

OPERATION INSTRUCTIONS

SPECIFICATION:

- Fluid orifice ... □ 1.3mm □ 1.4mm □ 1.7mm □ 1.9mm □ 2.1mm □ 2.5mm
- Pressure required 10 – 28 psi
- Air Consumption HVLP 165 – 280 L/min
- Air Consumption MIDDLE PRESSURE 150 – 270 L/min
- Air Connection 1/4" NPS(M)

FEATURES:

- ▲ Fast working speed and wide fan pattern.
- ▲ High transfer efficiency means reduced spray mist.
- ▲ Stainless steel needle and fluid tip allow use with water borne materials.
- ▲ Significant reduction in operating cost.

Cause

1. Foreign substances between fluid nozzle and fluid needle prevent sealing.
2. Self tensioning needle sealing damaged or lost.
3. Horn air holes or air circuit clogged.
4. Dirt on fluid needle tip or air outlet.
5. Too little material in cup, fluid nozzle not tight, needle sealing damaged, nozzle set dirty or damaged.
6. Atomization air flows through the paint channel to the cup. The paint nozzle is not tight enough. Air nozzle is not completely screwed, the air net clogged and the seat is defective or nozzle insert is damaged.

Repair

1. Clean fluid needle and fluid nozzle in thinner or use new fluid nozzle.
2. Replace needle sealing.
3. Soak in thinner, after wards clean with nozzle-cleaning needle.
4. Turn air nozzle by 180 degrees. If defective pattern remains, clean paint outlet in air nozzle.
5. Refill material, tighten parts, if necessary clean or replace parts.
6. Tighten parts accordingly, clean or replace.

Operation:

1. Starting

- a. Use spanner to tighten the nozzle.
- b. Check for correct tightening of stuffing box to avoid any air leakage.
- c. Air hose should be blow out before fitting with the air connection.
- d. Before using this gun, please make sure that it is carefully brushed w/solvent

2. Adjustment of the jet width

To adjust jet width, rotate the stepless adjuster. The spray pattern can be altered from flat to round spray as required.

3. Air quantity control

To set the air to material ratio, adjust the stepless air micrometer. While gun is in operation, never dismantle hollow screw for removal of micrometer by hexagon socket screw key.

4. Exchange of nozzle set

When changing to another nozzle size, make sure that the complete nozzle set is exchanged. A set comprises of air cap, Paint needle and paint nozzle. Insert paint nozzle before putting in paint needle.

5. Exchange of the self tensioning sealings

The needle seal is effected by a teflon seal and a needle packing with self-tensioning compression spring. To change the packing please use the socket spanner provided.






6. Cleaning and gun care

- a. Flush gun thoroughly with solvent.
- b. Clean air nozzle with brush. Do not place the gun into solvent.
- c. Clogged holes should never be cleaned with improper objects, at the smallest amount of damage may badly influence the spray pattern.
- d. Slightly oil movable parts.

Trouble

1. Gun leaks from fluid nozzle.
2. Paint emerges from fluid-needle sealing.
3. Spray pattern in sickle shape.
4. Drop-like or oval shaped pattern.
5. Paint spray flutters.
6. Material hobbies or “boils” in paint cup.

Trouble shooting spray gun test patterns

FORM	CAUSE	CORRECTION
 RIGHT	Correct normal pattern	No correction necessary
 WRONG Heavy top or bottom pattern	1. Dirty or damaged air cap. 2. Dirty or damaged fluid tip.	1. Rotate air cap 180° A. If pattern following air cap problem is in air cap. Clean and inspect. If pattern is not corrected, replacement is necessary B. If pattern doesn't follow the air cap, the problem is with the fluid tip. Clean and inspect the tip for dried paint, dirt or damage. If the pattern is not corrected, replacement is necessary.
 WRONG Split pattern	Pressure too high for material viscosity being sprayed.	1. Reduce air pressure. 2. Increase material viscosity. 3. Pattern may also be corrected by narrowing fan size with spray width adjuster control knob.
 WRONG	1. Dirty or distorted air horn holes. 2. One of the air horn holes completely obstructed.	1. Rotate air cap 180° If pattern follows air cap, the problem is in air cap, Clean and inspect the horn holes. If horn holes are distorted, replacement is necessary.
 WRONG Gun splitting	Air getting into paint stream somewhere. Example: Same symptoms as a cup running out paint.	1. Check and tighten fluid needle packing nut. 2. Tighten fluid tip. 3. Check fluid tip seat for damage. 4. Check for poor gun to cap seating. 5. Check that cup is correctly fastened on the gun.
AIR BACK PRESSURING INTO CUP	Excessive air blowing back into cup.	1. Tighten fluid tip. 2. Check fluid tip seat. 3. Check for damaged fluid seat on tip or seat on gun head.

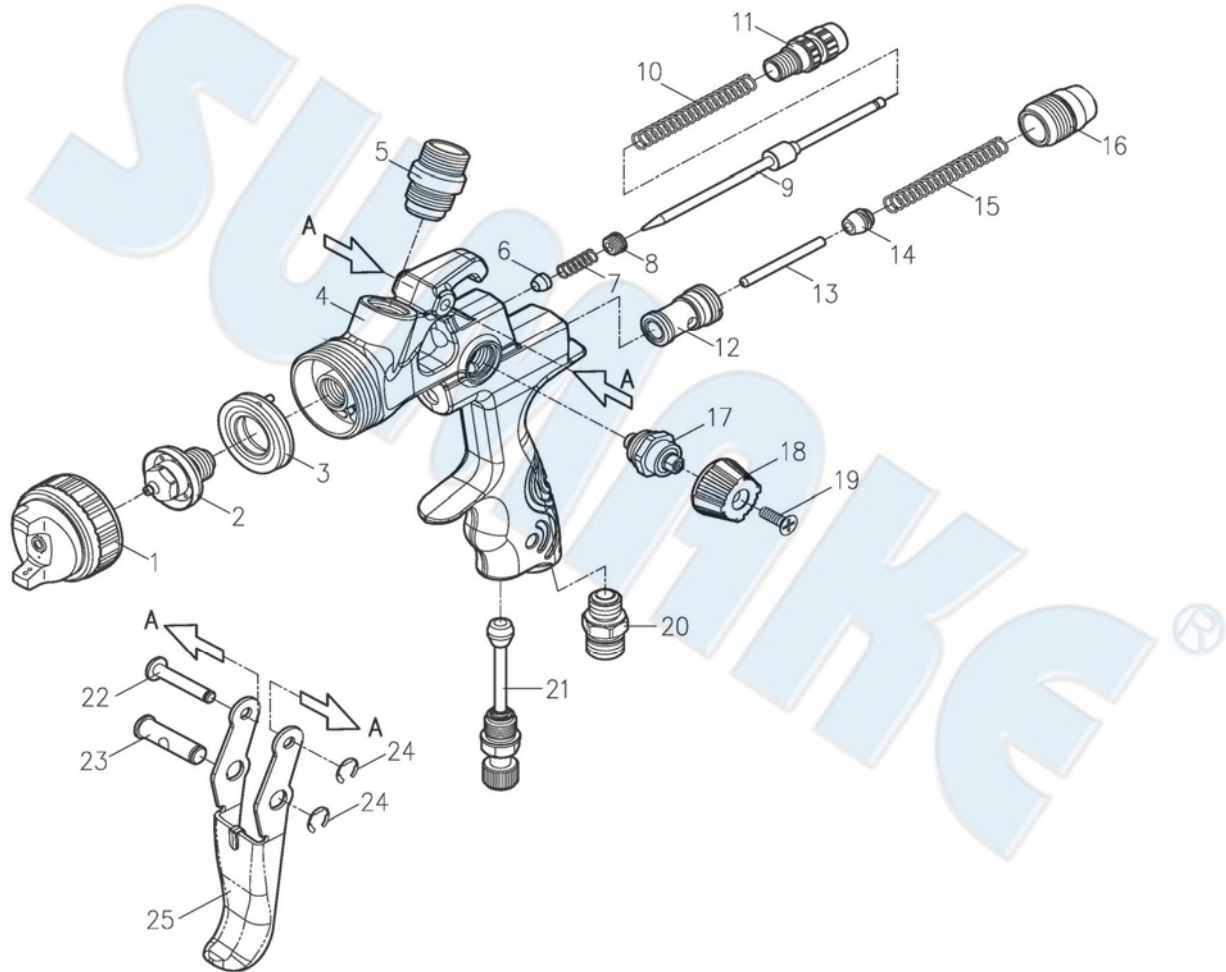


SS-1421HG

HVLP GRAVITY TYPE AIR SPRAY GUN W/ 600CC PLASTIC CUP

SS-1424RG

MIDDLE PRESSURE GRAVITY TYPE AIR SPRAY GUN W/ 600CC PLASTIC CUP



PARTS LIST

No.	Parts No.	Description	Q'ty
1	SS1421-01A	Air Nozzle Cap Set -1.3	1
	SS1421-01B	Air Nozzle Cap Set -1.4	1
	SS1421-01C	Air Nozzle Cap Set -1.7	1
	SS1421-01D	Air Nozzle Cap Set -1.9	1
	SS1421-01E	Air Nozzle Cap Set -2.1	1
	SS1421-01F	Air Nozzle Cap Set -2.5	1
2	SS1421-02A	Fluid Nozzle -1.3	1
	SS1421-02B	Fluid Nozzle -1.4	1
	SS1421-02C	Fluid Nozzle -1.7	1
	SS1421-02D	Fluid Nozzle -1.9	1
	SS1421-02E	Fluid Nozzle -2.1	1
	SS1421-02F	Fluid Nozzle -2.5	1
3	SS1421-03	Distribute Seat	1
4	SS1421-04	Gun Body -Gravity Type [SS-1421HG]	1
	SS1424-04	Gun Body -Pressure Type [SS-1424RG]	1
5	SS1421-05	1/4" Fluid Inlet (600C.C.)	1
6	SS1421-06	Needle Packing	1
7	SS1421-07	Spring	1
8	SS1421-08	Needle Packing Seat	1
9	SS1421-09A	Fluid Needle Assembly -1.3	1
	SS1421-09B	Fluid Needle Assembly -1.4	1
9	SS1421-09C	Fluid Needle Assembly -1.7	1
	SS1421-09D	Fluid Needle Assembly -1.9	1
	SS1421-09E	Fluid Needle Assembly -2.0	1
	SS1421-09F	Fluid Needle Assembly -2.5	1
10	SS1421-10	Fluid Needle Spring	1
11	SS1421-11	Control Knob Set	1
12	SS1421-12	Air Valve Seat	1
13	SS1421-13	Air Valve Shaft	1
14	SS1421-14	Air Valve Gasket	1
15	SS1421-15	Spring	1
16	SS1421-16	Screw	1
17	SS1421-17	Fan Control Assembly	1
18	SS1421-18	Control Knob	1
19	SS1421-19	Screw	1
20	SS1421-20	Air Inlet	1
21	SS1421-21	Air Control Set	1
22	SS1421-22	Pin	1
23	SS1421-23	Hollow Pin	1
24	SS1421-24	E Stopper	2
25	SS1421-25	Trigger	1



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 may 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. Failure to do so can result in serious bodily injury.
22. Only qualified and trained operators should install, adjust or use the tool.
23. Do not modify the 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 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 tool from the energy source when changing inserted tool or accessories.
2. Failure of the accessories 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.

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 tool is fixed to suspension device make sure that the fixation is secure.

Safety precautions for repetitive motions hazards

1. When using the tool, 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. 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 accessory.
2. Only use sizes and types of accessories and consumables that are recommended by the 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.
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 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.

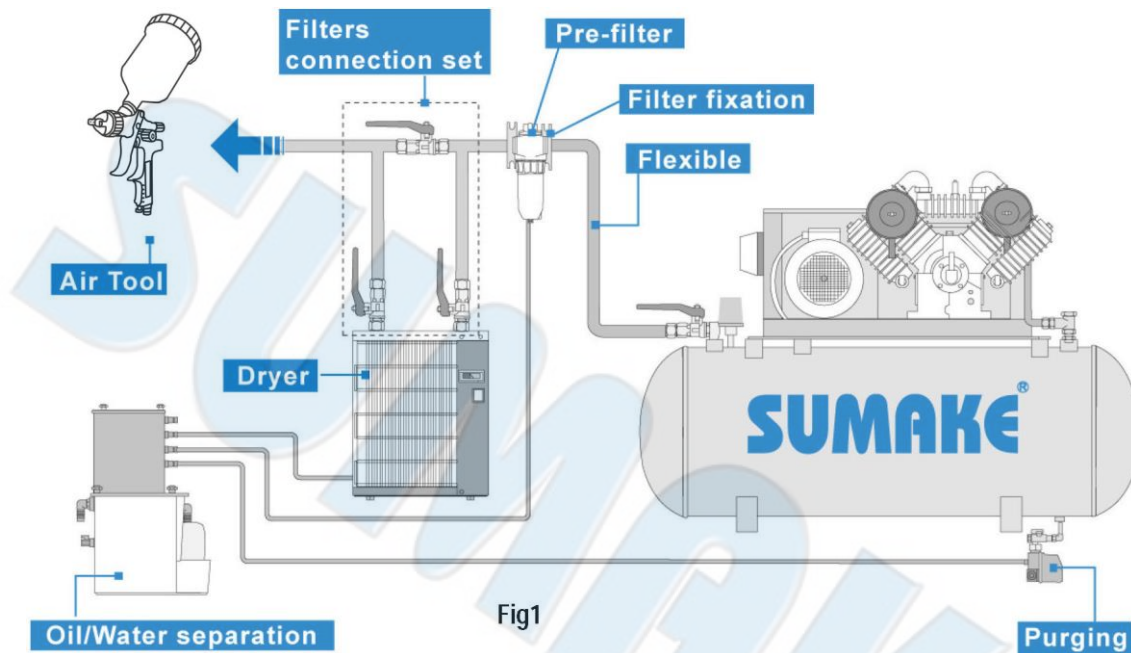
Additional safety instructions for pneumatic power tools

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 spraying air or liquid 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:



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 please refer specification indication. 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.

