



# SAFETY AND OPERATING MANUAL

## BOLT THREADING MACHINE MODEL NO. BM25

Please record your machine Serial No. which are located on nameplate

**Serial No.**

**WARNING:** For your own safety and effective operation, read this Safety and Operating Manual carefully and completely before assembling and operating this unit. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.



**Keep this manual for future reference.**

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# SAFETY INFORMATION

## 1. Safety Symbols

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and the explanations with them, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

### SYMBOL MEANING

	<b>WARNING:</b> Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precaution to reduce the risk of fire, electric shock, and personal injury.
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	<b>CAUTION:</b> Failure to obey a safety warning may result in property damage or personal injury. Always follow the safety precaution to reduce the risk of fire, electric shock, and personal injury.
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<b>NOTE:</b>	Advises you of information instructions vital to the operation or maintenance of the equipment.
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## 2. General Safety

- 1) Read all these instructions in this manual completely and carefully for your protection against serious injuries.
- 2) Save this manual. Refer to them frequently and use them to instruct other users.

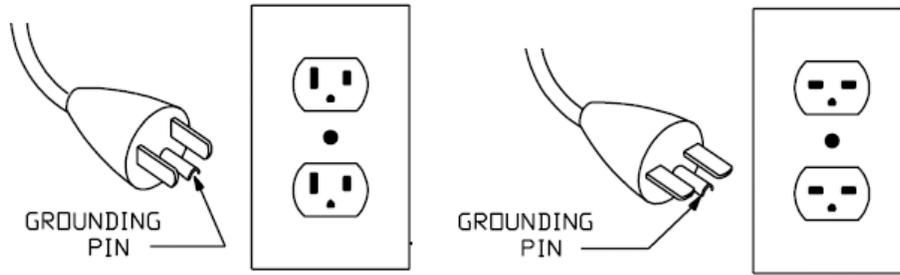
## 3. Personal Safety

- 1) Stay alert, watch what you are doing and use common sense when operating a power tool. Never operate machine when tired or under the influence of drugs or alcohol. A moment of inattention while operating machine may result in serious personal injury.
- 2) Do not wear gloves, loose clothing or jewelry that can get caught in machine's moving parts and cause serious injury. Cover up or tie up long hair. Keep sleeves and jackets buttoned for reduction of risk any accident.
- 3) Always wear safety glasses.
- 4) Protect your hearing by earmuffs or earplugs. If you use machine daily or in a noisy area.
- 5) Protect your lungs by using dust mask when work area is dusty.
- 6) Keep your hands and face away from dies, cutter blade, auto-chuck or other moving parts.
- 7) Avoid accidental starting. Make sure switch is OFF position before plugging in. Plugging in tools in that have the switch ON invites accidents.
- 8) Keep hands away from rotating rod, pipe, or any other materials. Stop the machine before wiping rod, pipe, or screw. Allow the machine to come to complete stop before touching the rod, machine chucks, or any moving parts. This practice will prevent serious injury.
- 9) Do not over-reach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
- 10) Unplug power cord when not in use, before making any adjustments, changing accessories, or storing the tools. Such prevention safety measures reduce risk of starting tool accidentally.

## 4. Electrical Safety

- 1) In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and

ordinances. Never modify the plug provided – if it will not fit the outlet, have the proper outlet installed by a qualified electrician.



- 2) Avoid body contact with grounded surfaces. If your body is grounded, There is an increased risk of electrical shock
- 3) Never expose electrical tools to rain or wet condition. Water entering a tool will increase the risk of electrical accident.
- 4) Do not abuse cord. Never carry machine by the cord or yank the cord to disconnect it from outlet. Keep cord from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords will cause the risk of electrical shock.
- 5) When used outdoors, use only extension cord intended for use outdoors and so marked.
- 6) Use only three-wire extension cords which have three-prong grounding plugs and three-pole receptacles which accept the tool's plug.
- 7) Use extension cord in good condition. Make sure to use one heavy enough to carry the current the machine will draw. An undersized cord will cause a drop on line voltage resulting in loss of power and overheating. The extension cord chart shows the correct sizes to use depending on cord length and ampere rating.

Minimum gage for cord

Ampere Rating	Total length of cord in meter			
	0 - 8	9 – 17	18 – 33	34 – 50
0 – 6	18 AWG	16 AWG	16 AWG	14 AWG
6 – 10	18 AWG	16 AWG	14 AWG	12 AWG
10 - 12	16 AWG	16 AWG	14 AWG	12 AWG
12 – 16	14 AWG	12 AWG	Not Recommended	
MCC Machine	18 AWG	16 AWG	14 AWG	12 AWG

- 8) Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.
- 9) Keep all electric connections dry and off the ground. Do not touch plugs or tool with wet hands. Reduce the risk of electrical shock.

## 5. Work Area Safety

- 1) Keep the work area clean. Cluttered work area invite accident.
- 2) Do not use machine in dangerous environment. Do not use machine near gasoline or other flammables or gases, or in damp locations. Do not expose machine to rain or direct sunlight. Keep work area well lighted.
- 3) Keep floors dry and free of slippery materials such as oil. Slippery floors invite accidents.
- 4) Keep children away from work area. All visitors should be kept at a safe distance from the work area. Guard or barricade for the work area when work piece extends beyond machine will reduce the risk of accident.
- 5) When not in use, machine should be stored in a dry and locked-up place out of the reach of children.
- 6) Never leave the machine running unattended. Turn off the power and stay there until machine comes to a complete stop.

## 6. Machine Safety

- 1) Threading machine is made to thread bolt. Follow instruction on proper use of this machine. Do not use for other purpose such as drilling holes or turning winches. Other uses or modification this power drive for other applications may increase the risk of serious accident.
- 2) Secure machine to bench or stand. Support long heavy rod with supports. This practice will

prevent tipping.

- 3) Remove hex keys and adjusting wrenches from machine before operation.
- 4) Do not force machine. It will do the job better and safer at the rate for which it is designed.
- 5) Maintain the machine with care. Periodically check lubrication and consumables. Replace cutting oil or dies when necessary. Inspect extension cord periodically and replace if damaged.
- 6) Use only manufacturer's recommended accessories. Consult this manual for recommended accessories. Using improper accessories may increase the risk of injury.
- 7) Do not use machine if switches are broken or switch does not turn it ON or OFF. Any tool that can not be controlled with the switch is dangerous and must be repaired.
- 8) Check for broken or damaged parts and alignment of moving parts before using machine. Repair or replace damaged parts by an authorized dealer to insure proper operation of the machine. Use only genuine MCC replacement parts. Poorly maintained machine cause risk of accident.
- 9) Keep handles dry and clean and free from oil and grease for better control of the machine.

## 7. Electrical Connection

Your MCC Machine is powered by a precision built electric motor.

It should be connected only to a power source that satisfies the power input listed on the machine's name plates.

If the name plate is marked AC or 60 or 50Hz, the machine must be operated only with alternating current (normal household current).

Never operate the machine with a direct current (DC), such as a generator. A substantial voltage drop will cause a loss of power and overheating.

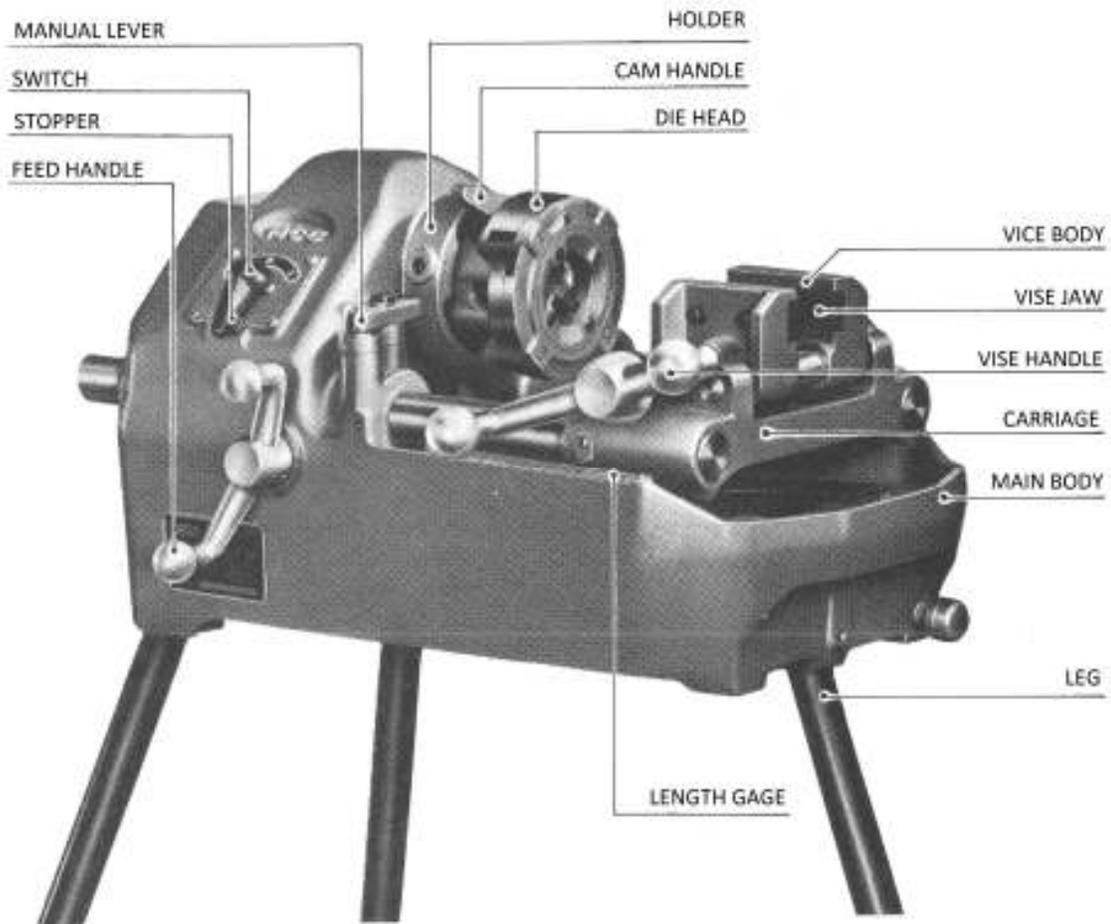
If the machine does not operate when plugged into an outlet, make sure the power supply rating.

**WARNING:** Keep the cord away from the work area and position the cord so that will not be caught on the work pieces, tools, or other objects during threading.



# Parts Name for MCC Bolt Threading Machine

## Model No. BM25



- Die Head rotating in both forward and reverse direction
- One-touch changeable Die Head and easy dies setting
- Automatic oil feed directly to Dies and materials through Die Head during the threading operation.
- Self-opening Die Head; opens automatically when desired length of thread is cut.
- This machine is designed specially to thread bolts for building construction.

# Description, Specifications and Standard Equipment

## Description

The MCC Model BM25 Bolt Threading Machine is an electric motor-driven machine that centers and chucks the steel rod and rotates Die Head while threading operations are performed. Threading dies are mounted in Die Head. An integral oiling system is provided to flood the work with cutting oil during the threading operations.

## Specification

Model No.	BM25
Die Head	Automatic Opening Type (Self-open)
Threading Capacity	W 5/16 – W1 (BSW) M8 – M24 (ISO Metric)
Motor	Single Phase 450W, 50/60Hz (Series, adaptable to local voltage)
Rotation Speed	100 RPM (No-Load)
Controls	Toggle Switch
Dimension	515mm(L) x 285mm(W) x 287mm(H)
Weight	32 Kg

## Standard Accessories

Right Hand Die Head (W5/16 – W1, M8 – M24)	1 set
Right Hand Die (W5/16, W3/8, W1/2, W5/8, W3/4, W7/8, W1)	1 set
MCC Cutting Oil 4L	1 pc
Chip Scraper	1 pc
Spanner for die head	1 pc
Release Bar for die head	1 pc
Hex Key 3,4,5,6mm	1 set
Carbon Brush	1 set
Machine Cover	1 pc
Tool Box	1 pc
Legs	1 set

## Optional Equipments/Accessories

Left Hand Die Head (W5/16 - W1, M8 - M24)
Left Hand Dies (W5/16, W3/8, W1/2, W5/8, W3/4, W7/8, W1)
Metric Dies (Left & Right) (M6, M8, M10, M12, M14, M16, M18, M20, M22, M24)
HSS(SKH) Die for all sizes in Whitworth and Metric listed above

# Preparing for Operation

## 1. Machine Inspection

To prevent serious injury, inspect your threading machine on a daily basis in accordance with following procedure.

- 1) Make sure your threading machine is unplugged and the ON/OFF switch is set to OFF position.
- 2) Inspect Vise Jaw for excessive wear. If it is worn down, it needs replacement.
- 3) Inspect Handle for any degradation. The sever damage causes risk of injury.
- 4) Inspect the power code and plug for damage. If the plug has been modified, is missing the grounding pin, or if the cord is damaged, do not use the threading machine until the cord has been replaced.
- 5) Inspect the threading machine for any broken, missing, misaligned parts as well as any other conditions which may affect the safe and normal operation of the machine.

**WARNING:** Do not use the threading machine until any problem has been repaired. The machine with any broken, missing, misaligned parts can cause serious injury.



- 6) Lubricate the threading machine if necessary according to the Maintenance Instructions.
- 7) Use tools and accessories that are designed for your threading machine. The correct tools and accessories allow you to do the job successfully and safely.

**WARNING:** Do not use any accessories designed for use with other equipment. It can cause serious injury. The machine allows using only the attachment or accessory designed for this machine.



- 8) Clean any oil, grease or dirt from all handles and controls. This reduces the risk of injury due to a tool or control slipping from your grip.
- 9) Inspect the cutting edges of your tools and dies. If necessary, replace them prior to using the threading machine.
- 10) Clean metal shavings and other debris from Chip Tray of the threading machine. Check the level and quality of the cutting oil. Replace or add oil if necessary. The suitable quantity is 80% of the tank inside. Cutting oil lubricates and cools the threads during the threading operation. A dirty or poor grade cutting oil can result in poor thread quality and reduce die life.
- 11) To drain dirty oil and replace the oil, refer to the Maintenance Instructions.

## 2. Machine and Work Area Set-Up

To prevent serious injury, proper set-up of the machine and work area is required. The following procedures should be completed.

- 1) Locate a work area properly by considering adequate lighting, eliminating flammable liquids, vapors or dust
- 2) Make sure the grounded electrical outlet.
- 3) Clear path to the electrical outlet that does not contain any sources of heat or oil, sharp edges or moving parts that may damage electrical cord.
- 4) Dry place for machine and operator. Do not use the machine while standing in water.
- 5) Make sure that the ground is even and has clean surface for suitable mounting of machine.
- 6) Clean up the work area prior to setting up any equipment. Always wipe up any oil that may have splashed or dripped from the machine to prevent slips and falls.
- 7) If the workpiece extends more than 1m beyond the threading machine, use a stand to prevent tipping and the oscillation of workpiece.
- 8) If the workpiece extends beyond the threading machine, set-up guards or barricades to avoid any accident.
- 9) Make sure ON/OFF switch is in the OFF position.
- 10) Stand facing the machine.
- 11) Have convenient access to the ON/OFF switch, tools and chucks without reaching across the machine. Machine is designed for one person operation.

- 12) Plug the threading machine into the electrical outlet making sure to position the power cord along the clear path selected earlier. If the power cord does not reach the outlet, use an extension cord in good condition.
- 13) To avoid electrical shock and electrical fires, never use an extension cord and understand the "Electrical safety" in "Safety Information" well

**WARNING:** Keep all electrical connections dry and off the ground. Do not touch plug with wet hands. Otherwise, you can not avoid the risk of electrical shock.



- 14) Check the threading machine to insure it is operating properly.
- 15) Flip the switch to ON. Check that the threading machine rotates in a designated direction.
- 16) Inspect the moving parts for misalignment, binding, odd noises or any other unusual conditions that may affect the safe and normal operation of the machine. If such conditions are present, have the machine serviced.
- 17) Flip the switch to OFF.

### 3. Cutting Oil Lubrication

**WARNING: FIRST AID TREATMENT**



If oil gets in eyes, wash them with pure water and see a doctor.  
If oil sticks to skin, wash well with water and soap.  
If swallowed, do not induce vomiting and see a doctor.  
If inhaled mist, move to the clean place, cover with blanket, keep warm and quiet and see a doctor.

**Use genuine MCC Cutting Oil.**

**MCC cutting oil Improves the finished screw surfaces and extends Die's service life.**

**MCC Cutting Oil is suitable for water works pipe for easy washing.**

- 1) Remove Chip Tray from oil tank.

**[NOTE]**

**Remove foreign substance from oil tank.**

**Change the whole oil if rain turns the oil cloudy or dirty.**

- 2) Fill the tank 80% full with the cutting oil.
- 3) Reinstall Chip Tray.

#### **STORAGE**

Store machine in a place inaccessible to children and out of the way of people. This is chemical product. Never leave machine in an area exposed to direct sunlight. Always store it in a cool, dark location. Make sure that Punching Plate is tightly in place and the machine is covered when not in use to avoid contamination (e.g. dust and moisture).

# Machine Operation

- WARNING:**  \* Always read and follow "Safety Information" and "Preparing for Operation"  
\* SHARP! Do not touch cutting edges.  
\* Moving Parts! Keep hands and face away from moving blades and parts. Moving parts could pull in objects such as clothing, hair, jewelry and fingers.  
\* If there is a problem or malfunction, IMMEDIATELY stop the machine and disconnect the power cord.  
\* Always remove the chip and keep machine clean before and after operation.  
\* After operation, switch off and disconnect Power Cord.

Failure to follow these instructions could result in serious personal Injury.

## 1. Electrical Requirement

- 1) Make sure to adequately ground the machine prior to operation.
- 2) If an extension power cord is required, make sure to use the appropriate cable listed in the chart in the page No. 4 in this manual to prevent drop of voltage which damage motor.

## 2. Switch Position (For. & Rev.) and Stopper

Stopper is to prevent Switch Lever from setting in the wrong position. When cutting right hand screw, be sure to set Stopper in "For." position, and for left hand screw in "Rev." position. If Stopper is at the wrong position, the machine and die head may be damaged. For relocating Stopper, unscrew and remove it from the machine and screw in to the desired location.

## 3. To Replace Dies

**NOTE:** First, be sure to unplug the power cable.

- 1) Loosen Hex Nut which is located behind Die Head.



- 2) Insert Release Bar (small end) into the hole on Die Head. Turn Die Head to the direction indicated in the photo all the way. Then, slightly tighten Hex Nut to hold the position.



- 3) Turn Cam Handle towards back until the slots for Dies are lined up straight.



4) Remove all Dies. Now, ready for installing new Dies.

5) When installing new Dies, make sure that the number on Dies (1 – 4) matches the same number on Die Head. Then, insert Dies all the way.



6) Turn Cam Handle towards front all the way.



7) Loosen Hex Nut which is located behind Die Head.



8) Insert the Release Bar (Small end) into the hall on Die Head. Then, turn Die Head until the engraved line is lined up.



9) Tighten Hex Nut again.



#### 4. To Replace Die Head

**NOTE** First, be sure to unplug the power cable.

1) Insert Release Bar (Large end) into the hall on Die Head and turn Die Head to front.



2) Die Head can be removed.



3) Before attaching Die Head, clean up the surface of Die Head where contacts the machine.



4) Insert Release Bar(Large end) into the hall on Die Head and turn Die Head to back.



## 5. To Cut Thread

- 1) Make sure that Stopper is set in the proper location. This is to avoid any counter-rotation by mistake.
- 2) Check size of Dies and confirm the proper Dies are installed in Die Head.
- 3) Check Cam Handle is tightened. For right hand thread cutting, Cam Handle is tightened towards front. For left hand thread cutting, Cam Handle is tightened towards back when Cam Handle is located on the top.
- 4) When certain length of thread needs to be cut, bring Carriage until the pointer meets the required scale on Length Gage.
- 5) Chuck a material (; steel rod) in Vise.
- 6) Turn switch on.
- 7) Bring a rod into turning Die Head by turning Feed Handle and push against Dies. When a few threads are made on the rod, relax your handle. It automatically move forward.
- 8) When the desired length of thread is cut, Dies releases a rod automatically.
- 9) Turn a switch off.
- 10) Return Carriage by Feed Handel all the way to the right end, and release the rod from Vise.
- 11) To manually stop the thread-cutting, keep pressing the Manual Lever to the left until Cam Handle is released.



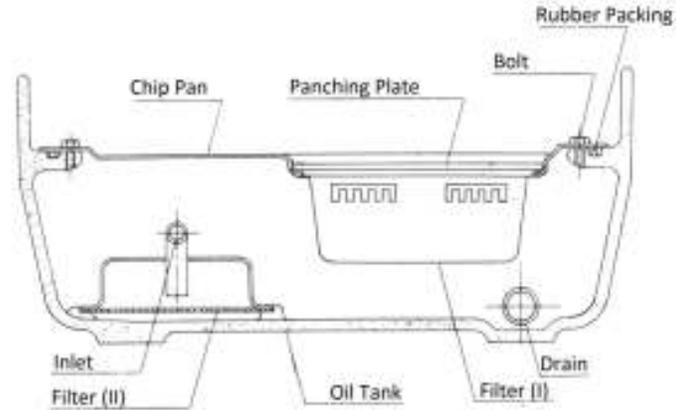
## 6. Cutting Oil

- 1) MCC cutting oil is formulated to extend lifetime of Dies and provide a finer finish of thread. Always make sure that cutting oil supply is adequate. Insufficient supply may shorten Die's lifetime, cause rough finishing of thread and increase pump wear and tear.
- 2) For adjusting the oil flow, turn the bolt underneath Die Head clockwise to increase, and counterclockwise to decrease the oil flow.
- 3) Cutting chips and other dirt may drop down from Chip Pan and flow to Filter (I). For better and efficient

oil circulation, clean Filter (I) occasionally.

4) Occasionally and when necessary, remove Chip Pan and drain all cutting oil from Oil Tank to clean up and remove any cutting chips and other sludge from the tank bottom, then, clean Filter (II) for maximize the oil circulation.

5) If the machine is left outdoor and exposed to rain, there is a risk that water may enter to Oil Tank. Be sure to drain all water from Oil Tank prior to the operation.



## 7. Maintenance and Inspection

1) To keep your machine in good condition and for longer lifetime, please fill the lubrication oil to the machine through the pointed location in the following photo once a month.



2) Support Bar(Right & Left) must be well lubricated to insure the smooth sliding of Carriage. Supply thread cutting oil on Support Bars and slide Carriage right and left several times to spread the oil on them.

3) Clean and lubricate the moving parts and slots for Dies for better performance and longer lifetime.

4) Replace Carbon Brushes after 250 – 300 hours of use or when 2/3 of carbon is worn out. Badly worn out Carbon Brushes may damage the motor.

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