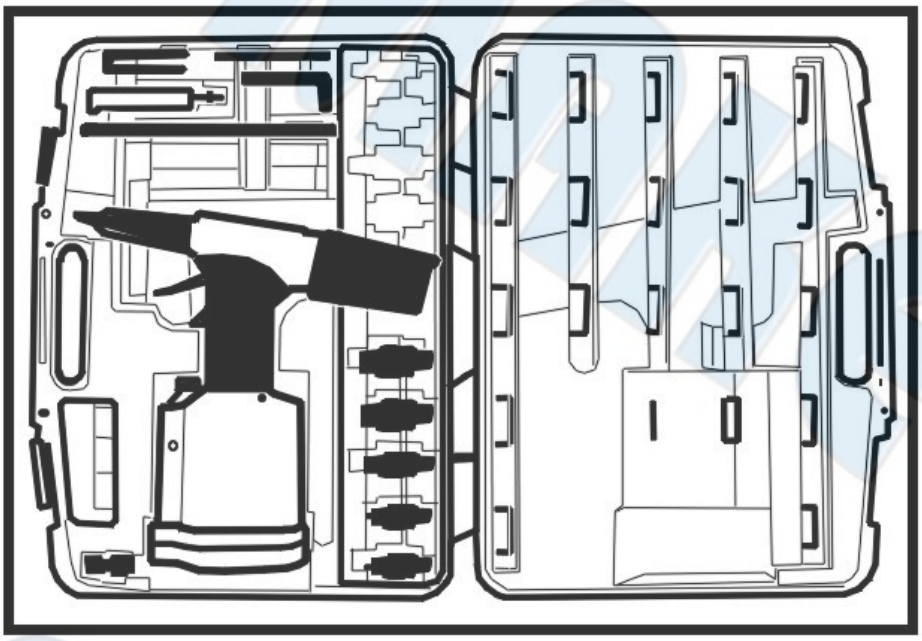
SUMAKE *PNEUMATIC TOOLS*



Air Spin-Pull Rivet Nut Tool
ST-6920(A)

Specification:

Rivet Capacity	1/4"-20, 5/16"-18, 1/2"-13, #8-32, #10-24, #10-32, #3/8-16 (M4, M5, M6, M8, M10, M12)
Tractin Power	6800 lbs (3100 kg)
Stroke Length	0.276” (7 mm)
Air Inlet (PT)	1/4” (6.35 mm)
Air Hose (I.D.)	3/8” (10 mm)
Air Pressure	85~95 psi (6~6.7 bar)
Net Weight	11.66 lbs (5.3 kg)

Noise and Vibration:

Vibration EN ISO 20643	**Noise** EN ISO 15744	**Remark**
Load: < 2.5 m/s²	Sound Pressure Level No load: 84 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: 95 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

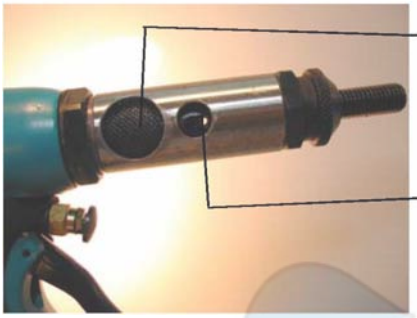
SUMAKE®

ST-6920 Air Hydraulic Rivet-Nut Tool

★ Working Instructions ★

(B)-1 Reverse Button
(A)-1 (A)-2 Trigger

* adjust this Button
(motor exhaust air.)



(D)- 2 Adjust Stroke Bushing

(C)-2 * Insert the Pin through THIS hole.

※ Operating Instructions :

(A)-1 Slightly push the Trigger #110 with the middle finger to spin threaded insert onto the Bolt Spindle (#1)

(A)-2 Push Trigger (#110) fully with the middle finger to pull & squeeze the threaded insert.

★ Please be sure only ONE time Push the Trigger.
Do NOT allow Twice push the trigger to install same one rivet nut

(B)-1 After squeeze completely, push the reverse Botton (#103) to release the tool backward.

※ Change Bolt spindle for different size of threaded Insert

(C)-1 Release Nut (#3) to remove Nut Anvil (#2)

(C)-2 Insert the Pin (#120) through the side hole of Head (#4) into the center hole of Spring Pin, and, draw backward direction of the tool, to separate the Bolt Spindle (#1) from Hexagon Bit (#7) so the Bolt Spindle (#1) can be removed.

※ REPEAT #(C)-2 to replace another New, different size of Bolt Spindle (#1).

※ How to adjust the Stroke : Mini. 0mm ← → Max. 7 mm
(*** Important *** ALWAYS adjust the STROKE before operate)

(D)-1 Always Press the Trigger (#110) , so that you can Adjust the Stroke easily & safely.

(D)-2 Simply adjust the Stroke by turning the adjustable Bushing (#6) on the bigger hole of Head (#4) to a correct Stroke : Mini. 0 mm ← → Max. 7 mm

Foreword

Sumake is a manufacturer and exporter of air tools since established. We have devote all our efforts in improving quality and tools' life. As well as the noise and vibration of tools. Bring all of you working efficiences, profits, and enjoy using the tool is our principle.

Operator's instruction

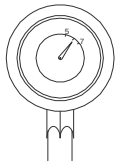
1. Main Applications

This tool has a strong traction power and light weight only 1.5 kgs. All rivets from 3/32" to 3/16" in all kind of material can be applied with this tool. This advantage performance make you job easily.

2. Cautions for Use

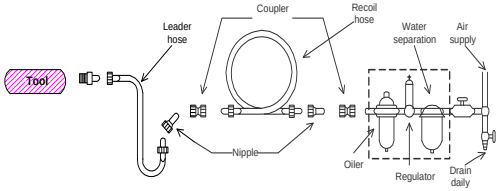
2-1 Air pressure

Maximum performance is displayed at the proper sanding speed, obtainable at a gauge pressure of 6.2 bar. Range-wise, this is an air pressure from 5 to 7 bar (70 to 100 psi)



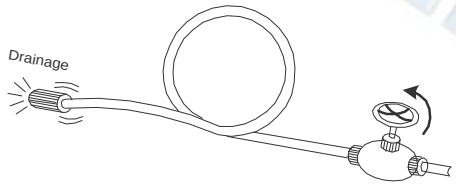
2-2 Air line

Use a 3/4" air hose between the compressor and the tool . Compressed air is cooled and its water content separated, as soon as the air leaves the compressor. A portion of the water content, however, is condensed in the piping, and can enter the tool mechanism, and may cause trouble. So, install an air filter and on oiler between the compressor and the tool. Use a 3 HP or larger compressor for each sander.



2-3 Air hose

Clean the hose with a blast of compressed air before connecting the hose to air tool. This will prevent both moisture and dust within the hose from entering the tool and causing possible rust or malfunction. To compensate for unusually long hose (over 25 ft), the line pressure should be increased accordingly.



2-4 Inserted tools

Use only the socket or adapter which are in good condition for use. The intended socket and adapter for this air tool could are stated as "Square Drive" on the specification list.

2-5 The approved eye protector, ear-muff, mouth-muffle, and gloves shall be worn when operate this tool.

2-6 The working place shall be ventilative.

2-7 Release the on-off device in the case of energy supply failure.

3. Operation Method

3.1 On-off device

The on-off device is on the inner or outer contour of the grip. It is a "hold-to-run" type. This tool stops rotation within few sec, after releasing the lever. For the sake of safety, place it on a level plate or on hanger after it completely stops.

3.2 Torque Adjuster

You can adjust the torque by rotating the knob which indicated by 1 to 6. "1" indicates the smallest torque output and "6" indicts the largest torque output.

3.3 Rotating Direction

One shall make sure the direction of rotation before actuate this tool. The "F" indicts foreword and the "R" indicts reverse. Forward is defined as clockwise direction seen from the operator's position.

4. Maintenance

4-1 Lubrication

Before connecting the hose , apply 4 or 5 drops of #60 spindle oil at the air inlet. Use of a thicker oil can lead to reduced performance or malfunction. If a thicker oil is used by accident, wash it away immediately. Also, every 3 or 4 hours of operation, oiling is necessary.

4-2 Storage

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. Before storing and after operation, oil the tool at the air inlet with spindle oil and run it for a short time.

4-3 Disposal

If the tool is too seriously damaged to be used anymore, drop it in a resource recycling can. Never drop it into fire.

4-4 Ordering service Parts

For further operational and handling information or for replacement of parts and components, contact the sale agent from whom you purchased the tool or the service division of our company.

* In ordering parts and components, give each part number, name and quantity.

Warning

1. The power toll shall not be used in potentially explosive atmospheres.

2. Disconnect the air hose before changing or adjusting any inserted tools.

3. Prevent long hair or loose clothing from drawing in while operate this tool.

4. Keep your body in well balanced position and always wear gloves to reduce the risk of crushing caused by torque between handle and workpiece.

5. Unexpected direction of rotating could cause a hazardous situation.

6. Slip/Trip/Fall is a major reason of serious injury or death. Beware of excess hose left on the walking or work surface.

7. Wearing eye/face protector could reduce the danger to person from high speed splinters being emitted from this tool in the case of inserted tool failure or emitted from the workpiece.

8. Wearing mouth-muff could avoid inhaling dust or handling debris from work process that can be harmful to your health.

9. Excessive high air pressure and too much free rotation may speed the wear of this tool and might cause danger situation.

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 SPIN-PULL RIVET NUT TOOL

Model/ Serial No.：ST-6920(A)

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

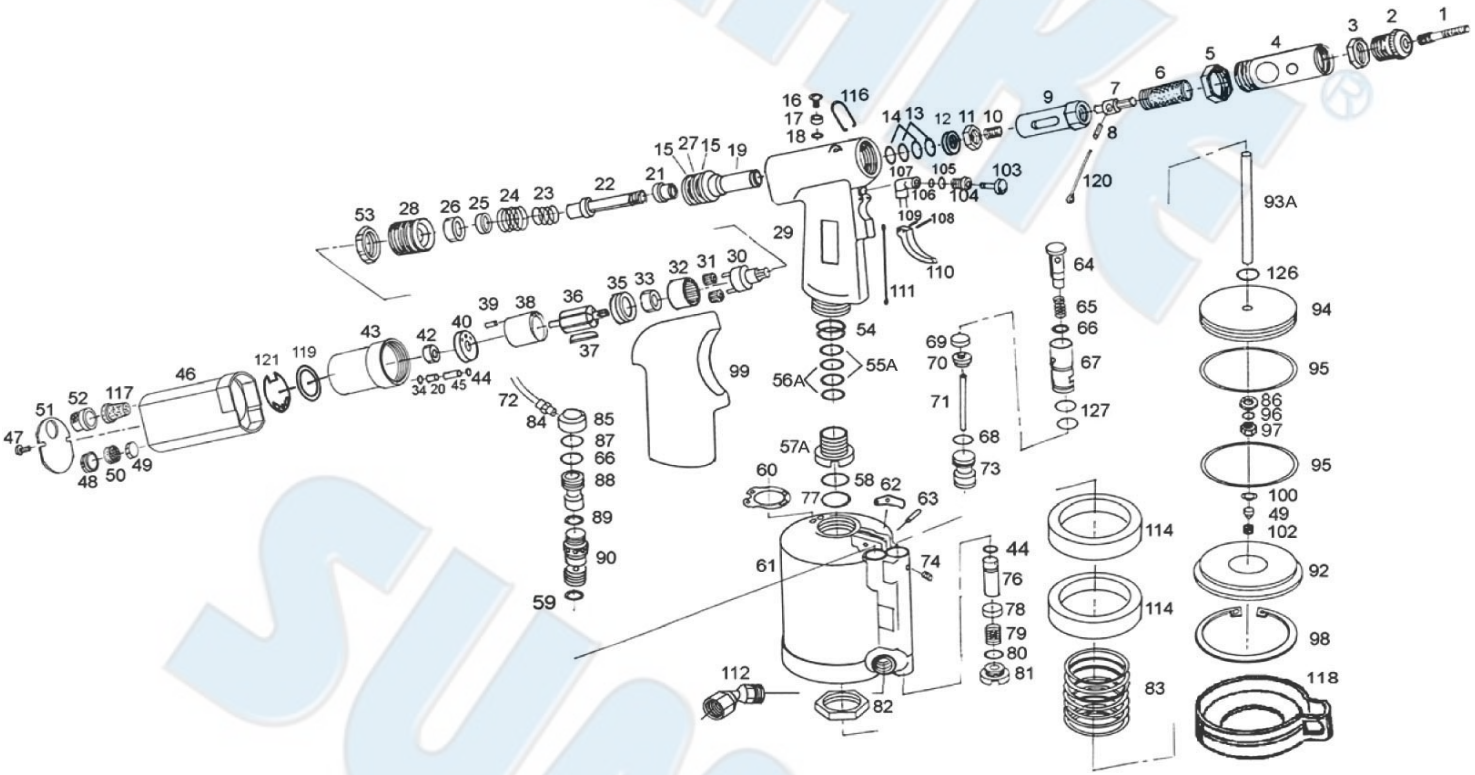
Mike Su – Managing Director

Date and Place

2024/5/2

Taipei, Taiwan

ST-6920(A) AIR SPIN-PULL RIVET NUT TOOL



ST-6920(A) AIR SPIN-PULL RIVET NUT TOOL

PARTS LIST

No.	Parts No.	Description	Q'ty
1	6920-01B	Bolt M10	1
2	6920-02B	Nut Anvil M10	1
3	6920-03	Nut	1
4	6920-04	Head	1
5	6920-05	Nut	1
6	6920-06	Adjustable Bushing	1
7	6920-07	Hexagon Bit	1
8	6920-08	Spring Pin	1
9	6920-09	Bolt Bushing	1
10	6920-10	Spring	1
11	6920-11	Nut	1
12	6920-12	Nut Ring	1
13	6920-13	Ring Washer	2
14	6920-14	X-Ring Seal	2
15	6920-15	O-Ring	2
16	6920-16	Oil Plug	1
17	6920-17	Fill Washer	1
18	6920-18	O-Ring Seal	1
19	6920-19	Hydraulic Plunger [Incl. 21]	1
20	6920-20	Valve Rod	2
22	6920-22	Shaft	1
23	6920-23	Spring	1
24	6920-24	Spring	1
25	6920-25	Washer Nut	1
26	6920-26	Ball Bearing	1
27	6920-27	Washer	1
28	6920-28	Screw Bushing	1
29	6920-29	Hydraulic Section	1
30S	6920-30S	Gear Spindle Set [Incl. 30, 36, 37(6)]	1
31	6920-31	Gear	3
32	6920-32	Ring Gear	1
33	6920-33	Ball Bearing	1
34	6920-34	O-Ring	2
35	6920-35	Front Plate	1
37	6920-37	Rotor Blade	6
38	6920-38	Cylinder	1
39	6920-39	Pin	1
40	6920-40	End Plate	1
42	6920-42	Ball Bearing	1
43	6920-43	Motor Housing	1
44	6920-44	O-Ring Seal	3
45	6920-45	Tube	2
46	6920-46	Motor Housing Cover	1
47	6920-47	Screw	2
48	6920-48	Screw Bushing	2
49	6920-49	Rubber Plate	3
50	6920-50	Valve Muffler	2
51	6920-51	Valve Plate	1
52	6920-52	Exhaust Cap	1
53	6920-53	Nut	1
54	6920-54	O-Ring Seal	2
55A	6920-55A	O-Ring Seal	2
56A	6920-56A	O-Ring Washer	2
57A	6920-57A	Screw Plug	1
58	6920-58	O-Ring Seal	1
59	6920-59	O-Ring	1
60	6920-60	Gasket	1
61	6920-61	Air Cylinder	1
62	6920-62	Trigger Lever	1
63	6920-63	Pin	1
64	6920-64	Valve Stem	1
65	6920-65	Valve Spring	1
66	6920-66	O-Ring Seal	2
67	6920-67	Valve Bushing	1
68	6920-68	O-Ring Seal	1
69	6920-69	Valve Plate	1
70	6920-70	Valve Plate Washer	1
71	6920-71	Pin	1
72	6920-72	Tube	1
73	6920-73	Low Valve Bushing	1
74	6920-74	Screw M4	1
76	6920-76	Low Valve Rod	1

No.	Parts No.	Description	Q'ty
77	6920-77	O-Ring Seal	1
78	6920-78	Valve Plate	1
79	6920-79	Valve Pressure Spring	1
80	6920-80	O-Ring	1
81	6920-81	Screw Plug	1
82	6920-82	Lock Nut	1
83	6920-83	Return spring	1
84	6920-84	Tube Connector	1
85	6920-85	Valve Cap	1
86	6920-86	Washer	2
87	6920-87	O-Ring	1
88	6920-88	Valve Stem	1
89	6920-89	O-Ring	1
90	6920-90	Valve Bush	1
92	6920-92	Air Cylinder Cap	1
93A	6920-93A	Plunger Rod	1
94	6920-94	Piston Disc	1
95	6920-95	O-Ring Seal	2
96	6920-96	Inner Tooth Washer	1
97	6920-97	Nut	1
98	6920-98	Clip	1
99	6920-99	Hand Grip	1
100	6920-100	Retaining Ring	1
102	6920-102	Spring	1
103	6920-103	Button	1
104	6920-104	Screw Bush	1
105	6920-105	O-Ring Seal	1
106	6920-106	O-Ring	1
107	6920-107	Adaptor	1
108	6920-108	Pin	1
109	6920-109	Pin	1
110	6920-110	Trigger	1
111	6920-111	Trigger Rod	1
112	6920-112	Universal Joint	1
114	6920-114	Damping Ring	2
117	6920-117	Muffler Bush	1
118	6920-118	Rubber Cushion	1
119	6920-119	O-Ring Seal	1
121	6920-121	Gasket	1
126	6920-126	O-Ring Seal	1
127	6920-127	O-Ring Seal	2
		*** ACCESSORIE ***	
1	6920-01A	Bolt M12	1
	6920-01C	Bolt M8	1
	6920-01D	Bolt M6	1
	6920-01E	Bolt M5	1
	6920-01F	Bolt M4	1
	6920-01G	Bolt 1/4"-20	1
	6920-01H	Bolt 5/16"-18	1
	6920-01I	Bolt 1/2"-13	1
	6920-01J	Bolt 3/8"-16	1
	6920-01K	Bolt #8-32	1
	6920-01L	Bolt #10-24	1
	6920-01M	Bolt #10-32	1
2	6920-02A	Nut Anvil M12	1
	6920-02C	Nut Anvil M8	1
	6920-02D	Nut Anvil M6	1
	6920-02E	Nut Anvil M5	1
	6920-02F	Nut Anvil M4	1
	6920-02G	Nut Anvil 1/4"-20	1
	6920-02H	Nut Anvil 5/16"-18	1
	6920-02I	Nut Anvil 1/2"-13	1
	6920-02J	Nut Anvil 3/8"-16	1
	6920-02K	Nut Anvil #8-32	1
	6920-02L	Nut Anvil #10-24	1
	6920-02M	Nut Anvil #10-32	1
116	6920-116	Hanging Ring	1
120	6920-120	Pin	1
122	6920-122	Wrench 24/27mm	1
123	6920-123	Hex. Wrench	1
124	6920-124	Oil Syringe	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:

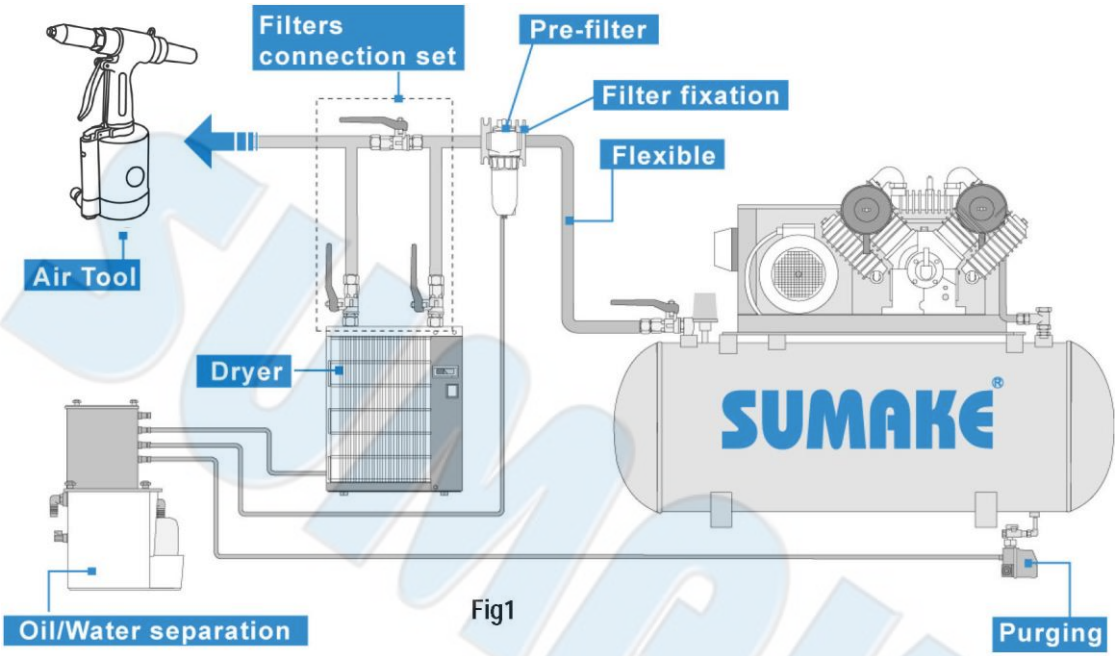


Fig1

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.