



INSTRUCTION MANUAL

Round Pattern Spray gun RG-3L/RG-3L1

和文取扱い、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.

Be sure to observe warnings and cautions in this instruction manual. If not, it can cause paint splosion 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 / 98 ps
Nozzle level	62 of JIS 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 fluid	Nozzle orifice φ (mm) (in)	Air cap Set mark	Recommended condition			Air & fluid connection	Inlets g (lb)
				※1 Airbursting air pressure MPa (bar / PSI)	Fluid output ml/min	Air consumption liter (dm ³)		
RG-3L-1	Gravity	0.4 (0.016)	1	0.25 (2.526)	※2 15	30 (1.1)	※2 25 (1.0)	160 (0.4)
RG-3L-2		0.6 (0.024)	2		35 (1.4)	35 (1.4)		
RG-3L-3		1.0 (0.039)	3	80	50 (1.8)	35 (1.4)		

※1 Airbursting air pressure means air pressure at gun inlet when trigger is pulled and air flows.
※2 Tested with 1.6mm standard paint.

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:
 - unsaturate 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: 1 less than 1MΩ. 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 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.
- 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 use something wrong with eyes or skin, immediately see a doctor.
- Wear earplugs if necessary.
- 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 corrosion 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 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.

- Job1. Connect an air hose to air nipple tightly
- Job2. Connect a fluid hose or a container 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 3.5 bar (29 to 50 PSI).

Recommended paint viscosity differs according to paint property and painting conditions. 12 to 23 sec./700μpa.s is recommended.

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 50~200mm (2~7.9 in).

Important

- 1 Basically, air volume should be adjusted by air regulator for atomizing air. However, if the adjustment is possible by adjusting air cap position. <Note> Normally, the best position of nozzle tip is 0 ~ 0.3 mm projected from air cap. Adjusting of air cap set.
- 2 Adjustment of air cap set. Only RG-3.1 is provided the air cap set. It is easy to obtain the finest spray by adjusting the air cap set.

■ 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 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 waste cloth.
- 3 Before disassembly, fully clean fluid passages.
 - (1) Disassemble fluid nozzle.
 - (1) Remove fluid nozzle after removing fluid needle set or while keeping fluid needle pulled, in order to protect seat section.
 - (2) Be careful when handling tip of fluid needle set since it is sharp.
 Disassemble fluid air guide set as far as possible.
- 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 1/6 turn (90-degree) by spanner.
- 5 In order to assemble air valve, first assemble air valve & air valve spring & fluid air guide set together. Next, insert fluid needle set into fluid air guide set, then fit it to gun body set and screw fluid air guide set.
- 6 Turn pattern air knob or air cap counter-clockwise to fully open. And then tighten pattern air set or air cap set.

Where to inspect

- 1 Each hole passage of air cap and fluid nozzle.

Part replacement standard

Replace if it is crushed or deformed.

Replace if it is deformed or worn out.
- 2 Packing and O ring.

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.

On/Off	Fluid nozzle/needle set combination		
	Air pipe length	Mark	Mark
0.4 (0.016)	04	1	
0.5 (0.020)	05	2	
1.0 (0.39)	10	3	

Parts list

No.	Description	Qty.	Ref. No.
1	Air cap set	1	RG-3.1
2	Fluid nozzle	1	1
3	Fluid needle set	1	1
4	Lamin fluid	1	1
5	Needle packing set	1	1
5-1	Needle packing set (1)	1	1
5-2	Needle packing set (2)	1	1
6	Gun body set	1	1
7	Fluid nozzle	1	1
7-1	Fluid nozzle	1	1
8	Trigger	1	1
9	E-stop	2	2
10	Propagator	1	1
11	Air valve shaft	1	1
12	Air valve seat set	1	1
12-1	Air valve seat set	1	1
13	Air valve seat set screw	1	1
14	Pin	1	1
14-1	Air cap set	1	1
15	Air valve spring	1	1
16	Air valve	1	1
17	Fluid air guide set	1	1
18	Needle spring	1	1
19	Fluid air knob	1	1
20	Brush	1	1
21	Insulation material	1	1

◆ Marked parts are wearable parts

■ Troubleshooting

Symptom	Precaution	Remedy
 Fluiding	<ol style="list-style-type: none"> 1 Air enters between fluid nozzle and tapered seal of gun body. 2 Air is drawn from fluid needle packing set. 3 Air enters at fluid connector fitting fluid. 	<ol style="list-style-type: none"> 1. Remove fluid nozzle to check seal. If it is damaged, replace nozzle. 2. Tighten fluid needle packing. 3. Fully tighten part section.
 Spitting	<ol style="list-style-type: none"> 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 on nozzle or cap set. 	<ol style="list-style-type: none"> 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	
Air leaks (from tip of air cap)	Air valve set	Air valve	* Dirt or damage on seal				
		Air valve seat set	* Wear on air valve spring				
		O ring	* Damage or deformed				
Paint leaks	Fluid nozzle	Fluid nozzle ~ fluid needle set	* Dirt, damage, wear on seat				
			* Loose fluid needle air knob				
			* Wear on needle spring				
			* Insufficient tightening				
			* Dirt or damage on seat				
			* Needle does not return due to packing set too tight				
Fluid needle	Fluid needle	Fluid needle ~ packing set	* Needle does not return due to paint buildup on fluid needle				
		Packing set	* Wear				
		Fluid air knob	* Insufficient tightening				
Tip of gun	Tip hole of nozzle	Tip hole of nozzle	* Insufficient opening				
		Paint filter	* Clogged				
Paint does not flow	Paint filter	Paint filter	* Clogged				

ANEST IWATA CORPORATION
 3176, Shinyoshida-cho, Kohoku-ku, Yokohama, 223-8501, Japan

Code No. 03018883
 No. 1680-02