



# Pipe Threading Machine

MODEL: SQ100F



## **WARNING!**

Read this Operator's Manual carefully before using this tool. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.

## General Power Tool Safety Warnings

**⚠️ WARNING!** Read and understand all instructions. Failure to follow all warnings and instructions may result in electric shock, fire, and/or serious injury.

Save all warnings and instructions for future reference.

### 1) Work area safety

- a) **Keep work area clean and well lit.** Cluttered or 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 tool 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.
- f) If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

NOTE The term "residual current device (RCD)" may be replaced by the term "ground fault circuit interrupter (GFCI)" or "earth leakage circuit breaker (ELCB)"

### 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 medications.** A moment of inattention while operating power tools may result in serious personal injury.
- b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tool with your finger on the switch or energizing power tools that have the switch on invites accidents.

d) **Remove adjusting key or wrench before turning the power tool on.** *A wrench or a key left attached to a rotating part of the 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 dust collection 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 and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** *Such preventive safety measures reduce the risk of starting the tool accidentally.*

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

e) **Maintain power tools with care. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's 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, 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.*

#### **Machine Safety**

- Secure machine to bench or stand. Support long heavy pipe with pipe supports. This practice will prevent tipping.
- Do not wear gloves or loose clothing when operating machine. Keep sleeves and jackets buttoned. Do not reach across the machine or pipe. Clothing can be caught by the pipe or machine resulting in entanglement and serious injury.
- Do not use this machine if the switch is broken.
- Keep hands away from rotating pipes and fittings. Stop the machine before wiping pipe threads or screwing on fittings. Allow the machine to come to a complete stop before touching

the pipe or machine chucks. This practice will prevent entanglement and serious injury.

- Do not use this machine to make or break fittings. This practice is not an intended use of the machine and can result in serious injury.
- Tighten chuck handwheel and engage rear centering device on the pipe before turning on the machine. Prevents oscillation of the pipe.
- Keep covers in place. Do not operate the machine with covers removed. Exposure to moving parts may result in entanglement and serious injury.

## Description, Specifications

### Description

The SQ100F threader is an electric motor-driven machine which centers and chucks pipe, conduit and rod (bolt stock) and rotates it while threading, cutting and reaming operations are performed. Threading dies are mounted in self-opening die heads. An automatic oiling system is provided to flood the work with thread cutting oil during threading operations.

### Specifications

Threading Capacity ..... Pipe 1/2" through 4"

Chuck ..... Speed Grip Chuck with Replaceable Jaw Inserts

Rear Centering Device....Cam Action Rotates with Chuck

Operating Speed ..... 36 RPM (1/2"-3/4"), 20RPM (1"-2"), 11RPM (2 1/2"-4")

Motor:

Type..... Induction

Power..... 1500 Watts

Volts ..... 115V / 230V Single Phase AC 50Hz / 60 Hz

Controls ..... ON /OFF Switch and ON/OFF Foot Switch (optional part)

N.W..... 140kg



## Operating Instructions

### Installing Pipe In Threader

Relevant parts' name, please refer to the photos within this manual.

Adding threading oil in the oil reservoir, when the machine is switched on, the oil will automatically cycle.

1. Check to insure the cutter, reamer and die head are swung to UP position.
2. Mark the pipe at the desired length if it is being cut to length.
3. Insert the pipe into the Threading Machine so that the end to be worked or the cutting mark is located about 12 inches to the front of the speed chuck jaws (*Fig 1*).
4. Insert workpieces less than 2 feet long from the front of the machine. Insert longer pipes through either end so that the longer section extends out beyond the rear of the Threading Machine.

Tighten the rear centering device around the pipe by rotation of the handwheel at the rear of the Threading Machine. This prevents movement of the pipe that can result in poor thread quality.

6. Secure the pipe by using repeated and forceful counterclockwise spins of the speed chuck handwheel at the front of the Threading Machine. This action “hammers” the jaws tightly around the pipe.

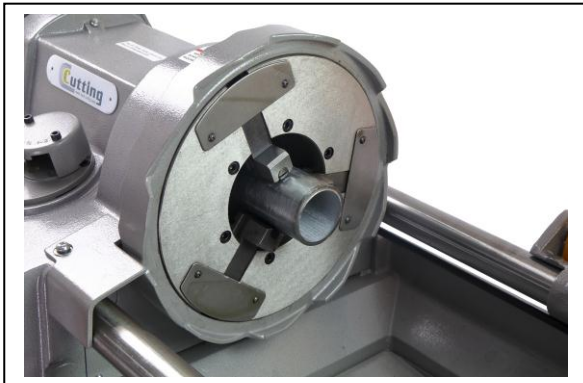


Fig 1

Pipe setup

### Installing dies in die head (1/2”-2”)

Relevant parts' name, please refer to the photos within this manual.

1. Place Self-Opening Die Head flat on bench with numbers UP.
2. Make sure trigger assembly is released.
3. Loosen clamp lever.
4. Pull lock screw out of size bar slot so that roll pin in lock screw will bypass slot. Position size bar so that index line on lock screw is all the way to the end of REMOVE DIES position.
5. Remove dies from die head.
6. Insert new dies to mark. Die numbers 1 through 4 must agree with those on die head.
7. Rotate cam plate until roll pin on lock screw can be positioned in slot. In this position dies will lock in die head. Make sure roll pin points toward end of size bar marked REMOVE DIES.

8. Adjust die head size bar until index line on lock screw is aligned with proper size mark on size bar.
9. Tighten clamp lever.
10. If oversize or undersize threads are required, set the index line in direction of OVER or UNDER size mark on size bar.

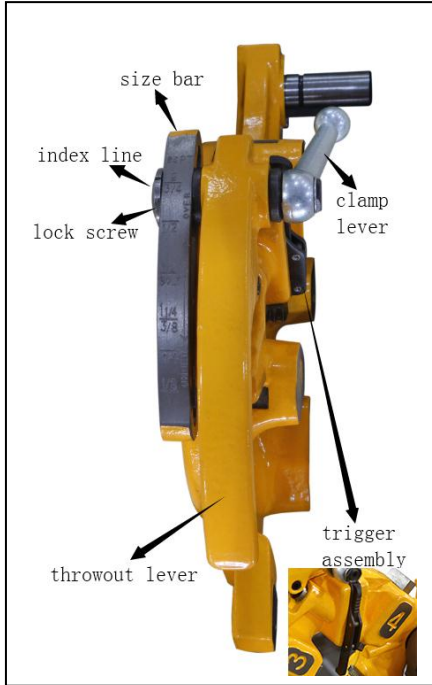


Fig 2  
Layout of die head 1/2"-2"

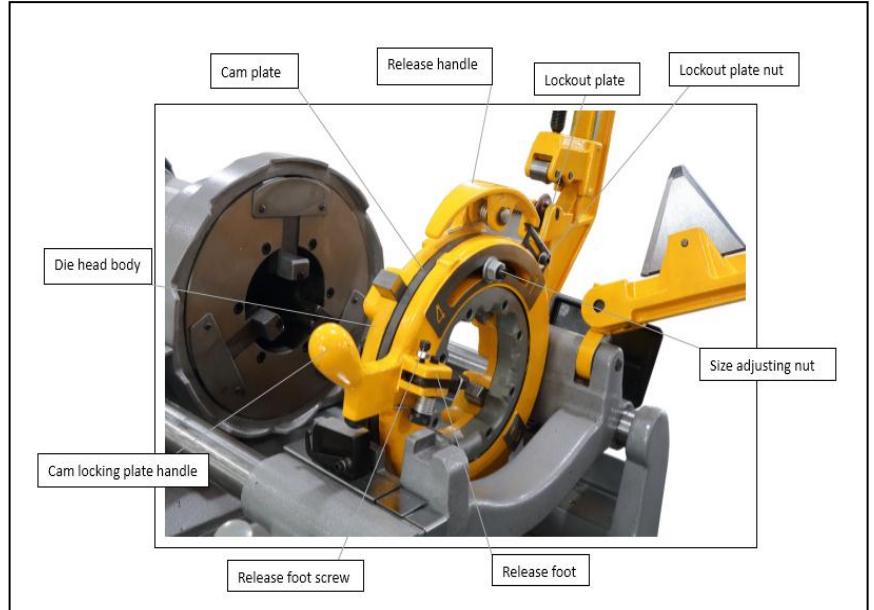


Fig 3  
Layout of die head 2 1/2"-4"

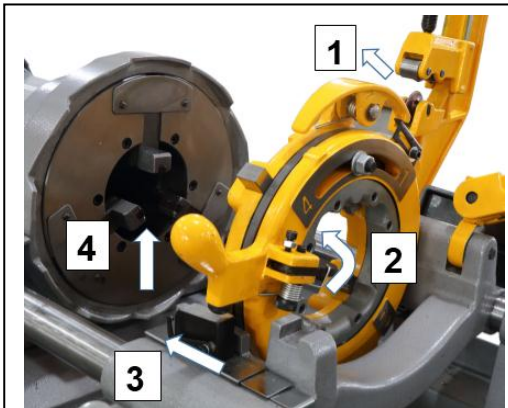


Fig 4  
Setting 2 1/2"-4" die head for  
NPT or BSPT threads

1. move Lockout Plate IN
2. place Release Foot IN
3. Place Sine Bar IN
4. Die Head Foot on Sine Bar

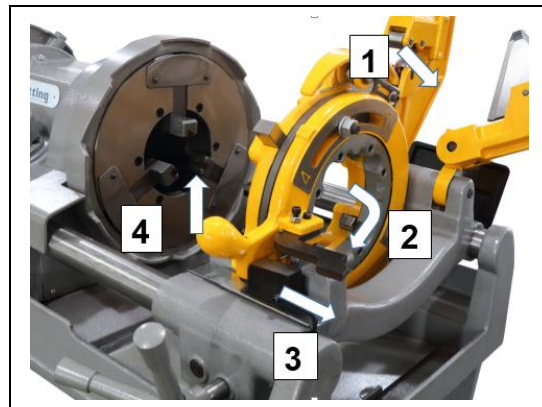


Fig 5  
Setting 2 1/2"-4" die head for  
NPSM or BSPP threads

1. move Lockout Plate OUT
2. place Release Foot OUT and secure
3. Move Sine Bar OUT, and get hooked
4. Die Head Foot off Sine Bar

## Installing dies in die head (2 1/2"-4")

Relevant parts' name, please refer to the photos within this manual.

1. Lay die head on ground or bench with numbers up.
2. Loosen size adjusting nut and lift die head washer foot out of slot.
3. Rotate cam in the direction of larger pipe sizes until adjusting screw reaches end of slot.
4. Remove dies from die head.
5. Insert new dies into slots making sure number on die agrees with number on die head.
6. Rotate cam to size setting desired.
7. Reinstall die head washer and tighten size adjusting nut.

## Threading with die head (1/2"-2")

Relevant parts' name, please refer to the photos within this manual.

1. Install die set. Refer to dies Installation procedure above.
2. Swing cutter and reamer to UP position.
3. Swing die head to DOWN position with throwout lever set to CLOSE position.
4. Switch on the threader. Oil should flow from die head.
5. Position shift knob.

**NOTE: Shifting should be done with machine idling. Do not operate shift knob while under load. The speed to sizes table is as 36 RPM (1/2"-3/4"), 20RPM (1"-2"), 11RPM (2 1/2"-4")**



Fig 6

6. Turn carriage handwheel to bring dies against end of pipe. Exert pressure on handwheel to start dies.
7. When die head end of pipe contacts trigger, throwout lever is automatically opened on tapered threads.

**NOTE! Throwout lever on Self-Opening Die Head must be pulled open manually when cutting straight threads (NPSM/BSPP).**

8. Switch off power and turn carriage handwheel to back die head off. Swing the die head to UP position.

## Threading with die head (2 1/2"-4") (NPT / BSPT)

Relevant parts' name, please refer to the photos within this manual.

1. Install die set. Refer to dies Installation procedure above.
2. Swing cutter and reamer to UP position.
3. Position lockout plate IN. (Figures 3 & 4)
4. Release foot IN. (Figure 4)
5. Sine Bar should be IN (unlatched). (Figures 4)
6. With die head in DOWN position, push UP on cam locking plate handle (Figure 4, Step 4) until release foot latches in die head body.

7. Switch on the threader. Oil should flow from die head.
8. Shift Knob MUST be in 11 RPM position.

**NOTE: Shifting should be done with machine idling. Do not operate shift knob while under load.**

9. Turn carriage handwheel to bring die head against end of pipe in one continuous motion. The release foot will actuate the receding mechanism. Continue to apply pressure to handwheel to start dies.

10. At end of cut, receding mechanism will automatically open dies. (See Figure 7.)



Fig 7

**NOTE: To remove die head part way through a thread, loosen size adjusting nut and manually retract dies by rotating cam plate. Lift cam locking plate handle to latch release foot. Back die head off pipe and reset size.**

11. Switch off power and turn carriage handwheel to back die head off. Swing the die head to UP position.

### **Threading with die head (2 1/2"-4") (NPSM / BSPP)**

Relevant parts' name, please refer to the photos within this manual.

1. Remove release foot screw from release foot pivot block. Unhook release foot spring from release foot. Rotate release foot out until hole in foot lines up with screw hole in pivot block. Reinsert screw until it engages release foot (Figures 3 & 5).
2. Position lockout plate OUT (Figures 3 & 5).
3. Push carriage sine bar to far right end of carriage and rotate sine bar hook around until it engages the hole in end of carriage (Figures 3 & 5).
4. With die head in DOWN position, pick up cam locking plate handle until release handle (Figure 5, Step 4) engages notch.
5. Switch on the threader. Oil should flow from die head.
6. Turn carriage handwheel to bring dies against end of pipe. Continue to apply pressure to handwheel to start dies.
7. When desired length of thread has been reached, depress release handle to disengage latch (Figure 3). Die head will open.
8. Switch off power and turn carriage handwheel to back die head off. Swing the die head to UP position.

### **Pipe cutting**

Relevant parts' name, please refer to the photos within this manual.

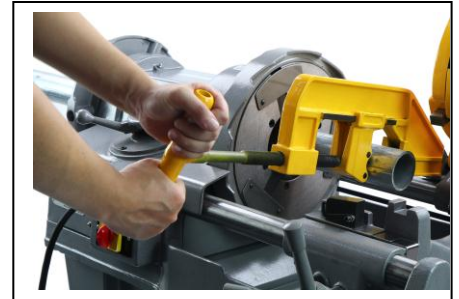
1. Swing reamer and die head to UP position.
  2. Place shift knob in 36 RPM position (Figure 1).
- NOTE: Shifting should be done with machine idling. Do not operate shift knob while under load.**
3. Move pipe cutter DOWN onto pipe and move carriage with handwheel to line up cutter



wheel with mark on pipe.

4. Tighten cutter feed screw handle on pipe keeping wheel aligned with the pipe.
5. Grasp the pipe cutter's feedscrew handle with both hands (Figure 8).
6. Switch on the machine.
7. Tighten the feedscrew handle slowly and continuously until the pipe is cut. Do not force the cutter into the pipe.
8. Switch off the machine. Swing pipe cutter back to the UP position.

Fig 8



## Pipe Reaming

Relevant parts' name, please refer to the photos within this manual.

1. Move reamer arm into DOWN position.
2. Place shift knob in 36 RPM position.

**NOTE: Shifting should be done with machine idling. Do not operate shift knob while under load.**

3. Switch on the machine. Advance reamer into pipe and complete reaming by exerting pressure on handwheel (Figure 9).

**NOTE! Do not apply excessive pressure on handwheel.**

4. Switch off the machine. Return reamer to UP position.



Fig 9

## Removing Pipe from the threader

1. Turn off the switch.
2. Use repeated and forceful clockwise spins of the speed chuck handwheel at the front of the threader to release the workpiece from the speed chuck jaws.
3. If necessary, loosen the rear centering device using a clockwise rotation of the handwheel at the rear of the Threader.
4. Slide the workpiece out of the Threader, keeping a firm grip on the workpiece as it clears the Threader. To avoid injury from falling parts or equipment tip-overs when handling long workpieces, make sure that the end farthest from the Threader is supported prior to removal.
5. Clean up any spills or splatter on the ground surrounding the Threader.

## Maintenance Instructions

**Make sure machine is unplugged from power source before performing maintenance or making any adjustment.**

### Jaw Inserts

1. Clean teeth of jaw inserts daily with wire brush.
  2. Replace jaw inserts when teeth become worn and fail to hold pipe or rod.
- NOTE! Replace entire set of jaw inserts to insure proper gripping of the pipe or rod.

### Lubrication

Proper lubrication is essential to trouble-free operation and long life of Threader. Grease main shaft bearings every 2 to 6 months depending upon amount of Threader use. Grease fittings are provided on side base, one at each end of shaft. Use a good grade of cup grease.

### **Machine Storage**

Motor-driven equipment must be kept indoors or well covered in rainy weather. Store the machine in a locked area that is out of reach of children and people unfamiliar with threaders. This machine can cause serious injury in the hands of untrained users.

### **Machine Transportation**

1. If machine is on a Stand, a forklift can be used with or without a sling.
2. Once packed, always use a forklift to move the crate.

**HANGZHOU HONGLI PIPE MACHINERY CO., LTD**

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