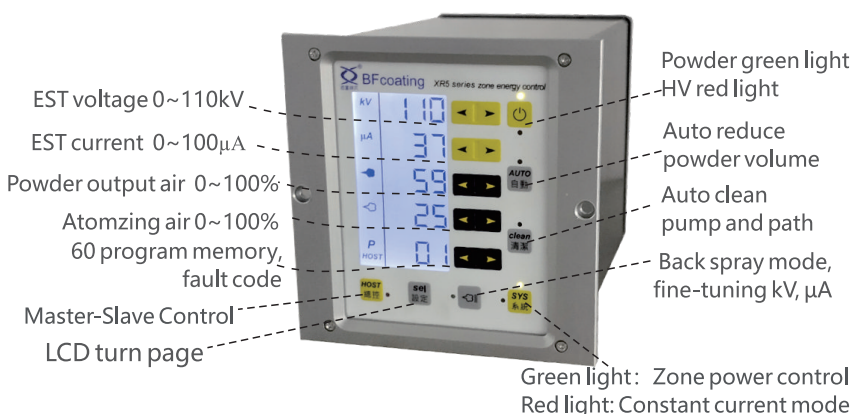





### Introduction of XR5 controller



### Character & Unique design

1. One-key switch dual electrostatic charging mode system; Invention patent "Zone Power Auto Control" with constant current spraying
2. Invention patent "Controllable Minimum Holding Power" - Complex Deep Groove Powder Electrostatic Spraying Technology.
3. Max. electrostatic voltage 110KV and controllable smaller electrostatic current, achieving optimal transfer efficiency and surface quality.
4. Each controller adopts 485/Modbus RTU bus connection for data communication..
5. Centralized control function of the controller when spraying with multiple guns, allowing setting one or multiple controller as the main controller.
6. In cases of multiple automatic guns, adjust the spraying parameters of the main controller, and the parameters of other secondary controller change synchronously..
7. Each gun is equipped with 3 pcs small electronic proportional valves for precise adjustment air pressure of powder, atomization and cleaning.
8. Spray receipts setting and storage function (60 programs in total), accessible at any time.
9. Press the AUTO key, when manually spraying at close range, the powder flow rate automatically reduces, and it increases automatically when spraying at a far distance.
10. Press the cleaning key, High voltage automatically shuts down, and the air electronic proportional valve opens to the maximum for cleaning the inside of the powder pump, powder hose and automatic gun.
11. Press the back spray key to enter the back spray mode, and adjustments to various parameters can also be made through adjustment keys.

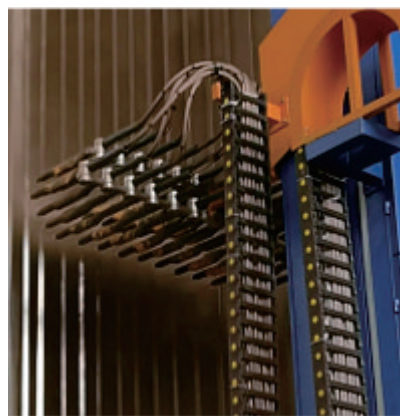
Photo			
Model	XR-5m	XR-5a	XR-5aq
Product description	Manual spray gun	Automatic spray gun	Quick color change auto spray gun
EST voltage output	0~110 kV Negative/(Positive voltage is special product)		
EST current output	0~100μA		
Flow rate	50~250g/min.( Be different to inner diameter and length of the paint hose; and powder pump)		
Electrostatic controller	XR5-GCU		
Working Power	DC13.5V		
Size L*W*H mm	325*30*92	390*30*45	390*30*45
Gun weight	495g	460g	460g



### Central control cabinet

545Lx600Wx1800H

### Typical application cases



7M vertical spray of aluminum profile



Horizontal spray of aluminum profile





Medical equipment spray



Robotic Spraying of Bicycle Frames

### Corona type electrostatic powder coating equipment

Product	Compact unit	Fluidizing hopper unit	Vibration trolley unit
Model	XR5-100m	XR5-300m	XR5-400m
Photo			

### Advantage of XR5 controller



Automatically control the voltage and current of the charging power area

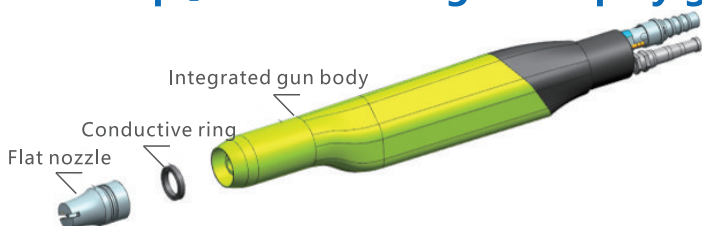
For different working environments, different products, and different powders, by setting the value of  $\mu A$ , we can find the most suitable electrostatic voltage and current values for the best spraying effect at the appropriate spraying distance. Effectively overcoming the phenomenon of "Faraday electrostatic shielding" and "reverse ionization" phenomenon, to obtain relatively good spray performance.

### Concrete implementation benefits:

- The spray gun automatically adjusts low voltage and current at short distances ;high voltage and current at long distances. And good spraying results for complex parts and large boards.
- Through the setting of  $\mu A$  value, on different workpieces and different powders, multiple groups of spraying methods can be recalled from memory, which can better optimize the effect of spraying.
- Automatically change the electrostatic voltage and current of spraying, reduce the amount of excess charge during electrostatic spraying operation, thus effectively overcome the "Faraday electrostatic shielding phenomenon" and "reverse ionization" phenomenon in electrostatic spraying operation, and improve product surface quality and T/E , saving production cost.

Model	XR5-100m	XR5-300m	XR5-400m
Spray gun model	XR-5m	XR-5m	XR-5m
EST voltage output	0~110 kV Negative		
EST current output	0~100 $\mu A$		
Gun weight (g)	450	450	450
EST controller	XR5-GCU		
Input power,50/60HZ	AC100-240V, Single phase		220V Single phase
Max. current	At 115V,400mA: At 230V,200mA		
Max air consumption	6m <sup>3</sup> /h	10m <sup>3</sup> /h	15m <sup>3</sup> /h
Air joint diameter	Φ8mm	Φ8mm	Φ8mm
Input air pressure	0.5MPa~0.6MPa (Recommended static : 0.5MPa)		
Powder hopper capacity,Kg		Fluidized bed hopper type Capacity: 60L (15Kg)	Loading use powder carton15Kg)
Size L*W*H mm	340*165*330	700*490*1080	700*490*1060
Combined weight (Kg)	4.8	50	45

### XR-5aq Quick color change auto spray gun








- No need to disassemble the nozzle for color change, just blow the powder from the powder supply center, saving color change time
- Powder route is wide, the powder cloud is soft, and the complex work piece is easy to spray.
- Simple structure designed, easy maintenance, less wearing parts.
- Designed with the max. high voltage 110Kv of the powder gun, powder is charged more, and the transfer efficiency is high.







### XR-5a auto spray gun




- Powder route is wide, the powder cloud is soft, and the complex work piece is easy to spray
- Simple structure designed, easy maintenance, less wearing parts
- Designed with the max. high voltage 110Kv of the powder gun, powder is charged more, and the transfer efficiency is high.

### Nozzle selection

Model	FN40	F0	FN400	ETN150/200/250	ELN120/135
Product	Flat nozzle	Electrode seat	Flat nozzle	Extension nozzle	Elbow nozzle
Photo	 400mm		 400mm	 150mm/200mm/250mm	 One-piece molding , durable long work-life 120°/135°(Specialty Product)

Model	RN0	R0	RN00	D16	D24	D32
Product	Round nozzle	Electrode	Round nozzle	Deflector Φ16	Deflector Φ24	Deflector Φ32
Photo						

### Main control cabinet selection

Model	CP-0-19	CP-7-30	CP-7-6*	CP-7-6-II*
Size	W450xH1800xD545	W600xH1800xD545	W1200xH2000xD500	W1200xH2000xD500
Photo				

\*Integration of spray booth and spray gun

### The Integration of smart XR5 fully electronic powder spray gun with powder booth HMI

① Spray booth and spary parameters are consistent with HMI. Memory storage for 30/100 types of workpiece parameters easy recall for subsequent use on the same workpiece.

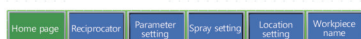
② Spray booth operating parameter settings: Setting of reverse blowing the recovery filter cartridge ,and blowing of accumulated powder at the bottom.

③ Setting of upper and lower limit points, speed, and reverse position for the reciprocator.

#### Powder recovery booth



Fan frequency 12 HZ

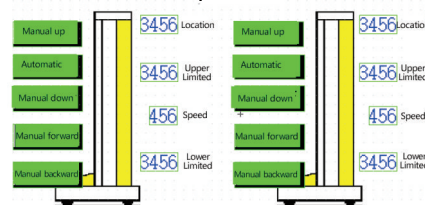


#### Booth parameter setting

Filter reverse blow ON:	45.6 sec.
Filter reverse blow OFF:	45.6 sec.
Air knife reverse blow ON:	45.6 sec.
Air knife reverse blow OFF:	45.6 sec.
Reciprocator 1 upper limited	3456 mm
Reciprocator 2 upper limited	3456 mm



#### Reciprocator



④ Comprehensive table correlating group numbers with workpiece names for convenient storage and recall during subsequent spray of the same type of workpiece.

#### Workpiece name

1	ABCDEFGH I J	11	ABCDEFGH I J	21	ABCDEFGH I J
2	ABCDEFGH I J	12	ABCDEFGH I J	22	ABCDEFGH I J
3	ABCDEFGH I J	13	ABCDEFGH I J	23	ABCDEFGH I J
4	ABCDEFGH I J	14	ABCDEFGH I J	24	ABCDEFGH I J
5	ABCDEFGH I J	15	ABCDEFGH I J	25	ABCDEFGH I J
6	ABCDEFGH I J	16	ABCDEFGH I J	26	ABCDEFGH I J
7	ABCDEFGH I J	17	ABCDEFGH I J	27	ABCDEFGH I J
8	ABCDEFGH I J	18	ABCDEFGH I J	28	ABCDEFGH I J
9	ABCDEFGH I J	19	ABCDEFGH I J	29	ABCDEFGH I J
10	ABCDEFGH I J	20	ABCDEFGH I J	30	ABCDEFGH I J



⑤ Gun voltage, current, powder flow rate and auxiliary air volume can be freely adjusted for each workpiece. Memory storage for 30/99 program groups

#### Spray setting

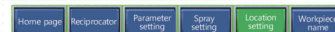
	Voltage	Current	Flow rate	Aux. air volume	Program group no.
1	456	456	456	456	55
2	456	456	456	456	
3	456	456	456	456	
4	456	456	456	456	
5	456	456	456	456	
6	456	456	456	456	



⑥ Synchronization of gun and workpiece, automatic gun on/off, each gun can be set to switch on/off at different times based on the shape of the workpiece.

#### Location setting

	Trigger on position	Trigger off position	Force trigger on	Clear conveyor
1	456	456	Spray gun off	Disable spray gun
2	456	456	Spray gun off	Disable spray gun
3	456	456	Spray gun off	Disable spray gun
4	456	456	Spray gun off	Disable spray gun
5	456	456	Spray gun off	Disable spray gun
6	456	456	Spray gun off	Disable spray gun



### Stainless steel Powder supply hopper

Model	PT-15	PT50K(KCI)	PT50Y	PT50S	PT50W
Capacity	15L	50L	50L	50L	50L
Material	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Photo			 Tank lid: Yellow	 Tank lid: Silver	 Tank lid: White

	Stainless steel Powder supply hopper		XR5 Trolley		Bus automation
Model	PT-150	PT180	TY1	TV1*	Modbus RTU
Capacity	150L	180L			
Material	Stainless steel	Stainless steel	Coating	Coating	
Photo			 Trolley	 Trolley with vibration	 Communication Protocol

\* Vibration motor is electric. Pneumatic motor is option.

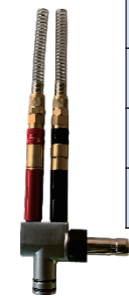
Powder pump Application	Model	Tube size	Material	Flow rate	Max.pressure head	Recommendation
Low flow rate	BJ-4A	Φ10/16	POE	250g/min.	3m	Manual spray gun
Medium flow rate	BJ-4A*1	Φ11/16	POE	300g/min.	3m	Manual spray gun
High flow rate	BJ-4B*2	Φ12/18	POE	350g/min.	3m	Manual spray gun

\*1 Manual spray gun standard configuration. \*2Auto spray gun standard configuration.

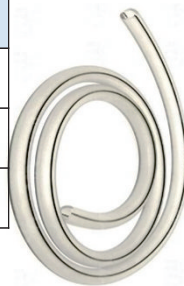
Manual spray gun: Standard length of cable and powder hose 12 M; power cable 2 M.

Auto spray gun equip: Standard length of cable and powder hose 13M.

Other optional lengths can be selected as appropriate according to the size of the workpiece and application.



BJ-4



PH Conductive powder hose