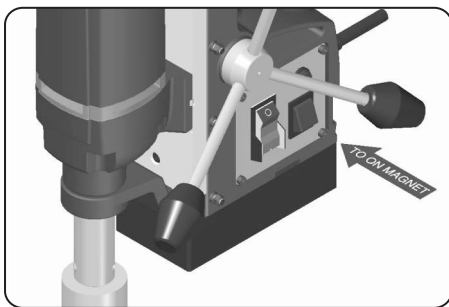


**Fig. No. 21**

3. Switch on the magnet (Fig. 22), in order to initiate the magnet and the magnetic adhesion is guaranteed, Switch on the DRILL to start the Motor (Fig.23)



**Fig. No. 22**



**Fig. No. 23**

4. Always proceed with caution at the start of drilling operations. When using annular cutter apply pressure gradually at first until the entire cut edge is formed as a circle / a depth of 1/8" (3.2mm) is reached.
5. When hole is complete the slug is automatically ejected from the cutter (Fig.21)

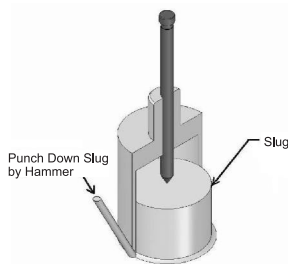


Fig. No. 24

However if the slug, remains inside the annular cutter, next drilling operation won't possible. Use Flat pin or punch to remove the slug as shown in (Fig. 24). Confirm slug is ejected from the annular cutter.

6. During the drilling process, do not stop the motor. After the process, cutter draw back with running motor.
7. Switch off the drill, then the magnet. Ensure the magnet base is clear of chips. Locate the next hole using the above procedures.

## 7. MAINTENANCE AND TROUBLE SHOOTING

Machine service must be performed only by qualified personnel. When servicing a tool, use only original replacement parts. Use of unauthorized parts will void the warranty. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

Machine service sheet is provided with this operation manual.

Pull out the plug prior to cleaning. Use dry compressed air to clean the motor (from the external).

In case of electrical or mechanical malfunction, immediately switch off the tool and disconnect the plug. Excessive sparking generally indicates the presence of dirt in the motor or worn out carbon brushes. Periodically check brushes for wear and replace when they reach (6mm)

### Ordering replacement parts:

Please quote the following data when ordering replacement parts:

- Type of machine
- Article number of the machine
- Identification number of the machine
- For our latest products & information please go to our website

<http://www.ep-india.in>

### Disposal and recycling

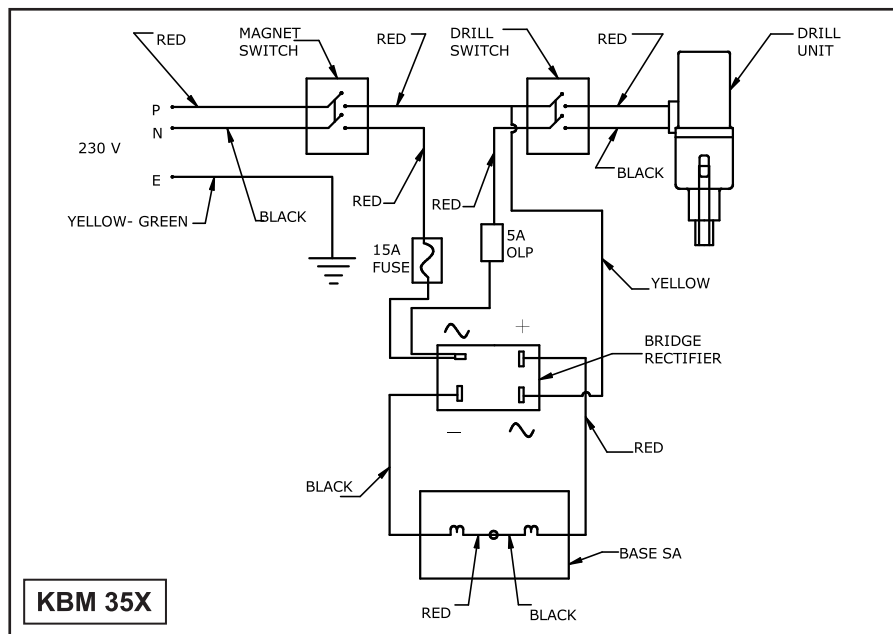
The unit is supplied in packaging to prevent its being damaged in transit. This packaging is raw material and can therefore be reused or can be returned to the raw material system. The unit and its accessories are made of various types of material, such as metal and plastic. Defective components must be disposed of as special waste. Ask your dealer or your local council.

△ Adjustable drilling protection is not provided, Because both hands are engaged during drilling. No chance to come in contact with moving parts.

## TROUBLE SHOOTING

| PROBLEM                                                                   | POSSIBLE CAUSE                                         | SUGGESTED SOLUTION                                                                                                                                                                |
|---------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fuse blows<br>(KBM 35I &<br>KBM 38)<br>OLP Trip<br>(KBM 35X &<br>KBM 38X) | Wrong connection                                       | Check the connection of bridge rectifier diode. (Ref. Electrical Wiring diagram)                                                                                                  |
|                                                                           | Rectifier short                                        | Replace the bridge rectifier diode                                                                                                                                                |
|                                                                           | Magnet short                                           | Check the resistance of coils separately. If it is zero or no resistance. Replace the magnetic base. (Ref. Electrical Wiring diagram) New magnet assembly.                        |
| Switch not<br>glows                                                       | Supply is not available in the mains.                  | Confirm the supply socket O/P & fuse.                                                                                                                                             |
|                                                                           | Switch failed.                                         | Replace the switch.                                                                                                                                                               |
| No<br>Magnetism                                                           | Loose Connection                                       | Do the proper connection (Ref. Electrical Wiring diagram)                                                                                                                         |
|                                                                           | Coil open                                              | Check the continuity & resistance of coil. If there is no resistance replace the magnet.                                                                                          |
|                                                                           | No stoppage during break or no time to cool            | Whenever no work, Switch off the magnet                                                                                                                                           |
|                                                                           | Switch failed.                                         | Replace the switch                                                                                                                                                                |
| Drill M/C<br>does not<br>rotate                                           | Switch failed.                                         | Replace the switch                                                                                                                                                                |
|                                                                           | Carbon brush over/<br>Armature failure /<br>Field Open | Refer the Owners manual for Drill machine.                                                                                                                                        |
| More play<br>in machine                                                   | Gib & Brass strip wear out                             | Set Guide bed clearance by fine tuning grub screws on side face of main body with 2mm wrench.<br>Use the wrench provided along with stand.                                        |
| Drill slips<br>during<br>drilling                                         | Unclean magnet base                                    | Clean the magnetic face & magnet mounting area.<br>Magnet mounting area should be rust free.                                                                                      |
|                                                                           | Insufficient thickness of material under drilling      | Under drilling plate thickness should be minimum 12 mm. If it is less use iron plate.                                                                                             |
| Slug blocks<br>in the<br>sleeve                                           | insufficient coolant flow                              | Use proper & sufficient coolant to cool the cutting area. It will avoid excess heating & blocking of slug.                                                                        |
|                                                                           | Movement of spring                                     | Spring operates in coolant & water after continuous application it becomes rusty & started to stuck in guide hole. To avoid this put some oil in sleeve after completion of work. |
|                                                                           | Spring tension lost                                    | Remove the circlip & replace spring SA.                                                                                                                                           |
| Water leakage<br>from sleeve<br>housing                                   | Rubber o ring worn out                                 | After continuous application, o ring will wear out because of friction.<br>Change the O ring.                                                                                     |
| Heavy noise<br>during<br>drilling                                         | Blunt cutter used                                      | Resharp or replace the cutter.                                                                                                                                                    |
| Cutter<br>breakage                                                        | Improper alignment                                     | See respected figure.                                                                                                                                                             |

## ELECTRICAL CONNECTION DIAGRAM



## SYMBOLY



Before you start working, read the operating instructions of the machine.



Danger / Caution / Warning



Wear ear protectors



Wear goggles



Danger of being ripped or cut



Class II construction, tool in which protection against electric shock does not rely on basic insulation only, but in which additional safety precautions, such as double insulation or reinforced insulation, are provided. There being no provision for protective earthing or reliance upon installation conditions.



European Conformity Mark



EC Declaration of Conformity  
Certificate No. 01548/3/2019

We declare under our sole responsibility that the product described under "Technical Data" is in conformity with following standards or standardization documents :

EN ISO 12100:2010  
EN 60204-1:2006 + A1:2009  
EN 61029-1:2009+A11:2010  
DIN EN 60745-2-1:2010  
DIN EN 61000-6-4:2007+A1 2011  
DIN EN 55014-1:2006+A1 2009 +A2:2008

accordance to the provisions of the directives (2006/42/EC)

Technical File (2006/42/EC) at :  
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18<sup>th</sup> April 2019