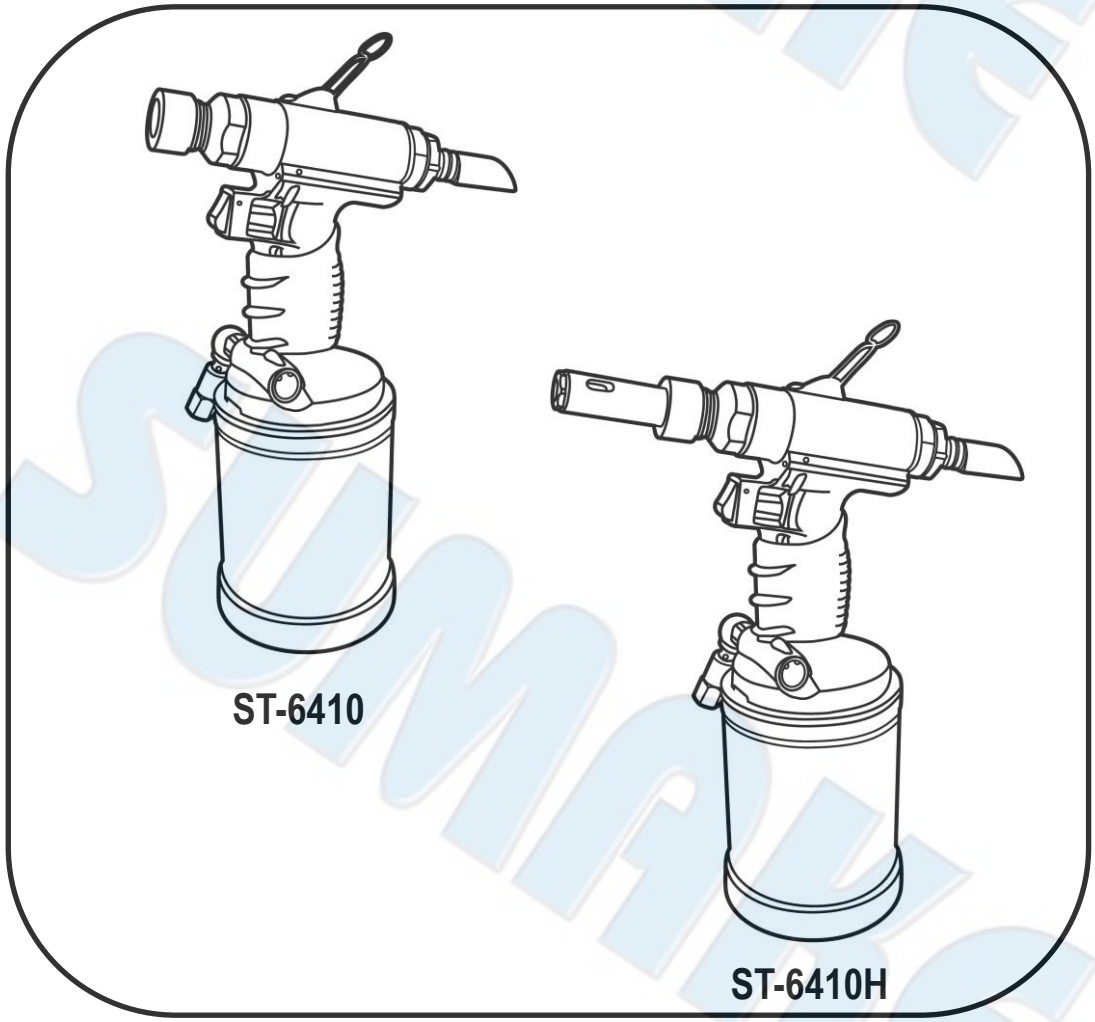
SUMAKE®

Professional & Industrial

INSTRUCTION MANUAL

ITEM NO.: ST-6410
AIR HYDRAULIC LOCKBOLT TOOL ONLY (W/O NOSE)

ITEM NO.: ST-6410H
AIR HYDRAULIC LOCKBOLT TOOL (W/ NOSE)



Contents

TOOL SPECIFICATIONS

Technical Data

Model Of Tool……	**ST-6410(H)**
Dimensions……..	**8.85” X 12.63” X 4.46”**
(Length X Height X Width)	**(224.8mm X 321mm X113.5mm)**
Weight……..……..	**3.83 *lbs* [1.74 Kgs]**
Air Inlet……	**1/4” NPT**
Recommended Operating Pressure……..…	**70 to 95 *psi* [4.9 to 6.67 kg/cm2]**
Air Consumption……...…	**4CFM**
Pulling Load……	**4480lbs(2033kg)**
Max. Stroke……..……	**0.94 *in* [24 mm]**
Rivet Nut Size……..……	**MAGNA-LOK** **4.8mm(3/16”)~6.4mm(1/4”)** **MAGNA-BULB** **4.8mm(3/16”)~6.4mm(1/4”)** **C6L** **4.8mm(3/16”)~6.4mm(1/4”)** **MAGNA-GRIP** **4.8mm(3/16”)~6.4mm(1/4”)** **BOM** **4.8mm(3/16”)**

GENERAL DESCRIPTION

The ST-6410(H) Installation Tool illustrated in Fig. 1 with its pneumatic hydraulic system provides an efficient, lightweight, powerful, and quiet tool for rivet nut installation. It is designed to provide long life and trouble free services.

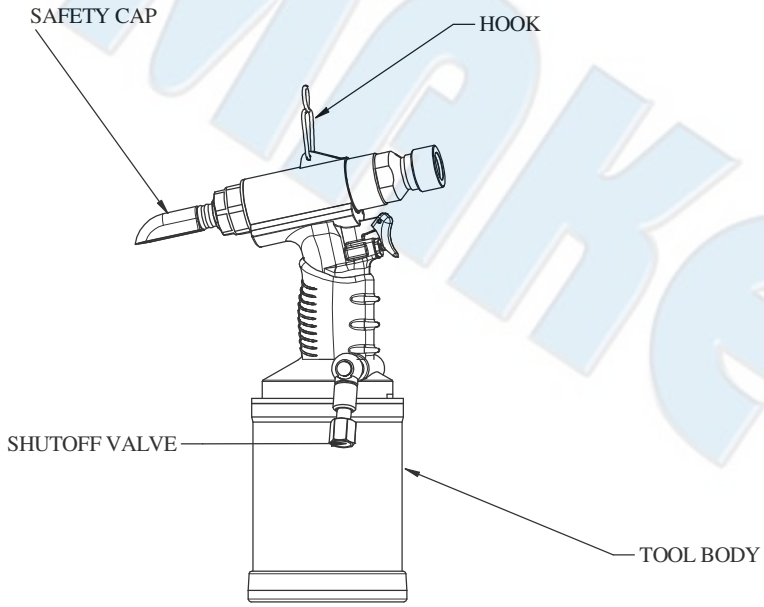


Fig. 1 ST-6410(H) Installation Tool

FEATURES

- **Heavy-duty use.**
- **Lightweight rivet-pull tool.**
- **High efficient, powerful and quiet installation tool.**
- **Easy maintenance and operation.**

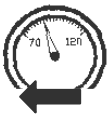
SAFETY INSTRUCTIONS

DANGER

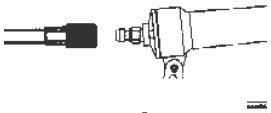
- Read this manual and understand all safety instructions before operating the tool. If you have any questions, please contact our authorized representatives.
- Any other use is prohibited.
- Be sure all hoses and fittings are the correct size and are tightly secured.
- Keep work area clean, uncluttered, ventilated and illuminated.

- Never allow the use of flammable gases (oxygen) as a power source for the tool. Use filtered, lubricated, and regulated compressed air only.

- Never use gasoline or other flammable liquids to clean the tool. Vapors in the tool can be ignited by a spark and cause the tool to explode.



- Do not exceed maximum permissible operating pressure of the tool (100 psig or 6.89 bars).



- Disconnect the tool from air supply before servicing, adjusting, and during non-operation.

WARNING

- At the workplace, always wear protective equipment such as Z87.1 safety glasses, hearing protection and head protection.
- Repairing and cleaning operations must be done when the tool is not fed.

- This tool is not designed for working in explosive environments.
- That unsuitable postures may not allow counteracting of normal or unexpected movement of this tool.
- Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool.
- If this tool is fixed to suspension device, make sure that the fixation is secure.
- It could cause crushing if nose equipment is not fitted.
- Check that the protection against ejection of fastener and stem is in place and is operative.
- This tool is possible forcible ejection of installation mandrels from the front of this tool.
- Be aware of the whipping compressed air hose.
- Release the trigger in case of a failure of energy supply.

PREPARATION FOR USE

An air supply of 85-90 psi must be available (6, 3kp/cm2). Every attempt should be made to furnish 90 psi of clean dry air to the tool. Connect the tool to an air supply equipped with a filter, regulator and lubricator. If no lubricator is available, pour a small quantity of clean light machine oil into air inlet (57). Press tool trigger a few times and observe spindle retraction. Attach the nose assembly as shown on the applicable Nose Assembly Data Sheet.

OPERATION

Place the pin in the prepared hole and the collar over the pin. Push the tool with attached nose assembly over the pintail until the tool nose touches the collar. Depress trigger and hold it until the pintail is separated and release the trigger. The nose will eject automatically. Blind Fasteners may be placed in the work hole or in the end of the nose assembly. In either case, the tool must be held firmly and at right angle to the work.

Depress the trigger and repeat, if necessary, until the Fastener is installed and the pintail breaks off.

MAINTENANCE

Regular inspection and immediate repair of minor faults will maintain the tool and nose assembly at its highest operating efficiency and eliminates unnecessary breakdowns. Daily before putting the tool into service, observe the following practice:

Always blow out the air line to clear it of all accumulated dirt or water before connecting air hose to tool. If the tool is in continuous use, remove the air hose and lubricate the tool with a few drops of light oil every two or three hours.

Nose assemblies should be cleaned periodically. Check completeness according to the applicable Nose Assembly Data Sheet.

Caution: Do not use air pressure greater than 95 psi (7kp/cm2) as this will cause the O-Rings to become dislodged from their mountings.

Do not abuse the tool by dropping it, using it as a hammer or otherwise causing unnecessary wear and tear.

DISASSEMBLY AND ASSEMBLY

1. Disconnect air hose and remove nose assembly.
2. Unscrew cylinder cap (1) with ϕ6.1 pin(60).
3. Pull out air piston (7) in a straight line with suitable pliers.
4. Remove Adapter (40)
5. Unscrew front gland (46), remove spring (56) and push out pull piston (42).
6. Push out pin (34) and remove trigger insert(31)
7. Unscrew air inlet (57)

Before assembling, inspect all parts and replace if necessary. Clean all parts thoroughly with mineral spirits and lubricate with Lubriplate

A good practice to follow is to replace all O-Rings when the tool is disassembled for any reason. Then assemble, taking care not to damage O-Rings, handle and cylinder housing.

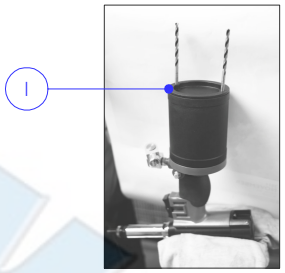
TROUBLE SHOOTING

TOOL MALFUNCTION	PROBABLE CAUSE	CORRECTIVE ACTION
1. Tool fails to operate when trigger is depressed	Incomplete or defect throttle valve assembly	Check and replace defective parts, O-Rings.
2. Tool will not break pintail of fastener	Nose Assembly not complete. Air supply pressure low.	Check with applicable Nose Assembly Data Sheet. Set to 85-95 psi (6 kp/cm2)
3. Short stroke, less than 22mm	Check oil levels	Refill per instructions.
4. Hydraulic fluid exhausting with air	Worn O-Rings	Replace O-Rings and seal. (16 & 18)
5. Leakage at rear pull piston gland.	Worn O-Rings	Replace O-Rings. (43 & 58)
6. Leakage at front pull piston	Worn O-Rings	Replace O-Rings and seal. (16 & 18)
7. Pull piston will not return	Broken spring	Replace O-Rings and seal. (56)

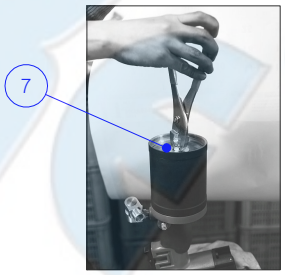
ADD OIL

The maintenance required when the tool of ST-6410(H) pulling strength diminish, it is only necessary to add ISO VG46 oil or DEXRON III., the operation steps as below:

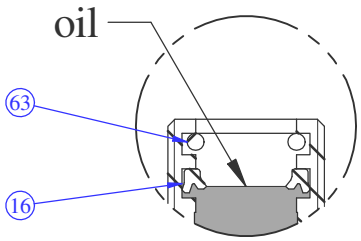
1. Turn the tool upside down and well fixed, then use spanner remove No.1 parts.



2. Remove No.7 parts.



3. Take the oil pot fill the oil up to top of No.16 parts, installed No.7 parts press up and down twice ,get the No.7 out, refill the oil reach the top of No.16.



4. Lubricate all connected O Ring area by grease, No.7 insert it.

5. . Screw on No.1 ,

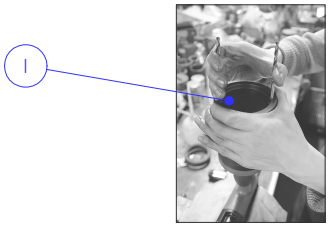


Fig. 2 ADD OIL.

OUTLINE DIMENSIONS

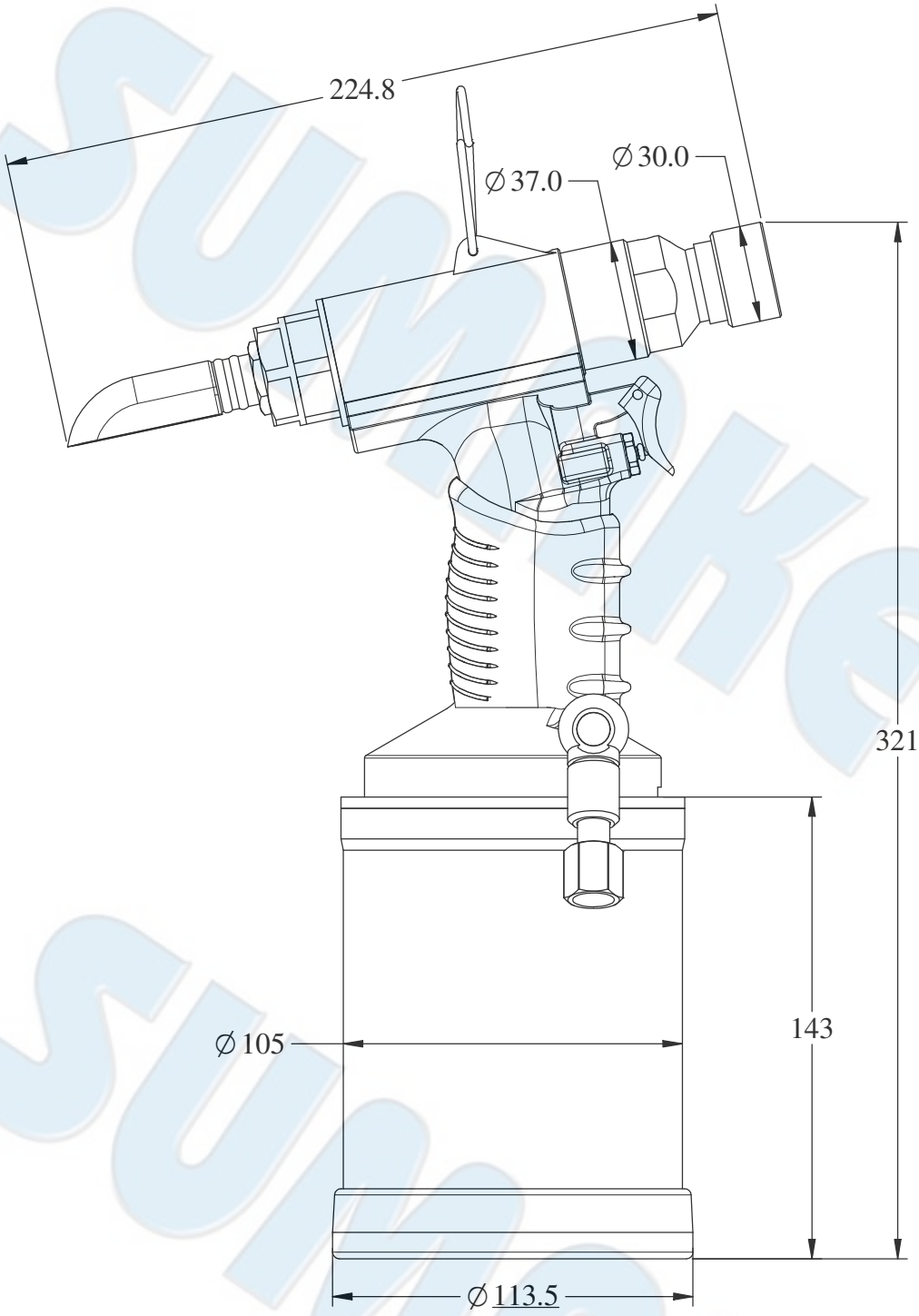


Fig.4 OUTLINE DIMENSIONS

PRINCIPLE OF OPERATION

When the tool is connected to a proper air supply and the trigger is depressed, air pressure acts upon the air piston and moves it upwards. The piston rod serves as a hydraulic piston and acts on a volume of hydraulic fluid in the handle. Pressurized fluid is forced into the head to move the pull piston in conjunction with the nose assembly to start fastener installation.

When the fastener installation is completed, the trigger is released. The oil-damper in the hydraulic system softens the pinbreak shock. A spring behind the pull piston returns it to its starting position. Hydraulic fluid is forced out of the head and returns the hydraulic and air pistons to their starting position.

CE

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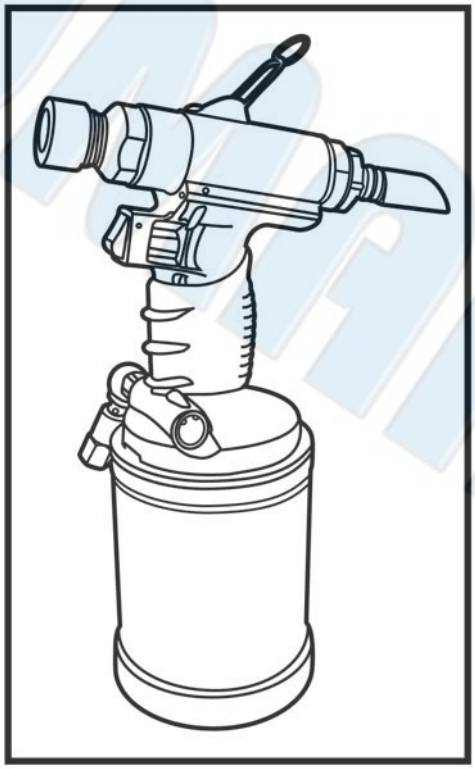


Air Hydraulic Lockbolt Tool Only (W/O NOSE) ST-6410

Specification:

Riveting Capacity	1/4”, 3/16” (2.4mm, 4.8mm)
Stroke Length	0.94” (24 mm)
Traction Power	4480 lbs (2033 kg)
Air Consumption	9 CFM (255 L/min)
Air Inlet (PT)	1/4” (6.35 mm)
Air Hose (I.D.)	3/8” (10 mm)
Air Pressure	90 psi (6.3 bar)
Net Weight	3.84 lbs (1.74 kg)

Noise and Vibration:

Vibration EN ISO 20643	**Noise** EN ISO 15744	**Remark**
Load: < 2.5 m/s²	Sound Pressure Level No load: 80 dB(A)	Please always wear ear protector at environment noise level > 80 dB(A) due to risk of impaired hearing!
	Sound power level No load: 91 dB(A)	
Uncertainty K= 1.5 m/s²	Uncertainty K= 3dB	

SUMAKE INDUSTRIAL CO., LTD

4F,NO.351,Yangguang St.,Neihu District TAIPEI, TAIWAN, ZIP:114-91

EC DECLARATION OF CONFORMITY

We: **SUMAKE INDUSTRIAL CO., LTD.**
4F, No. 351, Yangguang St., Neihu District, Taipei City, Taiwan

declare in sole responsibility that the equipment
Equipment： AIR HYDRAULIC LOCKBOLT TOOL ONLY (W/O NOSE)
Model/ Serial No.：ST-6410

to which this declaration applies, complies with these normative documents:

- **Machinery Directive: 2006/42/EC**

and conforms to the following EN standard,

- **EN ISO 12100: 2010**
- **EN ISO 11148-1:2011**

Name and Signature/Position

Mike Su – Managing Director

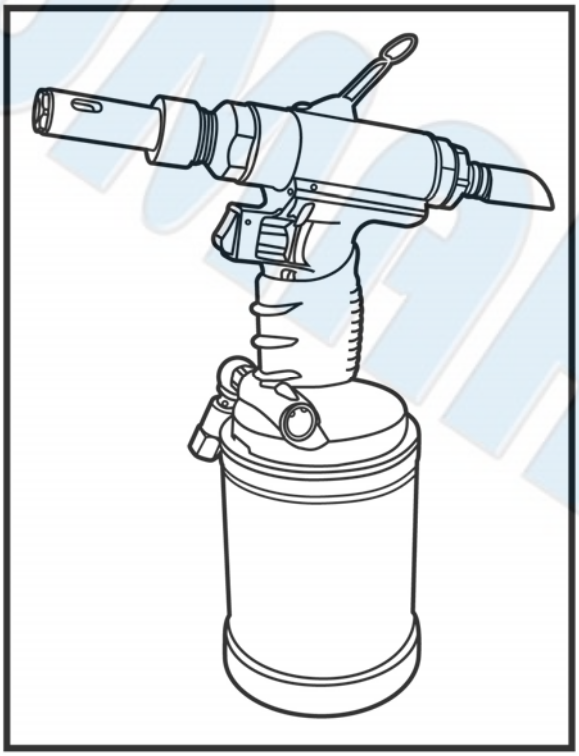
Date and Place

2024/5/2

Taipei, Taiwan

ST-6410-D-2407C-C1F

SUMAKE *PNEUMATIC TOOLS*



Air Hydraulic Lockbolt Tool (W/ NOSE) ST-6410H

Specification:

Riveting Capacity	1/4”, 3/16” (2.4mm, 4.8mm)
Stroke Length	0.94” (24 mm)
Traction Power	4480 lbs (2033 kg)
Air Consumption	9 CFM (255 L/min)
Air Inlet (PT)	1/4” (6.35 mm)
Air Hose (I.D.)	3/8” (10 mm)
Air Pressure	90 psi (6.3 bar)
Net Weight	3.84 lbs (1.74 kg)

Noise and Vibration:

Vibration EN ISO 20643	**Noise** EN ISO 15744	**Remark**
Load: < 2.5 m/s²	Sound Pressure Level No load: 80 dB(A)	Please always wear ear protector at environment noise level > 80 dB(A) due to risk of impaired hearing!
	Sound power level No load: 91 dB(A)	
Uncertainty K= 1.5 m/s²	Uncertainty K= 3dB	

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Equipment： AIR HYDRAULIC LOCKBOLT TOOL (W/ NOSE)
Model/ Serial No.：ST-6410H

to which this declaration applies, complies with these normative documents:

- **Machinery Directive: 2006/42/EC**

and conforms to the following EN standard,

- **EN ISO 12100: 2010**
- **EN ISO 11148-1:2011**

Name and Signature/Position

Mike Su – Managing Director

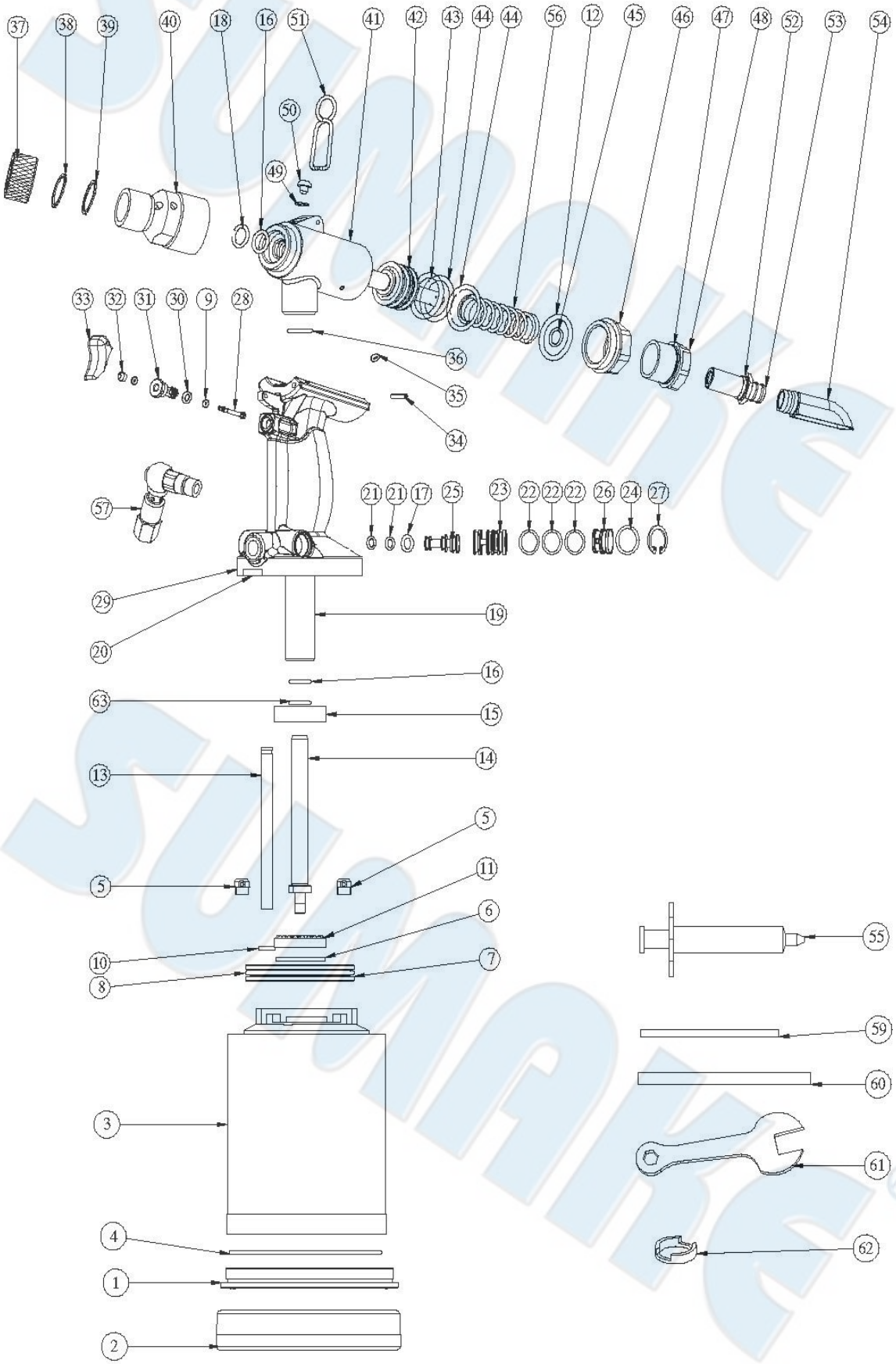
Date and Place

2024/5/2

Taipei, Taiwan

ST-6410H-D-2407C-C1F

ST-6410 AIR HYDRAULIC LOCKBOLT TOOL ONLY (W/O NOSE)
ST-6410H AIR HYDRAULIC LOCKBOLT TOOL (W/ NOSE)



ST-6410 AIR HYDRAULIC LOCKBOLT TOOL ONLY (W/O NOSE)
ST-6410H AIR HYDRAULIC LOCKBOLT TOOL (W/ NOSE)

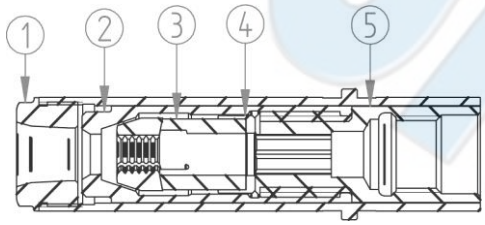
PARTS LIST

No.	Parts No.	Description	Q'ty
1	6410-01	Cylinder Cap	1
2	6410-02	Rubber Bottom	1
3	6410-03	Air Cylinder Body	1
4	6410-04	O-Ring	1
5	6410-05	Valve	2
6	6410-06	Washer	1
7	6410-07	Air Piston	1
8	6410-08	O-Ring	1
9	6410-09	O-Ring	2
10	6410-10	O-Ring	1
11	6410-11	Crash Washer	1
12	6410-12	O-Ring	1
13	6410-13	Tube	1
14	6410-14	Rod	1
15	6410-15	Stem Nut	1
16	6410-16	Seal	2
17	6410-17	O-Ring	1
18	6410-18	O-Ring	1
19	6410-19	Stem	1
20	6410-20	Muffler	1
21	6410-21	O-Ring	2
22	6410-22	O-Ring	3
23	6410-23	Cage	1
24	6410-24	O-Ring	1
25	6410-25	Valve	1
26	6410-26	Valve Cap	1
27	6410-27	Retaining Ring	1
28	6410-28	Valve Piston	1
29	6410-29	Handle Body	1
30	6410-30	O-Ring	1
31	6410-31	Trigger Insert	1
32	6410-32	Trigger Head	1
33	6410-33	Trigger	1
34	6410-34	Spring Pin	1

No.	Parts No.	Description	Q'ty
35	6410-35	O-Ring	1
36	6410-36	O-Ring	1
37	6410-37	Nut Retaining	1
38	6410-38	Washer Stop	1
39	6410-39	O-Ring	1
40	6410-40	Adapter Anvil	1
41	6410-41	Oil Cylinder Body	1
42	6410-42	Pull Piston	1
43	6410-43	Seal	1
44	6410-44	O-Ring	2
45	6410-45	O-Ring	1
46	6410-46	Front Gland	1
47	6410-47	O-Ring	1
48	6410-48	Rear Gland	1
49	6410-49	Oil Seal Washer	1
50	6410-50	Hexagon Socket Screw	1
51	6410-51	Hook	1
52	6410-52	O-Ring	1
53	6410-53	Guide Tube	1
54	6410-54	Safe Cap	1
55	6410-55	Oil Can	1
56	6410-56	Spring	1
57	6410-57	Shut off Valve	1
59	6410-59	Φ4.0 Rod	1
60	6410-60	Φ6.1 Rod	2
61	6410-61	Spanner	1
62	6410-62	Stop Ring	1
63	6410-63	Wear Ring	1
Huck C6L Nose (For ST-6410H)			
6410H-NS01		1/4"(6.4mm) Huck C6L Nose Ass'y	1
6410H-NS02		3/16"(4.8mm) Huck C6L Nose Ass'y	1
Huck Magna-Grip Nose (For ST-6410H)			
6410H-NS03		1/4"(6.4mm) Huck Magna-Grip Nose Ass'y	1
6410H-NS04		3/16"(4.8mm) Huck Magna-Grip Nose Ass'y	1

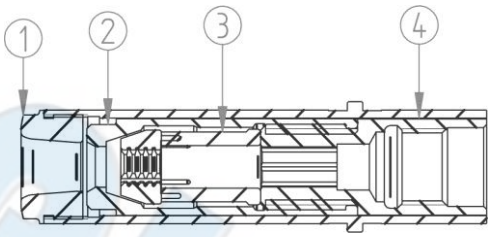
HUCK NOSE HEAD ASS'Y

6410H-NS01 1/4"(6.4mm) Huck C6L Nose Ass'y



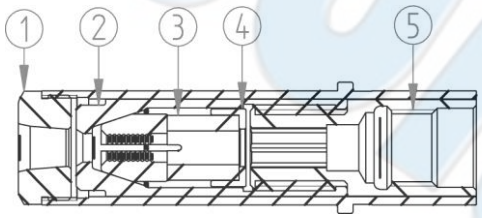
No.	Parts No.	Description	Q'ty
1	6410H-01-01	Anvil Assembly	1
2	6410H-01-02	Collet	1
3	6410H-01-03	Unitized Jaws	3
4	6410H-01-04	Locator	1
5	6410H-01-05	Extension	1

6410H-NS03 1/4"(6.4mm) Huck Magna-Grip Nose Ass'y



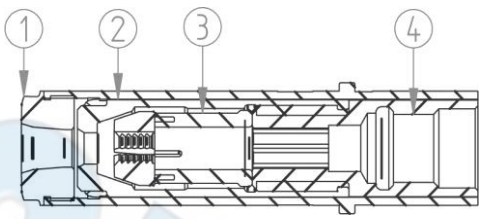
No.	Parts No.	Description	Q'ty
1	6410H-03-01	Anvil Assembly	1
2	6410H-03-02	Collet	1
3	6410H-03-03	Unitized Jaws	3
4	6410H-03-04	Extension	1

6410H-NS02 3/16"(4.8mm) Huck C6L Nose Ass'y



No.	Parts No.	Description	Q'ty
1	6410H-02-01	Anvil Assembly	1
2	6410H-02-02	Collet	1
3	6410H-02-03	Unitized Jaws	3
4	6410H-02-04	Locator	1
5	6410H-02-05	Extension	1

6410H-NS04 3/16"(4.8mm) Huck Magna-Grip Nose Ass'y



No.	Parts No.	Description	Q'ty
1	6410H-04-01	Anvil Assembly	1
2	6410H-04-02	Collet	1
3	6410H-04-03	Unitized Jaws	3
4	6410H-04-04	Extension	1

SUMAKE®

MAKE JOBS BETTER THAN EVER

RIVETER

Original instructions

Read all these safety instructions before operating this product and save these instructions.

The tool has been manufactured in conformity with the instruction of EU machine directive. The EU mark will be considered void in the event of inexpert repairs, the use of non-original parts and in case of non-observance of the safety instructions in the user's manual.

Possible direct or indirect consequential damages are not the responsibility of SUMAKE Industrial co., Ltd.

General safety rules:

1. Watch the tool at all times when in use.
2. People under the influence of alcohol or drugs are not allowed to use, repair or maintain the tool.
3. Keep unqualified persons, children, etc. away from the tool.
4. Keep work area clean and with sufficient daylight or artificial lighting. The work area on which the machine is used must be cleaned up. Disorder is a potential cause of accidents.
5. Danger of explosion. Never use oxygen and combustible gas as an air supply for the tool which many be ignited by spark and cause fire or explosion.
6. Never use gasoline or other flammable liquids to clean the tool.
7. Do not use air tools in potentially explosive atmospheres such as in the presence of flammable liquids, cleaning solvents, fluid energy or stored gases.
8. Do not expose air tools to rain. Do not use air tools in damp or wet locations.
9. When a fault or failure is detected, the tool must immediately be disconnected from the air supply and returned for repair.
10. It is not permitted to modify the tool in any way.
11. When not in use, keep tools in a dry place, either locked up or in a high place, out of the reach of children.
12. Do not force small air tools to do the job of a heavy –duty task. Do not use air tool for purpose of which was not intended.
13. Wear suitable ear protection at environment noise level >80dB(A) and safety spectacles when using the tool. Always wear approved safety goggles if work in dusty. This also applies to other persons in the nearby vicinity.
14. Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid foot wear are recommended when working outdoors. Wear protective hair covering to contain long hair.
15. Keep proper footing and balance at all times.
16. Use clamps or a vice to hold work-piece. It is safer than using your hand and free both hands to operate the air tool.
17. When not use, before performing service or changing accessories, please disconnect tool from air compressor.
18. Do not carry plugged in air tool with your finger on the switch trigger. Be sure switch is in the "OFF" position when connecting to air supply.
19. Watch what you are doing. Use common sense, even unsafe situation or unbalanced positions, particularly when you are tired.
20. Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands or arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
21. Multiple hazards. Read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the power tool. Failure to do so can result in serious bodily injury.
22. Only qualified and trained operators should install, adjust or use the power tool.
23. Do not modify this power tool. Modifications may reduce the effectiveness of safety measures and increase the risks to the operator.
24. Do not discard the safety instructions – give them to the operator.
25. Do not use the power tool if it has been damaged.
26. Tools shall be inspected periodically to verify the ratings and markings required by this document are legibly marked on the tool. The employer/user shall contact the manufacturer to obtain replacement marking labels when necessary.

Safety precautions for projectile hazards

1. Disconnect the power tool from the energy source when changing inserted tool or accessories.
2. Failure of the work piece, or accessories, or even of the inserted tool itself may generate high velocity projectiles.
3. Always wear impact-resistant eye protection during operation of the tool. The grade of protection required should be assessed for each use.
4. The risks to others should also be assessed at this time.
5. Ensure that the work piece is securely fixed.
6. Check that the protection against ejection of fastener and/or stem is in place and is operative.
7. Warn against the possible forcible ejection of installation mandrels from the front of the power tool.

Safety precautions for operating hazards

1. Use of the tool may expose the operator's hands to hazards including crushing, impacts, cuts and abrasions and heat. Wear suitable gloves to protect hands.
2. Operators and maintenance personnel must be physically able to handle the bulk, weight and power of the tool.
3. Hold the tool correctly: be ready to counteract normal or sudden movements – have both hands available.
4. Maintain a balanced body position and secure footing.
5. Release the start and stop device in the case of an interruption of the energy supply.
6. Use only lubricants recommended by the manufacturer.
7. That unsuitable postures may not allow counteracting of normal or unexpected movement of the tool.
8. If the power tool is fixed to suspension device make sure that the fixation is secure.
9. Risk of crushing if nose equipment is not fitted.

Safety precautions for repetitive motions hazards

1. When using a power tool, the operator may experience discomfort in the hands, arms, shoulders, neck, or other parts of the body.
2. While using a power tool, the operator should adopt a comfortable posture. Maintain secure footing and avoid awkward or off-balanced postures. The operator should change the posture during extended tasks which may help avoid discomfort and fatigue.
3. If the operator experience symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensation or stiffness, these warning signs should not be ignored. The operator should tell the employer and consult a qualified health professional.

Safety precautions for accessory hazards

1. Disconnect power tool from energy supply before changing the inserted tool or accessory.
2. Only use sizes and types of accessories and consumables that are recommended by the power tool manufacturer.

Safety precautions for workplace hazards

1. Slips, trips and falls are major causes of workplace injury. Be aware of slippery surfaces caused by use of the tool and also of trip hazards caused by the air line or hydraulic hose.
2. Proceed with care in unfamiliar surroundings. Hidden hazards may exist, such as electricity or other utility lines.
3. This power tool is not intended for use in potentially explosive atmospheres and is not insulated from coming into contact with electric power.
4. Make sure there are no electrical cables, gas pipes etc. that could cause a hazard if damaged by use of the tool.

Safety precautions for dust and fume hazards

1. Dusts and fumes generated when using power tools can cause ill health (for example: cancer, birth defects, asthma and/or dermatitis); risk assessment of these hazards and implementation of appropriate controls of is essential.
2. Risk assessment should include dust created by the use of the tool and the potential for disturbing existing dust.
3. Operate and maintain the power tool as recommended in these instructions, to minimise dust or fume emissions.
4. Direct the exhaust so as to minimise disturbance of dust in a dust filled environment
5. Where dusts or fumes are created, the priority shall be to control them at the point of emission.
6. All integral features or accessories for the collection, extraction or suppression of airborne dust or fumes should be correctly used and maintained in accordance with the manufacturer's instructions.
7. Use respiratory protection as instructed by your employer or as required by occupational health and safety regulations.

Safety precautions for noise hazards

1. Unprotected exposure to high noise levels can cause permanent, disabling, hearing loss and other problems such as tinnitus (ringing, buzzing, whistling or humming in the ears).
2. Risk assessment of these hazards and implementation of appropriate controls of is essential.
3. Appropriate controls to reduce the risk may include actions such as damping materials to prevent work pieces from 'ringing'.
4. Use hearing protection as instructed by your employer or as required by occupational health and safety regulations.
5. Operate and maintain the power tool as recommended in these instructions, to prevent an unnecessary increase in noise.
6. If the tool has a silencer, always ensure it is in place and in good working order when the tool is operating.
7. Select, maintain and replace the consumable/inserted tool as recommended in these instructions, to prevent an unnecessary increase in noise.

Safety precautions for vibration hazards

1. Exposure to vibration can cause disabling damage to the nerves and blood supply of the hands and arms.
2. Wear warm clothing when working in cold conditions and keep your hands warm and dry.
3. If you experience numbness, tingling, pain or whitening of the skin in your fingers or hands, stop using the assembly power tool for non-threaded mechanical fasteners, tell your employer and consult a physician.
4. Support the weight of the tool in a stand, tensioner or balancer, because the operator can then use a lighter grip to support the tool.

Additional safety instructions for pneumatic power tools

1. Always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repairs.
2. Never direct air at yourself or anyone else.
3. Whipping hoses can cause severe injury. Always check for damaged or loose hoses and fittings.
4. Cold air shall be directed away from the hands.
5. Whenever universal twist couplings (claw couplings) are used, lock pins shall be installed and whipcheck safety cables shall be used to safeguard against possible hose-to-tool and hose-and-hose connection failure.
6. Do not exceed the maximum air pressure stated on the tool.
7. Never carry an air tool by the hose.

Specific safety instructions

Warnings shall be given about any specific or unusual hazards associated with the use of the power tool. Such warnings shall indicate the nature of the hazard, the risk of injury and the avoidance action to take.

General preparation and connection:

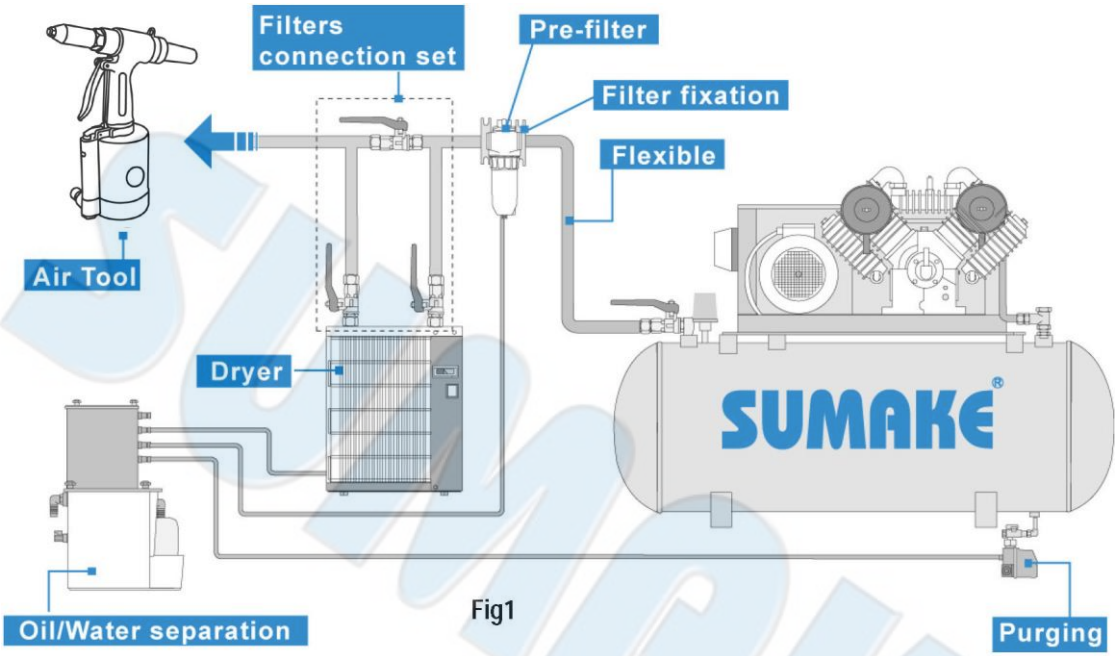


Fig1

1. Before connecting the air hose, apply 4 to 5 drops of SAE 10W-20 (ISO Viscosity Grade 46/32) Hydraulic Oil at the air inlet. Also, every 3 to 4 hours of operation, oiling is necessary. Twist Teflon thread tape to ensure a proper seal air inlet. Then tighten the air coupler into air tool.
2. The supplied compressed air must be clean and dry, with the appropriate oil mist. Use an air treatment unit; filter, regulator and lubricator.
3. Please refer Fig.1 illustration shows the correct mode of connection to the air supply system which will increase the efficiency and useful life of the tool.
4. The quick connect coupling and hose must have sufficient air flow capacity. We recommend an air hose with a diameter of 10mm (3/8").
5. To ensure a good performance. The operation pressure at the compressed air inlet should not exceed 6.3bar (90psi) (unless indicated otherwise). Higher operating pressures may cause damaged or excessive wear. Operating pressures below 5.3bar may cause pressure or power loss.

Risk of injury

1. Compressed air can inflict serious injuries. Therefore never point the air hose at another person or yourself.
2. Shut – off the air supply and disconnect the tool in case:
   - You want to change or replace accessories.
   - You want to clean, repair or maintain the tool.
   - The tool is not going to use for some times.
3. Check compressed air hose before use. If it is damaged, broken, torn, or deformed, the hose is not to be connected to the tool.
4. Always check the pneumatic couplings before using the tool. If they show signs of damage, fracture, cracking or excessive corrosion, the respective tool or the air hose is not to be used.
5. Use only qualified adapters and connectors, In case of wear they are to be replaced immediately.
6. Only use air pipes that are fit for the use at maximum pressure.

Maintenance instruction:

1. Dry the filter (fig1) and the air inlet of the tool.
2. Lubricate the quick connect coupling to prevent blocking.
3. Air tool require lubrication throughout the life of the tool. The air motor and bearing uses compressed air to start the tool. The moisture in compressed air will rust the air motor; you must lubricate the motor daily.
4. Avoid storing the tool in a location subject to high humidity. If the tool is left as it is used, the residual moisture inside the tool can cause rust.
5. Before storage, lubricate tool and run it for a few seconds.
6. Regular inspection of spindles, threads, and clamping devices in respect of wear and tolerances for location of abrasive products.
7. If the tool is too seriously damage to be used anymore, recycle raw material instead of disposing as waste. The machine, accessories and packaging should be sorted for environmental-friendly recycling. Check with your local authority or retailer for recycling advice.
8. Keep Safety Cap free of spent mandrels.
9. Insure that jaws are clean and free of metal shavings, dirt and oil.
10. Keep oil at optimum level. With use of tool there may be a gradual loss of oil. When you notice a reduction in the stroke, you need to add a small amount of oil.