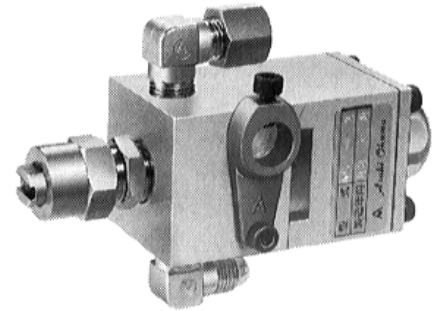


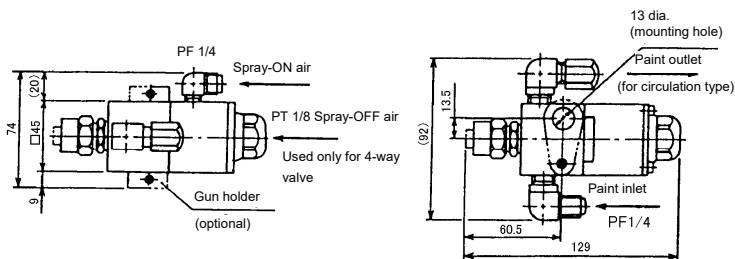
Operation and Maintenance Manual

Automatic Airless Spray Gun

AG Series



■ Dimensions: AG series gun



| AG Series Specifications | |
|--------------------------|---|
| Structure | Needle type |
| Paint pressure | 0 – 25 MPa |
| Weight | Aluminum type: 650g Stainless steel type: 1,200g |
| Operating method | 3-way/4-way valve interchangeably used |
| Operating air pressure | 0.3 - 0.6 MPa |



This manual contains important information on warnings and cautions. Read the manual thoroughly before using the airless automatic gun, and follow the instructions.

The pump body should be grounded.

Always keep the manual handy until such time as the equipment is no longer being used. If your manual is lost or worn badly, do not hesitate to contact our agency which is closest to you, or the Asahi Sunac Corporation, directly, and ask us to send you a new one.

Thank you for buying our product, Automatic Airless Spray Gun.

Please pay particular attention to major specifications, warnings and precautions, including prohibited items.

Use the equipment appropriately and with care, following the instructions.

WARNING

High-pressure paint sprayed from a spray gun may cause injury to human body and skin if it comes into contact.

- ⊙ Use this gun with paint pressure at 25MPa or lower.
- ⊙ Never point the gun nozzle toward yourself or other people around you. Also never block the nozzle of the gun with an object that you holds with your hand.

When you get sprayed by the high-pressure paint spray, immediately seek a doctor specialized in such cases. Then tell the doctor the details, such as the paint type used.

- ⊙ Never try to remove the hose or disassembly the spray gun without removing the air pressure.
- ⊙ Be sure to wear a mask and protective goggles before spraying. These can prevent inhaling toxic gas such as an organic solvent and protect your eyes from the solvent coming into your eyes.
- ⊙ To prevent hazards associated with static electricity, ground all the pumps, painting objects, painting equipment and components that are used in the area. If the equipment is not grounded, static electricity is generated due to flowing of the paint, sparks occur, thereby electrical shock or fire may result.

<<How to release air pressure>>

- ① Shut-off the air source (or power source/engine) and stop the pump.
- ② Open the drain valve and remove the whole air pressure from the system.
- ③ Detach the nozzle, turn ON the spray signal, and make sure that the air pressure is removed completely.

Operating Conditions

① Operating principle

The automatic spray gun is air-operated. When compressed air is fed into the air cylinder of automatic gun, its piston and needle, which play the role of trigger, are pulled, thereby initiating paint-spraying.

② Operating air

Pressure: 0.3MPa or more but no greater than 0.7MPa.
Please install an air-filter/oiler (lubricator).

③ Solenoid valve

Use a 2-position, 3-way valve (normally closed type) with effective cross section of 15mm² or greater.

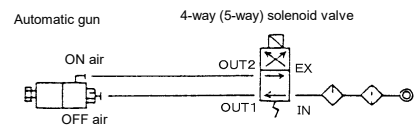
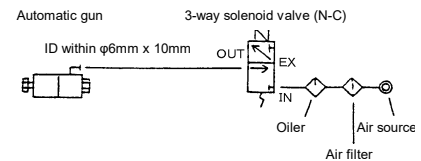
④ Hose length

Keep the length of hose between solenoid valve and spray gun as short as possible. (Typically, hose length should be kept within 10 meters when the I.D. of hose is 6mm.)

When it is too long, it will take a long time for spraying to start after the solenoid valve is energized.

⑤ Use a 4-way valve in the following cases:

1. When paint pressure exceeds 20Mpa.
2. When paint is tacky with coarse pigment.
3. Synchronized stopping of spraying is required among multiple automatic guns.



CAUTION

When paint pressure exceeds 20Mpa, only AG-6 and AG-7 (large bore diameter types) are allowed to set the operating air pressure to 0.35 – 0.6MPa.

How to Use

- ① Securely connect a paint hose and set paint pressure to 2 - 3MPa at painting equipment.
- ② Before attaching a nozzle, exhaust any foreign materials in system passages by blowing them out into an empty can.
- ③ Select a nozzle that suits best to your application and attach it to the tip of the gun. Do not forget to attach gasket (16).
- ④ Conduct trial spraying and adjust the painting equipment to the minimum required pressure.
Usually, a 10 - 15MPa paint pressure will give you satisfactory results.

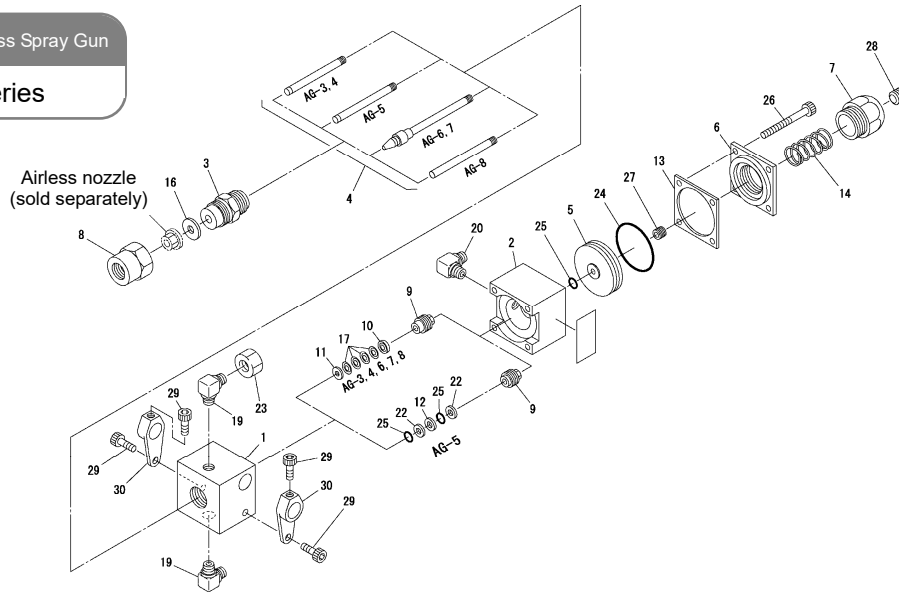
CAUTION

- When preparing paints, carefully read paint and solvent instructions so that blending may be made properly.
- Always keep the nozzle clean. When paint job is done, take the nozzle out and clean, each time.
- As for the gun, never put the gun entirely into thinner. If you do so, equipment failure may result due to adverse effect of thinner upon the gun, which removes lubricant and deteriorates packings, as a result.
- For the paint hose, use a metal-blade coated or grounded type.

Exploded Diagram and Names of Parts

Automatic Airless Spray Gun

AG series



| No. | Part Name | Qty | Part numbers by type/ () = Part number □=Stainless specification | | | | | |
|----------------|-----------------------|--------|---|----------------|----------------|----------------|----------------|----------------|
| | | | AG-3 (1383) | AG-4 (1384) | AG-5 (1385) | AG-6 (1386) | AG-7 (1387) | AG-8 (1388) |
| 1 | Body | 1 | 1383-001 | 1383-101 | 1385-001 | 1383-001 | 1383-101 | |
| 2 | Cylinder | 1 | 1381-002 | 1381-102 | 1381-002 | | 1381-102 | |
| *♦3 | Seat | 1 | 1381-003 | | 1385-003 | 1386-003 | | 1388-003 |
| *♦4 | Needle | 1 | 1381-004 | | 1385-004 | 1386-004 | | 1388-004 |
| 5 | Piston | 1 | 1381-005 | | | | | |
| 6 | End plate | 1 | 1381-006 | | | 1381-106 | | 1381-006 |
| 7 | End cap | 1 | 1381-007 | | | | | |
| 8 | Retaining nut | 1 | 1217-102 | | | | | |
| 9 | Packing adjuster | 1 | 1381-009 | | 1385-009 | 1381-009 | | |
| 10 | Packing retainer | 1 | 1203-124 | 1203-224 | - | 1203-124 | 1203-224 | 1203-224 |
| 11 | Packing retainer | 1 | 1203-125 | 1203-225 | - | 1203-125 | 1203-225 | 1203-225 |
| 12 | Spacer | 1 | - | - | 1385-010 | - | - | - |
| 13 | Gasket | 1 | 1381-013 | | | | | |
| 14 | Spring | 1 | 1381-014 | | | | | |
| *16 | Gasket | 1 | 146-3002 | | | | | |
| *17 | V-packing | 4 | V850320105 | | - | V850320105 | | |
| 19 | L-shaped hose joint | 2 | 249-2202 | 249-4202 | 249-2202 | | 249-4202 | |
| 20 | Quick fitting | 1 | 384-0801 | | | | | |
| *22 | Back-up ring | 2 | - | - | 106-2003 | - | - | - |
| 23 | Plug | 1 | 278-2002 | 278-4002 | 278-2002 | | 278-4002 | |
| *24 | O-ring | 1 | 101-6034 | | | | | |
| *25 | O-ring | (*2) 3 | 101-6003 | | | | | |
| 26 | Hex. socket bolt | 4 | 03-80545 | | | | | |
| 27 | Hex. socket set screw | 1 | 86-50506 | | | | | |
| 28 | Leak plug | 1 | 1381-030 | | | | | |
| Optional parts | | | | | | | | |
| 29 | Hex. socket bolt | 4 | 03-80510 | | | | | |
| 30 | Gun holder | 2 | 1381-028 | | | | | |

* As for the parts marked with an asterisk (*), it is recommended to purchase enough amount as spare parts.

*2 : AG5 needs three o-rings, other series needs one o-ring.

♦The replacement of Seat (3) and Needle (4) simultaneously is recommended because both of these are consumable parts.

■ Accessory tool

| No. | Part No. | Part Name | Qty | Remarks |
|-----|----------|------------------|-----|---------|
| 1 | 3511-201 | Dedicated wrench | 1 | |

Note: Because of possible modifications, such as improvements, changes may be made without advance notice, to both the configuration and the specifications of this equipment.

Troubleshooting

*Numbers in parentheses correspond to those indicated in the exploded diagram.

| Symptom | Probable cause | Remedy |
|--|--|---|
| Does not spray | • No operating air, or low pressure | • Supply operating air pressure that is 0.3MPa or more |
| | • Abnormality in solenoid valve or electrical failure | • Inspect, repair, replace, as required |
| | • Packing adjuster (9) tightened too much | • Loosen a little *1 |
| | • Fixation of needle (4) or O-ring (25) due to paint leakage | • Take it apart and clean. Replace packing. |
| | • Wear or breakage of O-rings (24, 25) | • Replace O-ring, as required |
| | • Out of grease in air cylinder | • Grease up |
| | • No paint feeding • Clogging of nozzle | • Inspect the painting equipment • Remove the object with nozzle cleaner |
| Paint leakage | • Loosen packing adjuster (9) | • Re-tighten *2 |
| | • Worn V-packing (17), or breakage of O-ring or back-up rings (21, 22) | • Replace consumable parts |
| | • Wear of needle (4) | • Replace needle |
| Poor atomization (drops at the end of spraying, or does not stop) | • Packing adjuster (9) tightened too much | • Loosen a little *1 |
| | • Fixation of needle (4) or O-ring (25) due to paint leakage | • Take it apart and clean. Replace packing |
| | • Out of grease in air cylinder | • Grease up |
| | • Pinching of foreign matter between needle(4)and seat (3) | • Take it apart and clean. |
| | • Wear or damage on the contacting surface between needle (4) and seat (3) | • Replace needle or seat, as required |

*1, 2: Packing cannot be tightened up in AG-5. Packing adjuster (9) should be tightened completely, and in cases of paint leakage, replace V-packing or O-ring as required.

List of AG Series

(Types marked with is made of stainless steel.)

| Type \ Item | Classification | Features | Application |
|-------------------------------|---------------------------------------|--|--|
| AG-3 | General-purpose gun | Good cleanability of inside of the gun | Oil-based zinc enrich paint Multi-component mixing paint Sedimental paint, re-coloring |
| <input type="checkbox"/> AG-4 | | | |
| AG-5 | Gun dedicated to zinc enrich painting | Designed for zinc enrich coating | Water-based zinc enrich paint (not applicable to solvent type paints) |
| AG-6 | Large diameter nozzle gun | Large diameter nozzle (φ4) | Large discharge volume, Highly viscous paints |
| <input type="checkbox"/> AG-7 | | | |
| <input type="checkbox"/> AG-8 | Ceramic sheet gun | Ceramic sheet All-teflon packing | Acids, alkali, chemicals, foods |

- When a transfer of title of this equipment takes place, please see to it that this manual is handed over to the new owner.
- This equipment is manufactured in compliance with the Laws and Regulations of Japan. Therefore, use of this equipment is limited to Japan only. In the rare eventuality of this equipment being used outside Japan, compliance with the safety standards of the relevant countries is of course mandatory.

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