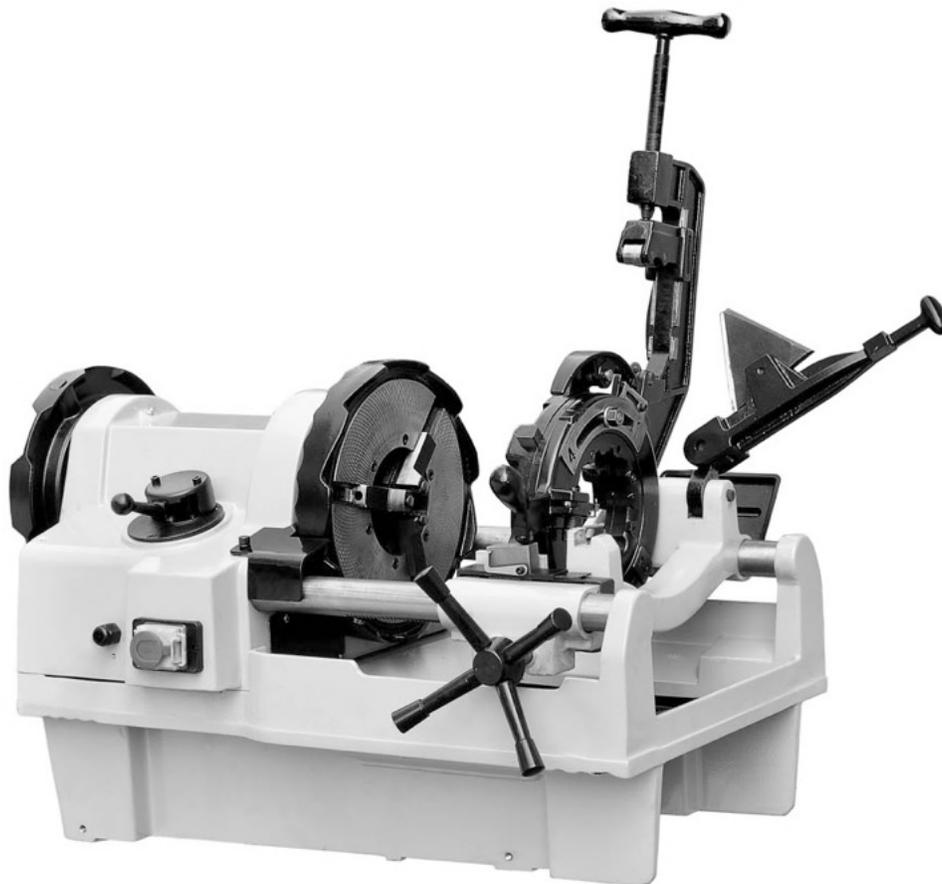


Volume

1.0

OPERATIONAL MANUAL

MODEL: PTM100 PIPE THREADING MACHINE



by BLUEROCK® Tools

PTM 100 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.

PTM 100 PIPE THREADER

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<u>SIMPLE VIEW WIRING SCHEMATIC</u>	ERROR! BOOKMARK NOT DEFINED.

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 remove adjusting keys or wrenches prior to turning machine on.
- DO guard against electric shock by preventing body contact with grounded surfaces such as pipes, radiators, ranges, refrigerators, etc.

PTM100 PIPE THREADER

➤ DO keep the working area clean and brightly illuminated for optimum operational safety.
➤ 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 cut or saw work-pieces by hand while the machine is running
➤ DO NOT use dull cutting dies as the machine is more likely to bind and the user lose control. This can also overload the motor.
➤ DO NOT use excessively long pieces of pipe in the machine. Keep the machine balanced and stable at all times.
➤ 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's panels 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 machine 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 switches are broken.
➤ 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

ELECTRICAL DATA	
Voltage	110V, 60Hz
Current	13 Amps
Motor Size	1500W, 2HP
Power Connection	US Standard Plug

MECHANICAL DATA	
Pipe Capacity	1/2" to 4" Diameter NPT
Die Head Size	Model 443 Universal Self Opening Die: 1/2"-3/4" NPT One Set and 1"-2" NPT One Set. Fits RIDGID® Dies (NPT/NPSM Threads) Model 444 Receding Self Opening Head: 2-1/2"-4" NPT One Set. Fits RIDGID® Dies (NPT/NPSM Threads). 443 (711) and 444 (714) Die Heads work with RIDGID® Dies (RIDGID® 26192) (RIDGID® 47765) (RIDGID® 47770)
Die Size	HSS NPT (Interchangeable with Ridgid® 811A Dies)
Gearbox	Forward and Reverse
Gear Housing	Aluminum
Machine Speed	3 Speed: 36 RPM (1/2"-3/4"), 20RPM (1"-2"), 11RPM (2 1/2"-4")
Carriage Travel	7" or 180MM
Oil Feeder	Geared Pump, Automatic Circulation
Maximum Chuck Capacity	4.925 or 125MM
On/Off Switch	Manual and Foot Pedal Type (Optional)

SHIPPING DATA	
Shipping Weight	392lbs
Shipping Carton	36"x24"x24"

Included Accessories

<i>DESCRIPTION</i>	<i>QTY</i>
Instruction Manual	1
1/2"-3/4" NPT Cutting Dies (4pc)	1
1-2" NPT Cutting Dies (4pc)	1
2-1/4"-4" NPT Cutting Dies (4PC)	1
Support Leg	4

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.

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Operations

Note

THOROUGHLY READ THROUGH THE ENTIRE MANUAL BEFORE OPERATING THIS MACHINE!

PURPOSE

- The purpose of the PTM-100 is for threading pipe and conduit ranging from ½" to 4" in diameter.

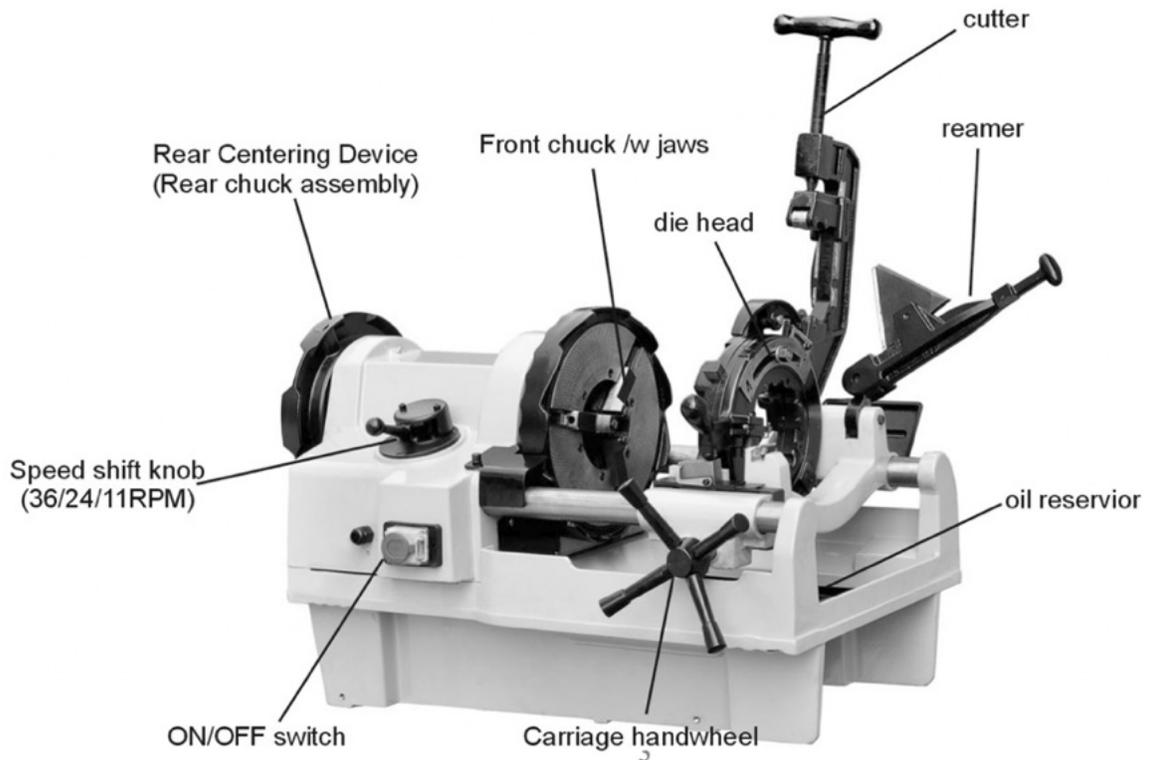
MACHINE SET-UP

- The machine is designed to either use the supplied leg supports or be securely mounted to a user-supplied bench.
 - CAUTION: This machine should be picked up and moved with at least 2 people
 - DO NOT allow the cord or plug to drag along the floor when transporting.
- Make certain the set-up work area is dry.
- Use barriers to keep non-essential personal away from rotating pipe.
- Place machine away from passageways and make certain the operator is able to see all parts of the work-piece.
- DO NOT set-up or modify the machine in a manner that is not intended.
- If using pipe extending more than 1 meter from the rear output of the machine chuck, make certain to use a pipe support. Add multiple supports if necessary, to ensure machine stability.

MACHINE COMPONENTS

- The main components of the PTM-100 are the die head assembly, gearbox, motor housing, chuck carriage, pipe cutting assembly, and pipe reamer assembly (see figure below). The chuck is driven rotational by the gearbox and the motor and acts as the main drive component of the machine.
 - These components must be not be removed except by a qualified technician. Power must be disconnected prior to any service.
- The machine has a main on/off switch as well as a foot pedal switch. These switches operate the turning mechanism, which turn the machine chuck. When the motor switch is turned on, the user is able to depress the foot switch, which starts the chuck rotation. When the pedal is released the rotation stops.

PTM 100 PIPE THREADER

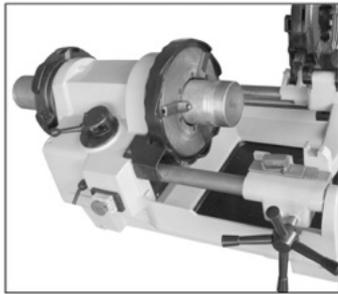


PREPERATION FOR THREADING

➤ **CAUTION:** Before making any adjustments, ensure the main machine switch is in the “off” position.

➤ **Chuck Operations and Pipe Installation in Threader**

- Rotate the forward and rear chucks clockwise to open them up and make room for the pipe.
- Mark the pipe at the desired length if it is being cut to length.
- 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).
- 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.



- To close the chuck around a piece of pipe, turn the chuck handwheel in the counter-clockwise direction. 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.
 - Check the pipe is perfectly centered in the chuck and attempt to spin the handwheel tight again.
 - If the pipe is not centered, reverse the operation until the pipe is loose and re-center the pipe.
 - **CAUTION:** Keep hands and fingers away from the chuck jaws when the machine is plugged into a power source. Closing chuck jaws can cause serious damage to bodily parts.

➤ Diehead Operations

- Always install the correct dies for the die assembly.
- 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.

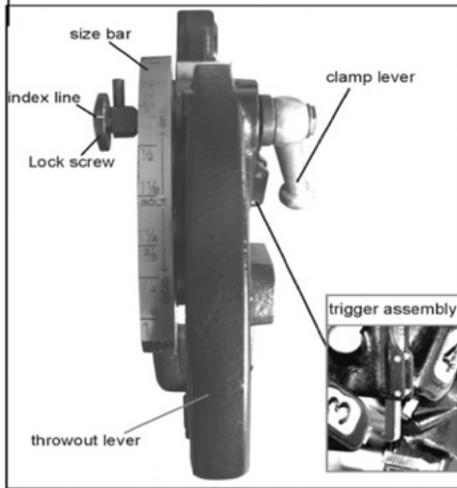


Fig 2
Layout of die head 1/2"-2"

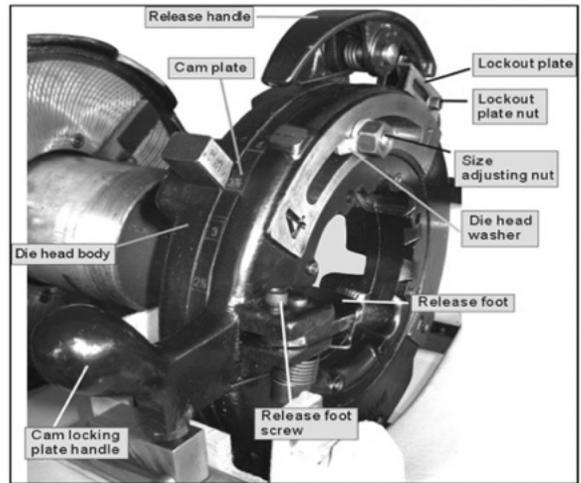


Fig 3
Layout of die head 2 1/2"-4"

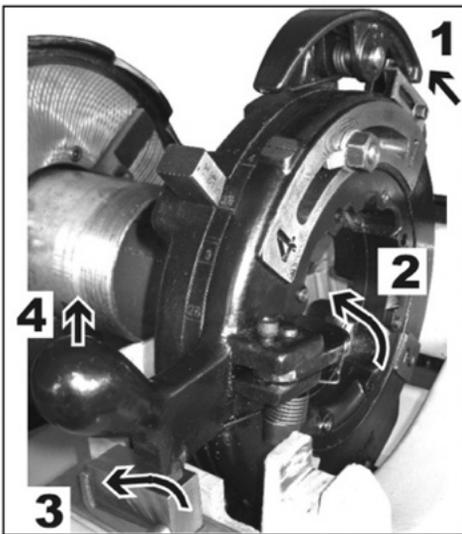


Fig 4
Setting 2 1/2"-4" die head for
NPT or BSPT threads

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

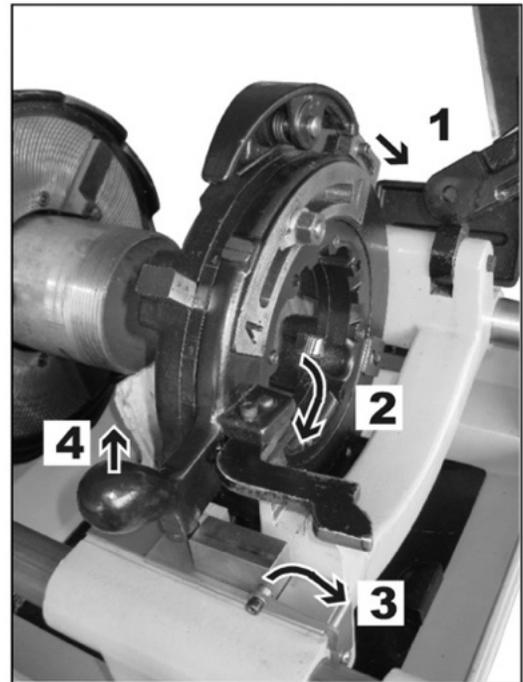


Fig 5
Setting 2 1/2"-4" die head for
NPSM or BSPP threads

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

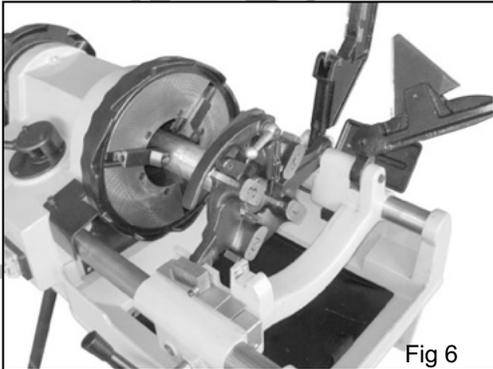
- Installing dies in die head (2-1/2" - 4")

- 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.

➤ Pipe Threader Operations

○ 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")**

- 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.

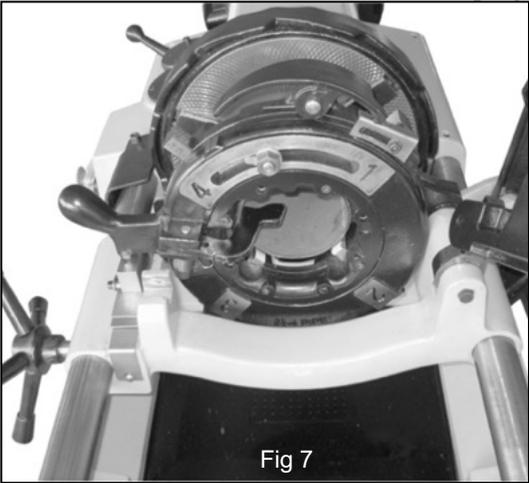
○ Threading with die head (2-1/2"-4") NPT / BSPT

- 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.)

▪ *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 7).

- 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 7

➤ 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 8).

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

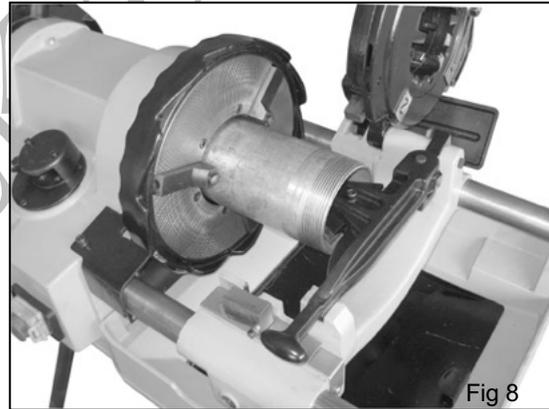


Fig 8

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

➤ 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.

➤ Oiling system operations

- Change oil when dirty.
- Check oil often and add oil if needed.

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.

- Ensure the machine handles are free of grease or oil.

- Check the level and quality of the cutting fluid in the oil reservoir. 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 die depth for the specific pipe you are threading.

- 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.

- To prevent tipping, long lengths of pipe should be supported by a pipe stand.

- Plug the machine into power source.

- Place pipe in the chuck and secure, evenly tightening the chuck handwheel (see section above for specifics about using the chuck).

- Ensure the machine main power and footswitch are operating correctly.

- Choose gear speed that is appropriate with dies being used

- Turn the main machine switch to the “on” position.

- Depress the on/off foot pedal to check the rotation and engagement of the chuck.

- Disengage the foot pedal to ensure the “off” function is working properly.

- NOTE: Be sure to position the foot pedal in an accessible place.

- CAUTION: Always allow the pipe to completely stop turning before touching the chuck handwheel, pipe, die assembly, pipe cutting assembly or pipe reamer assembly.

- CAUTION: Ensure the main on/off switch is “off” before making adjustments any adjustments.

- Cut the pipe end to ensure a clean edge (see figure above for specifics using the pipe cutter)

- Use the pipe reamer to clean the inside edge (see figure above for specifics using the pipe reamer).

- Engage the cutting dies with the clean rotating pipe end (see above section for specifics on engaging cutting dies).

- Apply plenty of thread cutting oil to the dies during threading. This will reduce the and on the motor and extend the life of motor components and dies.

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	Threading machine unplugged	Plug into power source
	Fuse blown	Replace the fuse
	Capacitor blown	Replace capacitor
	Bad on/off switch	Replace Switch
The cutting knife will not cut	Cutting blade is dull	Replace blade
	Lead screw on cutting blade assembly is damaged	Replace assembly
	Too much force being applied	Cut slower
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
	Improperly set dies	Reset dies
Damaged Thread	Dull dies	Replace dies
	Dies not assembled in correct sequence	Put dies in correct sequence

PTM 100 PIPE THREADER

	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
Pipe turns while threading	3-jaw chuck not tight	Tighten handwheel chuck
	3-jaw chuck teeth dirty	Clean with wire brush
	3 jaw chuck teeth damaged or dull	Replace 3-jaw chuck
Cooling oil not reaching pipe	Oil filter clogged	Clean filter
	Oil line is blocked	Clean oil lines
	Oil has leaked out	Fill oil in the pump
Cooling oil leaked into motor	The oil seal of the oil pump PD 8x228x has been damaged	Replace oil seal

BLUEROCK® TOOLS

General Maintenance

Note

SERVICING SHOULD ONLY BE DONE BY A QUALIFIED TECHNICIAN.

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

➤ 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.
➤ Clean the oil filter disk and oil suction filter disk after running for 8-12 hrs. Clean the oil tank and refill if the oil is dirty or turns black.
○ Small iron filings may fall into the oil tank when threading and clog the filters.
➤ Check the cutting blade on the pipe cutting assembly.
➤ Clean dies and inspect for chips. Also check the sharpness on the dies. If they are dull or broken, replace ALL dies with identical set.
➤ Clean chuck teeth with wire brush. Check the attrition of the claw points on the 3-jaw chuck. If the points are worn, replace with identical piece.
➤ Oil the two oil cups on the machine shell of the main shaft after each use. This will lubricate the forward and rear bearings. 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.
➤ After each use coat all working surfaces with corrosion resistant oil.
➤ Check brushes for wear and replace if worn.

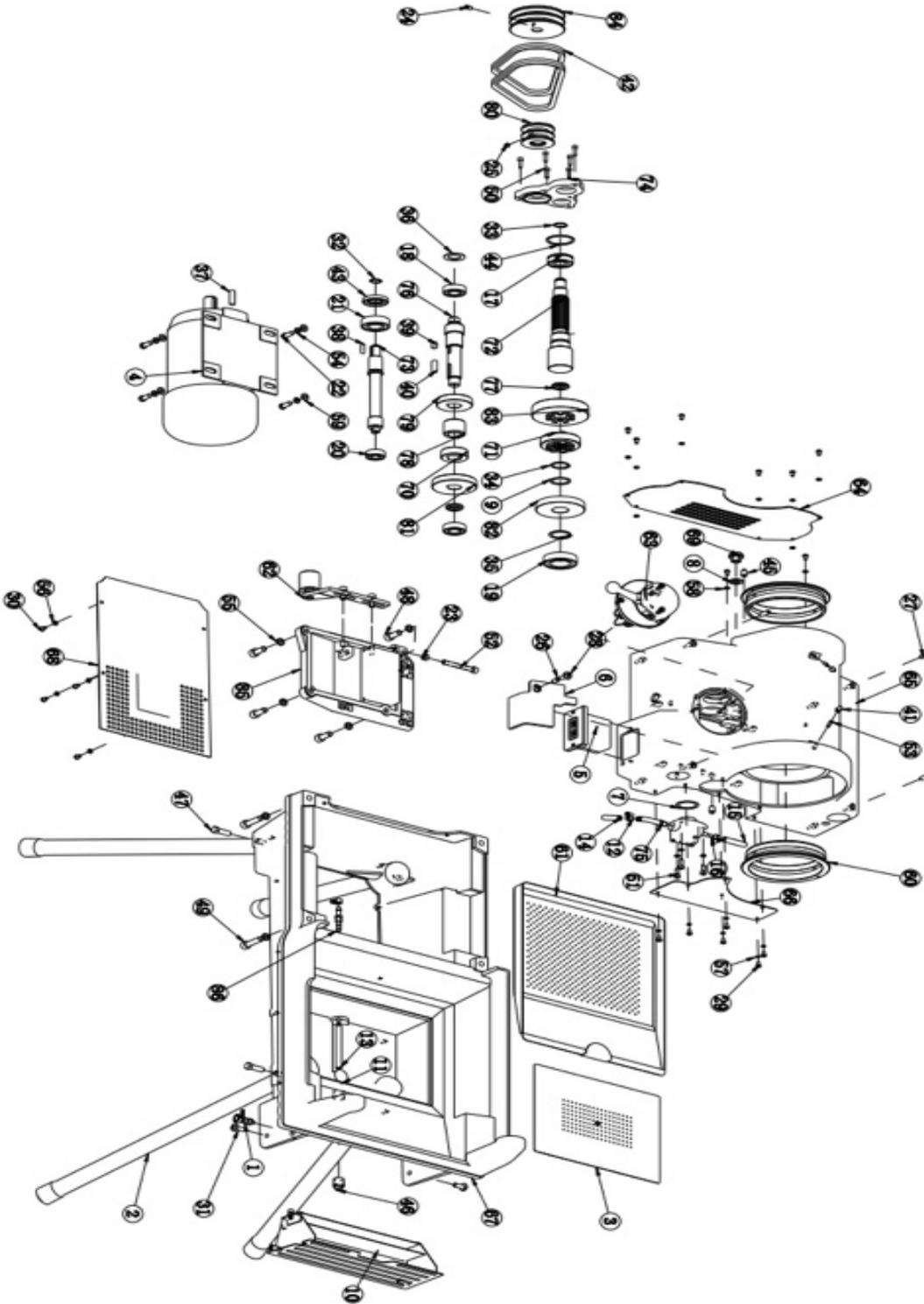
Parts List- Main Unit

P/N	Ref. No.	Qty	DESC	P/N	Ref. No.	Qty	DESC
1		1	Lock bolt	44		1	Retaining ring (2)
2		4		45		2	Square plug
3		1	Oil filter plate	46	MFJ.760106	1	Oil plug
4	SQ100F.107001	1	Motor	47	LS.706160	4	
5	SQ100F.409040	1	Switch	48	LD.701057	4	
6	SQ100F.401050	1	Carriage stop	49	LD.701060	4	
7		1		50	LD.701006	6	
8		1	Spacer	51	LD.701020	3	screw M6*16 (3)
9	H401.409003	1		52	LD.701052	1	Screw M8*70
10		1	Tool box	53	X.709491	2	
11	SQ50B1.408009	1	Oil filter	54	DQ.702004	4	
12	SQ100F.409014	3		55	DQ.702006	8	
13		1	Oil tube	56	DQ.702003	15	
14		1	Oil tube	57	DQ.702002	6	Spacer M5
15		1	Oil tube	58	DQ.701002	2	
16	SQ100F.403064	1	Oil pump	59	DQ.701005	4	
17	ZC.701043	1	Bearing	60	SQ100D1.401015	2	Bearing (2)
18	ZC.701026	2	Bearing	61	SQ100F.301003	1	Chip pan
19	ZC.701037	1	Bearing	62	SQ100F.301010	1	Belt tightening wheel
20	ZC.701017	1	Bearing	63	SQ100F.301012	1	Speed shifting complete
21	ZC.701031	1	Bearing	64	SQ100F.401005	1	Rear cover
22	LS.706153	4		65	SQ100F.401010	1	Upper casting body
23	LM.704105	1		66	SQ100F.401011	1	Front cover
24	LD.724156	1		67	SQ100F.401012	1	Lower casting body
25	LD.724154	1		68	SQ100F.401030	1	Bottom cover

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26	LD.704007	1		69	SQ100F.401049	1	Bolt
27		3		70	SQ100F.403001	1	2nd middle speed gear
28	LD.702032	1	Screw M5*8	71	SQ100F.403002	1	3rd hi-speed gear
29	LD.702016	8		72	SQ100F.403003	1	3rd gear shaft
30	LD.702027	10		73	SQ100F.403008	1	1st gear shaft
31	LD.702033	2		74	SQ100F.403010	1	Gear box cover
32	DQ.708112	1		75	SQ100F.403021	1	Right angle joint
33	DQ.708113	1		76	SQ100F.403028	1	2nd gear shaft
34	DQ.708118	1		77	SQ100F.403039	2	
35	DQ.708121	1		78	SQ100F.403046	1	
36	DQ.707154	1		79	SQ100F.403047	1	2nd high-speed gear
37	J.701030	1		80	SQ100F.403048	1	Motor V wheel
38	J.701009	1		81	SQ100F.403049	1	2nd helical gear
39	J.701021	1		82	SQ100F.403050	1	3rd middle-speed gear
40	J.701028	1		83	SQ100F.403051	1	3rd low speed gear
41	MFJ.705001	2	Grease fitting M6 (2)	84	SQ100F.403052	1	1st V wheel
42		2	V belt (2)	85	SQ100F.403053	1	Motor mounting base
43	MFJ.703003	1	Seal ring B25X47X7	86	SQ50E.401028	1	Oil coupling

Breakdown View- Main Unit

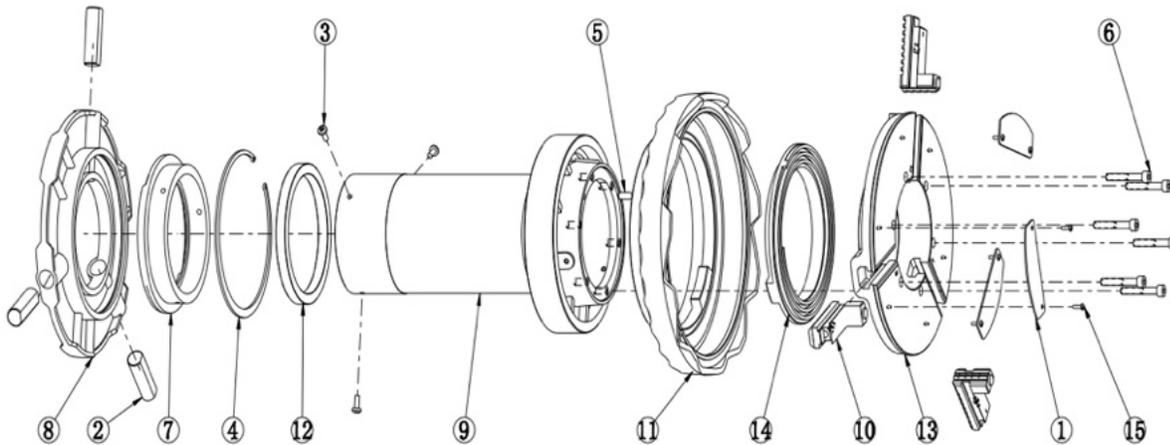


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Parts List- Chuck

S/N	Ref. No.	Qty	DESC
1		3	Guard plate (3)
2	SQ100D1.402006	3	Rear jaws (3)
3	LD.702020	3	Cross recessed pan head screw M5X16
4	DQ.706019	1	Retaining ring D=180
5	X.701021	1	Pin 8*20
6	LD.701049	6	Bolt M8*55 (6)
7	SQ100D1.402003	1	Rear scroll
8	SQ100D1.402004	1	Rear centering head
9	SQ100F.302003	1	Drive shaft complete
10	SQ100F.302005	3	Jaw insert set (3)
11	SQ100F.402005	1	Hand wheel
12	SQ100F.402007	1	sleeve
13	SQ100F.402014	1	Cap
14	SQ100F.402016	1	Front scroll
15	LD.760001	6	Bolt (6)

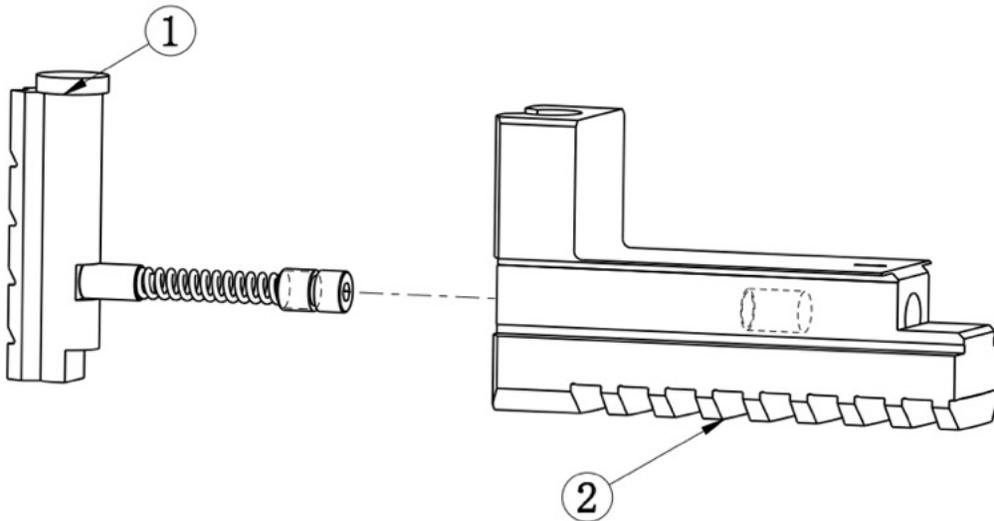
Breakdown View- Chuck



Parts List- Jaw Insert

			DESC
1	SQ100D1.302001/SQ80C1.302001	1	Jaw insert set (3)
2	SQ100F.402015	1	Front chuck Jaw Set (3)

Breakdown View- Jaw Insert



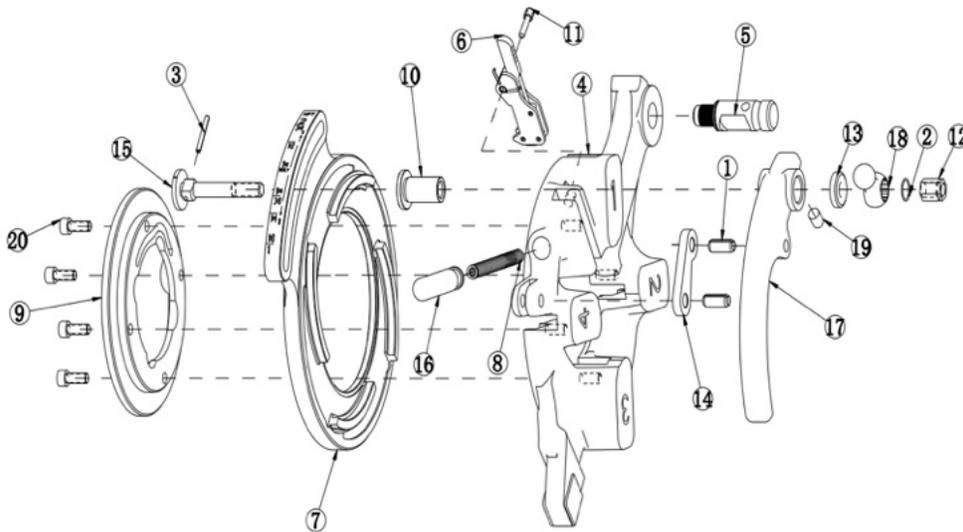
Parts List- Diehead Assembly

S/N	Ref. No.	Qty	die head 1/2"-2" automatic type DESC
1	X.711602	2	Pin 8*19 (2)
2	DQ.710253	1	Retaining ring 12*1
3	X.708307	1	Pin 3*28
4	SQ100F.404013	1	Head

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5	SQ50E.304001	1	Post
6	SQ50E.304003	1	Trigger
7	SQ50E.404003	1	Cam plate
8	SQ50E.404008	1	Pressure spring
9	SQ50E.404025	1	Retaining ring
10	SQ50E.404038	1	Bushing
11	SQ50E.404039	1	Screw
12	SQ50E.404040	1	Nut
13	SQ50E.404041	1	Spacer
14	SQ50E.404042	1	Link
15	SQ50E.404043	1	Lock screw
16	SQ50E.404044	1	Plunger
17	SQ50E.404045	1	Throw-out lever
18	SQ50E.404046	1	Clamp lever
19	SQ50E.404081	1	Insert
20	LD.760077	4	Screw (4)
	SQ100F.104001		Die head

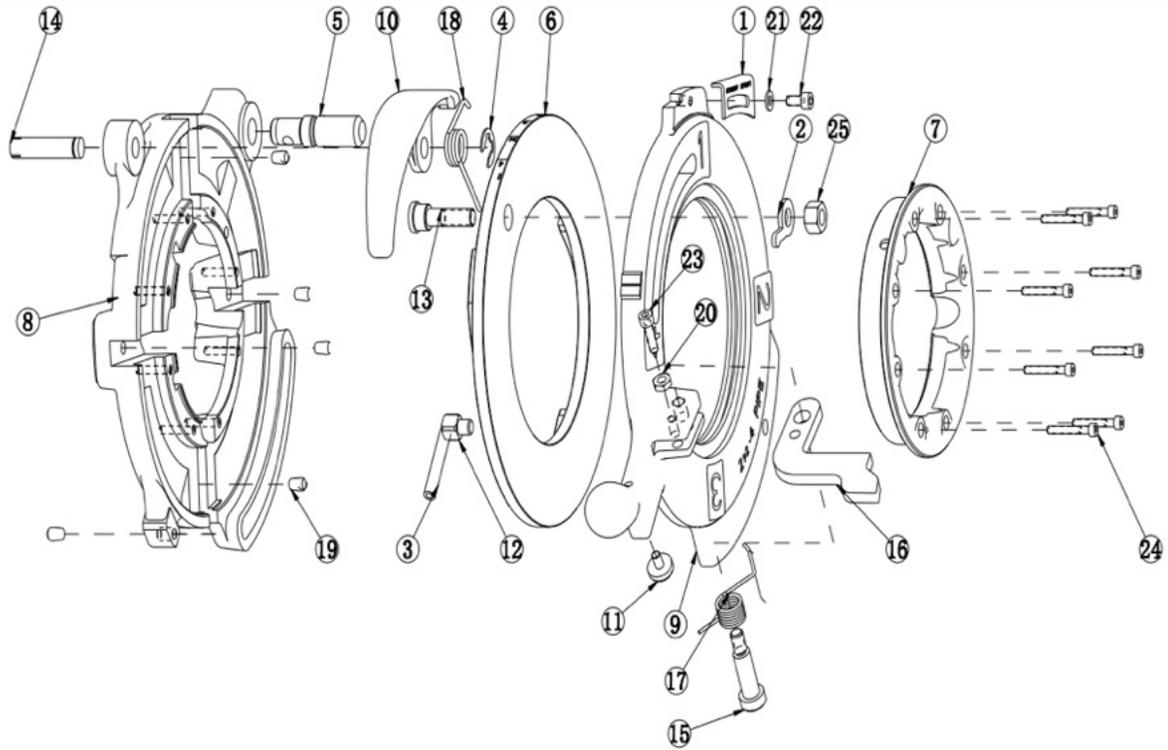
Breakdown View- Diehead Assembly



Parts List- Diehead Assembly (2)

S/N	Ref. No.	Qty	DESC
			die head 2 1/2"-4" automatic type
1	SQ100F.404057	1	Lockout plate
2	SQ50D.404011	1	Spacer
3	SQ100F.404065	1	Spring
4	DQ.709206	1	Clip d=13
5	SQ100F.304001	1	post
6	SQ100F.404003	1	Cam plate
7	SQ100F.404004	1	Retaining ring
8	SQ100F.404027	1	Head /w post
9	SQ100F.404053	1	Cam locking plate
10	SQ100F.404054	1	Release lever
11	SQ100F.404055	1	Sine bar ball
12	SQ100F.404056	1	Drive block
13	SQ100F.404058	1	Lock screw
14	SQ100F.404059	1	Groove pin
15	SQ100F.404060	1	
16	SQ100F.404061	1	Release foot
17	SQ100F.404063	1	Torsion spring
18	SQ100F.404064	1	Screw
19	SQ50B1.404007	5	insert
20	LM.760011	1	nut
21	DQ.760014	1	washer
22	LD.760086	1	Screw
23	LD.760080	1	Screw
24	LD.760071	8	Screw (4)
25	LM.760012	1	Hex Nut
	SQ100F.104002	1	Die head

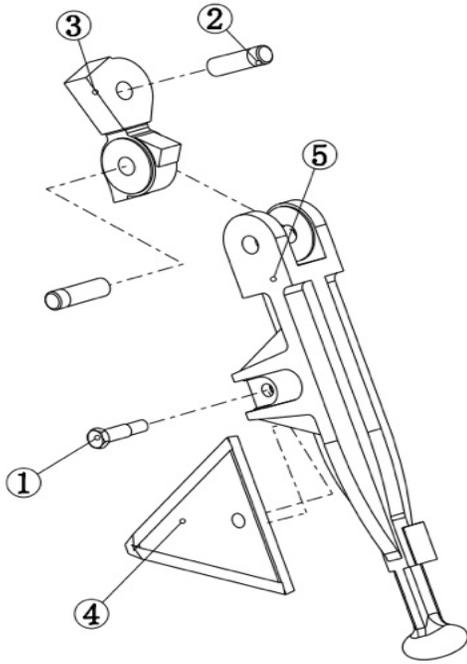
Breakdown View- Diehead Assembly (2)



Parts List- Pipe Reamer

SQ100F.105001 Reamer			
S/N	Ref. No.	Qty	DESC
1	LS.708651	1	bolt M8*35
2	SQ100F.405017	2	Support pin(2)
3	SQ100F.405007	1	Rotating link
4	SQ100F.405001	1	Reaming balde
5	SQ100F.405010	1	Reamer frame
	SQ100F.105001	1	Reamer complete

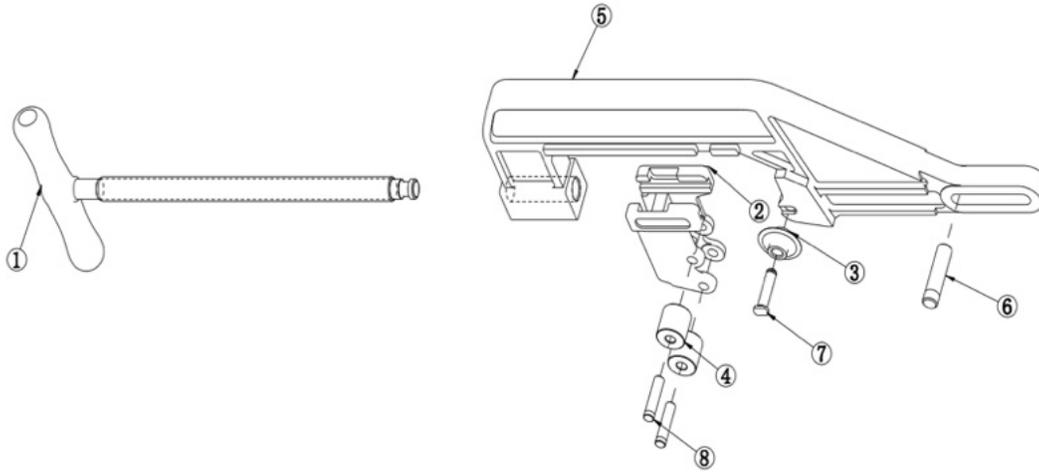
Breakdown View- Pipe Reamer Assembly



Parts List- Pipe Cutter Assembly

Cutter			
S/N	Ref. No.	Qty	DESC
1	SQ100F.306001	1	Cutter handle
2	SQ100F.406024	1	Roller housing
3	SQ80C1.406006	1	Cutting wheel
4	SQ80C1.406007	2	Wheel pin
5	SQ100F.406001	1	Cutter frame
6	SQ100F.406010	1	Pin
7	SQ50D.306002	1	Clip
8	SQ80C1.406009	2	Roller pin (2)
			cutter complete

Breakdown View- Pipe Cutter Assembly



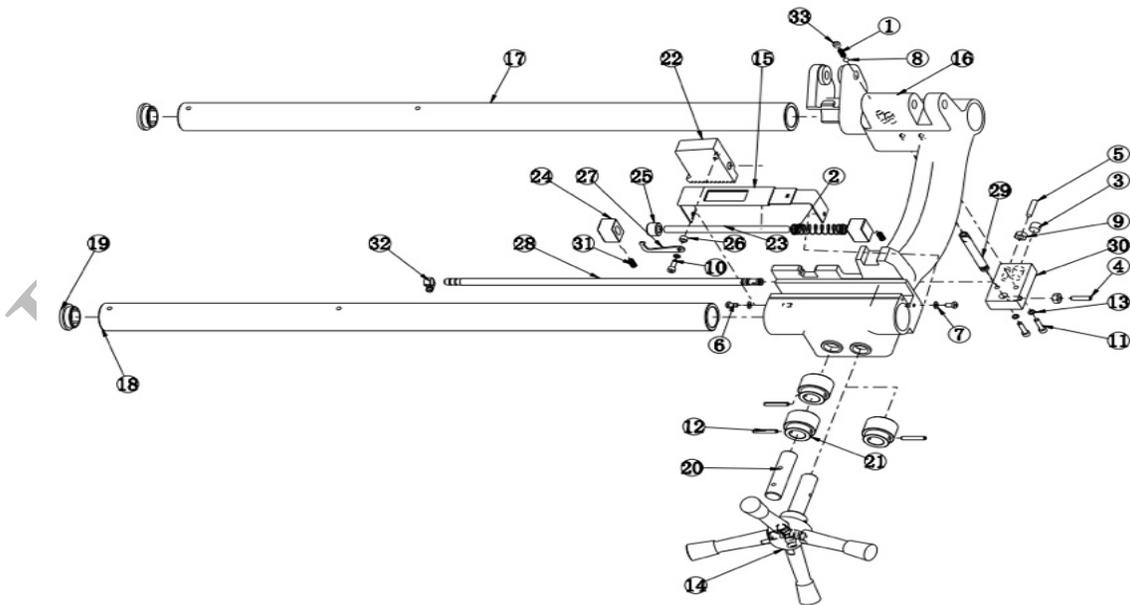
Parts List- Carriage Assembly

SQ100F.108001			Carriage
S/N	Ref. No.	Qty	DESC
1		1	Spring
2	SQ100F.408052	1	Pressure spring
3	LD.704165	1	bolt M12*10
4	LD.725257	1	bolt M6*30
5	LD.725258	1	bolt M6*30
6	LD.702017	2	bolt M5*25
7	DQ.701002	2	Spacer
8	GQ.701004	1	Ball φ6
9	LM.704104	2	Nut M6
10	LD.701096	1	bolt M5X15
11	LD.701008	2	bolt M5X25/12.9
12	X.709472	3	pin M5*30 (4)
13	DQ.702002	3	Spacer (3)
14	SQ100F.308002	1	Feeding handle complete
15	SQ100F.308012	1	Sine bar cover assembly

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16	SQ100F.408002	1	Carriage
17	SQ100F.408005	1	Rear rail
18	SQ100F.408006	1	Front rail
19	SQ100F.408008	2	Rail plug (2)
20	SQ100F.408037	1	Slave gear shaft
21	SQ100F.408038	3	Feeding gear (3)
22	SQ100F.408042	1	Sine bar
23	SQ100F.408043	1	Regulating post
24	SQ100F.408044	2	Block (2)
25	SQ100F.408045	1	Spacer
26	SQ100F.408046	1	Spacer
27	SQ100F.408047	1	Latch
28	SQ100F.408048	1	Oil tube
29	SQ100F.408049	1	Oil tube
30	SQ100F.408050	1	Overflow valve
31	SQ100F.408053	2	Spring (2)
32	SQ100F.409014	1	Clamp M12
33	LD.760164	1	bolt

Breakdown View- Carriage Assembly



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