Portable Electric Pipe Threader

MODEL:SQ30-2B

WARNING!

To reduce the risk of injury, user must read instruction manual
Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.

SQ30-2B Power Drive

SQ30-2B Die Sets

SQ30-2B Power Drive	
Record Serial Number below and retain product serial number which is located on nameplate.	
Serial NO.	

Safety Symbols

In this operator's manual and on the product, safety symbols and signal words are used to communicate important safety information. This section is provided to improve understanding of these signal words and symbols.

 This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE indicates information that relates to the protection of property.

 This symbol means read the operator's manual carefully before using the equipment. The operator's manual contains important information on the safe and proper operation of the equipment.

 This symbol means always wear safety glasses with side shields or goggles when handling or using this equipment to reduce the risk of eye injury.

 This symbol indicates the risk of fingers, hands, clothes and other objects catching on or between gears or other rotating parts and causing crushing injuries.

 This symbol indicates the risk of electrical shock.

 This symbol indicates the risk of machine tipping, causing striking or crushing injuries.

 This symbol means do not wear gloves while operating this machine to reduce the risk of entanglement.

 This symbol means use support device to resist the threading forces, improve control, and reduce the risk of striking, crushing, and/or other injuries.

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.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

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 heating 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.

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.

Service

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

Specific Safety Information

⚠ WARNING This section contains important safety information that is specific to this tool. Read these precautions carefully before using the power drives to reduce the risk of electrical shock or serious personal injury.

SAVE THESE INSTRUCTIONS!

Keep this manual with the machine for use by the operator.

Power Drive Safety

• **Follow instructions on proper use of this machine.** Do not use for other purposes such as drilling holes or turning winches. Other uses or modifying this machine for other applications may increase the risk of serious injury.

• **When threading 3/4" or larger pipe, use support device to resist threading forces.** Use an appropriate support device per these instructions. Support devices improve control and reduce the risk of striking, crushing, and/or other injuries.

• **When using a support device other than the supplied support arm, the support device must react against the gear housing or fan housing.** Support devices contacting the motor housing or handle may damage these parts or increase the risk of injury.

• **Always firmly hold the power drive when threading or backing die head off the pipe to resist threading forces, regardless of support device use.** This will reduce the risk of striking, crushing and other injuries.

• **Do not use this power drive if ON/OFF switch is broken.** This switch is a safety device that lets you shut off the motor by releasing the switch.

• **Do not wear gloves or loose clothing when operating machines.** 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.

• **One person must control the work process and machine operation.** Only the operator should be in the work area when the machine is running. This helps reduce the risk of injury.

• **Do not use dull or damaged dies.** Sharp cutting tools require less torque and the power drive is easier to control.

• **Keep handles dry and clean; free from oil and grease.** Allows for better control of tool.

• **Keep floors dry and free of slippery materials such as oil.** Slippery floors invite accidents.

• **Only use our Hongli die heads with the Power Drives** Other die heads may not fit correctly in the power drive increasing the risk of equipment damage and personal injury.

Description, Specifications and Standard Equipment

Description

SQ30-2B Portable Electric Pipe Threader is a light weight and powerful portable threader. It is designed for threading 1/2”-2” pipes with 11-R die heads. It is portable enough for maintenance, repair workings and service plumbers requiring 2” pipe capacity.

Motor always runs in one direction, which makes the machine working more steady.
Mechanical transmission based on gears set

CE & CSA approved

Specifications

Capacity: ½”-2” (DN 15mm-50mm) pipes.
Motor: 1200~1350W Universal 110V or 220v, 50~60 Hz.
Spindle Speed: 28 RPM for threading, 51 RPM for reverse. (No load)
Gear Housing: Aluminum
Die Heads Included: ½”, ¾”, 1”, 1 ¼”, 1 ½”, 2” (Type 11R)
Screw Threads: NPT / BSPT

Standard Equipment

Model No.	Description	Image	Quantity
	SQ30-2B Power Drive		1pc
11R	Die Head for 1/2”		1pc
11R	Die Head for 3/4”		1pc
11R	Die Head for 1”		1pc
11R	Die Head for 1 1/4”		1pc
11R	Die Head for 1 1/2”		1pc
11R	Die Head for 2”		1pc
NPT 26201 BSPT 26101	Threading Dies 1/2”Alloy (BSPT or NPT for Option)		1 set /4pcs

NPT 26202 BSPT 26102	Threading Dies 3/4” Alloy (BSPT or NPT for Option)		1 set /4pcs
NPT 26203 BSPT 26103	Threading Dies 1” Alloy (BSPT or NPT for Option)		1 set /4pcs
NPT 26204 BSPT 26104	Threading Dies 1 1/4” Alloy (BSPT or NPT for Option)		1 set /4pcs
NPT 26205 BSPT 26105	Threading Dies 1 1/2” Alloy (BSPT or NPT for Option)		1 set /4pcs
NPT 26206 BSPT 26106	Threading Dies 2” Alloy (BSPT or NPT for Option)		1 set /4pcs
	Pipe Clamp		1pc
	Oiler		1pc
	Adapter (1/2”-1”)		1 pc
	Carbon Brush		1 set /2 pcs
	Blow Molded Case		1pc

Pre-Operation Inspection

Before each use, inspect power drive and correct any problems to reduce the risk of serious injury from electric shock, crushing injuries and other causes and prevent power drive damage.

1. Make sure that the power drive is unplugged.
2. Inspect the power cord and plug for damage. If the plug has been modified or if the cord is damaged, do not use the Threader until the cord has been replaced.
3. Inspect the Threader for any broken, missing, misaligned or binding parts as well as any other conditions which may affect the safe and normal operation of the tool. If any of these conditions are present, do not use the Threader until any problem has been repaired.
4. Use tools and accessories that are designed for your Threader and meet the needs of your application. The correct tools and accessories allow you to do the job successfully and safely. Accessories suitable for use with other equipment may be hazardous when used with this Threader.
5. Clean any oil, grease or dirt from all equipment handles and controls. This reduces the risk of injury due to a tool or control slipping from your grip.
6. Inspect the cutting edges of your dies. If necessary, have them replaced prior to using the Threader. Dull or damaged dies can lead to binding and poor quality threads.
7. Check the level and quality of the thread cutting oil. Replace or add oil if necessary.

NOTE! Thread cutting oil lubricates and cools the threads during the threading operation. A dirty or poor grade cutting oil can result in poor thread quality.

Operating Instructions

Installation of Adapter

Adapter is required for 1/2″ through 11/4″ 11-R Die Heads. Push Adapter into threader and tighten the ring at opposite side (Figure 1 & 2). Installation can be made from only one side of the threader.

Fig 1

Fig 2

Threading with 11R Die Heads

1. For 11/2″ - 2″ 11-R Die Heads, push die heads, spline end first, squarely into the threader until the spring engages securely. For 1/2″ - 11/4″ 11R Die Heads, rotate adapter cap clockwise, then push die heads into adapter spline end first, then release the adapter cap to hold die head (fig 3 & 4).

NOTE! Installation can be made from only one side of the threader.

Fig 3

Fig 4

2. If possible, secure the pipe in a portable tristand vise or a bench vise.
To prevent tipping, long lengths of pipe should also be supported with pipe stand.
3. Be sure the Oiler is properly filled with Thread Cutting Oil. We suggest specific oiler for this purpose.
4. Position Support Arm on pipe so end of support arm is in line with end of the pipe (Figures 5). Make sure jaws squarely contact pipe and tighten handle firmly to prevent slipping of the jaws.

Note! To avoid serious injury from losing control of the threader, a support arm should be used when threading 3/4" or larger pipe.

When threading pipe less than 3/4" in size without a support arm, hold onto the threader firmly with one hand to exert pressure against the handle forces developed during threading.

5. Place Die Head over end of pipe and insert post of support arm through notch in gear case.
6. Simultaneously actuate the ON/OFF switch and exert pressure against the Die Head with the palm of free hand to assist in starting thread. Apply plenty of thread cutting oil to the dies during threading. This will reduce the torque required to thread and improve the thread quality *(Figure 6)*.

Fig 5
Support arm mounted on pipe.

Fig 6
Pipe threading with 11R type die head.
We suggest using specific oiler

7.Keep ON/OFF switch depressed until end of the pipe is even with edge of the dies. Release the switch button.

8. Back off the Die Head from the threaded pipe, reversing the directional switch and actuating the ON/OFF switch.

Note! Hold onto the threader handle firmly to resist handle forces developed while backing off the Die Head.

9.When dies clear the end of the pipe, grip the handle on top of the threader and remove the threader and Die Head from the pipe.

10. Remove the support arm from the pipe.

Note! To avoid injury, make sure long sections of pipe are supported at the end farthest away from the vise prior to removal.

Inspecting Threads

1. Remove any oil, chips or debris from the thread.

2. Visually inspect thread. Threads should be smooth and complete, with good form. If issues such as thread tearing, thin threads, or pipe out-of-roundness are observed, the thread may not seal when made up. Refer to the “Troubleshooting” chart for help in diagnosing these issues.

3. Inspect the size of the thread. The preferred method of checking thread size is with a ring gauge. There are various styles of ring gauges, and their usage may differ from that shown in *Figure 7*.

• Screw ring gauge onto the thread hand tight.

• Look at how far the pipe end extends through the ring gauge. The end of the pipe should be flush with the side of the gauge plus or minus one turn. If thread does not gauge properly, cut off the thread, adjust the die head and cut another thread. Using a thread that does not gauge properly can cause leaks.

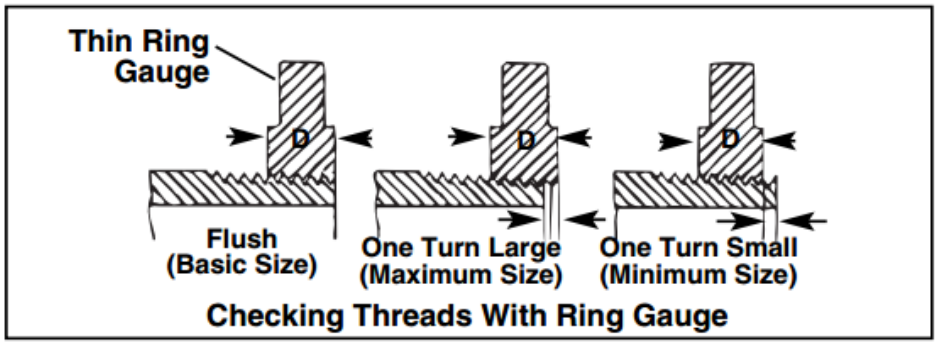

Fig 7

• If a ring gauge is not available to inspect thread size, it is possible to use a new clean fitting representative of those used on the job to gauge thread size. For 2" and under NPT threads, the threads should be cut to obtain 4 to 5 turns to hand tight engagement with the fitting and for 2" and under BSPT threads it should be 3 turns.

Maintenance Instructions

Make sure machine is unplugged from power source before performing maintenance or making

any adjustments.

Cleaning

1. After each use, empty the threading chips from the 418 Oiler (if used) chip tray and wipe out any oil residue.
2. Wipe off any oil, grease, chips or dirt from the power drive, including the handles and controls. Clean the SQ30-2B retaining mechanism.
3. Wipe off any oil, grease or dirt from the support arm. If required, clean the support arm jaws with a wire brush.
4. Remove chips and dirt from die heads.

Changing Dies in 11-R Die Heads

A variety of dies are available for installation in 11- R Die Heads.
See catalog for availability.

1. Remove the four screws from cover and remove the cover plate.
2. Remove the worn dies from the die head.
3. Insert new dies into slots – numbered edge up.

Numbers on the dies must correspond with those on the die head slots. Always replace dies as a set.

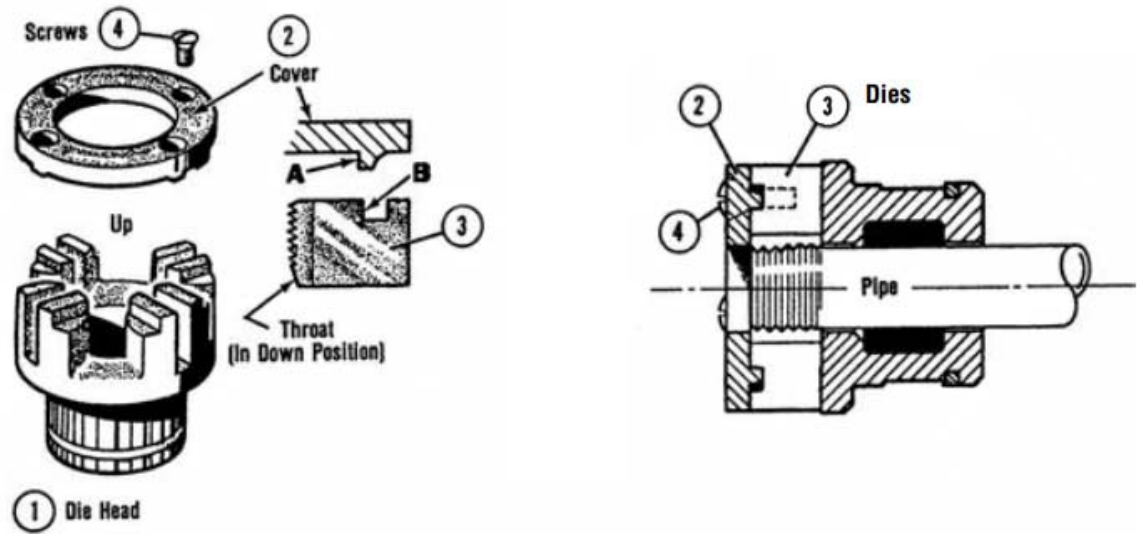

Fig 8

4. Replace the cover plate and tighten the four screws lightly.
5. Place die head on already threaded pipe until dies begin to thread. This forces stop on dies outward against lugs on cover plate and properly sets the size.
6. Tighten the four screws securely. Remove the threaded pipe and make a test cut.

Motor Brush Replacement

Check motor brushes every 6 months and replace brushes when they are worn to less than 1/4″.

Machine Storage

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

Troubleshooting

⚠ WARNING Always unplug power cord before servicing threader.

PROBLEM	CAUSE	CORRECTION
Motor does not start	Threader unplugged	Plug into power source
	Brushes do not touch armature	Check brushes, replace if worn
Motor sounds overloaded	Overload because of dull dies	Replace dies
	Bad quality or insufficient thread cutting oil	Use thread cutting oil in adequate quantity
Sparks forming at motor	Bad contact between brushes and brush holder	Tighten the screws, make sure brush is pressed firmly onto armature
	Brushes do not touch armature properly	Replace worn brushes
	Sharp edge on brush	Break edge with sand paper
Die head does not start threading	Dull or broken dies	Replace dies
	Machine running in wrong direction	Check setting of the direction switch
	Improperly set dies	Reset dies
Damaged Thread	Dull dies	Replace dies
	Dies not assembled in correct sequence	Put dies in correct sequence
	Low quality pipe	Make sure only pipe of good quality is used
	Bad quality or insufficient thread cutting oil	Use only thread cutting oil in adequate quantity
Support arm turns while threading	Support arm feed screw not tight	Tighten feed screw
	Support arm jaws dirty	Clean with wire brush
	Support arm not square on pipe	Make sure sits square on pipe
Die heads cannot be changed properly	Burr has occurred at the spline end of the die head	Eliminate burr with file