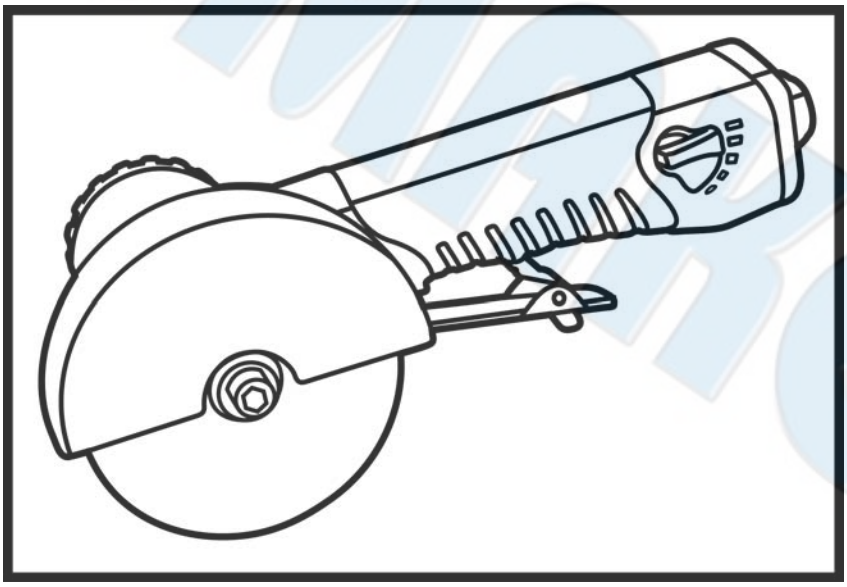
# SUMAKE *PNEUMATIC TOOLS*



# 3" Cut-Off Tool (W/Wheel)
# ST-M5068

**Specification:**

| | |
|---|---|
| Free Speed | 15,000 r.p.m. |
| Cutting Capacity | 3” |
| Air Consumption | 13 CFM (368 L/min) |
| Overall Length | 8-1/6” (210 mm) |
| 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 | 2 lbs (0.93 kg) |

**Noise and Vibration:**

| **Vibration** EN ISO 28927-4 | **Noise** EN ISO 15744 | **Remark** |
|---|---|---|
| Load: 1.63 m/s² | Sound Pressure Level No load: 95 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: 105 dB(A) | |
| Uncertainty K= 0.65 m/s² | Uncertainty K= 3dB | |

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

# 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： 3" CUT-OFF TOOL (W/WHEEL)**

**Model/ Serial No.：ST-M5068**

**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 11148-7:2012**

Name and Signature/Position

**Mike Su – Managing Director**

Date and Place

*2013/6/28*

**Taipei, Taiwan**

ST-M5068-D-1410B-D5F

# SAFETY RULES FOR AIR TOOLS

1. Always wear approved eye protection.
2. Have throttle (trigger) in "on" position when connecting to air supply.
3. Disconnect tool before performing service or when not in use.
4. Always use tool a safe distance from other people in work area
5. Maintain tools with care. Keep tools clean and oiled for best and safest performance. Follow instructions for lubricating and changing accessories. Wiping or cleaning rags and other flammable waste materials must be placed in a lightly closed metal container and disposed of later in the proper fashion
6. Do not wear loose or ill-fitting clothing. remove matches and rings
7 Never use quick change couplings at toot They add weight and could fail due to vibration. Instead add a hose whip and connect coupling between air supply and hose whip, or between hose whip and leader hose
8. Don't overreach keep proper tooting and balance at all times.
9. Don't force tool. It will do the job better and safer at the rate for which it was designed
10. Don't abuse hoses or connectors Never carry tool by the hose or yank it to disconnect from power supply keep hoses from heat oil and sharp edges. Check hoses for weak or worn condition before each use making certain that all connections are secure
11. When possible secure work with clamps or vise so both hands are free to operate tool
12. Accessory retainers should be used to prevent discard or ejection of the accessory which might injure persons in the general area

    EXCEPTION Retainers not be used it in compliance with applicable safety codes In such cases, to avoid injury the trigger should never be depressed unless the accessory is held firmly against the work piece Accessory should be removed when tool is not in use

# OPERATING INSTRUCTIONS

## AIR SUPPLY

Toots of this class operate on a wide range of air pressure. It is recommended that air pressure to these tools do not exceed 90 PSI at the tool while running. Higher pressure and unclean air will shorten the tool's life because of faster wear and could create an unsafe condition.

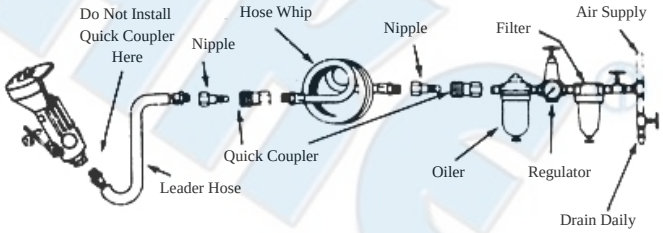



**FIGURE 1**

Water in the air line will cause damage to the tool. Drain the air tank daily. Clean the air inlet filler screen on at least a weekly schedule. The recommended hook-up procedure can be viewed in Figure l

The air inlet (A) Figure 2. used for connecting air supply has standard 1/4 NPT Thread

Line pressure or hose inside diameter should be increased to compensate for unusually long air hoses (over 25 feet) Minimum hose diameter should be 1/4" I.D. But 3/8" I.D. is recommended

## OPERATING

On tools with regulators the air regulator (A) Figure 2. can be used as an air throttle. If there are no other means of regulating air.

Turn the air regulator (A} all the way in and adjust outward until desired speed

Daily before using and before putting tool into operation, disconnect air hose and pour about one tablespoonful of recommended oil (see "Lubrication and Maintenance") into tool air inlet Blow out air line to clear it of accumulated dirt and moisture, connect tool and operate on low throttle to allow oil to be carried to the interior of tool.

Let the tool do the work. Do not put extreme pressure on the machine. This will only slow down the speed of the cutting wheel, reduce cutting efficiency, and put additional burden on the motor. Start the tool off the work. set it down on the work evenly and move in the direction desired to make the cut. When finished cutting, lift off the work before stopping the motor.

NOTE:PURING OPERATION SAFETY GOGGLES SHOULD ALWAYS BE WORN TO GUARD AGAINST FLYING RUST AND CHIPS.

USE ONLY WHEELS RATED AT 15,000 RPM OR HIGHER


**FIGURE 2**

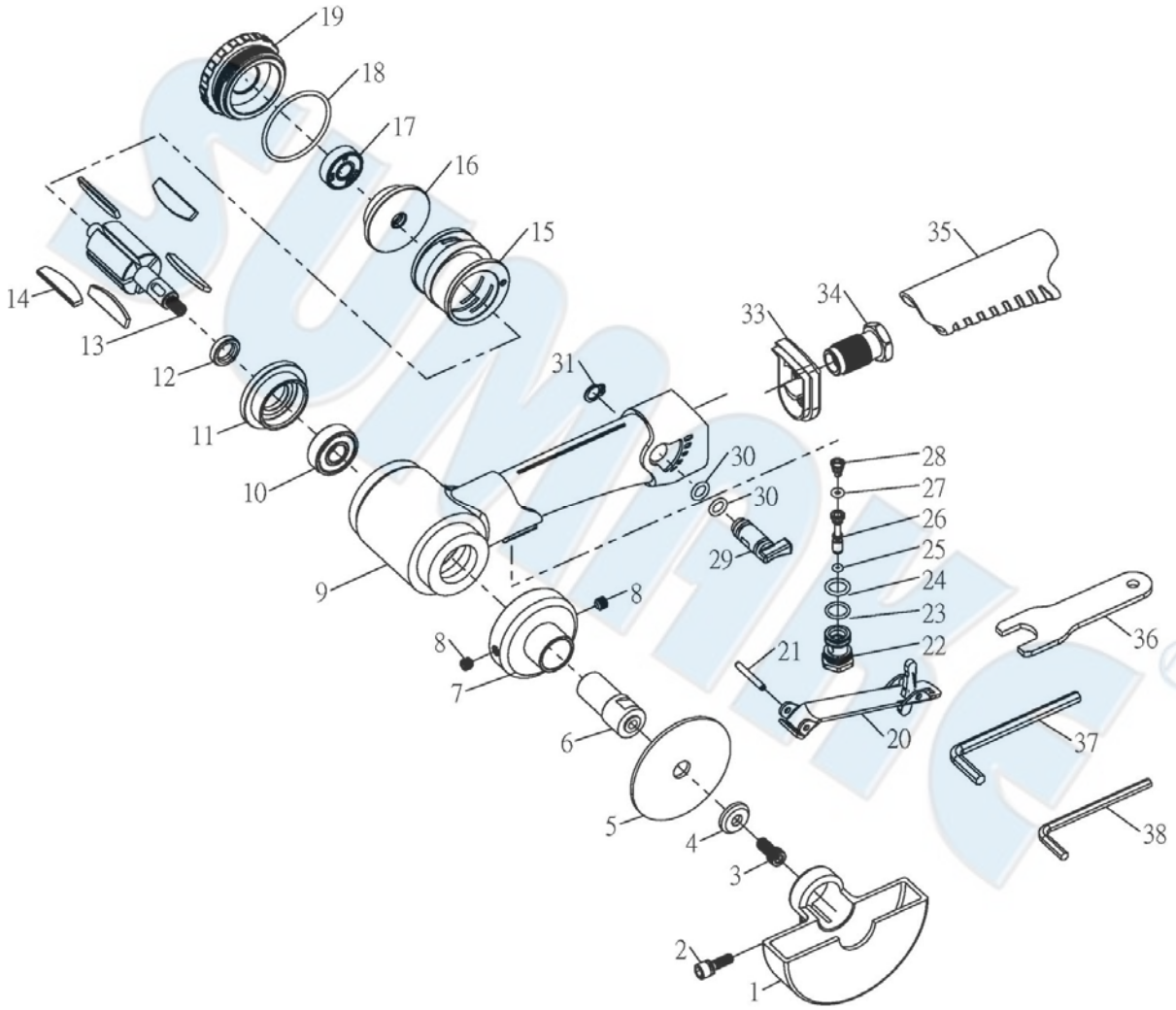
## LUBRICATION AND MAINTENANCE

Lubricate the air motor daily with a good grade of air motor oil. If no air line oil is used run a teaspoon of oil through the tool The oil can be squirted into the tool air inlet (A) Figure 2. or into the hose at the nearest connection to the air supply, then run the tool A rust inhibitive oil such as "Marvel Mystery" oil. available from

auto supply stores etc.. is acceptable for air motor

Other factors outside the tool may cause loss of power or erratic action Reduced compressor output, excessive drain on the air line. moisture or restrictions in air pipes or the use of hose connection of improper size or poor condition may reduce air supply Grit or gum deposits in the tool may cut power and may be corrected by cleaning the air strainer and flushing out the tool with gum solvent oil or an equal mixture or SAE #10 oil and kerosene If outside conditions are in order, disconnect tool from hose. disassemble tool. replace worn or damaged parts, clean, reassemble and relubricate, or take tool to your nearest authorized service center

# ST-M5068 3" CUT-OFF TOOL (W/WHEEL)




PARTS LIST

| No. | Parts No. | Description | Q'ty |
|---|---|---|---|
| 1 | M5068-01 | Wheel Cover | 1 |
| 2 | M5068-02 | Cap Screw | 1 |
| 3 | M5068-03 | Pan Head Screw (M6x12) | 1 |
| 4 | M5068-04 | Spacer | 1 |
| 5 | M5068-05 | Pad | 1 |
| 6 | M5068-06 | Power Shaft | 1 |
| 7 | M5068-07 | Clamp Nut | 1 |
| 8 | M5068-08 | Set Screw (M5x5) | 2 |
| 9 | M5068-09 | Housing | 1 |
| 10 | M5068-10 | Ball Bearing (6000ZZ) | 1 |
| 11 | M5068-11 | Front End Plate | 1 |
| 12 | M5068-12 | Spacer | 1 |
| 13 | M5068-13 | Rotor | 1 |
| 14 | M5068-14 | Rotor Blade | 5 |
| 15 | M5068-15 | Cylinder | 1 |
| 16 | M5068-16 | Rear End Plate | 1 |
| 17 | M5068-17 | Ball Bearing (608ZZ) | 1 |
| 18 | M5068-18 | O-Ring (S38) | 1 |
| 19 | M5068-19 | Cap | 1 |

| No. | Parts No. | Description | Q'ty |
|---|---|---|---|
| 20 | M5068-20 | Throttle Lever Ass'y | 1 |
| 21 | M5068-21 | Spring Pin (Φ3x20) | 1 |
| 22 | M5068-22 | Valve Body | 1 |
| 23 | M5068-23 | O-Ring (S11.2) | 1 |
| 24 | M5068-24 | O-Ring (P9) | 1 |
| 25 | M5068-25 | O-Ring (AS-004) | 1 |
| 26 | M5068-26 | Valve Stem | 1 |
| 27 | M5068-27 | O-Ring (P3) | 1 |
| 28 | M5068-28 | Valve Spring | 1 |
| 29 | M5068-29 | Air Regulator | 1 |
| 30 | M5068-30 | O-Ring (P7) | 2 |
| 31 | M5068-31 | External Stop Ring (STW-8) | 1 |
| 33 | M5068-33 | Exhaust Diffuser | 1 |
| 34 | M5068-34 | Inlet Bushing | 1 |
| 35 | M5068-35 | Housing Cover | 1 |
| 36 | M5068-36 | (#14) Spanner Wrench Set | 1 |
| 37 | M5068-37 | Hatted Wrench Key (M5) | 1 |
| 38 | M5068-38 | Hatted Wrench Key (M4) | 1 |
| | | | |

SUMAKE®

MAKE JOBS BETTER THAN EVER

# CUTTER(SAW)

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 tool.
22. Failure to do so can result in serious bodily injury.
23. Only qualified and trained operators should install, adjust or use the tool.
24. Do not modify the tool. Modifications may reduce the effectiveness of safety measures and increase the risks to the operator.
25. Do not discard the safety instructions – Give them to the operator.
26. Warnings shall be given against the risk of explosion or fire due to the material being processed;
27. Do not use the tool if it has been damaged
28. 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. Failure of the work piece, or accessories, or even of the inserted tool itself may generate high velocity projectiles.
2. Always wear impact-resistant eye protection during the operation of the tool. The grade of protection required should be assessed for each use.
3. Ensure that the work piece is securely fixed.

**Safety precautions for entanglement hazards**

1. Entanglement hazard - choking, scalping and/or lacerations can occur if loose clothing, personal jewellery, neck ware, hair or gloves are not kept away from tool and accessories.

**Safety precautions for operating hazards**

1. Use of the tool may expose the operator's hands to hazards including 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. Warnings against the break-through when the tool bit passes through the material being cut
6. Release the start and stop device in the case of an interruption of the energy supply
7. Use only lubricants recommended by the manufacturer
8. Personal protective safety glasses shall be used, suitable gloves and protective clothing are recommended.

**Safety precautions for repetitive motions hazards**

1. When using the tool to perform work-related activities, the operator may experience discomfort in the hands, arms, shoulders, neck, or

other parts of the body.
2. While using the tool, the operator should adopt a comfortable posture whilst maintaining secure footing and avoiding awkward or off-balanced postures. The operator should change posture during extended tasks which may help avoid discomfort and fatigue.
3. If the operator experiences symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensation, or stiffness, these warnings should not be ignored. The operator should tell the employer and consult a qualified health professional.

**Safety precautions for accessory hazards**
1. Disconnect the tool from the energy supply before fitting or changing the inserted tool or accessory.
2. Only use sizes and types of accessories and consumables that are recommended by the tool manufacturer.
3. Avoid direct contact with the inserted tool during and after use as it can be hot or sharp.

**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. The 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 the tool 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 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. Select, maintain and replace the consumable/inserted tool as recommended in these instructions, to prevent an unnecessary increase in dust or fumes.
8. Use respiratory protection as instructed by your employer and 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 workpieces from 'ringing'
4. Use hearing protection as instructed by your employer and as required by occupational health and safety regulations;
5. Operate and maintain the circular, oscillating or reciprocating saw as recommended in these instructions, to prevent an unnecessary increase in noise levels
6. Select, maintain and replace the consumable/inserted tool as recommended in these instructions, to prevent an unnecessary increase in noise
7. If the tool has a silencer, always ensure it is in place and in good working order when the tool is operating;

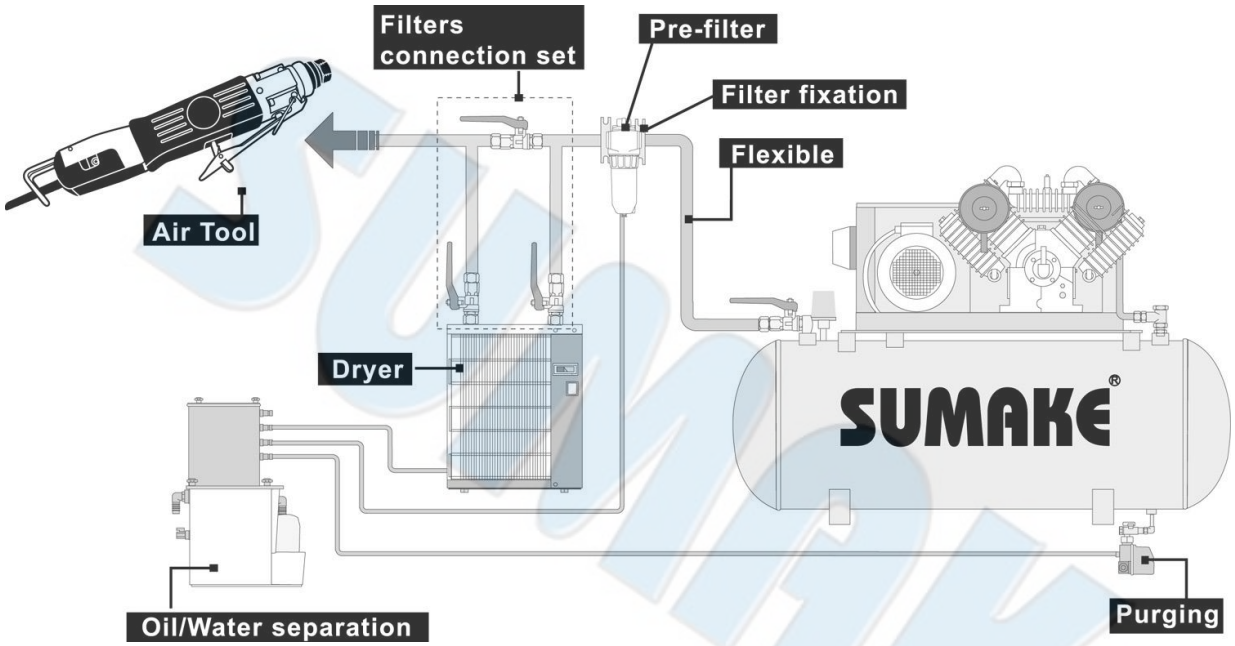
**Safety precautions for vibration hazards**
1. Exposure to vibration can cause disabling damage to the nerves and blood supply of the hands and arms.
2. Wear warm clothing when working in cold conditions and keep your hands warm and dry;
3. If you experience numbness, tingling, pain or whitening of the skin in your fingers or hands, stop using the circular, oscillating or reciprocating saw, tell your employer and consult a physician.
4. Operate and maintain the tool as recommended in these instructions, to prevent an unnecessary increase in vibration levels.
5. Select, maintain and replace the consumable/inserted tool as recommended in these instructions, to prevent an unnecessary increase in vibration levels.
6. Support the weight of the tool in a stand, tensioner or balancer if possible.
7. Hold the tool with a light, but safe, grip taking account of the required hand reaction forces, because the risk from vibration is generally greater when the grip force is higher.

**Additional safety instructions for pneumatic power tools**
1. Air under pressure can cause severe injury.
2. 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.
3. Never direct air at yourself or anyone else.
4. Whipping hoses can cause severe injury. Always check for damaged or loose hoses and fittings.
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 tool. Such warnings shall indicate the nature of

the hazard, the risk of injury and the avoidance action to take.

## General preparation and connection:




1. Before connecting the air hose, apply 4 to 5 drops of SAE#10-20 spindle 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.