INSTRUCTION MANUAL
For Jackhamers

Instruktionshåndbog
for Jackhamers

HANDLEIDING
voor boorhamers

MANUEL D'INSTRUCTIONS
Pour les marteaux–perforateurs

BETRIEBSANLEITUNG
für Bohrhämmer der Jackhamer™

ΟΔΗΓΟΣ ΧΡΗΣΕΩΣ
Για Περιστροφικές Αερόσφυρες

MANUALE DI ISTRUZIONI
per i Martelli perforatori Jackhamer™

INSTRUKSJONSHÅNDBOK For
Håndholdte bormaskiner

MANUAL DE INSTRUÇÕES
Para Martelos de Perfuração

MANUAL DE INSTRUCCIONES
MARTILLOS ROMPEDORES

INSTRUKTIONSBOK för
handhållna bergborrmaskiner

INGERSOLL-RAND®

Read this instruction manual before
operating this equipment.

Designed and Built by Ingersoll–Rand Company
Roanoke, Va. 24019–5198 U.S.A.

Certified ISO–9001 (ANSI/ASQC Q91)
Certification No. QSR–80

IM6097ENG
Revision 2

CPN 51985323

INSTRUCTION MANUAL

FOR

Jackhamers

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Refer All Communications To The Nearest Address Listed On The Back Cover.

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Ingersoll–Rand, through its distributor, warrants that each item of equipment manufactured by it and delivered hereunder to the initial user to be free of defects in material and workmanship for a period of three (3) months from initial operation or six (6) months from the date of shipment to the initial user, whichever first occurs.

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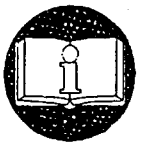

Read this instruction manual before operating this equipment.

(Continued)

Title	Section

Alphabetical Index

1. FOREWORD.

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Nothing contained in this document is intended to extend any promise, warranty or representation, expressed or implied, regarding the products described herein. Any such warranties or other terms and conditions of sale of products shall be in accordance with Ingersoll-Rand's standard terms and conditions of sale for such products, which are available upon request.

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All equipment, regardless of how well built, requires a certain amount of attention. The purpose of this publication is to acquaint an operator with the function and operation of the components to obtain maximum performance and trouble free service from the jackhamer.

Before using the jackhamer, these instructions should be carefully read to obtain a thorough knowledge of the duties to be performed. Take pride in the jackhamer, keep it clean; and in good mechanical condition.

2. INTRODUCTION.

This instruction manual contains information on safety, installation, operation, description, and specifications for the Jackhamer Family.

3. REFERENCE MATERIAL.

The reference materials required to operate and/or maintain the jackhamer are listed in Table 1.

Table 1. Reference Material

Manual No.	Title of Manual
PL6113	Parts Lists For "PROMAXX™" Jackhamer Models JX35 & JX35S.
PS-5350.84	Parts List For Jackhamer Model JH40.

NOTICE

SAVE THESE INSTRUCTIONS. DO NOT DESTROY.

NOTICE

All information, illustrations, and specifications in this manual are based on the latest information available at the time of publication.

Product improvement is a continuing goal at Ingersoll–Rand®. Design and specifications are subject to change without notice or obligation.

The use of repair parts other than those included within the Ingersoll-Rand® approved parts list may create hazardous conditions over which Ingersoll-Rand® Company has no control. Therefore Ingersoll-Rand® Company cannot be held responsible for equipment in which non-approved repair parts are installed.

When the life of the tool has expired, it is recommended that the tool be disassembled, degreased and parts be separated by material so that they can be recycled.

Alphabetical Index

1. INTRODUCTION.

This section contains important safety information for the Jackhamer Family.

2. SAFETY FIRST.

SAFETY FIRST is the primary concern for the protection of both, personnel and the jackhamer during any phase of operation. All personnel must thoroughly understand all safety precautions before operating or doing any work on the jackhamer.

3. SAFETY ALERT SYMBOL AND SIGNAL WORDS.

⚠ – This is the Safety Alert Symbol. When you see this symbol in this instruction manual, be alert to the presence of a hazard.

All personnel must understand the **DANGER, WARNING, CAUTION,** and **NOTICE** used throughout the text of this instruction manual. The **DANGER, WARNING, CAUTION,** and **NOTICE** are defined as follows:

⚠DANGER

DANGER IS USED TO INDICATE THE PRESENCE OF A HAZARD WHICH WILL CAUSE SEVERE PERSONAL INJURY OR DEATH IF THE WARNING IS IGNORED.

⚠WARNING

WARNING IS USED TO INDICATE THE PRESENCE OF A HAZARD WHICH CAN CAUSE SEVERE INJURY OR DEATH IF THE WARNING IS IGNORED.

⚠CAUTION

CAUTION IS USED TO INDICATE THE PRESENCE OF A HAZARD WHICH **WILL** OR **CAN** CAUSE PERSONAL INJURY, OR PROPERTY DAMAGE IF THE WARNING IS IGNORED.

NOTICE

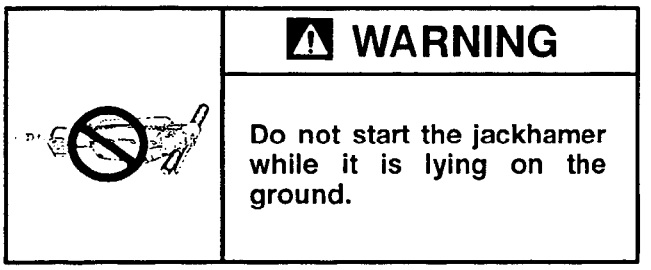
Notice is used to notify people of installation, operation, or maintenance information which is important but not hazard related.

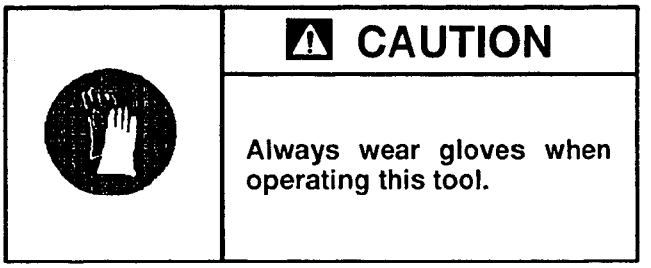
By understanding what **DANGER, WARNING, CAUTION,** and **NOTICE** mean; and using good judgment and common sense; all

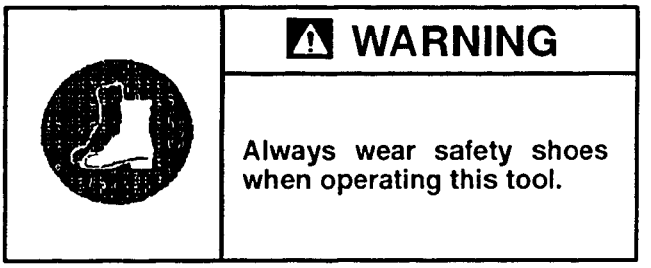
personnel can avoid injuring themselves and/or damaging the jackhamer.

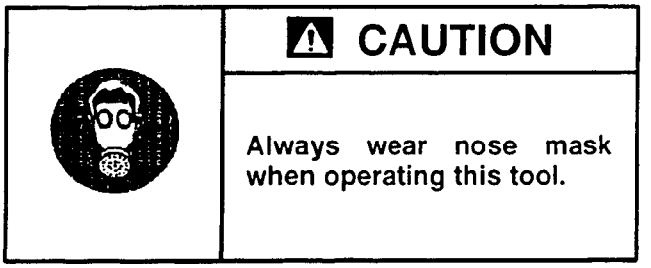
4. SAFETY PRECAUTIONS.

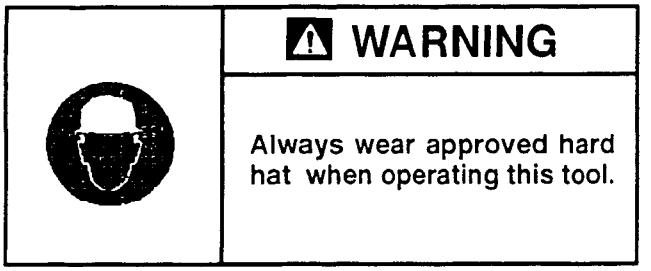
The Safety Precautions listed are intended to make all personnel aware of the hazards while working on or near a jackhamer. All personnel must use common sense and a good working practice while operating and maintaining the jackhamer. The safety precautions listed are of a general nature and cannot cover every possible situation:

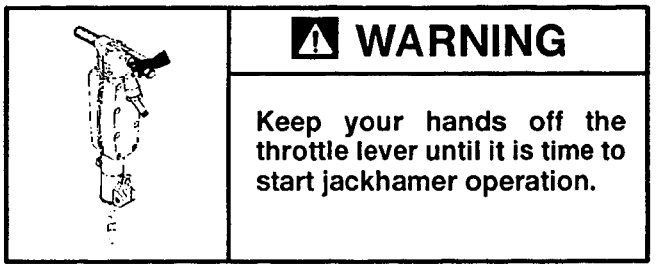


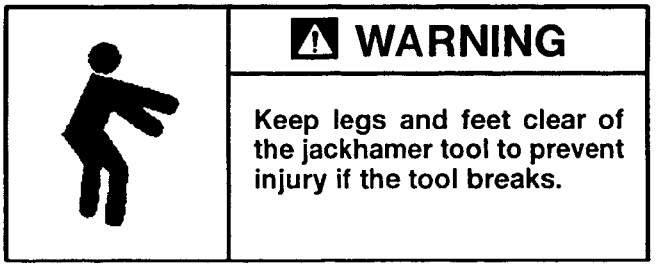


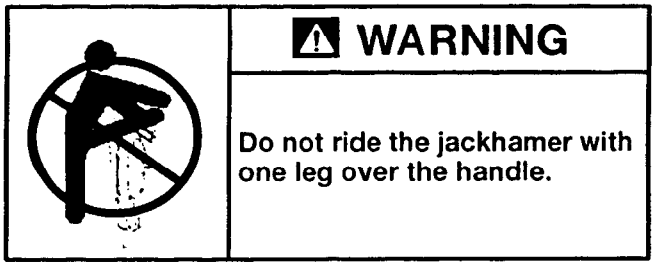


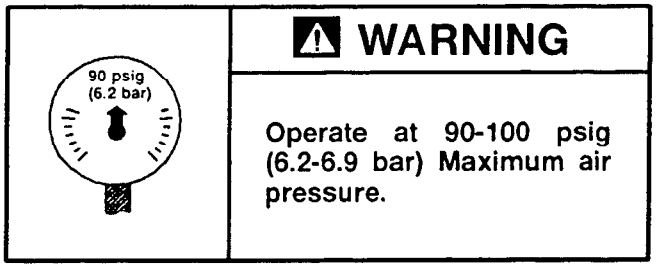


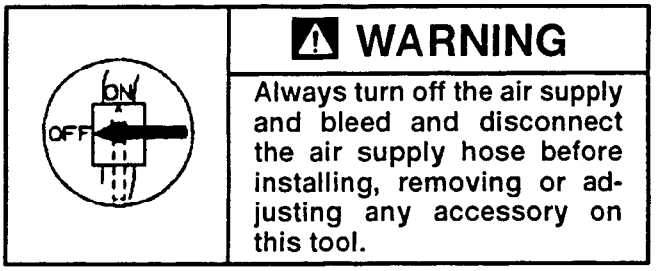












⚠ CAUTION

Always wear eye protection when operating this tool.

⚠ WARNING

Do not operate the jackhamer without a tool locked in the fronthead. Hold the tool firmly against the work.

⚠ CAUTION

Always wear hearing protection when operating this tool.

⚠ WARNING

Know what is underneath the material you are about to break. Be alert for any buried water, gas, sewer, telephone, or electric lines.

⚠ WARNING

Never rest the jackhamer on your foot.

⚠ WARNING

Do not use damaged, frayed or deteriotated air hose and fittings.

⚠ WARNING

Always keep both hands on the handles while operating the jackhamer.

⚠ WARNING

Keep body stance balanced and firm. Do not overreach when operating this tool.

⚠ WARNING

Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.

Alphabetical Index

1. INTRODUCTION.

This section provides a description of the standard and optional equipment for the Jackhamer Family.

2. DESCRIPTION. (JX35/JX35S)

The jackhamer is a hand–held, lightweight, pneumatic powered rock drill with a ratchetless rotation assembly and a reliable air distributor which replaces the traditional valving system. The jackhamer is designed for dry or wet drilling, and can easily be converted using the available wet option kit. (Refer to the parts list for the part number of available kits.)

The jackhamer is capable of drilling 1–1/4 to 1–1/2 in. (32 to 38mm) diameter holes up to 10 Ft. (3m) deep in medium to hard rock. It is particularly suitable for construction work, medium industrial maintenance work, and for general utility work in quarries and mines.

The standard jackhamer with an exhaust deflector is a JX35. The standard jackhamer with a muffler assembly is a JX35S.

3. DESCRIPTION. (JH40)

The jackhamer is a hand–held, medium-weight, muffled, pneumatic powered rock drill with automatic rifle bar rotation, and exceptional hole cleaning ability. It is designed for air blowing or wet drilling; incorporates control of "hole blowing" in the throttle lever for one-lever, simplified control; and is equipped with a closed-center, T-Handle for general ground level work.

The jackhamer is capable of drilling 2 in. (50.8mm) diameter holes up to 18 ft. (5.5m) deep in medium to hard rock. It is particularly suitable for construction work, medium industrial maintenance work, and for general utility work in quarries and mines.

4. STANDARD EQUIPMENT.

Each jackhamer is a complete unit ready to be put into service with proper lubrication.

Refer to Section 6 for fronthead chuck sizes.

5. OPTIONAL EQUIPMENT. (JX35/JX35S)

The jackhamer can also be furnished with the following options:

a. **Chucks** – Refer to Section 6.

b. **Wet Option** – Used for dustless, wet drilling where minimum air consumption is required.

c. **Muffler Assembly** – Used to reduce jackhamer noise without hendering performance.

d. **Flex Handle** – This handle is used in place of the standard handle to reduce the amount of vibration that the operator encounters.

e. **Open Center Grip Handle** – This handle is mounted to the backhead end of the jackhamer and allows for ease of transportation as well as an optional operator handle.

6. OPTIONAL EQUIPMENT. (JH40)

a. **Chucks** – Refer to Section 6.1.

b. **Beavertail Type Steel Holder** – Used in place of the standard yoke type steel holder. This holder is designed for foot operation.

c. **Wet Option** – Used for dustless, wet drilling where minimum air consumption is required.

Alphabetical Index

1. INTRODUCTION.

This section provides installation and operation requirements for the Jackhamer Family.

2. AIR REQUIREMENTS.

An air compressor of sufficient capacity is needed to provide the necessary volume of air at the most efficient operating pressure to ensure effective and economical operation of the jackhamer. (Refer to Section 6 for specifications.)

The air requirements represent air pressures at the jackhamer inlet and not at the compressor. There is always a certain amount of pressure drop between the compressor and the jackhamer; only the pressure and volume at the tool is effective in doing work. If the hose is relatively short and in good condition, the pressure drop between the compressor (or air receiver) and the jackhamer should not exceed 15 percent of the initial pressure.

Low or inadequate air pressure at the jackhamer is costly and wasteful, and an insufficient volume of air will not allow it to operate efficiently.

3. AIR HOSE AND FITTINGS.

Quality hose designed especially for rock drill service should be used. It should be constructed with an outer covering that resists abrasive wear, an oil–resistant inner tube and should be able to withstand the heat of the compressed air. It should have a working

pressure safety factor of at least 4 to 1 in relation to burst.

The hose fittings should be kept as tight as possible and should be in good condition. Elimination of leakage involves making the air system tight and then keeping it tight. Air loses through bad connections and worn hose can often reach 10 to 20 percent of the total air compressed. Refer to Section 6 for the size of air hose required.

4. WATER REQUIREMENTS.

The water pressure for wet style machines should be maintained at 10 psi (.69 bar) less than the air pressure. If water pressure exceeds air pressure, water will be forced into the machine and will carry away the lubricant. The water pressure should never fall below 40 psi (2.8 bar).

5. BEFORE OPERATION.

a. Determine the method of lubrication to be used. Refer to Paragraph 16.

b. Blow out the main air supply hose to get rid of moisture, rubber particles, and dirt.

c. When using new air hose, blow lubricated air through the hose to completely coat the inside with oil. This may take 10 to 15 minutes.

⚠WARNING

COMPRESSED AIR IS DANGEROUS. WHEN BLOWING OUT AN AIR HOSE, HOLD IT FIRMLY, AND POINT IT AWAY FROM PERSONNEL AND EQUIPMENT. NEVER BLOW YOUR CLOTHES FREE OF DUST WITH COMPRESSED AIR.

d. An air line filter can be installed in the main air supply line to keep dirt from entering the jackhamer. Air line filters are an accessory item and must be specially ordered.

e. Before connecting the air hose to the air connection, pour 2 to 3 oz. (.06 to .09 L) of rock drill oil into the inlet.

f. Connect the leader hose to the air connection on the jackhamer.

⚠WARNING

BE SURE ALL HOSE CONNECTIONS ARE TIGHT. A LOOSE HOSE NOT ONLY CAUSES LEAKS, BUT CAN COME COMPLETELY OFF THE JACKHAMER, WHIP AROUND, AND INJURE PERSONNEL IN THE AREA. ATTACH SAFETY CABLES TO ALL HOSES TO PREVENT INJURY IF A HOSE IS ACCIDENTALLY BROKEN.

g. Open the latch by pushing the lever down.

h. Insert the shank end of the drill steel in the fronthead, and swing the latch up to lock the tool in the jackhamer. Refer to Section 6 for the correct jackhamer shank size.

⚠CAUTION

MAKE SURE THE TOOL IS THE CORRECT SIZE FOR THE FRONTHEAD: 7/8 OR 1 IN. HEX. (22 OR 25 MM HEX.) DEPENDING ON THE CHUCK. DON'T USE A JACKHAMER TOOL THAT IS WORN; IT WON'T DO AN EFFECTIVE JOB AND WILL CAUSE UNNECESSARY WEAR TO THE JACKHAMER.

i. Check the drill steel. The drill steel center hole should be open, and shanks should be flat and square – not chipped or

rounded off. Be sure the shank of the drill steel is the proper length.

j. Be certain bits are properly ground. Dull bits are hard on the jackhamer and on the operator.

6. CONTROLS. (JX35/JX35S)

The jackhamer is controlled by a valve with a variable setting lever. The jackhamer also has an added blow air lever for secondary blow air to the drill steel, independent of the cycle or the main throttle. This blow air lever allows an extra 40 to 50 scfm (1.13 to 1.42 m^3/min.) of blow air.

7. CONTROLS. (JH40)

The jackhamer is controlled by moving the lever as shown in Figure 1.

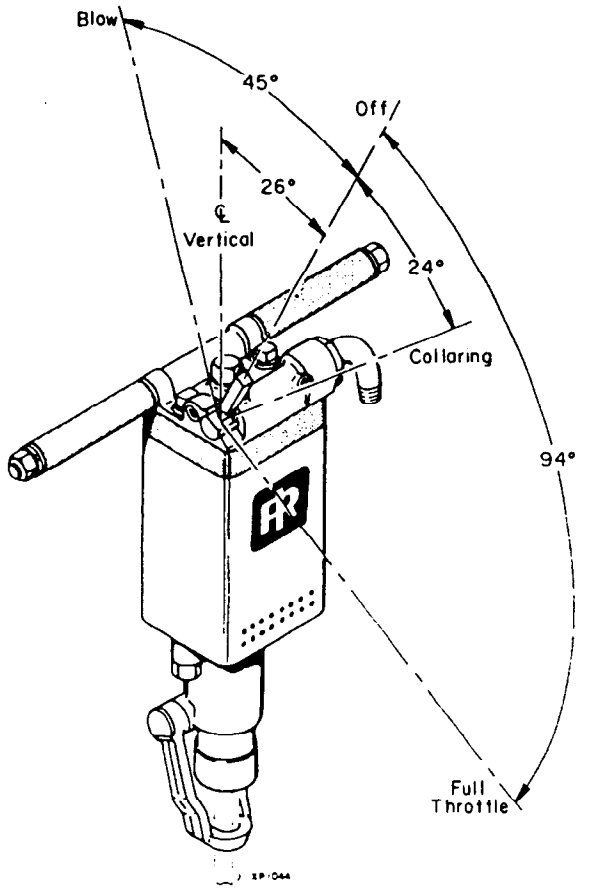


Figure 1. Operating Lever Postions

8. OPERATION.

⚠ DANGER

KNOW WHAT IS UNDERNEATH THE MATERIAL YOU ARE ABOUT TO DRILL. BE ALERT FOR ANY EXISTING WATER, GAS, ELECTRICITY, SEWER, OR TELEPHONE LINES.

ALWAYS KEEP BOTH HANDS ON THE HANDLE WHILE OPERATING THE JACKHAMER.

THE OPERATOR MUST KEEP HIS LEGS AND FEET CLEAR OF THE DRILL STEEL TO PREVENT INJURY IF THE TOOL BREAKS. WHEN A TOOL BREAKS, THE JACKHAMER (WITH A PIECE OF BROKEN TOOL PROJECTING FROM THE FRONTHEAD) WILL SUDDENLY DROP TO THE GROUND.

THE OPERATOR WILL BE SERIOUSLY INJURED IF THE TOOL BREAKS WHILE HE IS RIDING THE JACKHAMER WITH ONE LEG OVER THE HANDLE.

⚠CAUTION

DO NOT OPERATE THE JACKHAMER WITHOUT A DRILL STEEL SHANK IN THE FRONTHEAD CHUCK. HOLD THE TOOL FIRMLY AGAINST THE WORK.

RIDING THE JACKHAMER HANDLE CREATES EXCESSIVE PRESSURE ON ONE SIDE OF THE JACKHAMER, THROWING IT OUT OF ALIGNMENT AND CAUSING UNNECESSARY WEAR ON INTERNAL PARTS.

NOTICE

Improper lubrication will prevent proper indexing of the rotation and ultimately reduce the rotation speed. Prolonged usage of the jackhamer without proper lubrication will cause damage to the unit. Refer to Paragraph 16 **"LUBRICATION"** for proper recommendations.

a. Immediately after starting the jackhamer, check for the presence of oil mist at the exhaust port and on the drill steel shank. This is the only assurance that oil is traveling all the way through the jackhamer. When checking the jackhamer for proper lubrication, always put the tool against the work.

b. Heating is not unusual in a new jackhamer and it should be checked careful during the first few hours of operation. In most cases, heating will be localized around the piston stem bearing at the front end of the cylinder. Test this area frequently with the hand. As long as the hand can be held on the part comfortably , it is safe to continue drilling. When the heat is great enough to cause discomfort, stop the jackhamer and let it cool. Since lack of oil can cause excessive heating, check again to see that the steel shank is oily.

c. If exhaust freeze–up occurs, add anti–freeze lubricant directly through the air inlet connection. Use "KILFROST" anti–freeze lubricant or equivalent.

9. OPERATIONAL TIPS.

For maximum operating efficiency, observe the following suggestions:

a. Never strike the jackhamer housing with a blunt object. The housing may be broken or damaged.

b. Never attempt major maintenance of the jackhamer on the job; take it to a repair shop.

c. Never drag the jackhamer along the ground; the air ports in the exhaust may fill with dirt.

d. Always blow out the air supply hose before connecting it to the jackhamer to remove any dirt inside the hose.

e. Always be sure the jackhamer is well lubricated. Adjust the air line lubricator so that the drill steel shank always shows an oil film. There should be a fine mist of oil coming out of the exhaust port.

f. Always keep rock drill oil in a sealed container so that it doesn't get contaminated with dust or dirt.

g. Do not operate the jackhamer when the tool is not against the work.

h. In extremely cold weather, keep drill steel tools wrapped in burlap or cloth until just before you use them. At 0°F (–17.8°C) a hardened steel tool loses about 80% of its normal shock resistance.

i. Always keep plastic caps or plugs in all ports when the jackhamer is not in service.

10. DRILLING THE HOLE.

a. Hold the jackhamer with both hands, spread feet apart, and apply a firm steady pressure.

b. The correct amount of pressure for maximum drilling efficiency can be gained only through experience, but generally the correct pressure is usually recognizable by the rhythmic sound of the exhaust and the free rotation of the drill steel.

c. Insufficient pressure will cause the jackhamer to bounce and may crack carbide inserts.

d. Too much pressure will slow down the jackhamer and may result in stuck drill steel.

e. Keep the jackhamer, drill steel and hole aligned at all times.

11. COLLARING THE HOLE.

a. When starting the hole, hold the jackhamer firmly against the work and use a steel short enough so that the jackhamer can be handled comfortably.

b. Open the throttle gradually and drill at half throttle or less.

c. Make sure the bit is through the overburden and about 2 in. (51mm) deep in the rock before using full throttle.

d. The jackhamer should be kept at right angles to the work, until the hole is collared, then repositioned for angled drilling.

12. CLEANING THE HOLE.

Always keep the hole clean and free of cuttings by blowing the hole frequently or using plenty of water with wet machines. The bit must work on fresh rock. If the bit churns in its own cuttings, drilling speed is reduced, and the possibility of the drill steel becoming stuck is increased.

⚠CAUTION

WHEN THE DRILL STEEL IS NOT PENETRATING THE ROCK FREELY, SEVERE LOADS BUILD UP ON THE CLUTCH ASSEMBLY CAUSING OVERHEATING. THIS LEADS TO MAJOR DAMAGE OF THESE PARTS AND EARLY BREAKDOWN.

13. STUCK DRILL STEEL.

When drilling moist formations there is often a tendency for cuttings to pack in the hole immediately behind the bit, forming a "mud collar". Through action of the rotating bit, wet cuttings pack solidly against the wall of the holes; and can cause a stuck drill steel.

a. **<u>To remove a stuck drill steel:</u>**

1. Remove the jackhamer from the stuck drill steel and make an attempt to loosen the steel with a wrench.

2. Do not try to pull a stuck drill steel with the jackhamer for more than a few minutes. Heavy thrust loads can damage front end parts.

b. **<u>To prevent a stuck drill steel:</u>**

1. Blow the hole often.

2. Keep the jackhamer working against fresh rock.

3. Raise the bit from the bottom of the hole, and blow the hole clean before removing drill steel and bit.

14. DRILL STEEL CARE.

a. It is very important that the threads of the drill steel be properly lubricated and cared for at all times. Steels having stripped threads, cracks, or severe galling must not be used. Also, care should be taken while drilling not to bend steel or gall threads due to misuse.

b. Bent steel produces unnecessary stresses and accelerates wear on fronthead components. Bent steel and severe thread galling can be avoided if the following steps are taken:

1. Be sure that the steel is bottomed in the bit.

2. All the threads must be in good condition and well lubricated.

3. Always drill with a sharp bit. Dull bits cause excessive pounding and unnecessary stresses on all threads and jackhamer parts.

4. Never approach the rock with the jackhamer running. Position carefully and collar the hole at reduced throttle. Once the bit is collared in rock, full throttle may be applied.

5. Always keep the jackhamer against the work. Insufficient feed pressure will cause the bit to become loose on the steel and will damage the threads and cause inserts to tear loose.

6. Always maintain alignment between the jackhamer and hole.

7. Never retract the jackhamer at full throttle. Use half throttle.

15. BIT CARE.

For long bit life, the instructions as listed in Paragraph 14 covering "Drill Steel Care" must also be applied to the bit. In addition, the following steps must be taken:

a. Never allow the bit to become plugged with loose cuttings. Blow the hole continuously.

b. Never force or broach the bit into a hole.

c. Remove the bit from the steel with a bit wrench. Never strike the bit with a hammer.

d. Never run a dull bit.

16. LUBRICATION.

17. METHODS OF LUBRICATION.

Proper lubrication is the most important single factor responsible for the service life of the pneumatic jackhamer. A jackhamer can be severely damaged during the first few minutes of operation if it is not properly lubricated.

The lubrication method depends on the actual operating conditions and customer preference.

a. **For JX35/JX35S** – The jackhamer is equipped with an integral lubricator which holds approximately 15cc of lubricant. The lubricator injects lubricant into the piston stem bearing area. Injection volumes will vary depending on the duty cycle of the jackhamer. Typically, the consumption rate is approximately 1cc per 10 – 15 minutes of operation. For more continuous drilling operation an inline lubricator is recommended.

b. For intermittent operation with an air supply hose no longer than 50 ft. (15 m), a compressor–mounted lubricator may be used.

c. For continuous operation during an eight hour shift, an Ingersoll–Rand® air line lubricator, or other constant–feed air line lubricator, should be installed in the air–supply line about 11.5 ft. (3.5 m) from the jackhamer. The lubricator should have a capacity of least 1 U.S. pint (0.47 liters). To adjust an air line lubricator initially:

1. Turn the lubricator needle valve clockwise until it is completely closed, and then turn the valve counter–clockwise about 3/4 of a turn off its seat.

2. Almost immediately after starting the jackhamer, check for presence of oil at the exhaust ports and on the drill steel shank. When checking the jackhamer for proper lubrication, always put the tool against the work.

3. Fine–tune the lubricator needle valve to provide a light film of oil on the jackhamer tool and a fine oil mist coming from the exhaust ports. If there is blue smoke coming from the exhaust port or oil running down the tool, the jackhamer

is getting too much oil. Adjust the lubricator for proper rate of feed.

d. Regardless of the method of lubrication, the lubricating oil reservoir must be filled with the correct grade of rock drill oil as frequently as is necessary to prevent any possibility of the jackhamer running dry.

e. Every effort must be made to avoid oil contamination from dirt or other impurities. Oil should be kept in covered containers and stored in an area that is relatively dust free.

f. Before filling the air line lubricator, the area around the filler plug should be wiped clean.

18. LUBRICATING OIL SPECIFICATIONS.

Ingersoll–Rand® offers a complete line of rock drill oil formulated to provide maximum performance in all types of rock drill equipment. These oils exceed the oil specifications listed in Section 5, Table 1.

⚠CAUTION

NEVER ALLOW THE LUBRICATOR TO BECOME EMPTY AS THE PARTS WILL BE DAMAGED IF THE JACKHAMER IS OPERATED WITHOUT LUBRICATION.

Use Section 5, Table 2 for selecting the correct viscosity grade to meet your requirements and Section 5, Table 3 for selecting the correct rock drill oil part number.

Table 1. Rock Drill Oil Specifications

Characteristic	Test Procedure	Below 20°F (–7°C)	20°F to 90°F (–7°C to 32°C)	Above 90°F (32°C)
Viscosity:				
SUS at 100°F (38°C)	ASTM–D2161	175 min.	450 min.	750 min.
SUS at 210°F (99°C)	ASTM–D2161	46 min.	65 min.	85 min.
cST at 104°F (40°C)	ASTM–D445	37 min.	105 min.	160 min.
cST at 212°F (100°C)	ASTM–D445	6 min.	11 min.	16 min.
Pour Point, °F (°C) max.	ASTM–D97	–10°F (–23°C)	–10°F (–23°C)	0°F (–18°C)
Flash Point,°F (°C) min.	ASTM–D92	370°F (188°C)	400°F (204°C)	450°F (232°C)
Viscosity Index, min.	ASTM–D2270	90	90	90
Steam Emulsion No. min.	ASTM–1935–65	1200	1200	1200
Consistency	. . . . .	Stringy	Stringy	Stringy
Falex Load Test lbs (kg) [min]	ASTM–D2670	2000 lbs (907 kg)	2000 lbs (907 kg)	2000 lbs (907 kg)
Timken E.P. Test lbs (kg) [min]	ASTM–D2782	30 lbs (14 kg)	30 lbs (14 kg)	30 lbs (14 kg)

Table 2. Selection Chart

Typical Operating Conditions	20°F to 90°F (–7°C to 32°C)	Above 90°F (32°C)
90–100 psi (6.2 to 6.9 bar)	Light	Medium

Table 3. Ingersoll–Rand Rock Drill Oil Part Numbers

Grade	1 Gallon (3.8 Liter)	5 Gallon (18.9 Liter)	55 Gallon (208 Liter)
Light	51378701	51378727	51378743
Medium	51378693	51378719	51378735

Alphabetical Index

1. VIBRATION AND NOISE DATA.

NOTICE

In compliance with **EC Directive 84/537/EEC on Noise** at the workplace, the following data is supplied:

The following are average sound power (Lw) levels:

JX35	113 dB(A)
JX35S	110 dB(A)

NOTICE

In compliance with **Weighted RMS Acceleration ISO 8662, Part 5 on Vibration,** the following data is supplied:

JX35/JX35S	30.2 m/s^2

2. JACKHAMER SPECIFICATIONS.

a. Net Weight (less tool):

JX35	32 lbs	14.5 kg
JX35S	34 lbs	15.4 kg

b. Shipping Weight (less tool):

JX35	39 lbs	17.7 kg
JX35S	41 lbs	18.6 kg

c. Overall Length (less tool):

22 in. 559 mm

d. Bore of Cylinder:

2.38 in. 60.3 mm

e. Working Stroke:

1.50 in. 38 mm

f. Blows Per Minute:

2400 bpm

g. Recommended Air Supply:

90 -100 psi (6.2 - 6.9 bar) at jackhamer inlet.

h. Air Inlet Size:

3/4 NPT

i. Water Inlet Size:

3/4 NPT

j. Size Air Hose Recommended:

3/4 in. 19 mm

k. Air Consumption @ 90 psi (6.2 bar):

75 ft^3/min 2.12 m^3/min

l. Size of Standard Chuck:

7/8 in. Hex. x 4-1/4 in. long

(22mm Hex. x 108mm long)

m. Size of Optional Chuck:

7/8 in. Hex. x 3-1/4 in. long

(22mm Hex. x 83mm long)

1 in. Hex. x 4-1/4 in. long

(25mm Hex. x 108mm long)

Alphabetical Index

1. VIBRATION AND NOISE DATA.

NOTICE

In compliance with **EC Directive 84/537/EEC on Noise** at the workplace, the following data is supplied:

The following are average sound power (Lw) levels:

112 dB(A)

NOTICE

In compliance with **Weighted RMS Acceleration ISO 8662, Part 5 on Vibration,** the following data is supplied:

18.2 m/s^2

2. JACKHAMER SPECIFICATIONS.

a. Net Weight (less tool):

(Yoke Style)	58 lbs	26.3 kg
(Beavertail Style)	61 lbs	27.7 kg

b. Shipping Weight (less tool):

(Yoke Style)	60 lbs	27.2 kg
(Beavertail Style)	63 lbs	28.6 kg

c. Overall Length (less tool):

22-1/2 in. 572 mm

d. Bore of Cylinder:

2-1/2 in. 63.5 mm

e. Working Stroke:

2-5/8 in. 66.7 mm

f. Standard Rotation:

180 RPM

g. Recommended Air Supply:

90 -100 psi (6.2 - 6.9 bar) at inlet

h. Air Inlet Size:

3/4 NPT

i. Water Inlet Size:

3/4 NPT

j. Size Air Hose Recommended:

3/4 in. 19 mm

k. Air Consumption @ 90 psi (6.2 bar):

Blower Style	120 ft^3/min	3.40 m^3/min
Wet Style	105 ft^3/min	2.97 m^3/min

l. Size of Standard Chuck:

1 in. Hex. x 4-1/4 in. long

(25.4 mm Hex. x 108 mm long)

m. Size of Optional Chucks:

7/8 in. Hex. x 4-1/4 in. long

(22 mm Hex. x 108 mm long)

7/8 in. Hex. x 3-1/4 in. long

(22 mm Hex. x 83 mm long)

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