



# FP Pro G



II2G Ex h IIB T6 Gb X

**User manual 582166110**

2021-04-24

Index B

**Original manual**

---

## SAMES KREMLIN SAS



13 Ch emin de Malacher  
38240 Meylan



[www.sames-kremlin.com](http://www.sames-kremlin.com)



33 (0)4 76 41 60 60

Any communication or reproduction of this document, in any form whatsoever, and any exploitation or communication of its contents are prohibited, unless expressly authorized in writing by **SAMES KREMLIN**.

The descriptions and characteristics contained in this document are subject to change without prior notice.

© **SAMES KREMLIN** 2021

## Table of Contents

1	Safety instructions.....	9
1.1	Life safety.....	9
1.2	Integrity of the material .....	13
2	UE Declaration of Conformity.....	15
3	Presentation of FPro G.....	18
3.1	FPro G Gun Components.....	19
3.2	Dimensions FPROG - FPRO GSP .....	20
4	Equipment identification .....	22
4.1	Material plan.....	22
4.2	Options.....	23
4.3	Versions FPro G .....	24
4.4	Standards applied .....	25
4.4.1	Description of the ATEX marking.....	26
4.4.2	Visuals of the marking elements .....	27
5	Technical specifications and performance .....	28
5.1	Technical specifications .....	28
5.2	Performances.....	31
5.3	Principle of operation.....	31
6	Installation.....	32
6.1	General Installation Diagram .....	32
6.2	Installation Diagram - Air Pressure Adjustment with or without Gauge at Gun Handle 33	
6.3	Transport .....	34
6.4	Storage.....	34
7	Commissioning.....	35
7.1	Apply a product on a surface.....	36
7.2	Short stop of the gun .....	36
7.3	Prolonged shutdown of the gun .....	36
7.4	User settings.....	37
7.4.1	Ergonomic GSP position adjustment for right-handed and left-handed users .....	38
7.5	Initialization of the follow-up in production.....	39
7.6	Safety in production .....	39
8	Use of the FPro G .....	39
9	Diagnostic Help / Troubleshooting Guide .....	40
9.1	Possible symptoms of faults - Causes of faults - Remedies to apply .....	41
10	Maintenance .....	42

10.1	Preventive Maintenance Plan.....	42
10.1.1	Location of lubrication points - FPro G - FPro GSP.....	43
10.2	Cleaning .....	45
10.3	Corrective maintenance.....	45
10.4	Disassembly/Re-assembly operation .....	46
10.4.1	Dismantle the FPro G .....	46
10.4.2	Replace needle packing.....	51
10.4.3	Replace air valve.....	56
10.4.4	Replace air valve seal .....	61
10.4.5	Replace the air needle at events and the air needle at the grip.....	62
10.4.6	Replace the GSP kit.....	64
10.4.7	Replace the air connection .....	71
10.4.8	Replace the gravity cup .....	72
10.5	Replace of defective parts.....	75
11	Disposable cups: smart cups .....	76
11.1	Assembly instructions.....	76
11.2	Storage instructions.....	79
11.3	Disposal instructions .....	81
12	Spare parts .....	82
12.1	Commercial References .....	82
12.1.1	Diversity of FPro G .....	82
12.2	Exploded view of the FPro G gun .....	84
12.3	Exploded view of the FPro GSP Gun .....	86
12.4	Consumable references .....	88
12.5	Wear part references .....	91
12.6	References for spare parts or repair kits .....	92
12.7	Kit references - specific tools .....	92
12.8	Lubricants .....	92

---

**Evolution table**

<b>Subject</b>	<b>Revision</b>	<b>Date</b>
<b>FPro G</b>	<b>A</b>	<b>01 14 2021</b>
<b>FPro G</b>	<b>B</b>	<b>23 04 2021</b>

Dear customer, you have just acquired your new equipment and we thank you for it.

We have taken the greatest care, from design to manufacturing, to ensure that this equipment gives you complete satisfaction.

For a good use and an optimal availability, we invite you to read this instruction manual carefully before putting your equipment into service.

---

---

## Warranty

SAMES KREMLIN grants a contractual warranty for a period of twelve (12) months from the date of availability to the Customer provided that the conditions of use indicated in this technical manual are complied with.

In order to be implemented, the warranty claim must define precisely, in writing the malfunction in question, must be accompanied by the defective Material and/or component, and must be informed of the conditions of acquisition by the Customer of the Material from SAMES KREMLIN.

SAMES KREMLIN will only accept or refuse the implementation of the warranty after analysis of the "defective" Material. The warranty granted by SAMES KREMLIN is limited to the replacement of the Material in its entirety or to the partial replacement of the defective component.

SAMES KREMLIN will only bear the cost of the parts necessary to replace the defective Material.

No guarantee will be granted by SAMES KREMLIN:

- For defects and deteriorations resulting from abnormal conditions of storage and/or conservation at the Customer's premises or for maintenance or use of the Equipment not conforming to the rules of art or not respecting the prescriptions of the present technical manual given to the Customer by SAMES KREMLIN,
- For defects and damage resulting from replacement parts not approved by SAMES KREMLIN or which the Customer, has modified,
- For all damages resulting from negligence or lack of supervision

On behalf of the Customer,

- In the event of normal wear and tear of the Equipment and/or its components or in the event of

Deterioration or accident resulting from faulty and/or abnormal use thereof.

---

**Meanings of pictograms**

 Danger : general signal (user)	 Danger: high pressure	 Explosive materials	 Danger: Electricity
 Toxic materials	 Corrosive materials	 Harmful or irritating materials	 Danger : pinching, crushing
 Risk of product emanation	 Danger: hot rooms or surfaces	 Danger: automatic start, moving parts	 Danger: risk of flammability
 General Obligation	 Grounding	 Refer to manual/instruction leaflet	 Gloves must be worn
 Protective helmet	 Hearing protection	 Mandatory respiratory protection	 Safety footwear
 Protective clothing	 Protective visor	 Wearing of glasses is mandatory	 Material recycling

---

### Qualification of personnel



Work on the gun must only be carried out by trained and qualified personnel in accordance with the legal rules and regulations in force.

The following conditions must be met:

- Staff must have specific skills and experience in the technical field concerned. This applies in particular to maintenance and repair work on devices related to the FPro G gun.
- The personnel must be familiar with the standards, guidelines, accident prevention regulations and operating conditions in force.
- Personnel must have been authorized by the Safety Officer to perform the required tasks.
- Personnel must be able to recognize and avoid potential hazards.
- The qualifications required of the personnel are subject to different legal regulations depending on the site of implementation. The owner must ensure compliance with applicable laws.
- Qualified personnel must be familiar with the product safety data sheets they are required to use in the operation of the FPro G.



# 1 Safety instructions

## 1.1 Life safety



The equipment at your disposal is for professional use only. It must be used only for the purpose for which it was intended.

Read the specified recommendations carefully:

- In the technical manuals of the equipment concerned.
- On device labels.

Misuse or improper operation can cause serious injury.

---

### Operator training and certification

Personnel using this equipment must be trained in its use.

The workshop manager must ensure that the operators have fully assimilated all instructions and safety rules for this equipment and the other components and accessories of the installation.

Only authorized personnel will be allowed to carry out production and maintenance operations on the equipment.

---

### (Personal Protective Equipment) - Workstation



The wearing of I.P.E. (Personal Protective Equipment) adapted to the risk situation is mandatory.

Avoid abnormal postures, maintain a stable position in order to keep your balance at all times, and therefore better control the equipment in case of unexpected situations.

Make sure the workstation is tidy and clean. Parts and tools that are scattered or piled up are sources of accidents.

---

### Products, paints

It is forbidden to use halogenated hydrocarbon solvents and products containing these solvents in the presence of aluminum or zinc.

Failure to comply with these instructions may result in explosion hazards causing serious injury or death.

The user shall identify and prevent potential hazards inherent to the products used, such as fire or explosion hazards, and toxicity hazards with serious injuries through body contact, in the eyes, under the skin, but also through ingestion or inhalation.

In relation to the products and paints (liquid or powder) used with its equipment, SAMES KREMLIN cannot be held responsible for direct or indirect material damage caused in use, for the poor compatibility of materials in contact, for the inherent risks to personnel and the environment, for wear and tear, for malfunctions of the equipment or installations and for the quality of the finished product.

---

### Ventilation



It is imperative that the spray booths are properly ventilated to avoid high concentrations of product, paint and to keep the LEL (Lower Explosion Limit) below.

If ventilation is turned off, toxic substances or dust may remain in the spray booth and cause a risk of fire, poisoning or irritation.

---

### Toxicity



Depending on the product used, toxic and/or flammable vapours may form.

There is a danger of intoxication and burning associated with the concentration of these vapors.

---

**Fire, explosion, arc, electricity**

The laws and regulations in force regarding safety, fire and electricity in the country where the equipment is used must be respected.

The gun must be used in areas for which it has been validated. Refer to the ATEX section of the document.

---

**Grounding**

In general, in order to prevent the accumulation of electrostatic charges, which could generate an electric arc in a flammable and explosive environment, it is necessary that all the elements making up the system be grounded.

The gun must be "grounded" through the air or fluid hose.

The materials to be painted must also be "grounded" by means of clamps with cables or, if they are suspended, by means of hooks which must be kept clean at all times.

Always follow decompression and purge procedures when cleaning, checking, maintaining equipment or cleaning gun nozzles.

This gun is a precision tool. Its proper operation requires frequent and careful maintenance.

If it is done immediately after the job, cleaning is easier and faster.

Never use wire brushes, files or pliers for disassembly.

Before cleaning or disassembling any component of the equipment, it is imperative that:

- Decompress the hoses by pulling the trigger.
  - Do not store more flammable products than necessary inside the work area.
-

These products must be stored in approved and grounded containers.

Use only grounded metal pails for the use of rinsing solvents.

Cardboard and paper are to be banned. Indeed they are very bad conductors, even insulators.

The canisters of products and cleaners must be grounded, via the grounding cable, using clamps or any other means of attachment.

The parts to be painted are hung or placed by means of grounded hooks or supports and kept clean at all times, in order to always guarantee a good conductivity to the ground.

All insulation (cardboard, paper, plastic materials) must be kept to a minimum in the work area.

Ground continuity must be checked by a qualified electrician.

Never operate the equipment without first ensuring that all the above provisions are met.

---

## **Pressure**



The use of pressurized air and products (paints or solvents) presents risks for the user and the equipment.

Never exceed the maximum working pressures of equipment, components and accessories.

It is imperative to follow the procedures for decompression, shutdown and logging of pressure energies, elimination of residual energies and purging of fluids, for any cleaning, inspection, maintenance of the equipment.

---

---

**Surfaces, edges, corners**

Some component surfaces may be hot during operation. Skin contact with hot surfaces will cause severe skin burns.



Handle open or sharp-edged components with care. Wear protective gloves.

---

**1.2 Integrity of the material****Equipment modification**

Under no circumstances should our equipment be modified or used in unintended cases of use.

Parts and accessories must be exclusively supplied or approved by SAMES KREMLIN.

SAMES KREMLIN cannot be held responsible for personal injury as well as breakdowns and/or damage resulting from modification of the equipment. Any modification of the equipment made by the user and not authorized by SAMES KREMLIN will result in loss of certification.

---


---

**Environment**

Environmental risks must be controlled as follows:

- Respect an average temperature of use of the equipment and products, which must be at least 5°C lower than the flash point of the products and within a range of 0 to 40°C.
- Ventilation of the area by forced extraction and supply of unpolluted air shall be mandatory during equipment operation or cleaning operations.
- Fragile parts of the installation, especially flexible hoses, must be protected from mechanical or thermal damage during production or maintenance.
- Waste related to the operation or dismantling of the equipment must be treated in accordance with the laws in force.



-  The noise level of our equipment is limited to the maximum, however the operators will have to be protected according to the overall noise level of the environment. Depending on the operating conditions, the sound pressure of the equipment may cause hearing problems. Take appropriate measures to reduce noise pollution.
- Dispose of packaging materials in a proper and environmentally friendly manner.

## 2 UE Declaration of Conformity



578.151.130 2102

### FR

**Pour une utilisation sûre, il est de votre responsabilité de :**

- D'installer, d'utiliser, d'entretenir et de réparer l'équipement conformément aux préconisations de SAMES KREMLIN ainsi qu'aux réglementations nationales et/ou locales,
- Vous assurez que les utilisateurs de cet équipement ont été formés, ont parfaitement compris les règles de sécurité et qu'ils les appliquent.

### ES

**Para una utilización segura, será de su responsabilidad:**

- instalar, utilizar, efectuar el mantenimiento y reparar el equipo con arreglo a las recomendaciones de SAMES KREMLIN y a la normativa nacional y/o local,
- cerciorarse de que los usuarios de este equipo han recibido la formación necesaria, han entendido perfectamente las normas de seguridad y las aplican.

### NL

**Voor een veilig gebruik dient u:**

- het apparaat te installeren, gebruiken, onderhouden en repareren volgens de door SAMES KREMLIN gegeven aanbevelingen en overeenkomstig de nationale en/of plaatselijke reglementeringen,
- zeker te stellen dat de gebruikers van dit apparaat zijn opgeleid, de veiligheidsregels perfect hebben begrepen en dat zij die ook toepassen.

### PL

**Dla zapewnienia bezpiecznego użytkowania na użytkownika spoczywa obowiązek:**

- Instalowania, użytkowania, konserwacji i naprawy urządzenia zgodnie z zaleceniami firmy SAMES KREMLIN oraz z przepisami miejscowymi,
- Upewnienia, że wszyscy przeszkoleni użytkownicy urządzenia zrozumieli zasady bezpieczeństwa i stosują się do nich.

### SK

**V záujme bezpečného je vašou povinnosťou:**

- nainštalovať, používať, udržiavať a opravovať zariadenie v súlade s odporúčaniami spoločnosti SAMES KREMLIN a národnými a/alebo miestnymi predpismi,
- uistiť sa, že používatelia tohto zariadenia boli zaškolení, riadne porozumeli pravidlám bezpečnosti a používajú ich.

**SAMES KREMLIN SAS**

13, chemin de Malacher  
38 240 - MEYLAN - France  
☎ : 33 (0)4 76 41 60 60

**www.sames-kremlin.com**

### UK

**To ensure safe use of the machinery, it is your responsibility to:**

- Install, use, maintain and repair the machinery in accordance with SAMES KREMLIN's recommendations and national and/or local regulations,
- Make sure that the users of the machinery have received proper training and that they have perfectly understood the safety rules and apply them.

### IT

**Per un uso sicuro, vi invitiamo a:**

- installare, utilizzare, mantenere e riparare l'apparecchio rispettando le raccomandazioni di SAMES KREMLIN, nonché le normative nazionali e/o locali,
- accertarvi che gli utilizzatori dell'apparecchio abbiano ricevuto adeguata formazione, abbiano perfettamente compreso le regole di sicurezza e le applichino.

### SE

**För en säker användning av utrustningen ansvarar ni för följande:**

- Installera, använd, underhåll och reparera utrustningen enligt anvisningarna från SAMES KREMLIN och enligt nationella och/eller lokala bestämmelser.
- Försäkra er om att användare av denna utrustning erhållit utbildning, till fullo förstått säkerhetsföreskrifterna och tillämpar dem.

### CS

**Pro bezpečné používání jste povinni:**

- Nainstalovat, používat, udržovat a opravovat zařízení v souladu s pokyny firmy SAMES KREMLIN a s národními a/nebo místními legislativními předpisy,
- Ujistit se, že uživatelé tohoto zařízení byli vyškoleni, že dokonale pochopili bezpečnostní pravidla a že je dodržují.

### HU

**A biztonságos használat érdekében az Ön felelőssége, hogy:**

- a berendezést a SAMES KREMLIN ajánlásainak valamint a nemzeti és/vagy helyi szabályozásoknak megfelelően helyezze üzembe, használja, tartsa karban és javítsa,
- megbizonyosodjon róla, hogy a berendezés felhasználói képzettek, tökéletesen megértették és alkalmazzák a biztonsági előírásokat.

### DE

**Eine sichere Nutzung setzt voraus, dass Sie:**

- die Anlage im Einklang mit den Empfehlungen von SAMES KREMLIN sowie mit den nationalen und/oder lokalen Bestimmungen installieren, verwenden, warten und reparieren,
- sich vergewissern, dass die Nutzer dieser Anlage angemessen geschult wurden, die Sicherheitsbestimmungen verstanden haben und sie anwenden.

### PT

**Para uma utilização segura, é da sua responsabilidade:**

- Proceder à instalação, utilização, manutenção e reparação do equipamento de acordo com as preconizações de SAMES KREMLIN, bem como com outros regulamentos nacionais e/ou locais aplicáveis,
- Assegurar-se que os utilizadores do equipamento foram devidamente capacitados, compreenderam perfeitamente e aplicam as devidas regras de segurança.

### FI

**Käytön turvallisuuden varmistamiseksi velvollisuutesi on:**

- Noudattaa laitteiston asennuksessa, käytössä, kunnossapidossa ja huollossa SAMES KREMLIN in suosituksia sekä kansallisia ja/tai paikallisia määräyksiä,
- Varmistaa, että laitteiston käyttäjät ovat koulutettuja ja ymmärtävät täysin turvallisuusmääräykset ja miten niitä sovelletaan.

### SL

**Za varno uporabo ste dolžni:**

- inštalirati, uporabljati, vzdrževati in popravljati opremo po določilih SAMES KREMLIN in v skladu z veljavnimi nacionalnimi in/ali lokalnimi predpisi,
- poskrbeti, da so uporabniki te opreme ustrezno usposobljeni, poznajo varnostne predpise in da jih upoštevajo.

### RO

**Pentru o utilizare sigură, este responsabilitatea dvs. să:**

- Instalați, utilizați, întrețineți și reparați echipamentul conform instrucțiunilor SAMES KREMLIN precum și reglementărilor naționale și/sau locale,
- Vă asigurați că utilizatorii acestui echipament au fost instruiți, au înțeles perfect regulile de securitate și le aplică integral.

		<p style="text-align: center;"> <u>DECLARATION UE DE CONFORMITE</u>  <u>UE DECLARATION OF CONFORMITY</u>  <u>EU- KONFORMITÄTSERKLÄRUNG</u>  <u>DECLARACIÓN UE DE CONFORMIDAD</u>  <u>DICHIARAZIONE DI CONFORMITÀ UE</u>  <u>DECLARAÇÃO UE DE CONFORMIDADE</u>  <u>EU-CONFORMITEITSVERKLARING</u>  <u>EU-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE</u>  <u>EU- VAATIMUKSENMUKAISUUSVAKUUTUS</u>  <u>DEKLARACJA ZGODNOŚCI UE</u>  <u>EU PROHLÁŠENÍ O SHODĚ</u>  <u>IZJAVA EU O SKLADNOSTI</u>  <u>VYHLÁSENIE O ZHODE</u>  <u>EU-MEGFELELŐSÉGI NYILATKOZAT</u>  <u>DECLARATIA DE CONFORMITATE UE</u> </p>
<p>Le fabricant / The manufacturer / Der Hersteller          / El fabricante / Il produttore / O fabricante          / De fabrikant / Tillverkare / Valmistaja / Producent          / Výrobce          / Proizvajalec / Výrobca / Gyártó / Fabricantul:</p>	<p style="text-align: center;"><b>SAMES KREMLIN SAS</b>          13, chemin de Malacher          38 240 - MEYLAN - FRANCE          Tél. : 33 (0)4 76 41 60 60</p>	
<p>Déclare que le matériel désigné ci-après / Herewith declares that the equipment / erklärt hiermit, dass die / Declara que el material designado a continuación / Dichiaro che il materiale sottoidicato / Declara que o material a seguir designado / verklaart dat de hieronder aangeduide apparatuur / Kungör att den utrustning som anges här nedan / ilmoittaa, että alla mainitut laitteistot / Oświadczam, że wymienione poniżej urządzenia / Prohlašuje, že níže uvedené vybavení / Izjavlja, da je opisana oprema spodaj / Vyhlasuje, že zariadenie uvedené nižšie / Kijelenti, hogy a megjelölt anyag a továbbiakban / Declara că echipamentul precizat mai jos:</p>		
<p><b>PISTOLETS AUTOMATIQUES DE PULVERISATION PNEUMATIQUES / AIRSPRAY          AUTOMATIC SPRAYING GUNS          / AUTOMATIK LUFTSPRITZPISTOLEN / PISTOLAS AUTOMÁTICAS DE PULVERIZACIÓN          NEUMÁTICAS</b></p>		
<p><b>FPro G</b></p>		
<p>Est conforme à la législation d'harmonisation de l'Union applicable suivante / Is in conformity with the relevant Union harmonisation legislation / Erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union / es conforme con la legislación de armonización pertinente de la Unión / è conforme alla pertinente normativa di armonizzazione dell'Unione / in overeenstemming met de desbetreffende harmonisatiewetgeving van de Unie / med den relevanta harmoniserade unionslagstiftningen / on asiaa koskevan unionin yhdenmukaistamislainsäädännön vaatimusten mukainen / jest zgodny z odnosnymi wymaganiami unijnego prawodawstwa harmonizacyjnego / Shoduje se s následující příslušnou evropskou harmonizační legislativou / V skladu s harmonizirano zakonodajo Unije / Je v súlade s uplatniteľnými harmonizačnými právnymi predpismi EÚ / Megfelel a következő alkalmazandó uniós harmonizációs szabályozásnak / Este conform cu legislația aplicabilă de armonizare de mai jos</p>		
<p>Directive ATEX / ATEX Directive / ATEX Richtlinie / Directiva ATEX / Direttiva ATEX / Diretiva ATEX / ATEX-Richtlijn / ATEX-direktivet / ATEX-direktivi / Dyrektywa ATEX / Směrnice ATEX / Direktiva ATEX / Smernica ATEX / ATEX-irányelv</p>		
<p style="text-align: center;">  II 2G Ex h IIB T6 Gb X           NF EN ISO 80079-36 Juin 2016          NF EN ISO 80079-37 Juin 2016          NF EN 1127-1 Août 2019           Ex h=&gt; Protection par sécurité de construction (c) / Protection by constructional safety (c) / Schutz durch konstruktive Sicherheit (c) / Protección por seguridad constructiva (c) / Protezione per sicurezza costruttiva (c) / Protecção por segurança construtiva (c) / Bescherming door constructieveiligheid (c) / Säker konstruktion (c) / Suojaus rakenteellisella turvallisuudella (c) / Zabezpieczenie za pomocą bezpieczeństwa konstrukcyjnego (c) / Ochrana bezpečnou konstrukci (c) / Zaščita s konstrukcijsko varnostjo (c) / Ochrana bezpečnou konštrukciou (c) / Szerkezetbiztonsági védelem (c) / Protecție prin securitate constructivă (c)       </p> <p style="text-align: center;"><b>INERIS 0080 - 60550 Verneuil-en-Halatte - France</b></p>	<p><b>2014/34/UE</b></p>	



La présente déclaration de conformité est établie sous la seule responsabilité du fabricant / This declaration of conformity is issued under the sole responsibility of the manufacturer / Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller / La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante / La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante / A presente declaração de conformidade é emitida sob a exclusiva responsabilidade do fabricante / Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant / Denna försäkran om överensstämmelse utfärdas på tillverkarens eget ansvar / Tämä vaatimustenmukaisuusvakuutus on annettu valmistajan yksinomaisella vastuulla / Niniejsza deklaracja zgodności wydana zostaje na wyłączną odpowiedzialność producenta / Toto prohlášení o shodě se vydává na výhradní odpovědnost výrobce / Za izdajo te izjave o skladnosti je odgovoren izključno proizvajalec / Toto vyhlásenie o zhode sa vydáva / na vlastnú zodpovednosť výrobcu / Ezt a megfelelőségi nyilatkozatot a gyártó kizárólagos felelőssége mellett adják ti / Prezenta declarație de conformitate este emisă pe răspunderea exclusivă a producătorului.



Hervé WALTER

Directeur Recherche & Développement /  
 Research & Development Director / Direktor für  
 Forschung & Entwicklung / Director de  
 Investigación y Desarrollo / Direttore Ricerca e  
 sviluppo / Diretor de Pesquisa e  
 desenvolvimento / Manager Onderzoek en  
 Ontwikkeling / Direktör för Forskning och  
 Utveckling / Johtaja tutkimus ja kehitys /  
 Dyrektor ds. Badań i rozwoju / Ředitel výzkumu  
 a vývoje / Direktor za raziskave in razvoj /  
 Riaditeľ pre výskum a vývoj / Kutatási és  
 Fejlesztési Igazgató / Director de cercetare și  
 Dezvoltare

Fait à Meylan, le / Established in Meylan, on / Geschehen zu Meylan, am / En Meylan, a / Redatto a Meylan, /  
 Vastgesteld te Meylan, / Utformat i Meylan, den / Meylan, Ranska, / Sporządzono w Meylan, dnia / Meylan, dnia / V  
 Meylanu, / V Meylan dňa / Kelt Meylanban, / Întocmită la Meylan, pe data de 15/02/2021 - 02/15/2021

---

### **3 Presentation of FPro G**

#### **Usage**

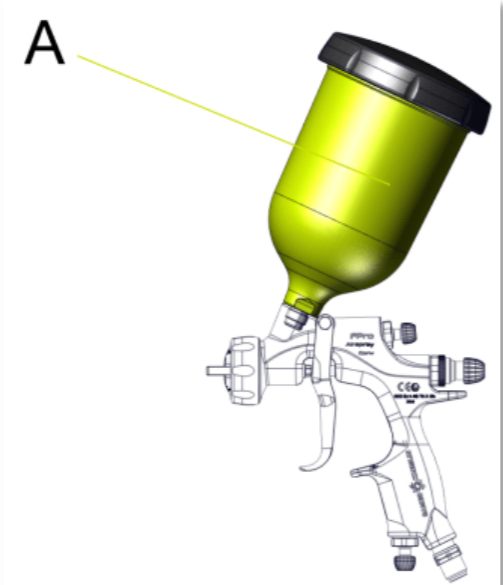
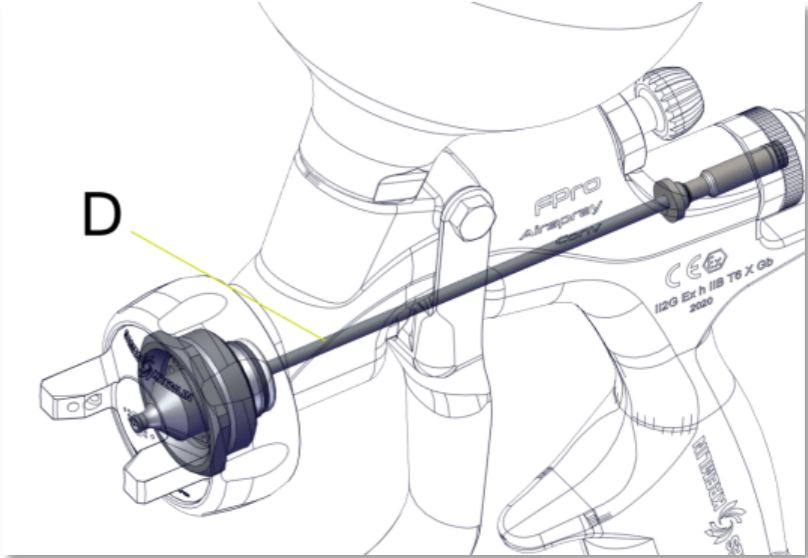
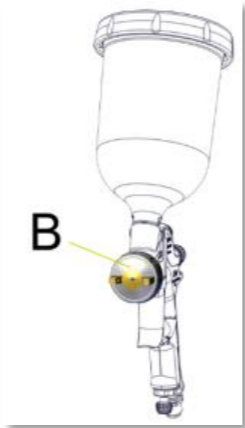
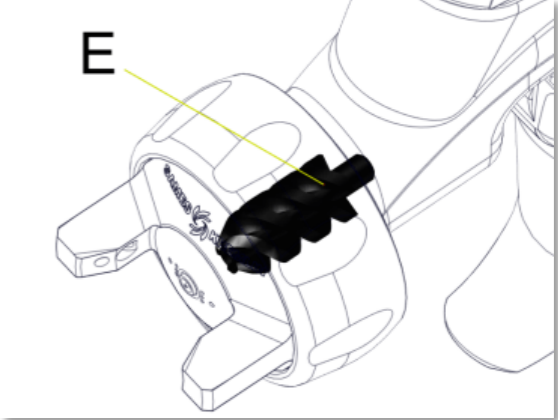
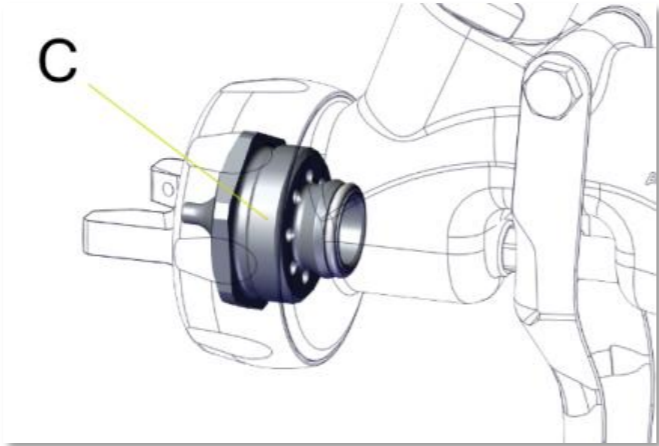
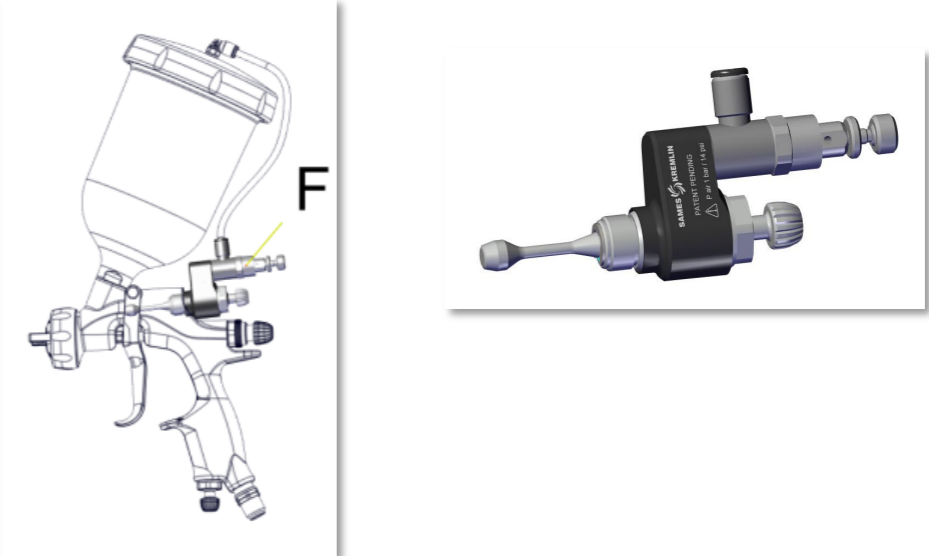
Guns recommended for spraying varnishes, lacquers, stains, polyurethanes.

The product is fed by gravity via a compatible rigid or disposable cup.

Refer to procedure: 11 Disposable cups: smart cups

---

3.1 FPro G Gun Components

Position	Designation	Visual	Position	Designation	Visual
A	Paint cup		D	Nozzle + needle	
B	Air cap+ring		E	Vortex	
C	Equipped nozzle		F	GSP Kit (FPRO G GSP)	

3.2 Dimensions FPROG - FPRO GSP

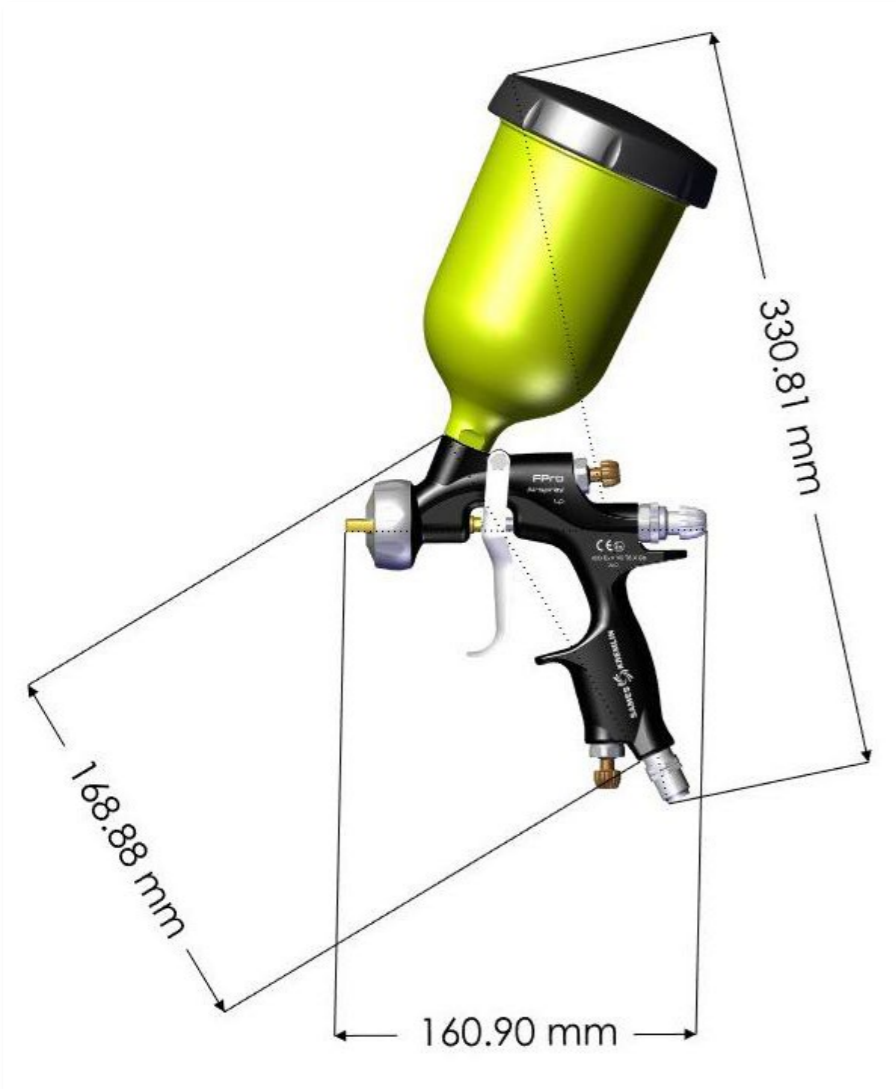


Figure 1 FPro G

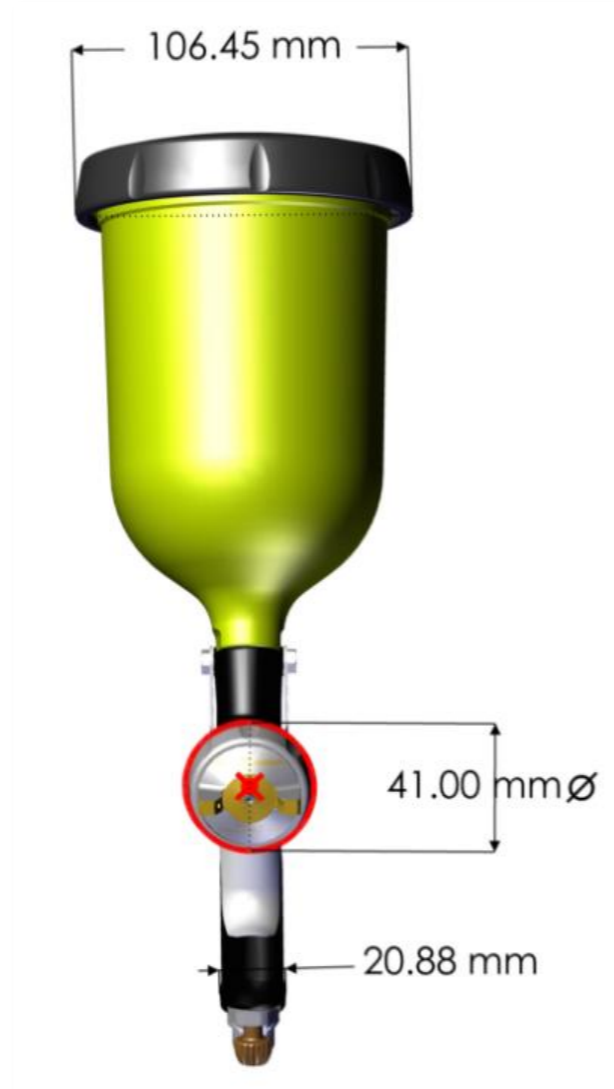


Figure 2 FPro G

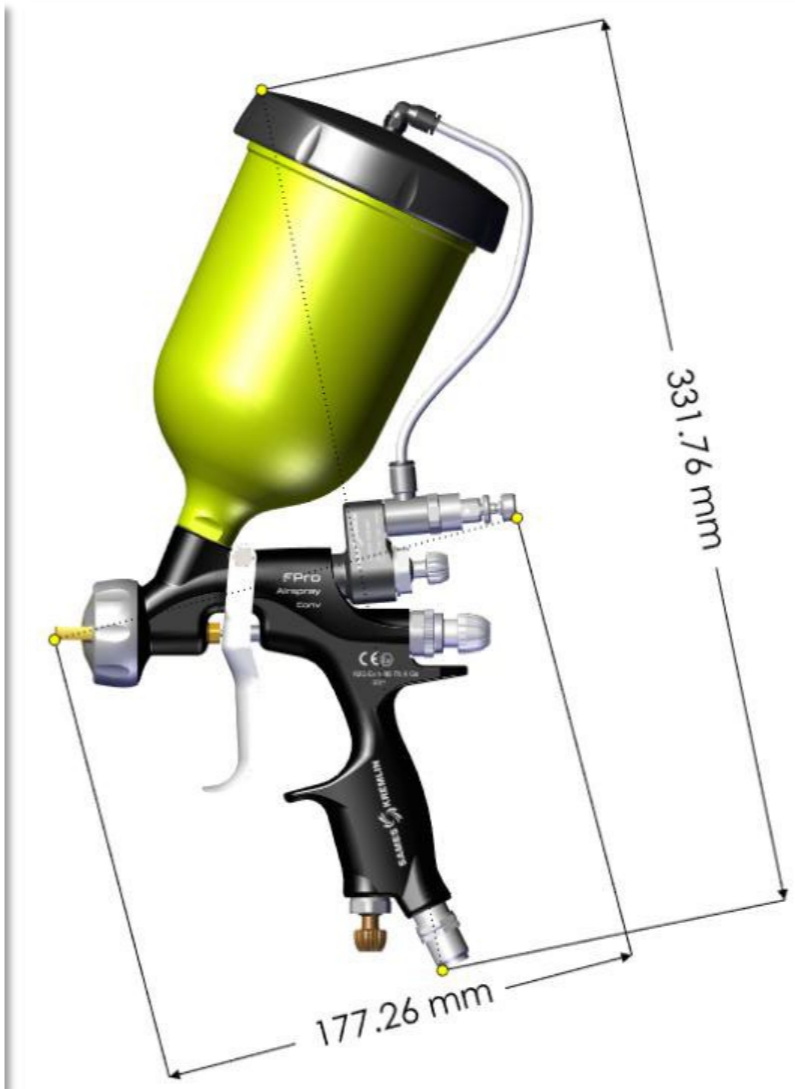
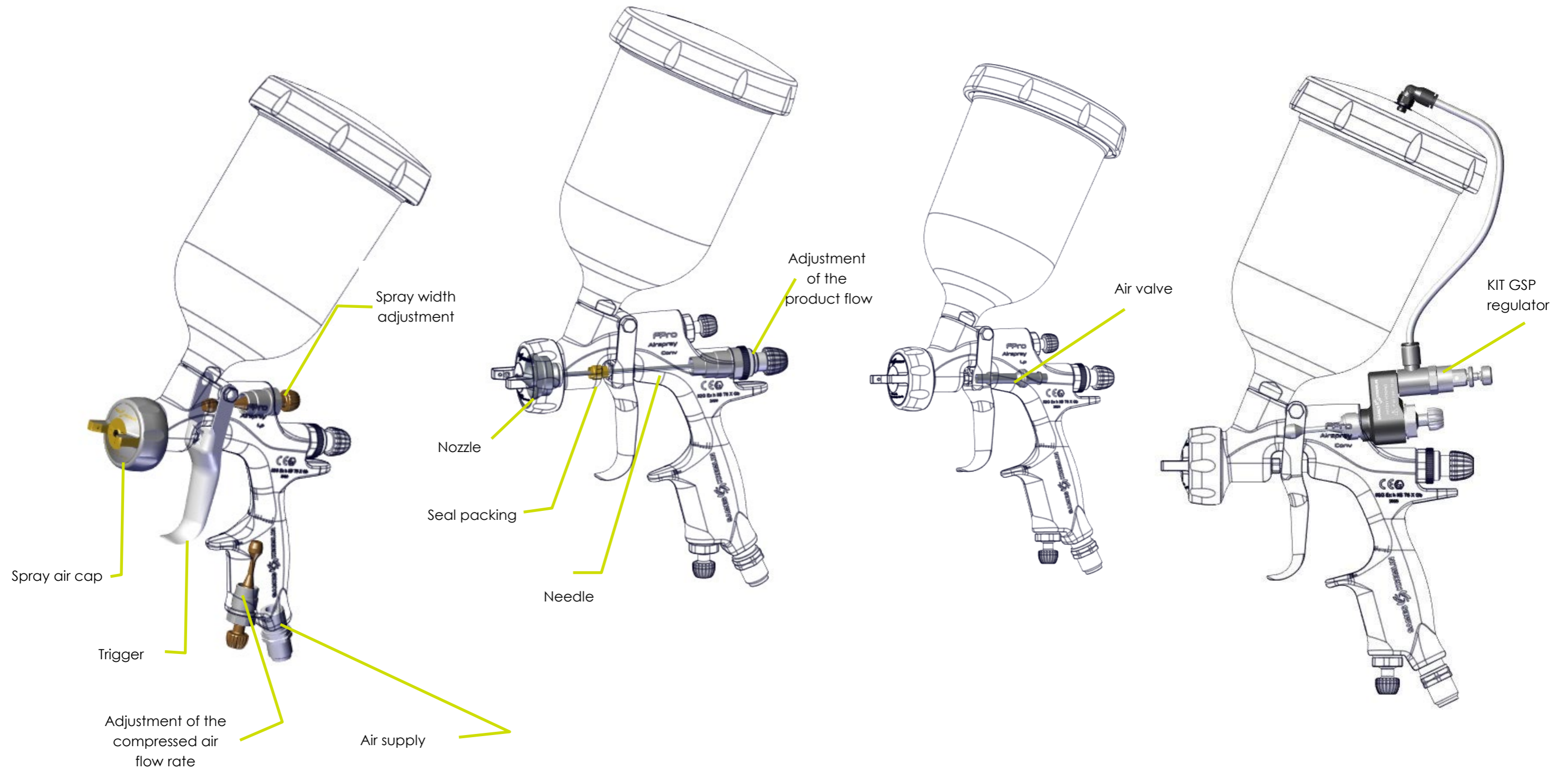


Figure 3 FPro GSP



Figure 4 FPro GSP

Gun structure FPROG and FPRO GSP

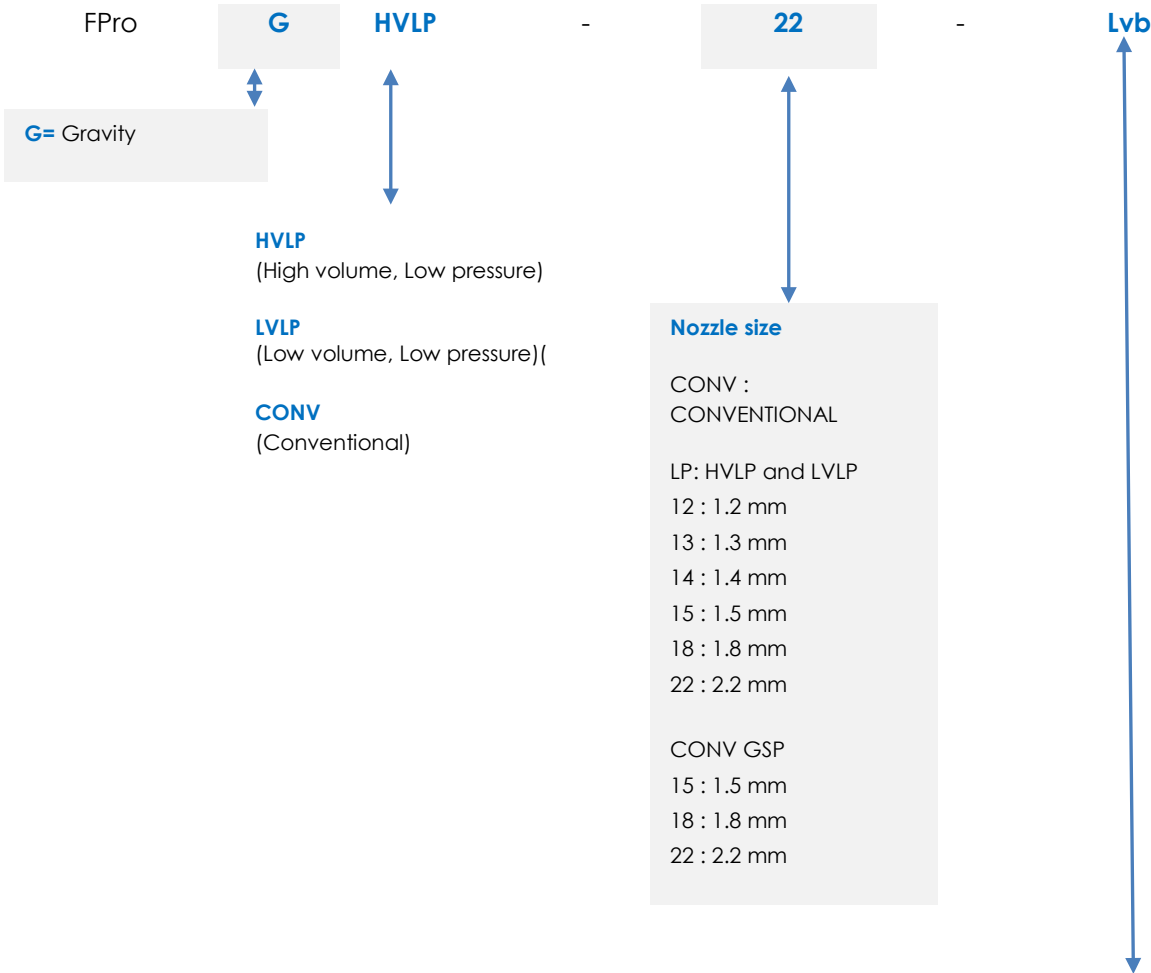


# 4 Equipment identification

## 4.1 Material plan

### Principle of designation

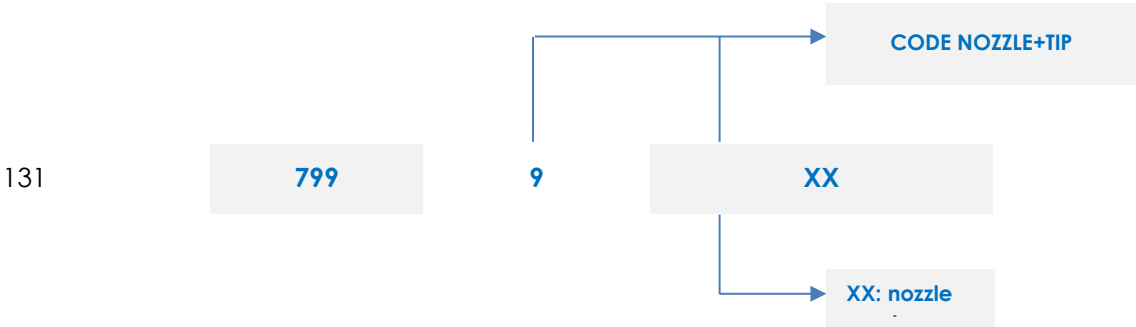
Referencing structure (below).



	Description
	<p><b>Lvb or Mvb</b></p> <p><b>Maximum spray width at 20 cm</b></p> <p><b>L:</b> 30 - 40 cm</p> <p><b>M:</b> 20 - 30 cm</p>

---

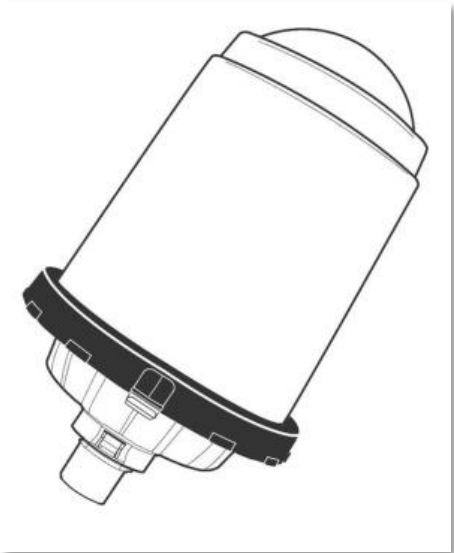
**Coding principle: nozzle code and needle code**



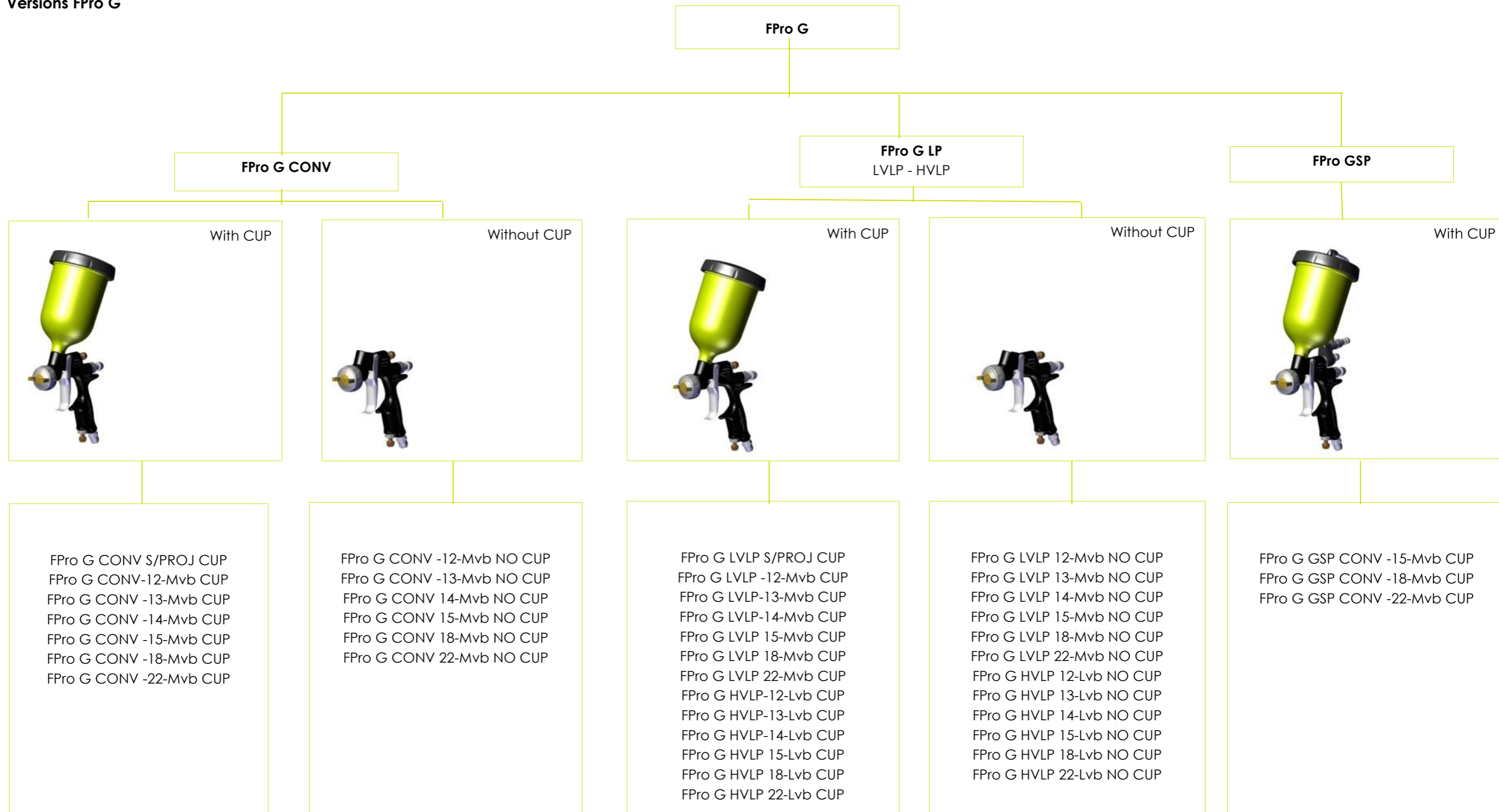
---

**4.2 Options**

**Disposable cup - Smart Cup**



Versions FPro G







#### **4.4 Standards applied**

- ATEX Directive 2014/34/EU.
  - NF EN ISO 80079-36 June 2016
  - NF EN ISO 80079-37 June 2016
  - NF EN 1127-1 August 2019
-

#### 4.4.1 Description of the ATEX marking

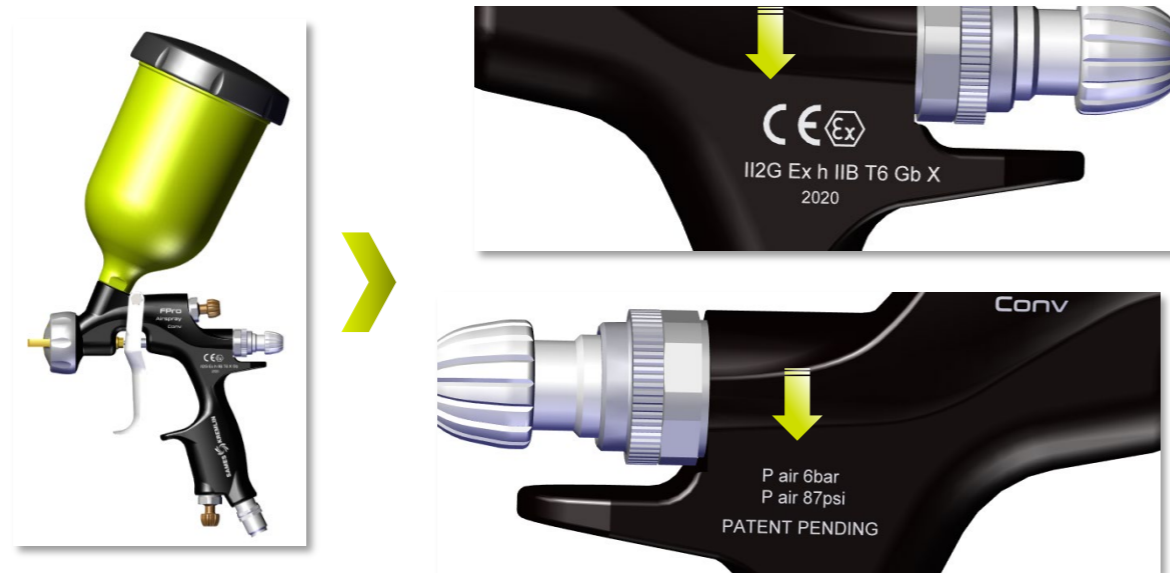
Each device is marked with the name of the manufacturer, the reference of the device and important information for the use of the device (air pressure, electrical power, etc.).

This equipment has been designed in accordance with the ATEX 2014/34/EU directive and is intended for use in Zone 1.

<b>Description</b>	
<b>Acronym SAMES KREMLIN</b>	Manufacturer's brand name
<b>FPro</b>	Gun model
<b>EC</b>	<b>EC</b> : European Conformity
	 : Use in explosive areas <b>II</b> : group II <b>2</b> : category 2 Surface equipment intended for an environment in which explosive atmospheres due to gases, vapours, mists are likely to occur occasionally during normal operation. <b>G</b> : Gas
<b>Ex h IIB T6</b>	<b>Ex</b> Marking of conformity to European standards <b>h</b> : Type of protection for non-electrical appliance <b>IIB</b> : Reference gas for equipment qualification <b>T6</b> : Temperature class - Maximum surface temperature: 85°C*.
<b>Gb</b>	<b>Gb</b> : Equipment protection level (zone 1 gas)
<b>X</b>	Special conditions apply for safe use. Refer to the requirements in the instruction manuals accompanying this product.
<b>20XX</b>	Number given by SAMES KREMLIN. The first two digits indicate the year of manufacture.
<b>P air : 6 bar / 87 psi</b>	Max. air supply pressure of the gun
<b>P prod : 6 bar / 87 psi</b>	Max. fluid pressure at gun inlet
<b>PATENT PENDING</b>	Patent pending on Vortex technology
<b>GSP KIT Specificity</b>	
<b>P air : 1 bar / 14 psi</b>	Maximum allowable pressure in the GSP cup: 1 bar / 14 psi

4.4.2 Visuals of the marking elements

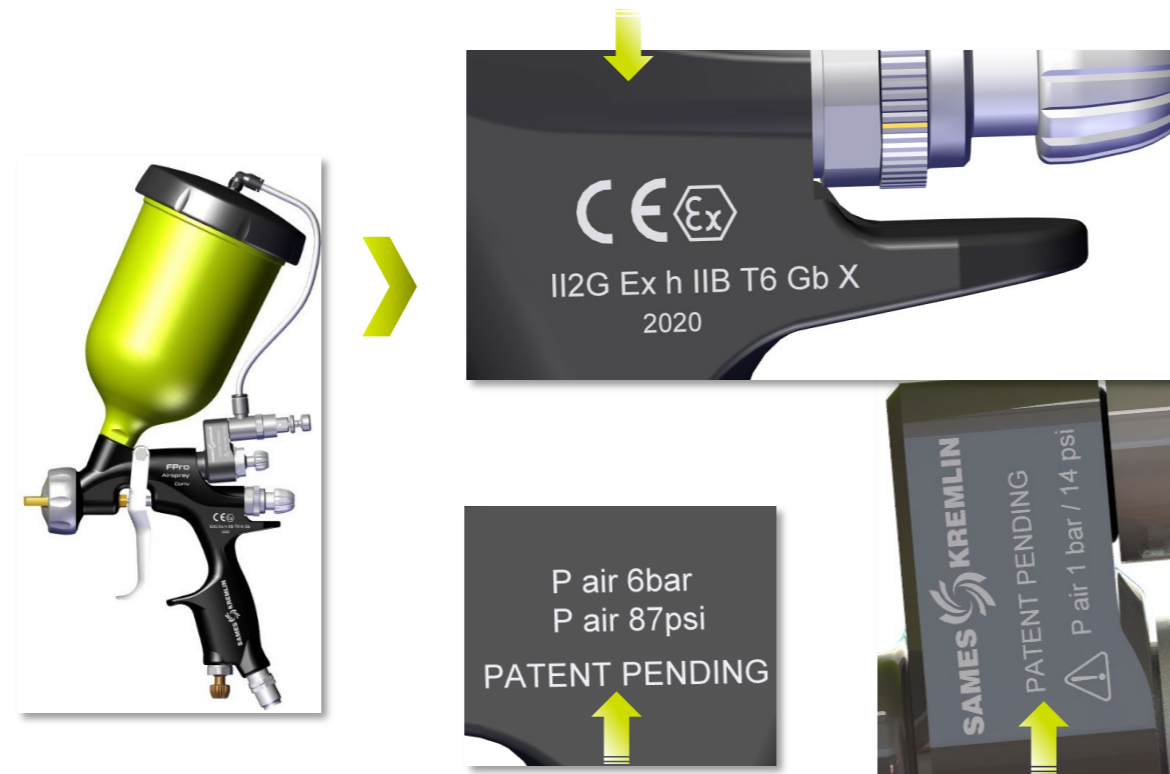
FPro G CONV



FPro G LP



FPro G GSP



## 5 Technical specifications and performance

### 5.1 Technical specifications

#### FPro G CONV - FPro G CONV GSP

	FPro G CONV	FPro G CONV GSP
Type	Gravity	
Maximum air supply pressure (network)	6 bar	
Maximum product feed pressure	NA	1 bar
Air flow rate	23, 8m3/h	23,3m3/h
Air pressure at the handle	3b	3b
Weight with cup	619 g	728 g
Weight without cup	446 g	527 g
Noise level	83 dBA	83 dBA
Maximum ambient operating temperature	50°C	

#### FPro G HVLP - FPro G LVLP

	FPro G HVLP	FPro G LVLP
Type	Gravity	
Maximum air supply pressure (network)	6 bar	
Maximum product feed pressure	NA	NA
Air flow rate	21.3 m3/h	14.9 m3/h
Air pressure at the handle	2.5 bar	2.5 bar
Weight with cup	628 g	628 g
Weight without cup	455 g	455 g
Noise level	81 dBA	81 dBA
Maximum ambient operating temperature	50°C	

**Materials FPro G**

<b>Gun body</b>	Anodized polished forged aluminum
<b>Head</b>	Nickel-plated brass
<b>Nozzle</b>	INOX
<b>Needle</b>	INOX
<b>Gravity cup</b>	Plastic

**Air and Fluid connections**

<b>Gun</b>	<b>Elements mounted on the gun (depending on model)</b>	<b>Air and product supply</b>
<b>Air</b>	Connection: M 1/4 NPS ( <sup>1st</sup> assembly) M ¼ BSP (spare connection)	Ø 7 mm int. minimum (for a length of 7.5 m)
<b>Product</b>	Gravity cup (0.6 l)	Cup (0.6 l)
		<b>Options</b> <b>Disposable cup (0.75 l)</b> <b>Disposable cup (0.25 l)</b>

### Nozzle characterization principle

Nozzle parameters	
Technology	Nozzle size
<b>CONV (CONVENTIONAL)</b> <b>LP: HVLP and LVLP</b>	<ul style="list-style-type: none"> <li>• 12 : 1.2 mm</li> <li>• 13 : 1.3 mm</li> <li>• 14 : 1.4 mm</li> <li>• 15 : 1.5 mm</li> <li>• 18 : 1.8 mm</li> <li>• 22 : 2.2 mm</li> </ul>
<b>CONV GSP</b>	<ul style="list-style-type: none"> <li>• 15 : 1.5 mm</li> <li>• 18 : 1.8 mm</li> <li>• 22 : 2.2 mm</li> </ul>

#### CONV Head

Nozzle	12	13	14	15	18	22
Flow rate	200 cc	220 cc	240 cc	300 cc	390 cc	440 cc

(Measured in water with 590 ml in the cup and 2.2 b of air).

#### LVLP head

Nozzle	12	13	14	15	18	22
Flow rate	190 cc	230 cc	240 cc	290 cc	375 cc	440 cc

(Measured in water with 590 ml in the cup and 2.2 b of air).

#### HVLP-Lvb head

Nozzle	12	13	14	15	18	22
Flow rate	170 cc	200 cc	226 cc	235 cc	278 cc	305 cc

(Measured in water with 590 ml in the cup and 2.2 b of air).

## 5.2 Performances

Excellent spray quality: Vortex technology .

Ergonomics studied for a better grip (Improved grip and trigger design)

Very low trigger force: magnetic assistance

Reduced weight

Easy to clean: body design with smooth and polished walls + materials used + use of anti-drip membrane in the cup to protect the lid during spraying.

Possibility to spray viscous products up to 3000 CP with the GSP version and with a product pressure of 1 bar.

---

## 5.3 Principle of operation

The FPro G is a pneumatic spray gun. A tool that ensures the projection and spraying of paint (or other liquid products: glue) only thanks to a compressed air supply in more or less large quantities, and under a pressure between 1 and 6 bars.

The product is gravity fed from the cup (rigid or disposable). In the GSP version, the product is fed by putting the cup under pressure (0 to 1 bar) in order to allow the spraying of more viscous product.

The gun includes:

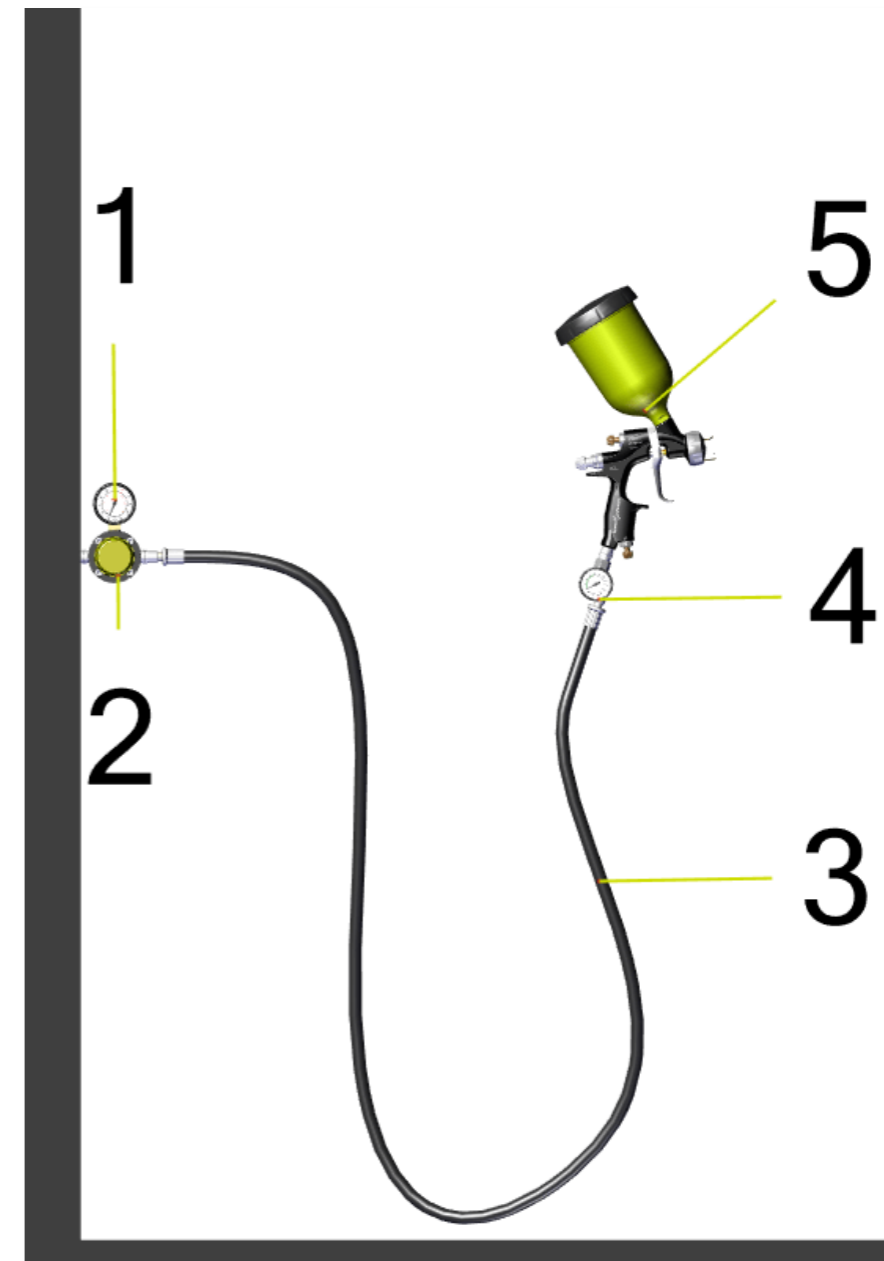
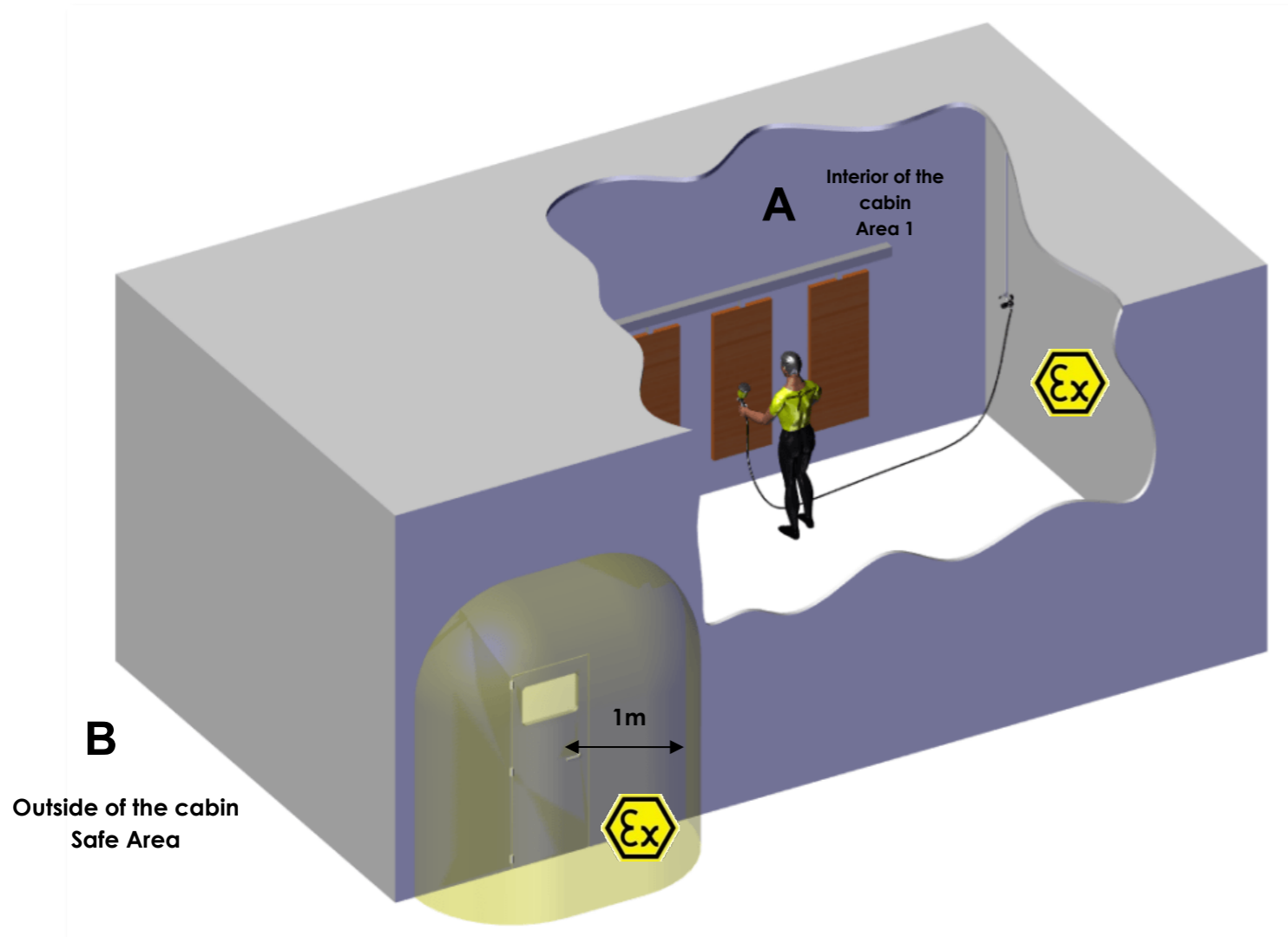
- A paint supply tank,
- A pipe bringing the paint to the head of the gun,
- A pipe for pressurized air
- A spray head for droplet formation

Several adjustments are available onto the gun in order to optimize the spraying process:

- Adjustment of the general air flow rate
  - Adjusting the fluid flow rate :
    - Product needle stroke.
    - Nozzle size installed.
  - Adjusting the spray width.
-

## 6 Installation

### 6.1 General Installation Diagram



A- Explosive area 1 (A1) or area 2 (A2): paint booth

B - Non-Explosive Zone

1 - Pressurized air supply

2 - air regulator

3 - Antistatic air hose

4 - Pressure gauge

5 - Pneumatic gun



The distance of 1 meter mentioned in this diagram is given only as an indication and could not engage the responsibility of SAMES KREMLIN.

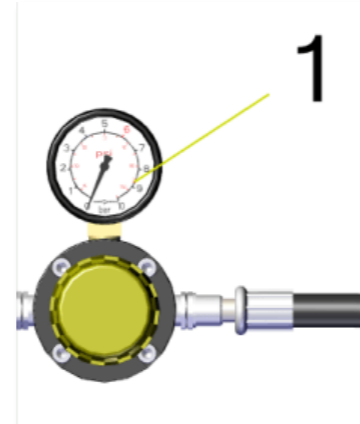
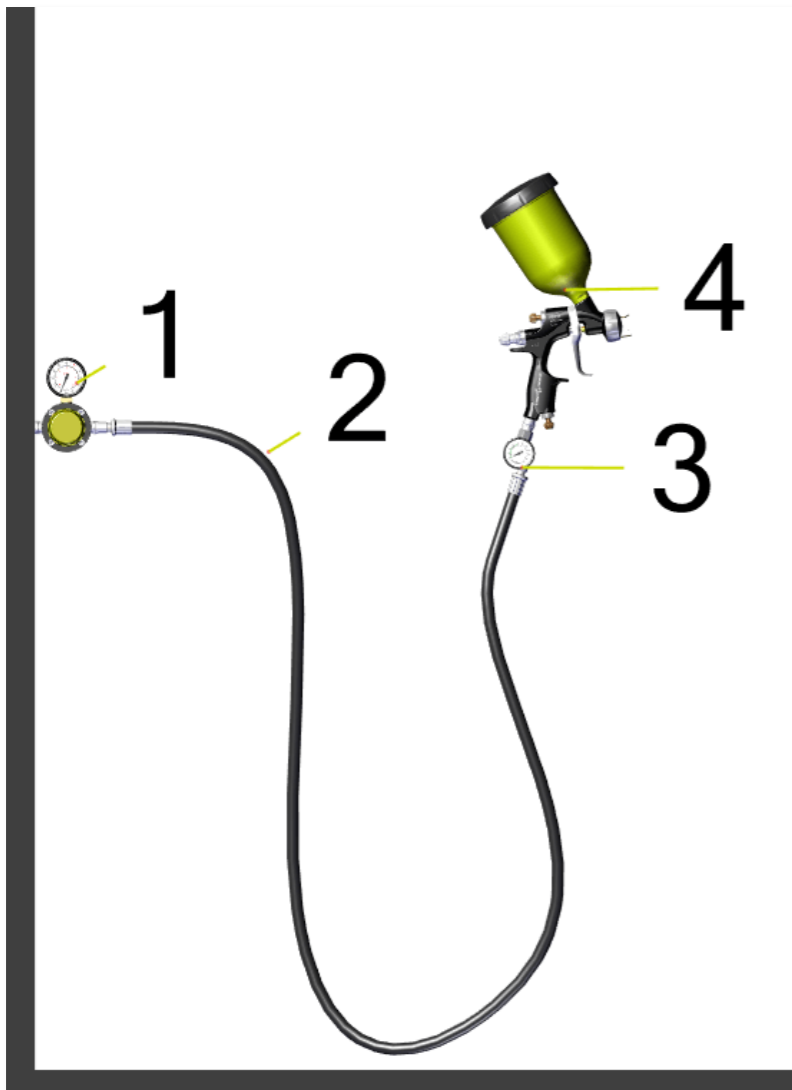
The exact delimitation of the areas is the express responsibility of the user, and this according to the products used, the environment of the equipment and the conditions of use.

This distance of 1 meter can thus be adapted if the analysis carried out by the user requires it.

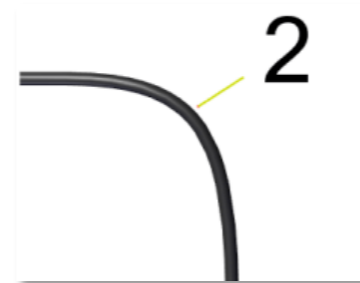
Using an antistatic quality hose, connect the gun to an air pressure regulator capable of supplying a minimum of 2 bar, a maximum of 6 bar.



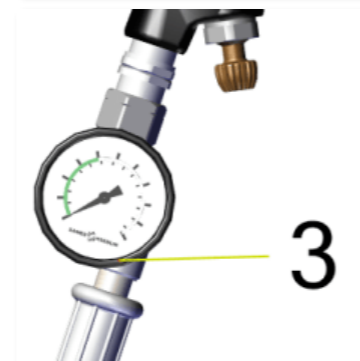
6.2 Installation Diagram - Air Pressure Adjustment with or without Gauge at Gun Handle



1- Air pressure regulator and wall pressure gauge PO



2-Air hose



3 - Pressure measured at the gun grip during operation (air needle open)



4 - Gun FPro G

### 6.3 Transport

Put the product in its original packaging during transport.

The packaging of the gun corresponds to the transport conditions provided for this purpose.

The packaging protects:

- Damages related to transportation.
  - Corrosion.
- 

### 6.4 Storage

Our equipment must be stored in its original packaging.

In case of prolonged storage, it is preferable to carry out preventive maintenance for all lubricants before commissioning.

#### **Storage before installation**

Storage ambient temperature 0 / +50 °C.

- Protect against dust, water runoff, moisture, vibration and shock.
- Only remove the packaging just before assembly.

#### **Storage after installation**

- Protect against dust, water runoff, moisture and shock.
-

---

## 7 Commissioning

### **Intervening staff: qualified personnel.**

- Take into account the safety instructions of the sprayed product.
  - Wear suitable PPE (ear protectors, mask, gloves, goggles, safety shoes.)
  - Check the correct operation of the pressurized air production system
  - Verify the proper operation of the air extraction system.
  - Use measuring equipment that is certified, monitored and complies with ATEX regulations.
  - Do not immerse the gun in solvents or aggressive products.
  - Do not clean or immerse the GSP kit in solvents or aggressive media.
  - Do not clean with wire brushes.
  - Use only antistatic wipes for cleaning the equipment.
  - Use only genuine SAMES KREMLIN spare parts and accessories.
-

## 7.1 Apply a product on a surface

- Select the right fitting for your installation

Original equipment Connection ¼ NPS	Option Connection ¼ BSP (included in the accessories box)
--	---



- Connect the air hose.
- Check the proper operation of the gun without any product and make a pre-setting of the supply pressure.
- Put the gun on its support .
- Fill the cup using a suitable filter.
- Put on the anti-drip membrane and close the cup.
- Perform spray tests on a test surface.
- Adjust the setting parameters to optimize spraying.
  - Air pressure and flow rate.
  - Fluid flow rate (needle stroke, nozzle size or pressure in the cup (in case of GSP version only)
  - Spray width
- Apply the product on the work piece.

## 7.2 Short stop of the gun

- put the gun on its adapted support

## 7.3 Prolonged shutdown of the gun

- Turn off general air
- Disconnect the gun
- Empty the cup.
- Cleaning the gun
- Put the gun away.

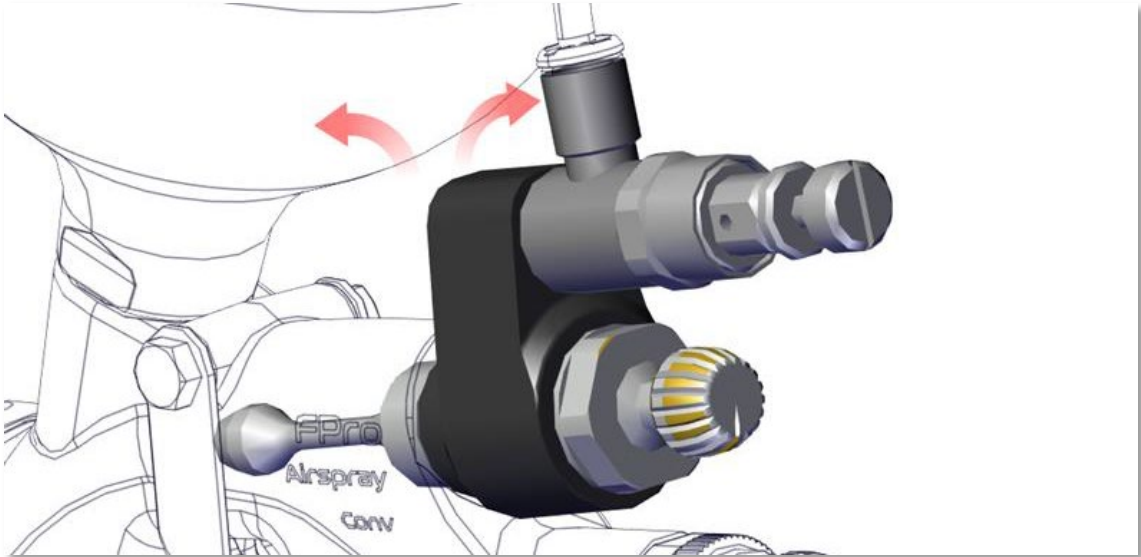
## 7.4 User settings

See paragraph: 6.1 General Installation Diagram .

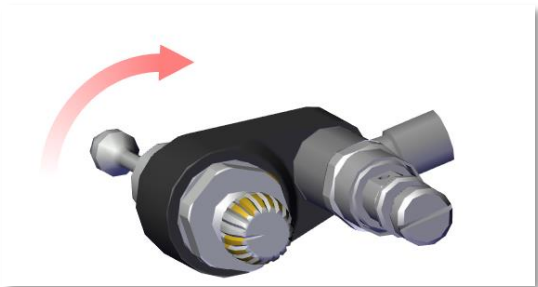
Product viscosity to use with the FPro G (without vortex)					
	Technology	HVLP	LVLP	CONV	CONV GSP
Nozzle size					
<b>12</b>		<20 s	<20 s	<20 s	
<b>13</b>		<20 s	<20 s	<20 s	
<b>14</b>		<20 s	<20 s	<20 s	
<b>15</b>		20s - 40s	20s - 40s	20s - 40s	20s - 2000Cp
<b>18</b>		20s - 40s	20s - 40s	20s - 40s	20s - 2500Cp
<b>22</b>		40s - 60s	40s - 60s	40s - 60s	40s - 3000Cp

Product viscosity to use with the FPro G (with vortex)					
	Technology	HVLP	LVLP	CONV	CONV GSP
Nozzle size					
<b>12</b>		<15 s	<15 s	<15 s	
<b>13</b>		<15 s	<15 s	<15 s	
<b>14</b>		<15 s	<15 s	<15 s	
<b>15</b>		15s - 30s	15s - 30s	15s - 30s	15s - 2000Cp
<b>18</b>		15s - 30s	15s - 30s	15s - 30s	15s - 2500Cp
<b>22</b>		30s - 40s	30s - 40s	30s - 40s	30s - 3000Cp

7.4.1 Ergonomic GSP position adjustment for right-handed and left-handed users



For Left-Handed



For Right-Handed

The user of the FPRO GSP, left or right handed, can adapt and adjust the positioning of the GSP KIT for practical use at an angle of 180 degrees.

---

## **7.5 Initialization of the follow-up in production**

Identify the gun in the material tracking system.

- Set up a preventive maintenance program if necessary.  
Refer to (10.110.1 Preventive Maintenance Plan).

---

## **7.6 Safety in production**

Respect the maximum recommended pressures:

- 6 bar max. in the gun.
- 1 bar max. in the GSP cup.

Do not point the gun at yourself or anyone else while spraying

Use an adapted and ATEX-certified conductive air hose.

---






# **8 Use of the FPro G**

## **First commissioning**

Refer to paragraph: 7 Commissioning

---

## 9 Diagnostic Help / Troubleshooting Guide

Topic	Explanation	Visual
<p><b>Bean-shaped spray</b></p>	<p>The defect comes from the head: loosen the ring slightly and rotate the head half a turn. If the defect is reversed, one of the side vents is blocked or deformed.</p> <p>Then clean the gun head with solvent and unclog the vents with a spray of compressed air. If this does not reverse, the nozzle is probably damaged.</p>	
<p><b>Deported spray</b></p>	<p>This deformation is due to a defect in the central spray. It is necessary to clean the head as described above and the nozzle. Also check that :</p> <ul style="list-style-type: none"> <li>• The head is well centered on the nozzle,</li> <li>• The nozzle is not too big (needle and nozzle must be adapted), you work with a sufficient needle opening.</li> <li>• With an almost closed needle, the product supply to the spray is not regular in all directions.</li> </ul>	
<p><b>Cuffed spray</b></p>	<p>The pressure of the air sprays at the vents is too high for the paint flow:</p> <ul style="list-style-type: none"> <li>• Reduce air at the vents by closing the adjustment needle. The spray is narrower.</li> <li>• Increase paint flow.</li> </ul>	
<p><b>Spray loaded in the center</b></p>	<p>Default inverse of the previous one :</p> <ul style="list-style-type: none"> <li>• Either the paint flow rate is excessive for the adopted spraying air pressure: you should increase the spraying air pressure and reduce the paint flow rate.</li> <li>• Either the paint is too thick: you must then dilute it.</li> </ul>	
<p><b>Jerky product spray</b></p>	<p>The Gun is machine-gunned. The phenomenon is caused by air entering the paint circuit:</p> <ul style="list-style-type: none"> <li>• The container containing the paint may be empty: refill with paint.</li> <li>• The nozzle is not tightened properly and does not fit properly on its seat: tighten the nozzle.</li> </ul> <p>If the phenomenon persists, disassemble the nozzle and clean it.</p> <ul style="list-style-type: none"> <li>• Check the nozzle seat and cone for damage, reassemble and secure the nozzle.</li> <li>• Check that the paint is fluid and homogeneous enough to be vacuumed.</li> </ul>	



## 9.1 Possible symptoms of faults - Causes of faults - Remedies to apply

Defaults	Root causes	Remedies
<ul style="list-style-type: none"> <li>Paint no longer comes out of the gun</li> </ul>	<ul style="list-style-type: none"> <li>Nozzle partially or completely clogged</li> </ul>	<ul style="list-style-type: none"> <li>Disassemble and clean the nozzle with solvent and a smooth brush</li> <li>Check the condition of the seal.</li> </ul>
<ul style="list-style-type: none"> <li>The spray narrows at pump reversals.</li> </ul>	<ul style="list-style-type: none"> <li>Viscosity too high.</li> </ul>	<ul style="list-style-type: none"> <li>Dilute the paint.</li> </ul>
<ul style="list-style-type: none"> <li>The head frequently gets dirty</li> </ul>	<ul style="list-style-type: none"> <li>Too much air.</li> </ul>	<ul style="list-style-type: none"> <li>Reduce air pressure.</li> </ul>
<ul style="list-style-type: none"> <li>The paint comes out through the air holes in the head.</li> </ul>	<ul style="list-style-type: none"> <li>Defective nozzle seal.</li> <li>Insufficiently tight nozzle</li> </ul>	<ul style="list-style-type: none"> <li>Replace it.</li> <li>Tighten it.</li> </ul>
<ul style="list-style-type: none"> <li>Product leakage at the trim level</li> </ul>	<ul style="list-style-type: none"> <li>Worn seal.</li> </ul>	<ul style="list-style-type: none"> <li>Tighten the liner press without blocking the needle.</li> <li>If the leak is still present, replace the seal and needle.</li> </ul>
<ul style="list-style-type: none"> <li>Product leakage at the front of the gun, trigger released</li> </ul>	<ul style="list-style-type: none"> <li>Impurities in the product</li> <li>Worn out needle or/and worn out nozzle</li> </ul>	<ul style="list-style-type: none"> <li>Pull the trigger 3 or 4 times and let it go back on its own.</li> <li>Replace the needle and/or nozzle.</li> </ul>
<ul style="list-style-type: none"> <li>Air leakage at the valve</li> </ul>	<ul style="list-style-type: none"> <li>Worn valve</li> </ul>	<ul style="list-style-type: none"> <li>Changing the valve</li> </ul>
<ul style="list-style-type: none"> <li>Permanent air leakage at the gun head when trigger is released</li> </ul>	<ul style="list-style-type: none"> <li>Rubbing on the needle</li> <li>Worn valve</li> </ul>	<ul style="list-style-type: none"> <li>Remove the trigger and check that the needle slides freely.</li> <li>Replace the valve.</li> </ul>

# 10 Maintenance

## 10.1 Preventive Maintenance Plan

Maintenance plan							
Equipment		Type of maintenance	Condition of the equipment	Operation		Intervening staff	Reference elements necessary for maintenance (range, manual, QR Code)
Sub-assembly	Element			Wording	Periodicity		
General installation	General	SM	ON	Visual inspection of the installation. Check for leaks. Check that the hoses are not pinched.	D	OPER	
Gun	All components	SM	OFF	Clean gun components	D	OPER	Solvents (except for GSP kit), blowgun, brush, antistatic cloth
Sealing elements	Seals	SM	OFF	Grease the seals.	D	OPER	560440001 : MAGNALUBE TEFLON GREASE 560440101 : 10 ML GREASE PTFE CARTRIDGE

**Type of maintenance**

AM Autonomous Maintenance  
SM Systematic Maintenance  
SI Scheduled Inspections

**Condition of the equipment**

ON : equipment in operation  
OFF : equipment in shutdown

**Frequency of interventions**

D : daily  
W : weekly  
M : monthly  
Q: Quarterly  
H-Y : Half-yearly  
A : annual

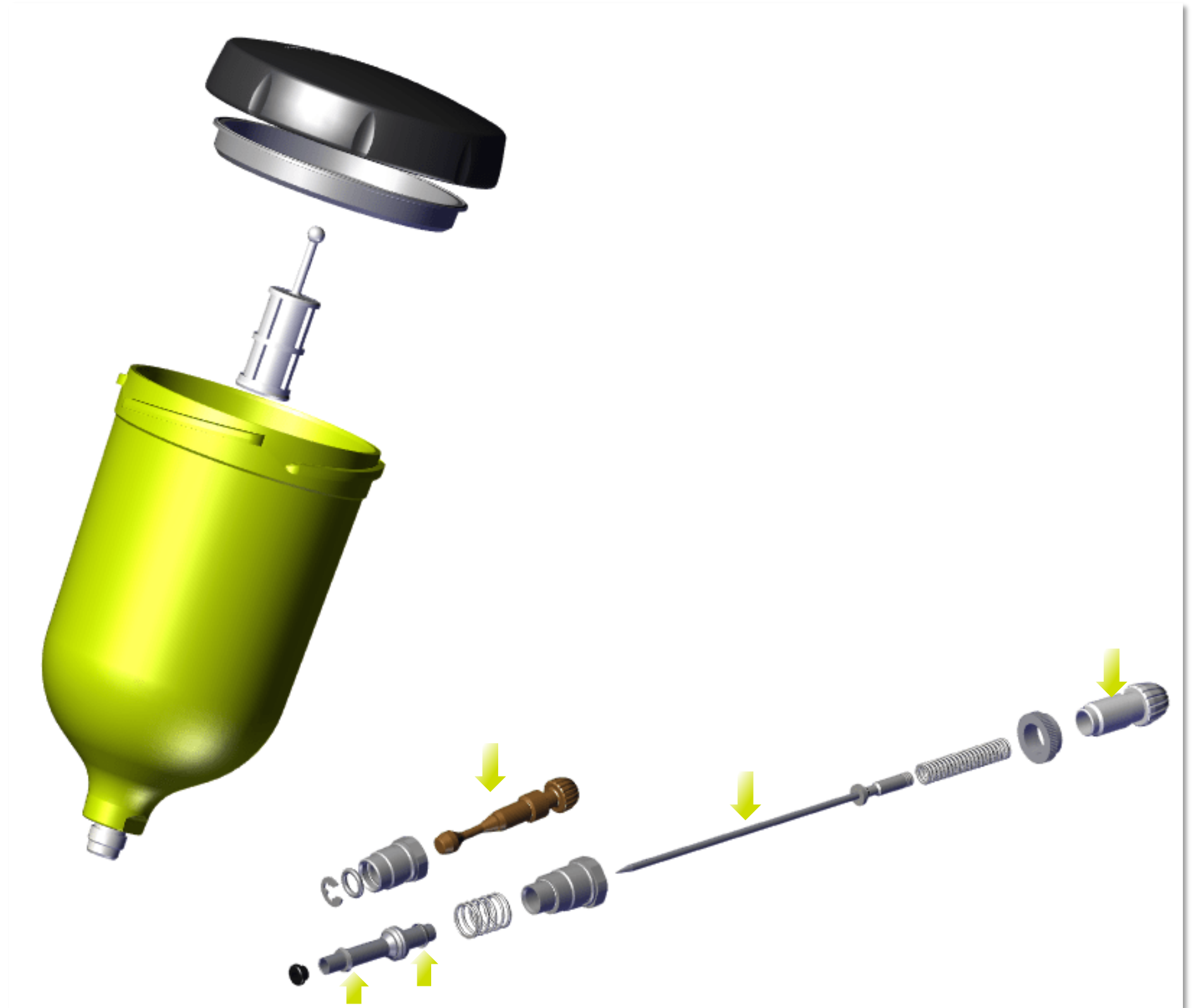
**Stakeholders**

MEC : mechanic  
ELECT : electrician  
OPER : equipment operator

10.1.1 Location of lubrication points - FPro G - FPro GSP

FPro G

560440001 : PTFE grease 450 GR. Box  
 560440101 : 10 ML GREASE PTFE CARTRIDGE



Location of lubrication points - FPro G - FPro GSP (continued)

FPro G GSP

- 560440001 : PTFE grease 450 GR. box
- 560440101 : 10 ML GREASE PTFE CARTRIDGE



## 10.2 Cleaning



### Clean gravity cup

The gravity cup is made of special antistatic materials.

Do not create electrostatic charges by friction.

Use only a damp cloth or antistatic wipes if manual cleaning is required in a hazardous area.

---

## 10.3 Corrective maintenance

Replace hoses if worn.

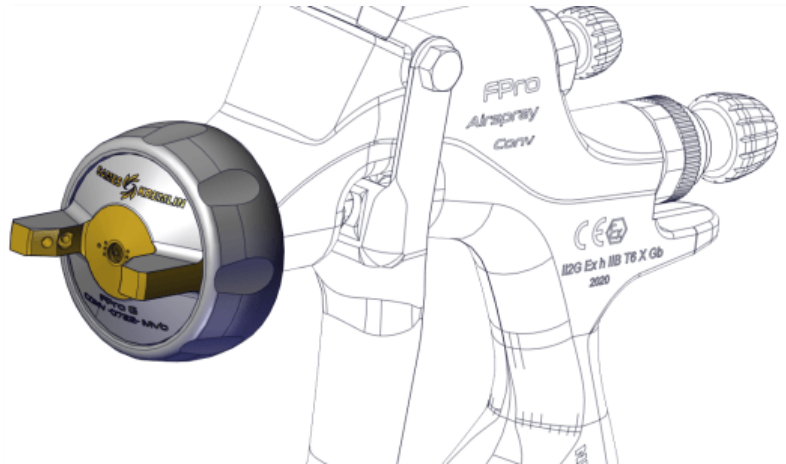
Replace seals in case of wear or leakage.

---

## 10.4 Disassembly/Re-assembly operation

### 10.4.1 Dismantle the FPro G

#### Unscrew the projector



#### Objectives

Procedure to be carried out within the framework of maintenance.

#### Reminder: Assembly errors

The use of improper replacement or defective parts may result in hazards to personnel, damage, malfunction or general shutdown of the equipment.

#### Intervening staff

Qualified personnel.

#### Prerequisite

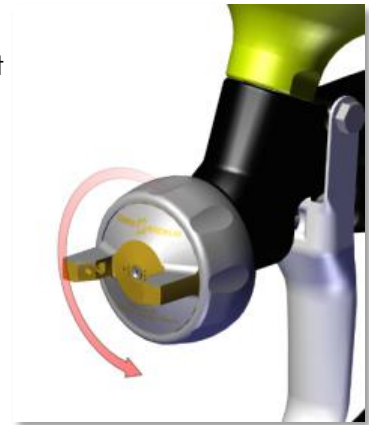


Before cleaning or disassembling any component of the equipment, it is imperative that:

- To cut off the compressed air supply,
- Decompress the hoses by pulling the trigger.

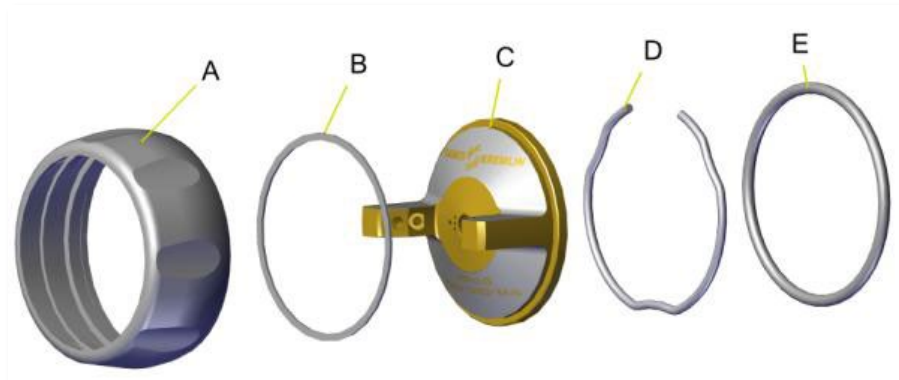
**Step 1**

Unscrew the complete head and remove it

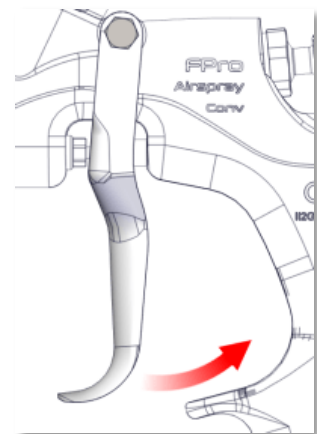
**Step 2**

Remove:

1. The ring seal (A).
2. The friction seal (B).
3. The bare head (C).
4. The retaining ring (D).
5. The head ring seal (E).

**Step 3**

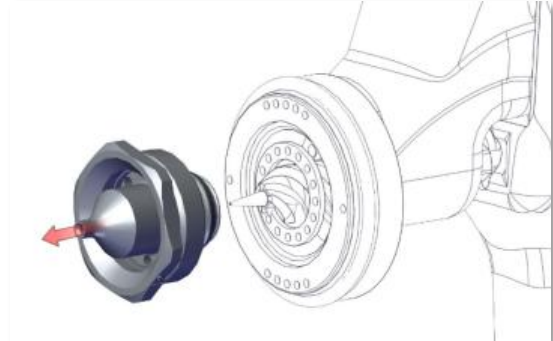
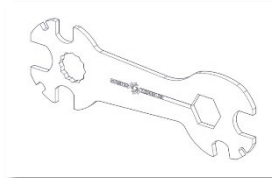
Pull the trigger.



---

**Step 4**

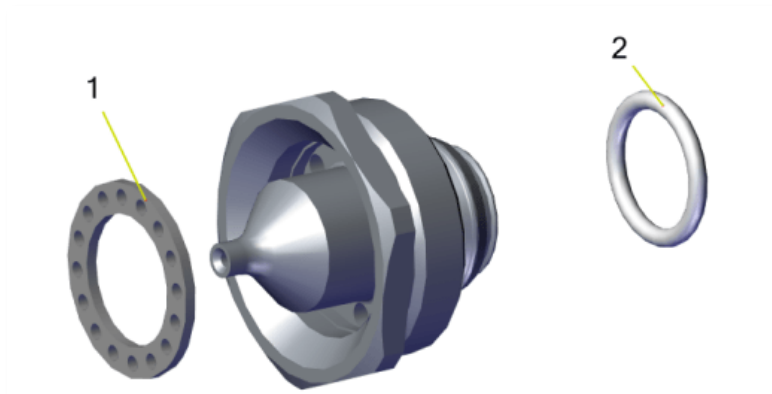
Unscrew the nozzle equipped with the wrench supplied with the gun.



---

**Step 5**

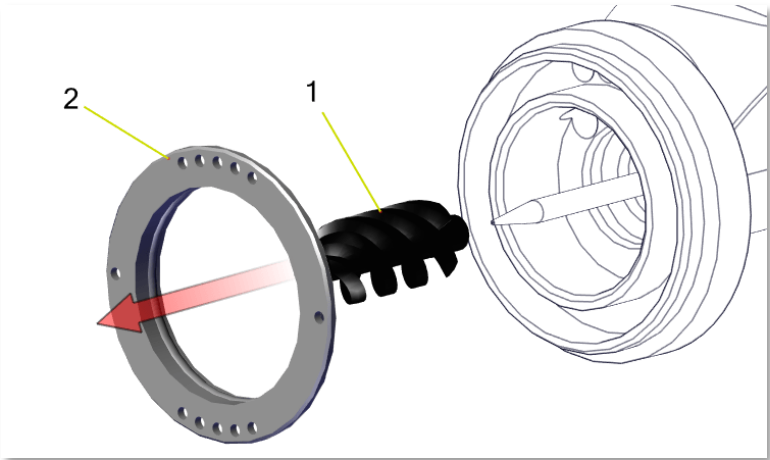
Remove the distribution ring (1) and the nozzle seal (2).



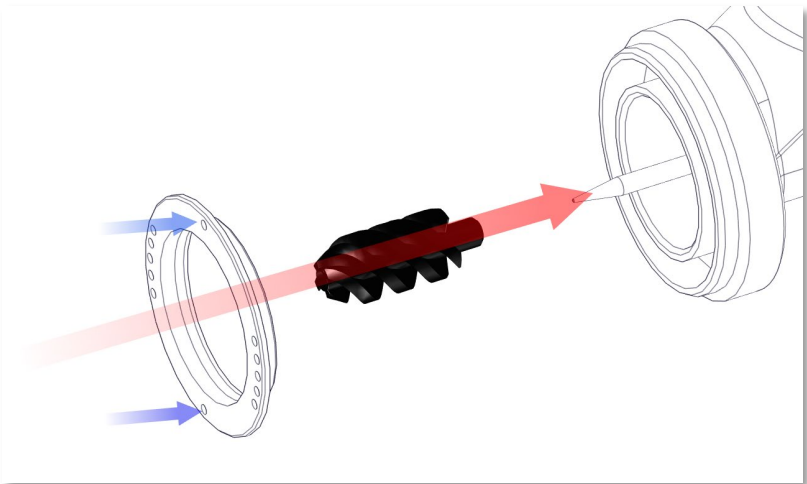


**Step 6**

Remove the vortex (1) and distribution ring (2).

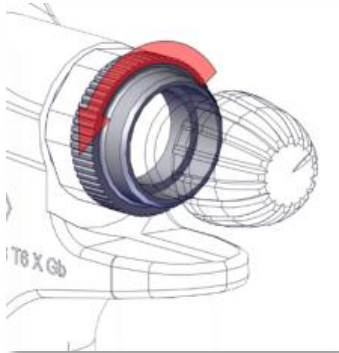


Observe the alignment of the ring position along the axis of the figure below for reassembly.



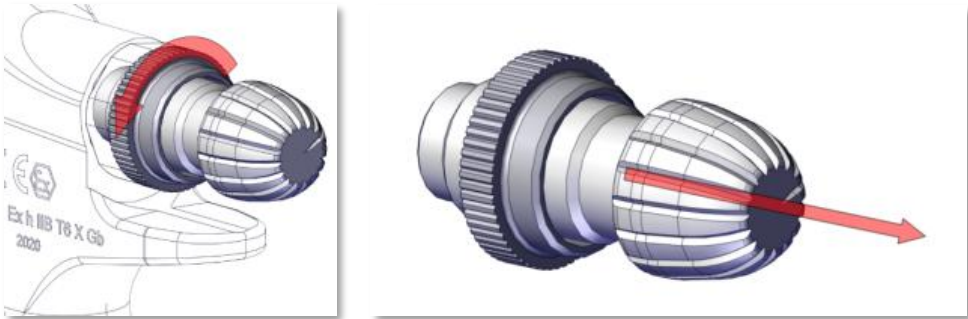
**Step 7**

Loosen the nut.



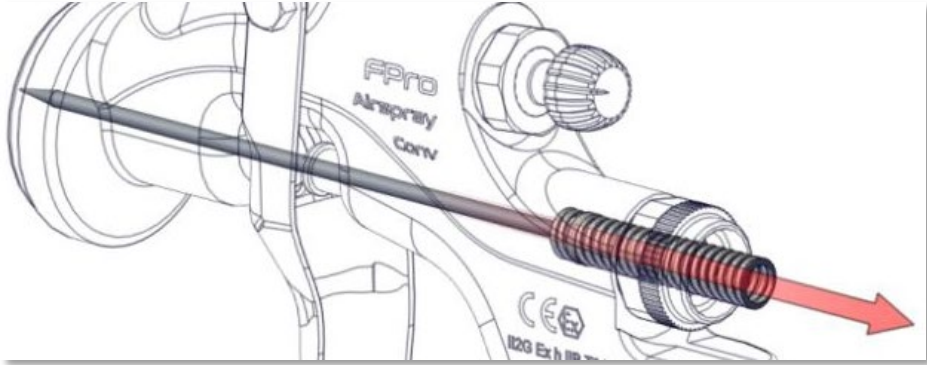
**Step 8**

Unscrew and remove the needle stop.

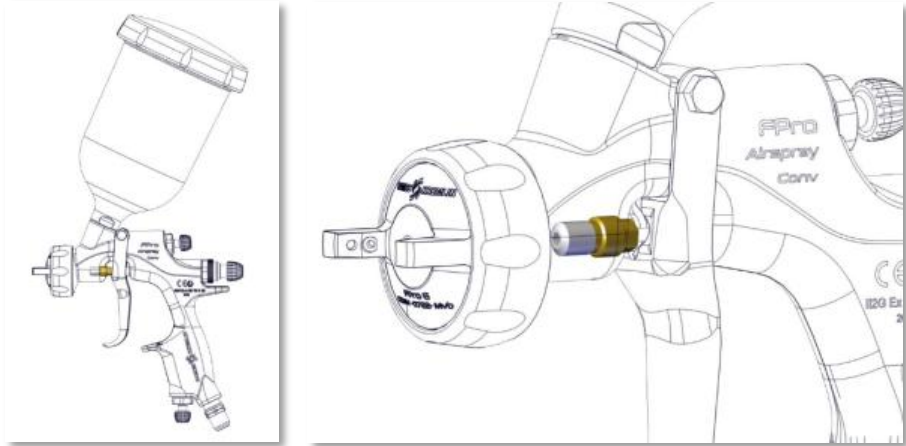


**Step 9**

Remove the needle spring and the needle from the back of the gun.



**10.4.2 Replace needle packing**



**Objectives**

Procedure to be carried out within the framework of maintenance.  
Ensure tightness between the needle and the body of the gun.

**Intervening staff**

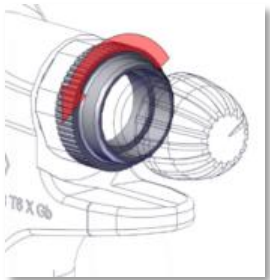
Qualified personnel.

**Step 1**

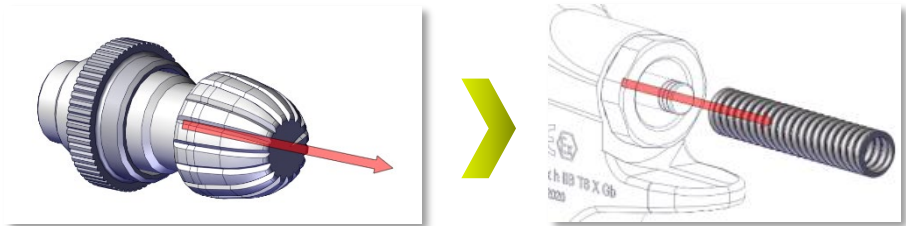
- Check that there is no more product in the cup and in the gun.
- Rinse the gun and the cup.
- Dry the gun and the cup.

**Step 2**

Loose the nut.

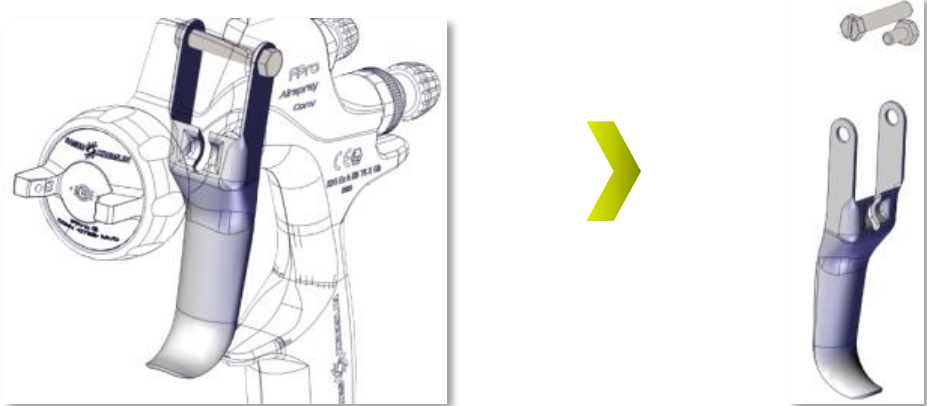


Unscrew and remove the needle stop. Remove the needle spring and the needle.



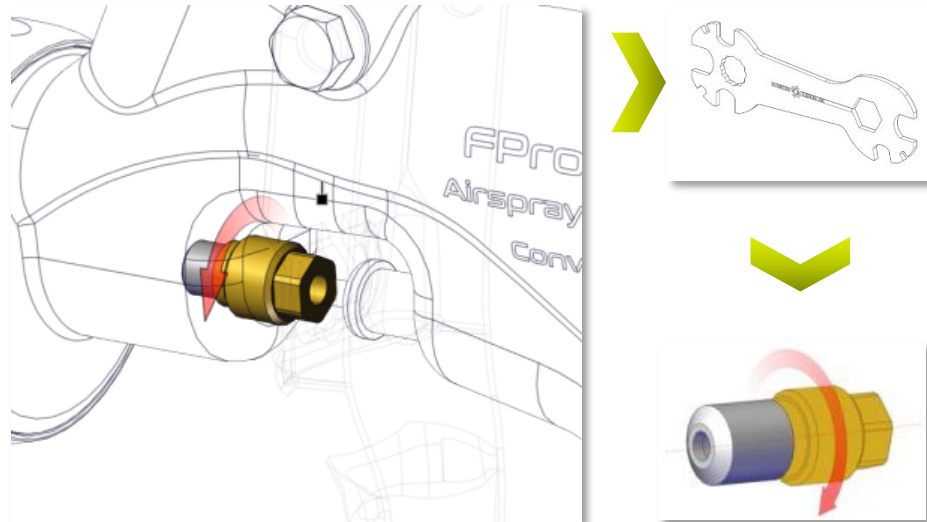
**Step 3**

Remove the trigger by removing the screw and trigger pin with two 5.5 wrenches.



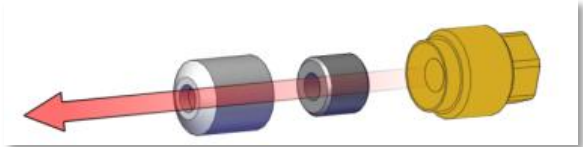
**Step 4**

Unscrew the liner press using the key supplied with the gun.



**Step 5**

Pull out the needle packing which consists of a seat and a bearing.

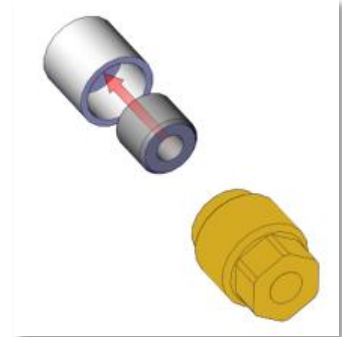


---

**Step 6**

Reassemble the new filling.

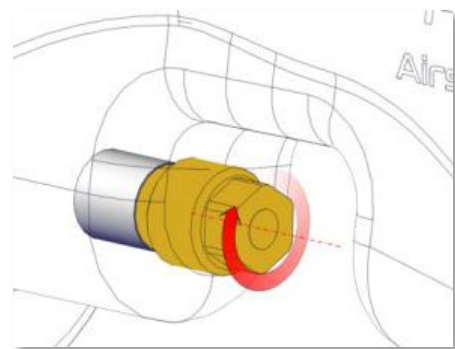
Insert the bearing into the seat and place the new assembly into the gun.



---

**Step 7**

Screw on the packing press loosely.



---

**Step 8**

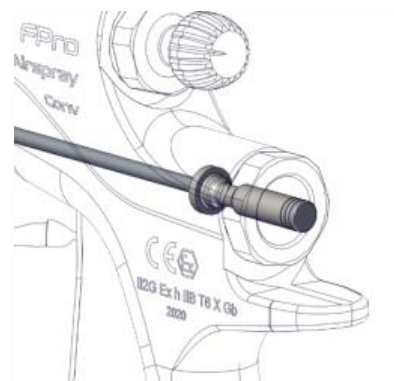
Grease the needle.

**560440001 : PTFE grease 450 GR. box**  
**560440101 : 10 ML GREASE PTFE CARTRIDGE**

---

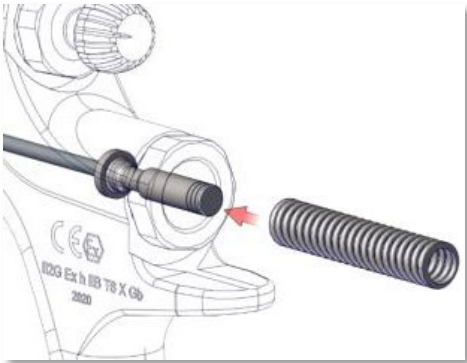
**Step 9**

Reassemble the needle.



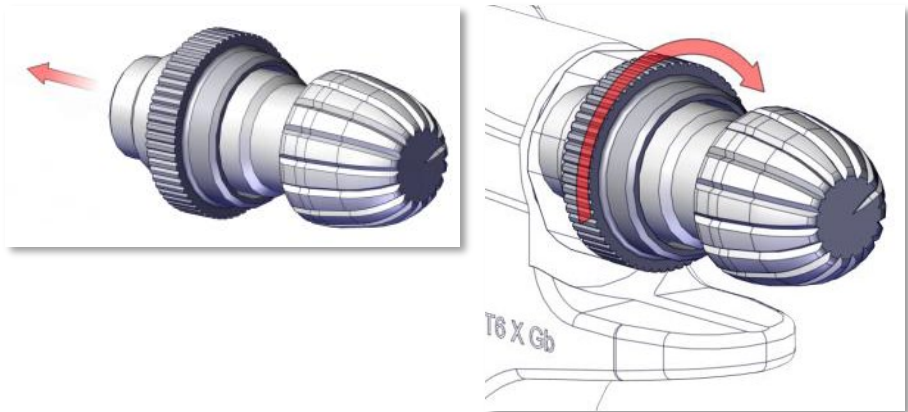
**Step 10**

Reassemble the needle spring and the needle stop.



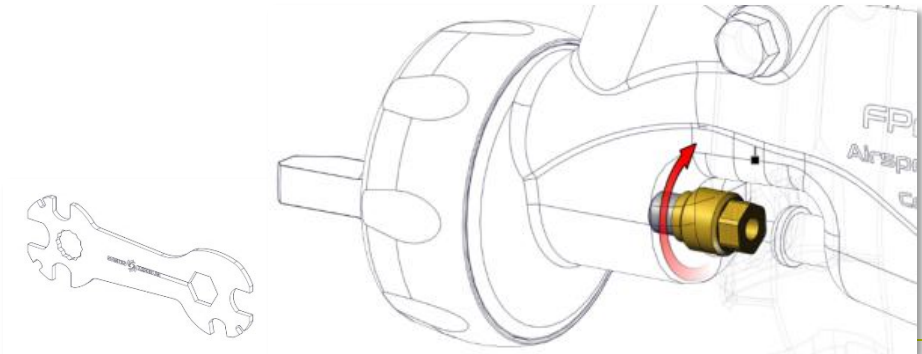
**Step 11**

Tighten the nut.



**Step 12**

Fully tighten the liner press with the key supplied with the gun and unscrew by a quarter turn.

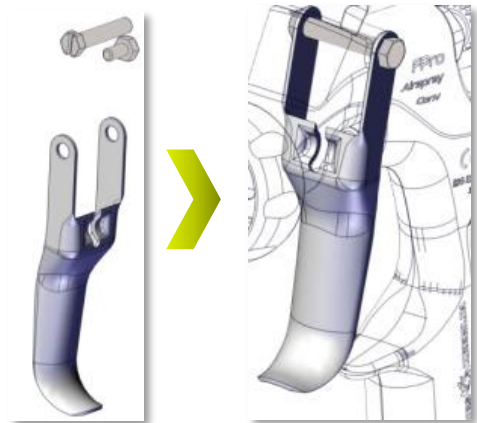


**Note:** If leakage is present, tighten slightly at the packing press.

---

**Step 13**

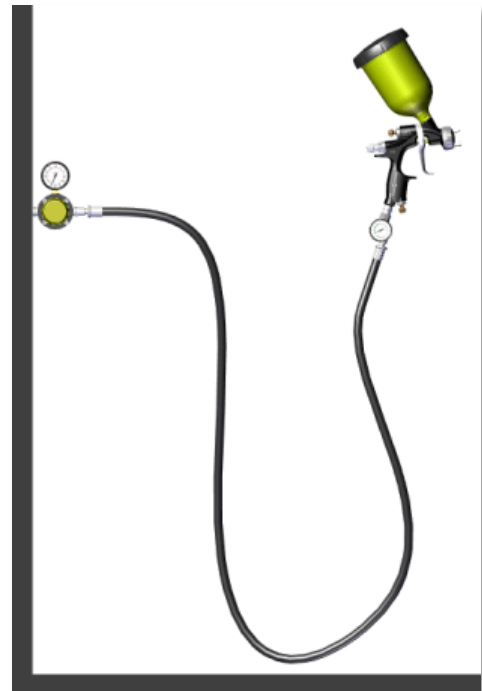
Raising the trigger



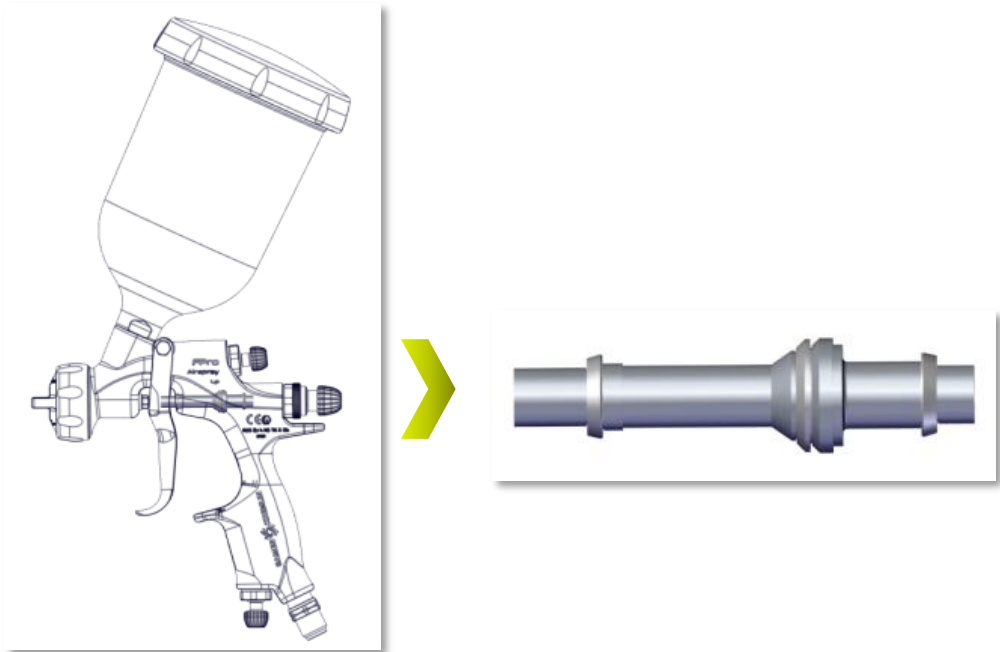
---

**Step 14**

Feed in air and product.

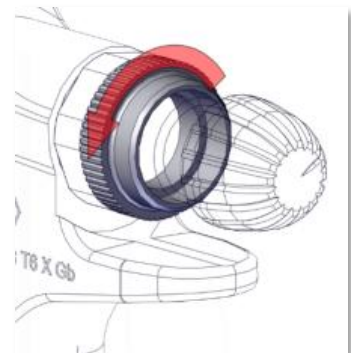


### 10.4.3 Replace air valve



#### Step 1

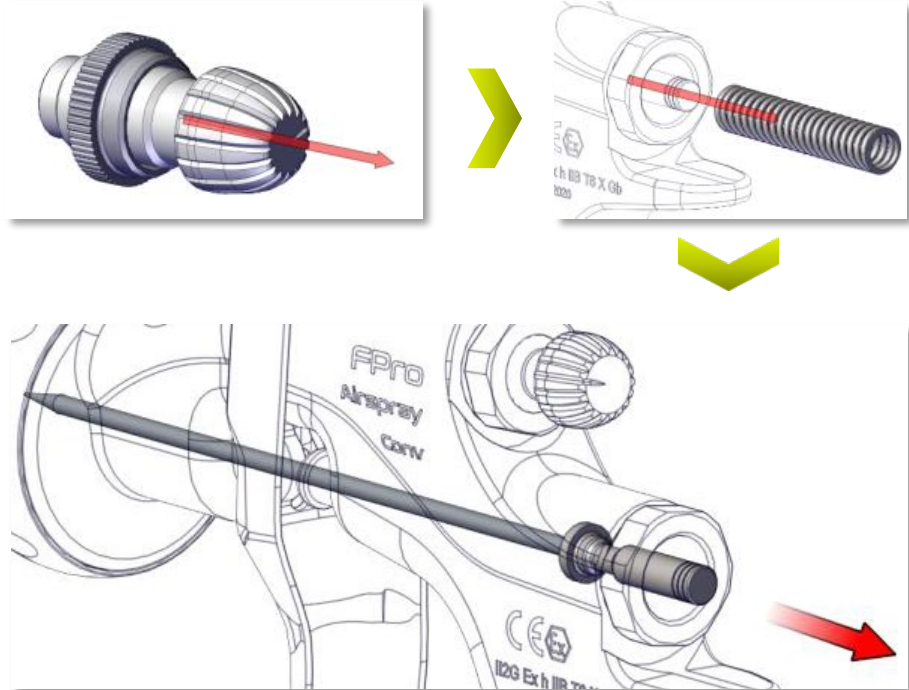
Loosen the nut.





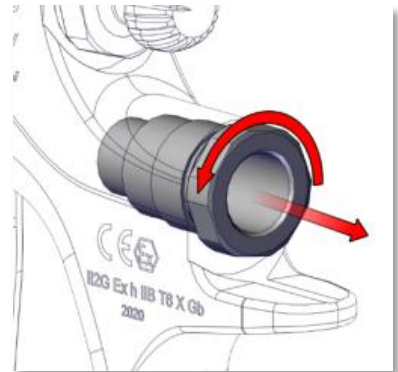
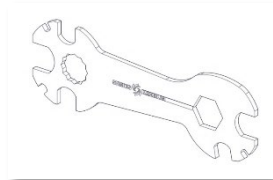
**Step 2**

Unscrew the needle stop, then remove the needle spring and needle from the back of the gun.

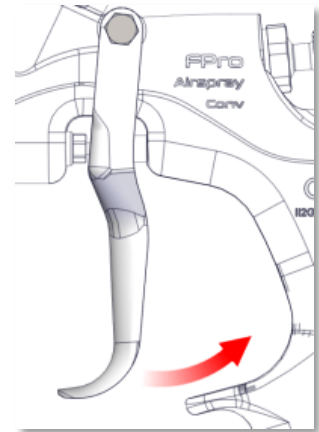


**Step 3**

Activate the trigger and unscrew the liner with the key supplied with the gun.

**Step 4**

Squeeze the trigger to move the valve.



**Step 5**

Extract:

- The valve spring,
- The air valve,
- The liner.



**Step 6**

Reassemble the liner on the new air valve.



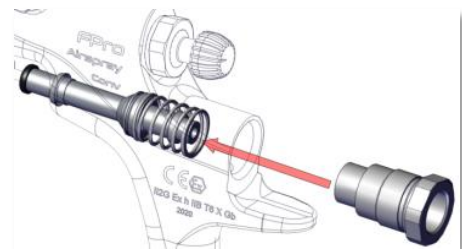
**Step 7**

Reassemble the liner on the new air valve.

Grease the valve seals.

**560440001 : PTFE grease 450 GR. box**

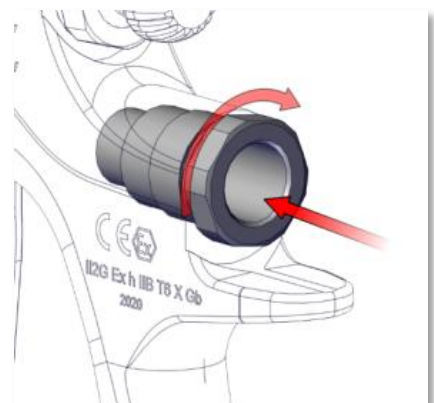
**560440101 : 10 ML GREASE PTFE CARTRIDGE**



**Step 8**

Put the liner in place.

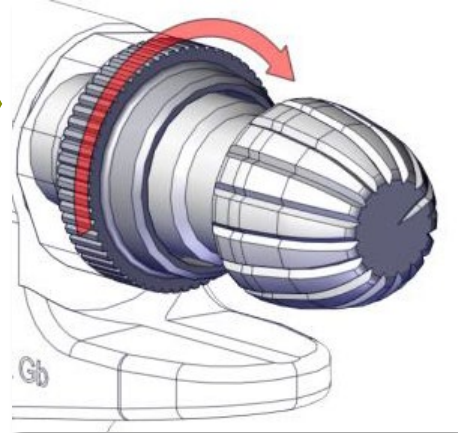
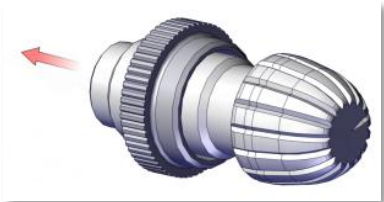
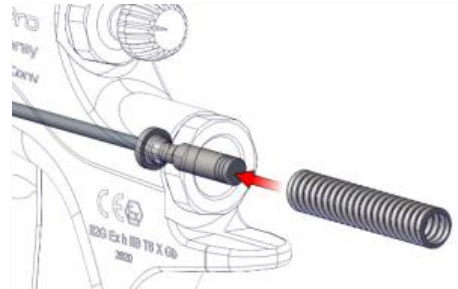
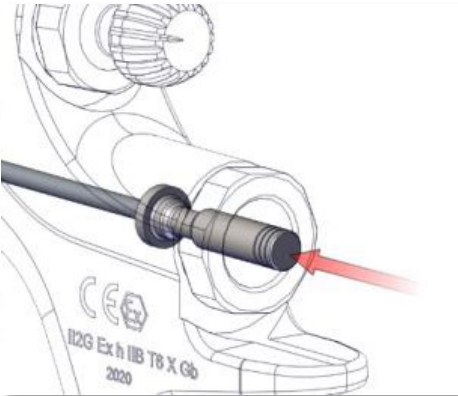
Screw on the liner.



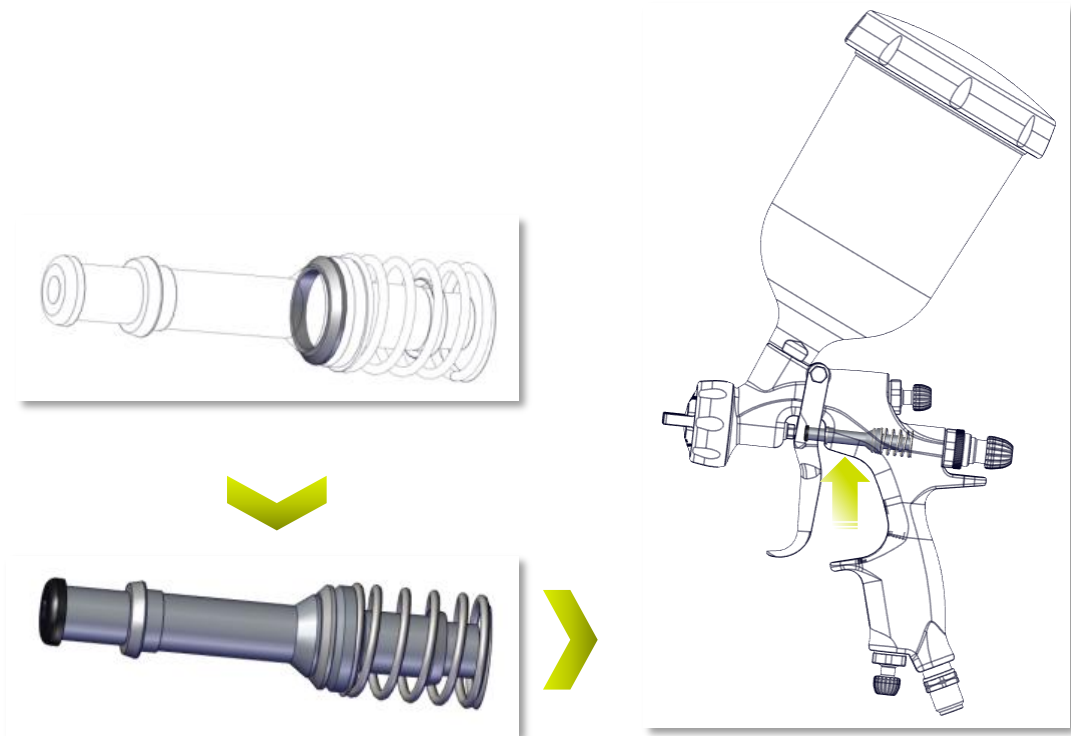
**Step 9**

Back up:

- The greased needle,
- The needle spring,
- The needle stop.
- Tighten the nut.



**10.4.4 Replace air valve seal**

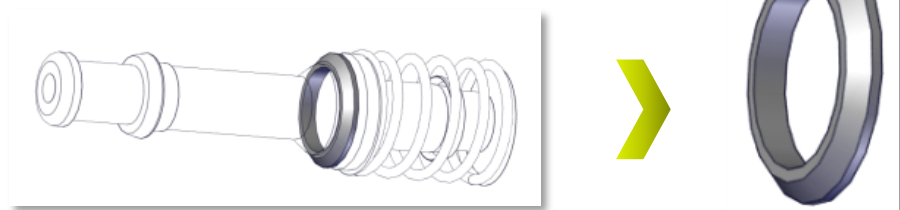


**Step 1**

Remove the air valve - see previous paragraph.

**Step 2**

Remove the seal.



Grease the new seal and place it in its housing.

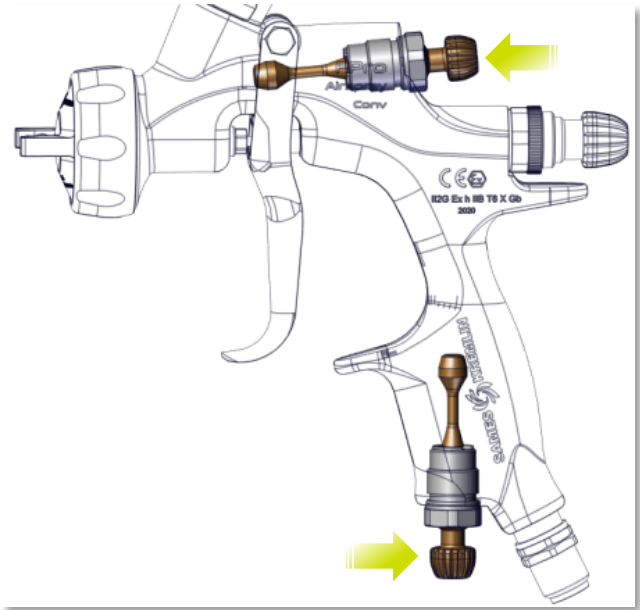
**560440001 : PTFE grease 450 GR. box**

**560440101 : 10 ML GREASE PTFE CARTRIDGE**

**Important**

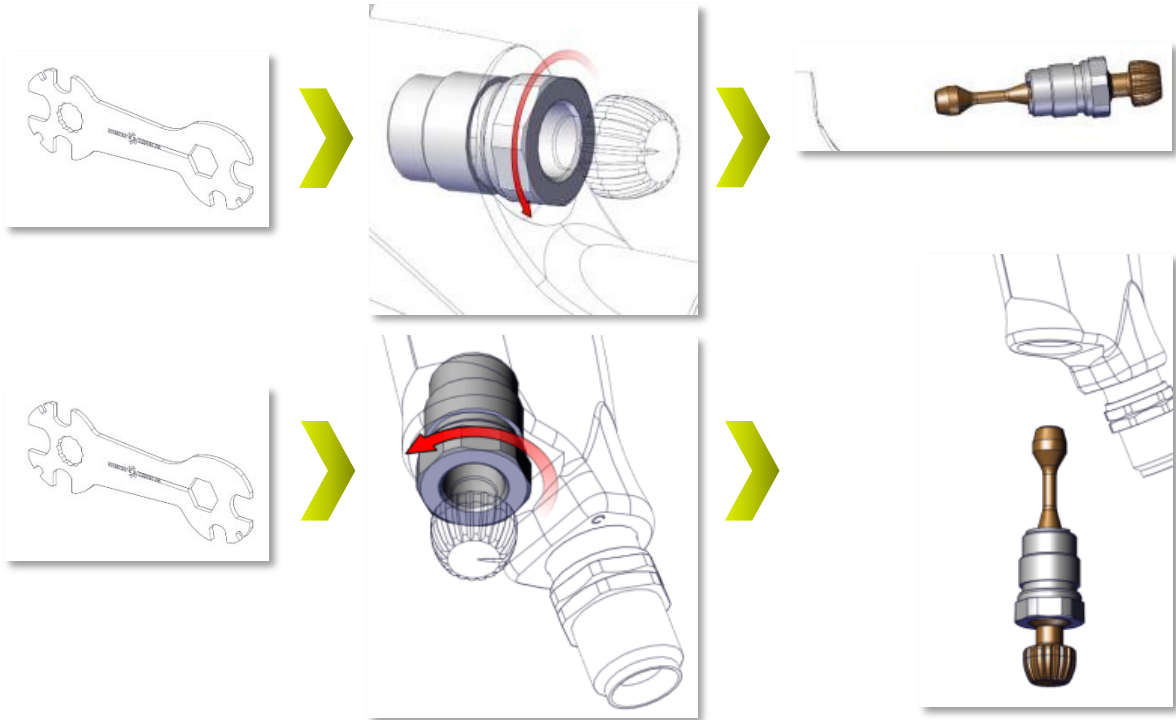
For reassembly, carefully insert the air valve into the gun body with a rotating movement so as to preform the valve seal.

**10.4.5 Replace the air needle at vents and the air needle at the grip.**



**Step 1**

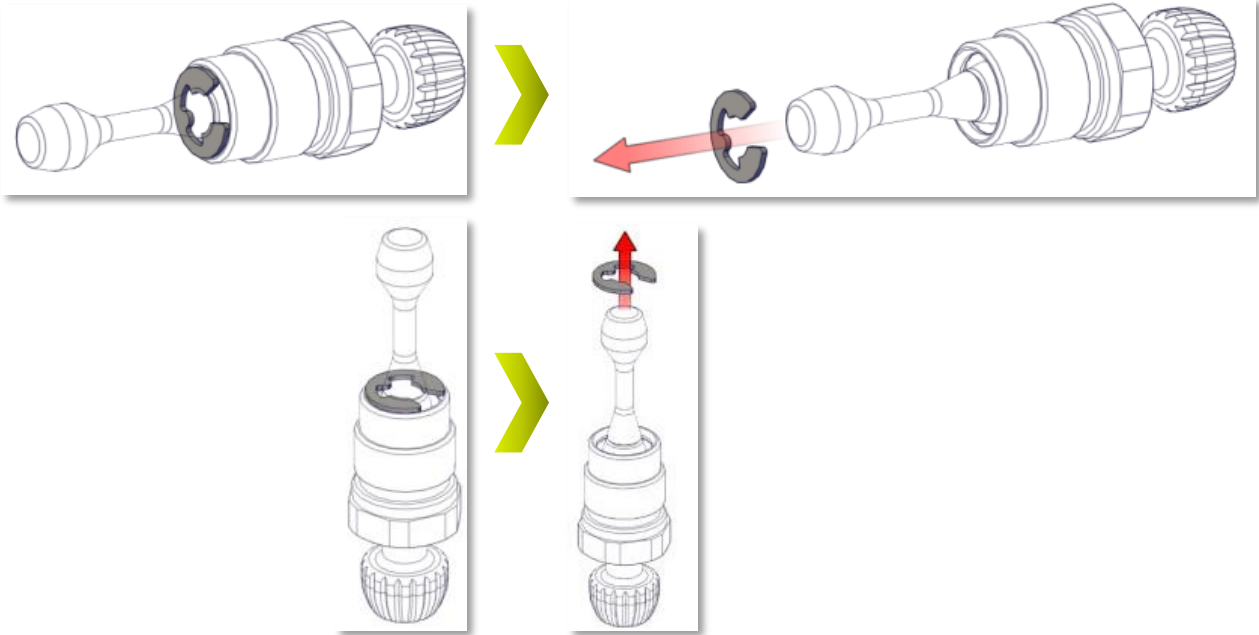
Unscrew the air needle at the vents and/or the air needle at the grip using the key supplied with the gun.



**The air needle must be in the "open" position before being mounted or dismantled from the gun.  
Danger of damage to the needle and/or the gun body.**

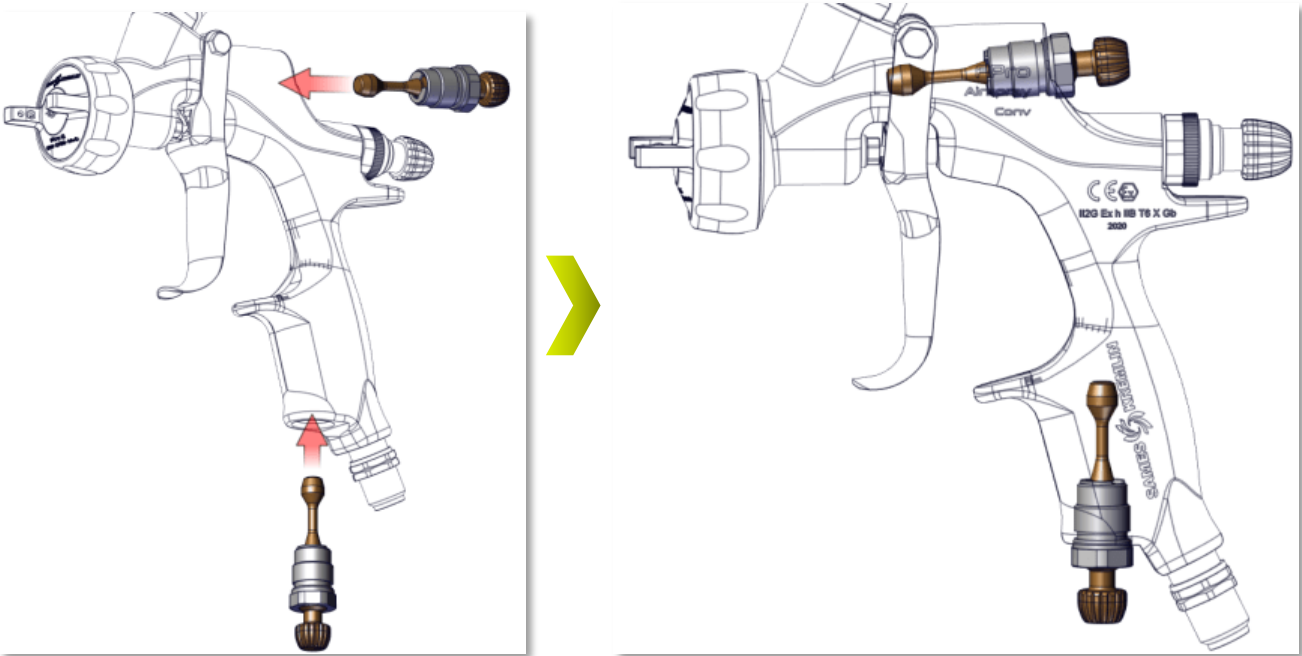
**Step 2**

Check the condition of the clip and change it if necessary.

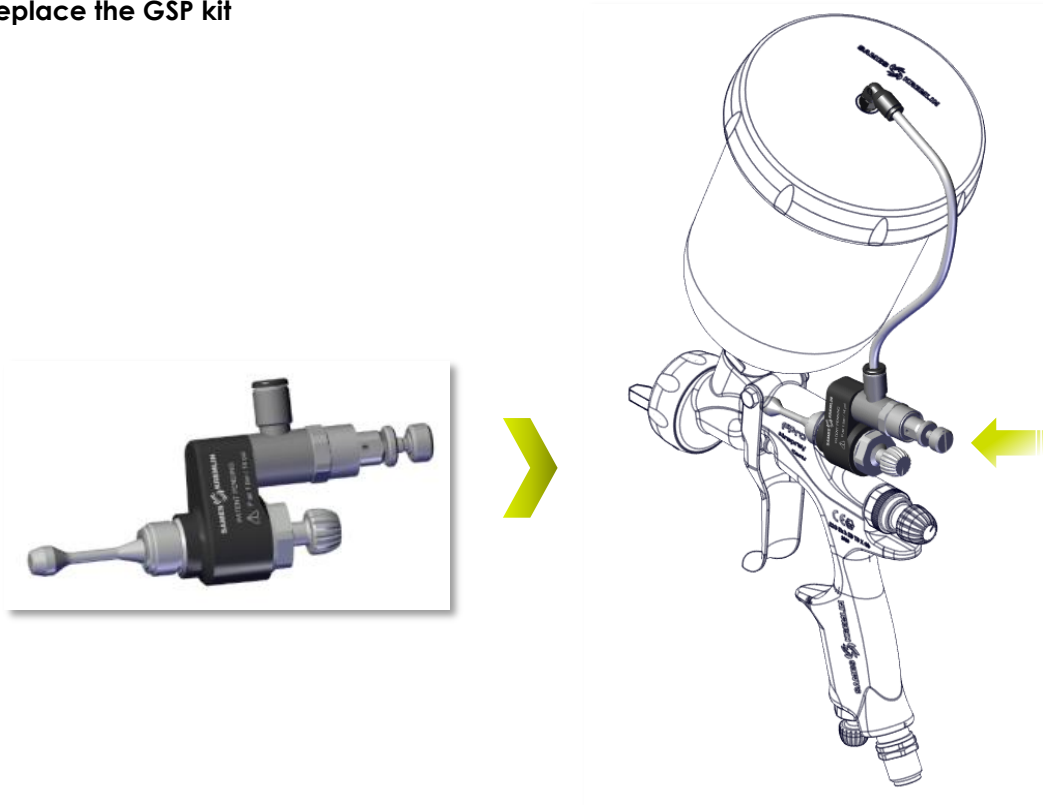


**Step 3**

Refit the new air needle to the air vents and/or the air needle to the stock - tightening torque: 10 Nm.



### 10.4.6 Replace the GSP kit



#### Objectives

Procedure to be carried out within the framework of maintenance.

#### Intervening staff

Qualified personnel.

#### Prerequisite



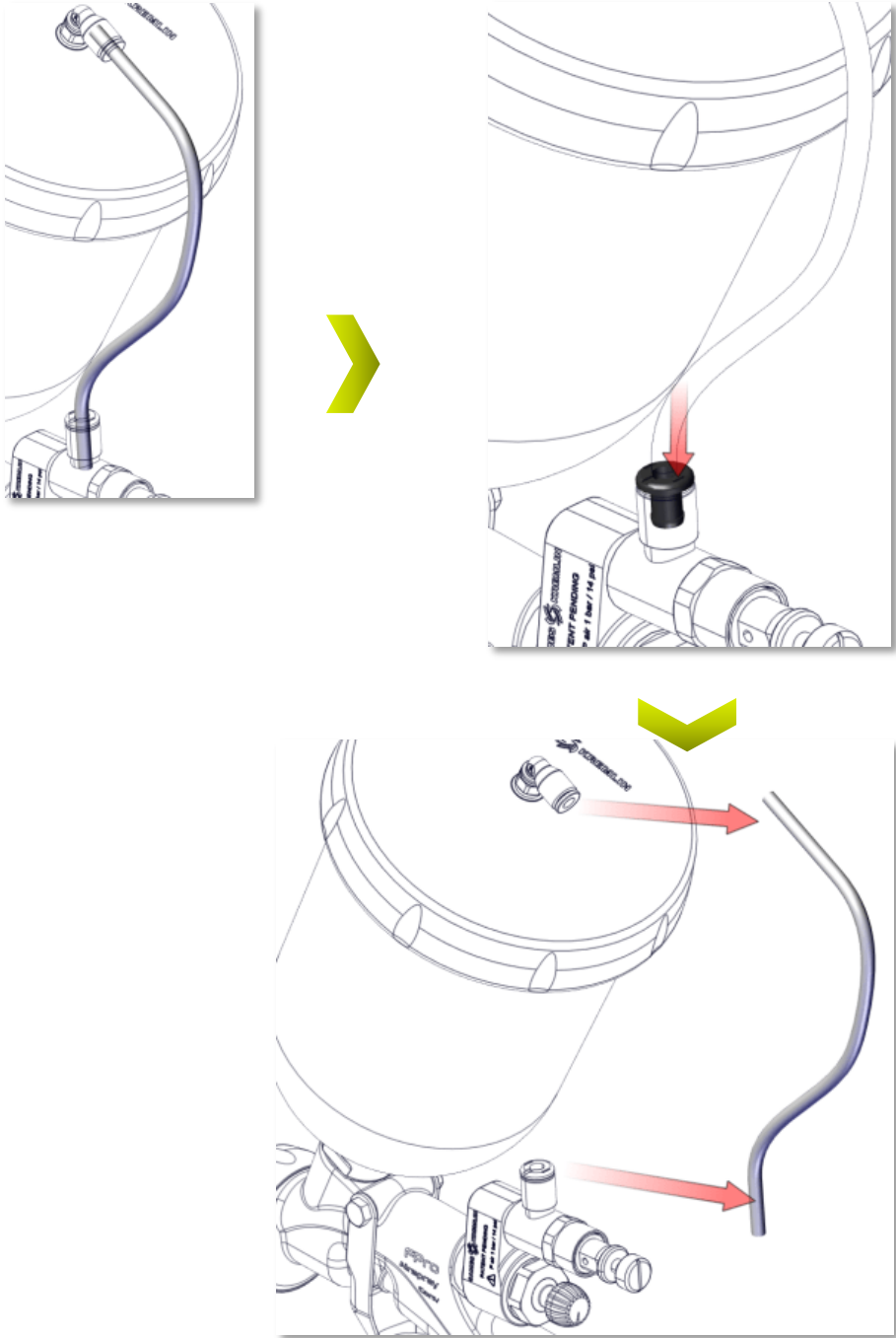
The GSP regulator kit must not be cleaned with solvents or immersed in solvents.

- Do not pull the trigger and open the cup lid at the same time.
- Maximum allowable pressure in the GSP cup: 1 bar / 14 psi.
- Only use regulator 903 130 605 with this GSP kit.
- The air needle must be in the "open" position before mounting or removing it from the gun.
- Risk of damage to the air needle and/or gun body.



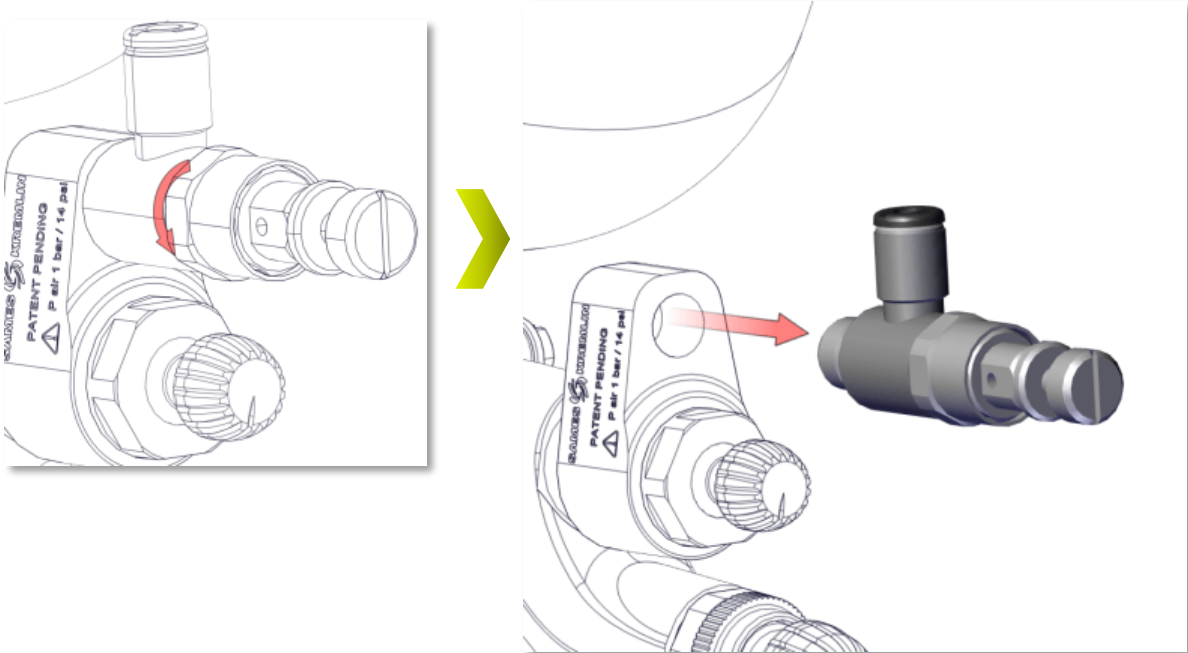
**Step 1**

To remove the hose, apply pressure from top to bottom on the arrowed element.



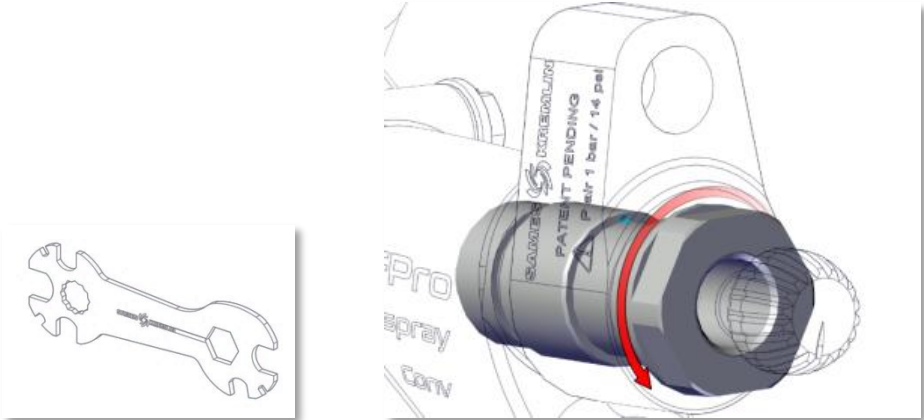
**Step 2**

Loosen the regulator.



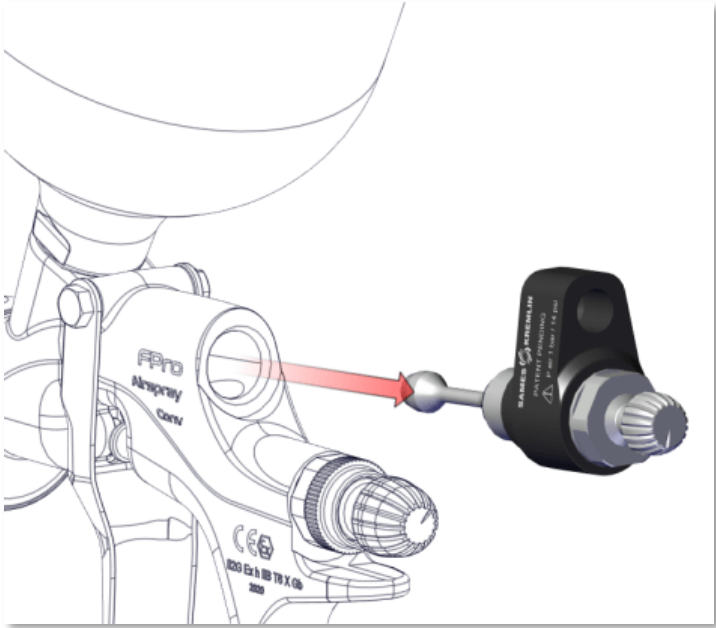
**Step 3**

Unscrew the air needle using the key supplied with the gun.



**Step 4**

Remove the ring and air needle assembly.



**Step 5**

Separate the ring from the needle.



**Step 6**

Remove both seals from the ring.



**Step 7**

Check that there are no deposits or residues in the ring chamber.

Blow a blower if necessary.

Grease the new seals and place them inside the ring.

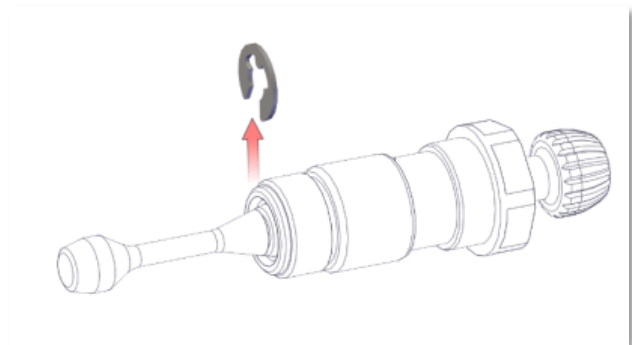
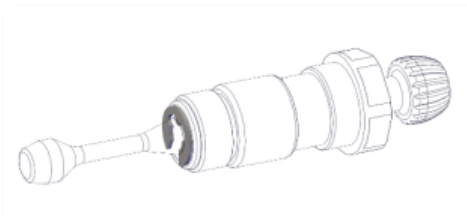
**560440001 : PTFE grease 450 GR. box**

**560440101 : 10 ML GREASE PTFE CARTRIDGE**

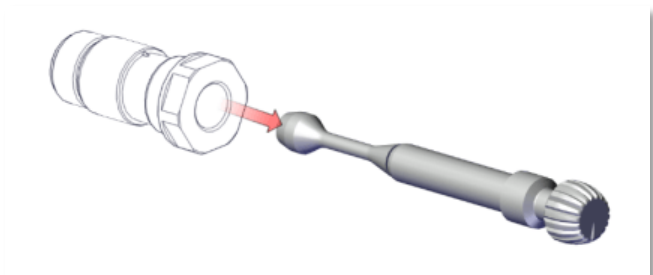
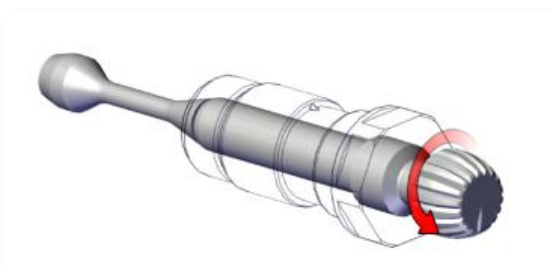
Check the correct arrangement of the seals in the ring chamber.

**Step 8**

Remove the circlip from the needle.

**Step 9**

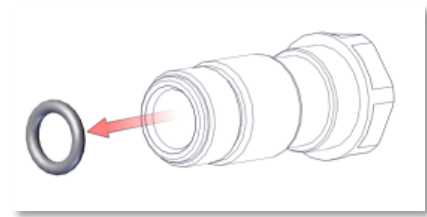
Unscrew the needle to separate it from the liner.



---

**Step 10**

Remove the seal from the liner.



Use a flat screwdriver.

**NOTE:**

Be careful not to scratch the liner or damage the seal groove.  
Possible residues or seal deposits caused by the removal of the seal with the screwdriver.

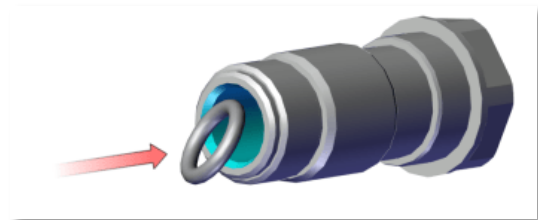
---

**Step 11**

Check that there are no deposits or residues in the liner.

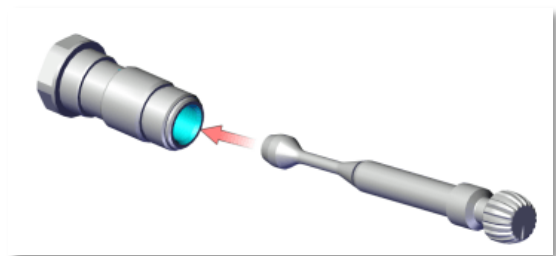
Blow a blower if necessary.

Place the seal in the liner at an angle of approximately 45 degrees.



Then seal it once in the liner:

Use the air needle to properly position this seal in the liner.



Apply grease to the air needle tip and its cylindrical body.

**560440001 : PTFE grease 450 GR. box**

**560440101 : 10 ML GREASE PTFE CARTRIDGE**

Then put the needle back into the liner according to its original position.

---

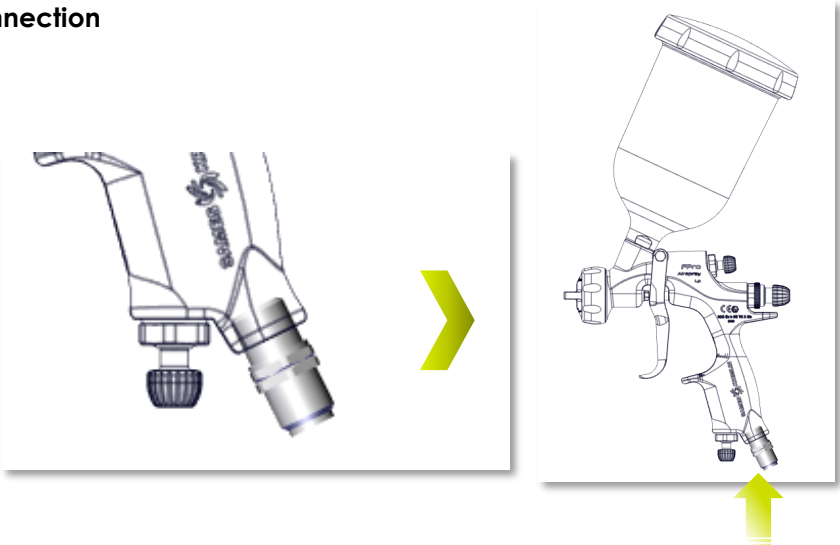
**Step 12**

Reassemble the GSP kit using the reverse procedure to that described in the previous steps of this procedure.

**Check that the liner threads are properly engaged in the gun before tightening the liner with a wrench.**

---

**10.4.7 Replace the air connection**



**Reminder**

Original equipment Connection ¼ NPS	Option Connection ¼ BSP, (included in the accessories box)
--	--



**Objectives**

Procedure to be carried out within the framework of maintenance.  
Adapt the air inlet fitting of the gun to the hose in place.

**Intervening staff**

Qualified personnel.

**Step 1**

Unscrew the air connection from the gun body using the wrench supplied with the FPro G gun.

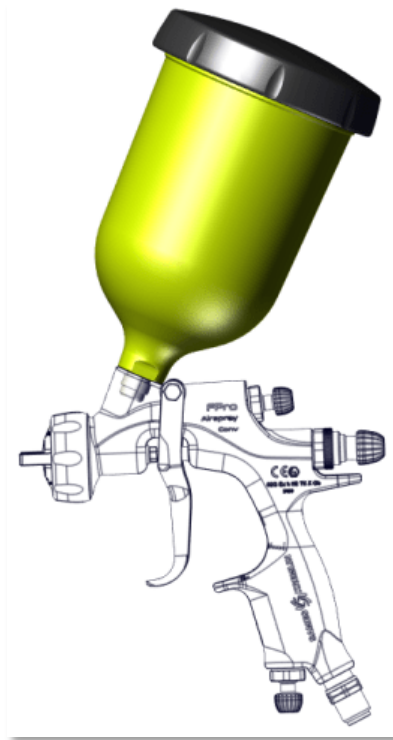


**Step 2**

Install the new air connection instead.

---

#### 10.4.8 Replace the gravity cup



---

##### **Objectives**

Procedure to be carried out within the framework of maintenance.

##### **Intervening staff**

Replace a damaged cup or replace it by a disposable cup

##### **Prerequisite**

Check that the cup is empty.

---



---

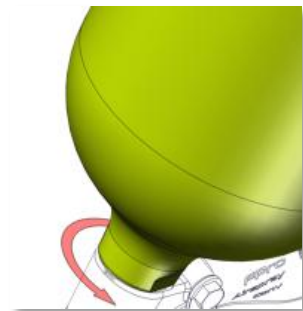
**Step 1**

Unscrew the lid with the cup.



The cup is unscrewed by hand.

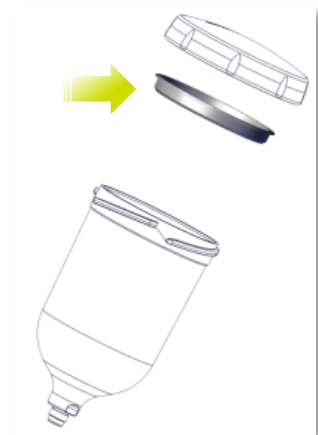
If resistance is encountered, unscrew the gravity cup at the connection using the wrench supplied with the gun.



---

**Step 2**

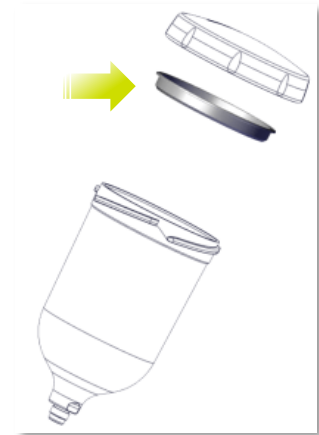
Extract the anti-drip membrane



---

**Step 3**

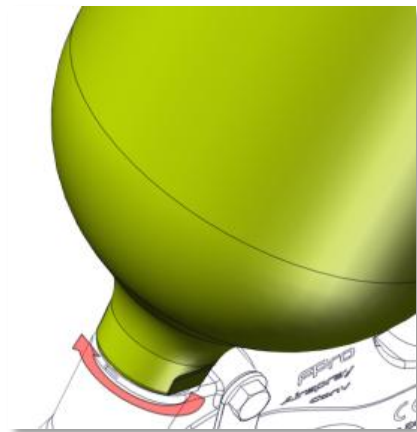
Install the new anti-drip membrane.



---

**Step 4**

Screw on the gravity cup by hand.



## **10.5 Replace of defective parts**

After a complete shutdown of the equipment, preventive maintenance can be performed according to the recommendations in the manual and using original SAMES KREMLIN spare parts or approved consumables.

---

# 11 Disposable cups: smart cups

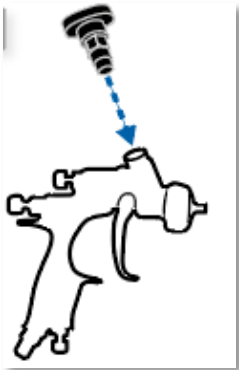
Disposable or single-use cups are an alternative to the conventional gravity cup. These cups are composed of a flexible pouch, a lid with filter, a holding ring and a cap. Refer to 12.4 Consumable references



## 11.1 Assembly instructions

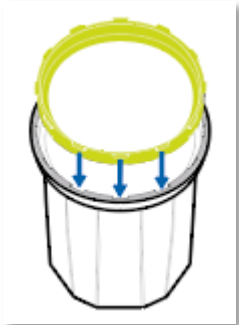
### Step 1

Thread adapter to spray gun.



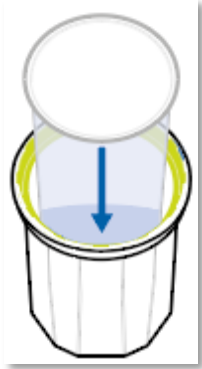
### Step 2

Insert ring into dosing cup.



### Step 3

Insert liner into ring.



---

**Step 4**

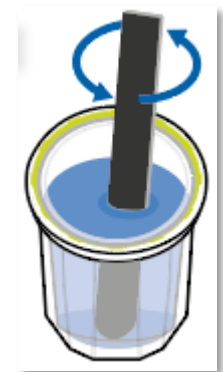
Pour the paint inside the liner. Be careful not to spill the paint on to the flange/ring.



---

**Step 5**

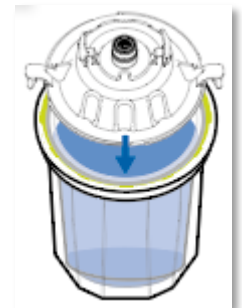
Mix the paint with a stir stick.  
Ensure that the paint has not coated the flange/ring before attaching the lid



---

**Step 6**

Seat lid into ring.

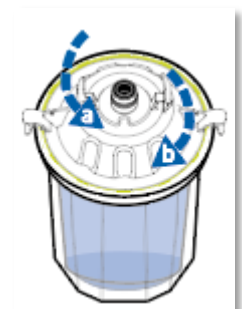


---

**Step 7**

Install the lid in two steps:

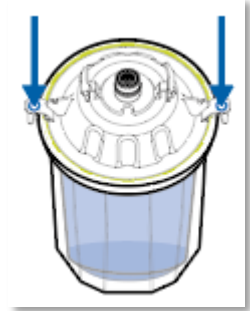
- a) Rotate for 1/4 turn counter-clockwise until a "click" sound is heard.
- b) Then rotate lid clockwise until it is tight.



---

**Step 8**

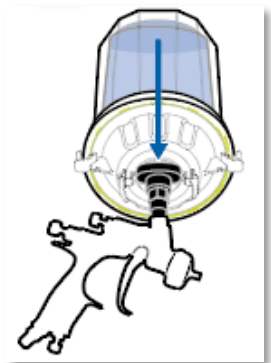
Press the clamps on the lid down to secure it to the dosing cup.



---

**Step 9**

Connect the cup assembly to the spray gun, perforating the membrane on the lid.



---

**Step 10**

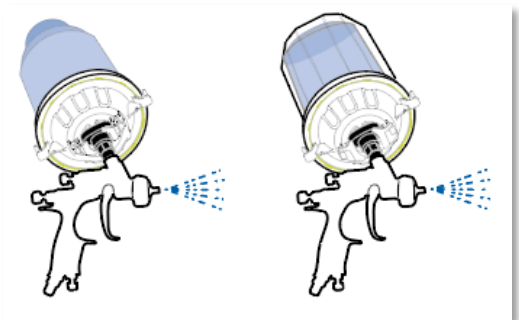
Press the clamps on the lid to secure the lid to the adapter.



---

**Step 11**

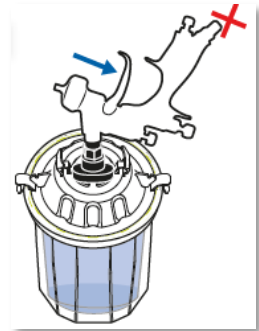
Optional: spray with,  
or without  
The dosing cup



## 11.2 Storage instructions

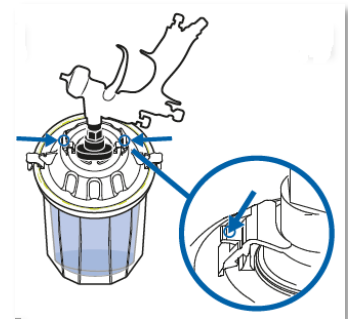
### Step 1

Turn the paint gun upside down, cup down, without air pressure, and pull the trigger to purge the gun paint remaining (in the paint gun will flow into the disposable cup)



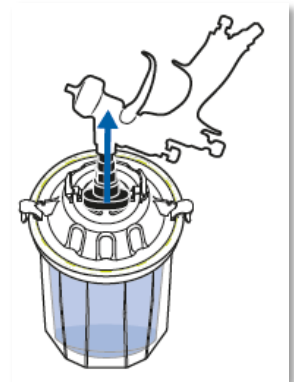
### Step 2

Push the tabs down to release adaptor locks



### Step 3

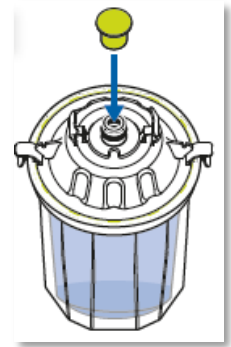
Remove the gun with the adaptor.



---

**Step 4**

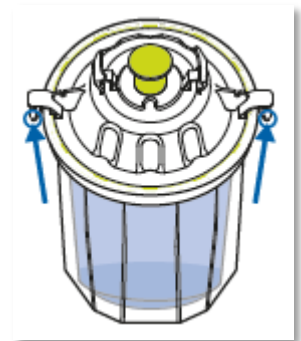
Put the cap on the lid of the liner.



---

**Step 5**

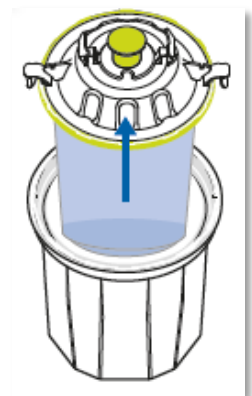
Unclip the tabs from the dosing cup.



---

**Step 6**

Remove the liner from the dosing cup.

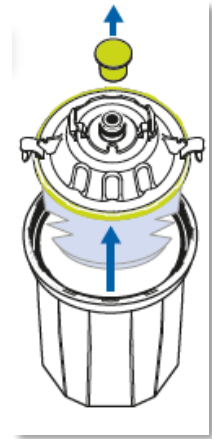




---

**Step 7**

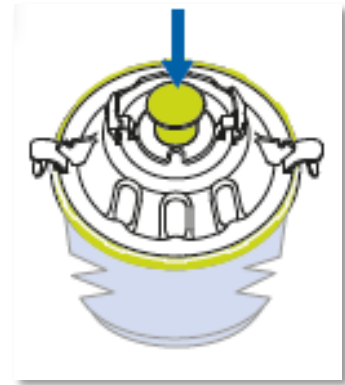
Remove the cap and purge air by carefully compressing the liner while the opening is upwards. Check that the paint permeates the filter.



---

**Step 8**

Put the cap on and store.



---

**11.3 Disposal instructions**

Repeat steps 1 to 6, then remove the liner.

No need to purge air before disposing of the liner

NOTE: Dispose in conformance with local rules and regulations.

---

## 12 Spare parts

### Reminder: Assembly errors

The use of improper replacement or defective parts may result in hazards to personnel, damage, malfunction or general shutdown of the equipment.

### 12.1 Commercial References

#### 12.1.1 Diversity of FPro G

##### FPro G LP with cup

136790000	FPro G LVLP S/PROJ CUP
136790312	FPro G LVLP-12-Mvb CUP
136790313	FPro G LVLP 13-Mvb CUP
136790314	FPro G LVLP-14-Mvb CUP
136790315	FPro G LVLP 15-Mvb CUP
136790318	FPro G LVLP 18-Mvb CUP
136790322	FPro G LVLP 22-Mvb CUP

##### FPro G LP without cup

135790312	FPro G LVLP 12-Mvb NO CUP
135790313	FPro G LVLP 13-Mvb NO CUP
135790314	FPro G LVLP 14-Mvb NO CUP
135790315	FPro G LVLP15-Mvb NO CUP
135790318	FPro G LVLP18-Mvb NO CUP
135790322	FPro G LVLP 22-Mvb NO CUP

##### FPro G HvLp with cup

136 797 412	FProG HvLp-12-Lvb CUP
136 797 413	FProG HvLp-13-Lvb CUP
136 797 414	FProG HvLp-14-Lvb CUP
136 797 415	FProG HvLp 15-Lvb CUP
136 797 418	FProG HvLp 18-Lvb CUP
136 797 422	FProG HvLp 22-Lvb CUP

**FPro G HvLp without cup**

135 797 412	FProG HvLp-12-Lvb NO CUP
135 797 413	FProG HvLp-13-Lvb NO CUP
135 797 414	FProG HvLp-14-Lvb NO CUP
135 797 415	FProG HvLp 15-Lvb NO CUP
135 797 418	FProG HvLp 18-Lvb NO CUP
135 797 422	FProG HvLp 22-Lvb NO CUP

**FPro G CONV with cup**

136794000	FPro G CONV S/PROJ CUP
136794312	FPro G CONV-12-Mvb CUP
136794313	FPro G CONV-13-Mvb CUP
136794314	FPro G CONV-14-Mvb CUP
136794315	FPro G CONV -15-Mvb CUP
136794318	FPro G CONV -18-Mvb CUP
136794322	FPro G CONV -22-Mvb CUP

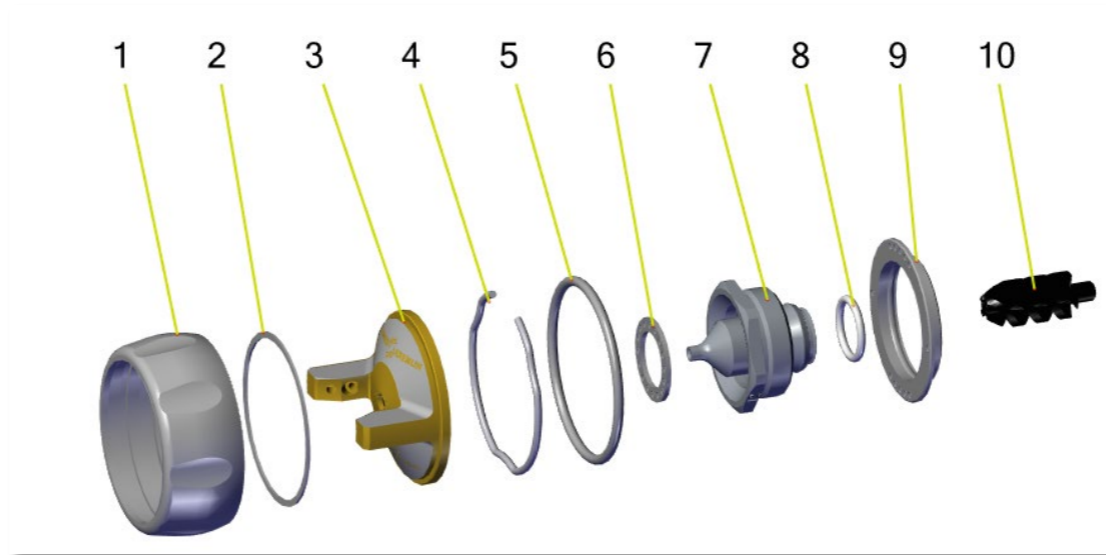
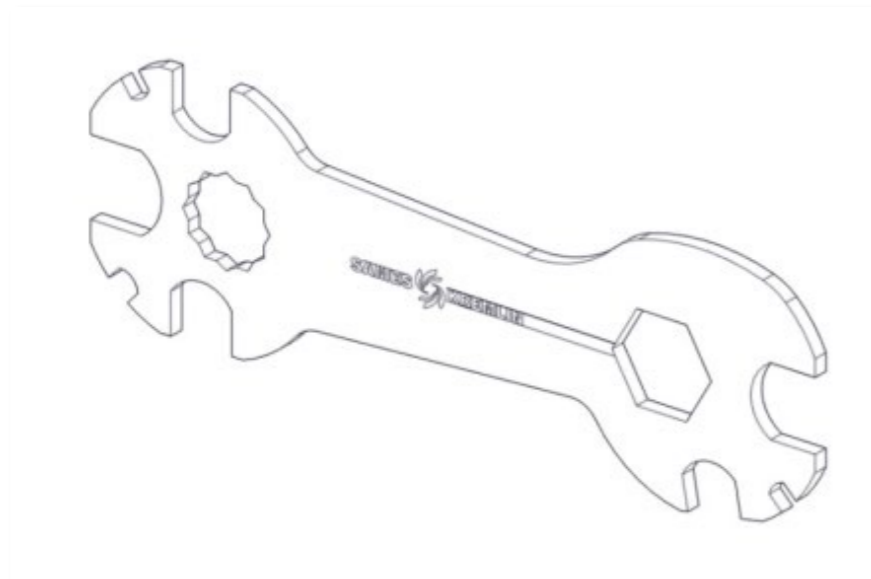
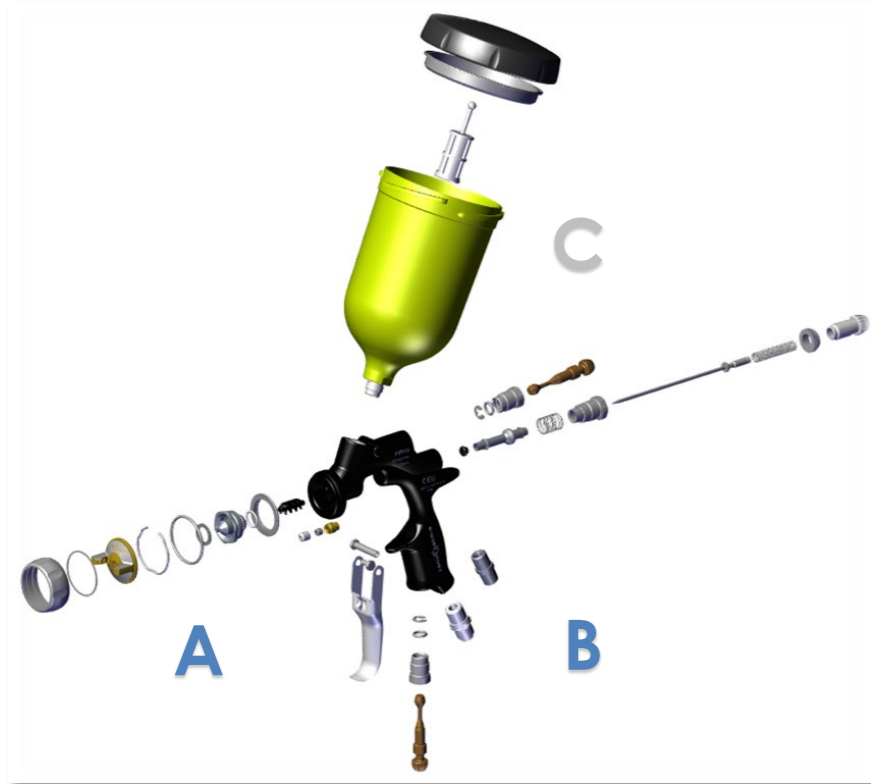
**FPro G CONV without cup**

135794312	FPro G CONV -12-Mvb NO CUP
135794313	FPro G CONV -13-Mvb NO CUP
135790314	FPro G CONV 14-Mvb NO CUP
135790315	FPro G CONV 15-Mvb NO CUP
135790315	FPro G CONV 18-Mvb NO CUP
135790322	FPro G CONV 22-Mvb NO CUP

**FPro G GSP with cup**

136798315	FPro G GSP CONV-15-Mvb CUP
136798318	FPro G GSP CONV-18-Mvb CUP
136798322	FPro G GSP CONV-22-MvbCUP

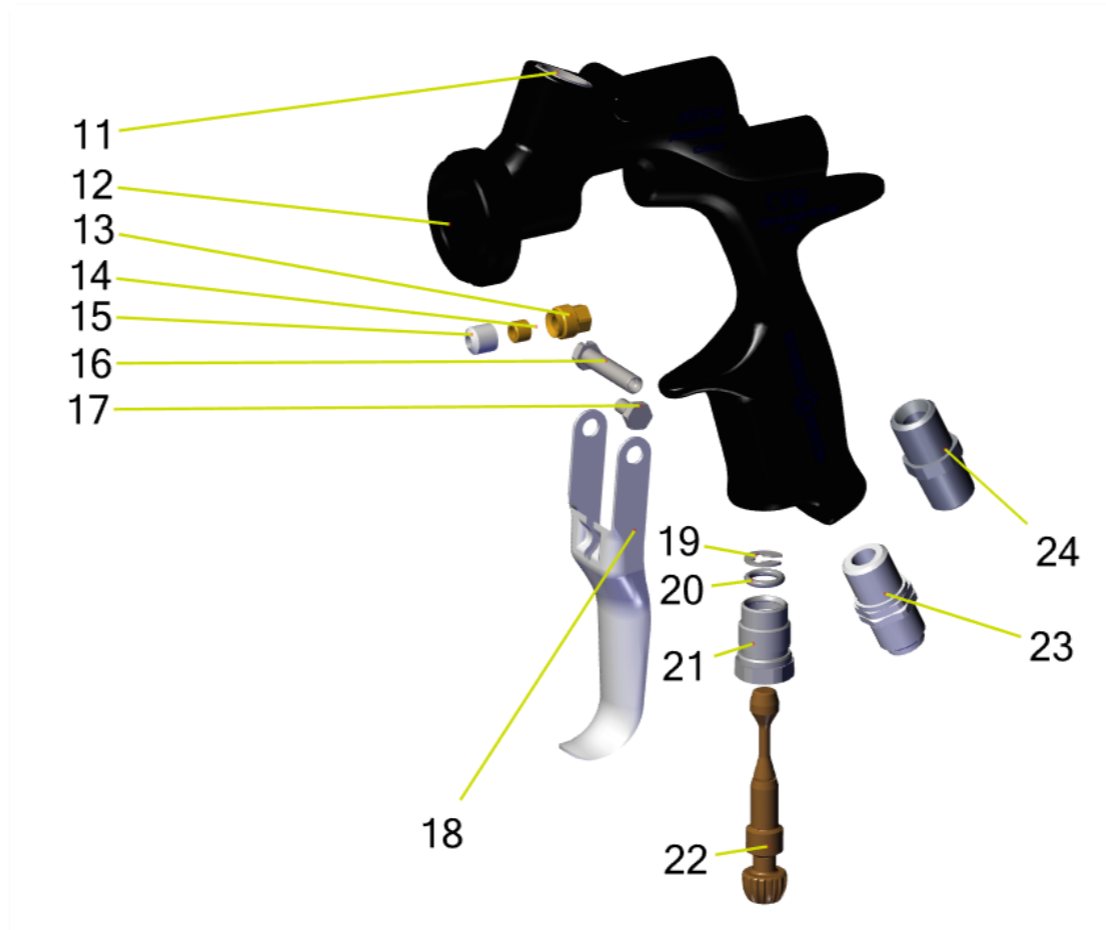
**12.2 Exploded view of the FPro G gun**



**Section A**

**Section A**

Designations	
1	Air cap ring
2	Friction seal
3	Air cap
4	Retaining ring
5	Air cap ring's o-ring seal
6	Distribution washer
7	Nozzle
8	Nozzle's o-ring seal
9	Distribution ring
10	Vortex

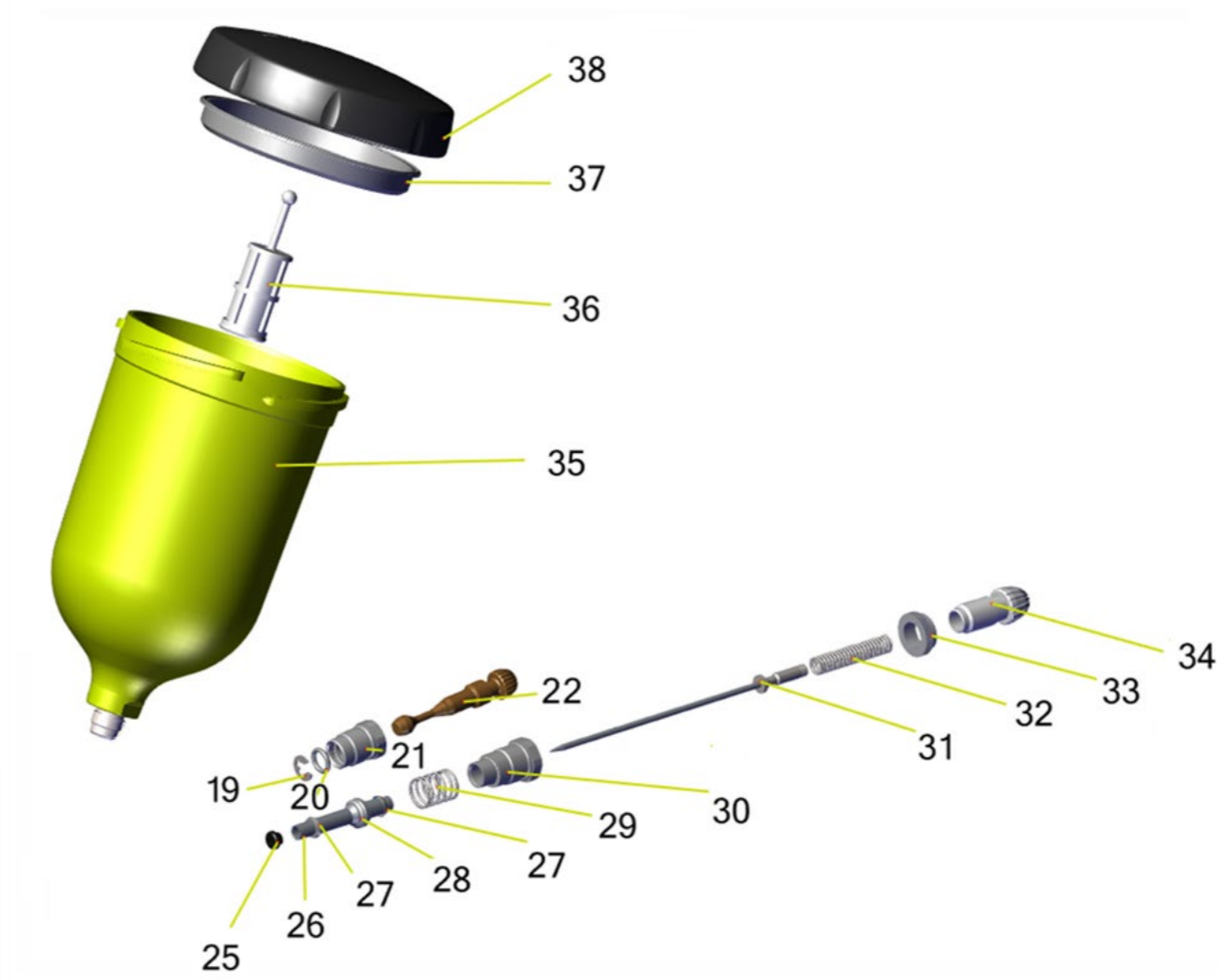
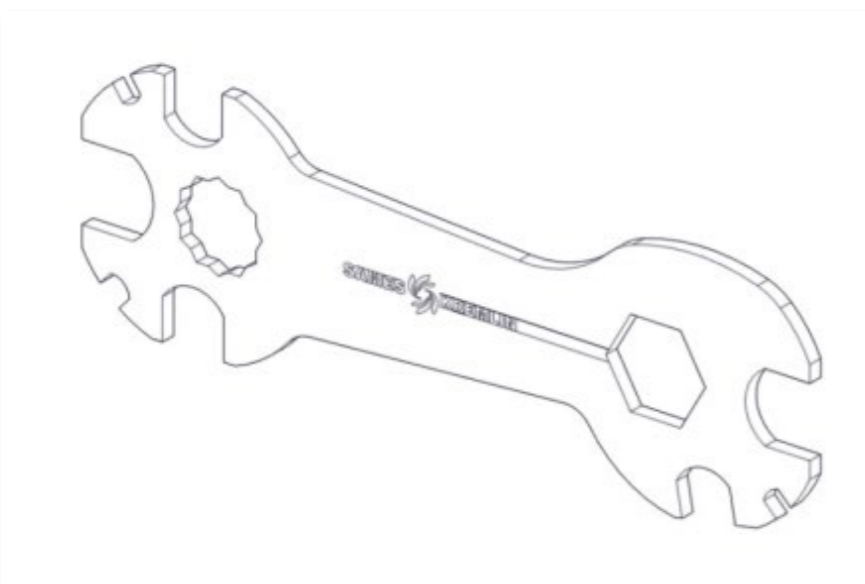
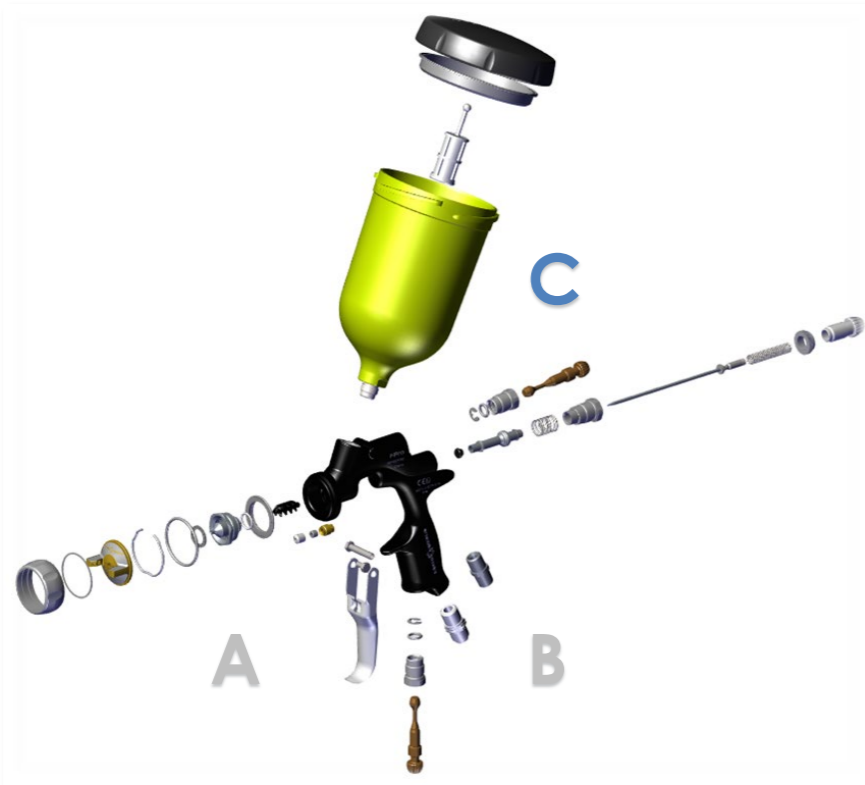


**Section B**

**Section B**

Designations	
11	Cup connection
12	Gun body FPro G GSP
13	Packing holder
14	Teflon bearing
15	Seat
16	Trigger axle
17	Stainless steel screw H M4X8
18	Trigger
19	Circlip
20	O-ring PTFE
21	Needle liner
22	Short air needle
23	Connection M R1/4 M 1/4 NPS
24	Connection M R1/4 - M G 1/4 BSP

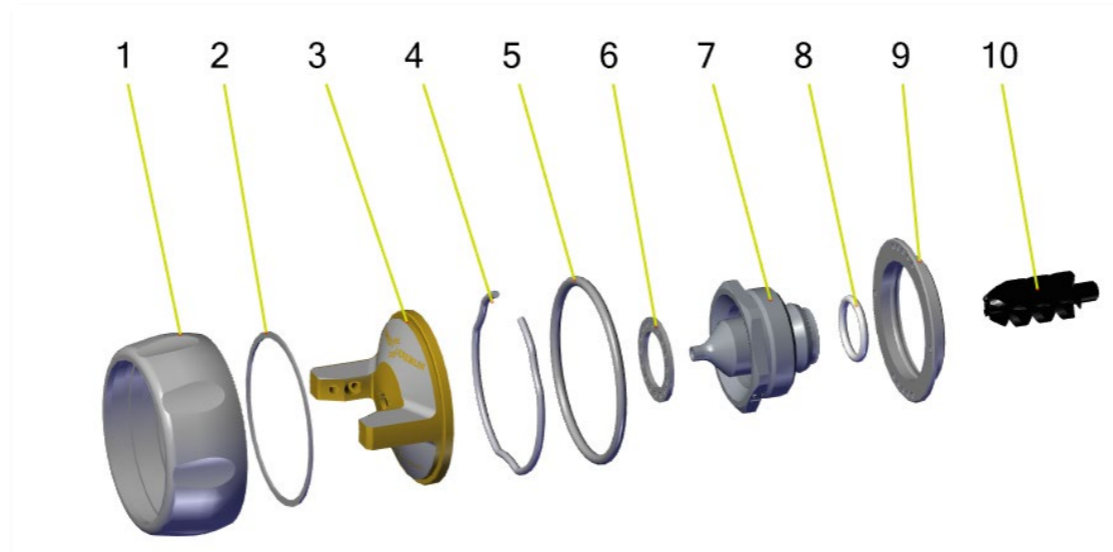
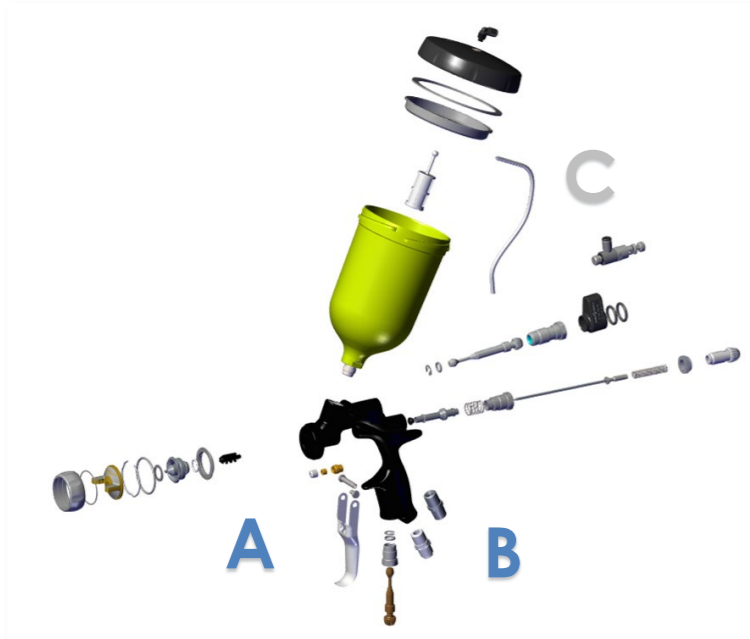
3.2 Exploded view of the FPro G gun (continued)



Section C

Section C	
Designations	
19	Steel Circlip
20	PTFE Seal
21	Needle sleeve
22	Short air needle
25	Valve actuator
26	One-piece valve body
27	Valve seal x2
28	Valve seal HDPE 300
29	Air valve spring FPro G
30	Rear liner
31	Needle
32	Needle spring FPro G
33	Locking nut M12x100
34	Magnetic needle stop
35	Cup body
36	Filter
37	Anti-drip mambrane
38	Cup lid 0.6L

**12.3 Exploded view of the FPro GSP Gun**



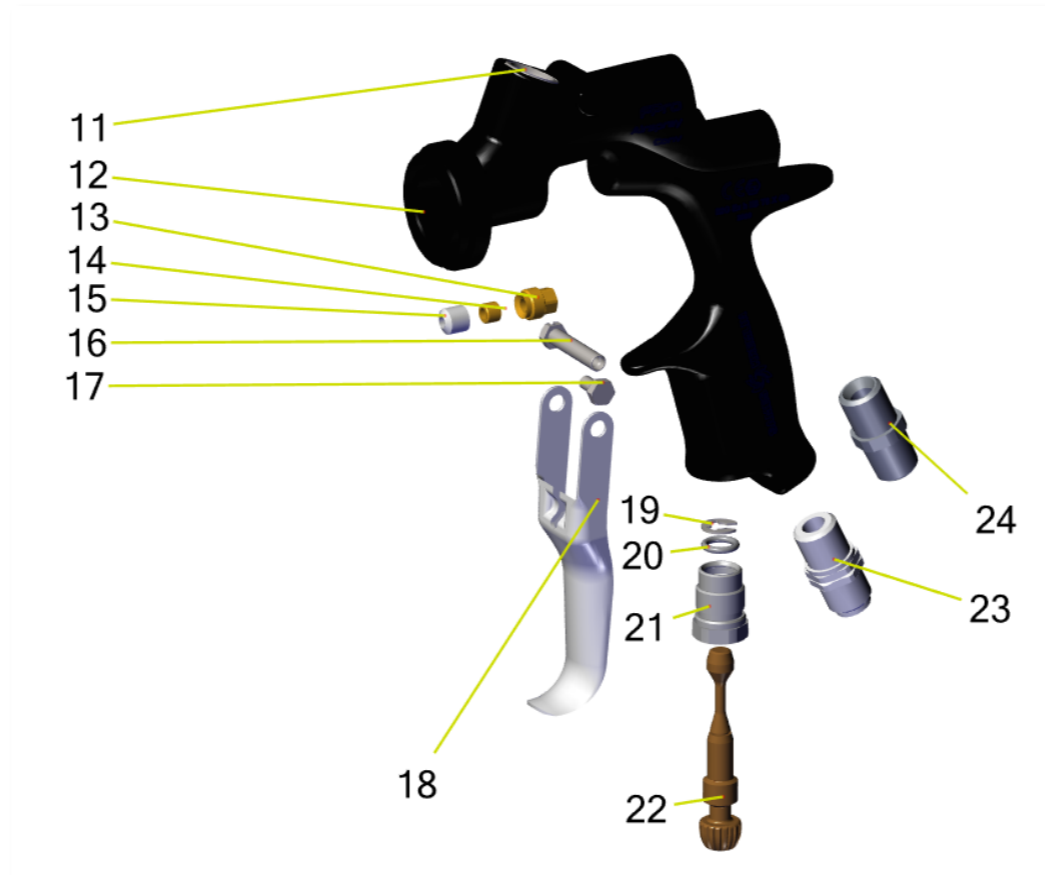
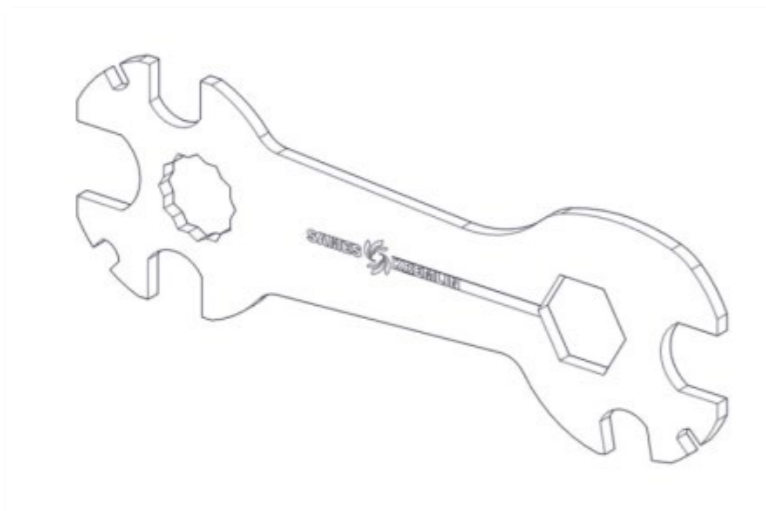
**Section A**

**Section A**

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

**Designations**

- 1 Air cap ring
- 2 Friction seal
- 3 Air cap
- 4 Retaining ring
- 5 Air cap ring's o-ring seal
- 6 Nozzle
- 7 Buse
- 8 Nozzle's o-ring seal
- 9 Distribution ring
- 10 Vortex



**Section B**

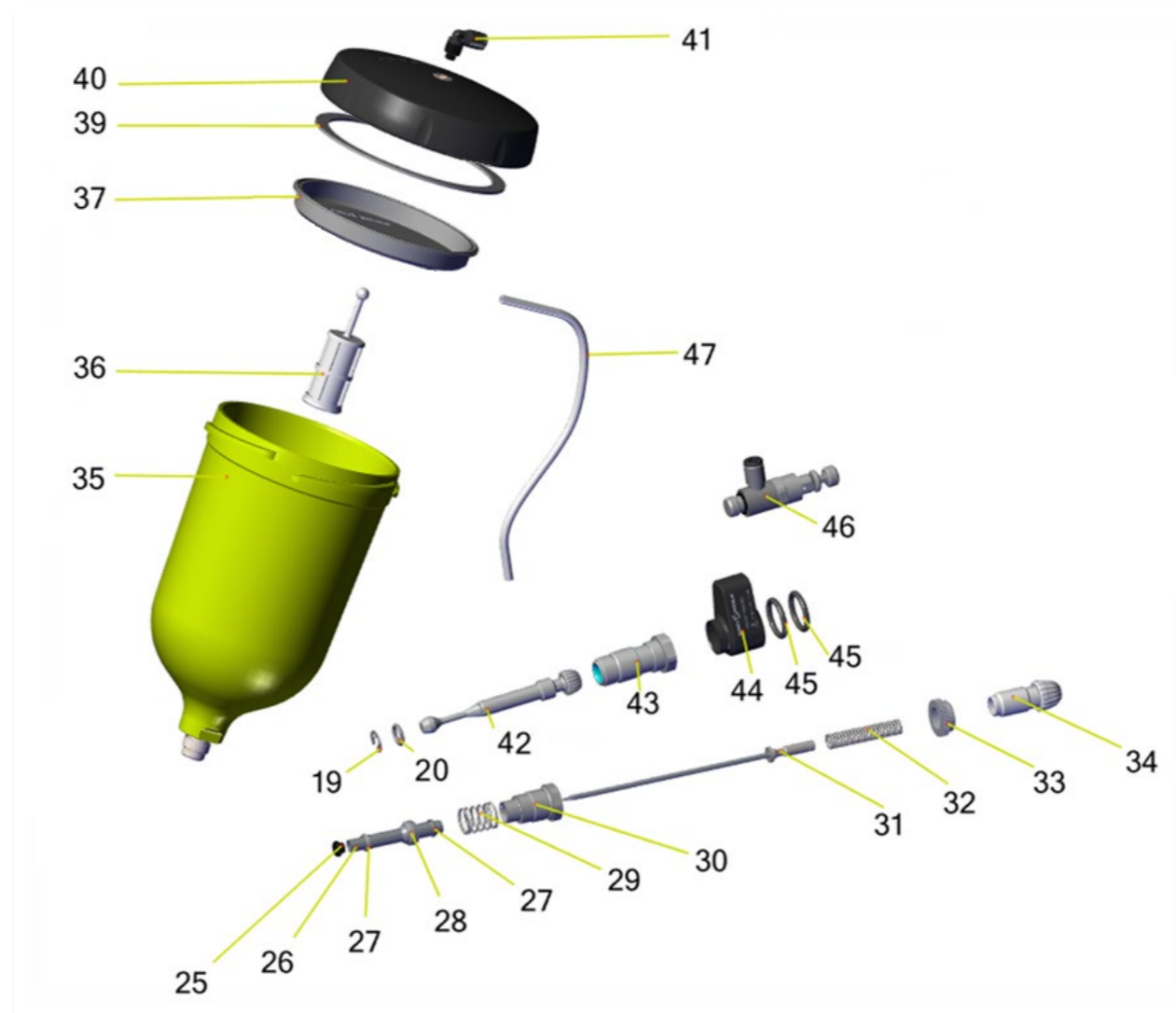
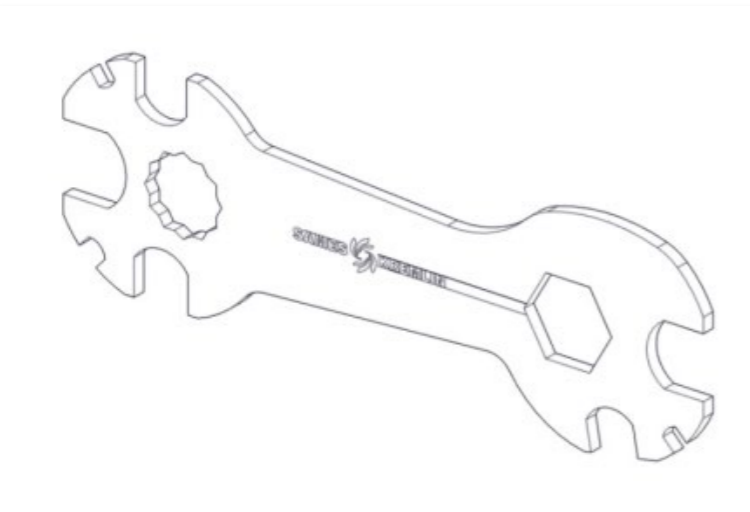
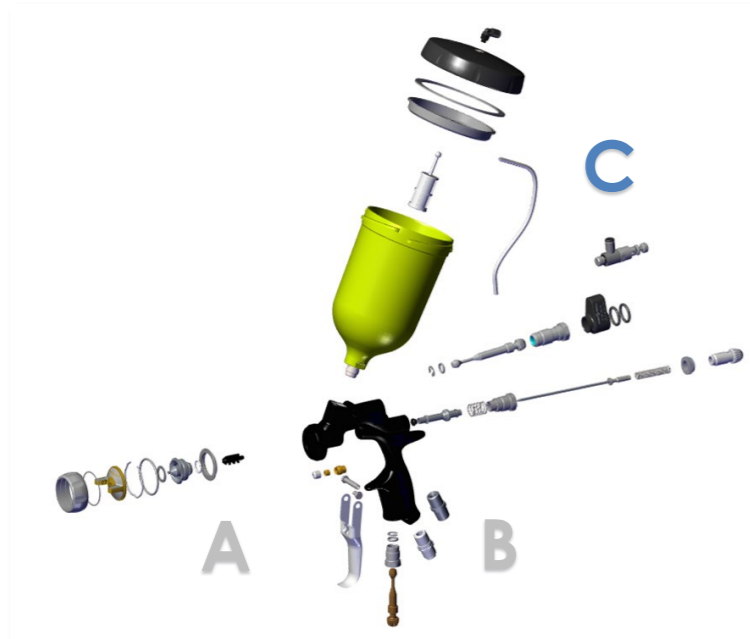
**Section B**

- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24

**Designations**

- 11 Cup connection
- 12 Gun body FPro G GSP
- 13 Packing holder
- 14 Teflon bearing
- 15 Seat
- 16 Trigger axle
- 17 Stainless steel screw H M4X8
- 18 Trigger
- 19 Circlip
- 20 O-ring PTFE
- 21 Needle liner
- 22 Short air needle
- 23 Connection M R1/4 M 1/4 NPS
- 24 Connection M R1/4 - M G 1/4 BSP

3.3 Exploded view of the FPro GSP Gun (continued)




















**Section C**

**Designations**

19	Steel circlip
20	PTFE Seal
25	Valve actuator
26	One-piece valve body
27	Valve seal x2
28	Valve seal HDPE 300
29	Air valve spring FPro G
30	Sleeve
31	Needle
32	Needle spring FPro G
33	Locking nut M12x100
34	Magnetic needle stop
35	Cup body
36	Filter
37	Anti-drip membrane
39	0.6L Cup seal
40	Cup lid 0.6L GSP
41	Elbow M5 T2,5X4
42	GSP air needle
43	GSP needle sleeve
44	Ring kit GSP FPro G
45	Seals NBR BLACK 80SH x2
46	Regulator 1 BAR 1/8G Ø4
47	Hose Ø4 KIT GSP










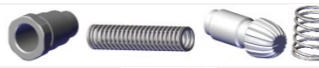









**Section C**

**12.4 Consumable references**

Positions	References	Designations	Visuals	Quantity	Level of maintenance spare parts
1	132760005	Head ring		1	2
1-2-3-4-5	132790100	FPro G head LVLP-12 22-Mvb		1	2
1-2-3-4-5	132794100	FPro G head CONV-12 22-Mvb		1	2
1-2-3-4-5	132790200	FPro G head HVLP-12 22-Lvb		1	2
6	129130004	Pack of 5 distribution washer		5	1
6-7-8-31	131799912	TIP + NEEDLE 12 - FPRO G		1	2
6-7-8-31	131799913	TIP + NEEDLE 13 - FPRO G		1	2
6-7-8-31	131799914	TIP + NEEDLE 14 - FPRO G		1	2
6-7-8-31	131799915	TIP + NEEDLE 15 - FPRO G		1	2
6-7-8-31	131799918	TIP + NEEDLE 18 - FPRO G		1	2
6-7-8-31	131799922	TIP + NEEDLE 22 - FPRO G		1	2
6-7-8	134130300	TIP 12 EQUIPPED FOR FPRO, M22		1	2
6-7-8	134130400	TIP 13 EQUIPPED FOR FPRO, M22		1	2
6-7-8	134130500	TIP 14 EQUIPPED FOR FPRO, M22		1	2
6-7-8	134130600	TIP 15 EQUIPPED FOR FPRO, M22		1	2
6-7-8	134130700	TIP 18 EQUIPPED FOR FPRO, M22		1	2
6-7-8	134130800	TIP 22 EQUIPPED FOR FPRO, M22		1	2

Level 1 preventive maintenance \*  
 Level 2 Corrective Maintenance \*\*  
 Level 3 Exceptional Maintenance \*\*\*



Positions	References	Designations	Visuals	Quantity	Level of maintenance spare parts
9	129130003	Pack of 5 distribution rings		5	1
10	129140031	Vortex		1	1
13	029130006	Packing holder for FPRO, M22		1	2
14-15	129130903	Pack of 5 packing assembly for FPRO, M22		5	1
16-17	129790904	Trigger axis + screw		5	3
16-17-18	129790907	Pack trigger FPro G		1	3
19-20-21-22	129130030	Air adjuster assembly		1	2
25	129030026	Pack of 5 air valve assembly drivers		5	1
25-26-27-28-29	129790020	Air valve assembly FPro G		1	2
29-30-32-34	129790905	Rear line assembly FPro G		1	2
30	029030003	Sleeve		1	2
31	133790100	Magnetic needle FPro G 07-09-12-13		1	2
31	133790200	Magnetic needle FPro G 14-15-18		1	2
31	133790300	Needle tip 22-27 & needle magnetic support 07-40 FPro G		1	2
31	133790400	Needle tip 07-13 & needle magnetic support 07-40 FPro G		1	2
31	133790500	Needle tip 14-18 & needle magnetic support 07-40 FPro G		1	2
	129140090	Needle end 22/27 for FPRO, M22 (PACK OF 5)		5	1
	129140092	Needle end 07/13 for FPRO, M22 (PACK OF 5)		5	1
	129140093	Needle end 14/18 for FPRO, M22 (PACK OF 5)		5	1

Level 1 preventive maintenance \*  
 Level 2 Corrective Maintenance \*\*  
 Level 3 Exceptional Maintenance \*\*\*

Positions	References	Designations	Visuals	Quantity	Level of maintenance spare parts
34	129790026	Magnetic needle stop FPro G		1	2
35-36-37-38	139790100	Gravity cup FPro G 0,6L		1	2
35-36-37-39-40	139790200	Cup FPRO GSP + filter + anti-grip diaphragm + lid		1	2
	139280200	Plastic gravity cup 0.25 L + filter		1	2
41	139790215	Elbow M5 T2,5X4		1	2
46	903130605	Regulator 1bar 1/8G Ø4 for FPro GSP		1	2
47	139790214	Tube rilsan 2,7 x 4 black - 1 METER – FPro GSP		1	1

Level 1 preventive maintenance \*  
 Level 2 Corrective Maintenance \*\*  
 Level 3 Exceptional Maintenance \*\*\*

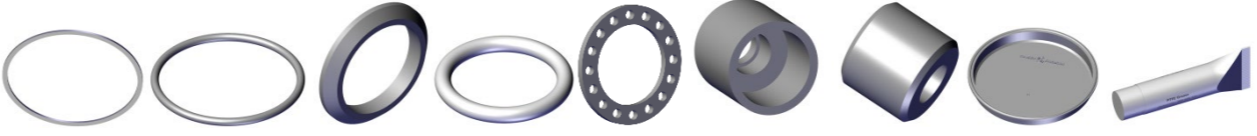






**Smart cups boxes**

References	Designations	Quantity
138790111	Pack of 48 Smart Cups Mini - 250mL - filter 125µm	48 cups + 1 stir stick
138790112	Pack of 48 Smart Cups - 750mL - filter 125µm	48 cups + 1 stir stick
138790113	Pack of 48 Smart Cups - 750mL - filter 190µm	48 cups + 1 stir stick
138790114	Starter Kit Smart Cups - 12 units - 750 mL - filter 125 µm	12 cups +1 dosing cup +1 adaptor FPRO G + 1 stir stick
138790115	Starter Kit Smart Cups - 12 units - 750 mL - filter 190 µm	12 cups +1 dosing cup +1 adaptor FPRO G + 1 stir stick

**Accessoires**




References	Designations	Quantity
138790001	Adaptor Smart Cups - Sames Kremlin Fpro G, M22G, S3G	1
138790121	Pack of 2 hard Mini Smart Cups for dosing - 250mL	2
138790122	Pack of 2 hard Smart Cups for dosing - 750mL	2
138790150	Box of 50 Stir Sticks - Smart Cups	50
138790057	Dispenser of mini Smart Cups 250mL wall mounted	1
138790058	Dispenser of Smart Cups 750mL wall mounted	1
138790059	Dispenser of lids & rings wall mounted - Smart Cups	1

**12.5 Wear part references**

Positions	References	Designations	Visuals	Quantity	Level of maintenance spare parts
2	129080007	Pack of 2 air cap seals		2	1
2-5-6-8-14-15-28-37	129790901	Pack of seals FPro G		1	1
5	150040309	Pack of 10 seals		10	1
8	129209902	Set of 5 tip seals		5	1
28	129030022	Pack of 10 air valve seals		10	1
19-20-37-39-45	129798901	Pack of seals GSP kit		1	1
36	139270220	Pack of 5 filters for gravity cup		5	1
37	139790105	Pack of 5 anti drip diaphragms FPro G		5	1

Level 1 preventive maintenance \*  
 Level 2 Corrective Maintenance \*\*  
 Level 3 Exceptional Maintenance \*\*\*

**12.6 References for spare parts or repair kits**

Positions	References	Designations	Visuals	Quantity	Level of maintenance spare parts
19-20-42-43-44-45-46	129798100	Kit GSP without cup - FPro GSP		1	2
19-20-35-36-37-39-40-41-42-43-44-45-46-47	139798200	Kit GSP with cup - FPro GSP		1	2
	049221800	Gravity gun table bracket		1	2
	049221900	Gravity gun wall bracket		1	2

Level 1 preventive maintenance \*  
 Level 2 Corrective Maintenance \*\*  
 Level 3 Exceptional Maintenance \*\*\*

**12.7 Kit references - specific tools**

Positions	References	Designations	Visuals	Quantity	Level of maintenance spare parts
23	050102624	Connector M R 1/4 M 1/4 NPS		1	2
24	050102217	Connector M R1/4 M1/4 BSP		1	2
	129760921	Brushes and wrench set		1	2
	906300101	Brush (large size)		1	2
	150070560	Handle gauge (fittings MF 1/4 NPS)		1	2

Level 1 preventive maintenance \*  
 Level 2 Corrective Maintenance \*\*  
 Level 3 Exceptional Maintenance \*\*\*

**12.8 Lubricants**

References	Designations	Quantity
560440001	PTFE grease 450 GR. box	1
560440101	10 ML GREASE PTFE CARTRIDGE	1