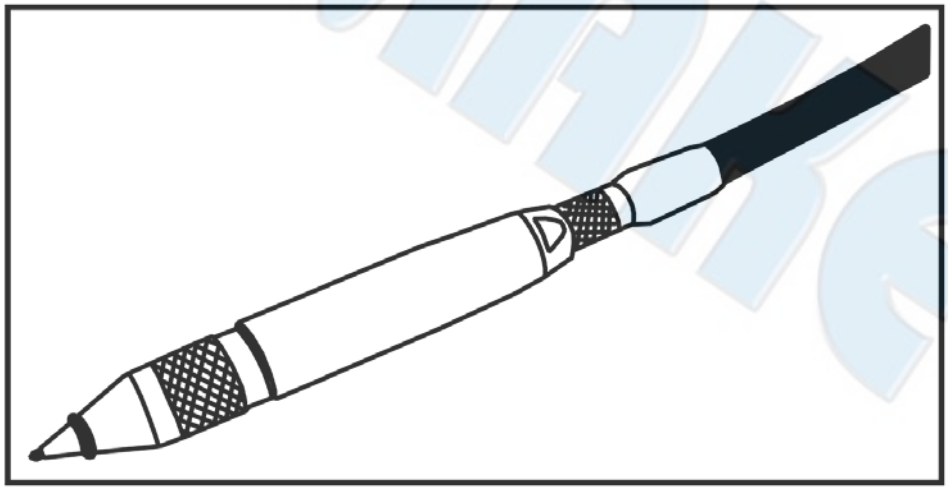
SUMAKE *PNEUMATIC TOOLS*



Air Engraving Pen
ST-909

Specification:

Blow Per Minute	10,000 b.p.m.
Air Consumption	6 CFM (170 L/min)
Overall Length	6-3/4” (170 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	2.0 lbs (0.9 kg)

Noise and Vibration:

Vibration EN ISO 28927-12	**Noise** EN ISO 15744	**Remark**
Load: 0.5 m/s^2	Sound Pressure Level load: 77 dB(A)	Please always wear ear protector at environment noise level > 80 dB(A) due to risk of impaired hearing!
	Sound power level load: 88 dB(A)	
Uncertainty K= 1.5 m/s^2	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 ENGRAVING PEN

Model/ Serial No.：ST-909

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 11148-9:2011**

Name and Signature/Position

Mike Su – Managing Director

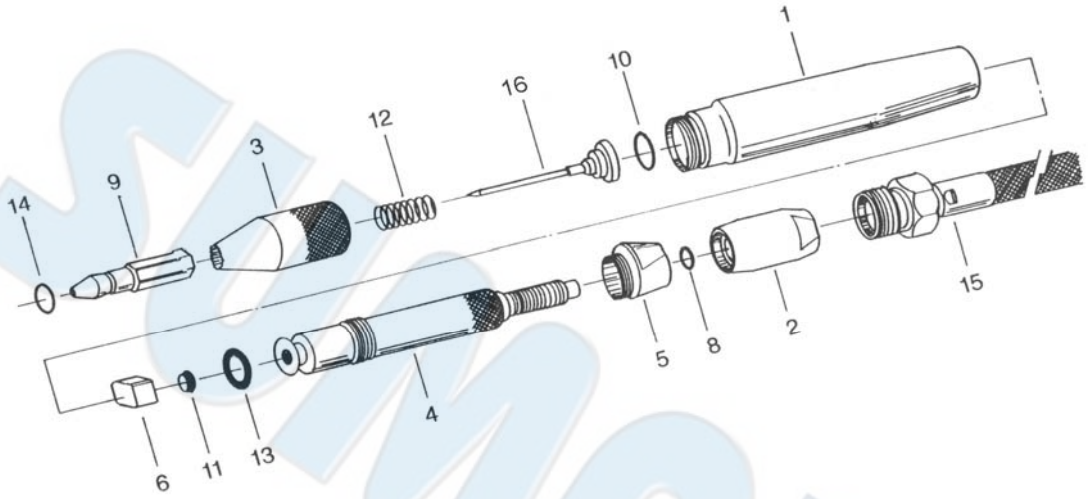
Date and Place

2022/7/1

Taipei, Taiwan

ST-909-D-2207E-CGF

ST-909(A) ENGRAVING PEN



PARTS LIST

No.	Parts No.	Description	Q'ty
1	909A-01	Body	1
2	909A-02	Adjustment Nut	1
3	909A-03	Front Part	1
4	909A-04	Throttle Valve	1
5	909A-05	Ring Nut	1
6	909A-06	Valve Seat	1
8	909A-08	O-Ring	1
9	909A-09	Bush	1
10	909A-10	O-Ring	1

No.	Parts No.	Description	Q'ty
11	909A-11	Oil Seal	1
12	909A-12	Spring	1
13	909A-13	O-Ring	1
14	909A-14	O-Ring	1
15	909A-15	Air Hose	1
16	909A-16	Sleeve For Thin Point	1
	909A-17	Sleeve For Medium Point	1
	909A-18	Sleeve For Large Point	1

ST-909(A)-P-0501B-CG

SERVICE INSTRUCTIONS

The Air Engraving Stylus is used to write on hard steel, metal, glass, stones, ceramic, plastics etc. Also useful for deburring, to reshape the cut on the screwhead or broken bolts to ease removal, and naturally, to personalise tools and other equipment in the workshop.

To obtain the best marking, hold the pen near the front at sharp angle.

Turn the valve (#4) so to have maximum power at the point. The valve can also be adjusted to reduce the impact force, eg. to work on softer material or to make thin markings. If the pen does not start hit lightly the point against a surface, this happen when the valve is not opened enough.

BUSH REPLACEMENT (#9)

To remove the bush push from the front part (#3) towards the inside. Insert, by pushing a new bush until the flange lays against the side of the hole at the front end.

POINT REPLACEMENT

To substitute the point unscrew the front end (#3) holding the body in a vice (#1). Take out the worn point and replace it with a new one.

MAINTENANCE

Clean the pen thoroughly after disassembling and assembly. Use pure clean air, as free of dust and humidity as ever possible.

LUBRICATION

Lubricate the pen daily, or every time it is used. Use very fluid mineral oil, free from acids and carbon or gummy residues.
The recommended viscosity is 1.7÷3.3 E/50℃
The lubrication can be done by automatic lubricators.

HOSE FITTING

Before hoses are connected to the tool, blow them clean with a blow gun.
If the pressure is too low the pen will not work satisfactorily.



ST-909(A)-I-1209A-CG

SUMAKE®

MAKE JOBS BETTER THAN EVER

DIE GRINDER

Original instructions



SUMAKE Industrial Co. Ltd.

Professional & Industrial

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 die grinder.
23. Do not modify this die grinder. 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.
27. Only permitted insert tools of the correct shaft diameter are used.
28. Cutting-off wheels and routing cutter wheels shall not be used.
29. Allowed speed of the insert tool shall be higher than the speed of the die grinder.
30. Attention must be paid to the fact that allowed speed of the mounted point must be lowered due to the increase of the length of the shaft between the end of the collet and the mounted point (overhang). Make sure that the minimum gripping length of 10 mm is observed.
31. Working in certain materials creates emission of dust and fumes, causing a potentially explosive environment.
32. There is risk of mismatching the diameter of the shaft of mounted point and that of the collet.
33. Excessive vibration levels may due to improper mounting or damaged insert tool.
34. Attention shall be paid so that maximum permissible pressure is not exceeded. Preferably a pressure regulator can be used to control the pressure of the air being supplied to the die grinder.
35. There is a running on of the rotary inserted tool after the start and stop device has been released.
36. There is risk of drawing in of long hair, loose clothing.
37. There is risk that stored gas or fluid energy may cause.
38. There is risk of a whipping compressed air hose.

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 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 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. Personal protective safety glasses shall be used, suitable gloves and protective clothing are recommended
8. A rotary file shall not be operated at a speed exceeding the rated speed.
9. The maximum operating speed recommended by the rotary die grinder manufacturer shall equal or exceed the rated speed marked on the tool.

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 die grinder, 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 the die grinder 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 die grinder 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. This die grinder 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 die grinders 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 die grinder 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 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. Operate and maintain the die grinder 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 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 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:

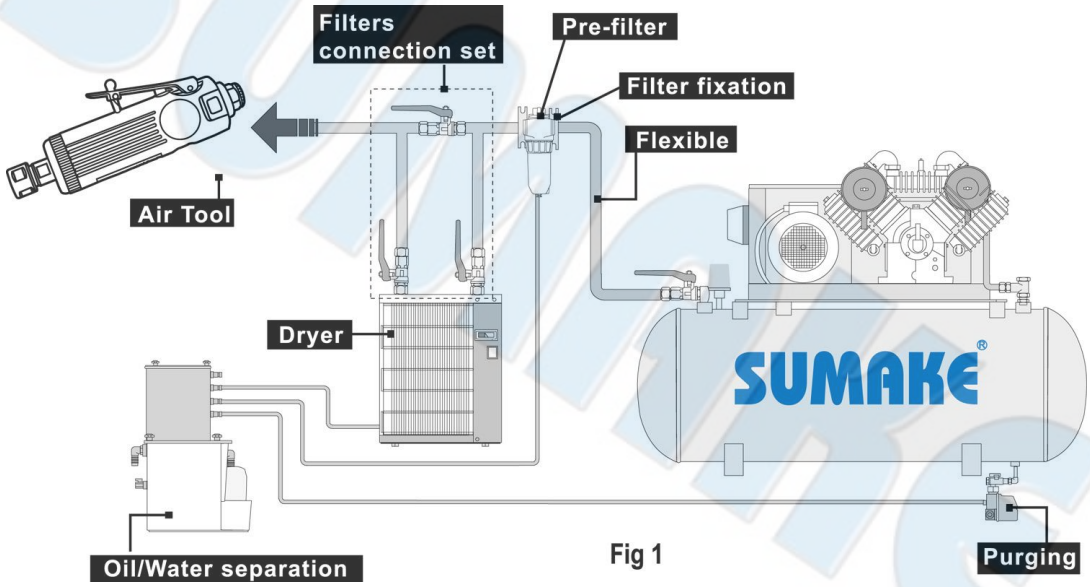


Fig 1

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.

