

INSTRUCTION MANUAL

Automatic Spray Guns Angled spray extension option WA-101 WA-1218 WA-0915 WA-0609

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 94/9/EC, Protection level : II 2 G X, Suitable for use in Zones 1 and 2. X marking : Any static electricity discharge from the spray gun is to be diverted to the grounded the 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  marked items which are especially important.

 WARNING	Indicates a potentially hazardous situation which, if not avoided, may result in serious injury or loss of life.
 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 fire prevention, electricity and safety as well as your own company regulations.

Important specifications

Max. Pressure	0. 68 MPa / 6. 8 bar / 99 PSI
Noise level	66. 8dB (A)
Spray condition	Recommended
Measuring point	1m backwards from gun, 1.6 m height
Max. Temperature	
Atmosphere	5°C~40°C
Air + Fluid	5°C~43°C

Main specifications

Model	Type of feed	Nozzle orifice φ mm (in)	Recommended condition							Air & fluid connection	Mass g (lbs)
			※1Atomizing air pressure MPa (bar /PSI)	Fluid output ml/min	Air consumption l/min (cfm)	※2 Pattern width	Pattern diameter mm(in)	Pipe Length cm (in)	Inner dia. of work piece φ mm (in)		
WA-1218	Gravity or Pressure	0.6 (0.024)	0.3 (3.0/38)	17	73 (2.6)	48 (1.9)	12 (0.47)	18 (7.09)	15~30 (0.59~1.18)	2-1/4 (Air) 1/4 (Fluid)	555(1.22)
WA-0915		0.5 (0.020)		9	55 (1.9)	36 (1.4)	9 (0.35)	15 (5.91)	12~25 (0.47~0.98)		510 (1.12)
WA-0609		0.5 (0.020)		6	48 (1.7)	32 (1.3)	6 (0.24)	9 (3.54)	9~15 (0.35~0.59)		475 (1.05)

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

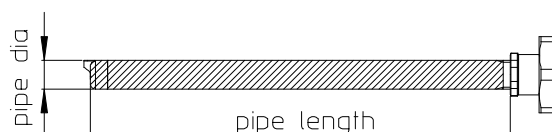
※2 Spray distance is 200m.

How to read model names

ex) WA-1218

→ Pipe length φ 18cm (7.09in)

→ Pipe diameter φ 12mm(φ 0.47in)



■ Safety precautions

⚠ WARNING

Fire and explosion

- Spark 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.
- 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.

Use air hose with built-in ground wire or use grounded gun stay.
Ground resistance : 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

- 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.**



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 automatic spray gun.
Next, supply only piston operating air and exhaust fluid by operating fluid needle, which results in automatic supply stop of all compressed air.

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

- 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



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.

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

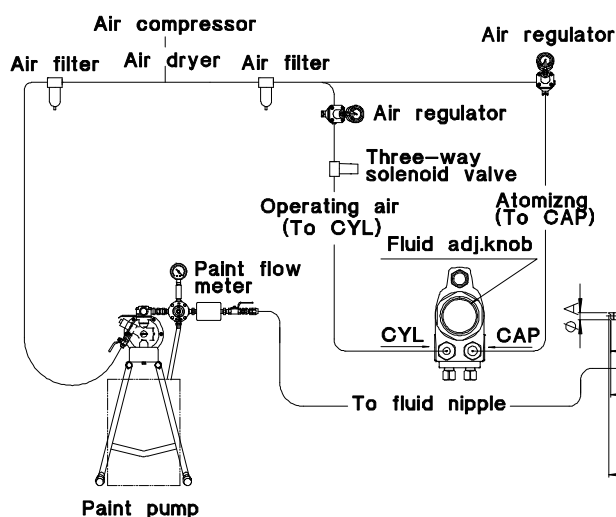
⚠ CAUTION

- 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.
- Use three-way solenoid valve of more than $\phi 4$ inner dia. cross-sectional area and air hose of over $\phi 6$ inner dia. and less than 10m length.
If not, small dia. of solenoid valve and longer air hose between three-way solenoid valve and gun can cause delay in operation.
- Firmly fix hose to spray gun. . . . If not, disconnection of hose and drop of container can cause bodily injury.

- Job1. Fit the gun to a stand or fitting stay, aim at spraying direction and secure it firmly with sitting bolt..
- Job2. Connect atomizing air hose to atomizing air side (Cap marked side) and operating air hose to operating air side (CYL marked side).

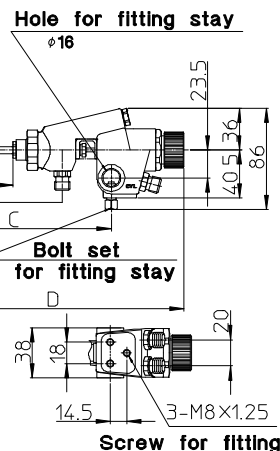
- Job3. Connect fluid hose to fluid inlet tightly.
- Job4. Supply thinner to automatic gun. Spray and clean fluid passage with thinner.
- Job5. Supply paint to automatic gun and test spray and adjust air volume, fluid output and pattern width as necessary.

[Connecting example of air hose and fluid hose]



Dimensions Diagram (mm)

Model	A	B	C	D
WA-1218	12	180	263	327.5
WA-0915	9	150	233	297
WA-0609	6	90	173	236.5



How to install half unions for atomizing air and operating air.

Important

1. Remove air nipples for atomizing and operating from gun body.
2. Replace air nipples for atomizing (CAP marked side) and with and also replace air nipple for operating (CYL marked side) half unions for O.D.8mm air tube attached.
3. Be sure to correct half unions to gun body tightly.
4. Connect fluid hose to the joint.

■ How to operate

1. Adjust operating air pressure from 3 to 4 bar (45 to 57 PSI).

NOTE:

Valve orifice inside three-way solenoid valve should be minimum $\phi 4\text{mm}$ (0.157 in) and also operating air hose length should be within 10m (32.8ft) with the inner diameter more than $\phi 6\text{mm}$ (0.236in) to avoid delayed operation and any kind of failure.

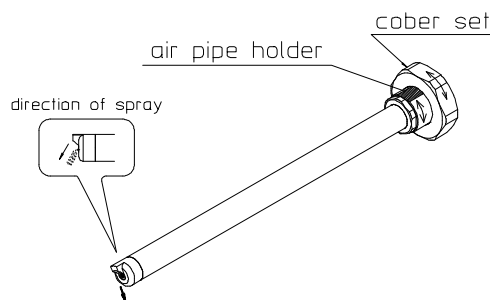
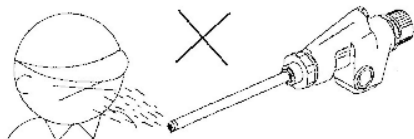
2. Although atomizing air pressure varies according to spray conditions, pulling the piston of the gun with the pattern adj. set fully opened, adjust it normally 2 to 4 bar (28 to 57 PSI).

3. Recommended paint viscosity differs according to paint property and painting conditions. 15 to 23 sec/Ford cup# 4 is recommendable

4. Air pipe set can rotate by 360°

Loosen cover set on air pipe holder, then set the position of air pipe set.

⚠ WARNING
DO NOT STAND IN FRONT OF SPRAY GUN.



■ Maintenance and inspection



WARNING

- First release air and pressure fully according to item No. 3 of "Improper 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 a fluid nozzle and fluid needle.

Step-by-step procedure

Important

1. Pour remaining paint to another container. Clean fluid passages and air cap set. Spray a small amount of thinner to clean fluid passages.

1. Incomplete cleaning can fail pattern shape and uniform particles. Especially clean fully and promptly two-component paint after use.

2. Clean each section with brush soaked with thinner and wipe out with waste cloth.

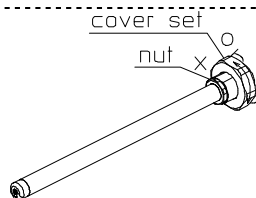
2. Soaking whole spray gun in solvent may cause spray gun malfunction. Also soaking air cap set itself for extended period. When cleaning, never scratch each hole of air cap set and fluid nozzle, and fluid needle set.

3. Before disassembly, fully clean fluid passages.

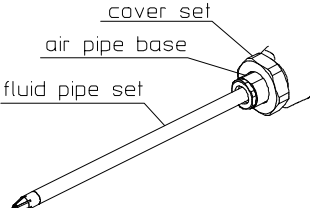
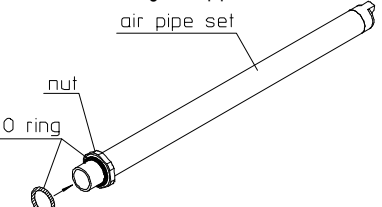
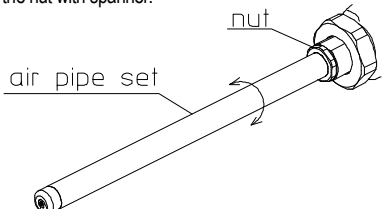
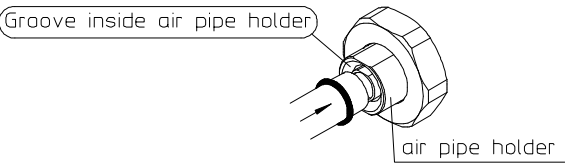
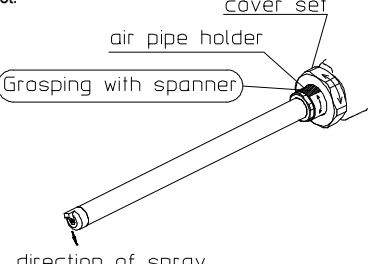
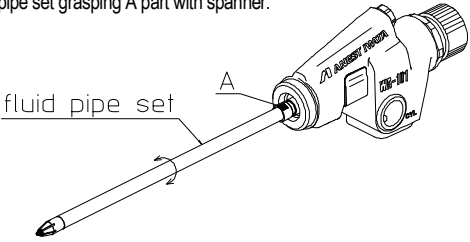
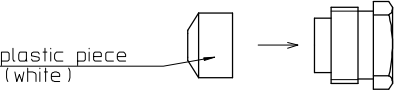
3. During disassembly, do not scratch seat section.

(1) Assemble or disassemble air pipe set.

When changing direction of spray or when cleaning air pipe set and fluid pipe set:
Loosen cover set on air holder, not the nut, disassemble air pipe set.



(1) If you lose the nut, the screw length of Air pipe set changes. It can fail coating or damage air pipe set and fluid pipe set.

Step-by-step procedure	Important
4. When setting the position of air pipe set and fluid pipe set or when the nut is loosened: (1) Set the air pipe holder with cover set. 	(2) When all parts are set directly without performing (1)~(3), it can fail coating or damage air pipe set and fluid pipe set since the air pipe set will not be set into the right position against fluid pipe set.
(2) Screw nut on air pipe set, then set the O ring on air pipe set. 	(2) When setting O ring, never scratch O ring.
(3) Screw air pipe set into air pipe holder, as O ring goes into groove inside air pipe holder. Then tighten the nut with spanner. 	(3) When setting O ring into groove inside air pipe holder, never scratch O ring. 
(4) Loosen cover set, not the nut, then set the piston of air set. Tighten again cover set. 	(4) Refer to 4/how to operate on page 3 and pay attention to fluid emitting condition and spraying direction not to coat people and other products than work to be coated.
5. Assemble or disassemble for fluid pipe set. Remove fluid pipe set grasping A part with spanner. 	5. Removing fluid needle set or while keeping fluid needle pulled, in order to protect seat section. Be careful when handing tip of needle set since it is sharp. When disassemble air pipe set and fluid pipe set, be careful that the top old packing does not remain inside When you disassemble an air pipe set and a fluid pipe set, check whether foreign matter clogs horn hole. When the hole is clogged, refer to 2 on page 3; and clean it.
6. 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 1/6 turn (60-degree) by spanner. When you remove needle packing set, do not leave plastic piece of needle packing set in the gun body 	6. If you tighten fluid needle packing set too much, fluid needle set will not move smoothly, resulting in paint leakage from tip of fluid nozzle. Try to adjust it carefully while pulling piston and confirming movement of fluid needle set. When you tighten it too much, first fully loosen it and then tighten it again carefully.
Where to inspect	Parts replacement standard
1. Each hole passage of air cap and fluid nozzle	Replace if it is crushed or deformed.
2. Packing and O ring	Replace if it is deformed or worn out.
3. Leakage from seat section between fluid nozzle and fluid needle set	Replace them if leakage does not stop after fully cleaning fluid nozzle and fluid needle set. If you replace fluid nozzle or fluid needle set only, fully match them and confirm that there is no leakage.

■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 set.

When replacing fluid nozzle or/and fluid needle for pressure feed application, please order fluid nozzle-needle set.

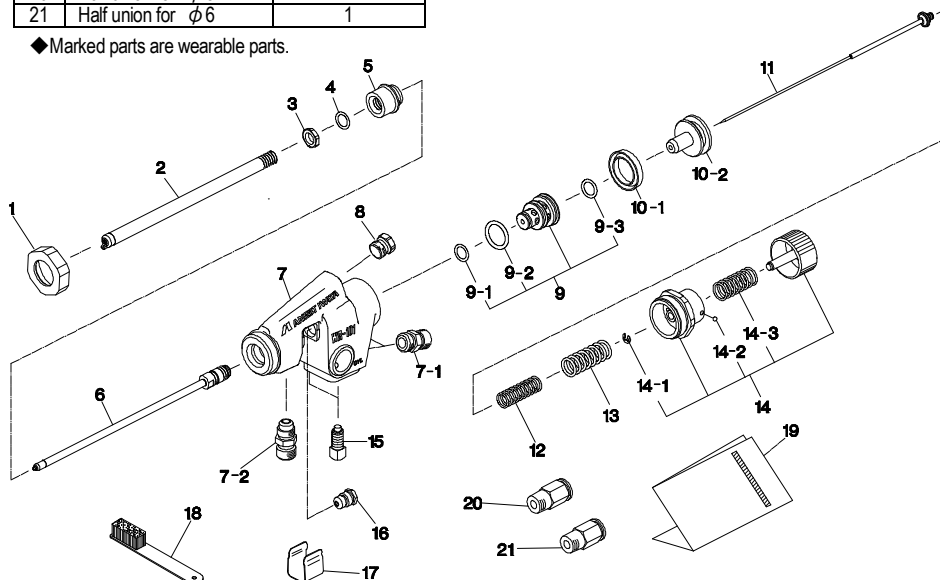
No.	Description	Q'ty		
		WA-1218	WA-0915	WA-0609
1	Cover set		1	
2	Air pipe set	1	1	1
3	Nut	1	1	1
4	O ring	1	1	1
5	Air pipe holder	1	1	1
6	Needle screw	1	1	1
7	Body set		1	
7-1	Air nipple		2	
7-2	Fluid nipple		1	
8	Plug Screw		1	
9	Air valve seat		1	
9-1	O ring		1	
9-2	O ring		1	
9-3	O ring		1	
10-1	Piston packing		1	
10-2	Piston		1	
11	Needle set	1	1	1
12	Needle spring		1	
13	Piston spring		1	
14	Fluid adj. set		1	
14-1	Stop ring		1	
14-2	Ball		1	
14-3	Fluid adj. spring		1	
15	Bolt set		2	

No.	Description	Q'ty		
		WA-1218	WA-0915	WA-0609
16	Fluid needle packing set		1	
17	Cover		1	
18	Brush		1	
19	Instruction manual		1	
20	Half union for $\phi 8$		1	
21	Half union for $\phi 6$		1	

Mark on Fluid needle set

Model	Mark
WA-1218	WA1218
-0915	WA0915
-0609	WA0609

◆ Marked parts are wearable parts.



■Troubleshooting

Spray Pattern	Problems	Remedies
 Fluttering	1. Air enters between fluid nozzle and tapered seat of gun body. 2. Air is suctioned from fluid needle packing.	1. Remove fluid nozzle to clean seat. If it is damaged, replace nozzle. 2. Tighten fluid needle packing.
 Spit	1. Fluid nozzle and fluid needle set are not seated properly. 2. The first-stage travel of trigger (when only air discharges) 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.

R1: retighten R2: adjust R3: clean R4: replace parts

Problem	Where it occurred	Parts to be checked	Cause	Remedy			
				R1	R2	R3	R4
Air leaks (from tip of air cap)	Piston	Piston	* Dirt or damage, wear on seat			○	○
		Air valve seat set	* Dirt or damage, wear on seat			○	○
			* Wear on air valve spring				○
		O ring	* Dirt or deteriorated				○
Paint leaks	Fluid pipe set	Fluid pipe set ~ fluid needle set	* Dirt or damage, wear on seat * Loose fluid needle adj. knob * Wear on needle spring		○	○	○
		Fluid pipe set ~ gun body	* Insufficient tightening * Dirt or damage, wear on seat	○		○	○
		Fluid needle ~ packing set	* Needle does not return due to packing set too tight. * Needle does not return due to paint buildup on fluid needle.		○	○	○
		Fluid needle					
	Fluid needle	Needle packing set ~ needle set	* Wear	○			○
		Needle packing set	* Insufficient tightening	○			
Paint does not flow	Tip of gun	Fluid adj. knob	* Insufficient opening		○		
		Tip hole of nozzle	* Clogged			○	
		Paint Filter	* Clogged			○	○



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