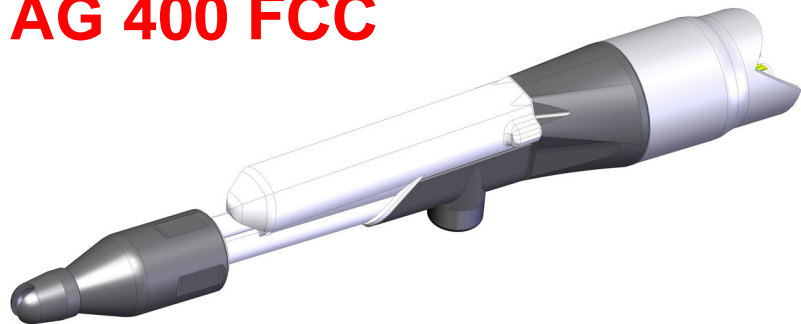




From February 1st, 2017 SAMES Technologies SAS becomes SAMES KREMLIN SAS
A partir du 1/02/17, SAMES Technologies SAS devient SAMES KREMLIN SAS

SAMES  **KREMLIN**

AG 400 FCC



GCU 400



User manual

**Eurotec
AG 400 FCC
Automatic Spray Gun
GCU 400 and GCU 400L Control modules**

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The French version is deemed the official text and Sames will not be liable for the translations into other languages.

Eurotec
AG 400 FCC
Automatic Spray Gun
GCU 400 and GCU 400L Control modules

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1. Health and safety instructions

1.1. Warnings



WARNING : This equipment may be dangerous if it is not used, disassembled and reassembled in compliance with the regulations specified in this manual and in all applicable European standards or national safety regulations.



WARNING : Equipment performance is only guaranteed if original spare parts distributed by SAMES Technologies are used.

DO NOT permit untrained or unauthorised personnel to maintain or adjust this equipment.

All other manuals relevant to components and equipment of the installation must be followed.

NOTE: Refer to pneumatic specifications.

- 1 Ensure that the equipment is properly earthed/grounded. Refer to assembly instructions.
- 2 The electrical supply to the gun's electrostatic generator and the control unit must be interlocked with the spray booth extraction system such that spraying cannot be carried out unless the exhaust ventilation system is in operation. The efficiency of the exhaust ventilation system should be checked regularly
- 3 All conductive structures within the vicinity of the spray area shall be bonded together with the earth terminal of the high voltage generator to the protective earth of the electrical supply system.
- 4 The equipment operates by electrostatically charging the powder by means of a high voltage corona discharge at the nozzle of the spray gun. This electrostatic discharge can seriously damage other electronic equipment if it is sited in close proximity and not suitably protected.
- 5 It is essential that all jigs and work pieces are adequately earthed. The workpiece shall have a resistance to earth of no greater than 1 Mohm. This should be checked regularly. If the earthing is not adequate, this can result in:
 - Poor coating.
 - Sparks between the product and jigs, which can constitute an ignition or explosion hazard.
 - Radio and TV interference from sparks between the product and jigs. This interference may also affect computer systems and process controllers.
- 6 Ensure the air supply is clean and dry.

2. Description

2.1. AG 400 FCC (Fast Color Change) automatic powder spray gun

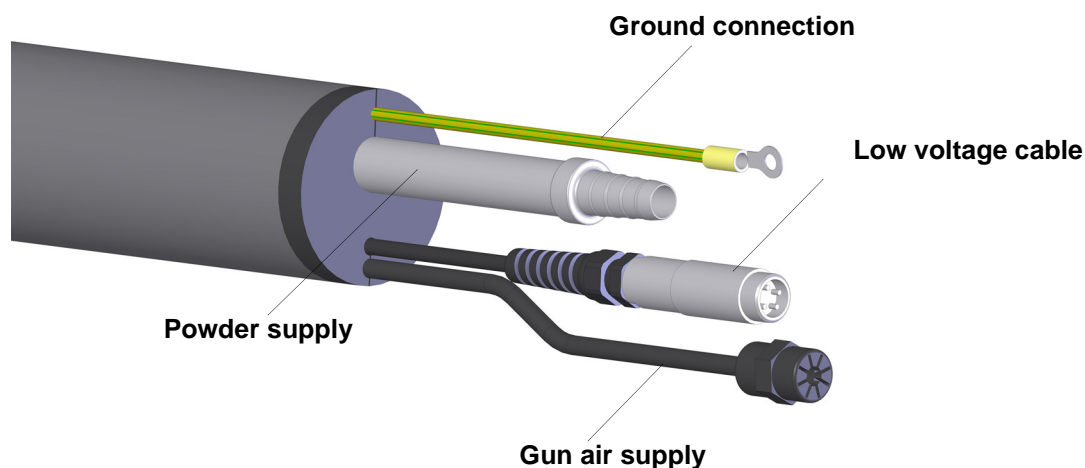
The AG 400 spray gun is built to a robust and compact design using a high efficiency corona discharge to charge the powder coating material.

It incorporates a high voltage unit charging system which converts the governed low voltage dc. power supply received from GCU 400 Series Gun Control Unit to a maximum output voltage of 85kV and a maximum output current of either 50uA (mode 1) or 100uA (mode 2) at the single point corona needle.

The gun nozzle may be fitted with a variety of powder deflectors and slotted caps which, combined with a forward air supply to the nozzle, enable the operator to control the spray pattern to suit the components being sprayed. A variety of nozzle adapters are available separately including a cup attachment.

The power connection to the gun is via a screened highly flexible cable.

The AG 400 FCC Automatic Powder Coating Spray Gun is mounted on a hollow support arm allowing a fast and easy cleaning. All the connections are deported on the rear of the arm to facilitate the removal of the whole during the maintenance.



2.2. GCU 400 control module

The Gun Control Unit provides all the control functions necessary to spray and charge powder using the AG 400 FCC automatic powder coating spray gun.

It contains the control P.C.B. which provides a checked low voltage d.c. power supply to the spray gun. The operator may adjust the spray gun output to a maximum output voltage of 85kV and a maximum output current of either 50uA (mode 1) or 100uA (mode 2) using the control unit.

The set value of kV (mode 1) or uA (mode 2) is displayed on a numerical led display.

Separate led bar graph displays enable the operator to monitor the electrostatic charge supplied to the gun either in terms of the voltage or current.

The unit has 3 regulated pneumatic outlets, the pressure regulators and gauges being mounted on the front panel.

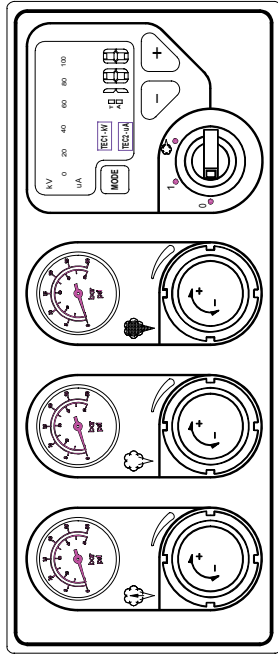
Two of these supply air to the venturi powder air and dilution air ports for pumping and controlling the supply of powder fed to the gun. The third is used to supply air to the nozzle of the spray gun.

Led indicators on the front panel show whether the unit is set for use with manual or automatic guns and it's also the unit is operating in mode 1 (TEC (Total Energy Control) 1) or mode 2 (TEC (Total Energy Control) 2).

The mains electrical supply to the unit is provided via. a sealed connector.

A non-switched electrical outlet is provided to enable the electrical supply to be linked through to other units, for example when situated in an automatic system console or double operator manual units. Circuit protection is by means of miniature circuit breakers.

The unit is mounted by means of 2 x M6 screws in each side, and on the rear panel.

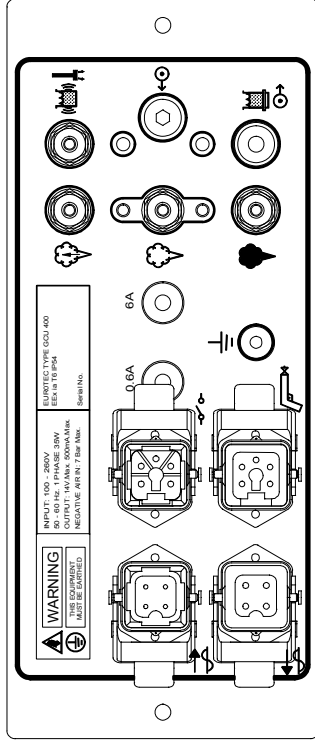


- Gun air supply
- Powder dilution air supply
- Powder delivery air supply
- UNIT OFF

- 1. UNIT ON - Powder & Electrostatics on when gun trigger switch operated
- UNIT ON - Powder without Electrostatics on when manual gun trigger switch operated and Remote control for automatic gun

- Bar graph display of discharge Kilo volts
- Bar graph display of discharge Kilo amps
- Set value of electrostatic discharge - kV (TEC 1) or μ A (TEC 2)
- Illuminated when total energy control mode 1 selected operator control of kV
- Illuminated when total energy control mode 2 selected operator control of μ A

- Illuminated when unit triggered by manual gun or remote PLC
- Illuminated when auto gun connected
- Push button selector switch for TEC 1 or TEC 2
- Push button switch to reduce electrostatic output
- + Push button switch to increase electrostatic output



- Gun air supply outlet
- Powder dilution air supply outlet
- Powder delivery air supply outlet
- Mains electrical input (arrow points towards connector)
- Mains electrical output (arrow points away connector)
- Electrical output to gun
- Electrical input from remote trigger
- Earth connection point
- Circuit breaker - generator supply
- Circuit breaker - slave output
- Main air supply in (arrow points towards connections)
- Fluid bed / Aux air supply out (arrow points away from connection)
- Vibrator / Fluidising pad air supply out (arrow points away from connection)


3. Characteristics

3.1. Electric characteristics

Electric datas	
Input Voltage	100-240 Volts 50 / 60 Hz single phase
Power Consumption (full load)	45 VA
Input Current (max.)	400 mA at 115 V 200 mA at 230 V
Electrostatic output voltage (max.)	10 - 85 kV negative
Electrostatic output current	Mode 1; 0 - 50 μ A Mode 2; 0 – 100 μ A

Electric Controls		
Mains Switch	Rotary 3 positions	OFF/ON/REMOTE (AUTO)
Mode Selection	Push Button LED's display mode selected	TEC 1 (mode 1) / TEC 2 (mode 2)
Charge Control	Push Buttons +/- to increase or decrease	Sets the maximum level of kV (Mode1) Sets the maximum level of μ A (Mode2)
Set Value Display	Numerical LED Indicator	Displays set max. kV. (Mode1) TEC 1 Displays set max. uA. (Mode2) TEC 2
Electrostatic Charge Indicators	LED Bar Graphs	0 to 100 μ A / 0 to 100 kV

Auto-Manual Selection: GCU 400 control module automatically detects which type of gun is connected

Auto gun connected LED displays "A" Auto selected LED Indicator at "A" LED Indicator at "T" when triggered	Unit triggers automatically when main switch is turned to On position. (1) Unit triggers via remote 24V dc. supply when switch is turned to Remote position 
--	---

Mains Input	Via connector on rear panel	
Mains Output Socket	Non switched 6A max.	-may be used to connect additional control units.
Trigger Switch - Hand Gun	Microswitch in hand gun	-connected through plug and socket on rear of control unit.
Remote Trigger	24 V dc. Supply from Remote PLC	-connected through plug and socket on rear of control unit.

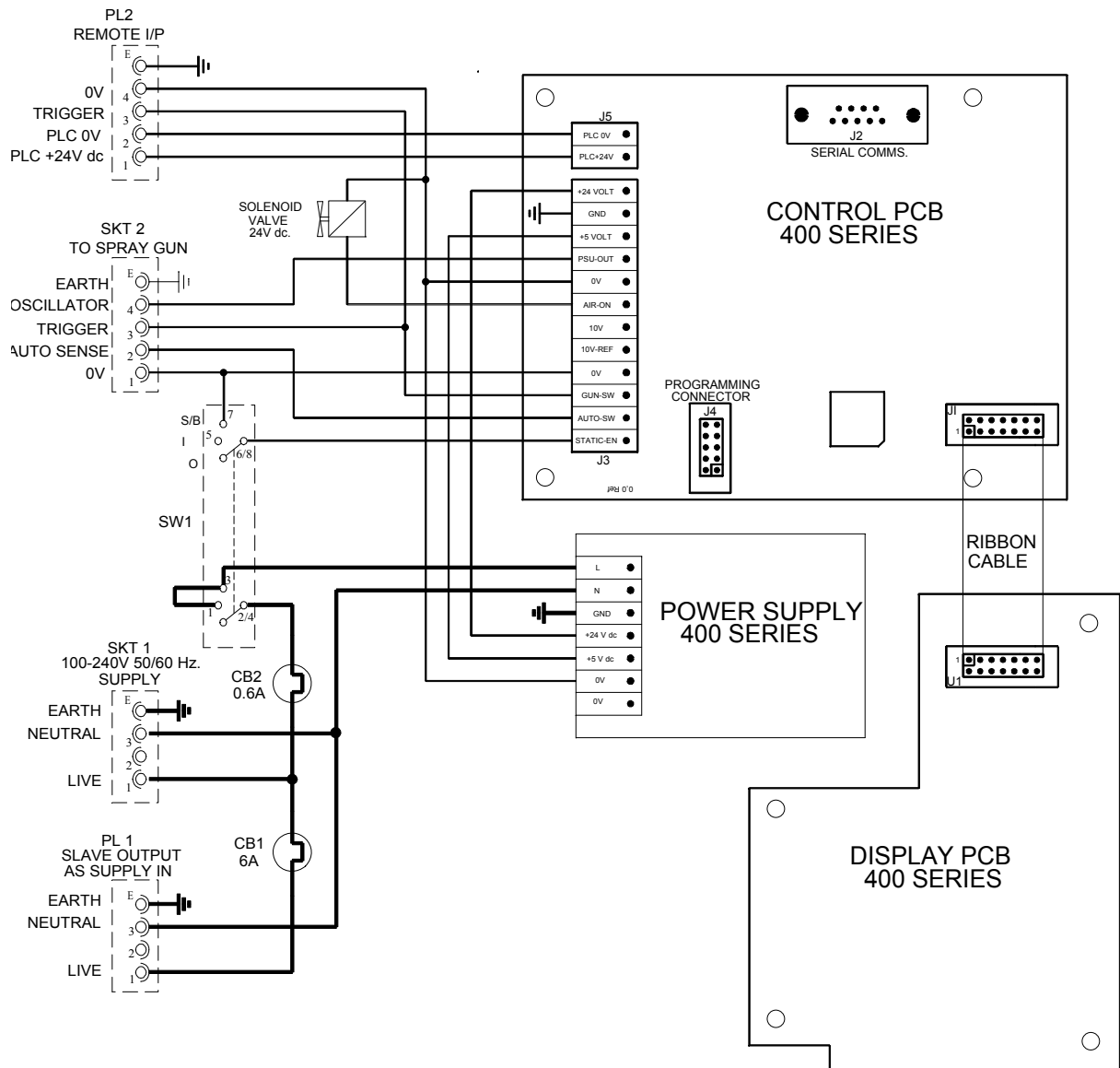
Circuit Protection		
Miniature circuit breakers	Mains input Mains output	0.6A 6A

Pneumatic Data	
Input air pressure	7.0 bar (102.9 p.s.i.) max
Input air conditioning	Oil free to 0.1 p.p.m. and dry to 1.3 g/cubic Nm.
Air consumption (Nominal)	400EA 10.0 cubic m/h. (6.0 c.f.m.) Auto Unit
Input connection	8mm. OD tube air fitting.

Pneumatic Controls (Pressure regulators and gauge) These control the air supply pressure to the following		
i) Powder delivery	4 bar (60 psi)	venturi jet controls delivery of powder from the venturi to the gun.
ii) Dilution ratio	2 bar (30 psi)	venturi dilution controls mixture ratio of powder to air from venturi to gun.
iii) Gun-Forward air	2 bar (30 psi)	venturi dilution controls mixture ratio of powder to air from venturi to gun.

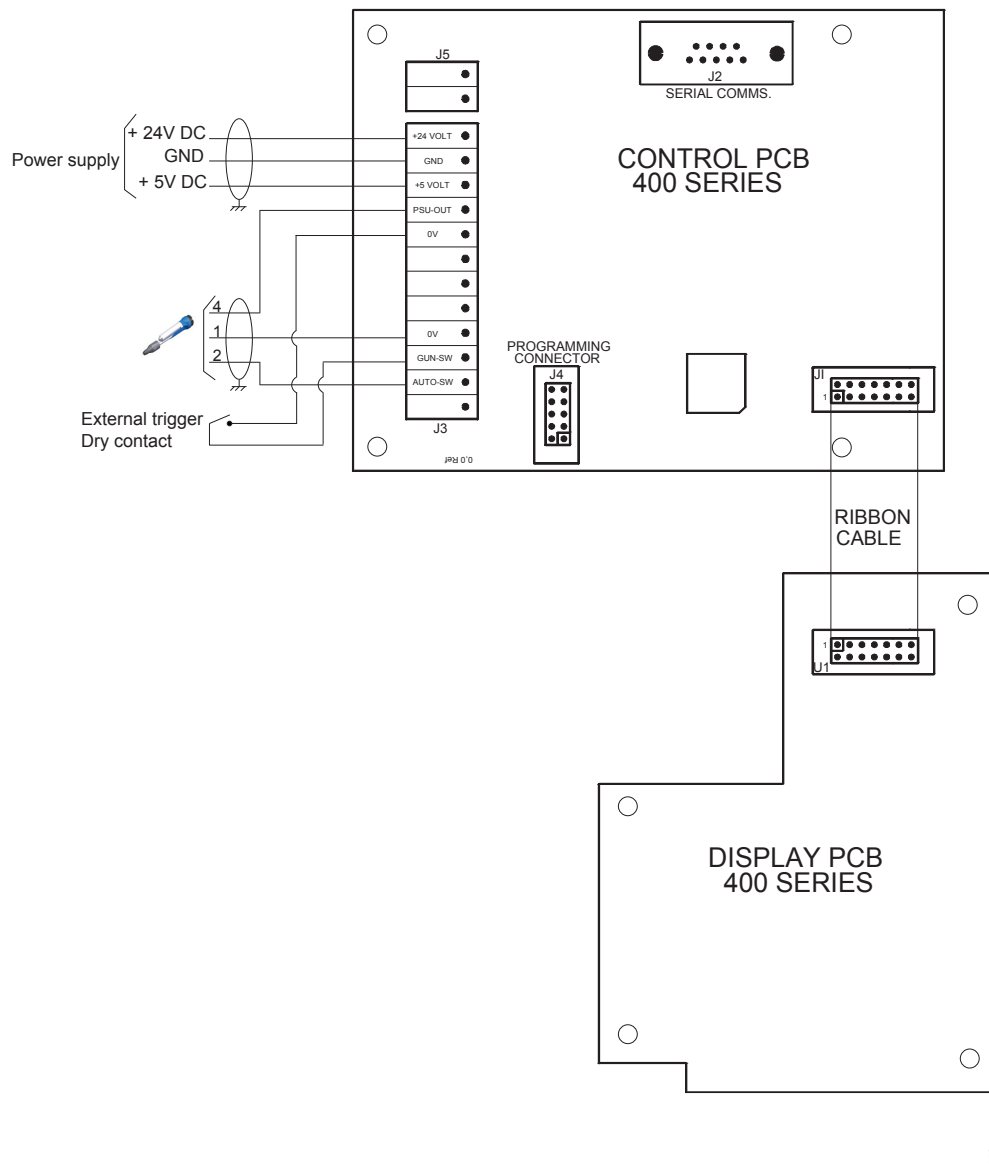
4. Diagrams

4.1. Connecting diagram GCU 400

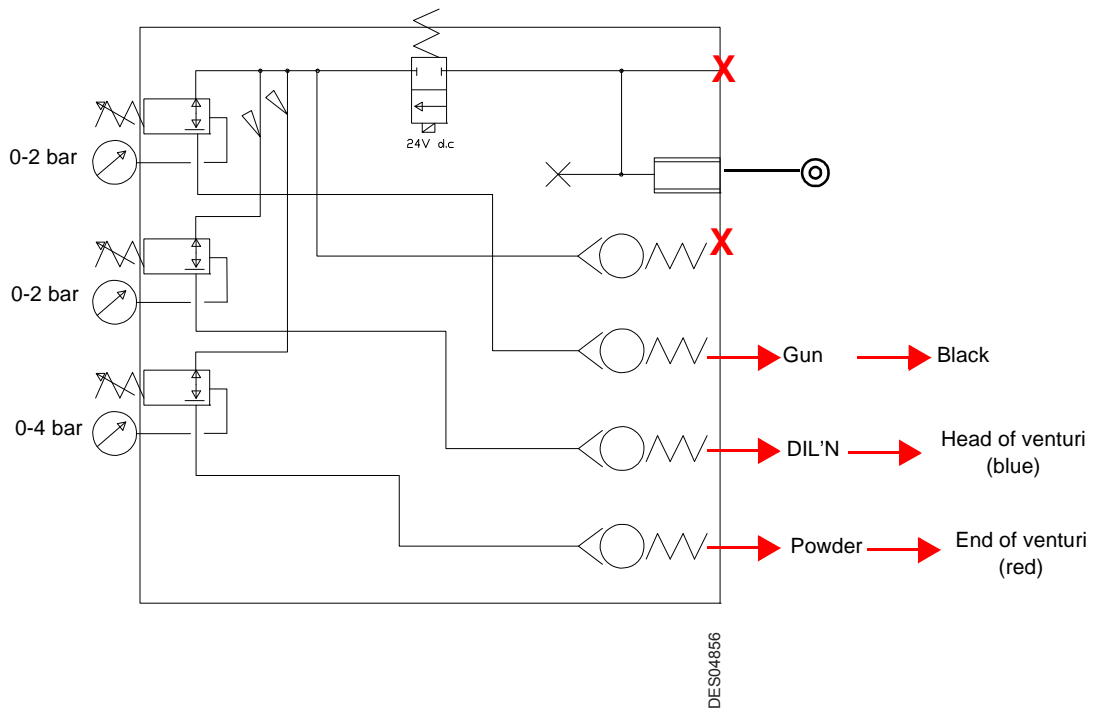


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4.2. Connecting diagram GCU 400 L

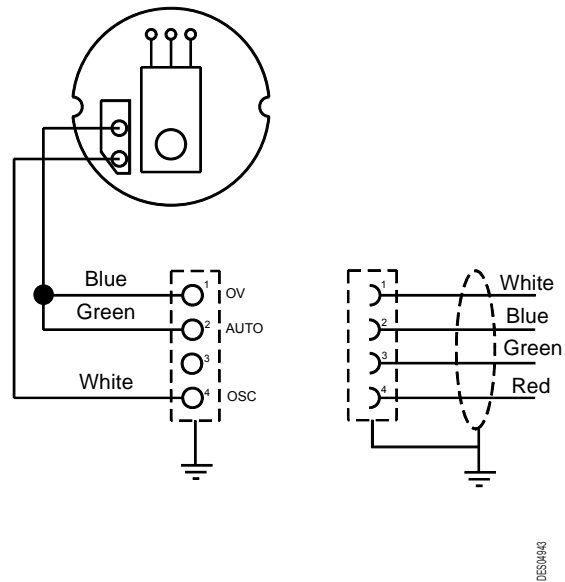


4.3. Pneumatic diagram



4.4. AG 400 Wiring diagram, Oscillator PCB

**AG 400 automatic powder gun,
Oscillator PCB**



5. Installation



WARNING : This equipment must be earthed.

- Carefully remove units and components from packaging, and check contents against packing list.
- Install the Gun Control Unit in a secure manner and placed at least 1m to any opening of the booth.
- Connect the airlines to the outlet ports of the rear panel of the Gun Control Unit as follows:- (Refer to the rear panel illustration and key to symbols).
 - 1 RED airline from Venturi Jet to the 'Powder Delivery Air Supply Output'.
 - 2 BLUE airline from Venturi Dilution Port to the 'Powder Dilution Air Supply Output'.
 - 3 BLACK airline from the Guns to the 'Gun Air Supply Output'.

Note: The Venturi Jet is identified by a red washer at the injection and dilution port by a blue washer.

- Remove the dust cover from the 'Gun Supply and Trigger' connector on the rear panel. Plug in and secure the gun cable using the latch provided.
- Connect a suitable airline to the main incoming air fitting, 'Mains Air Supply In'.
- Connect the mains electrical supply to the main electrical input connector.
- Connect the yellow/green wire at the rear of the gun to the ground.



WARNING : Under no circumstances should this equipment be connected to a mains supply which does not include a grounding wire and contacts. e.g.. 2 -Wire extension leads as used for some domestic equipment MUST NOT BE USED.

The terminals used in the mains connectors on the rear panel of the unit are:

Live	Pin 1
Neutral	Pin 3
Earth/Ground	Pin E

NOTE: The method of disconnection from the mains electrical supply shall be by removal of the plug on the mains lead from its respective supply socket.

NOTE: If the system is intended to be permanently connected to mains wiring then the switch used to disconnect the unit from the supply voltage must disconnect all poles and have a contact separation of at least 3mm.

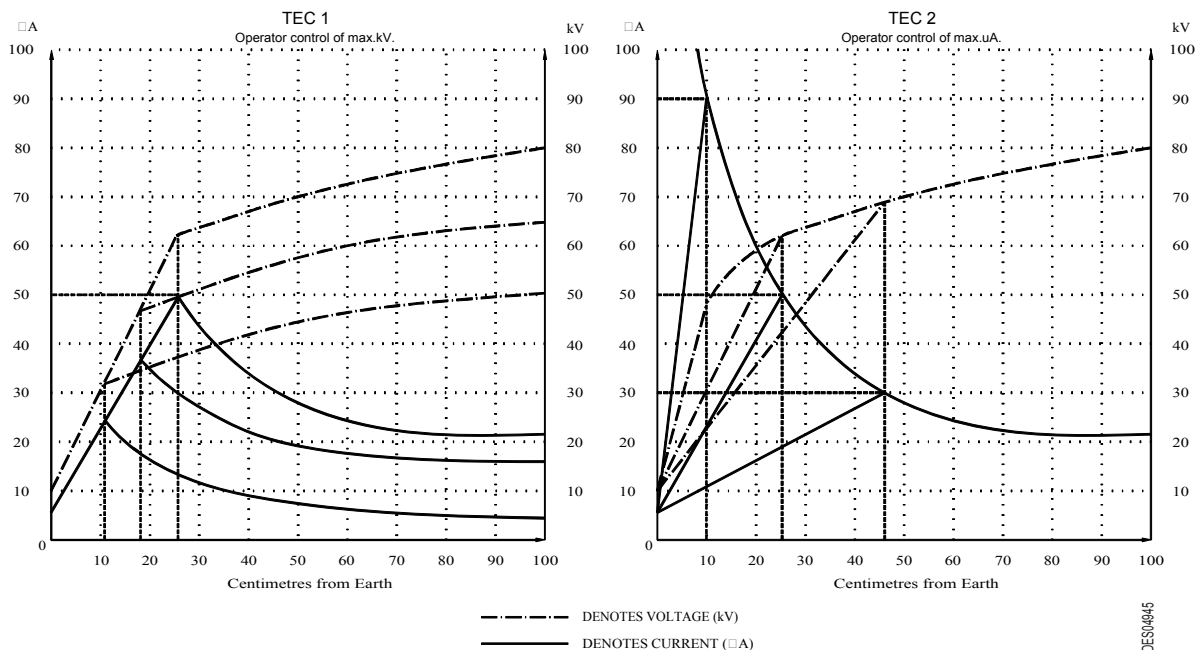
6. Operating instructions

see § 4.3 page 12 for pneumatic diagram.

- **Step 1:** Ensure that all switches are in the OFF position and that all pressure regulators are closed (The knobs should be turned fully anticlockwise). The knobs of the pressure regulators are released by pulling upwards and locked by pressing inwards.
- **Step 2:** With the spray gun pointing into an extracted spray booth, turn the main electrical switch to the "On" position.(1)
When used with automatic spray guns the mains electrical switch will also trigger the electrostatic generator and air supplies.
Open the left hand regulator to approx. 5 psi to supply air to the gun nozzle.

Open the centre regulator (dilution air) to approximately 5-10 psi. and then open the right hand regulator (powder) to give the required powder output. It is good practice always to operate the "Powder" regulator last in order to avoid any powder contamination of air lines. A good starting point is approximately 20 psi.

- **Step 3:** Having set the volume of powder required from the gun, there may be a tendency for the powder flow to surge unduly, this can normally be eliminated by adjusting the dilution air pressure. With the gun pointing into an extracted spray booth, trigger the unit and slowly move the nozzle of the gun progressively closer to an earth point or the product. It will be seen that as the nozzle moves closer, the current will rise progressively to a maximum of 50 μ A in mode 1 (TEC 1) or 100 μ A in mode 2 (TEC 2). As the nozzle continues to be moved closer, the discharge current and voltage then falls progressively to very low levels as the nozzle touches the earth.



The discharge current and voltage will be dependent on the proximity of the spray gun discharge needle to earth. When setting the maximum discharge voltage, the spray gun discharge needle should be placed at least 300 mm from earth.

General Observations:

- It is essential that all substrates and jigs are clean and that there is a good earth/ground to the workpiece to ensure maximum powder attraction.
- Higher powder emissions do not necessarily mean faster coating or better penetration into corners and recesses. In practice it can often cause the opposite effect and produce products with a poor finish.
- Similarly, high electrostatic discharge currents or voltages do not necessarily mean faster or more efficient coating. Again, in practice, they can cause the opposite effect and produce products with a poor finish.

6.1. DO's

- 1 Ensure that the equipment is operated by trained personnel only
- 2 Ensure that the equipment is serviced regularly by qualified personnel. All repairs and maintenance shall be carried out by qualified personnel only, in accordance with the manufacturers instructions (failure to observe may result in the invalidation of any warranty on the equipment). Repairs must be carried out at the instigation of the operator when faults or defects are detected. Repairs must not be performed in hazardous areas and must not compromise safety standards.
- 3 Ensure that the operator is correctly earthed. If overalls are worn, they should be anti-static or non-insulating. If gloves are worn, they should be anti-static or non-insulating. If this is not possible, gloves with the palms removed may be used. Footwear intended for use by operators shall be anti-static or non-insulating and shall comply with the requirements of ISO 2251 / BS 5451 or equivalent. Shoes with leather soles are usually adequate.
- 4 Ensure that the operator wears suitable respiratory equipment and or protective clothing. All personnel working in a powder-laden atmosphere should wear similar equipment.
- 5 Ensure that the operator wears suitable eye protection e.g. goggles or visor (in addition to a respiratory mask) when using a compressed air clean down gun as particles in the airstream can damage eyes.
- 6 Avoid skin contact with powders where possible as some powders may cause skin irritation.
- 7 Wash hands and face after work and prior to eating or drinking.
- 8 Keep floors and equipment within 5 metres of the spray area clean using a suitable industrial vacuum cleaner.
- 9 Keep light fittings and all other electrical equipment clean.
- 10 Regularly check the effectiveness of dust/powder extraction filters and that recycled air is clean.
- 11 Regularly check the earthing of electrical equipment and manually operated spray guns.
- 12 Regularly check the earth bonding of all conductive electrical enclosures and all conductive structures such as floors, walls, ceilings, fences, conveyors, powder containers etc. within the vicinity of the spray area. These shall be bonded together with the earth terminal of the high voltage generator to the protective earth system of the electrical supply. Electrostatic grounding should comply with EN 50053 or equivalent.
- 13 Ensure that all jigs and work pieces are adequately earthed. Each workpiece shall have a resistance to earth of not greater than 1 Mohm. This resistance shall be checked regularly.
- 14 Ensure that correct cleaning procedures are followed ([see § 6.3 page 16](#)).
- 15 Ensure that powders are processed in compliance with the powder manufacturers instructions. Special care should be taken with powders containing metallic pigments.



WARNING : The workplace must be kept tidy and well organized to reduce the risk of accidents. Good illumination, protection from any damp environment and correct storage of materials will assist the operator to maintain concentration and an awareness of potential hazards.



WARNING : Before starting to clean the spray gun or carrying out any other work in the spraying area, the high voltage supply shall be switched off in such a manner that it cannot be re-energized by operating the trigger of the spray gun.

6.2. DONT's

- 1 The operator must not wear insulating gloves, clothing or footwear.
- 2 Do not smoke in areas where powder coating is being carried out or in areas where powder is stored.
- 3 Do not eat or drink in areas where powder coating is being carried out or in dust-laden atmospheres.
- 4 Do not spray into areas which are not properly extracted.
- 5 Do not use compressed air for cleaning skin and clothing as it can penetrate the skin causing embolisms. Use a suitable industrial vacuum cleaner for clothing and wash skin with water.
- 6 Do not point compressed air clean down guns towards body orifices such as mouth, ears etc.
- 7 Do not enter spray booths when in operation.
- 8 Do not operate fluidized beds without connecting a suitable vent hose from its lid to an extracted area such as a spray booth.
- 9 Do not place the GCU control within the minimum distance of 1m to any powder spray booth opening.

The GCU 400 control unit is not permitted inside the hazardous area. Only the gun units are designed for ATEX 21 area.

6.3. Changing colour

In order to prevent contamination of the product from a previous colour, it is essential to remove all traces of the previously sprayed powder from the application equipment. i.e.. Powder container, suction tubes, Venturies, Powder hoses and Spray guns. Also any other surfaces where powder may become dislodged and cause contamination of the product or new powder. If the powder is to be reclaimed, then the spray booth, ductwork and recovery equipment must also be thoroughly cleaned.



WARNING : Whenever compressed air is used for cleaning equipment. This operation must be carried out in an extracted spraybooth.



WARNING : During the cleaning phases, it is necessary to switch off the high voltage and ensure that a third person cannot activate it remotely.

7. Troubleshootings

Symptoms	Remedies
No high voltage The check unit GCU 400 is switched OFF (No LED's will illuminate)	Check that mains connector is fitted to rear panel of control module
	Check that module is connected to a suitable mains electrical supply and is switched on (the electrical supply should be interlocked with the booth extraction system)
	Check that miniature circuit breaker (automatic fuses) on the rear panel of the control unit have not been tripped. If one or more has, then press to reset. If it trips again, switch off unit and refer to an authorized distributor or service agent.
No high voltage The check unit GCU 400 is switched ON (LED's will illuminate)	Check the gun trigger connection on the rear panel of the control unit is correctly fitted
	Check that the low voltage cable and its connection are not damaged. Replace if necessary.
No powder delivery	Check air supply to unit.
	Check that the powder container is not empty .
	Check that the powder in the powder container has no rat holes or voids around the suction or induction point - increase fluidization / vibration or agitate powder cup Check that powder is not damp.
	Check for kinked or blocked powder hose.
	Check for blockage in suction tube, ventury body and gun.
	Check that the internal solenoid valve is operating, an audible click should be heard from inside the control unit. If it is not, check the gun trigger connection on the rear panel of the control unit.
Powder delivery (intermittent or surging)	Check ratio of dilution air to powder air and adjust if necessary.
	Check for any kinks or partial blockages in the powder hose, venturi suction tube and body, or gun.
	Check that the venturi body is seating firmly on the mounting spigot and that o-rings are not damaged.
	Check condition of the PTFE insert in the venturi for signs of wear-replace as necessary.
	Check that there is sufficient powder in the box
	Check that the induction holes in the bottom of the suction tube are fully immersed in the box.
Powder does not adhere to workpiece	Check that the setting of the charge control (kV et μ A). and that an electrostatic charge is present at the discharge electrode needle of the gun. If no charge (or very poor charge) is present, then check that there is no water present from the compressed air supply or from condensation.
	Check that the gun barrel is not contaminated with metallic particles from bright unbonded metallic powders.
	Check that the workpiece is properly earthed/grounded.

Defaults on finished product

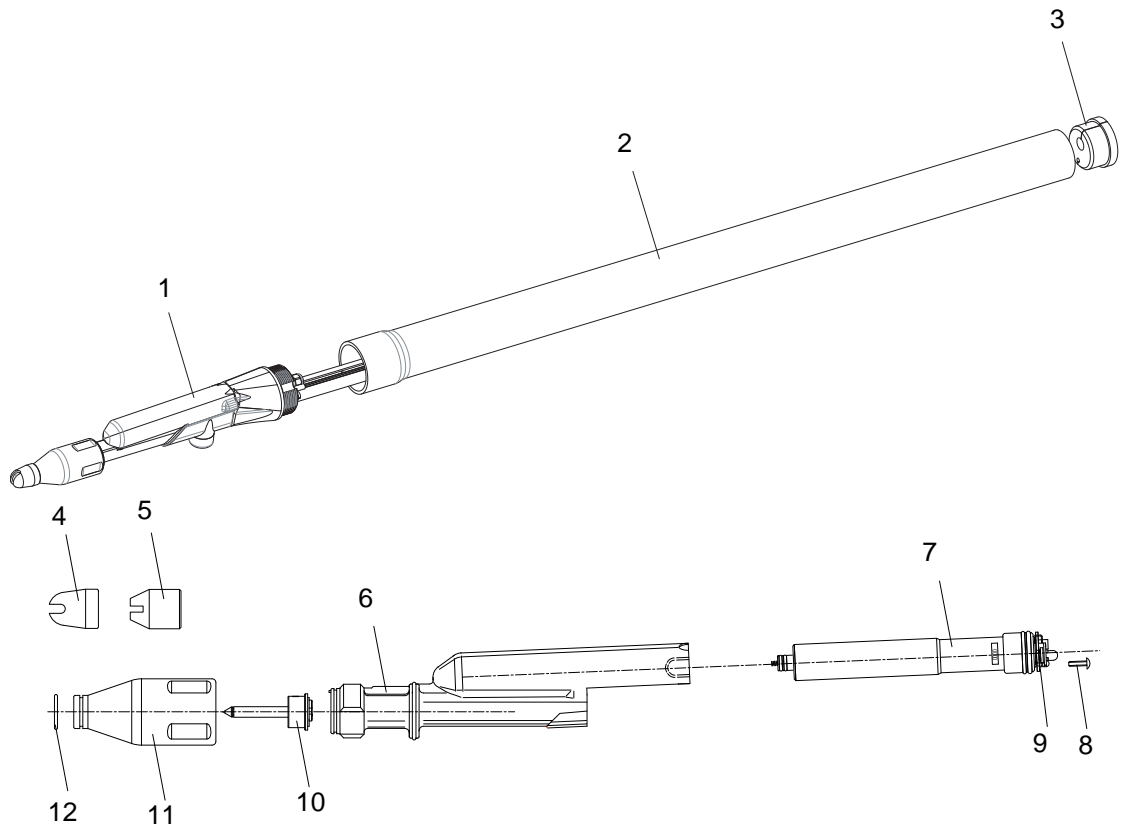
Symptoms	Remedies
Contamination of surface with specks of other colours	Application equipment inadequately cleaned after using previous powder.
	Airborne powder of different type within a contaminated spray booth, or sucked in from dirty surroundings.
	Reclaimed powder contaminated within other powders from within the reclaim system e.g. ductwork, cyclone, booth etc...
	Airborne contamination within the oven.
	Dust or dirt dislodged from jigs or conveyor.
	Dusty environment before or after coating.
Lumps or protrusions on surface	Dirty or contaminated powder
	Dirty or contaminated substrate (workpiece)
	Rusty substrate
	Dusty environment before or after coating.
	Dust or dirt in oven
Heavy "orange peel"	Applied coating is too thick
	Incorrect cure cycle and/or temperature
	Inferior quality of powder
Fish eyes	Contamination of substrate
	Contamination of powder
	Contamination of compressed air supply e.g. Silicone
Craters and voids	Poor cleaning of substrate e.g. trapped oils or solvents
	Wet components e.g. water trapped in corners or joints
	Contamination of powder
	Contamination of substrate
Pin- holing and bubbles	Porous substrate e.g. expansion or air or solvents from porosity or cavities in castings during curing cycle. Pre-heating of the workpiece may help.
	Excessive electrostatic charge applied to the powder. To overcome, reduce the discharge voltage and/or increase the spraying distance
	Rusty substrate
	Contamination of substrate, powder, air supply or from dirty surroundings.
	Excessive moisture in compressed air supply (see § 3 page 8)

Note 1: Contamination may be caused by airborne vapour such as wet paint, airline or conveyor oil or stripping facilities.

Note 2: Silicones and acrylic paints are the worst offenders and can contaminate the powder and / or substrate.

8. Spare parts

8.1. AG 400 FCC automatic spray gun



Item	Part Number	Description	Qty	Sale Unit	Level for spare part (*)
1	910015619	AG 400 FCC spray gun	1	1	3
2	1411605	Tube support arm	1	1	3
3	1315630	Arm plug, Dia.: 60mm	1	1	3
4	EU3019017	6mm fan spray nozzle, black	1	1	1
5	EU3022019	4mm fan spray nozzle, black	1	1	1
6	EU73019005	Barrel assembly (see § 8.1.3 page 21)	1	1	3
7	EU73019007	High voltage cascade	1	1	3
8	EU9000511	Screw, M3 x 12	1	1	3
9	EU73019008	Oscillator	1	1	3
10	EU73016185	Electrode assembly	1	1	1
11	EU3019013	Nozzle nut	1	1	3
12	EU9001856	Red o-ring	1	1	1

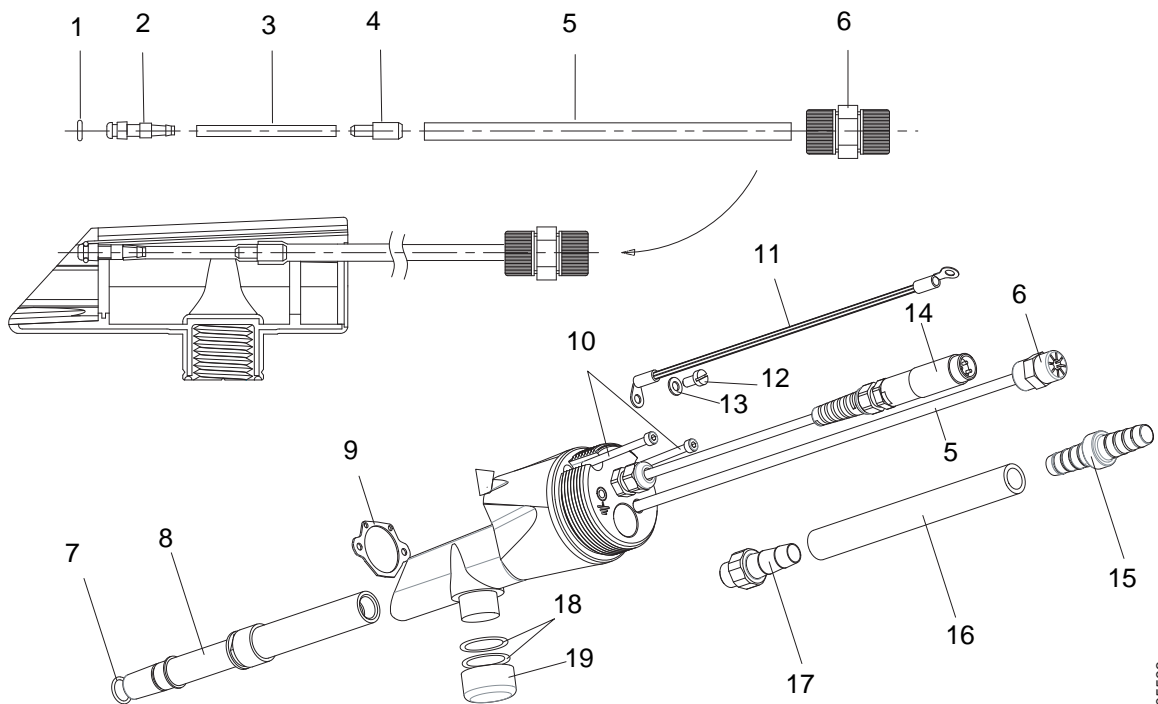
(*)

Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

8.1.1. AG 400 spray gun equipped body



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Item	Part Number	Description	Qty	Sale Unit	Level for spare part (*)
1	EU9001860	Black o-ring	1	1	2
2	EU3019027	Air pipette	1	1	3
3	EU9000203	Black hose Dia: 4	0,04	m	2
4	EU3022015	Air connection pipette	1	1	3
5	EU9000084	Black hose Dia: 6	1,25	m	2
6	EU9000116	Female-female dual fitting	1	1	2
7	EU9001862	O-ring	1	1	2
8	900010388	Powder tube	1	1	2
9	900010390	Flat seal	1	1	2
10	X3AVSY129	Zinc coated M4 X 50 screw	2	1	3
11	910015695	Ground wire	1	1	3
12	X7CVCB181	Slotted head brass C M 5x 10 screw	1	1	3
13	X7DDZU005	Brass Z 5 U washer	1	1	3
14	910015643	Low voltage cable	1	1	3
15	1315394	Powder hose fitting	1	1	2
16		Powder hose	1,2	m	1
17	900010391	Powder nipple	1	1	2
18	EU9001881	Black o-ring	2	1	2
19	900010389	Cap	1	1	3

(*) Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

8.1.2. Nozzles

Item	Part Number	Description	Qty	Sale Unit	Level for spare part (*)
	EU3019017	6mm fan spray nozzle, black	1	1	1
	EU3022019	4mm fan spray nozzle, black	1	1	1
	EU3016200	Round spray nozzle, small	Option	1	1
	EU3016201	Round spray nozzle, medium	Option	1	1
	EU3016202	Round spray nozzle, large	Option	1	1

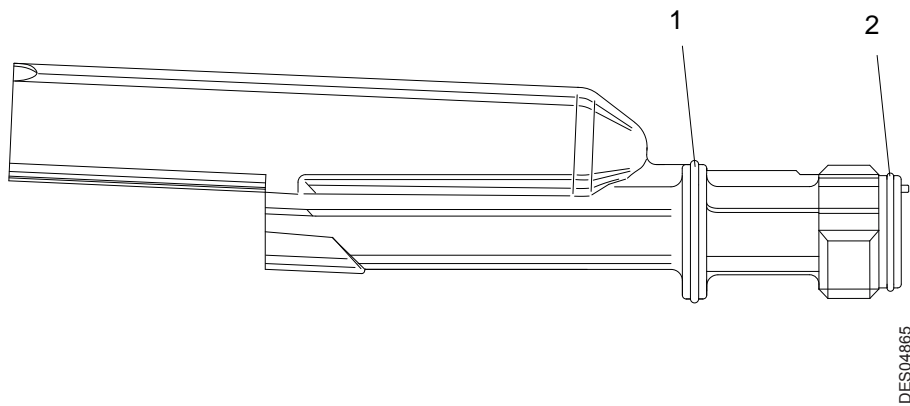
(*)

Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

8.1.3. Barrel assembly



Item	Part Number	Description	Qty	Sale Unit	Level for spare part (*)
	EU73019005	Barrel assembly	1	1	3
1	EU9001917	Red o-ring	1	1	1
2	EU9001865	Red o-ring	1	1	1

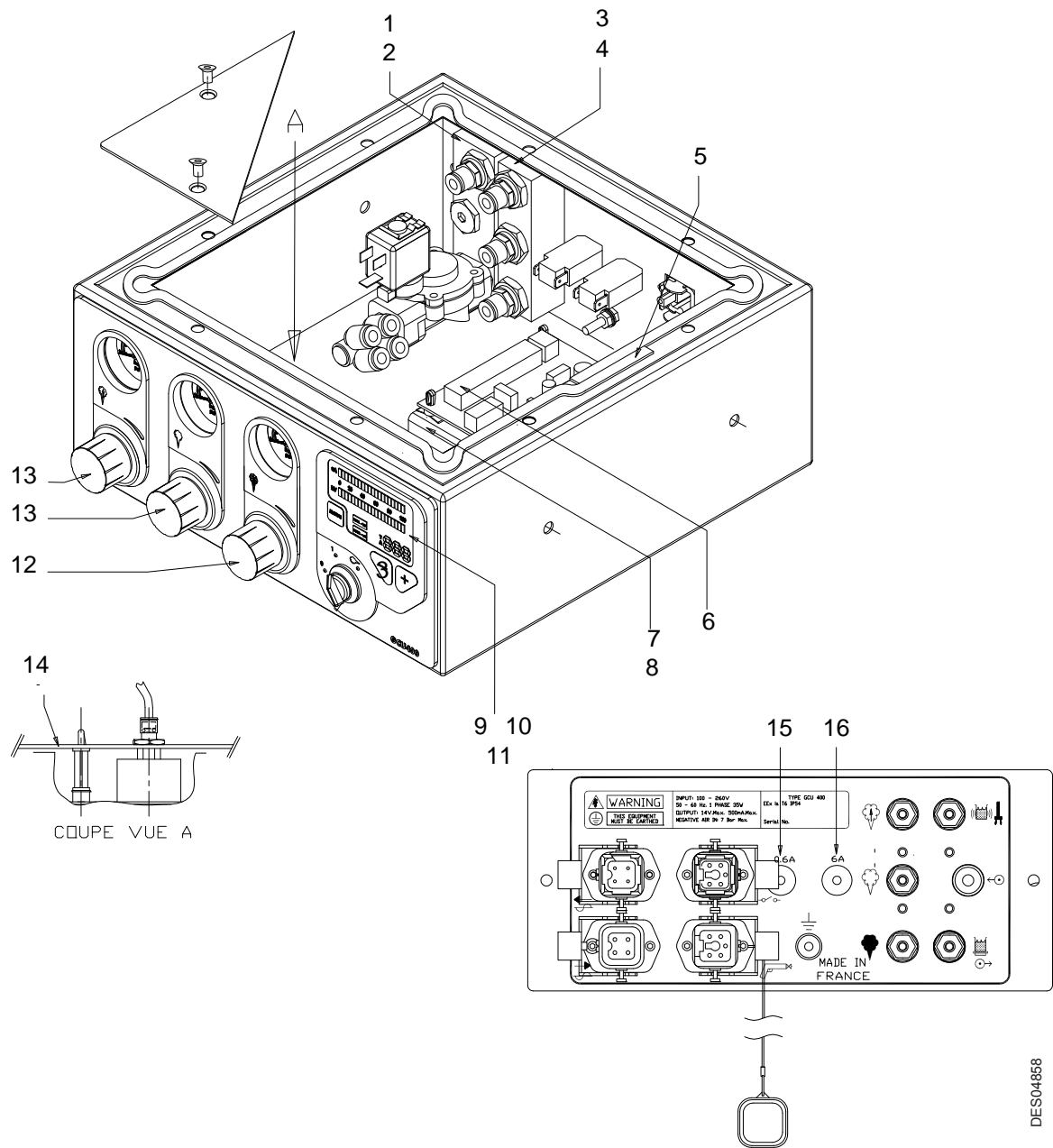
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Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

8.2. GCU 400 Control module



DES04858

Item	Part Number	Description	Qty	Sale Unit	Level for spare part (*)
	EU72024002	GCU 400 Module	1	1	3
1	EU72024009	Air input block assembly (see § 8.2.1 page 24)	1	1	3
2	EU2020060	Flat seal, air input block assembly	1	1	2
3	EU72024021	Air output block assembly (see § 8.2.2 page 25)	1	1	3
4	EU2020061	Flat seal, air output block assembly	1	1	2
5	EU9000063	Self-adhesive foam seal	1	1	3
6	EU2024006	Control PCB	1	1	3
7	EU9001882	Supply block	1	1	3
8	EU9001847	Plastic pillar 6.4 mm	4	1	3
9	EU2024005	Display PCB	1	1	3
10	EU9001849	Plastic pillar 9.5 mm	3	1	3
11	EU9001898	Nut M4 plastic	3	1	3
12	EU72010018	Regulator assembly 4 bar (see § 8.2.3 page 26)	1	1	3
13	EU72000026	Regulator assembly 2 bar (see § 8.2.3 page 26)	2	1	3
14	910009000	Pressure gauge assembly (see § 8.2.4 page 27)	1	1	3
15	EU9000016	Circuit breaker 0,6A	1	1	3
16	EU9000018	Circuit breaker 6A	1	1	3

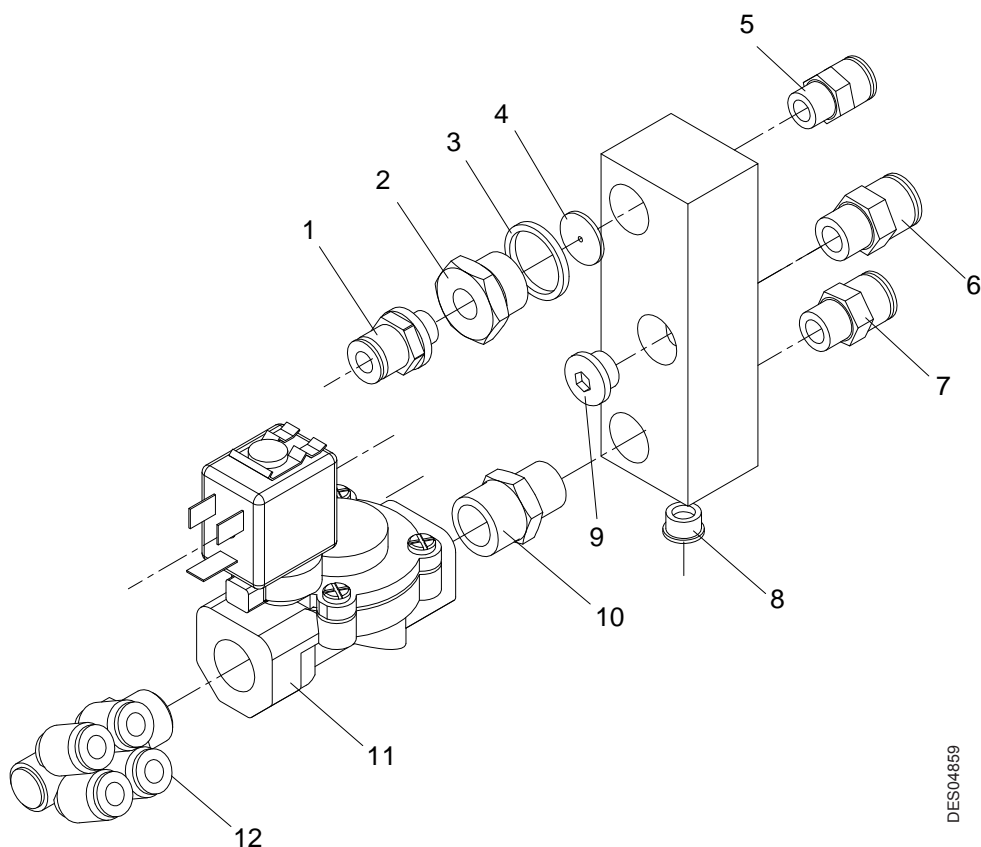
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Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

8.2.1. Air Input block assembly



DIES04859

Item	Part Number	Description	Qty	Sale Unit	Level for spare part (*)
	EU72024009	Air input block assembly	1	1	3
1	EU9000041	Straight fitting 1/8BSPM Dia: 6 plastic	1	1	2
2	EU2000031	Valve, Non return	1	1	3
3	EU9000042	Washer 3/8BSP	1	1	2
4	EU2000037	Seal, non return valve	1	1	2
5	EU9001889	Straight fitting 1/8BSPMT Dia: 6 metal	1	1	3
6	EU9001891	Straight fitting 1/4BSPMT Dia: 8 metal	1	1	3
7	EU9001890	Straight fitting 1/4BSPMT Dia: 6 metal	1	1	3
8	EU9001874	Plug 1/8 BSPMP	1	1	3
9	EU9001880	Plug 1/4 BSPMP	1	1	3
10	EU9000032	Male-male fitting 1/4 BSPMT 3/8BSPMT	1	1	3
11	EU9000038	Solenoid valve 2/2 3/8 BSP 24V DC	1	1	2
12	EU9001746	Banjo 3/8	1	1	3

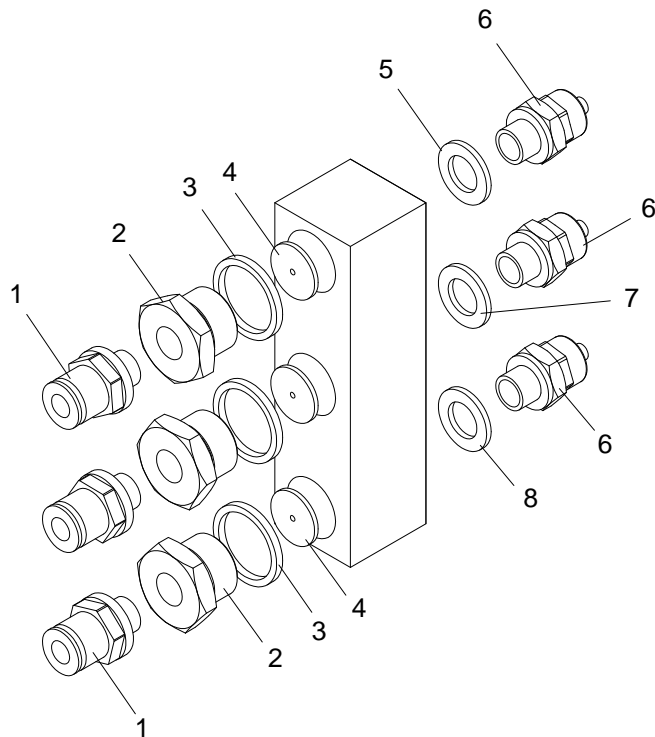
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Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

8.2.2. Air output block assembly



DES04860

Item	Part Number	Description	Qty	Sale Unit	Level for spare part (*)
	EU72024021	Air output block assembly	1	1	3
1	EU9000041	Straight fitting 1/8BSPM Dia: 6 plastic	3	1	2
2	EU2000031	Valve, Non return	3	1	3
3	EU9000042	Washer, sealing, 3/8BSP, nylon	3	1	2
4	EU2000037	Seal, non return valve	3	1	2
5	EU9000855	Washer 1/8BSP nylon black	1	1	2
6	EU9001045	Straight fitting 1/8BSP Dia: 6 metal	3	1	3
7	EU9001854	Washer, 1/8BSP nylon blue	1	1	2
8	EU9000853	Washer 1/8BSP nylon red	1	1	2

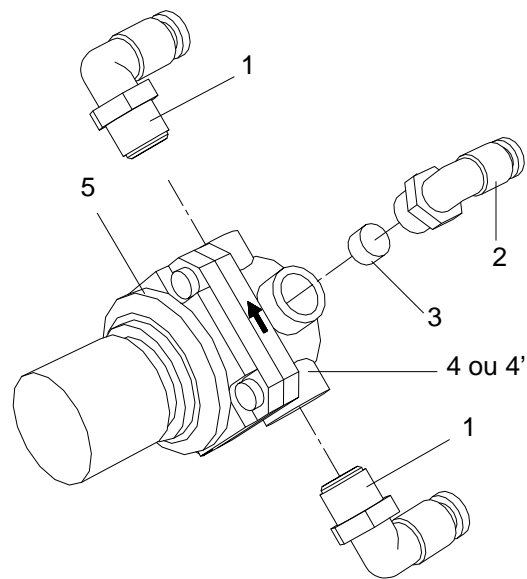
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Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

8.2.3. 2 and 4 bar Regulators



Item	Part Number	Description	Qty	Sale Unit	Level for spare part (*)
	EU72010018	Regulator assembly 4 bar	1	1	3
	EU72000026	Regulator assembly 2 bar	1	1	3
1	EU9000033	1/4" elbow fitting for hose Dia: 6	2	1	3
2	EU2000062	1/8" elbow fitting for hose Dia: 4	1	1	3
3	EU5000050	Porous disc Dia: 8 thickness: 3.2 mm	3	1	2
4	EU9000112	Regulator 4 bar	1	1	2
4'	EU9000111	Regulator 2 bar	1	1	2
5	EU2024015	Regulator seal	1	1	1

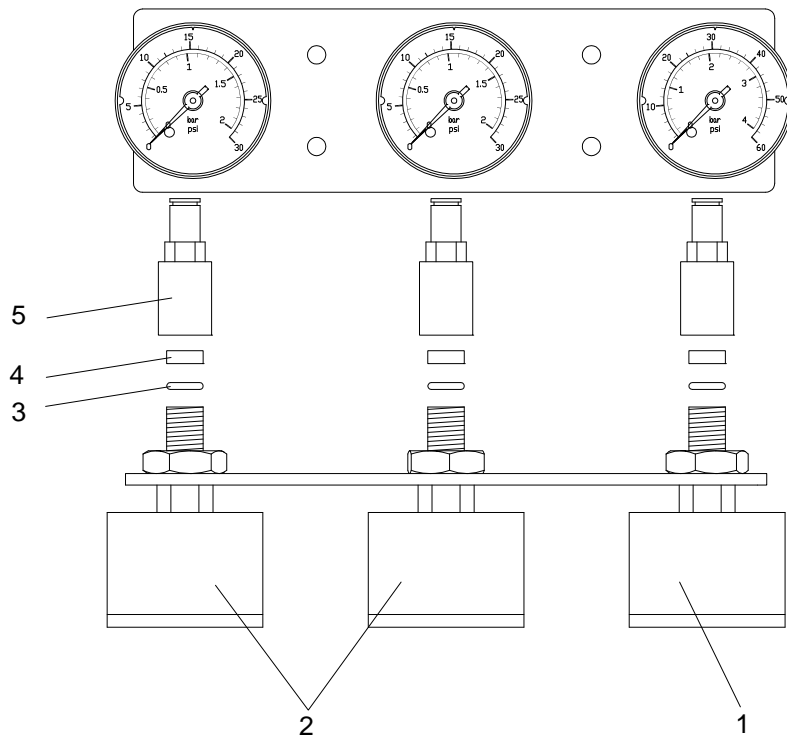
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Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

8.2.4. Pressure gauge assembly



DES04862

Item	Part Number	Description	Qty	Sale Unit	Level for spare part (*)
	910009000	Pressure gauge assembly	1	1	3
1	EU2024020	Pressure gauge - 4 bar	1	1	3
2	EU2024019	Pressure gauge - 2 bar	2	1	3
3	EU9000071	O-ring	3	1	2
4	EU5000040	Porous disc - Dia: 8 thickness: 4.7	3	1	2
5	EU9000052	Quick release female union	3	1	1

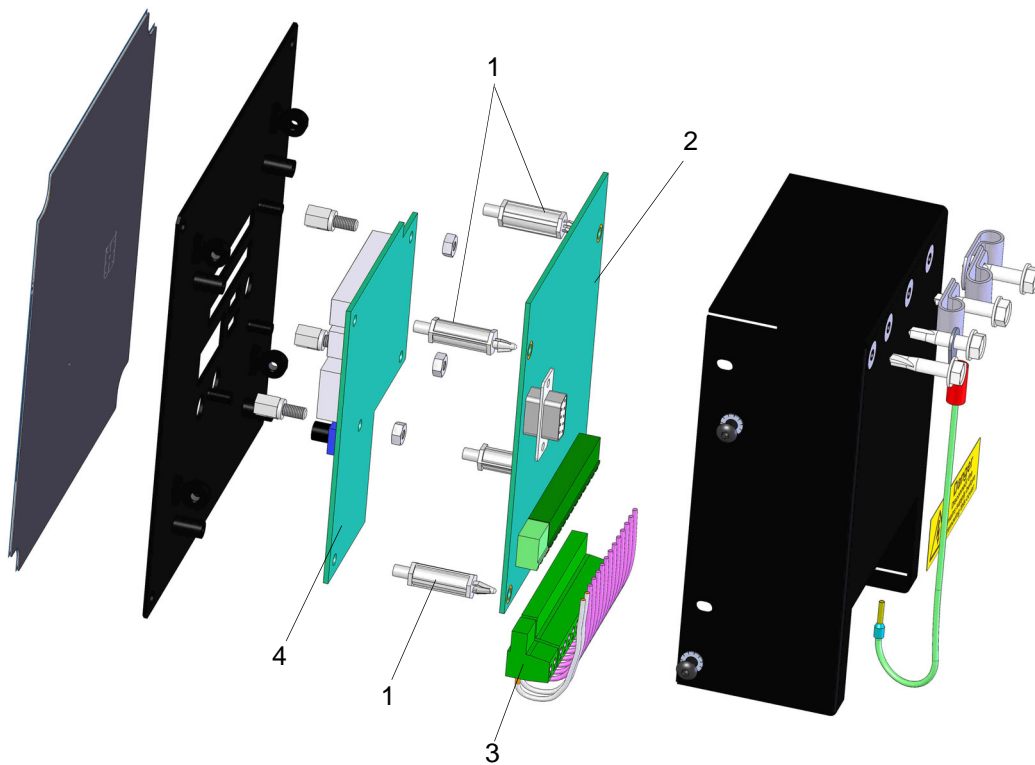
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Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance

8.3. GCU 400 L Control module



Item	Part Number	Description	Qty	Sale Unit	Level for spare part (*)
	910016783	GCU 400 L control module	1	1	3
4	EU2024005	Display PCB	1	1	3
2	EU2024006	Control PCB	1	1	3
3	110001831	Connector	1	1	3
1	EU9001848	22.2 mm plastic pillar	4	1	3

(*)

Level 1: Standard preventive maintenance

Level 2: Corrective maintenance

Level 3: Exceptional maintenance