

# E-COAT Master

## User's Manual

Powder Coating Equipment Kits User's Manual



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10010 St. No: 10

35470

İTOB Menderes

Izmir TURKEY

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## Table of Contents

<b>1- Safety Regulations</b> .....	<b>4</b>
1-1 Safety Symbols .....	4
1-2 Conformity of Use .....	4
1-3 Technical Safety Regulations for Stationary Electrostatic Powder Spraying Equipment .....	5
1-3-1 General Information .....	5
1-3-2 Consciously Working Safe .....	5
1-3-3 Safety Regulations for the Operating Firm and/or Personnel .....	5
1-3-4 Special Type of Hazards .....	6
1-3-5 Safety Requirements for Electrostatic Powder Coating .....	6
1-4 P .....	7
1-5 Scope of Delivery .....	7
1-6 Conformity Between Products .....	8
<b>2- Technical Data</b> .....	<b>8</b>
2-1 Electrical Data .....	8
2-2 Pneumatic Data .....	9
2-3 Powder Paint Output References .....	9
2-4 E-COAT Master with E-FEED V2 Output .....	9
2-5 E-COAT Master Air Flow Rates .....	9
2-6 General View .....	9
2-7 Front Panel and Input Buttons .....	10
2-8 Back Panel and Connections .....	11
2-9 General Instructions .....	12
<b>3- Start Up</b> .....	<b>15</b>
3-1 Installation .....	15
3-2 Start Up .....	18
3-3 Operation .....	19
3-4 Trigger .....	24
3-5 Fluidization .....	24
<b>4- Cleaning and Maintenance</b> .....	<b>25</b>
<b>5- Troubleshooting</b> .....	<b>25</b>
<b>6- Parts and Accessories</b> .....	<b>27</b>
<b>7- Service and Maintenance Table</b> .....	<b>60</b>
<b>8- Product Life and Warranty</b> .....	<b>61</b>

## 1. Safety Regulations

This section sets out the fundamental safety regulations that must be followed by the user and third parties using the E-COAT Master. These safety regulations must be read and understood before the E-COAT Master is used.

### 1.1. Safety Symbols

The following warnings with their meanings can be found in the Sistem Teknik Makina operating instructions. The general safety precautions must also be followed as well as the regulations in the operating instructions.



**DANGER!**

Live electricity or moving parts are dangerous.  
Possible Consequences: Death or serious injury.





**WARNING!**

Improper use of the equipment could damage the machine or cause it to malfunction.  
Possible consequences: Minor injuries or damage to equipment



### 1.2. Conformity Of Use

- E-COAT Master Manual Coating Equipment is built to the latest  and conforms to the recognized technical safety regulations. It is designed for the normal application of powder coating.
- Any other use is considered as non-conform. The manufacturer is not responsible for damage resulting from improper use of this equipment; the end-user alone is responsible. If the E-COAT Master is to be used for other purposes or other substances outside of our guidelines then Sistem Teknik Makina A.Ş. should be consulted.
- Observance of the operating, service and maintenance instructions  by the manufacturer is also part of conformity of use. The E-COAT Master should only be used, maintained and started up by trained personnel, who are informed about and are familiar with the possible hazards involved.
- Start-up is forbidden until it has been established that the E-COAT Master has been set up and wired according to the guidelines for machinery EN 60204-1 (machine safety) must also be observed.
- T Master exempt the manufacturer from any liability from resulting damage.
- Relevant accident prevention regulations, as well as other generally recognized safety regulations, occupational health and structural regulations are to be observed.
- 



#### Explosion Protection Class of E-COAT Master Controller Unit

Explosion Protection	Protection Type	Temp Class	
  II 3 D	IP54		

#### Explosion Protection Class of E-GUN C1 Powder Paint Gun

Explosion Protection	Protection Type	Temp Class	
  II 2 D	IP64		

#### Explosion Protection Class of E-GUN C3 Powder Paint Gun

Explosion Protection	Protection Type	Temp Class	
  II 2 D	IP64		

*Note: EN 60204-1 this standard includes the non-mobile machines electronic machines and programmable electronic hardware and systems.*

### 1.3. Technical Safety Regulations for Stationary Electrostatic Powder Spraying Equipment

#### 1.3.1. General Information

The powder spraying equipment of Sistem Teknik Makina (Electron) is designed for safe use and to the latest technological specs. Electrostatic powder equipment could create dangerous situations unless it's used properly. In addition to that, there might be a danger to life and limb of the user or third party, a danger of damage to the equipment and other machinery that belongs to the user and hazards to the proper operation of equipment.

- The powder spraying equipment should only be started up and used once the operating instructions have been carefully read. Apart from any usage from the user manual, there lies a danger of damaging the equipment and loss of control of the equipment.
- Operational safety has to be observed before every start-up. Regular Servicing is the essence of working safely.
- Local legislation should be considered for the safety.
- The plug has to be disconnected before the machine is opened for repair.
- The plug and socket connections between spraying equipment should only be taken out when the power is off.
- The connection cables have to be installed in a manner that they wouldn't interfere or damage the normal machine operation. Also the local legislation should be observed for the installation.
- Only original Electron spare parts should be used, because only the original products will guarantee the equipment's explosion protection. Any damage caused by other used parts is not covered by the guarantee.
- If Electron powder spraying equipment is going to be used with other devices/machinery from other manufacturers, their safety regulations should be also considered.
- Be cautious while working in a powder/air mixture area. In the right concentration the mixture would be thus smoking is forbidden in the entire plant area.
- Rule of thumb says that any person who uses a pacemaker should NEVER enter a high voltage area or places with ALSO SHOULDN'T work in powder spraying installations.



**WARNING!**

Only the customer itself is responsible for the safe usage of the equipment  
Sistem Teknik is not responsible for any damage resulted from the usage.

#### 1.3.2. Consciously Working Safe

Every other individual who will be working for the assembly, start-up, operation, service and repair of powder spraying equipment must have read and understood the operating instructions and the "Safety Regulations". Operators have to be appropriately trained via Sistem Teknik assembly personnel and made aware of the possible danger of powder spraying equipment and the environment.

The control units for guns must only be set up and used in zone 22. The spray guns are permitted in the zone 21 which is created by them but only them.

Powder spraying equipment must only be used by trained and authorized personnel. This also applies for any kind of on to the electrical equipment, which only should be carried out by a specialist.

It is essential that the operating instructions are understood before any kind of work is done with the equipment. All the procedures have to be done according to the instructions.

Powder spraying equipment can be turned off via the main power switch or the emergency shut down procedure.

#### 1.3.3. Safety Regulations for the Operating Firm and/or Personnel

- 
- The machine user should be well informed about no other people than trained personnel would use the machine.
- The employer has to provide an operating instruction manual for specifying the dangers for humans and the environment by handling dangerous materials, as well as all preventive measures and workplace behaviors. This "document" must be well written in an understandable form in the language that the person employed for the equipment.
- The operator is obliged to check the equipment for external damage once every shift changed at the very least. The operation characteristic changes should also be reported.
- Users should conform the satisfactory working conditions else the equipment should not be used.
- 
- 
- Safety devices should be always on the equipment at all costs unless the equipment is going to be maintained or cleaned. After the maintenance all the devices should be put on the equipment. The users must be trained well for this purpose.
- 9. P

### 1.3.4. Special Types of Hazard

- **Power:** All the high voltage equipment should be unplugged before opened. This is a huge life risk thus it has to be taken under great care.
- **Powder:** Powder/air mixtures could be ignited by sparks. Powder ventilation is a must while using powder spraying equipment.
- **Static Charges:** These could result in the following: Charges to people, electric shocks, sparks. Charging of objects has to be avoided.
- **Grounding:** All electricity conducting parts and machinery in the workplace must be earthed 1.5 mt on either side and 2.5 mt around each booth opening. The grounding resistance must amount to a maximum of 1 MOhm resistance has to be tested regularly. The appropriate devices must be kept in the workplace for regular grounding checks.
- **Compressed Air:** Compressed air could be created after long pauses of the equipment and this creates risk of pneumatic hose damage or uncontrolled release and improper use of compressed air. Compressed air should be drained properly.
- **Crushing and Cutting:** There might be moving parts while operation (e.g. Conveyor Belt, Reciprocator). The operator must be trained to maintain the area safety and local security regulations.
- **Exceptional Circumstances:** Local conditions must be met at all costs. Additional measures such as barriers can be used to prevent unauthorized access.
- **Conversions and Modifications to the Equipment:** All conversions and must be asked to Sistem Teknik prior to the process and no process should be done without Sistem Teknik's permission. This is essential for the equipment safety and conformity. Powder coating equipment should never be used if damaged; these parts should be changed immediately with the original Sistem Teknik replacement. Other replacements then Sistem Teknik original equipment does not conform the guarantee, thus the guarantee will no longer be valid. Equipment repairs must be done only by specialist or at Sistem Teknik

### 1.3.5. Safety Requirements for Electrostatic Powder Coating

- All the equipment used for powder coating is dangerous unless the instructions are not conformed.
- Every electrostatic conductive part must be earthed within the 5 meter radius from the equipment.
- The r of the coating area should conduct electricity (Concrete is generally a conductive surface, check with your building project for more info)
- The users should wear electricity conducting footwear.
- The guns are earthed thus you must use them with your bear hands. If gloves are going to be used, make sure that they conduct electricity.
- Grounding cable must be connected to the grounding screw of the electrostatic powder spraying hand appliance. It should have a good connection with the booth, hopper and conveyor chain (if used).
- E-COAT Master Device must be switched off while the hand gun is being cleaned.
- The grounding must be checked every week. Remember that the grounding resistance must be 1 MOhm at a maximum.
- The E-COAT Master equipment should only be switched once the booth is working in proper conditions. If the booth malfunctions, E-COAT should be turned off.
- At nozzle changes, the E-COAT Master device should be shut down.
- Only use spare parts / attachments and accessories from Sistem Teknik's original parts page. This ensures the safety of the equipment and conformity of use.
- Cleaning agents creates the risk of hazardous fumes. Please check the manufacturer's manual about more information about the cleaning agents if they are used in the site.
- If there is any damage on the powder coating equipment or the spray gun, operators should stop using it.
- Especially make sure that the environmental regulations and the manufacturer's instructions are being conformed while disposing the powder lacquer and cleaning agents.
- Repairs have to be carried out via specialists of Sistem Teknik trained personnel and never to be done in the operating area under any circumstance.
- Dangerous dust concentration levels should be avoided in powder spraying areas. There must be technical ventilation available (e.g. booth ventilation) to prevent a dust concentration of more than %50 of the lower explosion limit (UEG = max. permissible powder/air concentration). If the UEG is not known then a value of 10g/m3 should be used.

## EN European Standarts

2014/34/EU	The approximation of the laws of the Member States relating to apparatus and safety systems for their intended use in potentially explosive atmospheres
EN 12100-1 EN 12100-2	Machine safety
EN IEC 60079-0	Electrical equipment for locations where there is danger of explosion
EN 50050-2	Electrical apparatus for potentially explosive atmospheres - electrostatic hand-held spraying equipment
EN 50177	Stationary electrostatic spraying equipment for
EN 12981	Coating plants - spray booths for application of organic powder coating material - safety requirements
EN 60529	IP-Type protection: contact, foreign bodies and water protection for electrical equipment
EN 60204	VDE regulations for the setting up of high voltage electrical machine tools and processing machines with mains voltages up to 1000 V

### 1.4. Product Specific Safety

If there is an installation work that will be done by the customer, the local regulations have to be considered.

The plant must be checked for any type of foreign objects inside the booth or in ducting, input and exhaust air before start up.

All equipment must be grounded according to the local regulations before start up as well.

### 1.5. Scope of Delivery

#### 1. E-COAT Master Automatic Bare Kit



- E-GUN C3
- E-GUN C3 Automatic Gun Cable (12 m)
- E-FEED V2
- E-COAT Master
- Regulator and Air Distribution Unit
- Hose connection accessories

#### 2. E-COAT Master Manuel Bare Kit



- E-GUN C1
- E-FEED V2
- E-COAT Master
- Regulator and Air Distribution Unit
- Hose connection accessories

#### 3. E-COAT Master H



- E-GUN C1
- E-FEED V2
- E-COAT Master
- E-HOPP 50
- E-COAT Mobile Carrier w/ Air Distribution Unit and Fluidization Control
- Hose connection accessories

## 4. E-COAT Master M



- E-GUN C1
- E-FEED V2
- E-COAT Master
- E-COAT Multicolor Unit w/ Vibratory Box Holder and Suction Tube
- Hose connection accessories

### 1.6. Conformity Between Products

Electron E-COAT Master can be used with:

- E-GUN C1
- E-GUN C3
- E-FEED V2

Electron E-GUN C1 can be used with:


- E-COAT Master
- E-FEED V2
- FastCorona™ Manual

Electron E-GUN C3 can be used with:

- E-COAT Master
- E-COAT Pro
- E-FEED V2
- FastCorona™ Auto

## 2. Technical Data

### 2.1. Electrical Data

E-COAT Master Control Unit	
Nominal Input Voltage	100-240 VAC
Operating Frequency	50-60 Hz
Input Power	60 VA
Gun Nominal Output Voltage	Max. 20 Vp-p
Gun Nominal Output Current	Max. 1,5 A
Auxiliary Output Type	24 VDC/max. 10W, 100-240 VAC/max.100W
Purge Output Type	24 VDC, max. 10W
Protection Class	IP54
Max. Operating Surface Temp	85°C
	



## 2.2. Pneumatic Data

E-COAT Master Control Unit	
Compressed Air Connection	8 mm
Input Pressure	5,5-7,0 bar
Max. Water Vapor in Compressed Air	1,4 g/m <sup>3</sup>
Max. Oil Vapor Content in Compressed Air	0,12 mg/m <sup>3</sup>

## 2.3. Powder Paint Output References

E-COAT Master Control Unit	
Powder Paint Type	Epoxy / Polyester
Powder Hose Type	Double Carbon De charge Connection Antistatic Hose
Powder Hose Length	5 m
Powder Hose Diameter	11 mm
Powder Air Nozzle Diameter	1,5 mm

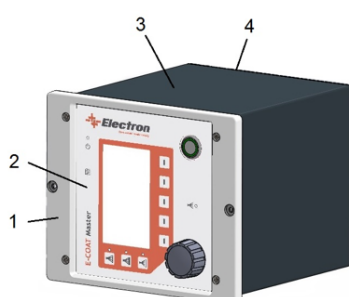
## 2.4. E-COAT Master with E-FEED V2 Output

E-COAT Master Control Unit			
Total Air (lt/min)			
	50	75	100
% Paint	Powder Output (gr/min)		
20	5	10	25
40	25	60	130
60	60	165	240
80	130	240	307
100	185	290	360

## 2.5. E-COAT Master Air Flow Rates

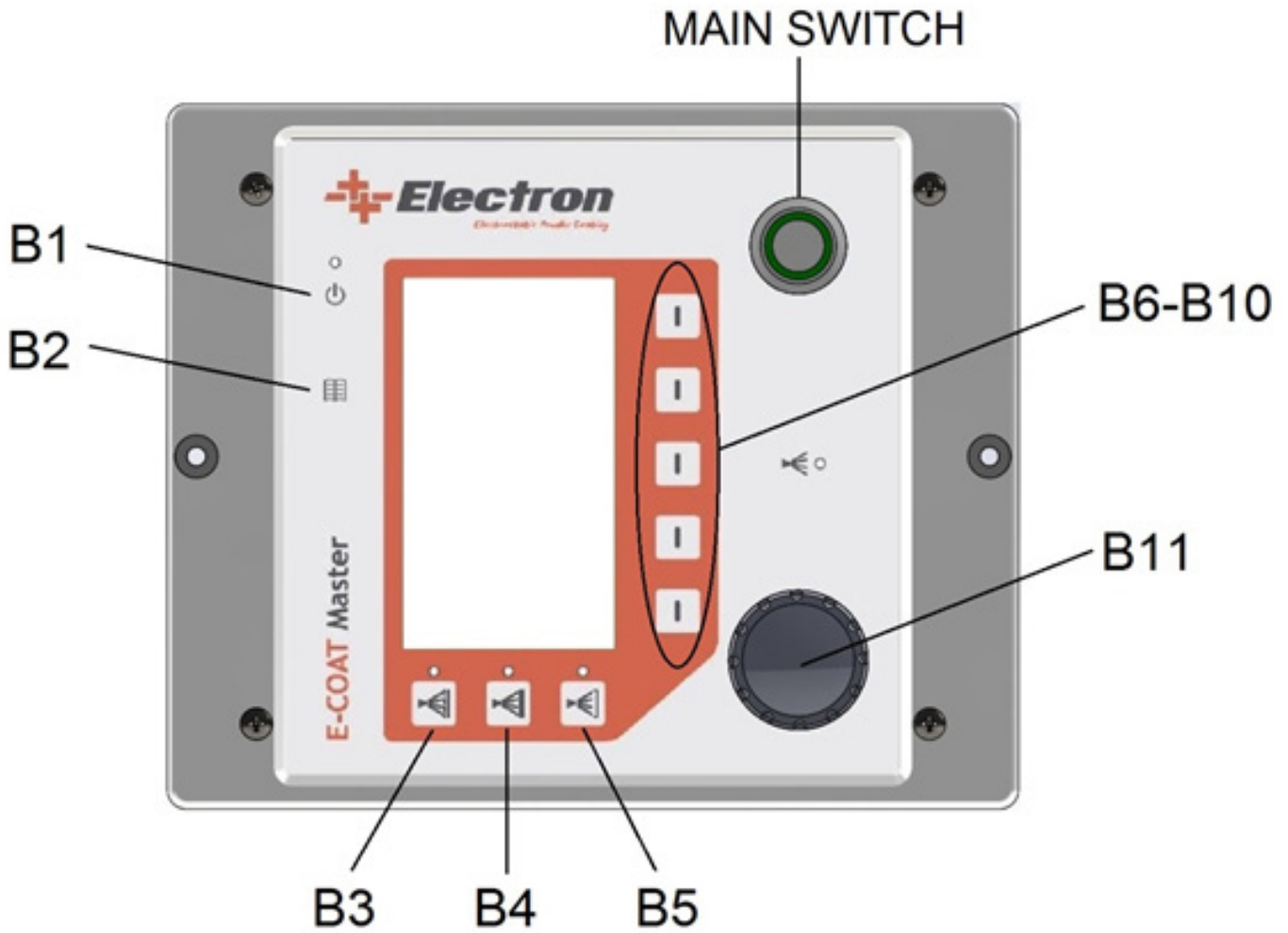
E-COAT Master Control Unit	
Nozzle Air	0-16 lt/min (2 lt/min Factory Set.)
Supplementary Air	10-75 lt/min
Conveying Air	10-100 lt/min
Total Air	20-175 lt/min

## 2.6. General View



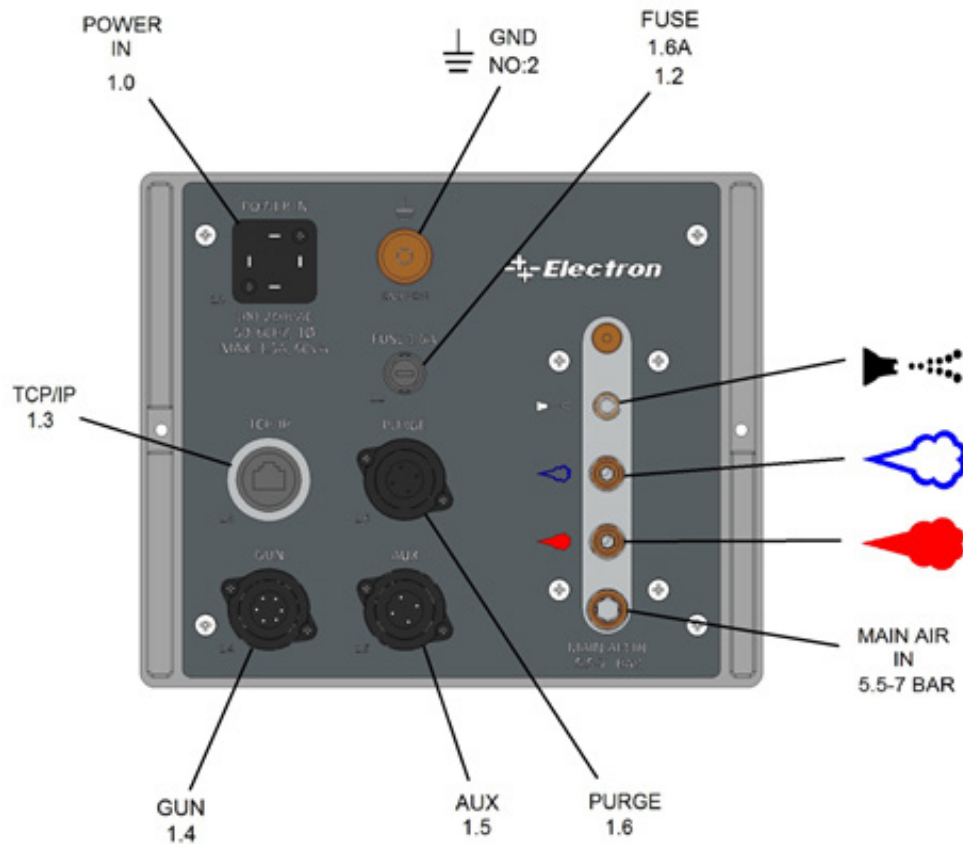
- 1) Front Panel
- 2) Display and Control Buttons
- 3) Casing
- 4) Back Panel and I/O

## 2.7. Front Panel and Input Buttons







Button	Definition
B1	Fluidization and Vibration Motor(Only Multicolor) Active/Passive Button
B2	Menu Button
B3	Automatic Program 1
B4	Automatic Program 2
B5	Automatic Program 3
B6-B10	Segment Buttons
Main Switch	Main Power Switch
B11	Rotary Adjustment Knob

## 2.8. Back Panel and Connections



Back Panel Connections

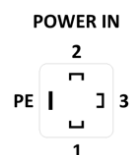
CONNECTION	FUNCTION
1.0 POWER IN	MAIN POWER CONNECTION (100-240VAC, 50-60Hz)
1.2 Fuse 1.6A	Glass Fuse Holder 1.6A
1.3 TCP/IP (Optional)	TCP/IP
1.4 GUN	Gun Cable Connection
1.5 AUX	Fluidization Unit/Multicolor Unit Connection
1.6 PURGE (Optional)	Purge Valve Connection (Supplied with optional Purge Module)
MAIN AIR IN 5.5-7 BAR	Main Pressured Air Connection (5,5-7,0 Bar, Ø8 Hose)
	Nozzle Air Connection (Black Ø6 Hose)
	Supplementary Air Connection (Blue Ø8 Hose)
	Powder Air Connection (Red Ø8 Hose)
	Earth Cable Connection

Back Panel Connection Table

**Warning:** AUX input lid should be closed if there is no connection.

### PIN Connection

- 1) "R", Phase (100-240 VAC)
- 2) "MP", Neutral
- 3) "T", Trigger (Phase Applied to Trigger-Only Automatic Mode)
- PE) "GND", Grounding



## 2.9. General Instructions

### Usage Types

#### a. Automated Recipe Working Mode

1. Coating on Straight Faced Materials
2. Coating on Coated Materials
3. Coating on Notched Surfaces



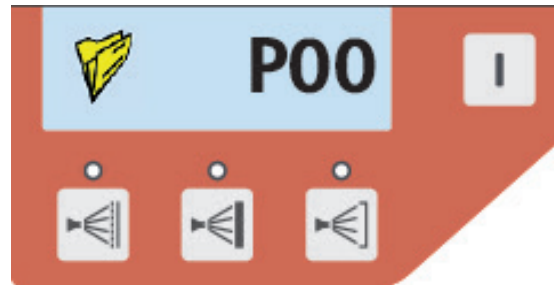
Predefined Recipe Buttons

Predefined Recipe Name	High Voltage (kV)	Output Current ( $\mu$ A)
Coating on Straight Faced Material	100	100
Coating on Coated Material	100	10
Coating on Notched Surfaces	100	22

Predefined Recipe Working Parameters

### b. User Defined Recipe Working Mode

In this working principle, the user can save their own working parameters and change them. There can be 4500 recipes starting from P01 to P50, three of which P01-02-03 are factory d recipes. These recipes are explained in this manual.



Recipe Segment

### c. Fast Purge Mode

Fast Purge mode uses the high pressured air to clean the Injector, Antistatic Coating Hose and E-GUN Coating Path. A “FastPurge” sign will appear on the main screen of the E-COAT Master when Fast Purge mode of the device is activated. E-COAT Master Device’s Fast Purge mode can be activated by two different ways.

- a. By pressing and holding the Page Button (B2 Button) for 3 seconds.
- b. By pressing and holding the “P” button on the manual E-GUN C1 gun for 3 seconds.



Fast Purge Mode Screen

Fast Purge mode’s working scenerio alters depending on the device and rinses through the hose and gun automatically If the E-COAT Master device is as “Auto”. On the other hand, the gun trigger on the E-GUN C1 works as a valve trigger during the Fast Purge mode if the E-COAT Master device is as a manual device (Hopper or Multicolor). The air comes out from the Purge Unit if the trigger is pressed and stop if the trigger is released. The E-COAT Master device exits from the Fast Purge mode if the trigger is not pressed for 3 seconds or the “P” button on the back side of the E-GUN C1 is pressed once during Fast Purge mode.

### d. Remote Control with E-GUN C1

The user can change the system parameters on E-COAT Master via using the E-GUN C1. The buttons which are marked “P”, “v” and “^” are explained below

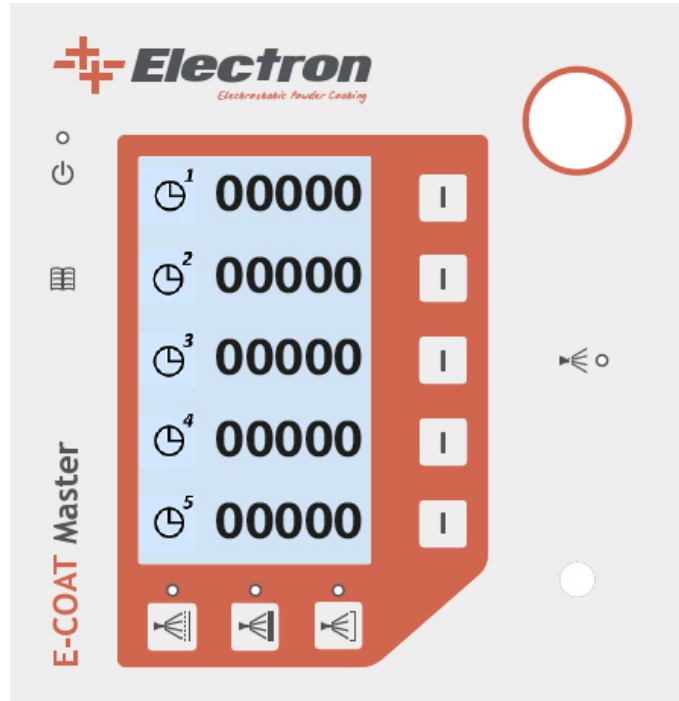
Button	Function
P	Recipe, Powder Ratio, Powder Air with consecutive presses - Fast Purge (via pressing 3 seconds)
v	Value decrease
^	Value increase

### e. Consumable Counters

E-COAT Master is designed with consumable counters so that the use would be always aware of the materials.


You can open the counter via pressing the B2 button for two times.

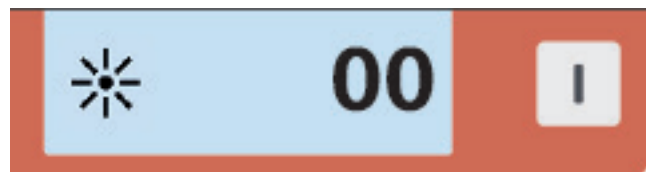
See the counters on the screen below.



The user can differentiate between consumables and adjust different consumables on the screen. The counters will warn the user when they reach to zero if they are not reset. A “!” sign will lit and blink on the bottom of the main page when a counter has reached to “0” and the counter is not reset by entering into the counters page for acknowledgement. The blinking “!” sign will disappear from the screen when user enters to the counters page to acknowledge the counter alarm. The unit of the counters are “Days”.

#### f. Screen Brightness Adjustment

E-COAT Master electrostatic powder paint control unit screen brightness can be adjusted by the user. The LCD screen allows the user to change the brightness from the segment button shown below in the second part of the Main Page. Reaching to the second part of the Main Page is from pressing the B2  button once.



Part-2 Screen Brightness Segment

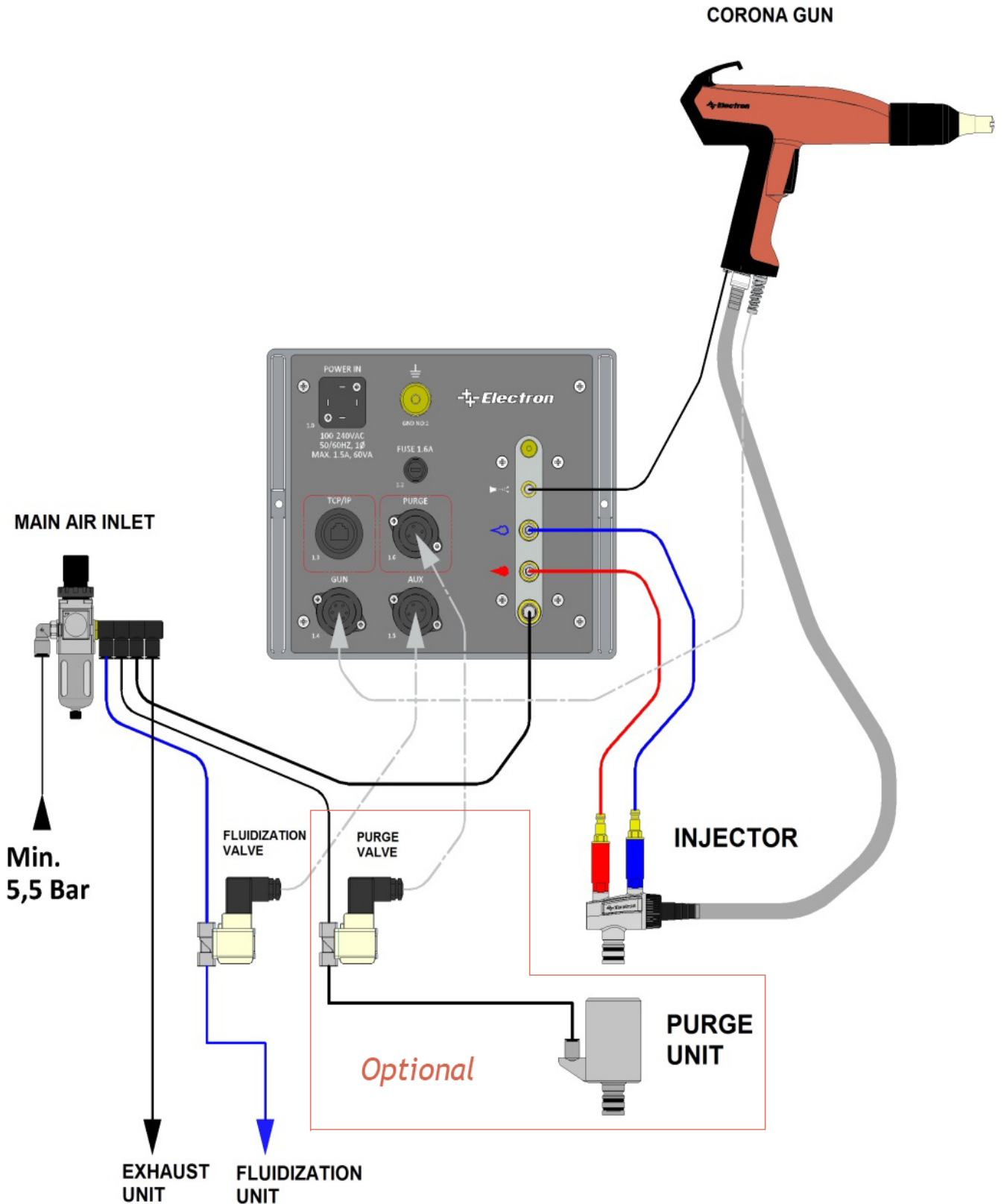
The screen brightness can be adjusted between the values 0 to 10, 0 showing the lowest brightness and 10 showing the highest.

*Info: E-COAT Master control unit is installed with standby mode. If the buttons are not used on the control unit or on the E-GUN, the control unit changes the brightness level to 0. Any input while in standby mode switches the control unit to the normal mode and the brightness becomes to the normal level*

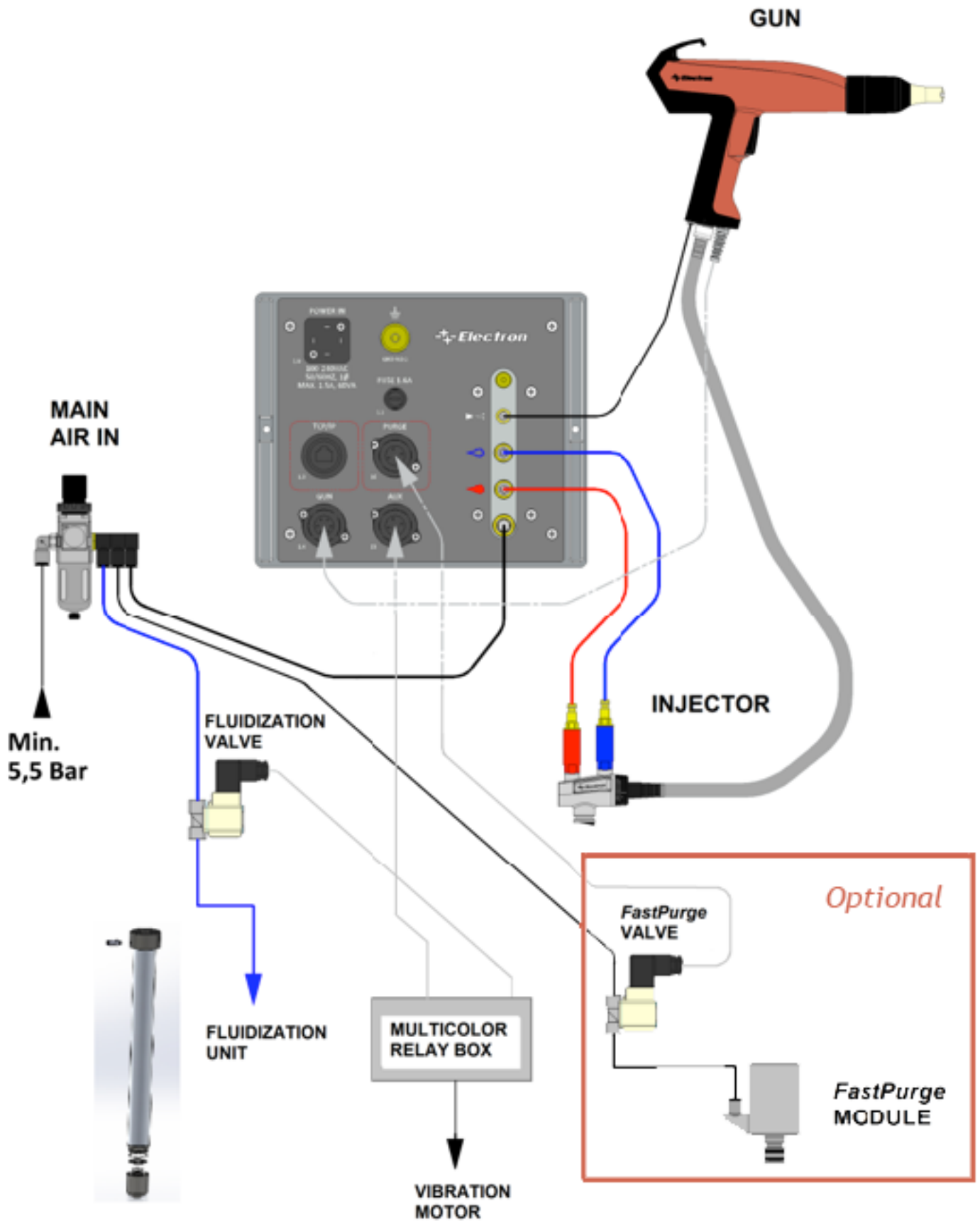
### 3. Start Up

#### 3.1. Installation

##### a. "Bare" and "H" type Device Kits Electro-Pneumactical Connections

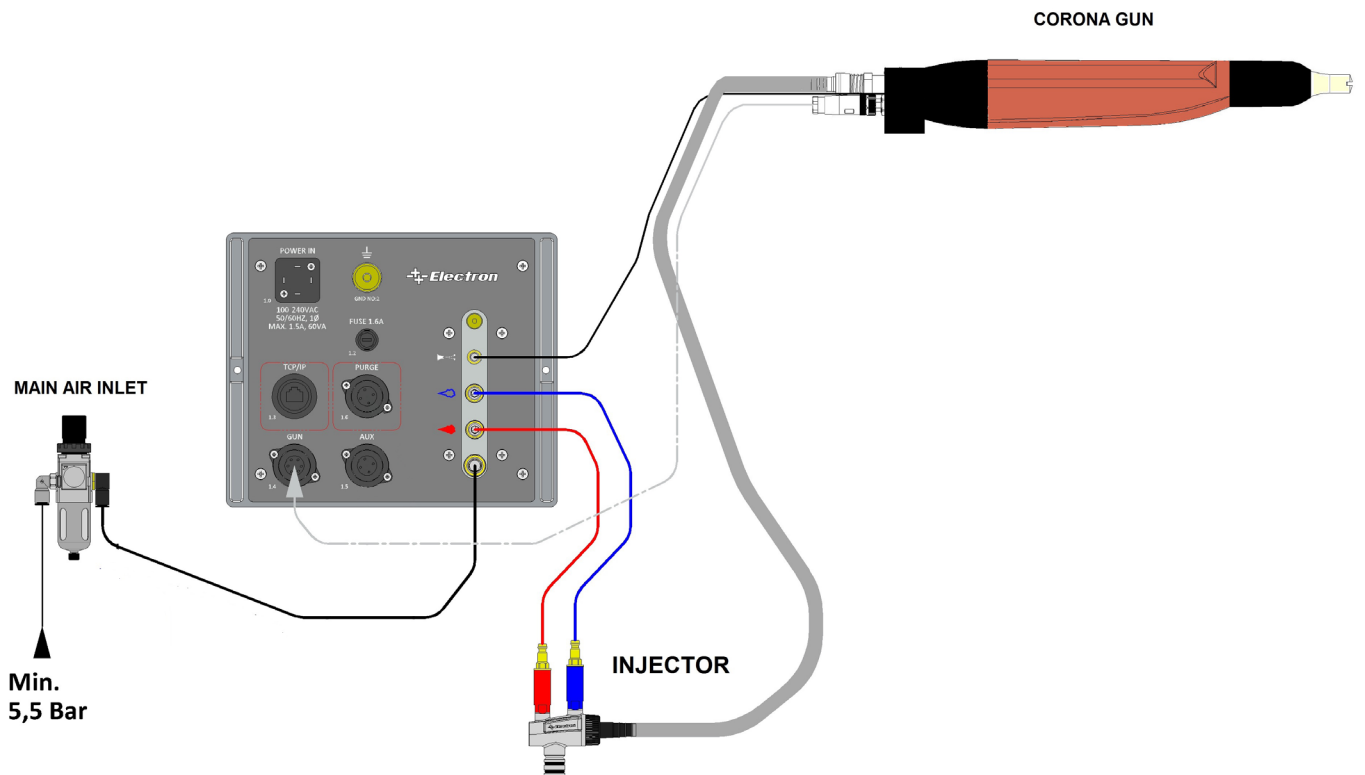


b. "M" type Device Kits Electro-Pneumtical Connections





c. "A" type Device Kits Electro-Pneumactical Connections



### 3.2. Start Up

**Info:** E-COAT Master Powder Coating Control unit always starts with the last used configuration preferences.

In the above “System Connections” all the electrical and pneumatic connections are shown. After correctly connecting the device, the user can press the “Main Switch” to start the control unit.

E-COAT Master should be calibrated according to the products that are going to be powder coated before the start up. Once you are in the “Main Page” Press the B1 ⏻ interface button for 5 seconds and the Setup Page will appear. The B1 button can be used to return back to the Main Page. B1 button also works as a “Save” button to save the changes in the SETUP PAGE.

**Info:** If the control unit is not used or a button is not pressed for 15 seconds time, the control unit automatically goes back to the “Main Page”.

The available calibrations for the “Calibration Pages” are stated in the below table

**Calibration Preferences**

Code	Code Info	Preferences	Factory Preset
C-1	Control Type Selection (MODE)	0 = Automatic 1 = Manual w/ Hopper 2 = Manual w/ Multicolor	1
C-2	Gun Type	0 = Corona 1 = Tribo	0
C-3	AUX output latency after trigger release (s)	0-100	10
C-4	Pneumatical Control Type	0 = Proportional 1 = Independent	0
C-5	Pneumatical Flow Units	0 = lt/m 1 = Nm3/h	1
C-6	Purge Valve Opt.	0 = Disabled 1 = Enabled	0
C-7	Gun Cable Length (m)	5-25	5
PCF1	Min. Powder Corr. Factor (lt/m)	0 - 50	5
PCF2	Powder Output Corr. Factor	0 - 100	100

**Info:** Correction Factors should be adjusted from the “Correction Factors Adjustment Table” below.

### 3.3. Operation

#### a. Creating and Saving a User Recipe:

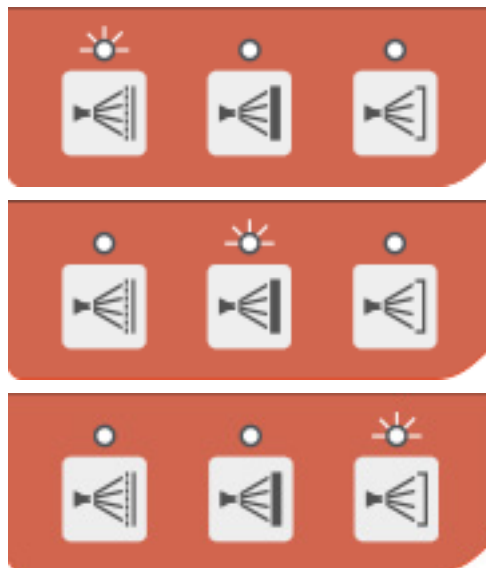


Recipe Segment

After adjusting the values from the control unit, the user can save the recipe for future usage. To save the current recipe, press and hold the segment button next to the recipe segment button for three seconds. You will see the recipe number every 500ms. The user then chooses the recipe number for the current recipe. Turn the knob until the desired recipe number is selected. Once the number is selected the recipe can be saved.

To save the recipe, press and hold the same segment button for three seconds. This time, the screen will start every 200ms for 2 seconds and the recipe will be saved successfully. If instead of pressing and holding for three seconds, the user presses the

#### b. Predefined Recipe Usage



Predefined Recipe Recall Buttons

Pressing the recipe on the left side calls the surface coating application. After pressing, the screen automatically brings the P01 recipe and the LED indicator will light up. Similarly, if the user presses the button on the middle, the control unit brings up the P02 recipe which is the “Coating on Coated Surface”, and if the user presses the right button the “Coating on Notched Surface”. Recipe will be recalled and the proper LED will light up.

Recipe Working Parameters are located below

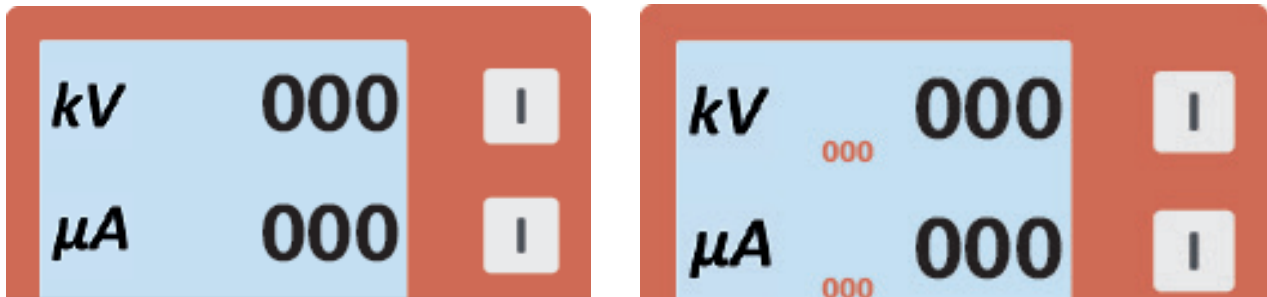
P Recipe Name	High Voltage (kV)	Current (μA)
Flat Surface Application	100	100
Coating on Coating Application	100	10
Notched Surface Application	100	22

**High Voltage Preferences:**

There are two different methods in E-COAT Master to change the High Voltage and Gun Output Current. These are as follows:

1. Using the front panel interface of E-COAT Master
2. Using the E-GUN C1 Manual type back side interface.

As it is shown in the below the values can be changed on the two segment buttons. Once the value segment is selected, the user can adjust the values via rotating the knob on the device



High Voltage and Current Adjustment Segments

The adjustments set the upper limits of both the High Voltage and Current Values. The values can change while gun operation, according to the coating application, and the type of workpiece. These values will also change according to the length between the workpiece and the tip of the gun. Once the gun is triggered the values can be read on the same segment. The “Orange” coloured parts show the adjusted values on the selected recipe and the “Black” coloured numbers show the real time usage values.

**Info:** The upper limit of the High Voltage is 100kV and the current output limit is 100μA.

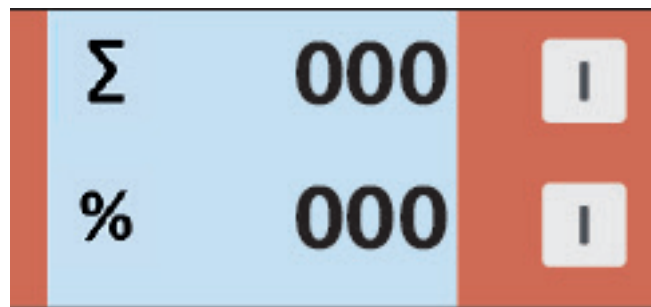
**Air and Powder Adjustments:**

There are two different pneumatic control types of E-COAT Master powder coating device.



These are;

1. Control via the Total Air and Powder Ratio
2. Control via Independent Air Flow

Picking the option, the user should adjust the value in regards to the air/powder ratio. The total output air per unit time should be calculated and the total powder per unit time should be adjusted accordingly.




Main Page Air/Powder Ratio Control Segments

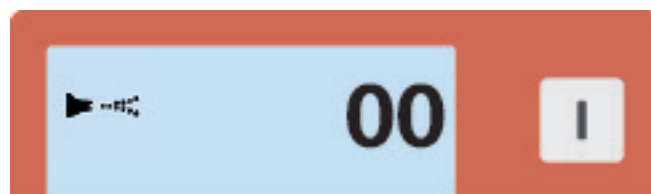
Picking the second option which is the Controlling via Air Flow, the user will see the below icons on the segments, Powder Transfer Air  and Assistant Air  Flows will be set independently.

**Suggestion:** For the best surface finishing in automatic systems, it is best to adjust the air flow with Ratio Control.

**Info:** Air Flows can be selected from C1-4 parameter and also can be seen as  $Nm^3/h$  or  $lt/min$ .

**Info:** Air Flows Control mode (as explained on installation) can be adjusted with C1-3.



The E-COAT Corona type powder gun includes High Voltage output the tip of the nozzle, powder output nozzle and nozzle air. This nozzle air can be adjusted. It should be noted that every other nozzle types' optimal adjustment values are different. Nozzle air adjustment can be made from the second page of the interface from the  segment. Like the other air adjustments the user can also see the values in  $Nm^3/h$  or  $lt/min$ .



Nozzle Air Adjustment Segment


**Suggestion:** As Factory Preset, for the Flat type nozzle groups the Nozzle Air Flow is set to  $0,2 Nm^3/S$ , for the Circle type and Deflector type nozzle groups it is set to  $0,5 Nm^3/S$ .

#### Correctional Factor Adjustment:

On the E-COAT Master  screen, PCF1 and PCF2 includes two different powder ratio correction factors. One of the correction factors is to adjust the minimum powder level and the other one is to synchronize the system if there is more than one control unit available for use. The  parameter adjustment is  $4.0 Nm^3/S$  of total air and the powder ratio is %0 while there is 10gr of powder output. This ensures a better curve on the powder ratio control graphic and removes the "dull" zone. The second parameter is needed because of the multiple gun usage and the different sizes of the gun hoses in the automatic systems. PCF2

The user should follow the procedure below when adjusting the correction factors.


The user should follow the procedure below when adjusting the correction factors.

1. The "FLOW CONTROL" parameter must be set to "Proportional". Press and hold the B1  interface button on the Main Page for 5 consecutive seconds and reach the SETUP PAGE. Then, press B1 button again to get back to the Main Page after making related changes.
2. On the Main page, the Total Air Flow must be adjusted to  $4.0 Nm^3/h$  or  $67 lt/min$ . The "Powder %" must be set to %0.
3. Put a filter type-powder bag at the tip of the gun.
4. Press the trigger or trigger the device externally (if it is an automatic type) for a whole 60 seconds and stop triggering.
5. Weigh the net weight of the powder that is dissipated by the gun in to the powder bag at the end of 60 second.
6. The targeted net weight of the powder inside the bag must be 10-15 grams.
7. Decrease the PCF1 value if the powder is too much. Increase the PCF1 value if the powder amount is too low.
8. Optionally, after adjusting the Total Air to  $4.0$  and Powder Amount to %0, the user can just trigger the device and can easily do that PCF1 adjustment in real time without any powder bag just by adjusting the PCF1 value while watching the powder amount that is being dissipated at the tip of the gun. The correct amount of paint can be barely seen as a little fog at the tip of the gun. DO NOT FORGET TO PRESS B1 BUTTON ONCE TO RETURN BACK TO MAIN PAGE AFTER MAKING ANY ADJUSTMENTS IN THE SETUP PAGES. B1 ALSO WORKS AS A SAVE BUTTON!

### PCF-1 Correctional Factor Reference Table

Gun	Maximum Powder Output Correction Factor PCF1			
	Before Correction		After Correction	
1	PCF1 = 5 lt/min	22 gr.	PCF1 = 2 lt/min	13 gr.
2	PCF1 = 5 lt/min	14 gr.	PCF1 = 5 lt/min	14 gr.
3	PCF1 = 5 lt/min	3 gr.	PCF1 = 15 lt/min	12 gr.

After adjusting the PCF1 Minimum Powder Output Correction Factor, the user can adjust the PCF2 Powder Output Equalization Factor (%) procedure. This procedure is as follows:

1. On the Main Page, the Total Air Flow should be adjusted to 4,0Nm3/h or 67lt/min.
2. Also the Powder Ration should be adjusted to %80.
3. While on Main Page, P  age.
4. Put the powder bag at the tip of the gun.

**Info:** Before putting the bag on, measure the weight of the bag to make a better calculation. Press the trigger for a whole 60 seconds and stop the trigger.

5. Press the trigger for a whole 60 seconds and stop the trigger.
6. Release the bag from the tip of the gun and weight it.
7. After measuring all the automatic guns’ output, proceed to the next step.
8. Make the below calculation for all the automatic guns and get the necessary C-9 parameter.

$$PCF2_{gun} = \frac{\text{Minimum Powder Output (g/mn)}}{\text{Measured Powder Output}_{gun} \text{ (g/mn)}} \times 100$$

9. Input the calculated parameter on the control unit.
- After the input procedure, there will be a similar table like below

### PCF-2 Correctional Factor Reference Table

Gun	Minimum Powder Output Correction Factor PCF-2			
	Before Correction		After Correction	
1	PCF2 = %100	220 gr.	PCF2 = %100	220 gr.
2	PCF2 = %100	255 gr.	PCF2 = %86	220 gr.
3	PCF2 = %100	275 gr.	PCF2 = %80	220 gr.

### Double-Triggering and Sub-Recipe System:

The E-COAT Master controller unit gives the opportunity to jump between two recipes to its users. The user can switch between any two recipes in a blink of an eye without any need to reach the main controller interface during operation. A recipe can be switched to its sub-recipe such as a “complex parts” recipe when needed. Also, similarly, the sub-recipe can be switched back to its main one just by double-triggering again.

The sub-recipe of each main recipe can be set in the second segment on the second page of the controller. The controller jumps to the sub-recipe desired when “double-triggered” on the manual gun during operation after setting the sub-recipe of any main recipe and saving it.

The “—” symbol defines that the “double-triggering” option is de-activated so that the recipe cannot be changed into any other one even though the manual gun trigger is double-pressed. The recipe should be saved again into a desired number after any change is made to the double-triggering recipe number on the second page. The main reason for re-save is same as other parameter changes where the user goes out of any saved recipe by changing a parameter which is already saved in the main recipe just like other parameters in the main screen.

The main recipe, where the user reached from to the sub-recipe, can be called back just by double-triggering again after finishing working with the sub-recipe.



### TCP/IP Communication and Master/Slave Option:


E-COAT Master controller unit has an optional connection to an automation system or to any other E-COAT Master device. In this case, the parameters of the controller can be controlled by any TCP/IP based automation system or by any other E-COAT Master device which is set as a “Master” in its network settings. Similarly, The E-COAT Master Device can be set as a “Master” to be able to control other E-COAT Master devices’ parameters where the other devices are set as “Slave” in their network settings. The settings of the network parameters can be reached in the second page of the “Configuration Parameters”.

NOTE: The E-COAT Master device does not include the Network Connector on itself as default. The “E-COAT ETHERNET SOCKET MODULE WITH PATCH CABLE” with order code “B07140513” should be ordered as an optional part for TCP/IP Network communication if needed.








Code Info	Preferences	Factory Preset
IP Address	IP Address of the device itself.	192.168.0.110
Subnet Mask	Subnet Mask of the Network which the device is connected.	192.168.0.1
Gateway	Gateway of the Network which the device is connected	255.255.255.0
Master/Slave	<p>Master = The device is set as a commander in a network where the operational parameters of this device is sent to other devices.</p> <p>Slave = The device is set as a listener in a network where the operational parameters of the device is copied from a desired master device.</p>	Slave
Master IP	Valid only when the device is set as a “Slave” in the Network. Defines Master Device’s IP Address in the network. The operational parameters of the device is copied from the Master device of which the IP parameters is pointed in this setting.	192.168.0.100
Network	<p>OFF = Network Communication Disabled</p> <p>ON = Network Communication Enabled</p>	OFF

### 3.4. Trigger


When triggered the Electrostatic Powder Application Control unit will start applying static electricity to the sprayed powder paint.

- Using the Gun Trigger
- If the POWER IN socket on the control unit is fed from the number three (3) meaning the terminal control unit’s POWER IN control unit is active, this led  will be lit. If the number three (3) cable socket is fed the powder paint will be blown it will be statically loaded.

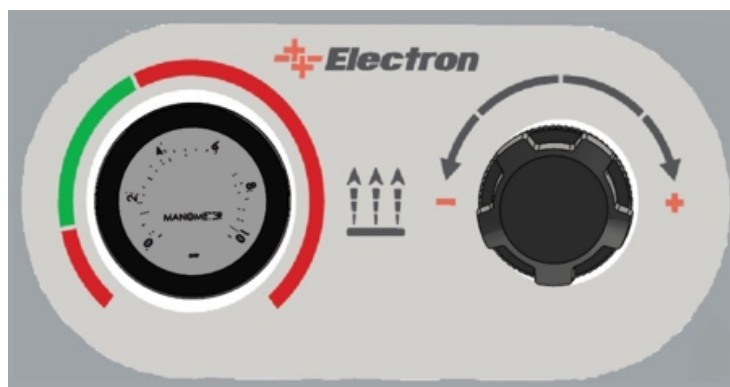
**Warning:** The 1.0 coded POWER IN socket’s inner connections and the fuse connections at the other end should be done by the ELECTRON technicians at the installation. Electron does not accept any responsibility for the possible damage if the equipment is altered or used before installation.

C1 Parameter	 B1 Button Status	System Operation
0 = Automatic	 Enabled	The device is ready to be triggered. The device will be triggered when mains phase voltage is applied to pin #3 of POWER IN socket.
	 Disabled	The device is disabled to be triggered. The device will not be triggered even if phase voltage is applied to pin #3 of POWER IN socket.
1 = Manual (w/or w/out hopper)	 Enabled	AUX socket is powered continuously.
	 Disabled	AUX socket is disabled.
2 = Manual (Multicolor/Stirrer)	 Enabled	AUX socket is powered depending on triggering. AUX is kept powered during triggering and turns off after the time
	 Disabled	AUX socket is disabled.



B1 Button Function Table

Pressing the gun trigger on the manual gun or using the electrical trigger on the automatic gun, if the high voltage and the air/powder ratio adjustments are done, the guns will be spraying statically loaded powder paint. The user can observe this occurrence from the green lit led (D-T marked)  in front of the control unit.

### 3.5. Fluidization



Fluidization Control Panel

A “Fluidization Control Panel” is placed on the mobile device carrier for the operator to easily adjust the pressure for H type devices with hopper or M type devices with box suction tubes. Turning the regulator knob counter-clockwise will decrease or clockwise will increase the applied pressure to the nozzle in the system. The green and red areas are signed to indicate the approximate operating pressure values for the air. The will start in parallel with the vibration motor when the device is triggered if the  button is enabled for “M” type multicolor sets. The will be activated all the time when the device is energized and the  button is enabled for “H” type hopper sets.



## 4. Cleaning and Maintenance

### 4.1. Cleaning

#### 4.1.1. Gun Body Cleaning

**Daily:**

- Clean the body of the gun with pressurized air and a clean towel.
- Remove the nozzle torque nut.
- Remove the gun nozzle and the electrode and clean the gun with pressurized air.

**Weekly:**

- Remove the powder paint hose.
- Clean the powder paint input of the gun with pressurized air.
- Clean the powder paint hose starting from the injector.

#### 4.1.2. Nozzle Cleaning

**Every other shift or at the end of a working day:**

- Remove the nozzle torque nut.
- Remove the gun nozzle and clean both the electrode and the nozzle.
- Clean all the powder thoroughly. Never try to scratch the paint with a strong material.

**Weekly:**

- 4. Check the nozzle group for scratches. Change the nozzle group using the spare parts list if needed.

#### 4.1.3. Maintenance

E-GUN C1 type manual and C3 type automatic coating guns is designed to be maintained with minimum effort.

- Clean the powder gun body with a clean towel.
- Make an eye check on the gun cable and input hoses.
- Change the powder and pneumatic hoses if needed.

## Part Change

The user can only change the consumables of the gun and some of the E-GUN coating gun parts.

**Note:** Operations like Changing the Cascade, Trigger mechanism or Gun Cable can only be done by an ELECTRON® approved personnel.

## 5. Troubleshooting

Troubleshoot Code	Explanation	Suggestions
kV and $\mu$ A segments fully blinking "0"	Feedback Signal Failure	<ul style="list-style-type: none"> <li>• Check the gun cables for a possible tearing</li> <li>• Check the connection between the gun Cascade and the Socket Group inside the gun.</li> <li>• Check Cascade for Multifunction.</li> </ul>

Error Codes

The failures which are mentioned above can be observed from the "kV" titled segment in the front panel of the device. The fault

The other faults in the user interface are explained below.

Failure	Possible Failure Reason	Solution
Powder Paint is being blown from the gun but the paint doesn't hold on the material. (No High Voltage Output)	<ol style="list-style-type: none"> <li>1. The material is not earthed</li> <li>2. The kV parameter is set to 0</li> <li>3. The signal from the gun does not reach to the Cascade.</li> </ol>	<ol style="list-style-type: none"> <li>1. Earth the material or improve the grounding.</li> <li>2. Set the kV parameter above 0</li> <li>3. Check the connection between the gun Cascade and the Socket Group for a possible short circuit inside the gun.</li> </ol>
The gun trigger is working and the High Voltage is working but there is no powder output.	<ol style="list-style-type: none"> <li>1. Blockage in the powder route</li> <li>2. Tearing or disconnection between the injector and the control unit.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove the blockage in the powder route.</li> <li>2. Change the Air or Powder Ratio other than 0 on the control unit.</li> <li>3. R connection.</li> </ol>
There isn't any output High Voltage or Powder Output.	<ol style="list-style-type: none"> <li>1. Gun cable is disconnected.</li> <li>2. Gun cable is damaged</li> <li>3. Short Circuit or damage in the Gun Trigger grouping</li> </ol>	<ol style="list-style-type: none"> <li>1. Plug the cable.</li> <li>2. Check for the damage or change the cable</li> <li>3. Check the grouping for short circuit or damage and change the trigger group if needed.</li> </ol>
The interface buttons are not working as intended.	<ol style="list-style-type: none"> <li>1. The Control Unit front panel membrane has a short circuit or damaged.</li> <li>2. The Control Unit is not correctly</li> </ol>	<ol style="list-style-type: none"> <li>1. Change the keypad of the membrane.</li> <li>2. if needed.</li> </ol>
The rotary Knob is not changing any values on the screen.	<ol style="list-style-type: none"> <li>1. The segment is not chosen.</li> <li>2. The Knob is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Please select the segment that you want to change.</li> <li>2. Change the Rotary Knob.</li> </ol>

Troubleshoot Code	Explanation	Suggestions
There isn't any high voltage and the signs.	<ol style="list-style-type: none"> <li>1. Gun cable is not connected.</li> <li>2. The gun cable is connected but not</li> <li>3. Gun cable is damaged.</li> <li>4. Cascade is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect the gun hose.</li> <li>2. Fix the cable to the socket.</li> <li>3. Consult an ELECTRON expert.</li> </ol>
Powder Paint is being blown from the gun but the paint doesn't hold on the material (No High Voltage Output)	<ol style="list-style-type: none"> <li>1. The material is not earthed</li> <li>2. the kV or <math>\mu</math>A parameter is set to 0</li> <li>3. The signal from the gun does not reach to the Cascade.</li> </ol>	<ol style="list-style-type: none"> <li>1. Earth the material or improve the grounding.</li> <li>2. Set the kV or <math>\mu</math>A parameter above 0.</li> <li>3. Consult an ELECTRON expert.</li> </ol>
Powder Paint is being blown from the gun but the paint doesn't hold on the material (No High Voltage Output)	<ol style="list-style-type: none"> <li>1. Blockage in the powder route</li> <li>2. The Air or Powder Ratio segment is set to 0</li> <li>3. Tearing or disconnection between the injector and the control unit.</li> <li>4. If the preferences are adjusted in a well manner, the proportional valve inside the gun might be damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Blockage in the powder route</li> <li>2. The Air or Powder Ratio segment is set to 0</li> <li>3. Tearing or disconnection between the injector and the control unit.</li> <li>4. Consult and ELECTRON expert</li> </ol>
Pressing the trigger doesn't start the control unit (The LED in front of the control unit is not lit)	<ol style="list-style-type: none"> <li>1. Gun trigger is damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Consult and ELECTRON expert</li> </ol>
Parameters at the installation are con- well.	<ol style="list-style-type: none"> <li>1. T cycle is ended.</li> <li>2. Nozzle life cycle is ended.</li> <li>3. Pneumatic hoses are damaged/broken or plugged.</li> <li>4. The air channels are plugged.</li> <li>5. Injector jet's life cycle is ended</li> </ol>	<ol style="list-style-type: none"> <li>1. Change the T</li> <li>2. Change the nozzle</li> <li>3. Fix the pneumatic hoses or change them if needed.</li> <li>4. Change any necessary parts.</li> <li>5. Change the injector jet.</li> </ol>

## 6. Parts and Accessories

1



2



3

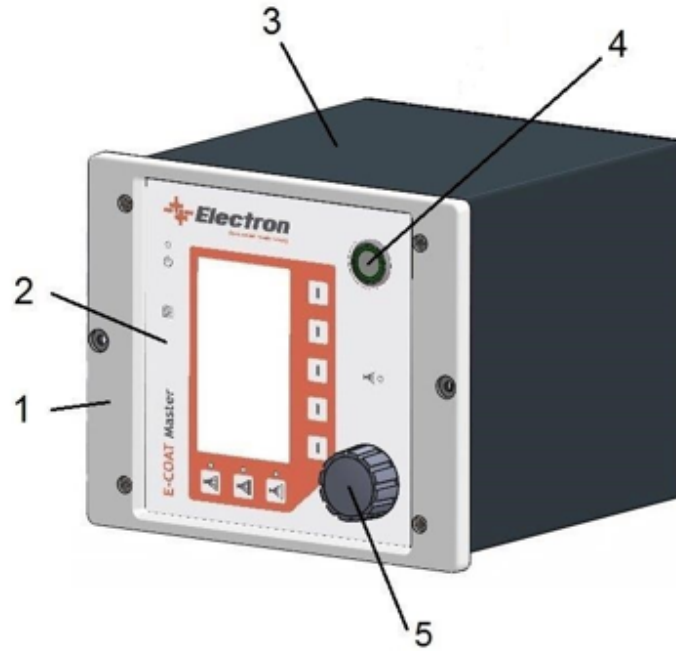


4



Product #	Product Name	Order Code
1	E-COAT Master Automatic Bare Kit	A06ECA01A
2	E-COAT Master Manual Bare Kit	A06ECM01B
3	E-COAT Master H	A06ECM01H
4	E-COAT Master M	A06ECM01M

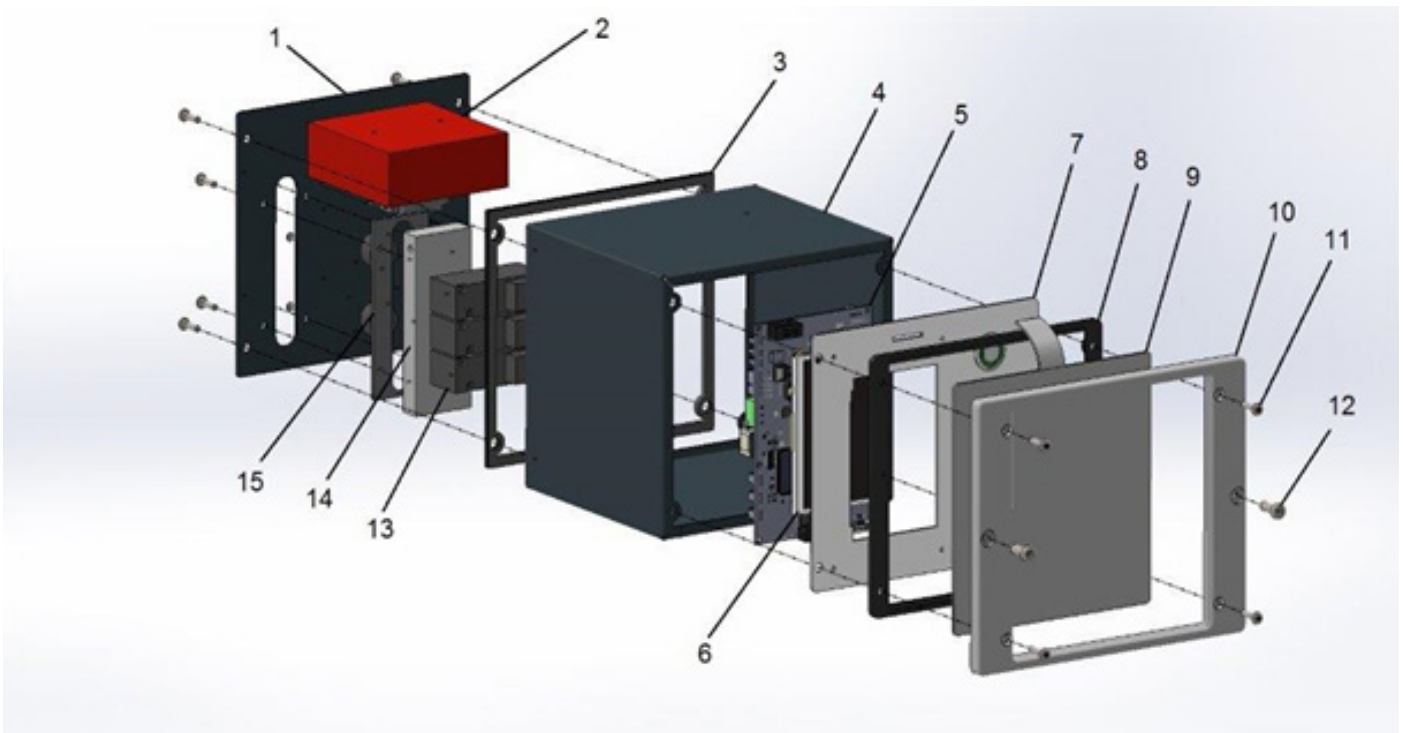
Control Unit Type	Order Code
E-COAT MASTER CONTROL UNIT	B07ECMU01



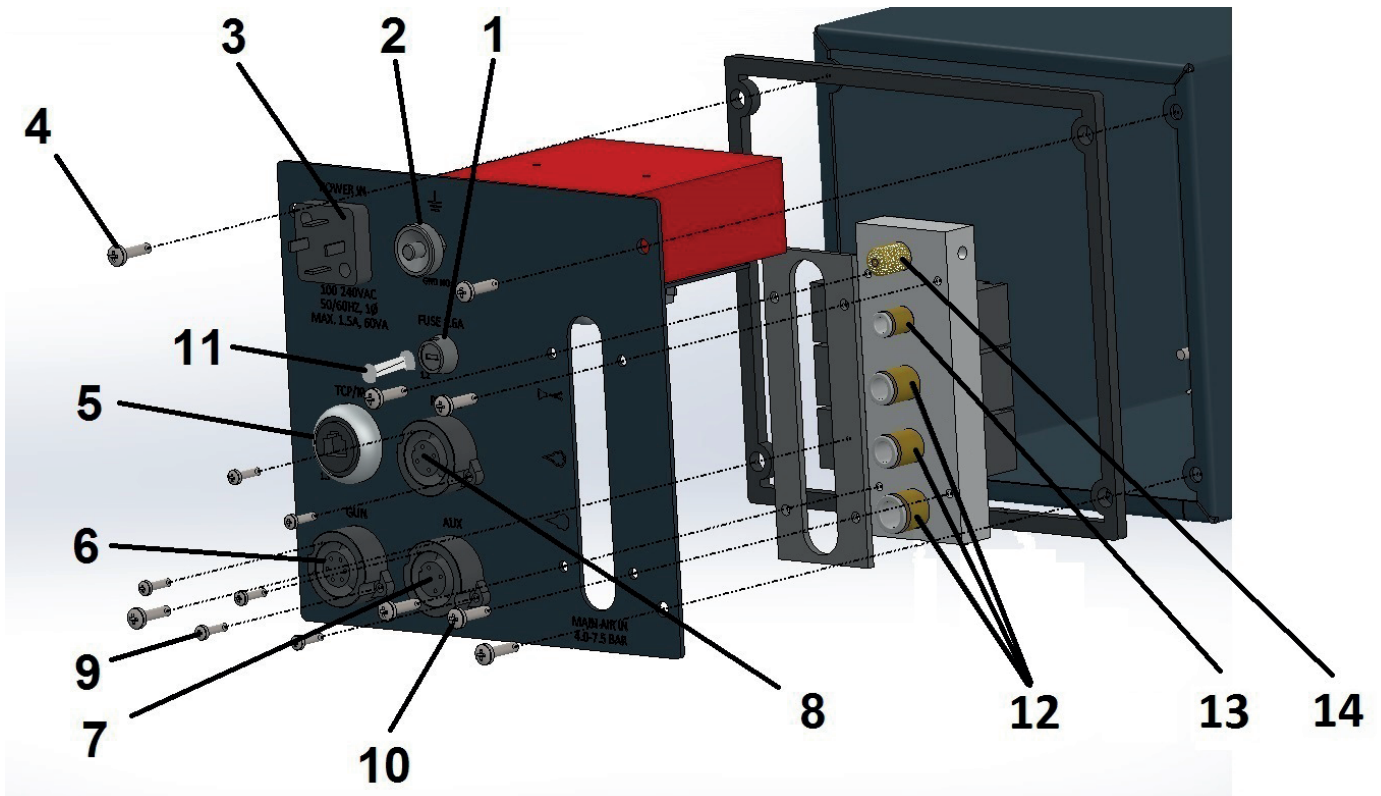
Part No	Part Name	Order Code	Qty
1	E-COAT CONTROL UNIT FRAME	ENEM02001	1
2	E-COAT MASTER FRONT MEMBRANE	ETKT04008	1
3	E-COAT CONTROL UNIT CASE	B07ECMP20	1
4	Ø22 STAINLESS POWER LED	ELBS01001	1
5	INCREMENTAL ENCODER	B07IENC01	1



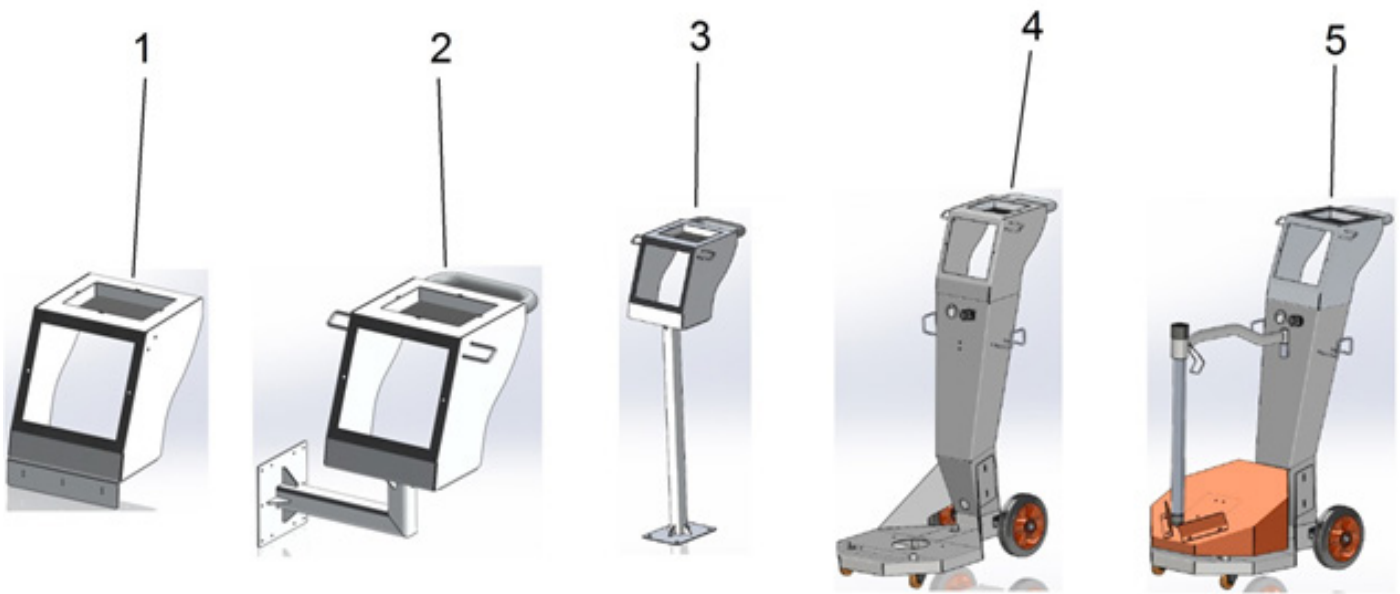
Order Code	Part Name	Wearing Part
B07POWER01	E-COAT MANUAL DEVICES POWER CABLE (3m)	*
B07POWER02	E-COAT AUTOMATIC DEVICES POWER CABLE (4 m)	*
B07140513	E-COAT ETHERNET SOCKET MODULE WITH PATCH CABLE	N/A



Part No	Part Name	Order Code	Qty
1	E-COAT MASTER BACK SHEET METAL	B07EC5004	1
2	RS-50-24 24 V DC SMPS	ELON10001	1
3	E-COAT FRONT/BACK SEALING	IZCS01004	1
4	E-COAT CONTROL UNIT CASE	B07ECMP20	1
5	E-COAT MASTER MAINBOARD	ELON09001	1
6	E-COAT MASTER GRAPHIC CARD	ELON09002	1
7	E-COAT MASTER FRONT ALUMINUM SHEET	B07EC5003	1
8	E-COAT FRONT/BACK SEALING	IZCS01004	1
9	E-COAT MASTER FRONT MEMBRANE	ETKT04008	1
10	E-COAT CONTROL UNIT FRAME	ENEM02001	1
11	M4X15 YSB SCREW	BECV01009	4
12	M6X16 E-COAT CONTROL UNIT FRAME NUT	BECV03029	2
13	PROPORTIONAL VALVE	PNPE04013	3
14	E-COAT PNEUMATIC VALVE PLATE	TRTM04040	1
15	VALVE SEALING EPDM 3X45X119 MM	IZCS01003	1



Part No	Part Name	Order Code	Qty
1	SHURTER IP68 FUSE	ELDE06006	1
2	GROUNDING NUT (M5X20)	TRTM05017	1
3	GSA 3000 A TYPE MALE VALVE SOCKET	ELKS10004	1
4	M4X15 YSB SCREW	BECV01009	8
5	RJ 45 ETHERNET PANEL	ELKS09002	1
6	RD24 7 PIN CONNECTOR	ELKS03003	1
7	RD24 4 PIN FEMALE CONNECTOR	ELKS03001	1
8	RD24 4 PIN MALE CONNECTOR	ELKS03006	1
9	M3X10 YSB	BECV01002	6
10	M4X10 YSB	BECV01007	4
11	5X20A 1,5A GLASS FUSE	ELDE06002	1
12	PIPE STRAIGHT 1/8"-Ø8 PNEUMATIC MALE	PNRD01005	3
13	PIPE STRAIGHT 1/8"-Ø6 PNEUMATIC MALE	PNRD01001	1
14	SILENCER SINTER	PNDP01001	1

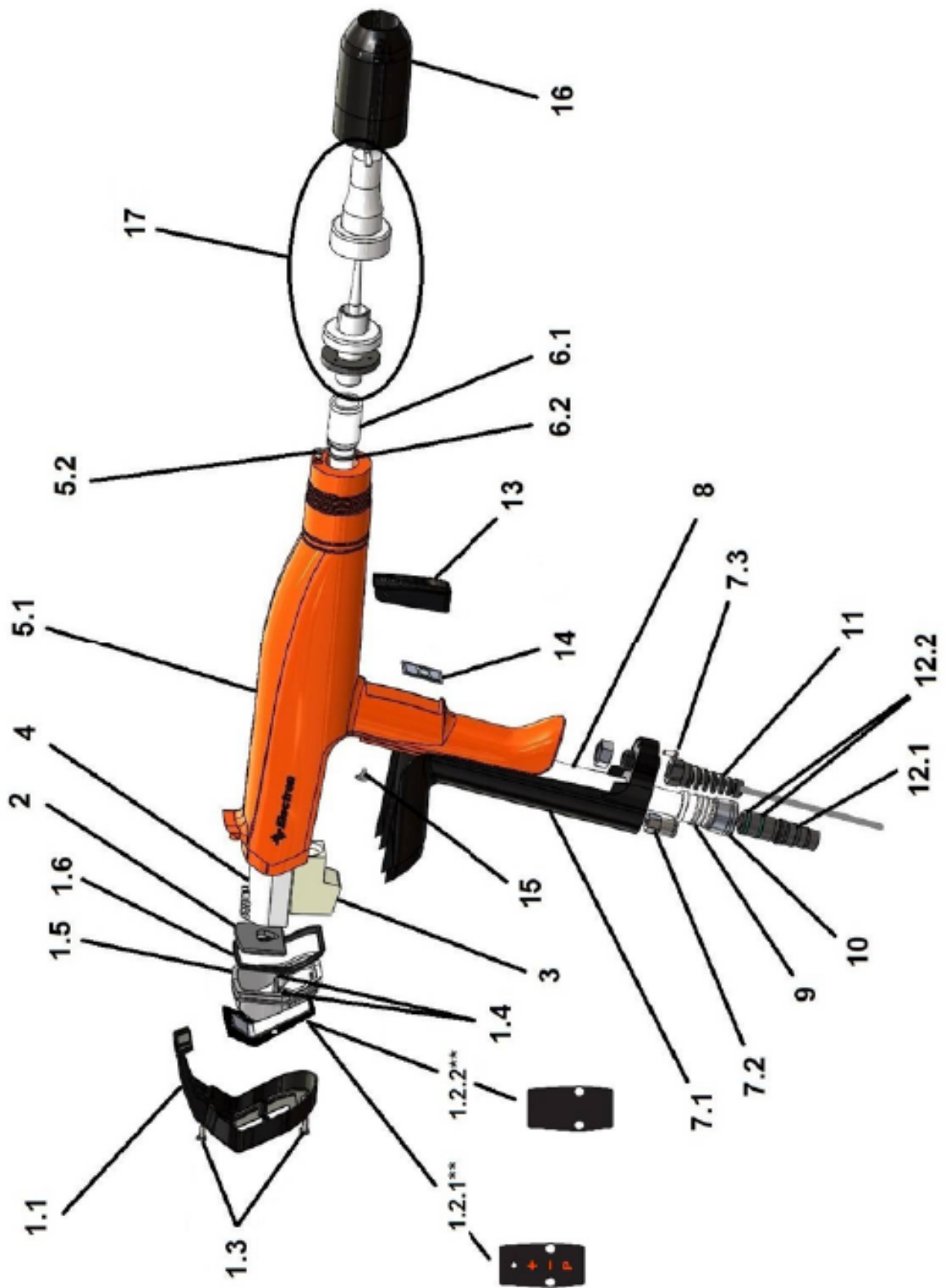


ACCESSORY TYPE	ORDER CODE	PART #
E-COAT Platform Mounting Kit	B07ECT004	1
E-COAT Wall Mounting Kit	B07ECT003	2
E-COAT Single Stand Kit	B07ECT005	3
E-COAT Mobile Stand Kit	B07ECT001	4
E-COAT MultiColor Kit	B07ECT002	5



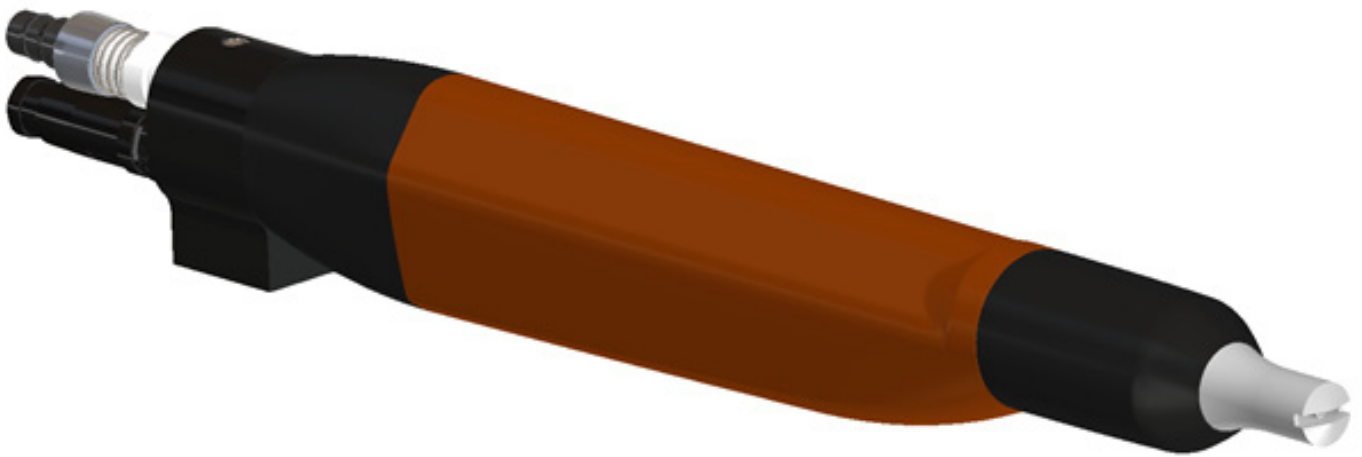
Product #	ORDER CODE	PART NAME	WEARING PART
1	B07EGC100	E-GUN C1 MANUAL POWDER COATING GUN	N/A



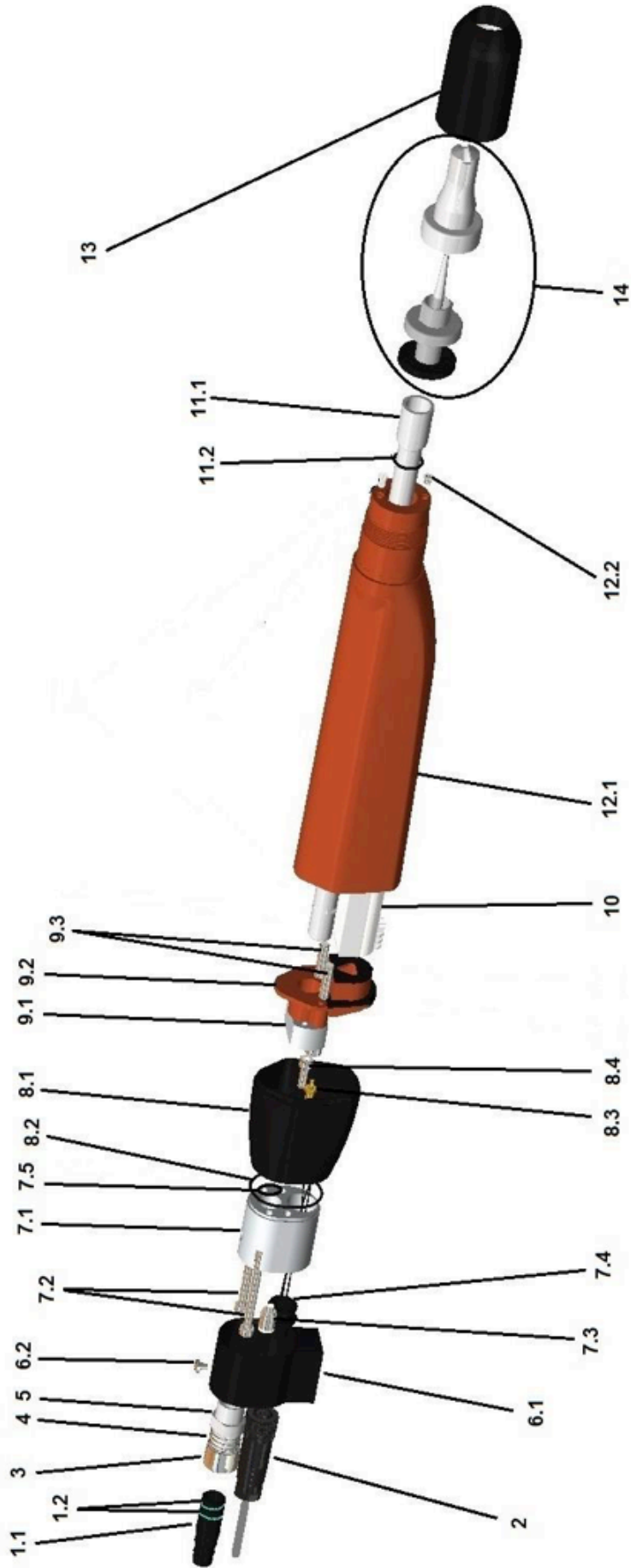


Part #	Order Code	Part Name	Wearing Part
1	B07BC0002	E-GUN C1 BACK COVER ASSEMBLY (COMPLETE)	N/A
1.1	ENEM01035	E-GUN C1/C2 BACK COVER OUTER LID (CONDUCTIVE)	N/A
1.2.1**	B07LG5005	E-GUN MANUAL GUN BACK LID KEYPAD AND KEY COVER	N/A
1.2.2**	ETKT03028	E-GUN BACK LID KEYLESS COVER	N/A
1.3	BECV01001	M3X8 YSB BOLT	N/A
1.4	BECV09001	3X6,5 SCREW for PLASTIC	N/A
1.5	ENEM01036	E-GUN BACK COVER INNER LID	N/A
1.6	ENEM04003	E-GUN BACK COVER INNER LID GASKET	N/A
2	ENEM04004	E-GUN CASCADE ISOLATION GASKET	N/A
3	ENEM01031	E-GUN POWDER PIPE ELBOW	*
4	B07EGCN01	E-GUN CASCADE	N/A
5	B07EC0001	E-GUN C1/C2 GUN BODY ASSEMBLY (COMPLETE)	N/A
5.1	ENEM01029	E-GUN C1/C2 GUN BODY MAIN PART	N/A
5.2	B07520007	E-GUN NOZZLE AIR FILTER UNIT	N/A
6	B07EC0002	E-GUN C1/C2 TOP POWDER PIPE ASSEMBLY (COMPLETE)	*
6.1	ENEM01032	E-GUN C1/C2 TOP POWDER PIPE	*
6.2	IZOR01005	O-RING Ø15X2 NBR70	N/A
7	B07EC0003	E-GUN C1/C2 HANDLE ASSEMBLY (COMPLETE)	N/A
7.1	ENEM01030	E-GUN C1/C2 HANDLE BODY (CONDUCTIVE)	N/A
7.2	PNRD02002	CONNECTOR FEMALE STRAIGHT HOSE Ø6-M5	N/A
7.3	BECV01001	M3X8 YSB BOLT	N/A
8	B07520011	E-GUN C1/C2 BOTTOM POWDER PIPE	*
9	BEDH09003	E-GUN HOSE CONNECTOR SPRING	N/A
10	TRTM04009	E-GUN HOSE CONNECTOR LOCKING RING	N/A
11	B07528005	E-GUN C1/C2 GUN CABLE (5m)	N/A
12	B07EC0004	E-GUN HOSE CONNECTOR ASSEMBLY (COMPLETE)	N/A
12.1	TRTM03005	E-GUN HOSE CONNECTOR BODY	N/A
12.2	IZOR02001	O-RING Ø12X1,5 SILICONE	N/A
13	B07520012	E-GUN C1/C2 TRIGGER BODY	N/A
14	TRTM04016	E-GUN MANUAL GUN CABLE COMPRESSION RING	N/A
15	B07LG5006	E-GUN MANUAL GUN TRIGGER BODY SET	N/A
16	BECV01030	M3X10 TAPTILITY SCREW	N/A
17	B07524002	E-GUN GUN COMPRESSION NUT	N/A
18		PLEASE CHECK NOZZLE TYPES SELECTION LIST	

\*\*Part #1.2.1 or #1.2.2 Manual Gun Type (C1 or C2) should be considered before ordering.



PART #	ORDER CODE	PART NAME	WEARING PART
1	B07EGC300	E-GUN C3 AUTOMATIC POWDER COATING GUN (COMPLETE)	N/A

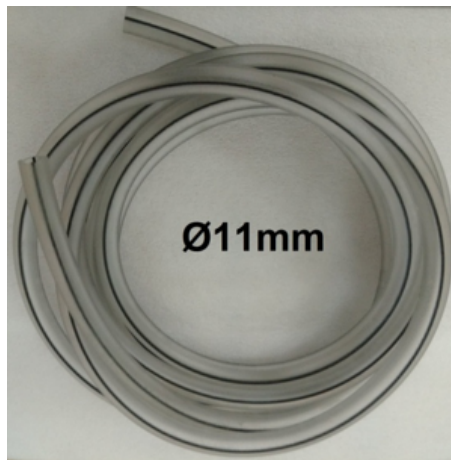


Part #	Order Code	Part Name	Wearing Part
1	B07EC0004	E-GUN HOSE CONNECTOR ASSEMBLY (COMPLETE)	N/A
1.1	TRTM03005	E-GUN HOSE CONNECTOR BODY	N/A
1.2	IZOR02001	O-RING Ø12X1,5 SILICONE	N/A
2	B07528012	E-GUN C3 GUN CABLE (12m)	N/A
3	TRTM04009	E-GUN HOSE CONNECTOR LOCKING RING	N/A
4	BEDH09003	E-GUN HOSE CONNECTOR SPRING	N/A
5	TRTM03009	E-GUN C3 QUICK HOSE CONNECTOR HOLDER	N/A
6	B07EC0005	E-GUN C3 ALUMINUM CLAMP ASSEMBLY (COMPLETE)	N/A
6.1	TRTM04012	E-GUN C3 ALUMINUM CLAMP ADAPTER	N/A
6.2	BECV03039	M5X20 ALLEN BOLT	N/A
7	B07EC0006	E-GUN C3 ALUMINUM BACK COVER ASSEMBLY (COMPLETE)	N/A
7.1	TRTM04013	E-GUN C3 ALUMINUM BACK COVER	N/A
7.2	BECV08002	M6X60 HALF THREAD PLATED ALLEN BOLT	N/A
7.3	PNRD01012	CONNECTOR MALE STRAIGHT HOSE Q6-M5 INNER ALLEN KEYED	N/A
7.4	ELKS02002	M12-A 4 PIN PANEL TYPE CABLE MALE CONNECTOR	N/A
7.5	IZOR02003	O-RING Ø14X1,5 SILICONE	N/A
8	B07EC0007	E-GUN C3 BODY BACK PART ASSEMBLY (COMPLETE)	N/A
8.1	ENEM01039	E-GUN C3 BODY BACK PART	N/A
8.2	IZOR01012	O-RING Ø35X1,5 NBR70	N/A
8.3	TRTM05008	E-GUN NOZZLE AIR M5-Ø6 HOSE CONNECTOR	N/A
8.4	BECV03024	M5X15 ALLEN BOLT	N/A
9	B07EC0008	E-GUN C3 INNER LID ASSEMBLY (COMPLETE)	N/A
9.1	TRTM04100	E-GUN C3 INNER ASSEMBLY ALUMINUM HOLDER	N/A
9.2	ENEM01040	E-GUN C3 INNER ASSEMBLY FRONT BODY LID	N/A
9.3	BECV08003	M5X70 HALF THREAD PLATED ALLEN BOLT	N/A
10	B07EGCN01	E-GUN CASCADE	N/A
11	B07EC0009	E-GUN C3 POWDER PIPE ASSEMBLY (COMPLETE)	N/A
11.1	ENEM01037	E-GUN C3 POWDER PIPE	N/A
11.2	IZOR01005	O-RING Ø15X2 NBR70	N/A
12	B07EC0011	E-GUN C3 BODY FRONT PART ASSEMBLY (COMPLETE)	N/A
12.1	ENEM01038	E-GUN C3 BODY FRONT PART	N/A
12.2	B07520007	E-GUN NOZZLE AIR FILTER UNIT	N/A
13	B07524002	E-GUN NOZZLE TIGHTENING NUT	N/A
14		PLEASE CHECK NOZZLE TYPES SELECTION LISTS	



L = 5 m  
L = 10 m

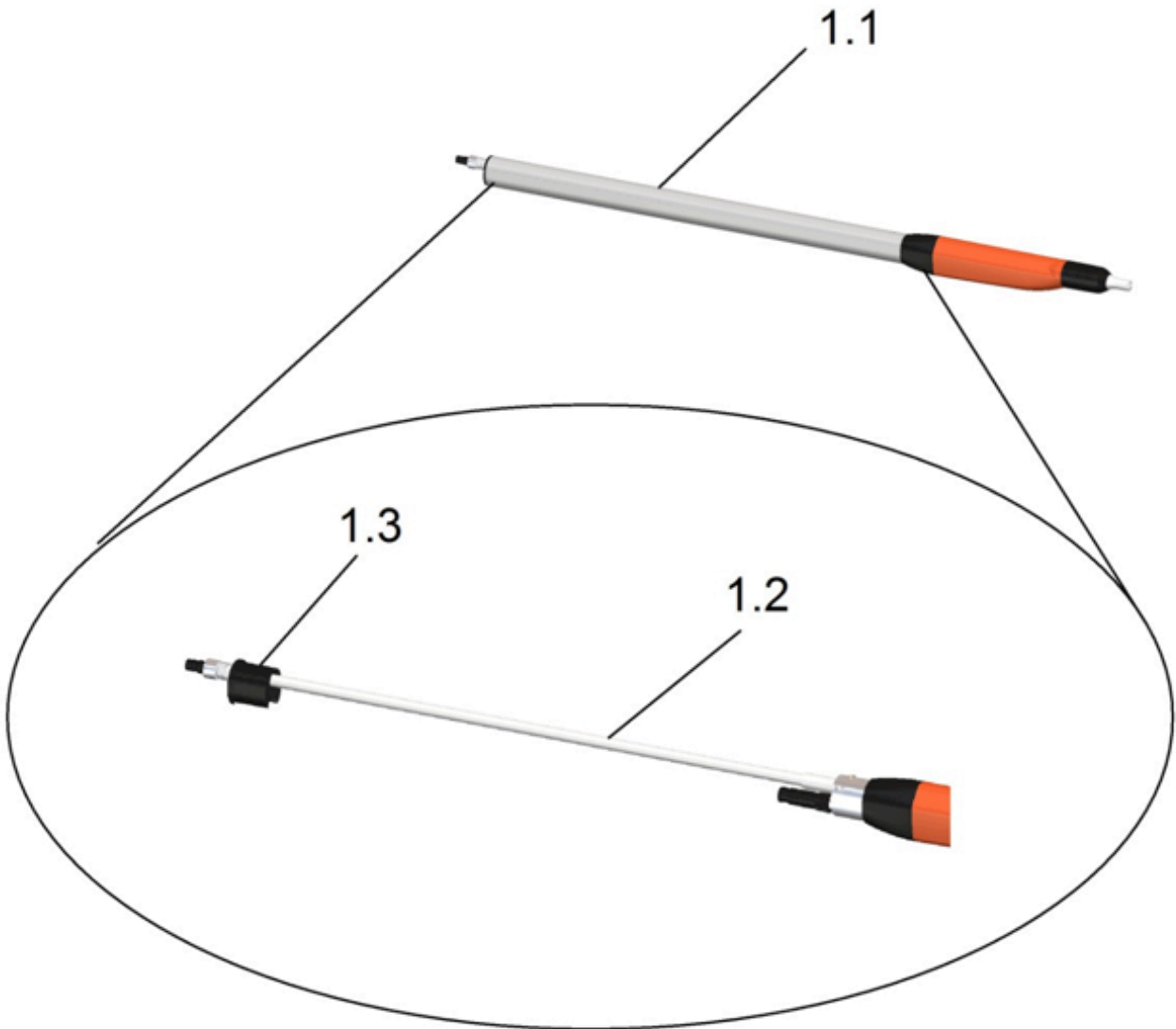
Part #	Part Name	Order Code	Wearing Part
1	GUN CABLE EXTENSION KIT (5 m)	B07EXT005	N/A
2	GUN CABLE EXTENSION KIT (10 m)	B07EXT006	N/A



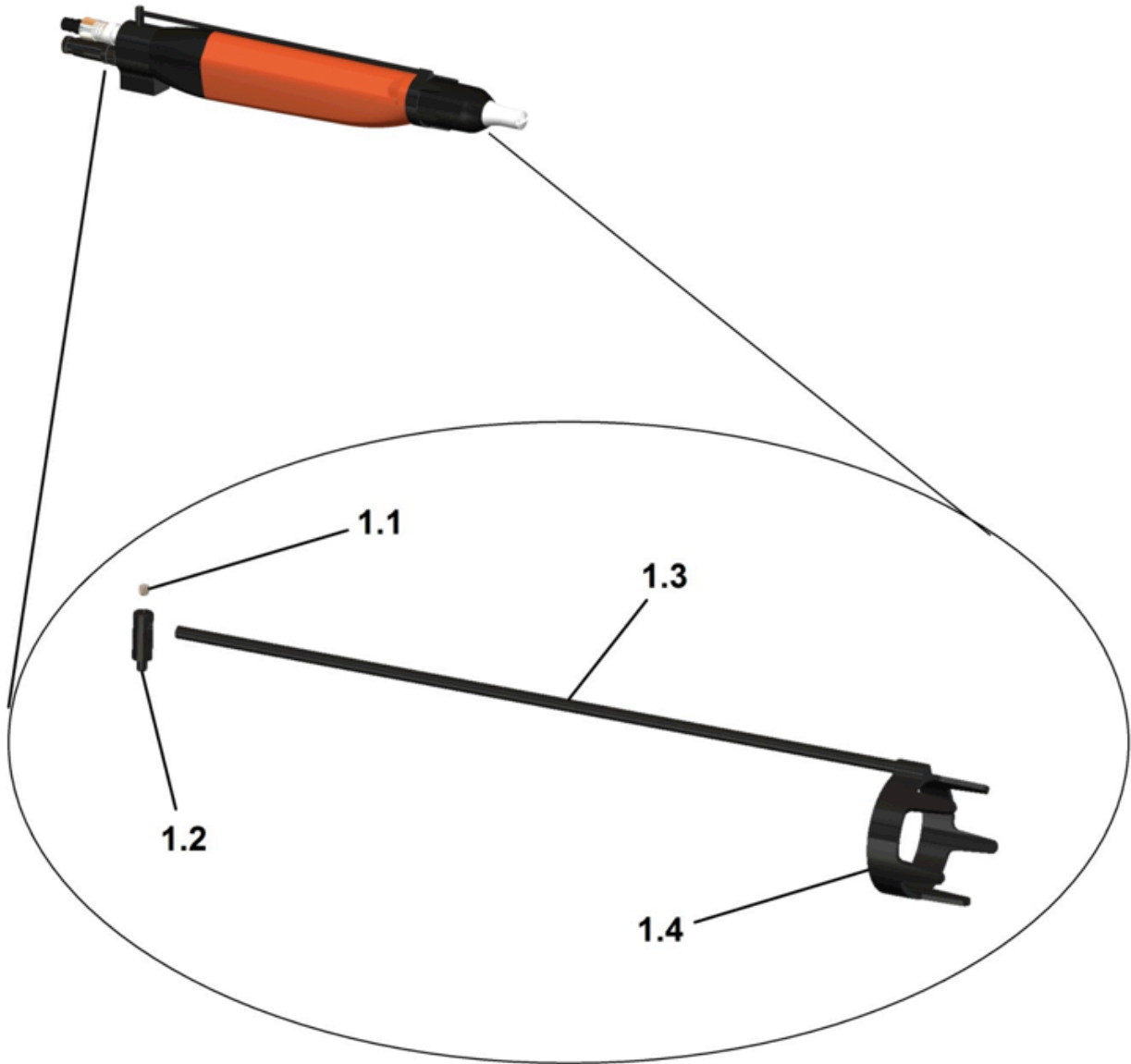
Part #	Part Name	Order Code	Wearing Part
1	11X16 POWDER HOSE w/ DOUBLE CARBON DISCHARGE LINES (ORDER IN METERS)	PNH003003	N/A



Product #	Part Name	Order Code	CONSUMABLE
1	E-COAT EARTHING CABLE (3 m)	B07ECK506	N/A

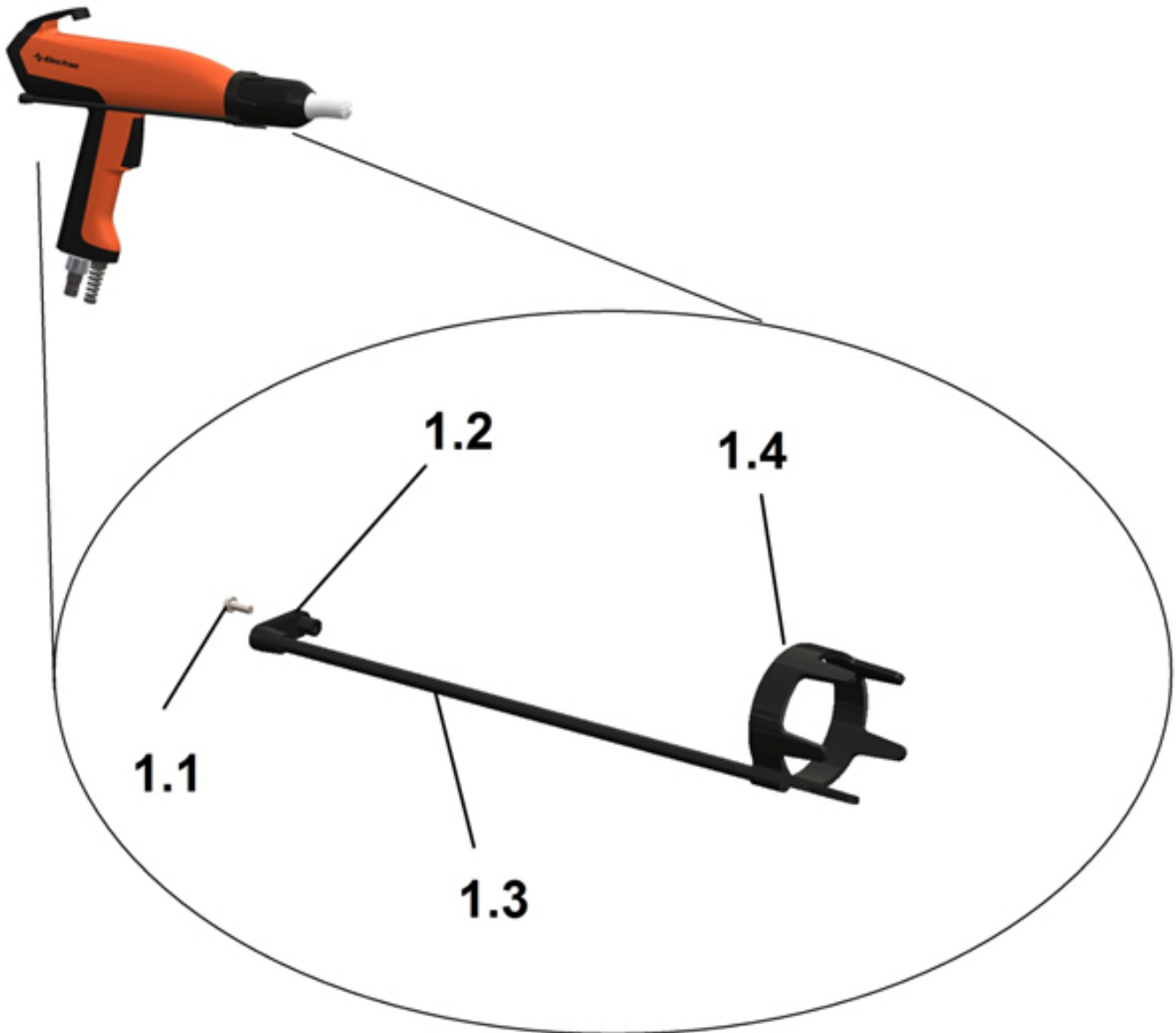


Part #	Order Code	Part Name	Wearing Part	WEARING PART
1	B07RCA001	E-GUN C3 COMPOSITE ARM W/ HOSE EXTENDER (COMPLETE)		N/A
	1.1	AKUA03002	E-GUN C3 COMPOSITE GUN ARM	N/A
	1.2	B07RCA002	E-GUN C3 HOSE EXTENDER FOR COMPOSITE ARM SET	*
	1.3	TRTM08009	E-GUN C3 COMPOSITE GUN ARM BACK COVER	N/A

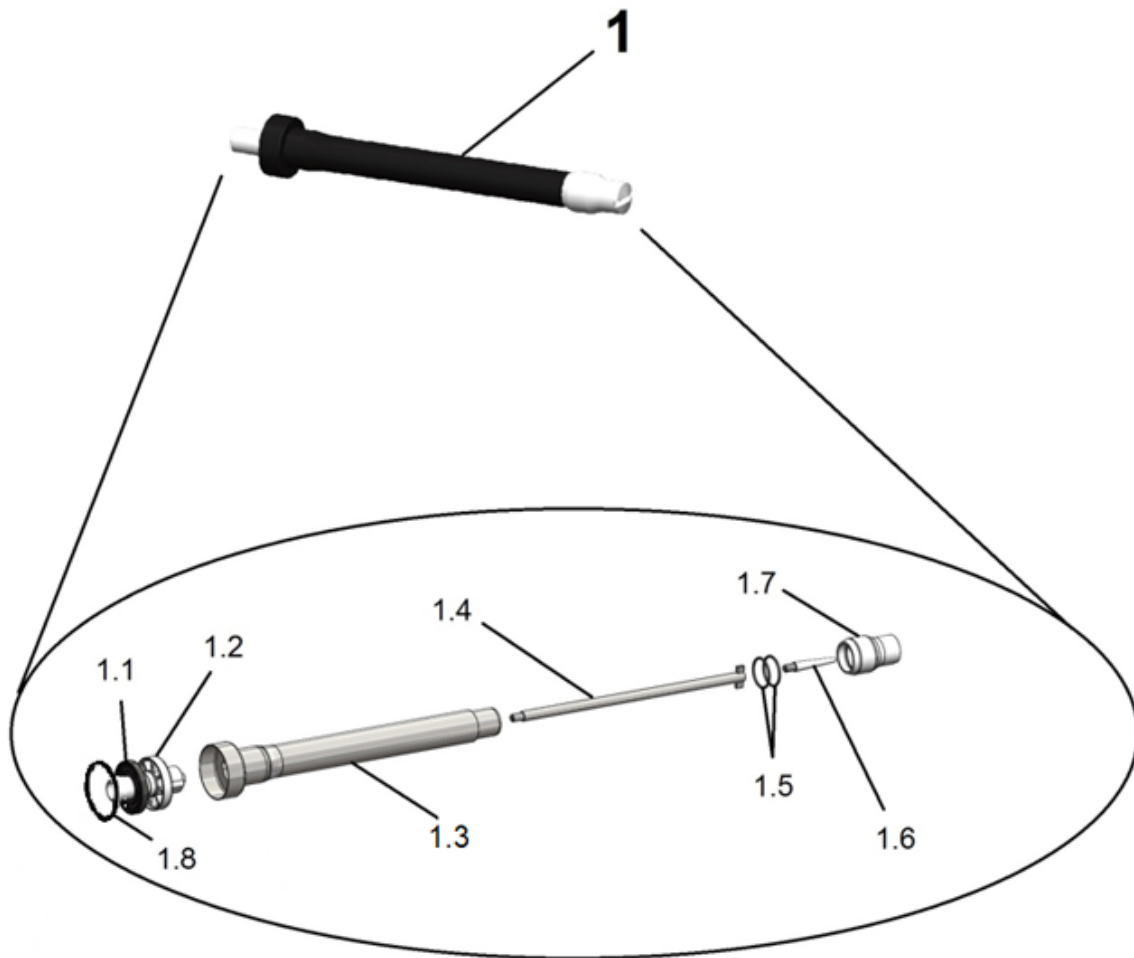


Part #	Order Code	Part Name	Wearing Part
1	B07FCR001	E-GUN C3 FAST CORONA DE-IONIZER UNIT (COMPLETE)	N/A
1.1	BEDH08003	E-GUN C3 FAST CORONA UNIT SPACER SET-4X6 SETSKUR SCREW	N/A
1.2	TRTM07003	E-GUN C3 FAST CORONA UNIT MOUNTING BOLT	N/A
1.3	TRTM08013	E-GUN C3 FAST CORONA UNIT SPACER	N/A
1.4	TRTM04015	E-GUN FAST CORONA UNIT CHARGE COLLECTOR	N/A



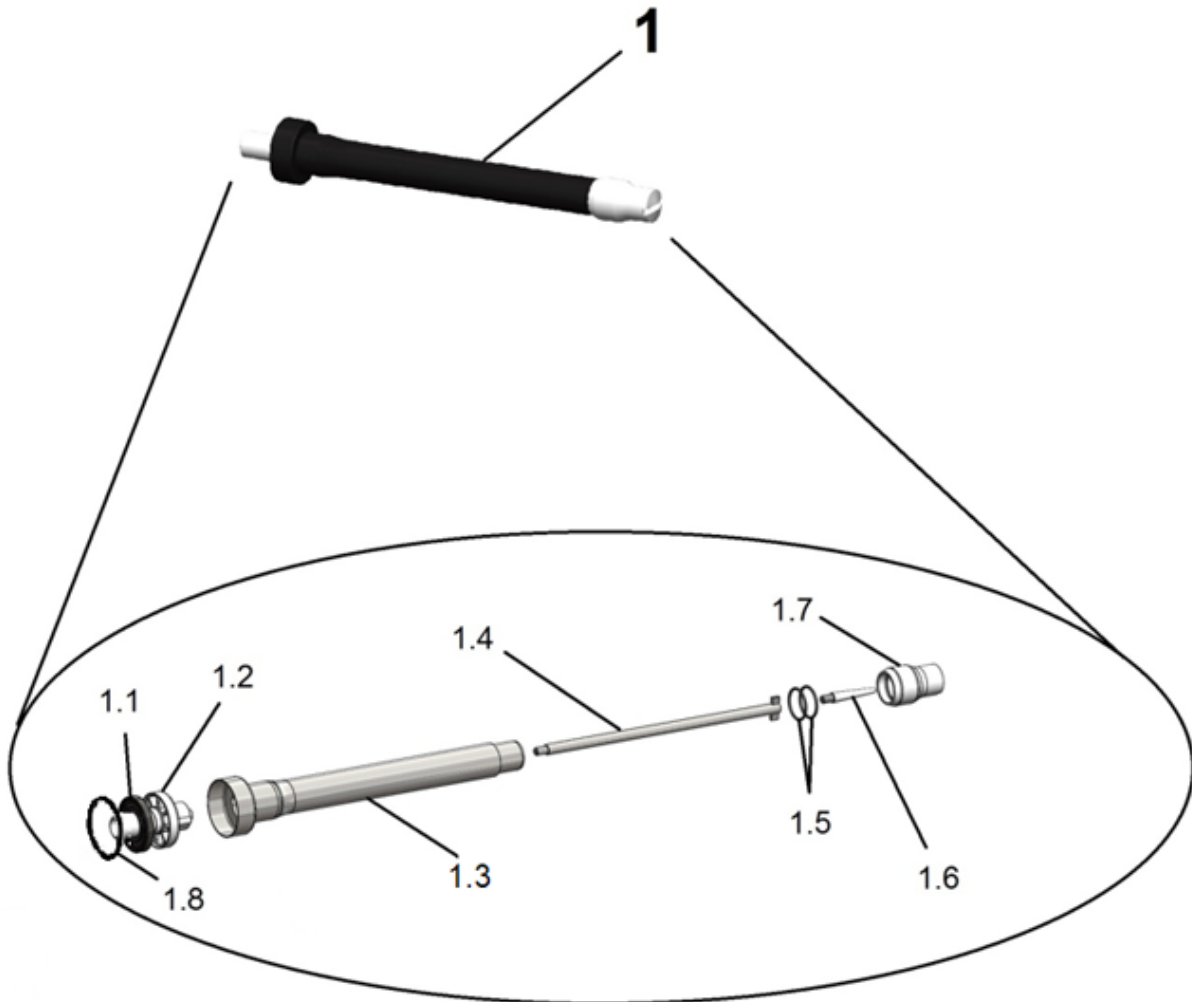


Part #	Order Code	Part Name	Wearing Part
1	B07FCR002	E-GUN C1/C2 FAST CORONA DE-IONIZER UNIT (COMPLETE)	N/A
1.1	BECV01003	M3X15 YSB BOLT	N/A
1.2	TRTM07002	E-GUN C1/C2 FAST CORONA UNIT BACK COVER CONNECTOR	N/A
1.3	TRTM08014	E-GUN C1/C2 FAST CORONA UNIT SPACER	N/A
1.4	TRTM04015	E-GUN FAST CORONA UNIT CHARGE COLLECTOR	N/A



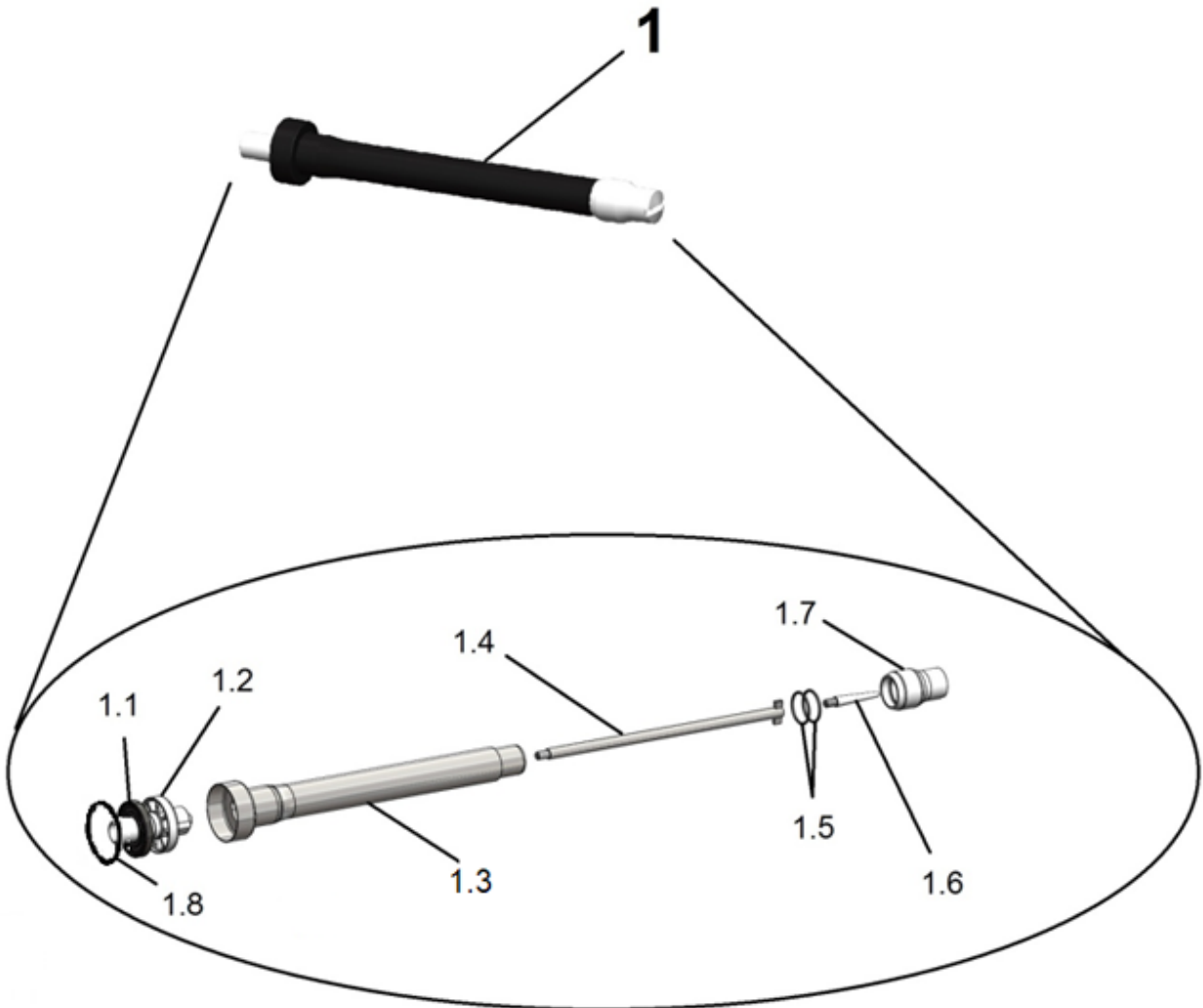
Part #	Order Code	Part Name	Wearing Part
1	B07EXT001	E-GUN NOZZLE EXTENSION KIT-STRAIGHT-150mm (COMPLETE)	N/A
1.1	TRTM08012	E-GUN Ø35 CARBON RING	*
1.2	B07524004	E-GUN ELECTRODE BODY	*
1.3	B07525003	E-GUN NOZZLE EXTENSION HOSE-STRAIGHT-150mm	N/A
1.4	B07525001	E-GUN ELECTRODE ISOLATOR EXTENSION-STRAIGHT-150mm	N/A
1.5	IZOR01007	E-GUN EXTENSION NOZZLE 18x1,5 O-RING	N/A
1.6	TRTM01022	E-GUN FLAT TYPE NOZZLES CONICAL ISOLATOR	*
1.7	TRTM01024	E-GUN EXTENSION NOZZLE-FLAT	*
1.8	IZOR01026	O-RING Ø30X1,5 NBR70	*

If any extension head group is used, the gun is no longer compliant with explosion protection regulation.



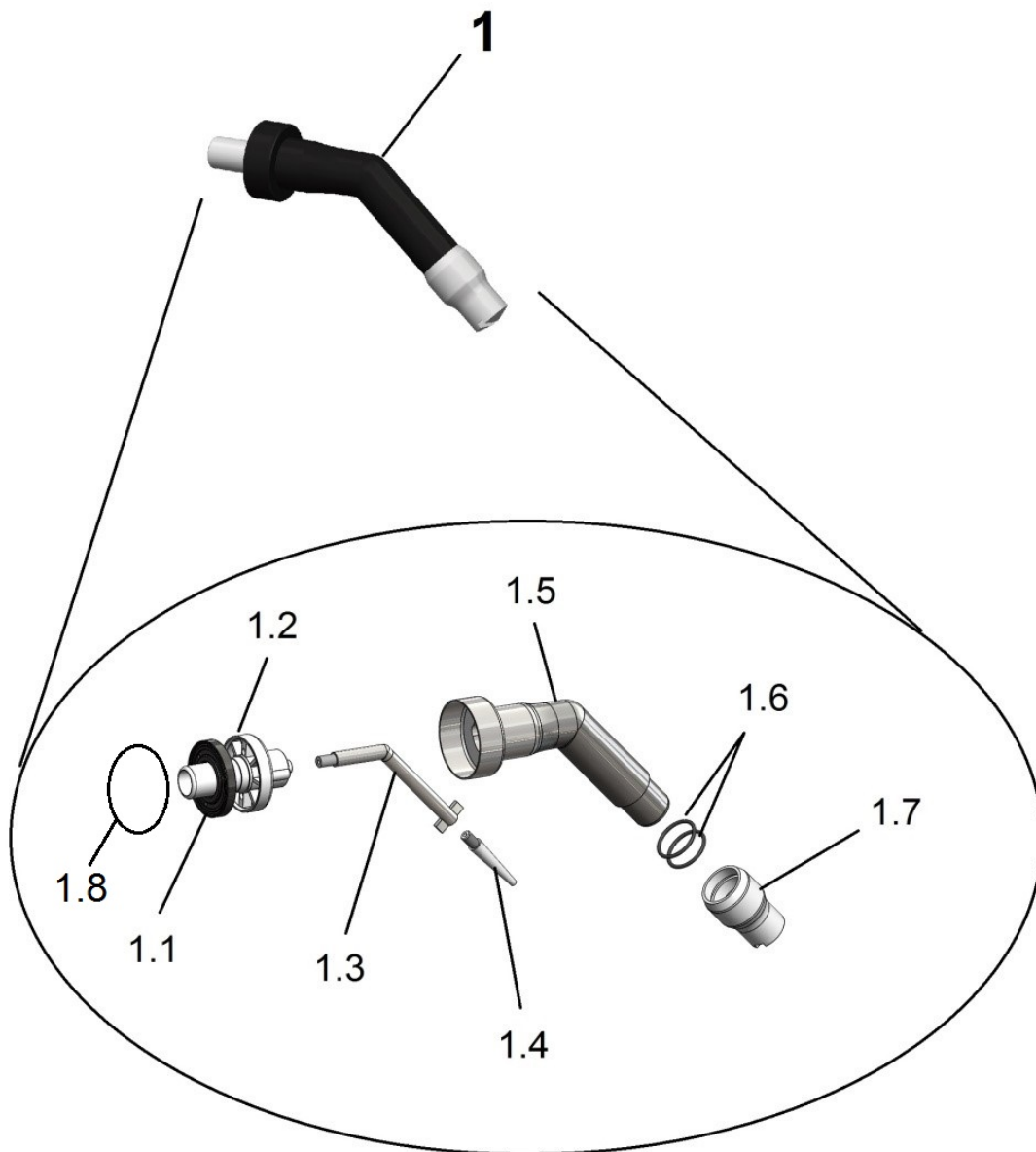
Part #	Order Code	Part Name	Wearing Part
1	B07EXT002	E-GUN NOZZLE EXTENSION KIT-STRAIGHT-250mm (COMPLETE)	N/A
1.1	TRTM08012	E-GUN Ø35 CARBON RING	*
1.2	B07524004	E-GUN ELECTRODE BODY	*
1.3	B07525006	E-GUN NOZZLE EXTENSION HOSE-STRAIGHT-250mm	N/A
1.4	B07525005	E-GUN ELECTRODE ISOLATOR EXTENSION-STRAIGHT-250mm	N/A
1.5	IZOR01007	E-GUN EXTENSION NOZZLE 18x1,5 O-RING	N/A
1.6	TRTM01022	E-GUN FLAT type NOZZLES CONICAL ISOLATOR	*
1.7	TRTM01024	E-GUN EXTENSION NOZZLE-FLAT	*
1.8	IZOR01026	O-RING Ø30X1,5 NBR70	*

If any extension head group is used, the gun is no longer compliant with explosion protection regulation.



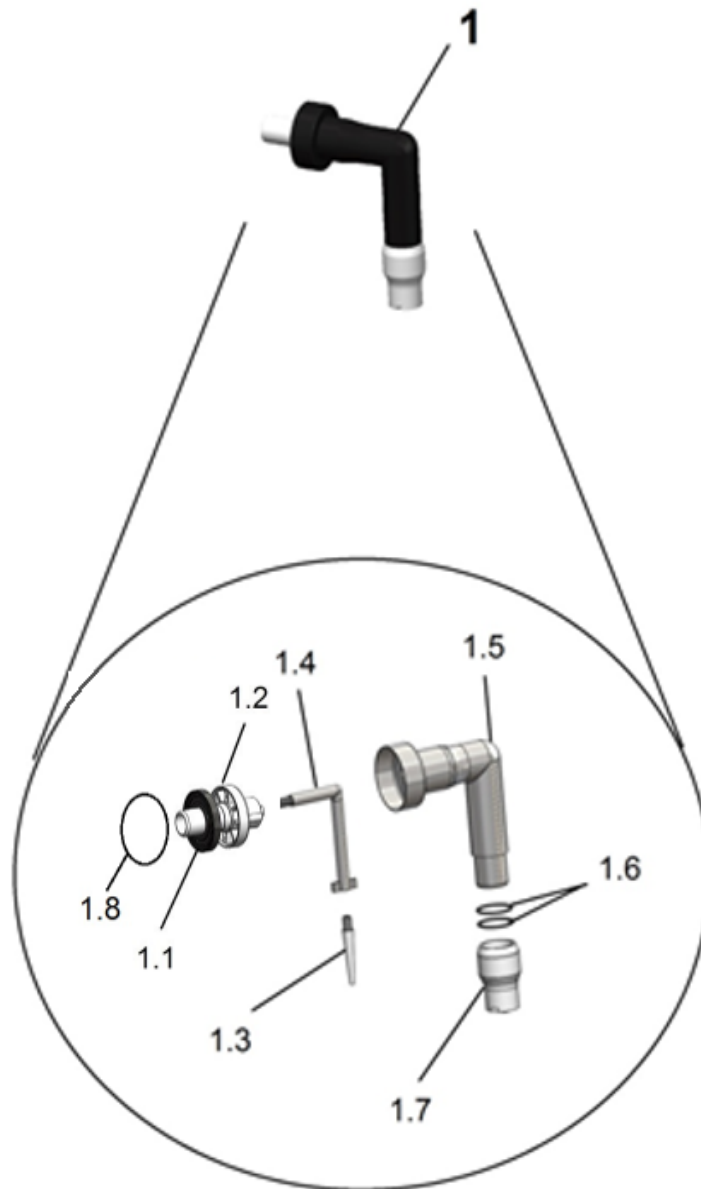
Part #	Order Code	Part Name	Wearing Part
1	B07EXT007	E-GUN NOZZLE EXTENSION KIT-STRAIGHT-400mm (COMPLETE)	N/A
1.1	TRTM08012	E-GUN Ø35 CARBON RING	*
1.2	B07524004	E-GUN ELECTRODE BODY	*
1.3	B07525011	E-GUN NOZZLE EXTENSION HOSE-STRAIGHT-400mm	N/A
1.4	B07525012	E-GUN ELECTRODE ISOLATOR EXTENSION-STRAIGHT-400mm	N/A
1.5	IZOR01007	E-GUN EXTENSION NOZZLE 18x1,5 O-RING	N/A
1.6	TRTM01022	E-GUN FLAT type NOZZLES CONICAL ISOLATOR	*
1.7	TRTM01024	E-GUN EXTENSION NOZZLE-FLAT	*
1.8	IZOR01026	O-RING Ø30X1,5 NBR70	*

If any extension head group is used, the gun is no longer compliant with explosion protection regulation.



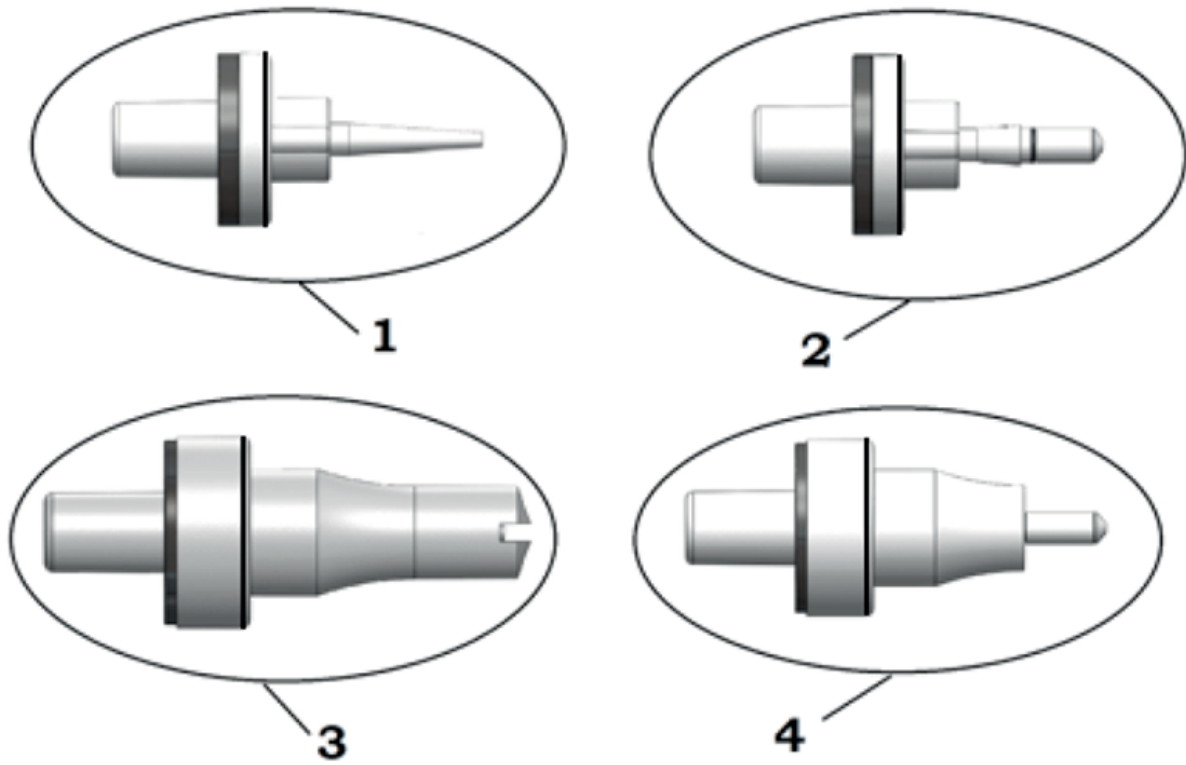
Part #	Order Code	Part Name	Wearing Part
1	B07EXT003	E-GUN NOZZLE EXTENSION KIT-45 degree (COMPLETE)	N/A
1.1	TRTM08012	E-GUN Ø35 CARBON RING	*
1.2	B07524004	E-GUN ELECTRODE BODY	*
1.3	B07525007	E-GUN ELECTRODE ISOLATOR EXTENSION-45 degree	N/A
1.4	TRTM01022	E-GUN FLAT type NOZZLES CONICAL ISOLATOR	*
1.5	B07525008	E-GUN NOZZLE EXTENSION HOSE-45degree	N/A
1.6	IZOR01007	E-GUN EXTENSION NOZZLE 18x1,5 O-RING	N/A
1.7	TRTM01024	E-GUN EXTENSION NOZZLE-FLAT	*
1.8	IZOR01026	O-RING Ø30X1,5 NBR70	*

If any extension head group is used, the gun is no longer compliant with explosion protection regulation.

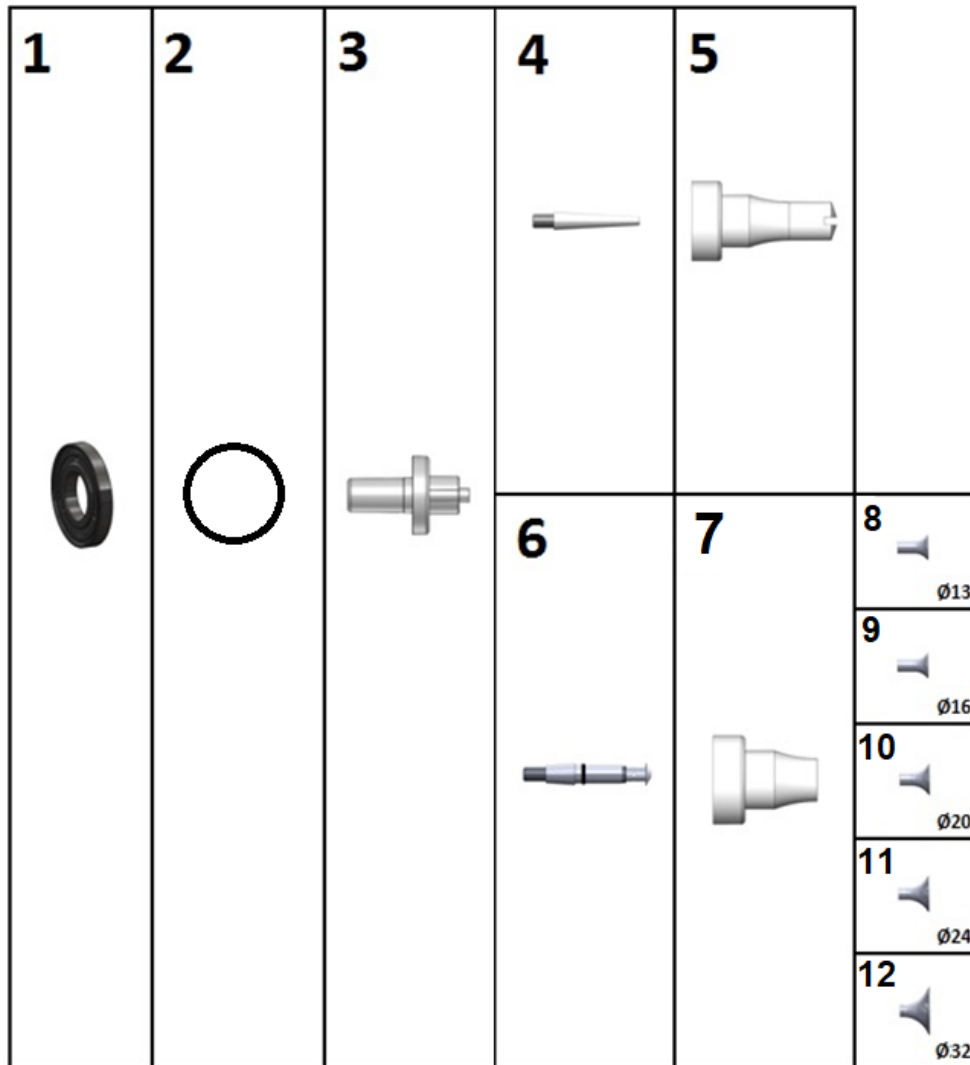


Part #	Order Code	Part Name	Wearing Part
1	B07EXT004	E-GUN NOZZLE EXTENSION KIT-90 degree (COMPLETE)	N/A
1.1	TRTM08012	E-GUN Ø35 CARBON RING	*
1.2	B07524004	E-GUN ELECTRODE BODY	*
1.3	TRTM01022	E-GUN FLAT type NOZZLES CONICAL ISOLATOR	*
1.4	B07525010	E-GUN ELECTRODE ISOLATOR EXTENSION-90 degree	N/A
1.5	B07525009	E-GUN NOZZLE EXTENSION HOSE-90 degree	N/A
1.6	IZOR01007	E-GUN EXTENSION NOZZLE 18x1,5 O-RING	N/A
1.7	TRTM01024	E-GUN EXTENSION NOZZLE-FLAT	*
1.8	IZOR01026	O-RING Ø30X1,5 NBR70	*

If any extension head group is used, the gun is no longer compliant with explosion protection regulation.

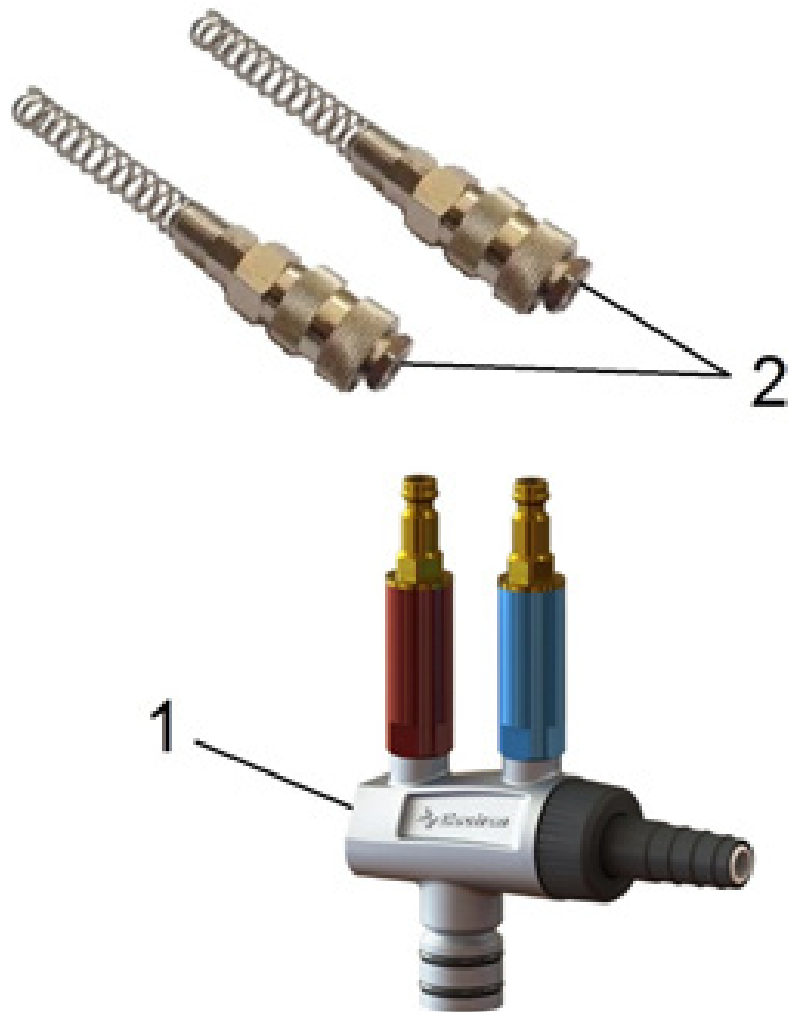


Part #	Order Code	Part Name	Wearing Part
1	B07524000	E-GUN FLAT TYPE ELECTRODE ASSEMBLY (COMPLETE)	N/A
2	B07523000	E-GUN DEFLECTOR TYPE ELECTRODE ASSEMBLY (COMPLETE)	N/A
3	B07524001	E-GUN FLAT TYPE NOZZLE (COMPLETE)	N/A
4	B07523001	E-GUN DEFLECTOR TYPE NOZZLE (COMPLETE)	N/A

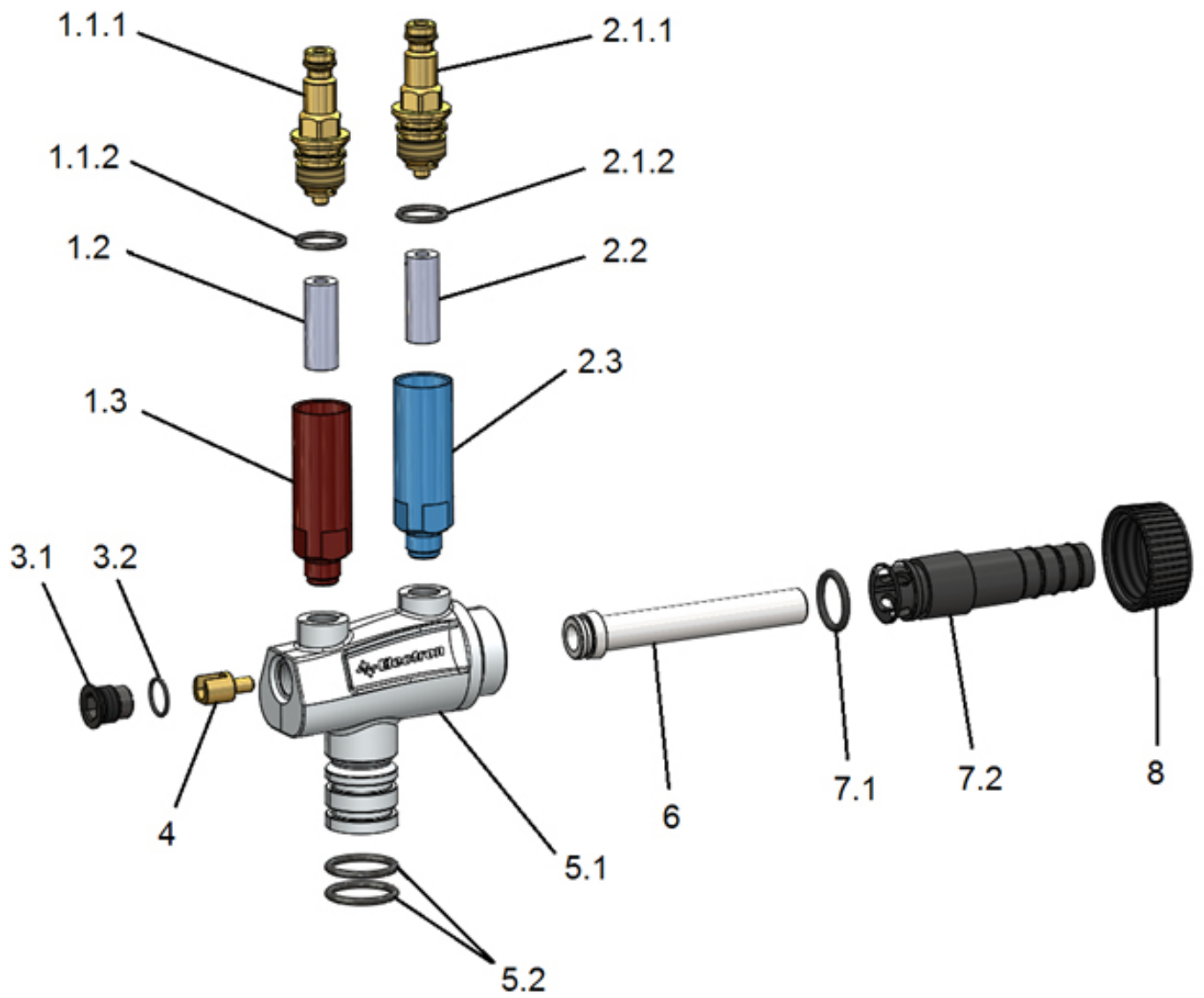


Part #	Order Code	Part Name	Wearing Part
1	TRTM08012	E-GUN Ø35 CARBON RING	*
2	IZOR01026	O-RING Ø30X1,5 NBR70	*
3	B07524004	E-GUN ELECTRODE BODY	*
4	TRTM01022	E-GUN FLAT type NOZZLES CONICAL ISOLATOR	*
5	TRTM01023	E-GUN FLAT NOZZLE	*
6	B07524502	E-GUN DEFLECTOR type NOZZLES SHAFT ASSEMBLY	*
7	TRTM01021	E-GUN DEFLECTOR NOZZLE	*
8	TRTM03013	E-GUN Ø13 DEFLECTOR	*
9	ENEM01044	E-GUN Ø16 DEFLECTOR	*
10	ENEM01045	E-GUN Ø20 DEFLECTOR	*
11	ENEM01046	E-GUN Ø24 DEFLECTOR	*
12	ENEM01067	E-GUN Ø32 DEFLECTOR	*

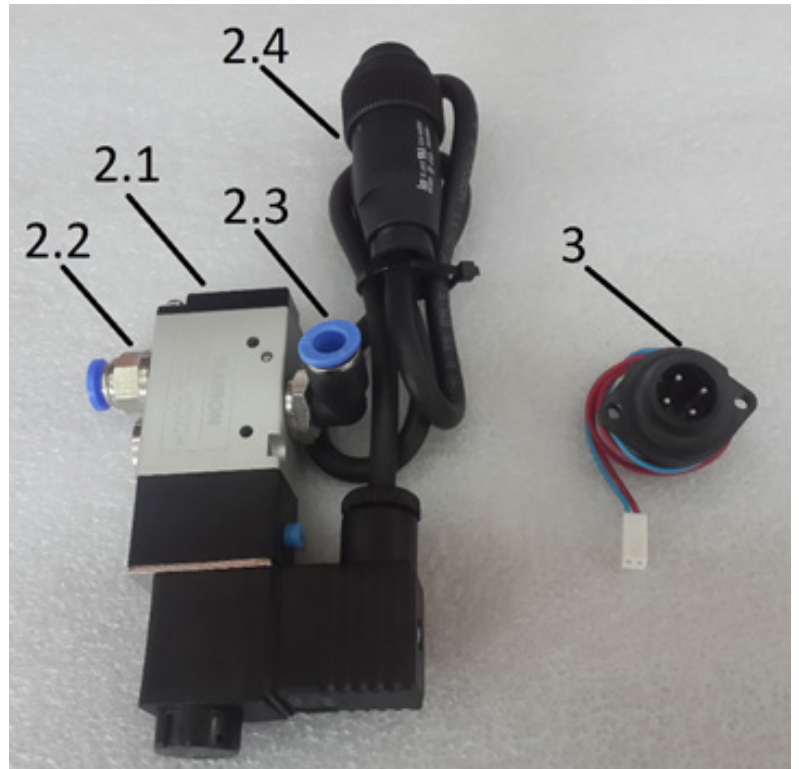




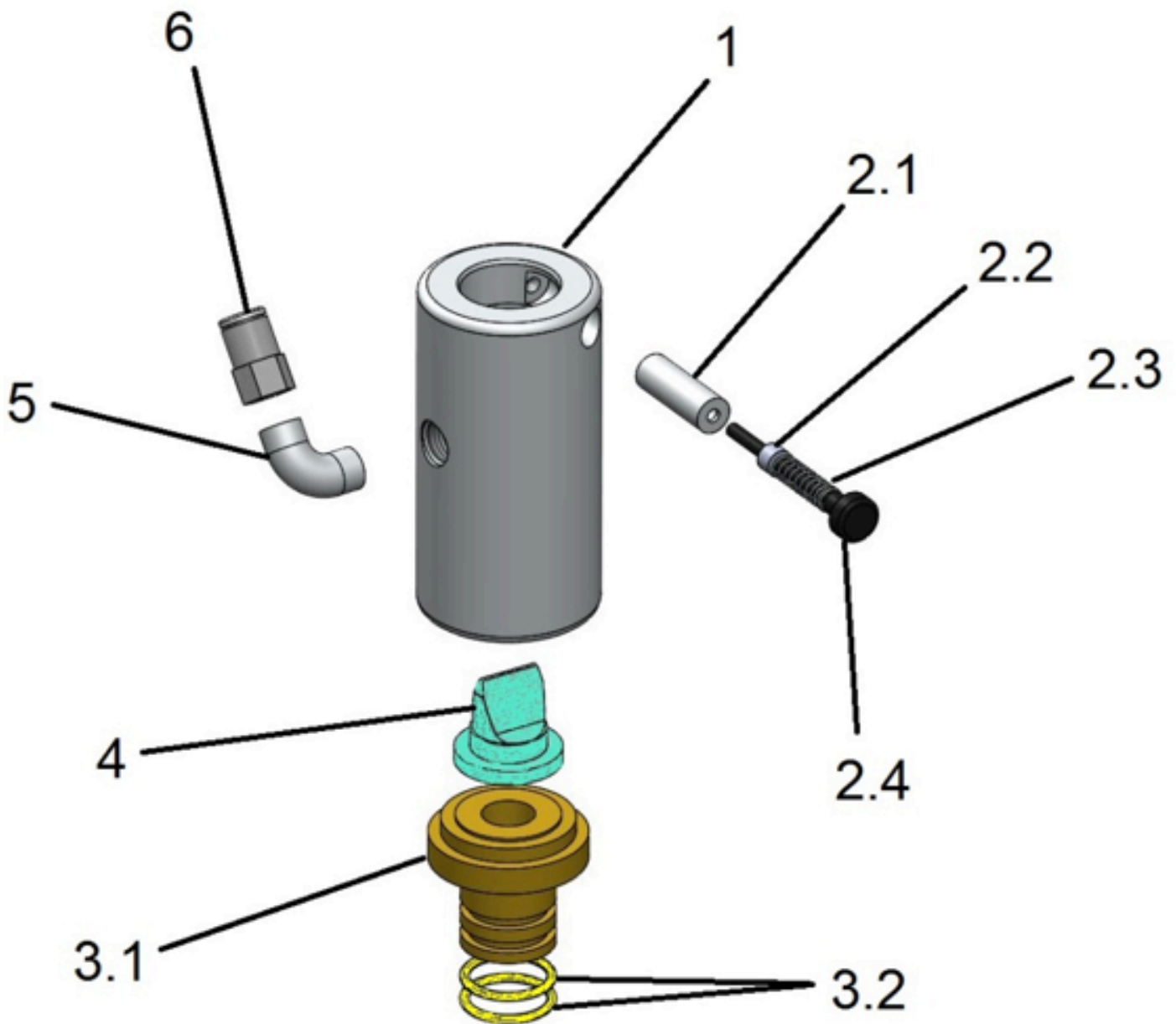
Part #	Order Code	Part Name
1	B07FEEDV2	E-FEED V2 POWDER INJECTOR (COMPLETE)
2	PNBE01005	QUICK CONNECTOR w/ SPRING 8X6mm (016-055) *** Sold as 1 piece.



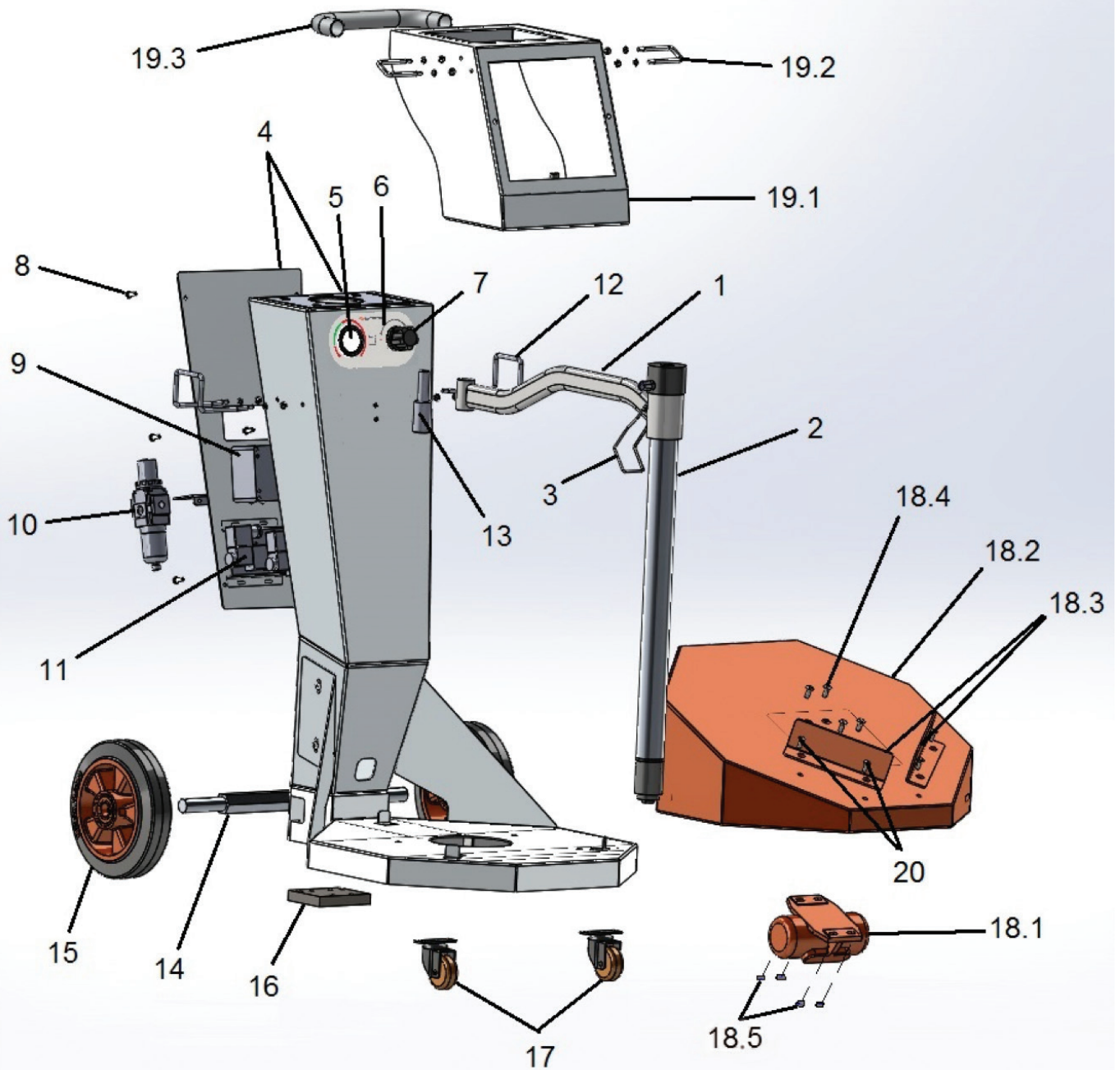
Part	Order Code	Part Name	Wearing Part
1	B07ENJ001	E-FEED V2 MAIN AIR FILTER MODULE (COMPLETE)	N/A
1.1	B07ENJ003	E-FEED V2 FEMALE QUICK CONNECTOR ADAPTOR W/ O-RING	N/A
1.1.1	TRTM05012	E-FEED V2 FEMALE QUICK CONNECTOR ADAPTOR	N/A
1.1.2	IZOR01017	O-RING Ø9,5X1,5 NBR	N/A
1.2	FRFL08002	INJECTOR SINTERED FILTER	*
1.3	B07540007	1/8" INJECTOR FILTER HOUSING (RED)	N/A
2	B07ENJ002	E-FEED V2 SUPPLEMENTARY AIR FILTER MODULE (COMPLETE)	N/A
2.1	B07ENJ003	E-FEED V2 FEMALE QUICK CONNECTOR ADAPTOR W/ O-RING	N/A
2.1.1	TRTM05012	E-FEED V2 FEMALE QUICK CONNECTOR ADAPTOR	N/A
2.1.2	IZOR01017	O-RING Ø9,5X1,5 NBR	N/A
2.2	FRFL08002	INJECTOR SINTERED FILTER	*
2.3	B07540006	1/8" INJECTOR FILTER HOUSING (BLUE)	N/A
3	B07ENJ004	E-FEED V2 INJECTOR NOZZLE CAP W/ O-RING (COMPLETE)	N/A
3.1	ENEM01057	E-FEED V2 INJECTOR NOZZLE CAP	N/A
3.2	IZOR01002	E-FEED V2 INJECTOR NOZZLE CAP O-RING (9X1)	N/A
4	TRTM05011	E-FEED V2 INJECTOR NOZZLE	*
5	B07ENJ005	E-FEED V2 INJECTOR MAIN BODY W/ O-RING (COMPLETE)	N/A
5.1	ENEM03002	E-FEED V2 INJECTOR MAIN BODY	N/A
5.2	IZOR02004	ORING Ø16X2 SILICONE (YELLOW)	*
6	B07540000	E-FEED V2 TEFLON BUSHING	*
7	B07ENJ006	E-FEED V2 INJECTOR HOSE ADAPTOR (CONDUCTIVE) W/ O-RING (COMPLETE)	*
7.1	IZOR02002	E-FEED V2 INJECTOR HOSE ADAPTOR O-RING SILICONE (13X2)	N/A
7.2	ENEM01058	E-FEED V2 INJECTOR HOSE ADAPTOR (CONDUCTIVE)	N/A
8	ENEM01059	E-FEED V2 INJECTOR HOSE ADAPTOR TIGHTENING NUT	N/A



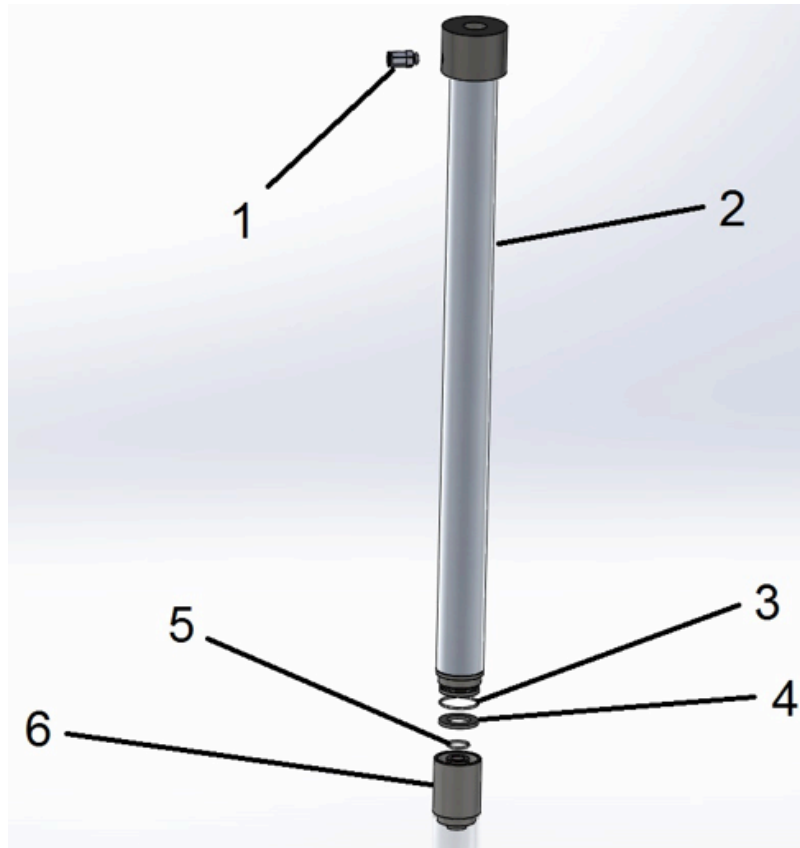
Order Code		Part Name
B07PURGE01		FastPurge™ Module
Part #	Order Code	Part Name
1	B07542000	FastPurge™ MAIN BODY - (COMPLETE)
2	B07EC0019	FastPurge™ VALVE(COMPLETE)
	2.1	PNPE04001 ¼" 3/2 WAY VALVE WITH ATEX COIL
	2.2	PNRD01014 REKOR DÜZ 1/4'-Ø8 ERKEK
	2.3	PNRD03009 PNEUMATICAL ROTATING ELBOW 1/4"-Ø8 MALE
	2.4	B07ECK511 FastPurge™ VALVE CABLE SET
3	B07ECK512	FastPurge™ CONTROLLER OUTPUT CABLE SET



Part #	Order Code	Part Name	WEARING PARTS	
1	TRTM04018	FastPurge™ MAIN BODY	N/A	
2	B07EC0016	FastPurge™ LOCKING SHAFT SET (COMPLETE)	N/A	
	2.1	TRTM07005	FastPurge™ LOCKING SHAFT BARREL	N/A
	2.2	TRTM07006	FastPurge™ LOCKING SHAFT SPRING HOLDER	N/A
	2.3	BEDH09006	FastPurge™ LOCKING SHAFT SPRING	N/A
	2.4	TRTM07004	FastPurge™ LOCKING SHAFT	N/A
3	B07EC0017	FastPurge™ BOTTOM LID SET (COMPLETE)	N/A	
	3.1	TRTM05016	FastPurge™ BOTTOM LID	*
	3.2	IZOR02004	ORING Ø16X2 SILICONE (YELLOW)	*
4	PNPE06002	FastPurge™ DUCKBILL VALVE	*	
5	PNRD03002	TAILED ELBOW 1/8" CHROME FINISH	N/A	
6	PNRD05005	CHECK VALVE CONNECTOR TYPE 1/8" Ø8	N/A	

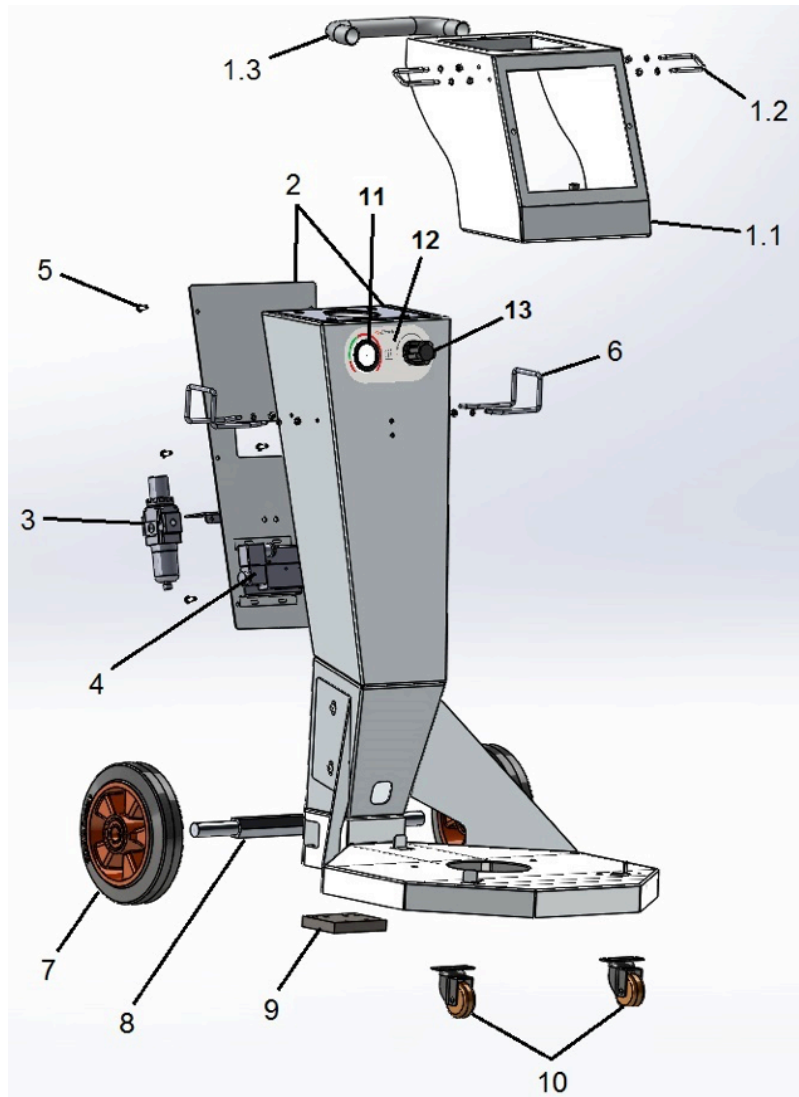


Part #	Order Code	Part Name	Wearing Part	
1	B07ECM001	E-COAT MULTICOLOR SUCTION TUBE HOLDER ARM	N/A	
2	B07ECM003	E-COAT MULTICOLOR SUCTION TUBE (COMPLETE)	N/A	
3	AKUA04004	E-COAT MULTICOLOR SUCTION TUBE LOCK	N/A	
4	B07560002	E-COAT MOBILE CAR MAIN BODY	N/A	
5	PNPE07002	MANOMETER Ø40 2,5 BAR	N/A	
6	ETKT03029	E-COAT MOBILE CAR FLUIDIZATION INDICATOR STICKER	N/A	
7	PNPE01002	REGULATOR - ¼" 0-3,5 BAR	N/A	
8	BECV01011	BOLT M5X10 YSB	N/A	
9	B07EMC001	E-MULTICOLOR RELAY BOX	N/A	
10	PNPE02001	FR REGULATOR ¼" w/ SQUARE MANOMETER	N/A	
11	PNPE04001	VALVE 3/2 - ¼" N.C. Ex II 3D	N/A	
12	AKUA04001	E-COAT MOBILE CAR HOSE HANGER	N/A	
13	TRTH08077	E-COAT MULTICOLOR TUBE ARM HANGER Ø30 - L34	N/A	
14	TRTM04048	E-COAT MOBILE CAR BACK WHEEL SHAFT	N/A	
15	AKUA08005	E-COAT MOBILE CAR BACK WHEEL 200X50	N/A	
16	TRTM04049	E-COAT MOBILE CAR BACK WHEEL SHAFT PLATE	N/A	
17	AKUA08006	E-COAT MOBILE CAR FRONT WHEEL	N/A	
18	B07EC0018	E-COAT MULTICOLOR VIBRATORY STAND (COMPLETE)	N/A	
	18.1	MPMT03001	E-COAT MULTICOLOR VIBRATION MOTOR Ex II 3D	N/A
	18.2	B07ECM002	E-COAT MULTICOLOR VIBRATORY STAND METAL BODY	N/A
	18.3	KBKE01043	E-COAT MULTICOLOR PAINT BOX HOLDER	N/A
	18.4	BECV02009	BOLT M6X30 YHB	N/A
	18.5	BESM02003	NUT M6 FIBER TIGHT	N/A
19	B07ECT006	E-COAT MOBILE CAR HEAD (COMPLETE)	N/A	
	19.1	B07560001	E-COAT MOBILE CAR HEAD METAL BODY	N/A
	19.2	AKUA04002	E-COAT MOBILE CAR HEAD GUN HANGER	N/A
	19.3	AKUA02001	E-COAT MOBILE CAR HEAD HANDLE	N/A
20	BECV02007	BOLT M5X15 YHB	N/A	



Part #	Order Code	Part Name	Wearing Part
1	PNRD01010	HOSE CONNECTOR 1/8" - Ø6 MALE STRAIGHT	N/A
2	B07ECM011	E-COAT MULTICOLOR SUCTION TUBE (Y1)	N/A
3	IZOR01027	ORING Ø30X2 NBR70	N/A
4	FRFL08007	E-COAT MULTICOLOR SUCTION TUBE FLUIDIZATION RING	*
5	IZOR01006	16-2 INJECTOR O-RING NBR70	N/A
6	TRTM03023	E-COAT MULTICOLOR SUCTION TUBE BOTTOM LID	N/A

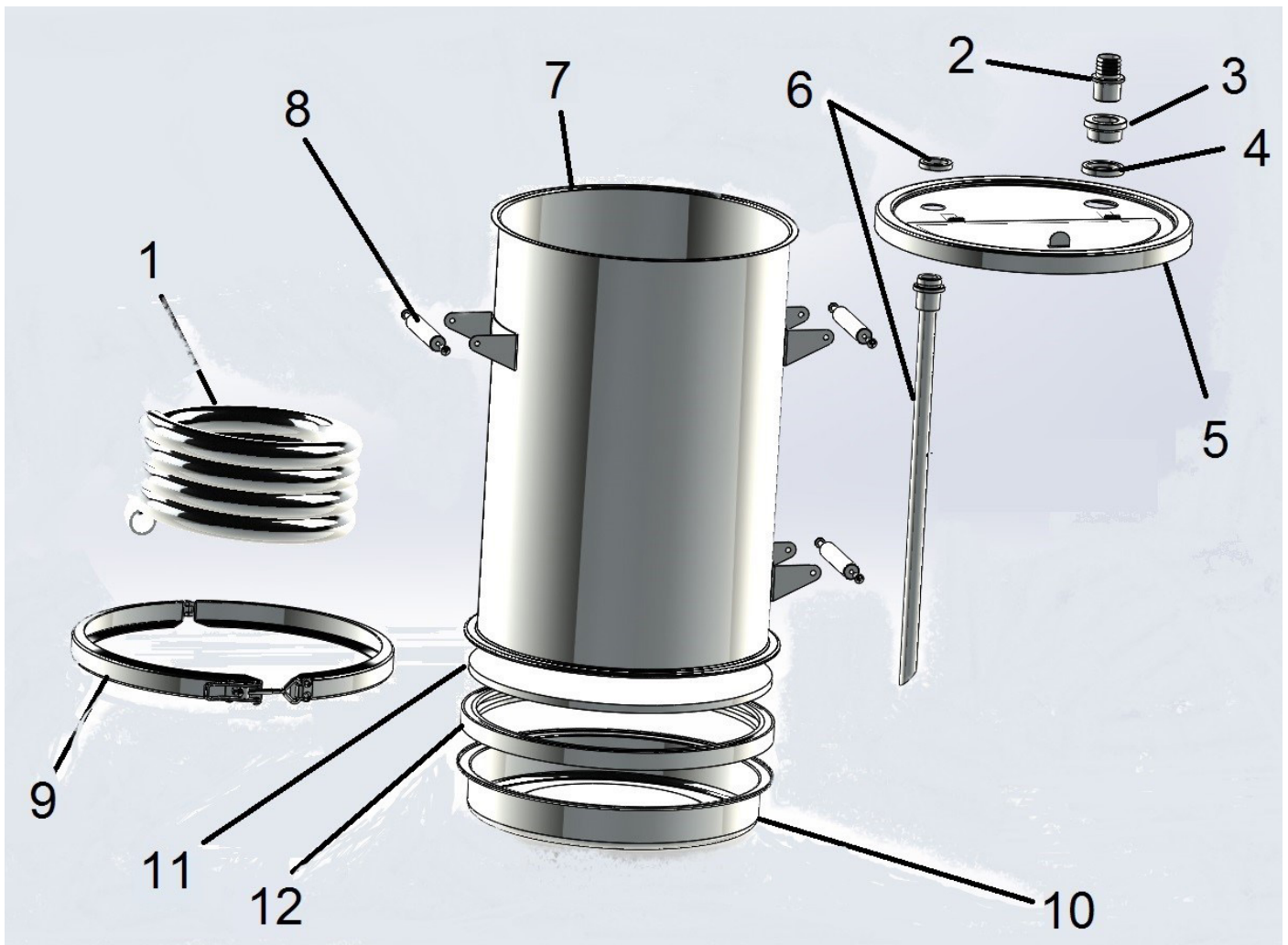




Part #	Order Code	Part Name	Wearing Part	
1	B07ECT006	E-COAT MOBILE CAR HEAD (COMPLETE)	N/A	
	1.1	B07560001	E-COAT MOBILE CAR HEAD METAL BODY	N/A
	1.2	AKUA04002	E-COAT MOBILE CAR HEAD GUN HANGER	N/A
	1.3	AKUA02001	E-COAT MOBILE CAR HEAD HANDLE	N/A
2	B07560002	E-COAT MOBILE CAR MAIN BODY	N/A	
3	PNPE02001	FR REGULATOR ¼" w/ SQUARE MANOMETER	N/A	
4	PNPE04001	VALVE 3/2 - ¼" N.C. Ex II 3D	N/A	
5	BECV01011	BOLT M5X10 YSB	N/A	
6	AKUA04001	E-COAT MOBILE CAR HOSE HANGER	N/A	
7	AKUA08005	E-COAT MOBILE CAR BACK WHEEL 200X50	N/A	
8	TRTM04048	E-COAT MOBILE CAR BACK WHEEL SHAFT	N/A	
9	TRTM04049	E-COAT MOBILE CAR BACK WHEEL SHAFT PLATE	N/A	
10	H09 ST5020	E-COAT MOBILE CAR FRONT WHEEL	N/A	
11	PNPE07002	MANOMETER Ø40 2,5 BAR	N/A	
12	ETKT03029	E-COAT MOBILE CAR FLUIDIZATION INDICATOR STICKER	N/A	
13	PNPE01002	REGULATOR - ¼" 0-3,5 BAR	N/A	



Order Code	Part Name	Wearing Part
A05EH0050	E-HOPP50 50 LT AISI304 POWDER COATING HOPPER	N/A



Part #	Order Code	Part Name	Wearing Part
1	B07EH50903	E-HOPP50 EXHAUST HOSE	N/A
2	TRTM04053	E-HOPP50 EXHAUST HOSE ADAPTOR	N/A
3	TRTM04043	E-HOPP50 EXHAUST HOSE ADAPTOR CONNECTOR Ø50 L25	N/A
4	TRTM04042	E-HOPP50 EXHAUST HOSE ADAPTOR CONNECTOR NUT Ø50 L8	N/A
5	SCSC05004	E-HOPP50 TOP LID (BARE METAL PART)	N/A
6	B07KEYT001	E-HOPP50 INJECTOR CONNECTOR w/ SUCTION TUBE	N/A
7	B06CE02001	E-HOPP50 HOPPER MAIN BODY AISI 304	N/A
8	TRTM04041	E-HOPP50 HOPPER BODY HOLDER Ø20 L110	N/A
9	B07EH50901	E-HOPP50 BOTTOM LID LOCK	N/A
10	SCSC05003	E-HOPP50 BOTTOM LID	N/A
11	FRFL07003	E-HOPP50 FLUIDIZATION PLATE	*
12	IZCS02001	E-HOPP50 FLUIDIZATION PLATE GASKET	N/A

## 7. Service and Maintenance Table

DATE	MAINT. TYPE -Weekly -Yearly -Service	MAINT. OR SERVICE PERSONNEL	PROCEDURE CHANGED PARTS NOTES	CONTROL SUPERVISOR

## 8. Product Life and Warranty

### 1. Product Life

- The economic life of E-COAT Master is approximately 10 years.
- This product life is highly dependent on the periodic maintenances and spare part changes in a timely manner. Improper maintenance will lead to lower product life.
- SİSTEM TEKNİK A.Ş. warrants supplying the needed service and the spare parts for the entire product life.

### 2. Warranty and Warranty Conditions

- The gun is warranted for production and parts failure for 2 (two) years.
- Spare parts that are changed from the warranty are free-of-charge.
- The parts that are supplied in the system which are not produced by SİSTEM TEKNİK A.Ş. are warranted with their own manufacturers and their own conditions.
- SİSTEM TEKNİK A.Ş. will not be held responsible for the improper usage of the machine or any unauthorized usage. These are not in the warranty.

### 3. Operating Conditions

- Read the user manual before using the gun.
- Only legally allowed people can operate E-COAT Master.
- Only trained and authorized people can operate E-COAT Master .
- SİSTEM TEKNİK A.Ş.'s suggested spare parts should be used at all times.
- Proper maintenance has to be done and the spare parts has to be changed in a timely manner
- The operational safety has to be assured by the customer; the operators who are not capable of working under safety rules shouldn't be operating the Control Unit
- All the suggestions and warnings in this manual have to be carefully considered and applied.





**MERKEZ OFİS / Head Office**

✉ info@electron.com.tr

☎ +90 (212) 222 2 345

📅 +90 (212) 210 6 761

📍 PERPA Tic. Mer. B.Blok Kat:2 No: 65  
34385 Okmeydanı İSTANBUL / TÜRKİYE

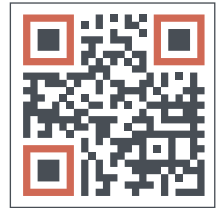
**FABRİKA / Factory**

✉ izmir@electron.com.tr

☎ +90 (232) 799 0 232

📅 +90 (232) 799 0 242

📍 İTOB Org. San. Bölgesi 10010 Sk. No: 10  
35470 Menderes İZMİR / TÜRKİYE



[www.electron.com.tr](http://www.electron.com.tr)

