

# INSTRUCTION MANUAL

## Spray Gun W-300

### 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.

Be sure to observe warnings and cautions in this instruction manual.  
If not, it can cause **pain, eye irritation and serious bodily injury** by drawing organic solvent.  
Be sure to observe following **▲** marked items which are especially important.

<b>▲ WARNING</b>	Indicates a potentially hazardous situation which, if not avoided, may result in serious injury or loss of life.
<b>▲ CAUTION</b>	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or property damage.
<b>Important</b>	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	0.68 MPa / 9.8 bar / 98 PSI
Needs level	76.3 (B/A)
Size condition	Recommended
Measuring point	In tubed from 9A, 1.8 in. height
Max. temperature	5°C ~ 40°C
Air - Fluid	5°C ~ 43°C

### Main specifications

Model	Type of tool	Nozzle orifice φ mm (in)	Air cap size mark	Recommended condition				Air & fluid consumption l/min	Mass g (oz)
				*1 Atomizing air pressure MPa (bar/PSI)	Fluid output ml/min	Air consumption l/min (cfm)	Pattern width mm (in)		
W-300-081G	Gravity	0.8(0.031)	E1	0.2(2.028)	※2 55	7(0.23)	※2 100(3.9)	320 (0.70)	
W-300-101G		1.0(0.039)	K1	0.25(2.536)	※3 60	8(0.26)	※3 100(3.9)		
W-300-132G		1.3(0.051)	H2		※3 100	14(0.51)	※3 130(5.1)		
W-300-141G		1.4(0.055)	K1	※3 160	22(0.79)	※3 175(6.9)			
W-300-161G		1.6(0.063)	N1	※2 180	14(0.51)	※2 160(6.3)			
				※3 200	15(0.53)	※3 160(6.3)			

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

※2. Tested with 12 sec.ANK-2 automotive repair paint.

※3. Tested with 20 sec.ANK-2 automotive repair paint.

## Safety precautions

### WARNING

#### Fire and explosion

1. Sparks and open flames are strictly prohibited.  
Paints can be highly flammable and can cause fire.  
Avoid any ignition sources such as smoking, open flames, electrical goods, etc.
2. Never use the following HALOGENATED HYDROCARBON SOLVENTS which can cause cracks or dissolution 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)
3. Securely ground spray gun by using air hose with built-in ground wire.  
Ground wire: Less than 1 MΩ. Check the earth stability periodically.  
If not, insufficient grounding can cause fire and explosion due to static electric sparking.

#### Improper use of equipment

1. Never point gun toward people or animal, if done, it can cause inflammation of eyes and skin or bodily injury.
2. Never exceed maximum operating pressure and maximum operating Temperature.
3. Be sure to release air and fluid pressures 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, first stop supply of compressed air, fluid and thinner to spray gun.  
Then remove trigger toward you.
4. Tip of fluid needle set has a sharp point.  
Do not touch the tip of needle valve at the maintenance for the protection of the human body

#### Protection of human body

1. Use in a well-ventilated site by using spray booth.  
If not, poor ventilation can cause organic solvent poisoning and catch fire
2. 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.
3. Wear earplugs if necessary.  
Noise level can exceed 80dB(A), depending on operating conditions and painting site
4. If operators pull the trigger many times during operation, it may be caused by inflammation of a tendon and it should.  
Be sure to take a rest if you feel tired.

#### Other precautions

1. Never alter this spray gun.  
If done, it can cause insufficient performance and failure.
2. Enter working areas of other equipment (robots, reciprocators, etc.) after machines are turned off.  
If not, contact with them can cause injury.
3. Never spray foods or chemicals through this gun.  
If done, it can cause accident by corrosion of fluid passages or adversely affect health by mixed foreign matter.
4. 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 fix hose or container to spray gun. ... If not, disconnection of hose and drop of container can cause bodily injury.

Job01. Connect an air hose to air nipple tightly

Job02. Connect an applicable cap PCG-2P-2 (Option), to fluid nipple tightly.

Job03. Flush the gun fluid passage with a compatible solvent.

Job04. Pour paint into container, test spray and adjust fluid output as well as pattern width.

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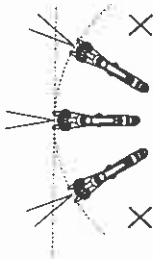
CE 01 2G X

This Anest-Iwata spray gun kit complies to ATEX regulations 94/9/EC.  
Protection level: II 2 G X.  
X marking: Suitable for use in Zones 1 and 2.  
Any static electricity discharge from the spray gun is to be diverted to the grounded the conductive air hose as stipulated.

## ■ HOW TO OPERATE

Suggested air pressure is 1.0 to 3.0 bar (14 to 43 PSI). Recommended paint viscosity differs according to paint property and painting conditions. 12 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 100-200 mm (3.9-7.9 in).

The gun should be held so that it is perpendicular to the surface of the work piece at all times. Then, the gun should move in a straight and horizontal line. Arcing the gun causes uneven painting.



## ■ Maintenance and inspection

### ⚠ WARNING

- First release air and pressure fully according to item No. 3 of "Important use of equipment" of 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 protection 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. Flow 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 waste cloth.
3. Before disassembly, fully clean fluid passages.
  - (1) Disassemble fluid nozzle.
  - (2) Disassemble fluid needle set. You do not need to remove fluid set, guide set from gun body. Remove fluid set, knob and fluid needle spring, and then put out fluid needle set from back of fluid set, guide set.
4. When you want to adjust fluid needle packing set, first tighten it by hand while fluid needle set remains inserted. Then tighten it further about 1/8 turn (90-degree) by spanner. When you remove needle packing set, do not leave plastic pieces of needle packing set in the gun body.
 

plastic pieces (white)
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 ad., knob or air ad., knob counterclockwise to fully open. And then tighten pattern ad. set or air ad. set.

#### Where to inspect

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

## ■ Parts list

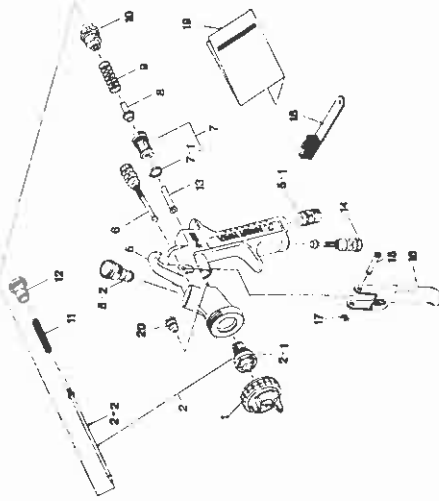
When ordering parts, specify gun's model, part name with ref. No. and marked No. of air cap set, fluid nozzle and fluid needle. When replacing fluid nozzle or fluid needle for pressure feed application, please order needle set.

Fluid nozzle		Fluid needle set	
Orifice	Mark	Mark	
φ 0.8 (0.031)	W101/08		30008
φ 1.0 (0.039)	W101/10		
φ 1.3 (0.051)	W101/13		
φ 1.4 (0.055)	W101/14		10013
φ 1.6 (0.063)	W101/16		

## Parts list

No.	Description	Qty.	City
1	Air cap set	1	
2	Fluid nozzle	1	
3	Fluid needle set	1	
4	Fluid nozzle	1	
5	Fluid nozzle	1	
6	Fluid needle set	1	
7	Fluid needle set	1	
8	Body set	1	
9	Air nipple	1	
10	Fluid nipple	1	
11	Pattern ad. set	1	
12	Air valve seat set	1	
13	O ring	1	
14	Air valve spring	1	
15	Fluid ad. guide	1	
16	Fluid needle spring	1	

◆ Marked parts are wearable parts.



## ■ Troubleshooting

Spray Pattern	Problem	Remedy
	1. Air enters between fluid nozzle and tapered seat of gun body. 2. Air is drawn from fluid needle packing set. 3. Air enters at fluid connector along nut or fluid hose joint.	1. Remove fluid nozzle to clean seat. If it is damaged, replace nozzle. 2. Tighten fluid needle packing. 3. Fully tighten joint section.
	1. Paint buildup on air cap partially chaps 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. 2. Remove fluid nozzle and clean seal section.
	1. Paint buildup or damage on fluid nozzle circumference and air cap orifice. 2. Fluid nozzle is not properly fitted.	1. Remove obstruction. Replace if damaged. 2. Remove fluid nozzle and clean seal section.
	1. Paint viscosity too low. 2. Fluid output too high.	1. Add paint to increase viscosity. 2. Tighten fluid set, knob to reduce fluid output. Or turn pattern ad., valve set clockwise.
	1. Paint viscosity is too high. 2. Fluid output is too low.	1. Add thinner to reduce viscosity. 2. Turn fluid adjustable knob counter-clockwise to increase fluid output.
	1. Fluid nozzle and fluid needle set are not sealed properly. 2. The first-stage level of trigger (when only air discharge) decreases. 3. Paint buildup inside air cap set.	1. Clean or replace fluid nozzle and fluid needle set. 2. Replace fluid nozzle and fluid needle set. 3. Clean air cap set.

Problem	Where it occurred	Parts to be checked	Cause				Remedy						
			R1	R2	R3	R4	R1	R2	R3	R4			
Air leaks (from tip of air cap)	Air valve set	Air valve											
		Air valve seat set											
		O ring											
Paint leaks	Fluid nozzle	Fluid nozzle ~ fluid needle set											
		Fluid nozzle ~ gun body											
		Fluid needle ~ packing set											
Paint does not flow	Fluid needle	Needle packing set ~ needle set											
		Packing seat											
		Fluid ad. knob											
Paint does not flow	Tip of gun	Tip hole of nozzle											
		Paint filter											



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