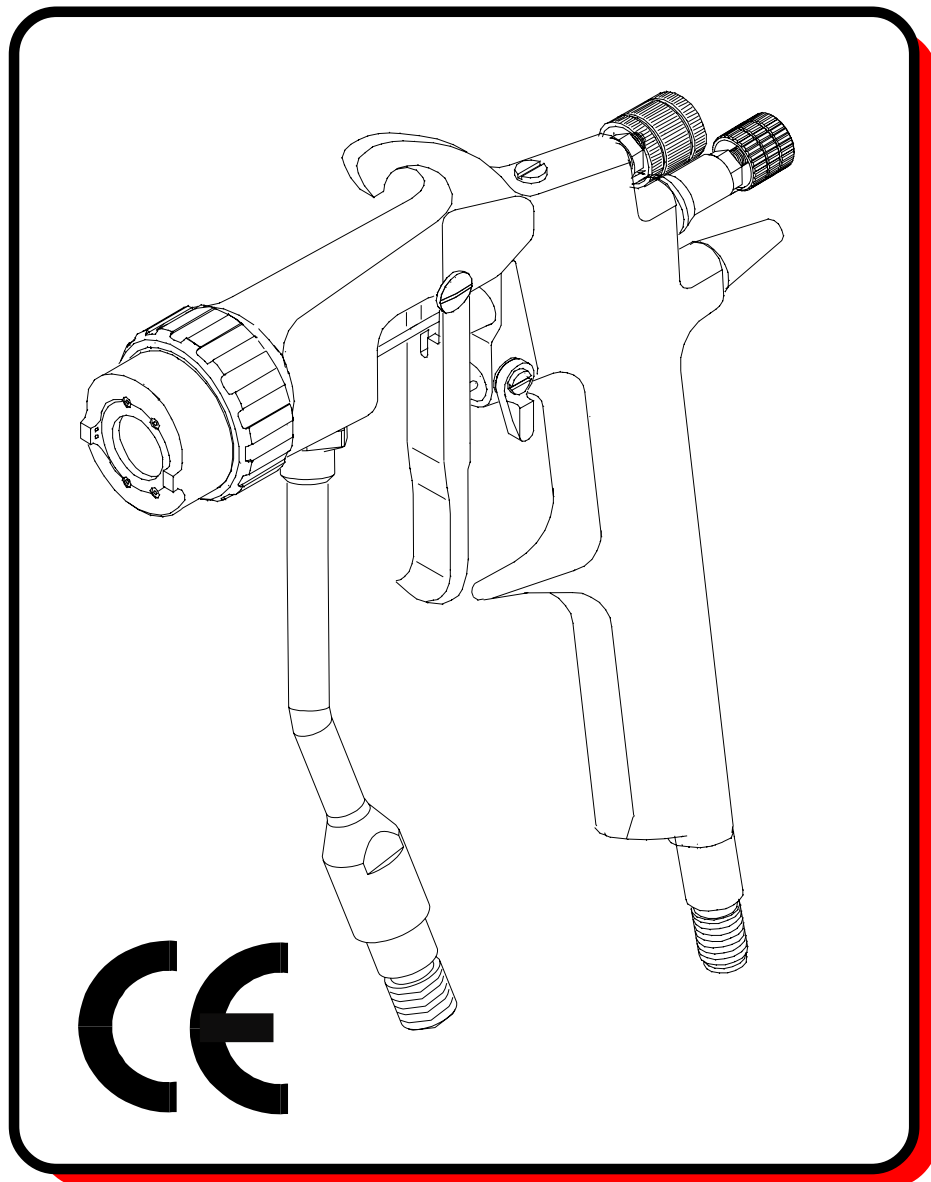


# USE AND MAINTENANCE MANUAL



GUN MOD. **3A MIX**

(Rev. 5 - 23/01/08)

**AOM Spray Equipment**  
7289 Park Dr Bath, PA 18014

**DICHIARAZIONE DI CONFORMITÀ / DECLARATION OF CONFORMITY  
KONFORMITÄTERKLÄRUNG / DECLARATION DE CONFORMITÉ  
DECLARACIÓN DE CONFORMIDAD**



ASTURO ORIGINALI MAVES Spa  
Via Cascina Venina 20 B/C  
ASSAGO - ITALIA  
++39 0289305416 - FAX ++39 0289305497  
P.IVA / VAT (registration number) 11164500156



**MODELLO / MODEL: 3A MIX**

**N\_ di MATRICOLA / SERIAL NUMBER**

**ANNO DI COSTRUZIONE / YEAR OF MANUFACTURE  
200**

**ACCESSORI IN DOTAZIONE / ACCESSORIES SUPPLIED**

**A.O.M** spa DICHIARA sotto la sua esclusiva responsabilità che la macchina a cui la presente dichiarazione si riferisce è conforme alle prescrizioni delle seguenti direttive:

**A.O.M** spa DECLARES on its own responsibility that the machine to which this declaration refers conforms with the requirements in the following directives:

DIRETTIVA **89/392/CEE** MODIFICATA DALLA DIRETTIVA **91/368/CEE**  
DALLA DIRETTIVA **93/44/CEE** E DALLA DIRETTIVA **93/68/CEE** (DIRETTIVA MACCHINE)  
DIRECTIVE **89/392/EEC** AMENDED BY DIRECTIVE **91/368/EEC**  
BY DIRECTIVE **93/44/EEC** AND BY DIRECTIVE **93/68/EEC** (MACHINE DIRECTIVE)

La macchina è inoltre conforme alle seguenti norme / The machine also conforms with following standards:

**UNI EN 292/1** (november 1992) Sicurezza del macchinario, Concetti fondamentali, principi generali di progettazione.- Terminologia, metodologia di base  
Machine safety, Fundamental concepts, General design principles - Terminology, basic methodology.

**UNI EN 292/2** (november 1992) Sicurezza del macchinario - Concetti fondamentali, principi generali di progettazione - Specifiche e principi tecnici  
Machine safety - Fundamental concepts. General design principles - Technical specification and principles.

**LUOGO / PLACE:**

ASSAGO

**COGNOME - NOME / SURNAME - NAME:**

BRANCHINI RIZIERI

**POSIZIONE / POSITION:**

AMMINISTRATORE UNICO / SOLE DIRECTOR

**DATA / DATE:**

/ / /

**SIGNATURE:.....**

# Dear Customer,

We want to thank you for choosing one of **ASTURO ORIGINALI MAVES Spa** products.

**ASTURO ORIGINALI MAVES Spa** is a leading reference point in the field of painting systems and machinery.


The name **ASTURO ORIGINALI MAVES Spa** has always meant reliability and safety and this is supported by over 70 years of experience and by our Customer satisfaction.

All our components have been designed and manufactured to guarantee the best performance ever.

To maintain the high quality level and lengthy reliability of our products throughout the years, always use original spare parts.

**ASTURO ORIGINALI MAVES Spa** units have the CERTIFICATION in accordance with EUROPEAN DIRECTIVE **89/392** (Machine Directive.)

We are certain to have met all safety requirements and we feel confident we have further improved working standards.

Our units, in fact, have the identification in accordance with  rulings. Furthermore, they are delivered with the instruction manual and the certificate with the Declaration of Conformity to European Directive 89/392 and to its various amendments.

*The Management*

# USE AND MAINTENANCE MANUAL



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## HOW TO USE THE MANUAL

The following manual is a document that accompanies the machine throughout its lifetime. It is, therefore, an integral part of the machine. Carefully read the following warnings and procedures before engaging in any activity with this machine, including handling and unloading it from its means of transportation.

## SYMBOLS USED

All operations which might be dangerous if not performed correctly are indicated with the following symbol:

All operations which, in order to avoid risks, must be performed by trained and authorized personnel are indicated by the following symbol:

All personnel in charge of using the machine must be thoroughly trained; all the above information must be thoroughly understood and applied.



## INFORMATION LETTER

The following maintenance and instruction manual is an integral part of the machine and must always be available to the personnel in charge of using and maintaining it. The operator and the personnel in charge of handling the machine must have knowledge of the contents of the manual. The descriptions and illustrations in the manual are not to be considered as binding. Although the main features of the machine described in this manual are not subject to changes, **ASTURO ORIGINALI MAVES Spa** reserves the right to change those components, details and accessories it deems necessary to improve the machine or to meet manufacturing or commercial requirements, at any time and without updating this manual immediately.

### WARNING

**ALL RIGHTS ARE RESERVED.** The reproduction of any part of this manual, in any given form, without prior written authorization from **ASTURO ORIGINALI MAVES Spa**, is strictly forbidden. The content of this manual can be modified without prior notice. Great care has been taken in collecting and checking the documentation contained in this manual in order to make it as complete and comprehensible as possible. **ASTURO ORIGINALI MAVES Spa** machines are not designed to function in areas at risk of fires. For problems or information call **ASTURO ORIGINALI MAVES Spa** customer care technical service or your local dealer.

## CUSTOMER CARE TECHNICAL SERVICE

### AOM Spray Equipment

7289 Park Dr Bath, PA 18014

Telephone # 484-281-3451

Fax # 484-281-3453

### WARNING

The machine original configuration must not be modified in any way.  
Upon receiving the machine make sure that:

- + The packaging is intact and undamaged.
- + The supply corresponds to what has been ordered.
- + In case of damage please call **ASTURO ORIGINALI MAVES Spa**

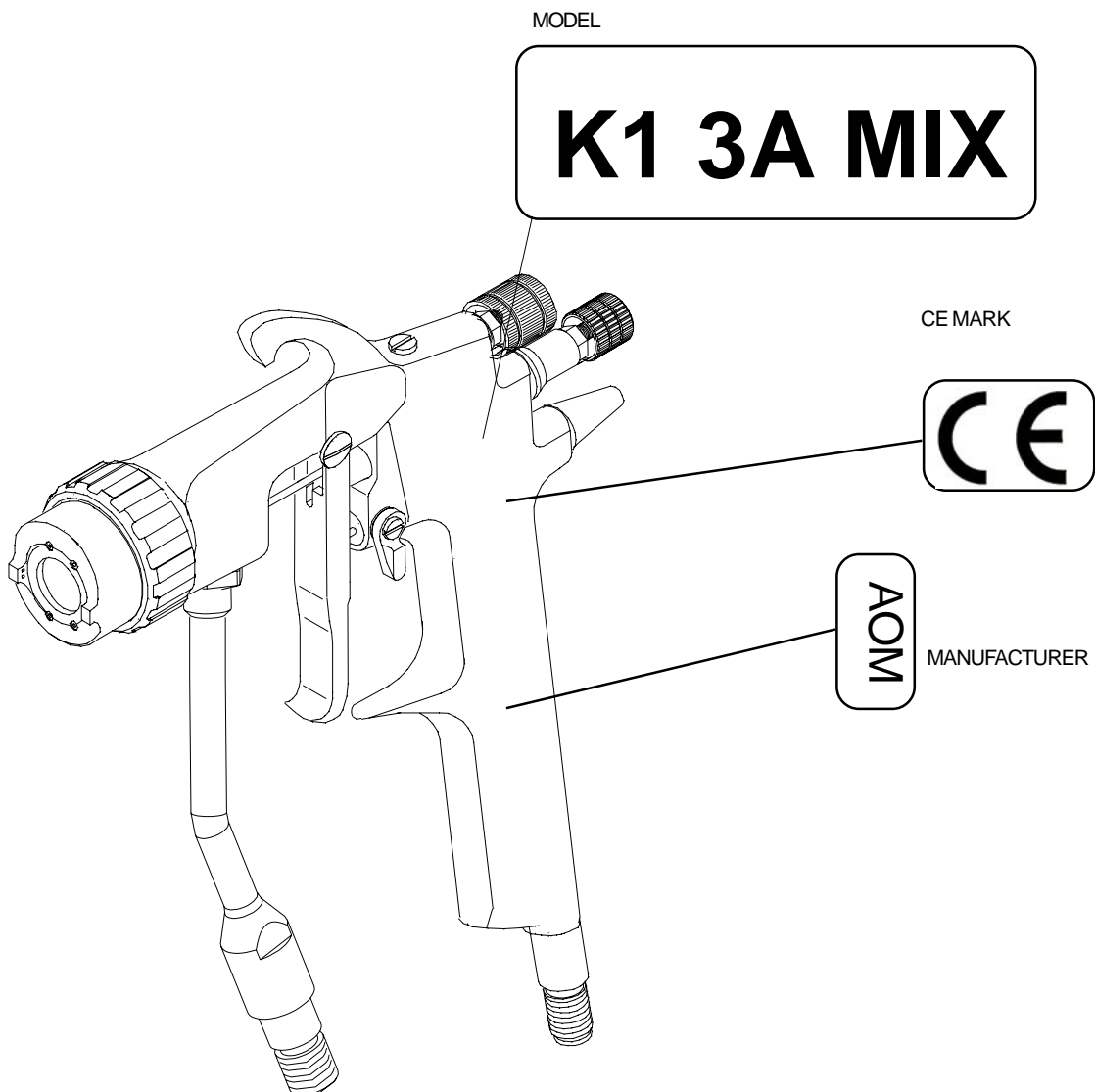
## 1.1 PACKAGING

K1 3A MIX gun is packaged in a cardboard box. All optional components are placed in the same box as the gun. While transporting and storing the machine make sure the surrounding temperature remains included between -15 and 40 °C (5°F and 104°F). If transportation or storage operations last no longer than 24 hours do not exceed 50°C (122°F), otherwise the unit could be damaged.

If the need arises to store the machine, make sure the humidity values in the storage area remain included between 30 and 80%.

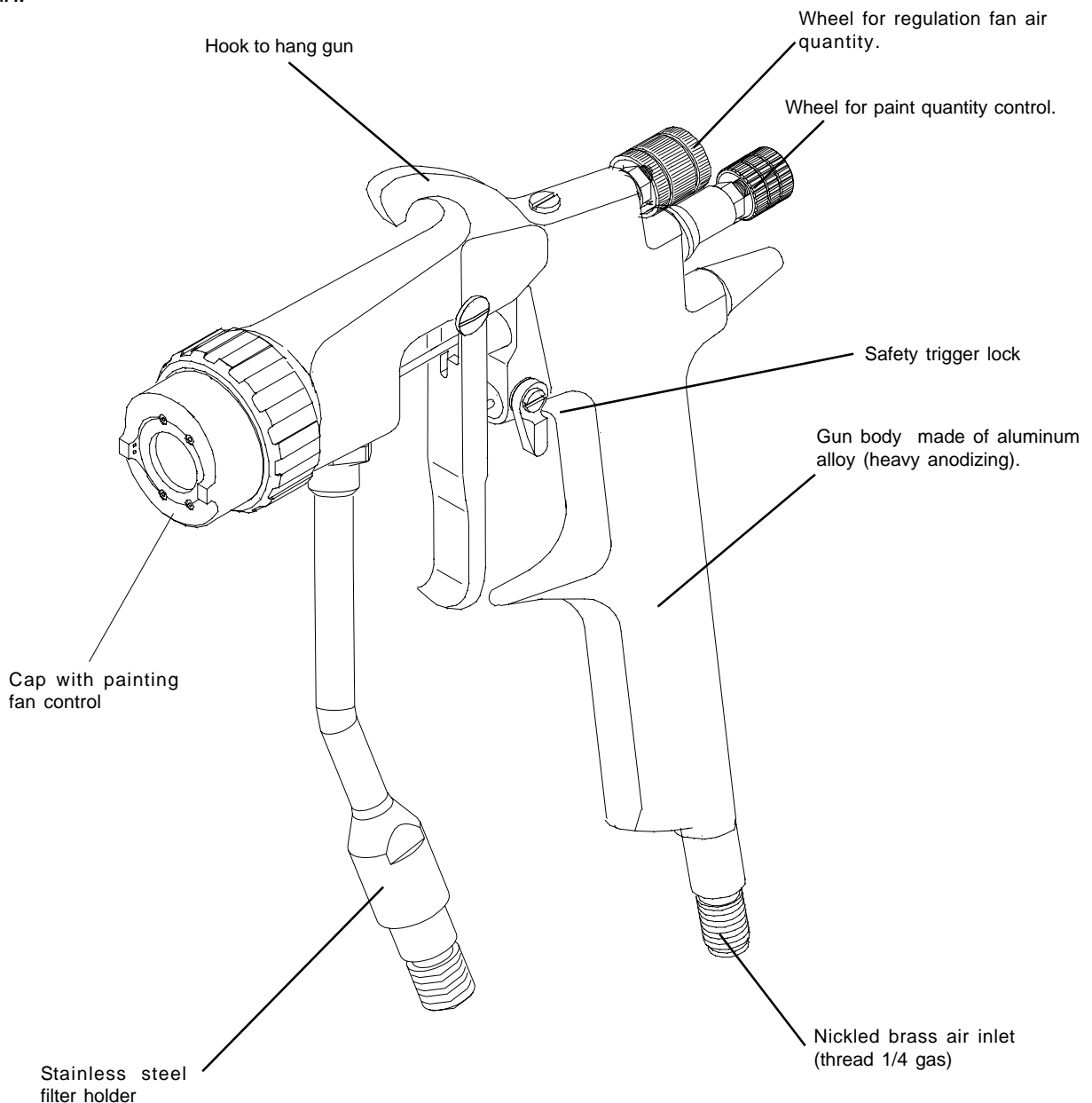
## 2.1 IDENTIFICATION DATA

The device has on one of its sides the manufacturer identification and CE RULING n° 89/392 conformity identification, as shown below.



## 2.2 MACHINE DESCRIPTION

K1 3A MIX gun is used to spray paints. With this gun it is possible to obtain smooth and even surfaces thanks to its micro-spraying system and reduced overspray. Its main features are lightness (677 g/24 oz.) and easy use. The K1 3A MIX offers the possibility of adjusting the spray fan in order to obtain a high quality finishing. The K1 3A MIX gun, coupled with a pneumatic pump unit, type mixed air, model K15 ASTURO, guarantees high transfer efficiency (over 80%) and saves considerable amounts of paint. To complete K1 3A MIX already high technical features, it is also provided with a rapid system for nozzle cleaning in case it gets obstructed during painting operations. The drawing below indicates the most important features of the gun.



# USE AND MAINTENANCE MANUAL



## 2.3 TECHNICAL FEATURES

The spray gun must be coupled with a pump with a maximum fluid pressure of 140 bar (2000 psi). **ASTURO ORIGINALI MAVES Spa** carries out all the necessary tests on the paint unit before delivering it to its customers.

### NOZZLE AND GUN TECHNICAL FEATURES TABLE

NOZZLE	SPRAY ANGLE	30Cm SPRAY OPENING	ORIFICE mm	ORIFICE IN INC	PRODUCTS	FILTER
7x20	20°	13.5	0.15	0.007"	CLEAR AND PIGMENTED LACQUER, ENAMELS	RED 200M
7x40	40°	16.5				
9x20	20°	14	0.23	0.009"		
9x40	40°	17.5				
9x60	60°	22.5				
11x10	10°	9				
11x20	20°	14.5	0.28	0.011"	NITRE, SYNTHETIC AND POLYURETHANE PAINTS	YELLOW 100 M
11x40	40°	18.5				
13x20	20°	15.5	0.33	0.013"		
13x40	40°	20				
13x60	60°	26.5				
15x20	20°	16.5				
15x40	40°	21.5	0.38	0.015"	RUST PREVENTER PAINTS	
18x10	10°	12.5				
18x20	20°	16.5	0.46	0.018"	THIXOTROPIC, SPRAY STUCCOS, FILLED BASES, INORGANIC ZINC, VERY THICK PAINTS, PAINTS WITH GLUES, FILLERS	WHITE 60 M
18x40	40°	20.5				
18x60	60°	29.5				
21x10	10°	13.5				
21x20	20°	18.5	0.53	0.021"		
21x40	40°	21.5				
21x60	60°	32.5				

CHARACTERISTICS	VALUE
Air max. pressure	5 Bar/71.4 psi
Air working pressure	1-2,5 Bar/14.28-35.7 psi
Working prod. pressure	20 - 100 Bar/290-1430 psi
Product max. pressure	140 Bar/2000 psi
Nozzles (microinches)	007-021
Weight	677 g/24 oz.
Air inlet	M 1/4"
Product inlet	M 1/4"

Nozzle maximum measure: 0.021"

The above technical features are only exemplifying and may vary without prior notice.

## 2.4 STANDARD AND OPTIONAL COMPONENTS

The machine is delivered with the following standard components:

- + 1 - Dismantling wrench.
- + 1 - Cleaning brush.
- + 1 - Use and maintenance manual.
- + 1 - Declaration of conformity to CE RULINGS.
- + 1 - Warranty certificate.

### On request:

- + TRI -A MIX nozzles of various dimensions.
- + K 15 - K20 - K30MIX high pressure PUMP.
- + Connection hoses.
- + Cleaning needles.
- + Paint filters 60, 100, 200 MESH

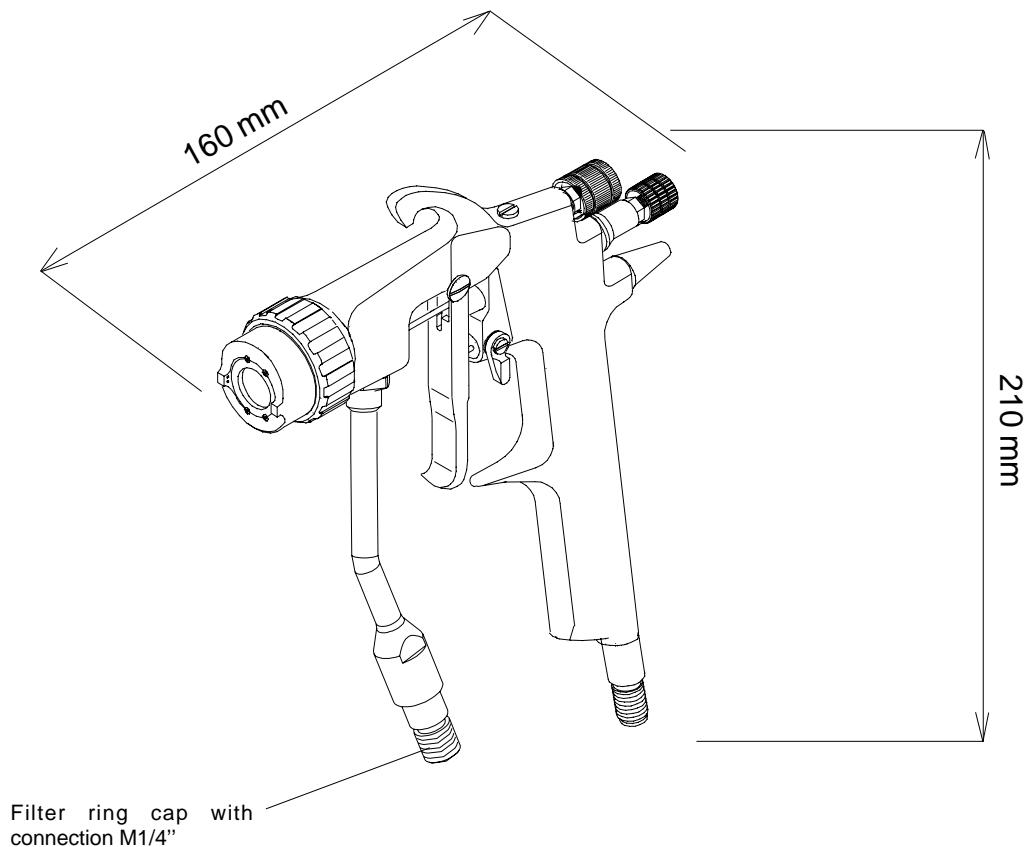
## 2.5 MACHINABLE PRODUCTS

The K1 3A MIX guns are designed to paint on iron, wood and plastic material. The materials which can be used with the gun are: synthetic paints and enamels, polyetherane, nitre, enamels, varnishes, water based paint, lacquers and primers. The manufacturer must authorize the use of the unit with other products and consequently the unit technical features must be changed in order to function properly with the alternative materials. **ASTURO ORIGINALI MAVES Spa** is relieved of all responsibility in case of accidents resulting from the use of the machine by UNAUTHORIZED and unqualified personnel or by personnel using the machine differently than intended.

**DO NOT USE THE PAINTING SYSTEM WITH FLAMMABLE OR HIGHLY TOXIC PRODUCTS SUCH AS GASOLINE, HERBICIDE AND PESTICIDE**

## 2.6 DIMENSIONS

The gun has the following dimensions:



## 3.1 INSPECTION OF PURCHASED PRODUCT

Inspect the equipment before its use to check for damages caused by transportation or improper storage. Make also sure that all standard and optional components have been delivered.

## 3.2 INSTALLATION CONDITIONS

The gun must be fed with a maximum fluid pressure of 140 bar (2000 psi). It is advisable to use dry compressed air to obtain the best painting results. To mount the double hose (air/product) proceed as follows (use the drawing below):

- + Fasten the air inlet hose (BLUE hose) to the gun buckle (A).
- + Fasten the paint inlet hose (LIGHT BLUE hose) to the gun buckle (B).
- + Choose which nozzles and spray gun filter better adapt to the operation which must be performed.

### WARNING

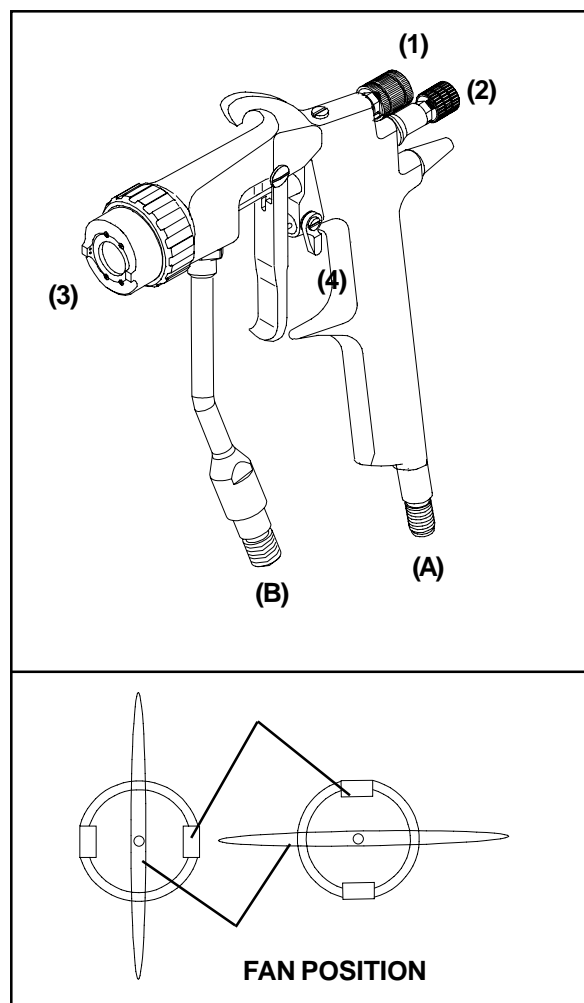
On one side of the pump cart (K15) there is a unit formed by two filters with pressure regulators. Finding the M1/4" air outlet connector (which must be connected to the gun air buckle "A") is fairly simple since there are only two connectors for the air connection; the other one is the pump air inlet.

### WARNING

Always use high pressure hoses to carry out all connections. Before using the equipment, make sure the connections and hoses are in perfect working conditions, that is without holes, bends or splits.

## 3.3 HOW TO USE THE GUN

- + Regulate the spraying angle (fan) by the wheel (1) (by opening the wheel, you will open the spraying angle).
- + Regulate spraying fan position by turning the cap (3), see drawing below.
- + Gradually open the fluid passage by turning the wheel (2) until the desired quantity is obtained. Check the regulation on a smooth trial surface until reaching the desired fan.



## 3.4 STRUCTURES TO BE ARRANGED

Painting operations **MUST** be possibly carried out in an appropriate spray booth equipped with a filtering system. Do not use the gun if the filtering system is not activated. Always wear protection gloves, glasses, breathing filters with active carbon and adequate clothing for the protection of the entire body.

## 3.5 SAFETY PROCEDURES DURING USE

**TO USE** the painting unit **STRICTLY OBSERVE** the following precautions and safety criteria, which follows.

**ASTURO ORIGINALI MAVES Spa** declines every responsibility whatsoever in case the user does not observe said precautions and safety criteria; furthermore, it is not responsible for any kind of negligence when using the equipment.

### WARNING

Always wear protective gloves, masks, breathing filters with activated carbon and adequate clothing for the protection of the entire body.

The gun is employed with paints and thinners which are highly inflammable, therefore, use the gun in well ventilated areas and avoid any action which might start a fire (eg. smoking, high temperature slags or shavings, sparks or whatever electric risks).

**CHECK** the chemical compatibility of the products on their technical safety charts. Further information on the materials which make up the gun are available, on request, at **ASTURO ORIGINALI MAVES Spa**.

The use of products which contain organic solvents might cause intoxication because of the created toxic vapours.

**DO NOT USE** the unit with food or medicines.

**DO NOT EXCEED** the indicated maximum working pressure (see section 2 or 3).

**BEFORE** starting on any dismantling, cleaning, maintenance or assembly operation

**DISCHARGE** the pressure in the hoses (see section 4.1).

Never direct the gun towards human body or animals.

### IMPORTANT

**DO NOT USE** the unit with **HALOGENATED HYDROCARBON** thinners (eg. Ethylchloride, Trichloride, etc.) which might explode when coming into contact with aluminum or galvanized parts.

# USE AND MAINTENANCE MANUAL



## 4.1 PRESSURE DISCHARGE PROCEDURES

When stopping the system to carry out operations on the unit, or when stopping it at the end of the working day, the high pressure inside the unit must be completely discharged. When the main air inlet is shut off, the air is automatically discharged from the pump motor.

**WARNING**

**The product in the flexible tube is still under pressure.**

PROCEED AS FOLLOWS:

- 1 Lock spray gun lever with the safety trigger lock (4) (see pag. 7).
- 2 Shut off the air supply to the equipment.
- 3 Unlock the lever safety bolt.
- 4 Take a metal bucket, make sure it is firmly fixed on the ground and keep the spray gun pressed tightly against the walls of the bucket. Pull lever to discharge the product.

## 4.2 ROUTINE MAINTENANCE

The routine maintenance of the K1 3A MIX gun is simple and does not require special operations because its components do not need to be lubricated. Clean the gun daily or at the end of each working session so that product residues will not dry out on its walls, thus guaranteeing long term efficiency.

**CLEANING:**

Unscrew the cap clamping ring, remove the self-cleaner and dismantle the nozzle. Place everything in the thinner. Carefully clean the nozzle, dip it in thinner to dissolve residues inside of it. Blow compressed air through it from the front to eliminate all traces of material. The nozzle must be daily mounted back on with its gasket. Clean the head of the gun and the tip of the nozzle with the provided brush; at least once a week dismantle and clean the product needle too. Reassemble the gun, lubricate the threads with a thin layer of oil, and close tightly.

**DO NOT USE POINTED METAL OBJECTS TO CLEAN CLOGGED PASSAGE HOLES. THESE OPERATIONS WOULD DAMAGE THEM, REDUCING THE SPRAYING QUALITY.**

Clean the body of the pump with a cloth soaked in thinner. In case industrial washers are used to clean the gun, close the fan adjustment and the needle adjustment tightly by turning them clockwise in order to avoid thinner infiltrations which in the long run may damage gaskets. Once in a while, lubricate the threaded parts such as the cap clamping ring, the needle adjustment and the air valve cap (including the dip rod) with a thin layer of synthetic oil, in order to avoid seizing up caused by the effect of thinners on the gun components.

**THE LUBRICANTS USED MUST NOT CONTAIN SILICONE.**

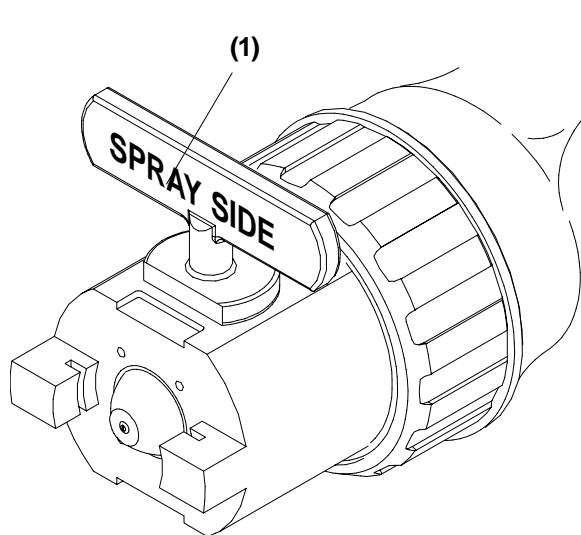
**WARNING**

**IF THE NEED ARISES CALL THE ASTURO ORIGINALI MAVES Spa CUSTOMER CARE SERVICE.**

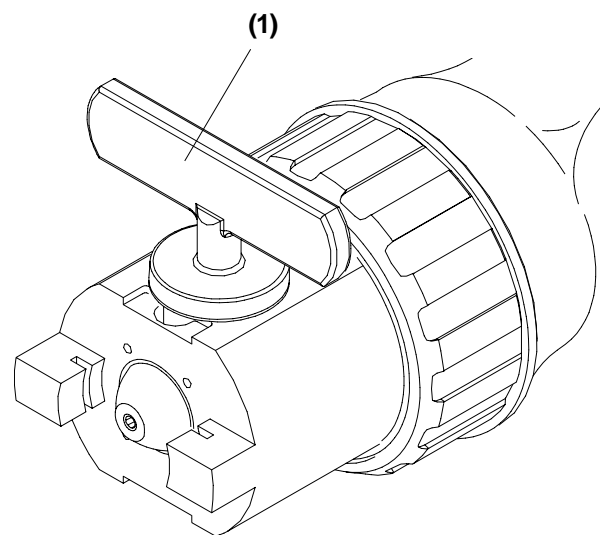
## 4.3 HOW TO USE THE SELF-CLEANER

The K1 3A MIX gun is provided with a nozzle self-cleaning system; such system has been designed to prevent expensive production standstills due to the need to disassemble the gun each time the nozzle clogs. If paint impurities get to the nozzle and clog it, to clean it simply:

- + Turn lever "1" 180° counterclockwise.
- + Point the gun towards a container, and then press the delivery lever to let the paint out.
- + Turn lever "1" 180° clockwise.
- + Resume painting.



LEVER POSITION FOR NORMAL  
PAINTING



LEVER POSITION FOR PAINT  
NOZZLE AUTOMATIC CLEANING

### WARNING

It is possible to distinguish the cleaning position from the spraying position: one side reads "SPRAY SIDE".



## 4.3 TROUBLESHOOTING

The chapter describes how to solve the most common problems which could affect the unit.

The problem is indicated by the following symbol: (6)

The possible cause is indicated by the following symbol: (A)

The possible solution is indicated by the following symbol: (I)

### 6 IRREGULAR FAN CLOSING?

A Clogged cap air holes.

A Damaged joint gasket.

I Clean the air holes.

I Replace the gasket.

### 6 UNEVEN JET?

A Worn or dirty cap air holes.

A Worn or dirty nozzle.

I Clean the gun components carefully.

I Replace damaged parts.

### 6 PAINT LEAKS OUT OF THE STUFFING BOX?

A Worn stuffing box gasket.

A Loose stuffing box nut.

I Replace stuffing box.

I Replace stuffing box nut.

### 6 PAINT LEAKS OUT OF NOZZLE WITHOUT PULLING THE LEVER?

A Ball and ball seat dirty of dry paint.

A Worn ball and ball seat.

A Loose nozzle tip.

A Dirty nozzle tip cone.

I Clean the gun parts very carefully.

I Replace both the ball and seat.

I Tighten tip.

I Clean cone and tighten tip.

### 6 AIR COMES OUT WHEN THE LEVER IS RELEASED?

A The air valve rod does not slide.

A Dirt inside the air valve body.

A Air stuffing box nut too tight.

I Lightly lubricate gun components.

I Clean with care.

I Loosen stuffing box nut.

## WARRANTY

All **ASTURO ORIGINALI MAVES Spa** appliances are guaranteed for a period of 12 months from the date written on the invoice, unless otherwise stated in writing. The warranty covers all manufacturing faults and material defect. Replacements and repair operations are covered only if carried out by our company and at our servicing shops.

The faulty parts must be sent **CARRIAGE FREE**.

Once the components have been repaired they will be sent **CARRIAGE PAID** to the customer.

The warranty does not cover our company personnel aid during installation or dismantling operations. If for practical purposes one of our employee is sent to the premises, a charge will be made for the time plus extra for travelling and expenses.

Our warranty does not cover direct or indirect damage, to people or property, caused by our appliances and it does not cover repair operations carried out by the owner or by a third party.

The following are not covered by our warranty:

- + failure caused by incorrect use or assembly.
- + failure caused by external agents.
- + failure caused by lack of maintenance or negligence.

### WARRANTY FORFEITURE:

If the form attached below is not filled out and returned.

In case of delayed payment or other contract defaults.

All repair operations carried out under warranty do not interrupt its duration.

Whenever changes or repairs are carried out on our machinery without prior authorization Whenever the unit seems tampered with, dismantled or previously repaired in unauthorized servicing shops.

Whenever the serial number is damaged or removed.

When the damage is caused by improper use or functioning, or if the machine falls, is bumped or by other causes of malfunctioning not due to normal working conditions

**All disputes will be settled in the court of justice of Milan (Italy).**

---

NAME: \_\_\_\_\_  
COMPANY: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
V.A.T. NUMBER \_\_\_\_\_  
UNIT MODEL: \_\_\_\_\_  
SERIAL NUMBER: \_\_\_\_\_  
DATE: \_\_\_\_\_  
STAMP AND SIGNATURE: \_\_\_\_\_

**Send this form fully completed (capital letters) to:**

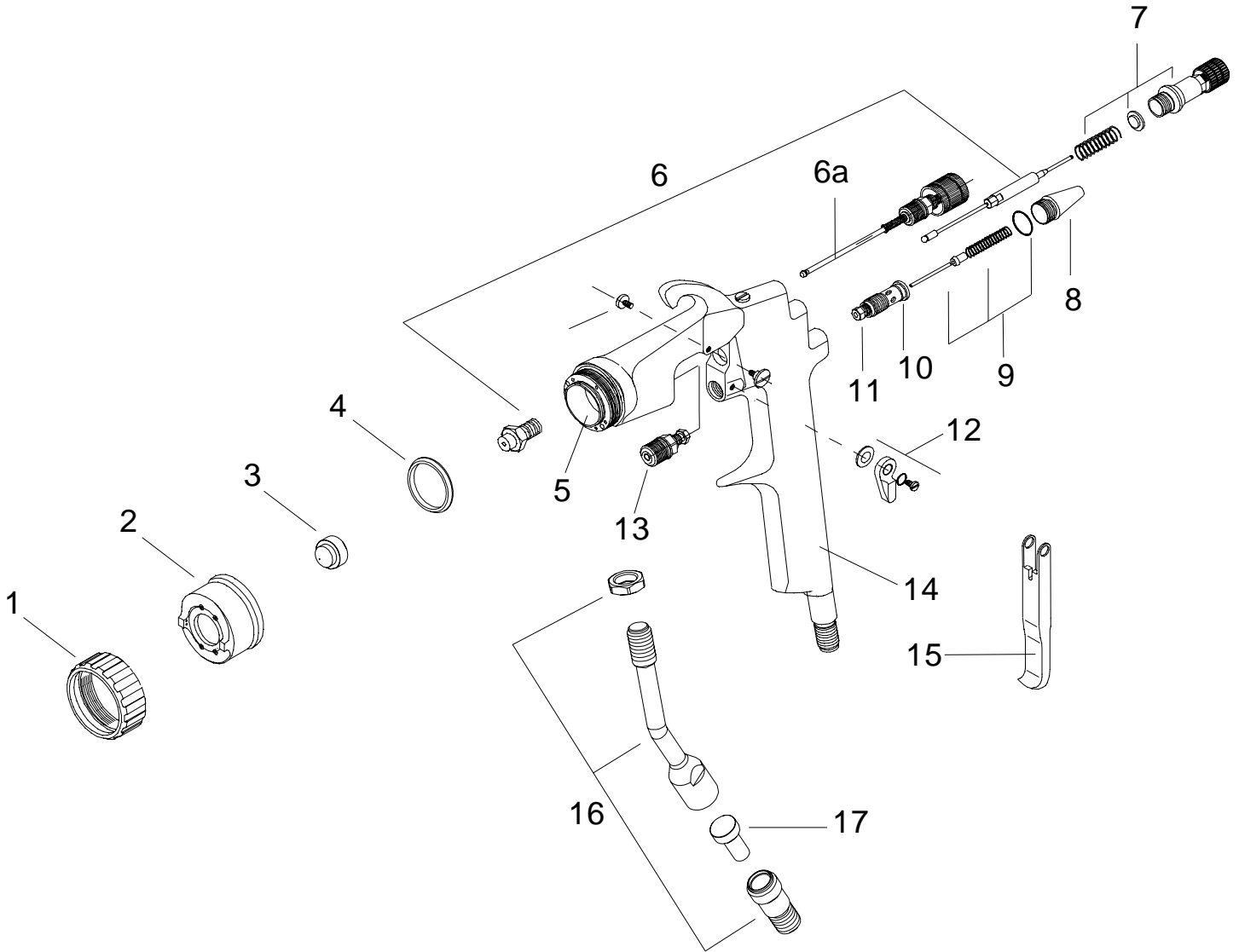
**ASTURO ORIGINALI MAVES Spa**

Via Cascina Venina 20 B/C  
20090 ASSAGO (MI) ITALY

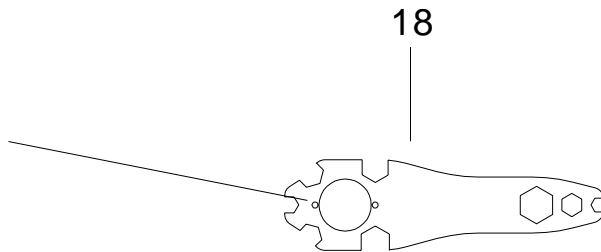
# USE AND MAINTENANCE MANUAL



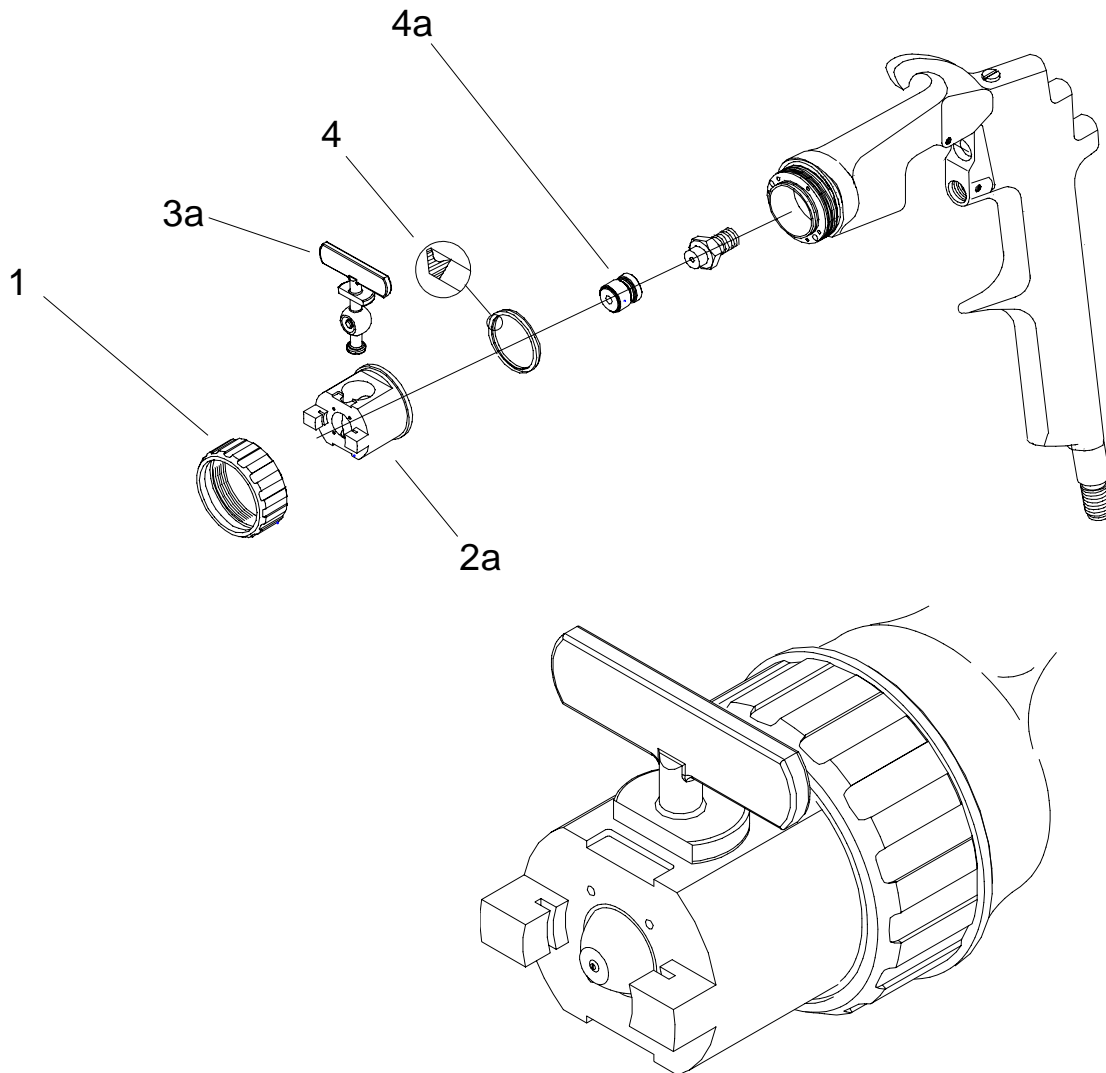
## GUN ASSEMBLING DRAWINGS VERS.MIX



DO NOT USE THE TWO  
WRENCH PINS FOR  
DISASSEMBLE THE  
SPRAY GUN



## PARTS FOR VERSION 3A-MIX

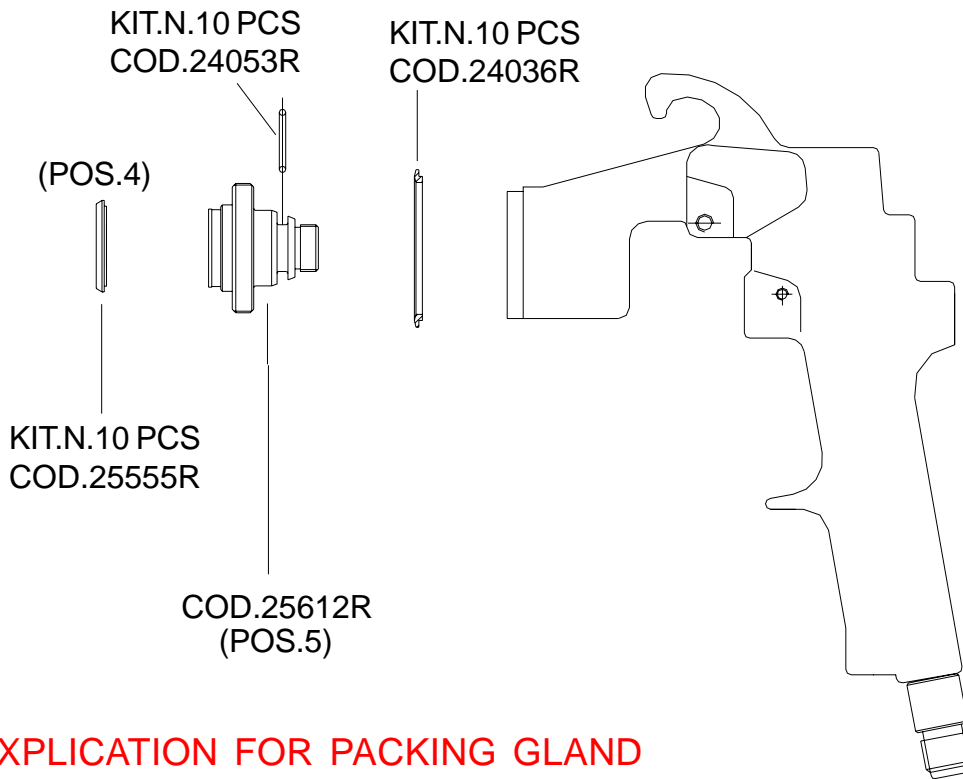


Pos.	CODE	Description
1	24005R	CAP CLAMPING RING K1MIX-3AMIX
2a	201126*	CAP K1 3AMIX COMPLETE
3a	TRXXX	TRI-A MIX NOZZLE
4	25555R	KIT CAP AIR SEP.GASKET MIX T.N ( 10 PCS.)
4a	201127/2007	TRI -A MIX JOINT GASKET VERS.2007

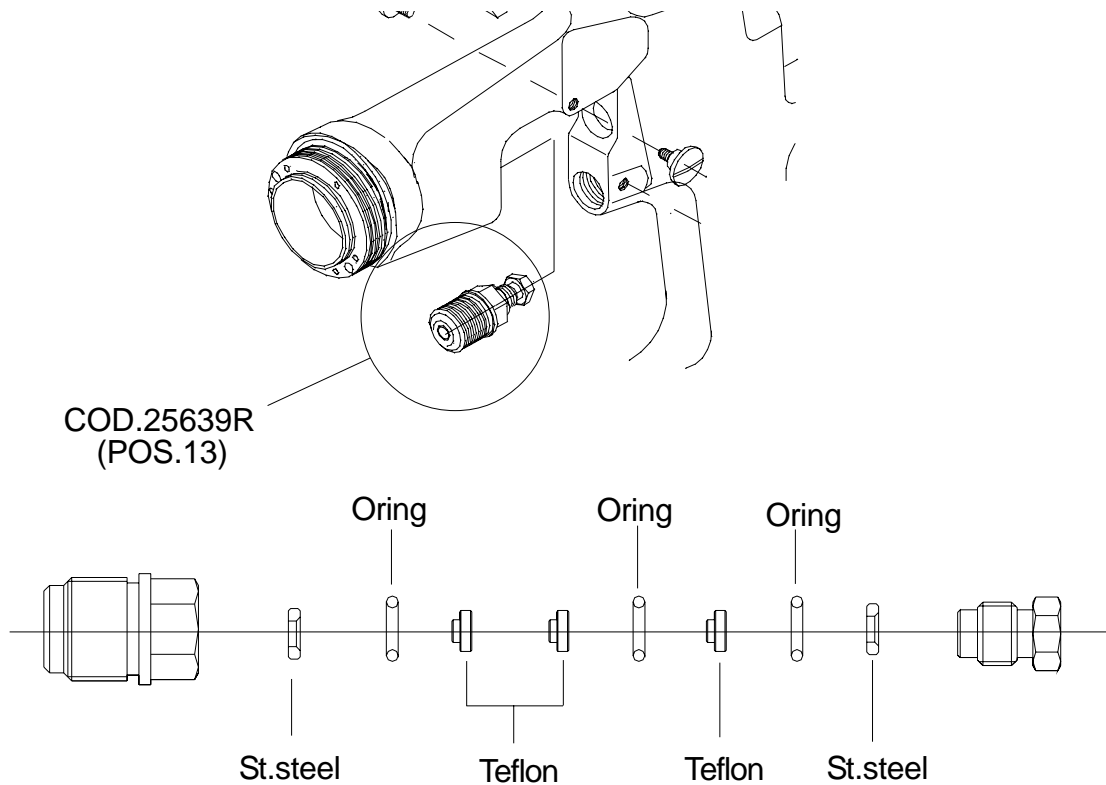
# USE AND MAINTENANCE MANUAL



## SPARE PARTS FOR BODY HANDLE



## EXPLICATION FOR PACKING GLAND



# USE AND MAINTENANCE MANUAL



## GUN COMPONENTS

Pos.	CODE	Description
1	24005R	CAP CLAMPING RING K1MIX-3AMIX
2	25521USA	CAP K1MIX USA COMPLETE
3	MIXXXX	MI NOZZLE
4	25555R	KIT N.10 CAP AIR SEP.GASKET MIX T.N
5	25612R	ST.STEEL HOLDER FOR NOZZLE
6	25509R	NEEDLE-NOZZLE KIT MIX 2004
6a	27025R	JET ADJUSTER T.N. ASSEMBLY
7	25645R	THRUST BEARING WITH SPPRING AND BASE
8	24043R	AIR VALVE PLUG
9	16585A	AIR VALVE PRESSURE TIGHTNESS KIT
10		OR ( ONLY WITH COD.25589R)
11	16584A	COMPLETE AIR VALVE
12	25560R	COMPLETE SECURITY FOR MIX T.N
13	25639R	PACKING GLAND
14	25503R	COMPLETE BODY LEGEND 3AMIX
15	25577R	COMPL.CONTROL LEVER MIX
16	25670R	3A MIX FILTER HOLDER WITHOUT FILTER
17	302091	100 ME FOLIATED FILTER FOR MINI HOLDER ( 10 PCS)
18	24091R	WRENCH
19	24097R	NYLON BRUSH

### 25589R KIT GASKETS AND SPRINGS

Q.ty	Description
1	Teflon friction ring
1	Cap air separating gasket
1	Teflon seal for spraying nozzle
1	Head cone packing
1	Packing needle spring
1	Flat ring
1	Air valve stuffing box needle
1	Air valve spring
1	Or 2037
1	Base for new mix spring
1	Or 3030 ( 16a)
1	Mix needle pushing spring
1	Complete legend air valve bar 2004

Warning: items not sold separately