

Dual Electric Fields Electrostatic Automatic Powder Coating Gun

Ec'Corona-X ECXa

Patent pending



Dual electric fields as new charging method
 Achieving both less powder usage and fine finish
 Advanced automatic powder coating gun



Automatic powder coating gun ECXa

Advantages of dual electric fields

Less powder used

Efficient electrostatic charging of powder and up to 10% increase of transfer efficiency has effects of reducing powder usage and touch-up coating.

Enhanced finish quality

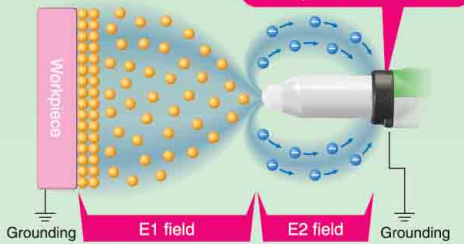
Due to prevention of free ion formation with efficiency of electrostatic application maintained, it realizes smooth finish with less back ionization (electrostatic repulsion).

What is dual electric field method?

Through formation of **dual (double) electric fields**, the new method for electrostatic application ensures both of;
E1: electrostatic effect (high transfer efficiency) and
E2: coating film quality (prevention of electrostatic repulsion).

Dual electric field method

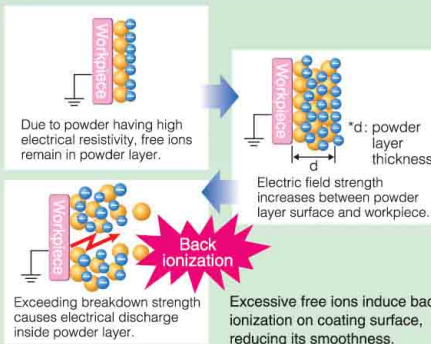
Ring for dual electric fields: is different from existing earth ring because it has the electric field adjustment function.



The ring for dual electric fields absorbs only excessive free ions to keep coating smooth for efficient powder particle adhesion.

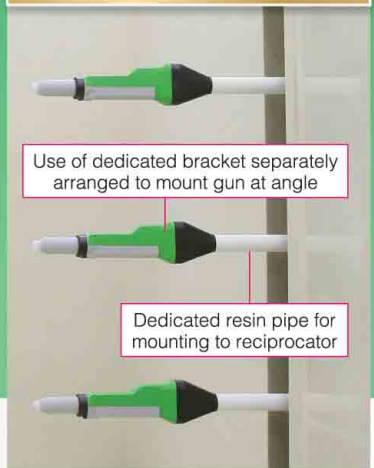
Free ion (blue dot) Powder particles negatively charged (orange dot)

In case of back ionization (electrostatic repulsion)



Exceeding breakdown strength causes electrical discharge inside powder layer. Excessive free ions induce back ionization on coating surface, reducing its smoothness.

Guns mounted to reciprocator

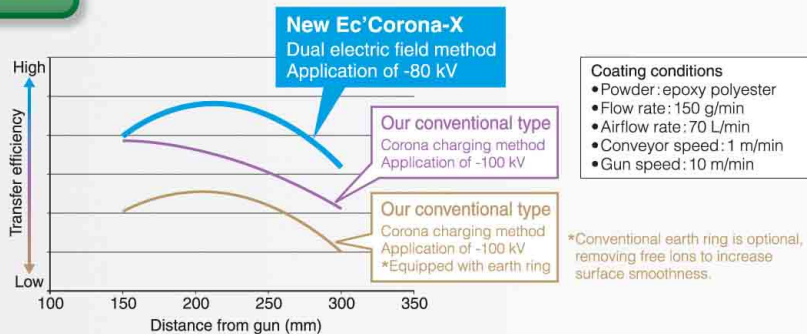


Use of dedicated bracket separately arranged to mount gun at angle

Dedicated resin pipe for mounting to reciprocator

Effect of dual electric field method

Capability to adjust electric fields with the dual field ring offers higher transfer efficiency and smoother finish even with -80 kV application compared with conventional -100 kV type application at any distance between workpiece and gun.



Gun mounted to robot



Use of dedicated bracket for flexible mounting



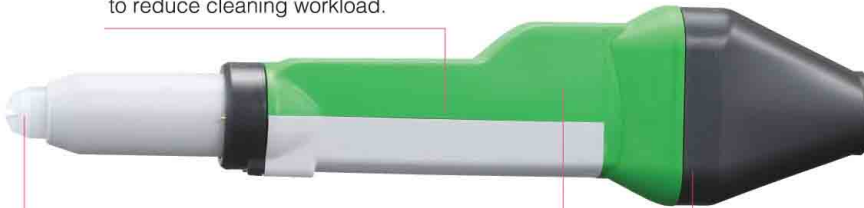
Aiming for eco-friendly and human-friendly coating

"Ec'Coater" is formed from the words "Ecology" and "Coater (coating machine)". "Ec'Coater" represents our concept born through our corporate principle.

ADVANTAGES

Ec'Corona-X automatic gun ECXa**Easy-to-clean seamless structure**

Shortened air blow time for color change to reduce cleaning workload.

**Expansion of nozzle variation**

Allowing nozzle selection from following 5 types according to the object to be coated;
Flat nozzle (4 types) or Round nozzle (1 type).

Cover

Protected gun holder and joint plate.

Barrel

Insulated and protected cascade and inside of gun subjected to high voltage application.

To cover flat surfaces and deep recesses, pattern width appropriate to workpiece or process is selectable.

**Ec'Corona-X**
Static electricity controller
BPS800a**Coating recipe**
99 + 3 settings available

99 recipes are available with the settings of voltage, current, flow rate, and powder conveyance airflow rate. In addition, coating mode is selectable from 3 settings of flat, irregular, and recoat by constant current control. Each recipe can be changed from the gun.

SPECIFICATIONS

● Automatic gun

Name	Ec'Corona-X automatic gun
Gun type	ECXa
Flow rate *1	Max. 250 g/min
Maximum applied voltage	DC-80kV
Constant current control range	2~80μA
Compatible controller type	BPS800a
Outer dimensions (L x W x H) *2	370 x 57 x 106.5mm
Weight *3	550g

*1 Amount varies depending on injector, powder, or hose.

*2 Nozzle and cover are not included.

*3 Nozzle is not included.

Please place an order with the automatic gun.

● Nozzle variation

Part name	Flat nozzle SN	Flat nozzle N	Flat nozzle W	Flat nozzle SW	Round nozzle
Part No.	15A5	15FE	15A6	15FC	15FF
Effective pattern width (Shape)	130mm	170mm	200mm	230mm	(Round)

● Powder hose SC black hose (grounding ready)

Part No.	628-0000
Inside diameter	φ 12.5mm
Remark	Sold by the meter

● Gun cable

Part No.	2579	2549
Length	2m	10m
Remark	Gun side	Static electricity controller side

● Tube for cleaning air

Part No.	586-0000
Inside diameter	φ 4mm
Remark	Sold by the meter

**Cautions for Safety**

For correct and safe use of the equipment, please refer to operation manual provided for it.

*Appearances and specifications of the equipment shown on this booklet are subject to be changed for the purpose of its improvement, without pre-announcement.



ISO9001
JQA-2095



ISO14001
JQA-EM2121

**ASAHI SUNAC CORPORATION**

Head Office & Factory
5050 Asahimae-cho
Owariasahi, Aichi Pref., 488-8688 Japan
Tel: +81-561-52-0717
Fax: +81-561-54-8847
<http://www.sunac.co.jp>
E-mail: ctrd01@sunac.co.jp