

Volume

1.2

OPERATIONAL MANUAL

MODEL: S302 PORTABLE PIPE THREADER



by BLUEROCK® Tools

SQ30 PIPE THREADER

UNPACKING THE ITEM

Caution: This machine is packed together with items that may be sharp, oily and overly heavy objects. Remove the machine from the packaging in a safe manner. Check to ensure all accessories are included with the item while unpacking. If any parts are found to be missing, contact the retailer as soon as possible. Do not throw away the packaging until the item is out of the guarantee period. Dispose of the packaging in an environmentally responsible manner. Recycle if possible. Keep all plastic bags away from children due to risk of suffocation.



WEEE - Waste Electrical & Electronic Equipment. Note this machine should be disposed of as electrical & electronic waste.

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Safety

DO NOT USE THIS MACHINE UNLESS YOU HAVE READ THE OPERATING INSTRUCTIONS!



Safety glasses must be worn at all times in work areas. Use a full face mask whenever possible.



Long and loose hair must be contained.



Appropriate footwear must be worn.



Close fitting/protective clothing must be worn.



Safety gloves should be worn at all times and jewelry must not be worn.



Hearing protection should be worn when using this machine.



Read operational manual prior to use.

PRE-OPERATIONAL SAFETY CHECKS

- Examine the power cord and plug for damage.
- Examine the body of the machine and inspect for damage or defects.
- Examine the cutting dies and die head to insure they are operable.
- Ensure that the die head and dies are correctly attached to the machine.
- Make certain the on/off switch is in the off position before plugging into power to prevent unintentional starting.

OPERATIONAL SAFETY CHECKS

- ONLY to be operated by qualified personal who have read instructions.
 - NOTE: Failure to read and follow instructions could result in electrical shock, fire, property damage and/or serious injury!
- DO ensure all non-essential people are clear of the immediate work area.
- DO keep body parts, clothing & power cords clear of turning pieces. Stay alert and use common sense when using this tool.
- DO use both hands when using this machine.
- DO remove adjusting keys or wrenches prior to turning machine on.

SQ30 PIPE THREADER

➤ DO guard against electric shock by preventing body contact with grounded surfaces such as pipes, radiators, ranges, refrigerators, etc.
➤ DO be mindful that power tools can expose an operator to vibrations transmitted through contact with the machine. Prolonged exposure can lead to medical issues, which should be discussed with a medical professional.
➤ DO NOT make adjustments to machine while the machine is running.
➤ DO NOT use dull cutting dies as the machine is more likely to bind and the user lose control.
➤ DO NOT leave the machine running when not in use.
➤ DO NOT hold the work piece by hand or using body. Always mechanically clamp or secure work piece.
➤ DO NOT allow liquids or dust to enter the machine's ventilation system.
➤ DO NOT operate machine outside of machine specifications.
➤ DO NOT touch moving parts while the machine is running as death or dismemberment could occur.
➤ DO NOT remove machine panel while machine is connected to a power source. Only to be removed for service by qualified personal and put back on the machine after service is complete.
➤ DO NOT allow children or untrained personal to operate machine.
➤ DO NOT use this machine in the rain or a wet environment. If using outdoors, make sure the surface is clean and dry.
➤ DO NOT operate in the presence of explosive materials as power tools create sparks which may ignite dust or fumes.
➤ DO NOT use on a pipe that may contain a live electrical wire/circuit.
➤ DO NOT use this machine if the ON/OFF switch is broken. This switch is a safety device that lets you shut off the motor by releasing the switch.
➤ DO NOT operate this machine on the same work surface where welding is being performed. This could result in severe damage to the machine or personal injury to the user.
➤ DO NOT operate this machine on a lower voltage as this could limit the motor life and work efficiency.
○ NOTE: Use of long small gauge power extension cords can result in decreased voltage. As local voltages can vary, it may be a good idea to test the voltage at the end of the extension cord to ensure proper voltage requirements are met. You might also consult an electrician to make sure the length of cord matches up with the proper wire gauge for this size motor. Make sure to use outdoor cords when operating outdoors. Use a GFCI circuit if using in wet locations.

Specifications

<i>ELECTRICAL DATA</i>	
Voltage	110V, 60Hz
Current	11 Amps
Motor Size	1300W
Power Connection	US Standard Plug

<i>MECHANICAL DATA</i>	
Pipe Capacity	½" to 2" Diameter
Die Head Size	11R
Die Size	12R
Gearbox	Forward and Reverse
Gear Housing	Aluminum
Machine Speed	28 RPM Forward 52RMP Reverse
On/Off Switch	Paddle Type with Trigger Lock

<i>SHIPPING DATA</i>	
Shipping Weight	57 Lbs
Shipping Carton	81cm x 15cm x 19cm

Included Accessories

<i>DESCRIPTION</i>	<i>QTY</i>
Instruction Manual	1
Support Arm	1
Stabilizing Bar	1
Die Head Adapter for Small Dies (1/2" to 1-1/4")	1
½" Die Head and Dies	1
¾" Die Head and Dies	1
1" Die Head and Dies	1
1-1/4" Die Head and Dies	1
1-1/2" Die Head and Dies	1
2" Die Head and Dies	1
Spare Brush	2
Plastic Carry Case	1
Oil Bottle	1

Additional Available Accessories

Additional accessories for this machine can be found in BLUEROCK® Tools online shop at www.bluerocktools.com or from your local retailer.

Operations

Note

THOROUGHLY READ THROUGH THE ENTIRE MANUAL BEFORE OPERATING THIS MACHINE!

PURPOSE

- The purpose of the SQ30 is for threading pipe and conduit.

OPERATIONAL PRINCIPLES

- The machine uses a forward and reverse rotation to thread pipe. The user can select the forward or reverse toggle while the on/off switch is engaged. The paddle switch cuts the power when released.
- The threading machine is designed to use 11R type die heads (1/2" – 2" pipe). An adapter is required for the 1/2" – 1-1/4" pipe sizes. The support arm should be used to secure the threader and resist high handle resistance when threading 3/4" or larger pipe.

MACHINE COMPONENTS

- The main components of the SQ30 is the die head assembly, gearbox, motor, housing and main handle. The die head is driven by the gearbox and the motor.
 - These components must be not be removed except by a qualified technician. Power must be disconnected prior to any service.
- The machine has a paddle switch located on the main handle. This switch operates the turning mechanism to turn the die head forward or reverse. When depressed the switch starts the rotation. When released the rotation stops.

TRANSPORTING THE MACHINE

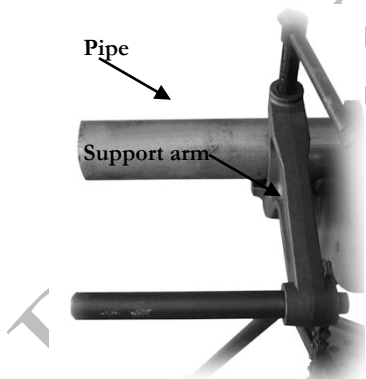
- When transporting the machine, always carry with both hands.
- If transporting inside a vehicle, it is recommended to transport it on its side so as to avoid the item falling over.
- DO NOT carry the machine by the cord.
- DO NOT allow the cord or plug to drag along the floor when transporting.

RUNNING THE MACHINE

- Do all pre-operational and operational safety checks from Chapter 1.
- Consider your security and stability as well as the orientation of the machine in the work area.
 - Consider the work surface material, condition, strength, density and rigidity. These factors directly affect the tools operation and user safety.

S Q 3 0 P I P E T H R E A D E R

- Ensure the work surface is free of debris, oil, etc.
- Also ensure the machine handle is free of grease or oil.
- Check the level and quality of the cutting fluid in the oil bottle. Fill or replace if necessary.
 - **NOTE:** Cutting oil is a necessary part of operations. Thread cutting oil lubricates and cools the threads during threading operations. A dirty or poor grade oil can result in poor thread quality.
- Select appropriate die head and dies. If using smaller die heads you may need to install the adapter head. Install on machine.
 - Inspect the dies to ensure they are sharp and in the correct position.
 - Improperly installed or dull cutting dies can cause binding or poor quality threads.
 - **Note:** See section below for more information on installation of adapter and dies heads.
- Select rotational direction.
- If possible secure the pipe in a portable tri-stand or a bench vice.
 - To prevent tipping, long lengths of pipe should be supported by a pipe stand.
- Position support arm on pipe so the end of the support arm is in line with end of the pipe (figure 5 below).
 - Make sure the jaws are squarely contacting the pipe and tighten the 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 $\frac{3}{4}$ " or larger pipe.
 - When threading pipe smaller than $\frac{3}{4}$ " in size without the support arm, hold onto the threader firmly to exert pressure against the handle developed during threading.
 - If the threader cannot be secured by the support arm, use other mechanical means to secure the machine from losing control.
 - Only use the aluminum gear case to secure the threader. Using the motor housing or handle may result in damage or injury.



*Support arm mounted on pipe.
Figure 5*

- Place die head over the end of the pipe and insert the post of the support arm through the notch in the gear case.
- Plug the machine into power source.
- Turn the machine on.
 - **NOTE:** To start the machine depress the main handle switch. Stop the machine by releasing the switch.

- Simultaneously depress the on/off paddle switch and exert pressure against the die head to assist in starting the 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).



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

Figure 6

- Keep the on/off switch depressed until the end of the pipe is even with the edge of the dies.

- Release the switch button to turn the threader off.

- Reverse the directional switch and engage the motor again, backing off the die from the pipe.

- NOTE: Hold onto the threader handle firmly to resist handle forces developed while backing off the die head.

- Release the on/off switch once the thread is fully reversed.

- When the 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.

- Remove the support arm from the pipe.

INSTALLING THE ADAPTER

- The adapter is required for use of 1/2" through 1-1/4" 11R die heads.

- Make certain the machine is unplugged from power.

- Push adapter into threader and tighten the ring on the opposite side (figure 1 and 2 below).

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

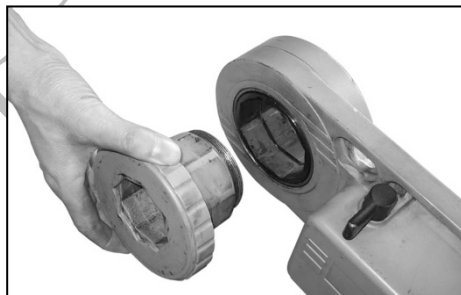


Figure 1

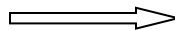


Figure 2

INSTALLING DIE HEAD

- For 1/2" through 1-1/4" 11R die heads, the adapter must be used. See above section. To install these die heads after the adapter has been installed, rotate adapter cap clockwise. Push die heads into adapter spline end first, then release the adapter cap to hold die head (see figure 3 and 4 below).
- For 1-1/2" to 2" die heads, install the dies heads by pushing the die heads in spline end first, squarely into the threader until the spring engages securely.

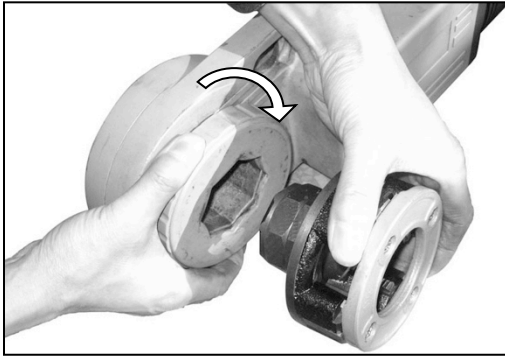


Figure 3

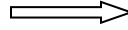


Figure 4

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Troubleshooting

Note

SERVICING SHOULD ONLY BE DONE BY A QUALIFIED TECHNICIAN.

DON'T FORGET TO UNPLUG POWER TO UNIT PRIOR TO SERVICE!

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 coming from 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 feedscrew not tight	Tighten feedscrew
	Support arm jaws dirty	Clean with wire brush
	Support arm not square on pipe	Make sure sits square on pipe

General Maintenance

- Inspect electrical cords and electrical connections.
- Keep machine clean and free of debris.
- Check for misalignment, binding and breakage of all moving parts. If damaged, repair tool before use.

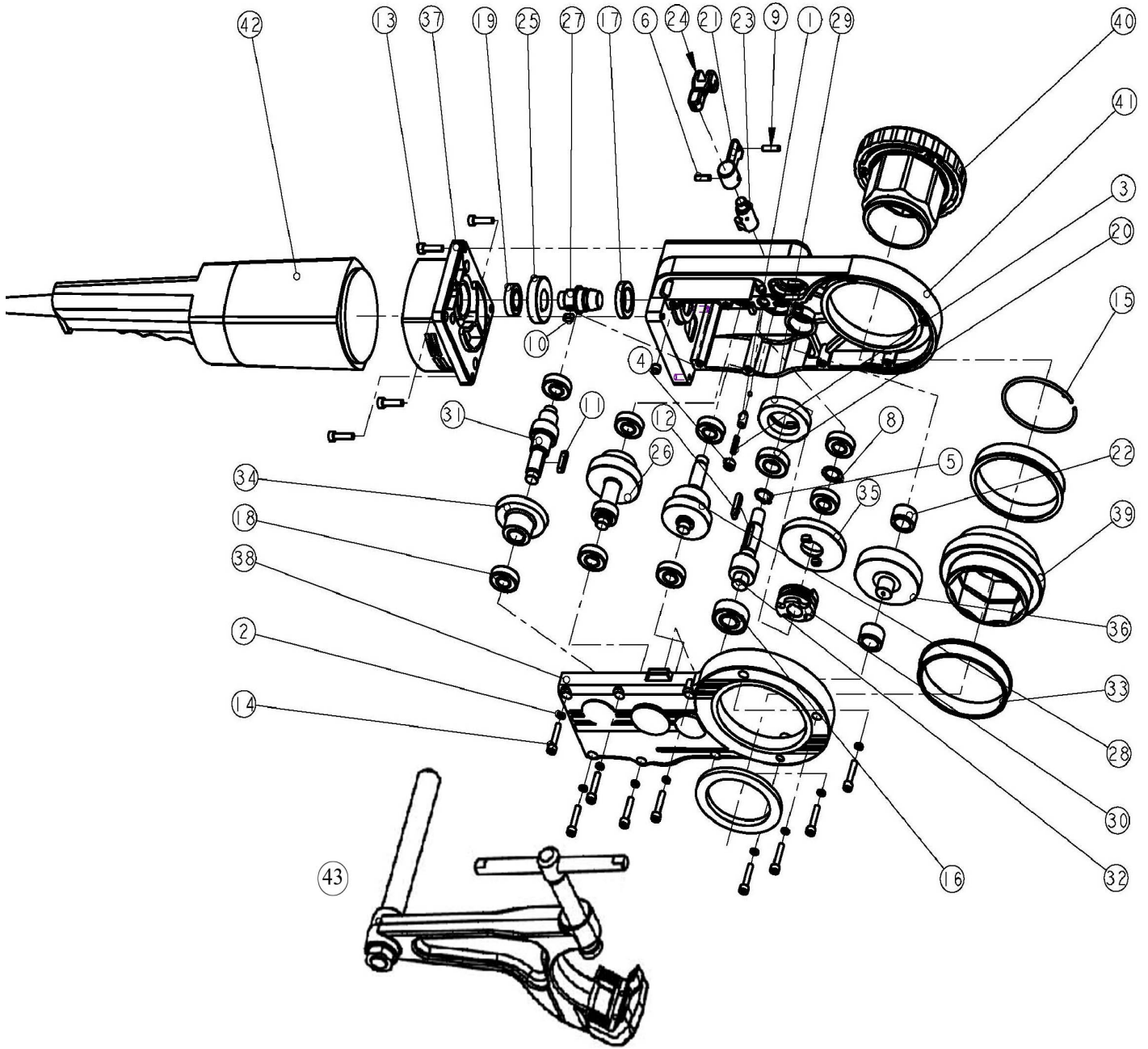
Occasional Maintenance

- Have the power tool serviced by a qualified service technician using identical replacement parts.
 - Change motor brushes (inspect every 6 months – replace when they are worn to less than ¼")
 - 1) Disconnect machine from power.
 - 2) Unscrew left and right side brush holder caps.
 - 3) Take out old brushes.
 - 4) Replace with exact same size new brushes.
 - 5) Screw in brush holder caps tightly.
 - 6) Replace motor handle housing.

Parts List

S/N	Description	S/N	Description	S/N	Description
1	Block	19	Bearing 1000902	37	Mounting plate
2	Washer	20	Bearing 102	38	Gear cover
3	Spring	21	Directional switch	39	Ring gear
4	Screw M10×10	22	Needle bearing 4524901	40	Adapter complete
5	Retaining ring 14.7	23	Switch bar	41	Gear housing
6	Pin 4×16	24	Extension lever	42	Motor complete
7	Bushing	25	Hi-speed gear	43	Support arm
8	Retaining ring	26	3 linkage gear		
9	Pin 5×18	27	Bevel gear		
10	Key 5×10	28	Feeding gear shaft		
11	Key 5×22	29	Feeding gear		
12	Key 5×25	30	Clutch		
13	Screw M5×20	31	Conical gear shaft		
14	Screw M5×25	32	Out-put gear		
15	Retaining ring	33	Bearing bronze		
16	Bearing 202	34	Bevel gear		
17	Bearing 1000804	35	Clutch gear		
18	Bearing 101	36	Gear		

Breakdown View



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