

FG-6 / FG-61 / FG-62 **FLOW GUN**

GB Before use, adjustment or maintenance, it is important to read this instruction manual very carefully. This manual must be stored in a safe place for any future reference that may be necessary.

This ANEST IWATA flow guns kit complies to ATEX regulations 94/9/EC. Protection level: II 2 G X Suitable for using Zones 1 and 2.

(E 🗐 🛙 2G X X marking: Any static electricity discharge from the flow gun is to be diverted to the ground via the conductive air hose as stipulated.

This flow gun should be operated only by an adequately trained operator, for safe use and maintenance of the equipment. Any misuse or handling other than those indicated in this Instruction Manual is not covered by guarantee. ANEST IWATA disclaims all responsibility for any accident or damage caused by failure to observe the operational and safety procedures as from this man-ual. In the interest of user friendliness, this manual contains information in a brief and concise form.

For any additional information you may require regarding flow guns operations, or if any missing parts or any damage during transportation is found, please contact your nearest ANEST IWATA Company (see last cover page).

Be sure to observe warnings and caulions in this instruction manual. If not, it can cause paint ejection and serious bodily injury by drawing organic solvent. Be sure to observe following Amarked items which are especially important.			
	Indicates a potentially hazardous situation which, if not avoided, may result in serious injury or loss of life.		
	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or pro- perty damage.		
IMPORTANT	Indicates notes which we ask you to observe. The safety precautions in this instruction manual are the mini- mum necessary conditions. Follow national and local regulations regarding fire prevention, electricity and safety as well as your own company regulations.		

IMPORTANT SPECIFICATIONS

Max. Pressure:	250 bar (3600 PSI)	Max. Temperature:	
		Atmosphere	5 ~ 40 °C
		Air and fluid	5 ~ 43 °C





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TECHNICAL SPECIFICATIONS

Model	Max. Operating pressure bar (PSI)	Use	Size of Nozzle Orifice	Shape of tip of fluid needle	Fluid Hose connection	Mass g (lbs)
FG-6 FG-61 FG-62	250 (3600)	Sealants & Adhesives (High Viscosity)	Ø 3.0	Tapered seat	NPS 3/8" G 1/4" G 3/8"	440 (0.97)

Manufactured by: ANEST IWATA Corporation 3176,Shinyoshida-cho, Kohoku-ku, Yokohama, 223-8501 Japan

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SAFETY WARNINGS

FIRE OR EXPLOSION HAZARD

1. Spark and open flames are strictly prohibited. Material (sealants, adhesives, etc.) can be highly flammable and can cause fire. Avoid any ignition sources such as smoking, open flames, electrical goods, etc.

2. Be sure to stop pump, reduce fluid pressure down to 0 pressure before you fit or remove nozzle tip. Emission of material (sealants, adhesives, etc.) or solvent during operation can cause

great danger.

3. Securely ground flow gun by using fluid hose with built-in ground wire. Ground wire : Less than 1M2. Check the earth stability periodically. Securely ground pump, flow gun, workpiece and containers containing material or solvent. Be sure to use fluid hose with built-in ground wire to have continuous grounding between pump and flow gun. Use conductive container containing material (sealants, adhesives, etc.) or solvent. Insufficient grounding will cause explosion or fire by spark of electricit. If not, insufficient grounding can cause fire and explosion due to static electric sparking.

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IMPROPER USE OF EQUIPMENT

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1. Never point flow gun toward people or animal. Never point tiow gun toward people or animal. Never pull trigger of gun when human body or finger come near tip of nozzle. If done, it can cause inflammation of eyes and skin or bodily injury. If you feel any abnormality during operation, consult with a medical doctor immediately.

2. Never exceed maximum operating pressure and maximum operating Temperature. Usage at more than max. operating pressure can cause explosion of flow gun resulting in great danger.

3. Be sure to release material 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 material and thinner to flow gun.

4. Never use corrosive liquid (less than PH6 or more than PH8).

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. If you feel any abnormality during operation, consult with a medical doctor immediately.

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.Never try to stop leaks by hand, when material leaks. In that case, stop pump immediately and reduce material pressure down to 0 pressure. High pressure material emitted through small hole can pierce an iron plate and can cause severe injury since material can enter human body directly through eye, mouth or skin. It is very dangerous. If you feel any abnormality or receiver any injury, consult with a medical doctor immediately 4.If operators pull the trigger many times during operation, it may cause carpal tunnel syn

drome. Be sure to take a rest if you feel tired.

5.If operators feel the pulsations in the coating material flow long time during operation, it may cause carpai tunnel syndrome. Be sure to take a rest if you feel tired. Or damping of the pulsations in the coating material flow from material pump by, for instance, the use of damping elements on the intel connection(s) of the equipment or the use of pulsation damping hoses supplying the equipment.

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Never use cracked, damaged, bent or crushed fluid hose.
 High pressure material emitted at small hole can pierce an iron plate and cause great danger.

BURST OF FLUID HOSE

2. Never bend fluid hose with a radius of less than permitted bend radius. Contact the shop who sold the hose to you, or us, about permitted bend radius. Never put heavy things on it in order not to damage the hose. If done, hose can explode causing great danger. 2

COMMENTS







SPARE PARTS LIST



DESCRIPTION	REF.PART
NOZZLE HOLDER	1
NOZZLE GLAND SET	• 2
GUN BODY	3
NEEDLE SEAT	4
FLUID NEEDLE SET	5
NEEDLE BAR SET	5-1
CONICAL SPRING HOLDER	5-2
CONICAL SPRING WASHER	5-3
PACKING HOLDER	5-4
SUB PACKING	5-5
NEEDLE PACKING	5-6
NEEDLE PACKING SEAT	5-7
NEEDLE SPRING HOLDER	5-8
SCREW	5-9
NEEDLE SPRING	6
NEEDLE SPRING SEAT	7
TRIGGER STUD	8
HEX. CAP NUT	9
TRIGGER SET	10
UNIVERSAL JOINT (NPS 3/8")	• 11-1
UNIVERSAL JOINT (G 1/4")	• 11-2
UNIVERSAL JOINT (G 3/8")	• 11-3
NAME PLATE	12
COLLAR	13

Marked parts are consumable parts

- Use optional collar [13] when you use very high viscosity material, or flow resistance in nozzle inner dia, or material does not emit smoothly.
- · As nozzle is not included, refer to Operating procedure on page 3 and prepare it separately on your side.

OTHER PRECAUTIONS

1. Never alter this flow gun.

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- 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 flow 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. Securely connect fluid hose.
- It hose is disconnected during operation, hazardous hose movement and paint ejection will cause severe bodily injury. 5. If something goes wrong, immediately stop operation and find the cause. Do not use again until you have solved the pro
- blem.

CHECKING THE PRODUCT

- When you open the package, be sure to check that all goods are included and are in good condition.
- If there is any damage or missing components, do not use the product to avoid danger and immediately contact the distrib utor who sold it to you.
- . Always keep caution plates (warning display) in good condition and clean. If they are damaged or missing, replace with new ones.

OPERATING PROCEDURE

CONNECT HIGH PRESSURE HOSE



WARNING

Securely connect high pressure hose without leak or loosening. If hose is disconnected during operation, hazardous hose movement and material ejection will cause severe bodily

When material leaks, never try to stop it by hand. In that case, stop pump immediately and reduce material pres sure down to 0 pressure.

Material or solvent can enter human body directly through eye, mouth or skin. It is very dangerous. If you feel any abnormality or receive any injury, consult a medical doctor immediately.



CAUTION

Before using a new flow gun, clean inside of the new flow gun. If not, rust preventive inside flow gun can cause materialing failure.

FIT OR REMOVE NOZZLE Fit nozzle to flow gun



Be sure to stop pump, reduce fluid pressure down to [0 MPa] and securely apply safety lock of flow gun before you fit or remove nozzle tip. Material or solvent can enter human body directly through eye, mouth or skin. It is very dangerous. If you feel any



abnormality or receive any injury, consult a medical doctor immediately.

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ATTENTION When you try to make a nozzle, refer to the figures below.



Sealing job

WARNING



injury caused by material or solvent which might enter your eyes or you might inhale. CAUTION

During materialing, be sure to wear protective cover such as glasses, mask or gloves to avoid serious

Before you use new flow gun for the first time, clean its inside. If not done, rust preventive inside gun can cause sealing failure.



CLEANING AND MAINTENANCE

In order to get longer lifetime of flow gun and good performance at the next job, fully clean its inside with cleaning liquid which is compatible with material used, after you finish the job.



WARNING WARNING During materialing, be sure to wear protective cover such as glasses, mask or gloves to avoid serious injury caused by paint or solvent which might enter your eyes or you might inhale. Be sure to stop pump and reduce fluid pressure down to 0 pressure before disassembling flow gun.

Only an experienced person who is fully conversant with the equipment can do maintenance and inspec-



tion. CAUTION

Never use commercial or other parts instead of ANEST IWATA original spare parts.

PROBLEMS AND REMEDIES IMPORTANT : As for * marked items, ask our distributor to remedy it for you. Incorrect remedy cannot achieve satisfactory

performance.			
Problem	Where	Cause	Remedies
Material does not		Nozzle tip is clogged.	Ispect or replace.
come out.		Material is not fed.	Inspect pump.
Material leaks or comes out weakly.	Nozzle(Material leaks from of nozzle)	Pump pressure is high.	Reduce pump pressure down to 150bar (2142PSI).
		Flow resistance in pump is too high. • Material viscosity is high. • Nozzle orifice is small.	Use material of lower viscosity. Use collar [13] or nozzle with larger orifice.
		Material or dust sticks to needle packing [5-6]. Material or dust sticks to needle seat [4]. Seat between needle bar set [7-11] and nozzle gland set [3] is worn.	Disassemble, inspect or replace part*
		Needle bar set [5-1] is over- tightened.	Adjust by needle spring holder [5-8]
	Nozzle gland set [2]	Nozzle gland set [2] is loose.	Tighten.
	Needle spring seat [7] needle seat[4]	Needle packing seat [5-7] is loose.	Tighten with needle spring holder [5-8].
		Needle packing [5-6] is worn, damaged or stuck with material or dust.	Tighten with needle spring holder [5-8].
			Disassemble, inspect or replace part.
		Needle bar set [5-1] is worn, damaged or stuck with material	Tighten with needle spring holder [5-8].
			Disassemble, inspect or replace part.
	Nozzle holder [1]	Nozzle gland set [2] and taper section of nozzle are damaged or stuck with material or dust	Disassemble, inspect or replace part.
		Nozzle holder [1] is loose.	Tighten.
	Universal joint [11]	Wear of packing in universal joint	Replace universal joint.

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