INSTRUCTION MANUAL

AUTOMATIC EXTRUSION GUN

MODEL 2000

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TRANSLATION FROM THE ORIGINAL MANUAL

IMPORTANT : Before assembly and start-up, please read and clearly understand all the documents relating to the equipment (professional use only).

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INSTRUCTION MANUAL

AUTOMATIC EXTRUSION GUN, model 2000

Dear Customer, you are the owner of our new gun and we would like to take this opportunity to thank you. To make sure your investment will provide full satisfaction, special care has been taken during all designing and manufacturing processes. To obtain the best result, safe and efficient operation of your equipment, 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. 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 this 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 equipment as well as the component to be painted.**

Use the equipment only in a well-ventilated area to prevent from serious body injuries, fire and explosion hazards. Do not smoke in the spray area.

Never stock 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 the hoses are in good in conditions 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

➲ **Ground the equipment (use the connection 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 equipment working life.

GUN

Never wipe the end of the tip with the fingers.

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

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

- **MAINTENANCE REQUIREMENTS**

Guards (air motor cover, coupling shields, housings …) have been designed for safe use of the equipment.
The manufacturer will not be held responsible for bodily injury or failure and / or damage to property due to removal or partial removal of the guards.

➲ **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 :
1 - to stop the pump by shutting off the compressed air supply,
2 - to open the pump drain valve,
3 - to depressurize the hoses by triggering the gun.

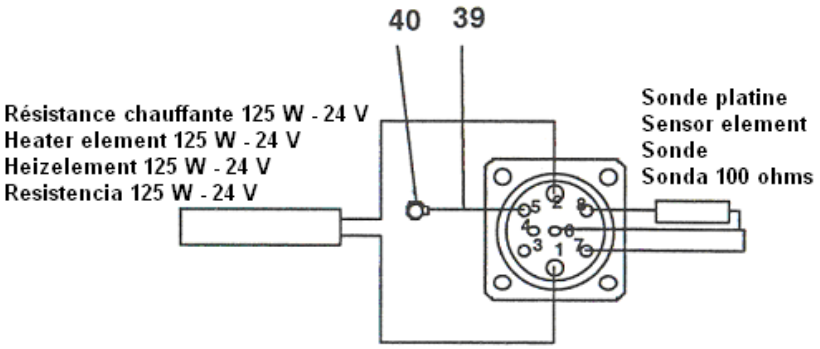
2. SPECIFICATIONS

The gun, model 2000, is an automatic extrusion gun. It is mounted on a robot or an automatic machine. It is designed for depositing large quantities of material in bead form. The opening and the closing of the gun must be controlled from the robot bay or from a line automaton.

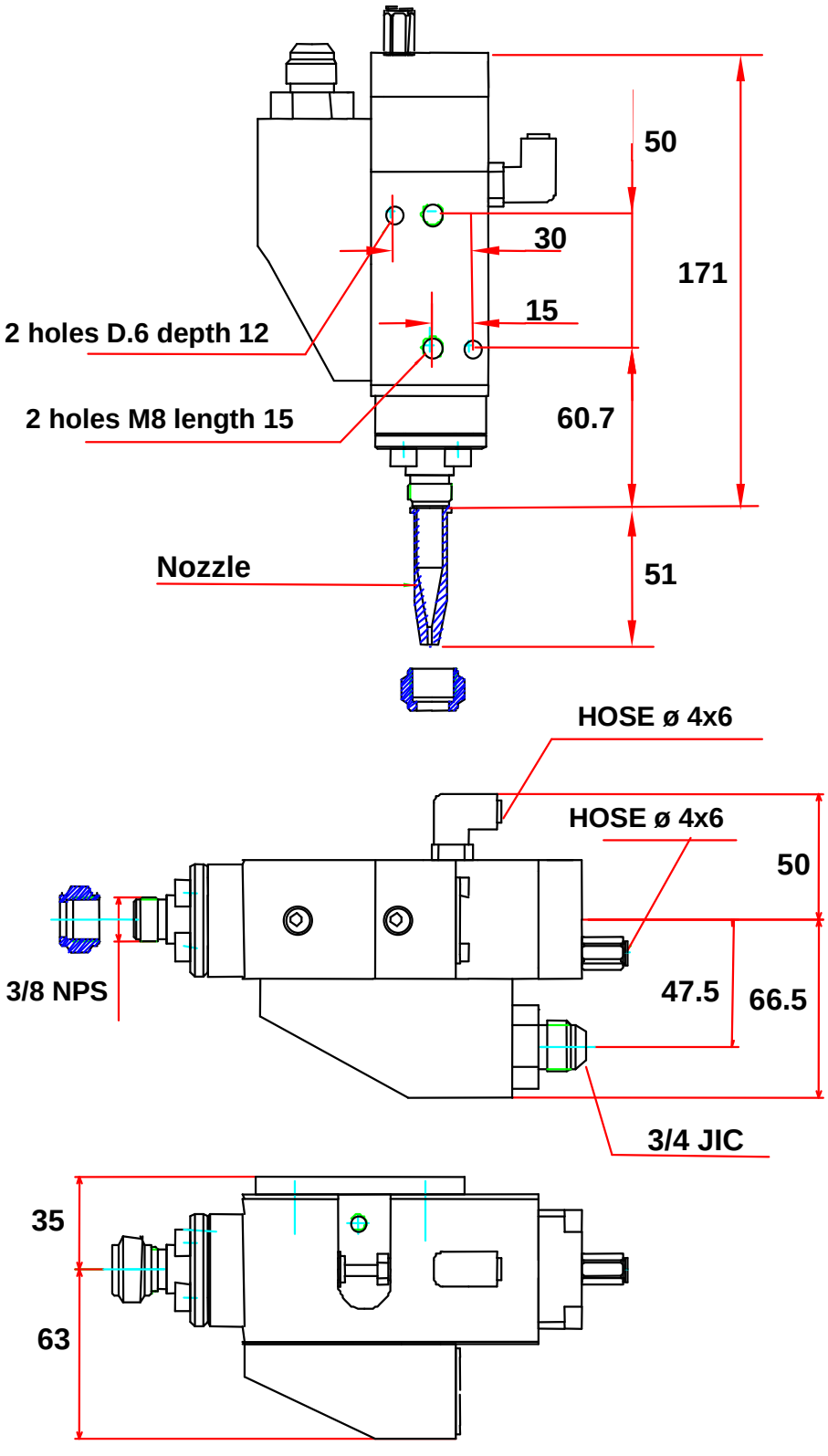
The supply of the gun to product is carried out from an extrusion pump or through a pressure regulator.

3. TECHNICAL FEATURES

Gun for hot or cold extrusion with or without pressure sensor (depending upon the version).
Fluid supply maximum pressure : 240 bar / 3480 psi.
Choice of the nozzles : ∅ 0,8, ∅ 1, ∅ 1,5, ∅ 2, ∅ 4, ∅ 5,5 mm
Fluid fitting : M 3/4 JIC
Control air fitting : 2 fittings for hose 4 x 6
Fluid maximum temperature : 100°C / 212°F
Weight : 1,7 kg / 3.75 lb.
Wetted parts : aluminium, stainless steel, treated stainless steel, carbide.
Depending upon the versions :
Pressure sensor 6 pins (in the standard version with sensor) : 250 bar / 3626 psi - 0,10 V
Heating kit :
- heater element : 24 V - 155 W
- temperature sensor element : sensor element Pt 100
- connector : 8 pins JAEGER (power and sensor element)

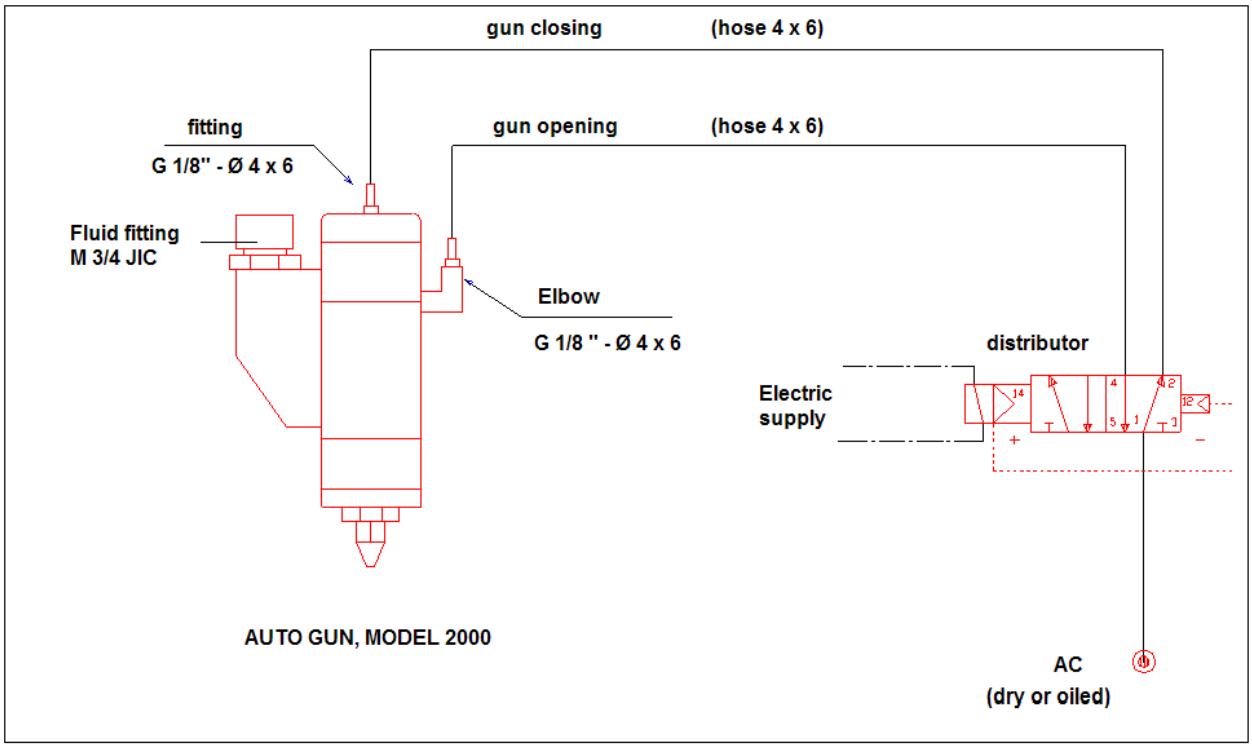
Electric connection of the heating kit	

DIMENSIONS


50
30
171
15
2 holes D.6 depth 12
2 holes M8 length 15
60.7
Nozzle
51
HOSE ø 4x6
HOSE ø 4x6
50
3/8 NPS
47.5
66.5
3/4 JIC
35
63

4. GUN FITTINGS

Mount a distributor, model 5/2 or an electrovalve, model 4/2 to pilot the opening and the closing of the gun.
Mount a HP fluid hose, ∅ 16 mm (5/8 ") between the fluid regulator and the gun.



5. ADJUSTMENTS

- **BEAD WIDTH**
  Choose the nozzle according to the bead to applicate.
- **FLUID FLOW**
  The flow can be adjusted by means of a pressure regulator installed between the pump outlet and the gun.

6. GUN CLEANING

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

- **SHORT SHUTDOWN**

  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 SHUTDOWN**

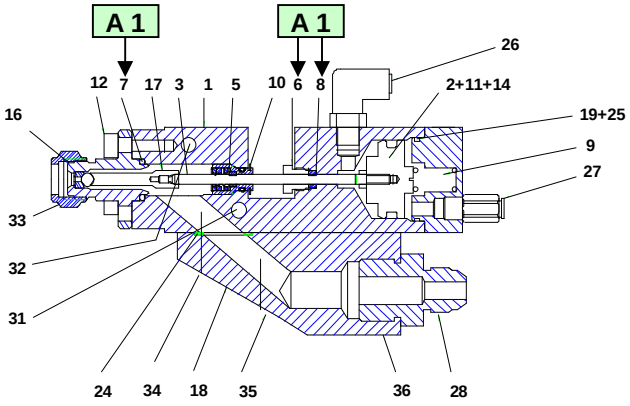
  Remove the needle and then remove the fluid nozzle backwards of the gun with the wrench provided. Soak the needle, air cap, fluid nozzle in solvent and brush them carefully, as they are precision parts. With a brush soaked in solvent, clean the internal part of the gun. Wash and carefully brush the threaded parts.

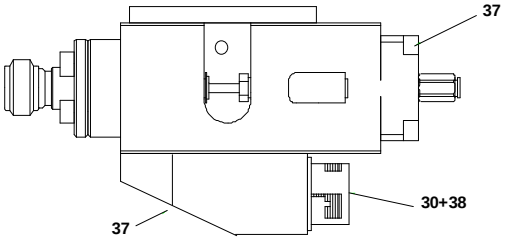
Do not soak the gun in solvent

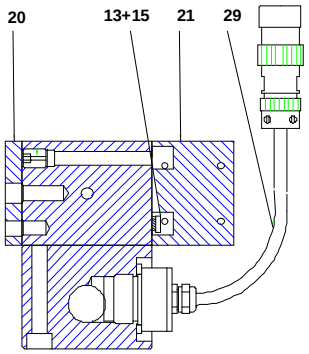
7. TROUBLESHOOTING CHART

TROUBLE	CAUSE	SOLUTION
Material is no longer coming out of the gun.	Tip obstructed / Tip clogged	Check the gun fluid supply. Shut off the pump pressure. Depressurize the circuit. Remove and clean the tip.
Deformed bead	Tip worn.	Change it.
Extrusion of intermittent material.	Lack of material Loose tip.	Check the material supply. Tighten tip.
Fluid leak in front of the gun	Dirt in the material. Bad tightness between the needle ball and its seat.	Trigger the gun 3 or 4 times. Clean seat or replace needle and seat.
Material leak at needle level	Cartridge worn.	Change the cartridge assembly.
Air leak at needle level	Bad tightness with the piston chamber	Change the piston air tightness seal.

8. REMOVAL - REASSEMBLY







REMOVAL

Remove the back part of the gun by unscrewing the 2 screws (37) that hold the cylinder back.

Remove the front part of the gun by taking off the nozzle.

Remove the 4 screws (12).

Remove the carbide holder (16).

Unscrew the front part of the needle (17) by holding the 6 back side of the piston (2) by means of a wrench.

From the front, push the needle rod (3) and take off the piston (2).

Remove the circlips (10) and take off the cartridge (5) frontwards of the gun.

Unscrew the retainer seal (6) and remove the seal (8).

REASSEMBLY

Clean the parts with white spirit or with the appropriate cleaning solvent.

Change the seals and the cartridge assembly. Lubricate them.

Reassemble in reverse order.

Index	Instruction	Description	Part number
A 1	PTFE grease	'TECHNILUB' grease (10 ml)	560.440.101