

AP&T®

Shanghai Anping Static Technology Co.,Ltd

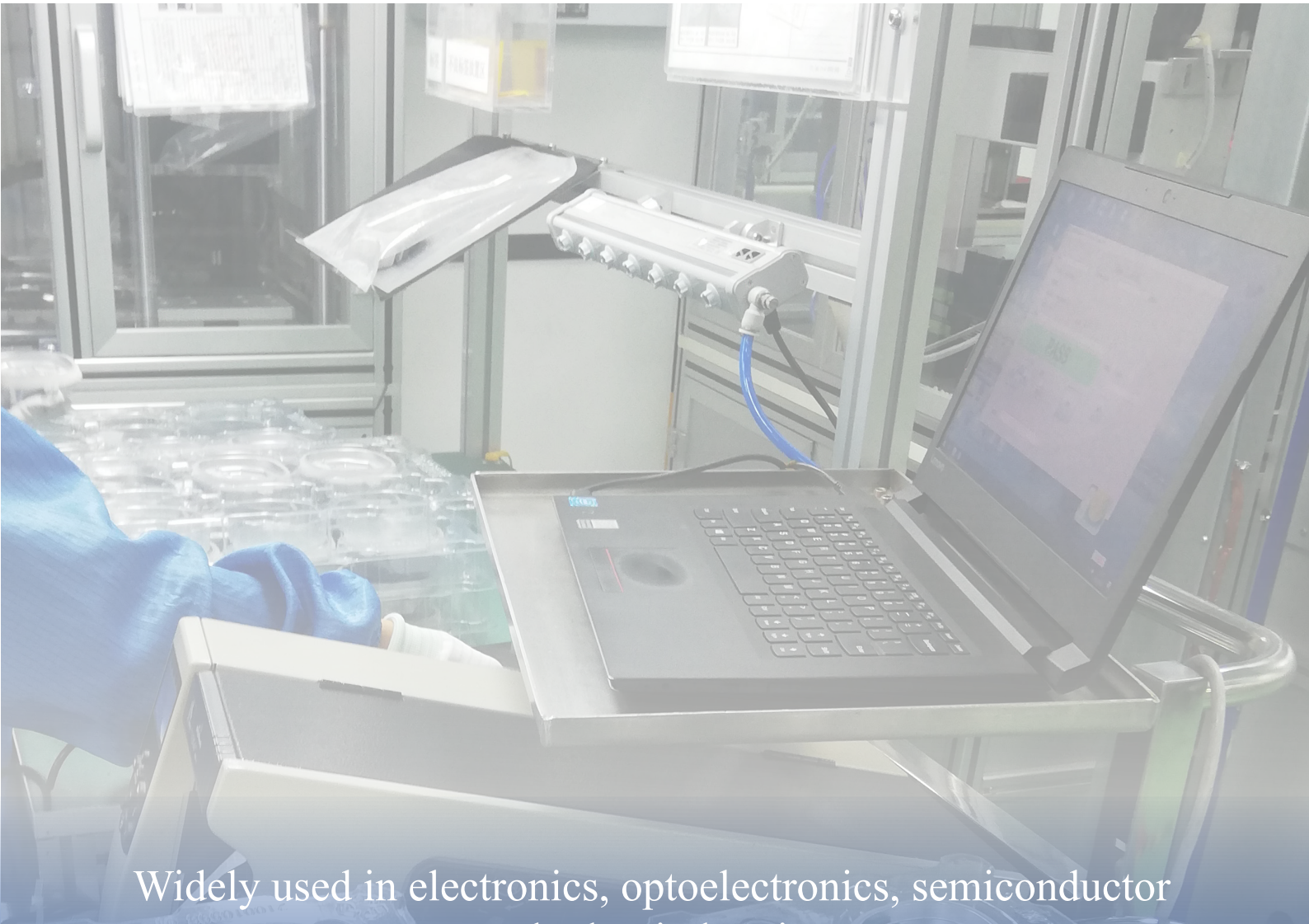
High Efficient Electroshock-proof

Intelligent Ion Bar

AP-AB1208



—AP&T—

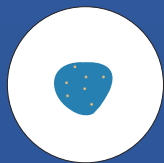


Widely used in electronics, optoelectronics, semiconductor and other industries

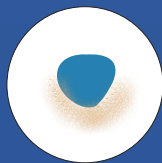
Effectively solve the problem caused by static electricity



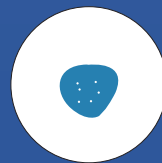
Static removal



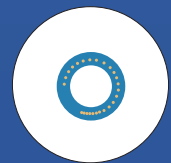
Prevent adhesion of objects



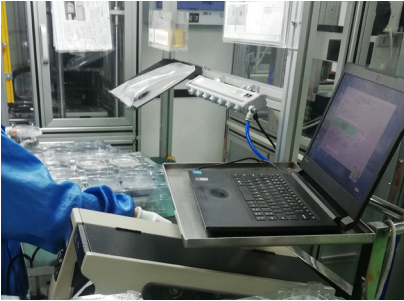
Prevent sticking



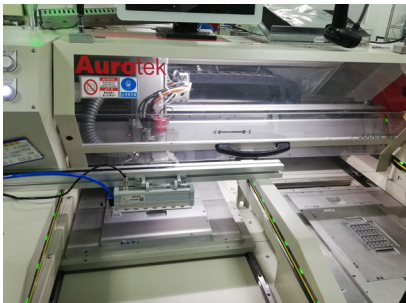
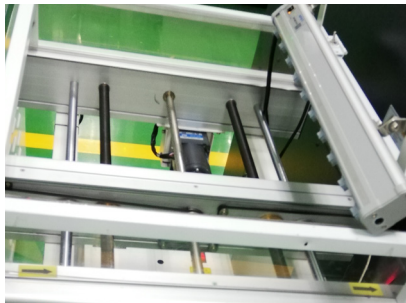
Control ink splashing



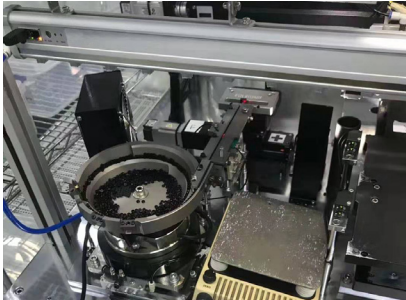
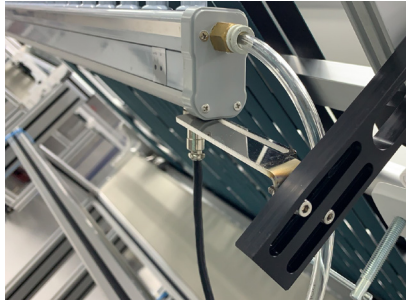
Prevent uneven scattering



High efficient



Safe



Static removal



Intelligent Control

Cleaning time /ion balance/
ion output frequency adjustable

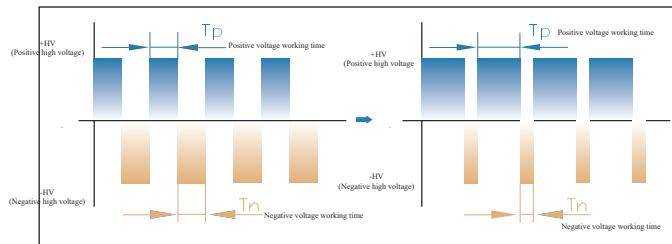


Remote control button

- "R/S": Run and pause.
- "IB+": Increase the duty cycle to eliminate excess negative charges on the surface of the object;
- "IB-": Reduce the duty cycle to eliminate excess positive charge on the surface of the object.
- "P": Only work with positive high pressure;
- "N": Only work with negative high voltage.
- "Bar" + "1": Set the working frequency of the ion bar to 1 Hz;
- "Bar" + "2": Set the working frequency of the ion bar to 3 Hz;
- "Bar" + "3": Set the working frequency of the ion bar to 5Hz;
- "Bar" + "4": Set the working frequency of the ion bar to 10 Hz;
- "Bar" + "5": Set the working frequency of the ion bar to 20 Hz;
- "Bar" + "6": Set the working frequency of the ion bar to 30 Hz;
- "Bar" + "7": Set the working frequency of the ion bar to 50 Hz.

Ion balance adjustment

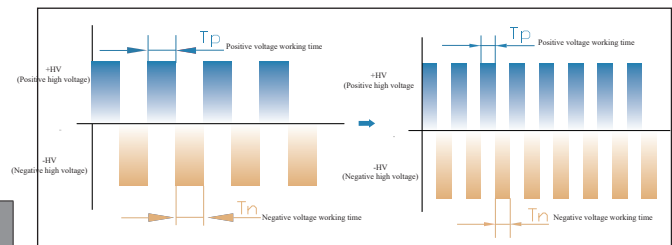
Press "IB-" when positive voltage on plate tester or target object is large or "IB+" when negative voltage on plate tester or target object is large until the ion balance reaches to ideal status. Static removing speed can be raised by adjusting the output ratio of positive and negative ion.



Output frequency of positive & negative ions adjustment

Adjust the output frequency of positive and negative ions to apply to different elimination distances.

No matter the distance is long or short, it can exert its static elimination ability. The factory setting is 30Hz. A handheld terminal is required or return to manufacturer if output frequency need to be adjusted.



Working frequency (Hz)	Discharge distance (mm)	Application
50	100-300	Low balance requirements such as semiconductor devices;
30	300-450	Low balance requirements such as optoelectronic devices;
20	450-600	Lower balance requirements such as electronic devices;
10	600-750	Material filling and transfer
5, 3, 1	750-1000	Discharge at a longer distance

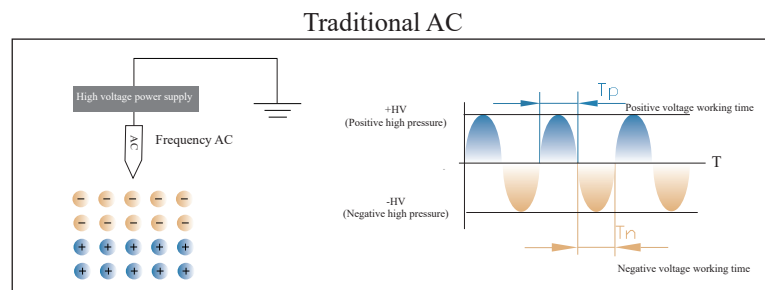
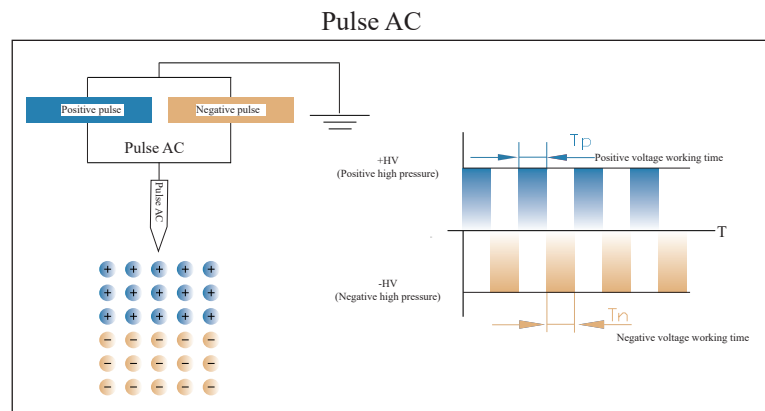
Pulse AC

The effect of static eliminating is better compare to power frequency AC ion bar

Comparison with traditional AC

The pulsed AC method alternately applies "+" and "-" high voltage to one electrode needle to generate two polar ions.

Compared with the traditional AC method, the amount of generated ions is increased and no uneven static elimination is found. Static elimination ability fits for both short or long distance.



3 situations of static on the surface of the object



Decrease T_p so that the positive voltage becomes smaller and the acting time becomes shorter. Less positive ions and more negative ions output to neutralize the excess positive charge on the surface of the object.



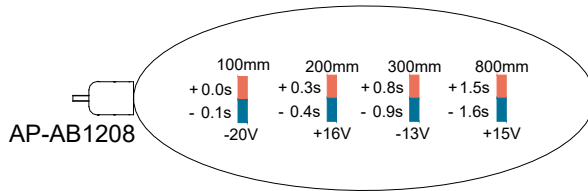
Increase T_p so that the positive voltage acting capacity becomes greater and the acting time becomes longer. More positive ions and less negative ions output to neutralize and excess negative charge on the surface of the object.



Adjust the duty ratio $[T_p/(T_p+T_n)]$ to an appropriate ratio and send out the same amount of positive and negative ions to neutralize the static charge on the surface of the object.

Efficiently static removal

Stay away from static electricity & for clean production environment



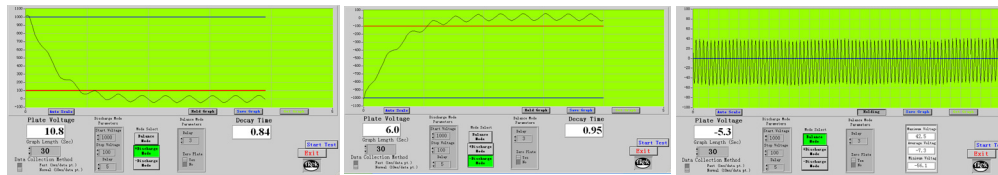
Test standard: ANSI/ESD.STM3.1, SJ/T 11446—2013

Test instrument: Trek157 static tester

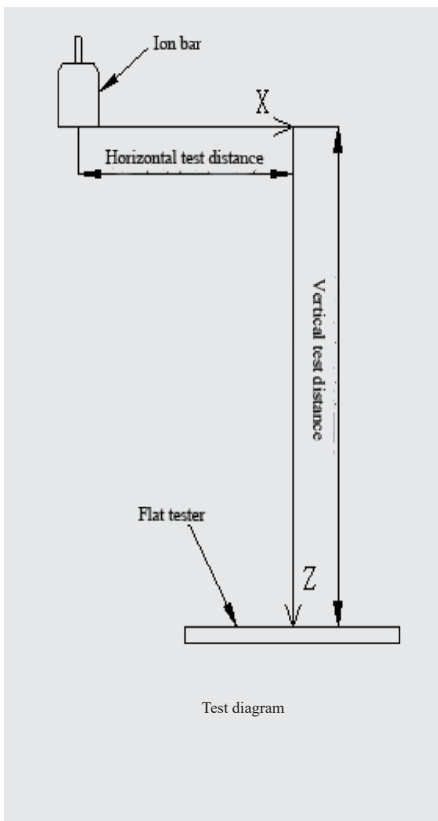
Test voltage: ±1000V → ±100V attenuation

Test environment: humidity 50±5%; temperature 23±3°C

The test data diagram is as follows (test distance: 400mm, ion rod length: 880mm, air flow pressure: 0.3Mpa, working frequency: 30Hz):



Test data under other test conditions are as follows



Ion bar length: 385mm; working frequency: 30Hz;						
Test distance (mm)		Air flow pressure (MPa)Remarks: 1*	Duty factor (%)	Discharge speed		
Vertical	Level			Positive discharge time (S)	Negative discharge time (S)	Ion Balance voltage (V)
300	-150	0.2	49	2.7	2.9	-0.7
	0		52	0.5	0.5	4.1
	150		49	2.9	3	-0.7
	-150	0.4	49	1.3	1.5	-5
	0		50	0.2	0.2	12.9
	150		49	1.6	1.9	-2.4
	-150	0.6	49	1.1	1.2	-3.8
	0		49	0.1	0.2	-11.6
	150		49	1.3	1.2	13.1
500	-150	0.2	50	2.6	3.1	-5.6
	0		51	1.1	1.3	-2.6
	150		51	2.9	3.1	2.2
	-150	0.4	49	1.5	1.8	-5.9
	0		49	0.6	0.8	-15
	150		50	1.8	1.6	11.7
	-150	0.6	49	0.9	1.2	-3.9
	0		49	0.4	0.6	-4.6
	150		49	1.2	1.4	-2.6
600	-150	0.2	50	1.8	2.4	-3.4
	0		51	1.3	1.7	1.2
	150		50	2.1	2.6	-2.4
	-150	0.4	50	1.1	1.2	9.1
	0		49	0.7	1	-4.6
	150		49	1.1	1.4	-3.7
	-150	0.6	49	0.7	0.9	-3.4
	0		49	0.5	0.7	-6.8
	150		49	0.9	1.1	-1.3

Remarks: 1*—Real-time pressure value during gas flow. The balance voltage performance of the ion bar varies with the length of the bar, airflow pressure, working frequency, and installation distance; the duty cycle should be adjusted according to the specific use environmental conditions to make the balance performance of the ion bar reach the best state.

Features

Safe / Easy to use / Durable



No.1

Easy installation

Provide stainless steel mounting angle and can adapt to various installation environments.

No.2

Electroshock-proof

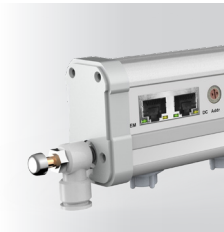
Protection against electroshock.



No.3

Intake throttle valve

The specification is $\Phi 8$ -G1/8 Grey.



No.4

Working status visualization

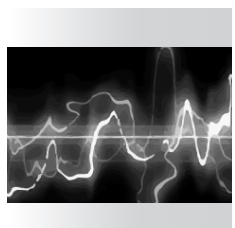
Green light-----working normally
Red light-----abnormal high voltage



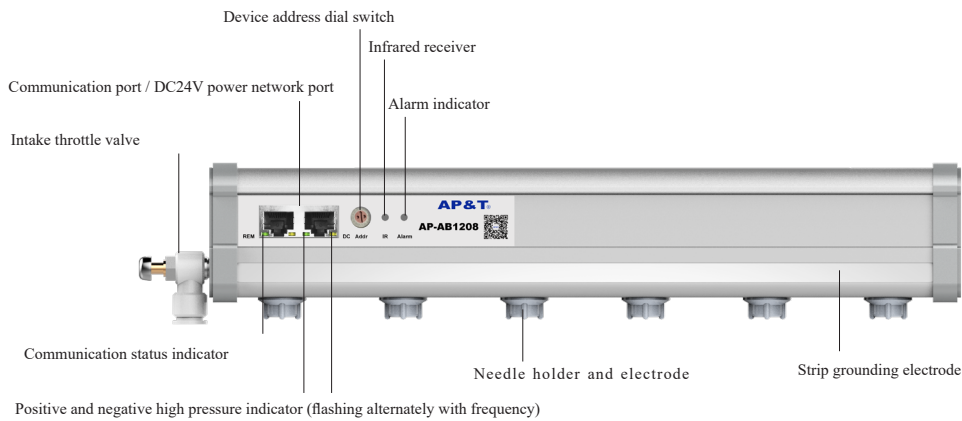
No.5

CE certification

It can effectively prevent the external electromagnetic interference from affecting the normal operation of the ion bar. This is a static electricity eliminator with high safety and high reliability.



Details



Installation

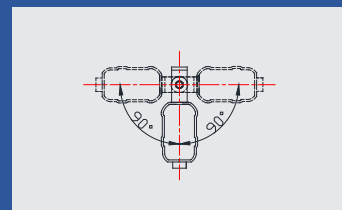
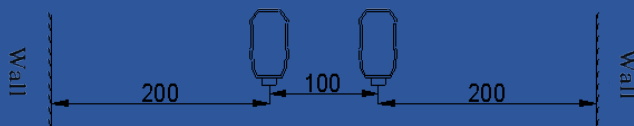
Installation steps

1. Choose the best position for eliminating electricity and install the bar firmly.
2. Insert one end of the power connection wire into the power adapter socket and the other end into the power socket on the bar body.
The wiring and panel descriptions are as shown above.
3. Connect the air source connector on the bar body to the air source generator and turn on the air source switch.
4. The network port indicator light is on green to show the ion bar working. Adjust the appropriate air source pressure and voltage parameters, output positive and negative ions to neutralize the surface static electricity.

Power connector		
1、 2	Orange, white orange	VCC: +24VDC
3	Blue	RS485+B
4	White-blue	RS485+A
5	Green	0V
6	White-green	0V
7、 8	Brown, white-brown	GND/PE

Installation tips

1. When using the ion bar, it should be placed in a static-free working area and the installation angle should be perpendicular to the surface of the charged body.
2. Ion bar should be at least 30mm away from the metal conductor and metal grounding body around the electrode. The bar body must be reliably connected to the grounding wire.
3. Ion bar grounding electrode is not allowed to be covered by other objects.
4. It is better to install two ion bars side by side with an interval of more than 300mm and more than 200mm away from obstacles such as walls.
5. The installation angle of the ion bar can be adjusted.



AP&T[®]

Speciality Creates Value

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