

# INSTRUCTION MANUAL

## Spray Gun W-400

和文取組は、裏面にあります

### Important

This manual contains **IMPORTANT WARNINGS** and **INSTRUCTIONS**.  
 Equipment in this manual is exclusively for painting purposes.  
 Do not use for other purposes.

The operator shall be fully conversant with the requirements stated in this instruction manual including important warnings, cautions and operation and correct handling.  
 Read and understand the instruction manual, before use and retain for reference.

CE II 2G X

This Anest-Iwata spray gun kit complies to ATEX regulations 04/02EC, Protection level X marking.  
 Any static electricity discharge from the spray gun is to be diverted to the grounded fire conductive air hose as stipulated.

Be sure to observe warnings and cautions in this instruction manual. If not, it can cause paint ejection and serious bodily injury by drawing organic solvent. Be sure to observe following  $\Delta$  marked items which are especially important.

- $\Delta$  **WARNING** Indicates a potentially hazardous situation which, if not avoided, may result in serious injury or loss of life.
- $\Delta$  **CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or property damage.
- Important** Indicates notes which we ask you to observe. The safety precautions in this instruction manual are the minimum necessary conditions. Follow national and local regulations regarding the prevention, electricity and safety as well as your own company regulations.

### Important specifications

|                  |                                     |
|------------------|-------------------------------------|
| Max. Pressure    | 0.69MPa / 8.8bar / 88PSI            |
| Nozzle level     | 79.7dB(A)                           |
| Spray condition  | Recommended                         |
| Measuring point  | 1m backwards from gun, 1.6 m height |
| Max. Temperature | 5°C ~ 40°C                          |
| Atmosphere       | 5°C ~ 43°C                          |
| Air - Fluid      |                                     |

### Main specifications

| Model      | Type of head | Nozzle orifice diameter (mm) | Air cap size | Recommended condition          |                      |  |                    | Air fluid connection | Mass g (lbs)      |
|------------|--------------|------------------------------|--------------|--------------------------------|----------------------|--|--------------------|----------------------|-------------------|
|            |              |                              |              | ※1 Airbrushing MPa (bar / PSI) | Fluid output min/max | Air consumption l/min (dm <sup>3</sup> ) | Paint width mm(lb) |                      |                   |
| W-400-122G |              | 1.2 (0.047)                  |              | 0.2 (2.0/29)                   | 140                  | 260 (9.9)                                | 175 (6.9)          | 150 (5.9)            |                   |
|            |              |                              |              | 0.26 (2.0/43)                  | 160                  | 370 (13.1)                               | 250 (9.1)          | 250 (9.9)            |                   |
| -122G      |              | 1.3 (0.051)                  | LV2          | 0.2 (2.0/29)                   | 180                  | 300 (10.9)                               | 225 (8.6)          | 150 (5.9)            |                   |
|            |              |                              |              | 0.26 (2.0/43)                  | 200                  | 370 (13.1)                               | 300 (11.8)         | 250 (9.9)            |                   |
| -142G      | Gravity      | 1.4 (0.055)                  |              | 0.2 (2.0/29)                   | 210                  | 280 (9.9)                                | 225 (10.0)         | 200 (7.9)            | 1/4 (M4)          |
|            |              |                              |              | 0.26 (2.0/43)                  | 255                  | 370 (13.1)                               | 320 (12.6)         | 250 (9.9)            | M18 x 1.5 (Paint) |
| -162G      |              | 1.6 (0.063)                  |              | 0.2 (2.0/29)                   | 240                  | 280 (9.9)                                | 275 (10.9)         | 200 (7.9)            |                   |
|            |              |                              |              | 0.26 (2.0/43)                  | 310                  | 370 (13.1)                               | 340 (13.4)         | 250 (9.9)            |                   |
| -182G      |              | 1.8 (0.071)                  | LV1          | 0.2 (2.0/29)                   | 320                  | 280 (10.2)                               | 280 (10.2)         | 200 (7.9)            |                   |
|            |              |                              |              | 0.26 (2.0/43)                  | 400                  | 300 (11.4)                               | 320 (12.6)         | 250 (9.9)            |                   |
| -251G      |              | 2.5 (0.098)                  | W1           | 0.26 (2.0/43)                  | 500                  | 380 (12.7)                               | 340 (13.4)         | 250 (9.9)            |                   |

※1 Airbrushing air pressure means air pressure at gun inlet when trigger is pulled and air flows.

### Safety precautions

#### WARNING

##### Fire and explosion

- Spark and open flames are strictly prohibited.  
Parts can be highly flammable and can cause fire.  
Avoid any ignition sources such as smoking, open flames, electrical goods, etc.
- Never use the following **HALOGENATED HYDRO-CARBON SOLVENTS** which can cause cracks or desiccation on gun body (aluminum) by chemical reaction.  
Unsuitable solvents: methyl chloride, dichloromethane, 1,2-dichloroethane, carbon tetrachloride, trichloroethylene, 1,1,1-trichloroethane  
(Be sure that all fluids and solvents are compatible with gun parts.)  
We are ready to supply a material list used in the product.
- Securely ground spray gun by using air hose with built-in ground wire.  
Ground wire: Less than 1M $\Omega$ . Check the earth stability periodically.  
If not, insufficient grounding can cause fire and explosion due to static electric sparking.

##### Improper use of equipment

- Never point gun toward people or animal.  
If done, it can cause inflammation of eyes and skin or bodily injury.
- Never exceed maximum operating pressure and maximum operating temperature.  
Be sure to release air and fluid pressure before cleaning, disassembling or servicing.  
If not, remaining pressure can cause bodily injury due to improper operation or scattering cleaning liquid in order to release pressure. Just stop supply of compressed air, fluid and hammer to spray gun. Then remove trigger toward you.
- Tip of fluid needle set has a sharp point.  
Do not touch the tip of fluid needle during maintenance for the protection of the human body.

##### Protection of human body

- Use in a well-ventilated site by using spray booth.  
If not, poor ventilation can cause organic solvent poisoning and catch fire.
- Always wear protective gear (safety glasses, mask, gloves).  
If not, cleaning liquid, etc. can cause inflammation of eyes and skin.  
If you feel something wrong with eyes or skin, immediately see a doctor.
- Wear earplugs if necessary.  
Noise level can exceed 80dB(A), depending on operating conditions and painting site.  
If operators pull the trigger many times during operation, it may cause carpal tunnel syndrome.  
Be sure to take a rest if you feel tired.

##### Other precautions

- Never alter this spray gun if done, it can cause insufficient performance and failure.
- Enter working areas of other equipment (robots, reciprocators, etc.) after machines are turned off.  
If not, contact with them can cause injury.
- Never spray foods or chemicals through this gun.  
If done, it can cause accident by ingestion of fluid passages or adversely affect health by mixed foreign matter.
- If something goes wrong, immediately stop operation and find the cause. Do not use again until you have solved the problem.

#### How to connect

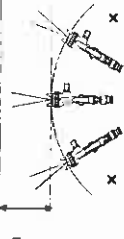
#### CAUTION

- Use clean air filtered through air dryer and air filter. \*\* If not, dirty air can cause painting failure.
- If you use this gun for the first time after purchasing, clean fluid passages spraying thinner and remove rust preventive oil.  
If not, remaining preventive oil can cause painting failure such as fish eyes.
- Firmly fit hose or container to spray gun. \*\* If not, disconnection of hose and drop of container can cause bodily injury.

- Job1. Connect an air hose to air nipple lightly.
- Job2. Connect an applicable cup, PCG-SP-M (Option), to fluid nipple tightly.
- Job3. Flush the gun fluid passage with a compatible solvent.
- Job4. Pour paint into container, test spray and adjust fluid output as well as pattern width.

## ■ How to operate

Suggested air pressure is 2.0 to 3.0bar (29 to 43 PSI). Recommended paint viscosity differs according to paint property and painting conditions. 15 to 23 sec. / Ford cup#4 is recommendable. Keep fluid output as small as possible to the extent that the job will not be hindered. It will lead to better finishing with fine atomization. Set the spray distance from the gun to the work piece as near as possible within the range of 100-250 mm (3.9-8.8 in).



## ■ Maintenance and inspection



### WARNING

- First release air and pressure fully according to item No. 3 of "Improper use of equipment", or WARNING on page 2.
- Tip of fluid needle set has a sharp point. Do not touch the tip of needle valve at the maintenance for production of the human body.
- Be careful not to damage the tip of fluid nozzle or must not put your hand on it.
- Only an experienced person who is fully conversant with the equipment can do maintenance and inspection.



### CAUTION

- Never use commercial or other parts instead of ANEST IWATA original spare parts.
- Never immerse the whole gun into liquid such as thinner.
- Never soak air cap set in solvent for extended period even if cleaning. It may cause defective pattern.
- Never damage holes of air cap fluid nozzle and fluid needle.

#### Step-by-step procedure

1. Pour remaining paint to another container. Clean fluid passages and air cap set. Spray a small amount of thinner to clean fluid passages.
2. Clean each section with brush soaked with thinner and wipe out with vesco cloth.
3. Before disassembly, fully clean fluid passages.
  - (1) Remove fluid nozzle.
  - (2) Disassemble fluid nozzle. You do not need to remove fluid set, guide set from gun body. Remove fluid set, knob and fluid needle spring, and then pull out fluid needle set from back of fluid set, guide set.
4. When you want to adjust fluid nozzle packing set, first tighten it by hand while fluid nozzle set remains inserted. Then, tighten it further about 1/8 turn (90-degree) by spinner. When you remove nozzle packing set, do not leave plastic piece of nozzle packing set in the gun body.
  - 5. In order to assemble air valve, first assemble air valve & air valve spring & fluid set, guide set together. Next, insert fluid needle set into fluid set, guide set, then fit it to gun body set and screw fluid set, guide set.
  - 6. Turn pattern adj. knob or air set, knob counterclockwise to fully open. And then tighten pattern adj. set or air set.

#### Where to inspect

1. Each hole passage of air cap and fluid nozzle.
2. Packing and O ring.
3. Leakage from seal section between fluid nozzle and fluid needle set.

## ■ Parts list

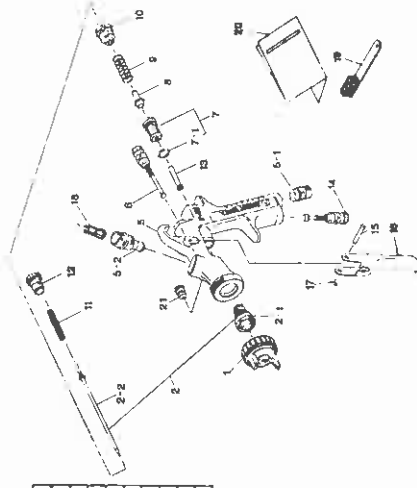
When ordering parts, specify gun's model, part name with ref.No. and marked No. of air cap set, fluid nozzle and fluid needle. When replacing fluid nozzle or fluid needle for pressure feed application, please order nozzle needle set.

| Fluid nozzle-fluid needle set combination |         |
|---|---------|
| Office gun(model)                         | Mark    |
| φ1.0 (0.039)                              | W200/10 |
| φ1.2 (0.047)                              | W200/12 |
| φ1.3 (0.051)                              | W400/13 |
| φ1.4 (0.055)                              | W400/14 |
| φ1.6 (0.063)                              | W400/16 |
| φ1.8 (0.071)                              | W200/18 |
| φ2.5 (0.098)                              | W200/25 |

## Parts list

| No. | Description                   | Qty |
|-----|-------------------------------|-----|
| 1   | Air cap set                   | 1   |
| 2   | Fluid nozzle-fluid needle set | 1   |
| 2-1 | Fluid nozzle                  | 1   |
| 2-2 | Fluid needle set              | 1   |
| 3   | Nozzle packing set            | 1   |
| 4   | Body set                      | 1   |
| 5   | Air valve                     | 1   |
| 5-1 | Air valve spring              | 1   |
| 5-2 | Fluid needle                  | 1   |
| 6   | Pattern adj. set              | 1   |
| 7   | Air valve seal set            | 1   |
| 7-1 | Air valve seal set            | 1   |
| 8   | Air valve                     | 1   |
| 9   | Air valve spring              | 1   |
| 10  | Fluid set, guide              | 1   |
| 11  | Fluid needle spring           | 1   |

◆ Marked parts are measurable parts.



## ■ Troubleshooting

| Spray Pattern | Problems  | Remedies   |
|---------------|---|--|
|               | 1. Air enters between fluid nozzle and tapered seat of gun body.<br>2. Air is drawn from fluid needle packing set.<br>3. Air enters at fluid container fitting nut or fluid hose joint. | 1. Remove fluid nozzle to clean seal. If it is damaged, replace nozzle.<br>2. Tighten fluid needle packing.<br>3. Fully tighten joint section. |
|               | 1. Paint buildup on air cap partially clogs horn holes. Air pressure from both horns differs.   | 1. Remove obstruction from horn holes with stretched brush. But do not use metal objects to clean horn holes.                                  |
|               | 1. Paint buildup or damage on fluid nozzle circumference and air cap center.<br>2. Fluid nozzle is not properly fluid.  | 1. Remove obstructions. Replace if damaged.<br>2. Remove fluid nozzle and clean seal section.  |
|               | 1. Paint velocity too low.<br>2. Fluid output too high.   | 1. Add paint to increase viscosity.<br>2. Tighten fluid set, knob to reduce fluid output. Or turn pattern adj. valve set clockwise.            |
|               | 1. Paint velocity is too high.<br>2. Fluid output is too low.   | 1. Add thinner to reduce viscosity.<br>2. Turn fluid set valve knob counter-clockwise to increase fluid output.                                |
|               | 1. Fluid nozzle and fluid needle set are not sealed properly.<br>2. The first-stage travel of trigger (when only air discharges) decreases.<br>3. Paint buildup inside air cap set.     | 1. Clean or replace fluid nozzle and fluid needle set.<br>2. Replace fluid nozzle and fluid needle set.<br>3. Clean air cap set.               |

| Problem                         | Where it occurred | Parts to be checked           | Cause   |            |           | Remedy    |            |             |
|---------------------------------|-------------------|-------------------------------|---|------------|-----------|-----------|------------|-------------|
|                                 |                   |                               | R1: tighten   | R2: adjust | R3: clean | R1: clean | R2: adjust | R3: replace |
| Air leaks (from tip of air cap) | Air valve set     | Air valve                     | • Dirt or damage on seal                                      |            |           |           |            |             |
|                                 |                   | Air valve seal set            | • Dirt or damage on seal                                      |            |           |           |            |             |
|                                 |                   | O ring                        | • Wear on air valve spring                                    |            |           |           |            |             |
| Paint leaks                     | Fluid nozzle      | Fluid nozzle—fluid needle set | • Dirt, damage, wear on seal                                  |            |           |           |            |             |
|                                 |                   | Fluid nozzle—gun body         | • Loose fluid needle set, knob                                |            |           |           |            |             |
|                                 |                   | Fluid needle—packing set      | • Wear on needle spring                                       |            |           |           |            |             |
|                                 |                   | Fluid needle—packing set      | • Insufficient tightening                                     |            |           |           |            |             |
| Paint does not flow             | Tip of gun        | Needle packing set—needle set | • Needle does not return due to packing set too tight         |            |           |           |            |             |
|                                 |                   | Packing set                   | • Needle does not return due to paint buildup on fluid needle |            |           |           |            |             |
|                                 |                   | Fluid needle                  | • Wear  |            |           |           |            |             |
|                                 |                   | Tip hole of nozzle            | • Insufficient tightening                                     |            |           |           |            |             |
| Paint filter                    | Paint filter      | Tip hole of nozzle            | • Fluid set, knob   |            |           |           |            |             |
|                                 |                   | Paint filter                  | • Insufficient opening  |            |           |           |            |             |



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