

Symbol Marking on the Spray Gun:	CE	II	2	G	Exh	X
This MEIJI AIR spray gun complies with 2014/34/EU Directive relating to equipment and protective systems intended for use in explosive potentially atmospheres.	Complies with European Directive	Specific Marking for Explosion Protective	Group II (Surface)	Category (Zone 1&2)	Type of Atmosphere (GAS)	Ignition Protection (not applied)
						Additional conditions: Any static Electricity should be discharged and needs to be diverted to the ground via a conductive air hose not included.

Thank you for purchasing MEIJI Hand Spray Gun.

Before Using this Product

- To ensure safe and proper use of this product, be sure to read through this operation manual, and understand the contents of this manual thoroughly before using the product.
- After reading this operation manual, keep it in place for your quick reference whenever required.
- To lend or transfer this product, attach this operation manual to the product.
- If this operation manual is lost or damaged, immediately order a new one from our authorized dealer or distributor.
- To improve the product quality or performance or to ensure safety, the parts used in the product are subject to change. In this case, note that the description and some parts in the illustrations may be different from those of the actual product.
- If you have any question or comment about the product, contact the distributor of this product or our authorized dealer or distributor in your district.

WARNING/CAUTION Indicates a case where failure in observing the advice on proper handling manners, or neglecting appropriate precautions may result in injury or death, and/or serious damage to the product.

Fire and Explosion

- Keep fire off your paint spray work area.
 - Paint is inflammable, causing fire and explosion. To conduct spray work, select a wide, well-ventilated place.
 - Be sure to keep an inflammable object (cigarette, ignition equipment, electric equipment, etc.) off your spray work area.
 - To clean spray gun, use a solvent whose flash point is equivalent to, or higher than that of the paint being used. Using a general cleaning solvent causes a fire. Use a cleaning solvent with 37.8°C or higher flash point.
 - Provide a fire extinguisher in your spray work area.
- Do not use a halogenated hydrocarbon solvent.
 - Chemical reaction with the solvent causes spray gun body (aluminum parts) to crack or melt.
 - Incompatible solvent: methyl chloride, ethyl chloride, methylene dichloride, ethylene dichloride, carbon tetrachloride, trichloroethylene, 1,1,1 trichloroethane, etc.
 - Before using a special paint or paint thinner, thoroughly check if the material is compatible or not.
- Connect ground cable.
 - Ground spray gun securely. For example, use hose with ground wire.
 - If spray gun is not securely grounded, it generates sparks of static electricity, causing a fire and explosion.

Protection of Human Body

- Ensure thorough ventilation.
 - To conduct spray work, be sure to select a well ventilated place with a booth.
 - If you conduct spray work in an airtight room or insufficiently ventilated place, you may suffer poisoning caused by organic solvent, or a risk factor of flammability will increase.
- Wear appropriate clothes and protective gear.
 - During spray and cleaning work, always wear appropriate clothes and protective gear (goggles, G-7-04 mask, and gloves).
 - Some kinds of paints cause a hazard, if the paint touches eyes or the skin. Check the paint and solvent being used. During spray and cleaning work, wear appropriate clothes and gloves.
- We recommend users to wear ear plugs for health and safety.
 - The product may produce a noise level of 80 dB (A) or higher depending on the use condition or work environment.
- Take a rest if you get tired during spray work.
 - Pulling the trigger many times during long-hours of work may cause tendovaginitis.

Improper Handling of Equipment

- Do not direct spray gun toward people.
 - Never attempt to spray paint toward people or animals.
 - Failure to observe this instruction may result in inflammations of eyes and the skin, or other hazard to human body.
- Use spray gun within the maximum operating pressure.
 - Never use spray gun at a pressure higher than the maximum operating pressure (0.69 MPa).
- During interruption of work, release compressed air.
 - Before cleaning, disassembly or maintenance/inspection of spray gun, or during a halt of spray work, be sure to release compressed air from spray gun.
 - If compressed air is remaining in spray gun, it may accidentally work, or cleaning solvent may spatter, causing a hazard to human body.
 - To release compressed air, stop supplying compressed air, paint and paint thinner to spray gun, and pull trigger lightly.
- Do not touch the tip of the needle valve and paint nozzle during maintenance.
 - The tip of the needle valve and paint nozzle is very sharp and may cause an injury.

Other Precautions

- Do not modify the product.
 - Do not modify spray gun.
 - If you modify spray gun, it cannot provide sufficient performance. Also, a failure of the machine may result.
- Stop other equipment.
 - To conduct spray work in an operating area of other equipment (robot, reciprocating equipment, etc.), confirm that the equipment has stopped first.
 - If you touch a robot or reciprocating equipment, you may get injury.
- Do not use spray gun for food and chemicals.
 - Do not apply spray gun to food or chemicals.
 - Corrosion of paint circuit may result in an accident. Also, mixture of foreign substances may result in health disorder.
- If an abnormal condition occurs, immediately stop spray gun.
 - If you find a problem, immediately stop spray gun, and examine the cause of the problem. Do not use gun until the problem can be solved.

Installation

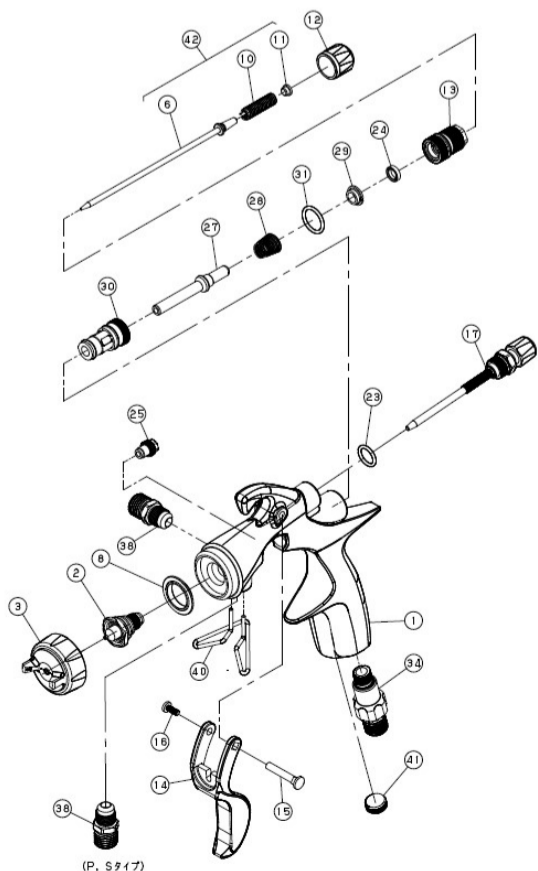
- Use clean compressed air.
 - Use clean compressed air that has passed through an air dryer or air filter. If contaminated air is used, it results in a failure in spray work.
- Ensure tight connections.
 - When connecting paint cup and air hose to spray gun, tighten them securely by using spanner. If the connection is loose, compressed air, paint and other liquids may spatter over human body, painted work pieces and peripheral equipment, resulting in damage.
- Conform to the rated withstand pressure of hose.
 - Make sure that the air pressure supplied to air hose does not exceed the rated withstand pressure of hose. Do not use an old or damaged hose.

3. Specifications

Model	Paint feed system	Paint nozzle bore mm	Applicable air cap	Spraying distance mm	Spraying pressure MPa	Air consumption L/min	Paint spraying volume mL/min	Maximum effective pattern mm	Connection bore	Weight g
FINER-FORCE T	Gravity	1.4	T	200	0.2	210	130	260	G1/4 (Airpaint)	325
FINER-FORCE R			R							
FINER-FORCE B			B							
FINER-FORCE C	Suction	1.4	C	150	0.15	170	130	220		
FINER-FORCE-ST			T	200	0.2	210	100	220		

* Paint viscosity is 12 seconds if you use automobile-repair high-solid paint and a Meiji V-1 Viscosity Cup.

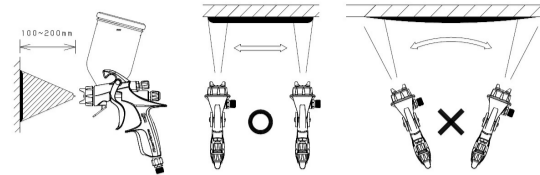
4. List of Components



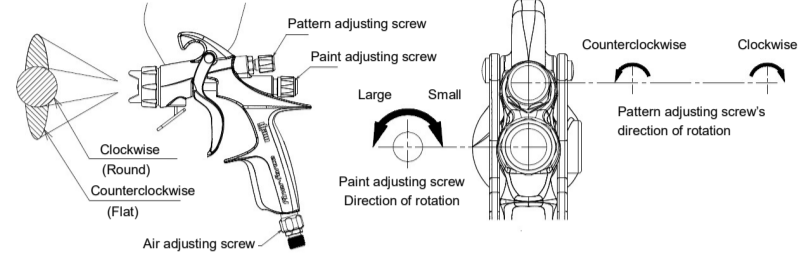
No.	Name	Qty.
1	Body	1
2	Paint nozzle	1
3	Air cap set	1
6	Needle valve set	1
8	Baffle plate	1
10	Needle spring	1
11	Spring insert	1
12	Paint adjusting screw	1
13	Needle cylinder	1
14	Trigger	1
15	Trigger pin (for resin)	1
16	Trigger screw	1
17	Pattern control valve set	1
23	O-ring S10 FKM	1
24	U packing P6	1
25	Needle packing screw set	1
27	Air valve	1
28	Air valve spring	1
29	Trigger stopper	1
30	Valve seat set	1
31	O-ring S12.5 FKM	1
34	Air volume control valve set	1
38	Hexagon nipple 1/4×M11G	1
40	Gun stand	1
41	Hexagon socket headless screw M12×1	1
42	Needle valve spring set (with spring insert)	1
Accessory	Identification ring / spanner set	1

1. Operation Procedure

- Mount a paint cup and an air hose to the spray gun by using a spanner or other tool.
- The appropriate spraying pressure is between 0.15 and 0.25 MPa. However, this value varies depending on the viscosity and properties of the paint, and the working conditions. DO NOT use the spray gun above the stipulated maximum working pressure (0.69 MPa).
- Appropriate spraying distance is between 100 mm to 200 mm. If the spraying distance is too short, or if you spray paint while moving the gun in a circular motion, a good result cannot be achieved.
- To achieve a uniform result, always hold the spray gun perpendicular to the paint surface.



- Tightening the air volume adjusting screw clockwise will decrease the air volume, and loosening the air volume adjusting screw counterclockwise will increase the air volume.
- If you tighten the pattern adjusting screw by turning it clockwise completely, paint is sprayed in a spot pattern. As you loosen the pattern adjusting screw by turning it counterclockwise, the spray pattern area gradually increases. When you rotate the screw approximately three times, the pattern area becomes the maximum. Adjust the spray pattern depending on the spray work step and the type of paint being used.
- If you tighten the paint adjusting screw by turning it clockwise, the spray volume decreases. As you loosen the screw by turning it counterclockwise, the spray volume gradually increases. When you rotate the screw three to four times, the spray volume becomes the maximum. Set the paint volume depending on spray work conditions.



8. Setting guidelines for various adjusting mechanisms (These values are just an example, and actual values vary depending on the various conditions. See the paint manufacturer's specifications before setting values.)

Setting condition example	Touch up			Solid			Metallic pearl			Clear		
	T/C	R	B	T/C	R	B	T/C	R	B	T/C	R	B
Paint adjusting screw (Number of rotations)	1 to 1.5			2 to 3	2 to 3	2 to 2.5	2 to 2.5	2 to 2.5	1.5 to 2	3 to 4	3 to 4	2.5 to 4
Pattern adjusting screw (Number of rotations)	1 to 2			Fully open			Fully open			Fully open		
Gun distance (mm)	Up to 100			150 to 200	200	200	150 to 200	200	200	150 to 200	200	200
Spraying pressure (MPa)	0.1 to 0.15			0.15 to 0.2	0.2	0.2	0.15 to 0.2	0.2	0.2	0.2 to 0.25	0.2 to 0.25	0.2 to 0.25

2. Maintenance and Inspection

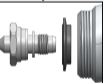
- Clean and lubricate the spray gun every day to maintain it in the best operating condition.
- Wipe dust off the spray gun body with a cloth dampened with a solvent. Soaking the spray gun in solvent will not only remove lubrication, but also lead to painting problems due to adhering objects entering into the air circuit. **We shall not be liable for any problems resulting from the use of a gun cleaner that causes dust or paint waste to enter the air circuit of paint nozzle or air cap.**
- After using the spray gun, be sure to clean it with a clean solvent, and leave the cup empty.
- To clean the cup, remove excess paint and pass an appropriate solvent through the cup to wash off residual paint.
- Using the spray gun for painting while cleaning solvent is in the gun or cup, or while paint waste, dirt, etc. are in the paint circuit will result in a painting failure.
- After disassembling the air cap set (3) and paint nozzle (2), clean them with a brush. When disassembling the paint nozzle, be careful not to damage it.
- To clean the paint circuit, spray a small quantity of solvent in the same manner as spray work.
- Be sure not to damage each hole of the air cap set (3), and the center hole and tip periphery of the paint nozzle (2).
- If the needle valve set (6) or air valve (27) malfunctions, apply a small quantity of oil (non-silicone oil) to the sliding part from the outside.
- Always remove any remaining water after cleaning, as failure to do so can cause rust.
- Do not soak the entire spray gun and the air cap set (3) in liquid such as solvent (cleaning solution). Soaking them for a long time will damage their components.

5. Parts Replacement

Before replacing spray gun parts, remove residual paint, and then clean the spray gun. Then, release air pressure from the spray gun, and remove the air hose and paint cup.

To repair the spray gun, place it in a clean level place, and wear protective goggles. For parts replacement, use the specified appropriate tools.

- Replacement of paint nozzle and needle valve set (It is recommended that these parts should be simultaneously replaced.)**
 - Remove the paint adjusting screw (12), and pull out the needle valve spring set (42) from the spray gun body.
 - Remove the air cap set (3).
 - Remove the paint nozzle (2) by using spanner 17 or socket wrench 17.
 - Tighten the paint nozzle (2) at a tightening torque of 10 N · m by using a torque wrench. Please be careful of the directions of baffle plate.
- Replacement of the air volume control valve set**
 - Remove the air volume control valve set (34) with spanner 13.
 - Apply anaerobic sealing agent to the screw tip and tighten the screw.
- Replacement of the pattern control valve set**
 - Before disassembling or assembling the pattern control valve set (17), turn the knob counterclockwise completely to loosen it.
- Replacement of the valve seat set, air valve, air valve spring, trigger stopper, and needle cylinder**
 - Remove the paint adjusting screw (12), and pull out the needle valve spring set (42) from the spray gun body.
 - Remove needle cylinder (13) using socket wrench 12.
 - Remove the trigger stopper (29), air valve spring (28), and air valve (27) from the spray gun body.
 - Remove the valve seat set (30) by using hexagon wrench 10 so as not to damage the seat surface which makes contact with the air valve (27). (Do not use a ball-point hexagon wrench. This rule applies for the replacement below)
 - Tighten the valve seat set (30) by using hexagon wrench 10 until the seat touches the spray gun body. Then, re-tighten the seat lightly.
 - Insert the air valve (27) until it reaches the innermost end so as not to damage the seat surface. Then, insert the air valve spring (28) and trigger stopper (29).
 - Tighten the needle cylinder (13) with socket wrench 12.
- Replacement of the needle packing screw set**
 - Remove the needle packing screw set (25) using the supplied spanner 7.
 - Tighten the needle packing screw set (25) using the supplied spanner 7.



6. Failure Causes and Corrective Actions

Symptom	Cause(s)	Corrective action
Paint cuts out	Lack of paint in the paint container The paint circuit is clogged. The screw or paint nozzle (2) at the paint circuit connection is loose, or the taper seat area is damaged. The needle packing screw (25) is loose or worn.	Refill paint. Clean with solvent. Tighten or replace. Tighten or replace.
Imbalance	The square hole in the air cap (3) is partially clogged or damaged.	Clean or replace.
Crescent	Paint or dirt is adhering to the tip periphery of the paint nozzle (2).	Clean or replace.
Thick in the middle	The square hole in the air cap (3) is partially clogged or damaged, or paint or dirt is adhered to the inside of the center hole, or it is damaged. Paint or dirt is adhering to the tip periphery of the paint nozzle (2).	Clean or replace. Clean or replace.
Narrow in the middle	The bore of the paint nozzle (2) has been worn out and is larger. Spraying pressure is too low. Viscosity is too high.	Replace. Increase air volume and pressure. Reduce viscosity.
Paint leakage from the needle packing screw	Spraying pressure is too high. Dirt or paint is adhering to the gap between the center hole of the air cap (3) and the periphery of the paint nozzle (2).	Reduce air volume and lower air pressure. Clean.
Fluid leakage from the tip of the paint nozzle	The needle packing screw set (25) is loose, or worn. The paint nozzle (2) and needle valve set (6) are worn or damaged. The needle packing screw set (25) or the needle valve set (6) is stuck. The needle packing screw set (25) has been improperly adjusted.	Adjust the needle packing screw (25). Replace. Replace. Lubricate. Adjust.
Air leakage from Air valve	Seat surface of Air valve(27), Valve seat set(30) has dirt, damage or worn out. Air valve spring(28) worn out.	Clean or replace Replace