



INSTRUCTION MANUAL
AIRMIX® AUTOMATIC SPRAY GUN

Manual : 0406 573.013.212

*Date : 10/06/04 - Supersede :
- Modif.*

KREMLIN REXSON – Site de Stains : 150, avenue de Stalingrad
93 245 - STAINS CEDEX - FRANCE
Téléphone : 33 (0)1 49 40 25 25 Télécopie : 33 (0)1 48 26 07 16



INSTRUCTION MANUAL
AIRMIX® AUTOMATIC SPRAY GUN

SUMMARY

1.	EC DECLARATION OF CONFORMITY.....	2
2.	GENERAL SAFETY INSTRUCTIONS	2
3.	AIRMIX® ATOMIZATION PRINCIPLE	3
4.	INSTALLATION.....	4
5.	OPERATION	5
6.	GUN HANDLING	6
7.	DAILY MAINTENANCE.....	6
8.	TROUBLESHOOTING CHART	7

The specifications of the gun - features and maintenance - are available in a documentation enclosed to the manual.

Dear Customer,

We thank you very much for purchasing the new **Airmix** ® gun.

To make sure your investment will provide full satisfaction, special care has been taken by KREMLIN during all designing and manufacturing processes.

To get the best result, safe and efficient operation of your spray gun, we advice you to read and make yourself familiar with this instruction and service manual. Indeed, the non-compliance with instructions and precautions stated in this manual could reduce the equipment working life, result in operating trouble and create unsafe conditions.

1. EC DECLARATION OF CONFORMITY

The manufacturer : **KREMLIN REXSON** with assets of 6 720 000 Euros

Head office : 150, avenue de Stalingrad 93 245 - STAINS CEDEX - FRANCE

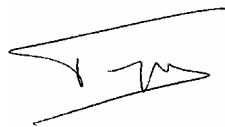
Tel. 33 (0)1 49 40 25 25 - Fax : 33 (0)1 48 26 07 16

Herewith declares that : Spray gun, is in conformity with :

EC - Machinery Directive (Directive 98/37/EC) as amended and with national implementing legislation.

Ex - ATEX Directive (Directive 94/9/EC) :  II 2 G (group II, class 2, gas).

Established in Stains, on March 1st 2003,



Daniel TRAGUS
President

2. GENERAL SAFETY INSTRUCTIONS



WARNING : Any misuse of the equipment or accessories can damage them, result in serious body injury, fire or explosion hazard and reduce the equipment working life. Read, understand and comply with the safety instructions hereafter.

The personnel involved in operating and servicing the equipment must be aware of all safety requirements stated in this manual. The workshop supervisor must be certain that the personnel has perfectly understood the safety instructions and complies with them.

Read all instruction manuals as well as the tags of the equipments before operating the equipment.

Refer to local safety instructions and comply with them.

■ INSTALLATION REQUIREMENTS

➔ Ground the equipments.

Use the equipment only in a properly ventilated area to maximize health care. Any misuse of the spray equipment or accessories can damage them and result in serious body injury, fire or explosion hazard. Do not smoke in the spray area.

Never stoke paints and solvents in the spray area. Always close the pots and the tins.

Always keep the spray area clean and free from debris (solvent, rags,...).

Read paint and solvent manufacturer's technical instructions.

Spraying of some materials may result in hazardous working conditions. To protect the operator, respirator mask, hand cream and glasses are required (Refer to chapter "Safety equipment" of KREMLIN selection guide).

■ EQUIPMENT REQUIREMENTS

The operating pressure of these equipments are particularly high. Consequently, some precautions must be taken in order to prevent from accidents and from unsafe working conditions.

➔ **Never exceed the components maximum working pressure of the equipment.**

HOSES

Do not use hoses with a maximum burst-proof pressure less than four times the maximum service pressure of the pump (see data sheet).

Be certain the hoses are not crimped, leaking and not unrolled.

Be certain hoses are in good condition and showing no evidence of damage.

➔ **Use only air hose with static conductor to connect the pump with the spray gun.**

All fittings must be tight and in good condition.

PUMP

➔ **Interconnect the equipment with ground (use the connection provided on the pump).**

Do not use any product or solvent incompatible with the pump components.

Use the appropriate solvent for the material being sprayed to increase the equipemnt working life.

GUN

Never wipe the end of the tip with fingers.

Never point the spray gun at anyone or at any part of the body.

Always depressurize air and hoses before carrying out any servicing on the gun.

■ MAINTENANCE REQUIREMENTS

➔ **Never modify these equipments.**

Check them daily, keep them in a good condition and replace the worn parts **only with KREMLIN parts.**

Before cleaning or removing components of the equipment, it is compulsory :

- **to stop the pump by shutting off the compressed air supply,**
- **to open the pump drain valve,**
- **to control the gun opening to depressurize the fluid hoses.**

3. AIRMIX® ATOMIZATION PRINCIPLE

The spray air cap of the AIRMIX ® gun is composed of 2 functional elements : a spray tip and an air cap. Atomization takes place in two phases :

1. The fluid is pre-atomized by going through the spray tip under pressure.
2. Atomization is improved by means of very low pressure atomizing air jets.

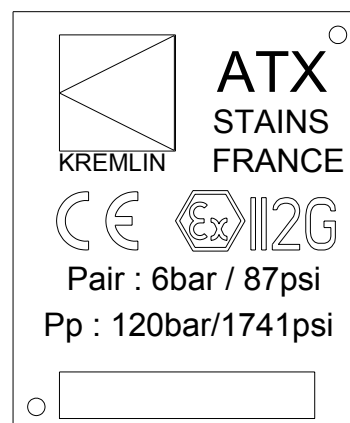
The end results is a fine uniform atomization that guarantees an excellent finish without excessive overspray. This results in very important air and fluid savings and cleaner working conditions - in comparison with a conventional air spray gun.

4. INSTALLATION

■ DESCRIPTION OF THE LABEL MARKING

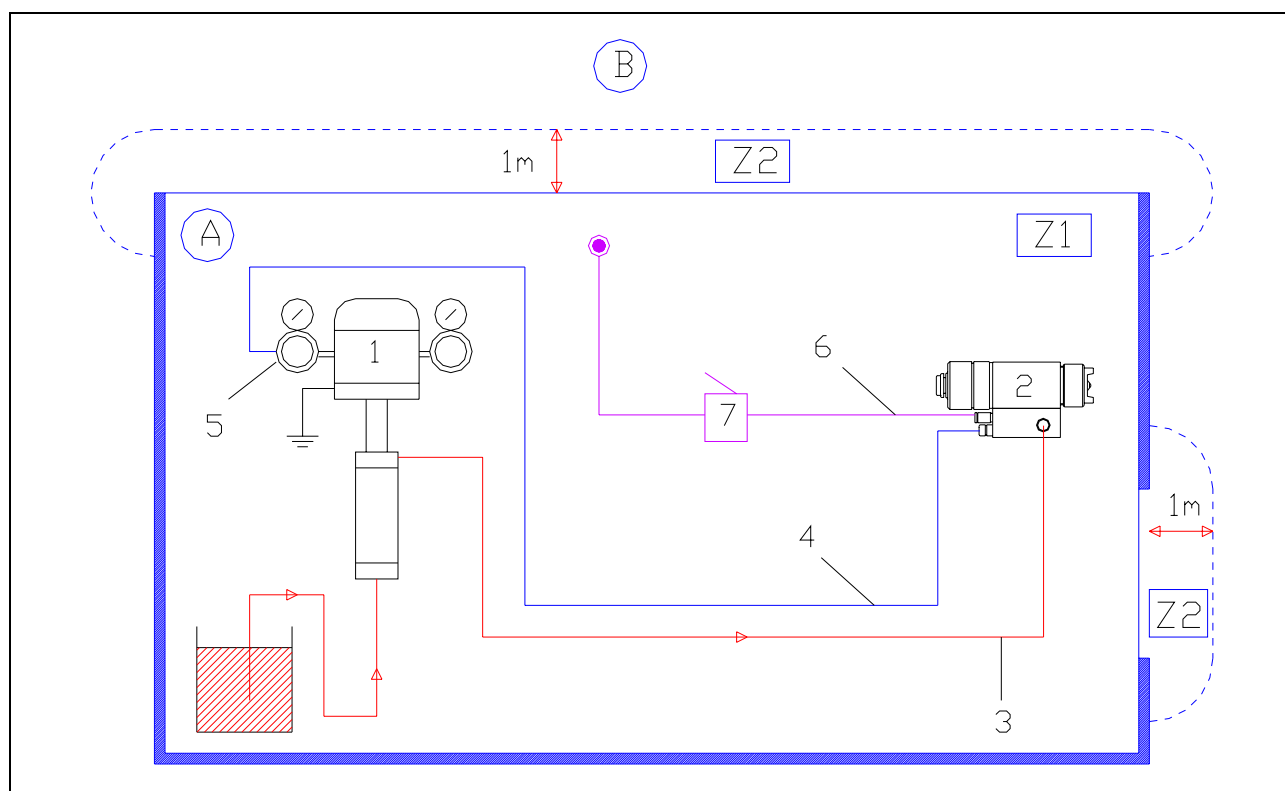
Marking in accordance with the ATEX directive

(example : ATX gun label)



KREMLIN STAINS FRANCE	Name and address of the manufacturer
ATX	Gun model
CE Ex II 2 G	II : group II 2 : class 2 Surface equipment meant to an area where explosive atmospheres due to gas, vapours, mists or air mixtures with dusts will probably appear. G : gas
P air : 6 bar / 87 psi	Gun air supply maximum pressure
P prod : 120 bar / 1741 psi	Maximum fluid pressure

■ INSTALLATION INSTRUCTIONS



Captions :

A	Explosive area area 1 (Z1) or area 2 (Z2) : spray booth	3	Conductive HP fluid hose
B	Non-explosive area	4	Air hose (spraying air)
		5	Air regulator
1	Pump	6	Air hose (control air)
2	Airmix ® automatic gun	7	3-way valve or electrovalve

- 1 - With a **conductive high pressure** hose (3), connect the gun fluid fitting to the pump. The fittings must be firmly tightened.
- 2 - By means of an air hose (4), connect the gun "Spraying air" fitting (2) to an air regulator that can supply at least 3 bar / 43.5 psi (→ spraying air).
- 3 - By means of an air hose (6), connect the gun "Control air" fitting to the valve or the electrovalve (7) that can controls the opening and the closing of the gun.

A minimum pressure of 3 bar / 43.5 psi or 4 bar / 58 psi is necessary to the gun control (→ control air).



Nota : In some particular cases, if the fluid hose (3) is a non-conductive hose, the air hose (4) must be conductive.

One of the 2 hoses (air or fluid) of the gun must be conductive.

5. OPERATION

- 1 - Prime the pump.
- 2 - Unscrew the air adjuster on the base of the gun.
- 3 - Select a spray tip (refer to AIRMIX ® spray tip chart).
- 4 - Make sure white seal (or micro-filter) is in place in the spray tip.
- 5 - Carefully press the spray tip into the air cap back being certain the locating pins are aligned with mating recesses of the tip.
- 6 - Insert the air cap with its tip into the retaining ring. Screw retaining ring and air cap firmly onto the spray gun positioning the air cap to obtain the desired pattern orientation.
- 7 - Adjust the air pressure for the desired flow rate.
- 8 - If tails or heavy deposits of sprayed material occur at the ends of the pattern, increase the atomizing air pressure until the pattern is even.
- 9 - If using an adjustable air cap, pattern width can be optimized with the air adjusting knob.

Nota : if more material or less material are required, select another spray tip (refer to AIRMIX ® spray tip chart).

6. GUN HANDLING

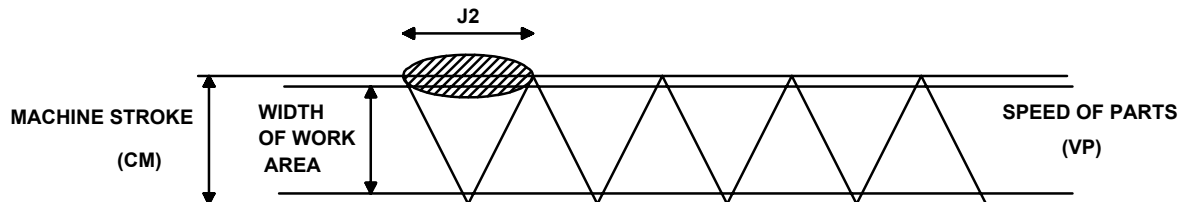
When mounting the air cap on the gun, hold it vertically in order to correctly adjust the air cap before screwing the air cap ring.

Keep the gun perpendicular to the surface to be painted.

Do not forget that crossed sweeps cannot correct irregularities.

Spraying from a stationary gun will not give even coverage.

Make sure that overlapping from the passes is even (gun moving vertically, part moving horizontally).



This width J2 for two regular coats of paint corresponds exactly to the following formula :

$$J2 \text{ (m)} = VP \text{ (m/s)} \times 2 \times \frac{CM \text{ (m)}}{VM \text{ (m/s)}}$$

Where :

VP = speed of travel of the parts to be painted.

CM = total stroke of the machine (and therefore of the spray guns).

VM = speed of the machine (and therefore of the spray guns).

2 = 2 regular coats of paint (or 4 if you want to double the number of coats).

7. DAILY MAINTENANCE

Do not use fluid which would quickly clog the filter or would often block the spray tip.

Air supply should be clean.

The gun is a precision instrument and it relies on good and frequent maintenance for its correct operation. When it is carried out directly after use, the cleaning of the gun is faster and easier.

Never use metal brushes files, points or clips for dismantling.

Whenever possible, during the course of the day, clean the outside of the spray tip with a soft brush.

Use a tip unclogging needle of the proper size.

▪ SHORT DURATION SHUTDOWN (LESS THAN 3 HOURS)

Remove the paint on the air cap with a brush and solvent. Otherwise, leave the equipment as it is. Removing the paint will prevent the drying and clogging of the holes.

▪ LONG DURATION SHUTDOWN

Depressurize the fluid systems.

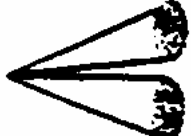
Unscrew the air cap. Remove the spray tip and soak it in solvent. Use a tip unclogging needle of the proper size.

Flush the installation and leave it full of solvent.

➡ **Never soak the gun in solvent.**

➡ **Always make sure white seal or micro-filter are in place in the spray tip.**

8. TROUBLESHOOTING CHART

TROUBLE	CAUSE	SOLUTION
No fluid out of the gun.	Tip is blocked.	Shut off pressure on pump. Depressurize the hoses. Remove and clean spray tip and filter.
Low flow rate.	Filter is partially clogged.	
Spray fan is not uniform. 	Tip is partially clogged.	
Spray fan is not uniform. 	Air holes in air cap are partially blocked.	Remove and clean with solvent. Blow all air holes clear with compressed air.
Excessive fluid fog.	Too much atomizing air.	Reduce atomizing air with the air regulator.
Pattern width narrows during reversing phase of pump.	Air trapped in the fluid circuit. Viscosity too high.	Check connection and suction hose quality. Reduce viscosity.
Air cap becomes dirty frequently.	Too much air. Seat-holder leaking.	Reduce air pressure. Replace it
Fluid seeping from the air holes of the air cap.	Defective tip seal. Retaining ring loose.	Replace it. Tighten it.
Fluid leak through leakage detector.	Cartridge worn	Replace cartridge .
No change in pattern width.	Air leak in front of the gun.	Replace air adjuster.