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µWire AeroBar®

MODEL 5711

Simco-Ion's µWire ("Microwire") AeroBar Model 5711 is a cost-effective, high-performance ionizer specifically designed to eliminate static charge on large surface areas. Similar to the µWire AeroBar 5710, the 5711 is particularly suited for sensitive flat panels where fast discharge times and low swing voltages are desired. The shorter bar length of the 5711 is ideal for space constrained tools in both the flat panel and back-end semiconductor processes. The µWire AeroBar utilizes MicroPulse technology applied to a corona wire system for optimal performance. MicroPulse technology reduces ion recombination at the corona wire, thus increasing product efficiency and performance.

The µWire Bar is optimized for lower gas consumption through its unique corona wire design. Corona wire produces more ions than emitter points; thus, less gas is needed to effectively ionize the target area. The corona wire design also permits the bar to be placed closer to substrates, diminishing the recombination of ions and the resulting "stripping effect".

The 5711 includes all the latest design features of the µWire AeroBar to make the bar easier to clean and provide higher performance. Shields have been added to protect the corona wire contacts during the cleaning process, making it truly a "one-swipe to clean" bar.

Features

- Compact Size (150 or 250 mm length)
- Unique corona wire design (no emitter points)
- Micropulse high voltage technology
- Remotely mounted controller for Model 5711 AeroBar

Benefits

- Charge protection for even the most space-limited automation tools
- Bar mounted close to the target without ionization "stripping"; one-swipe cleaning with the bar in place
- Long-term balance stability and discharge time performance
- Uniform balance over the length of the bar
- Innovative ionization generation that translates to lower total cost of ownership
- Convenient access to power input, status lights and remote alarm connection

Ionization Solutions

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Specifications	
Input Voltage	24 VDC ±10%, 12W (max)
Output Voltage	Adjustable, 13 kV pk-pk (typ)
Range	Target ionization 150-2000 mm, application and performance specification dependent
Frequency	Factory default setting is 1 Hz, adjustable from 0.1-35 Hz
Balance	<±25V over the length of the bar; maintains balance performance >6 months without cleaning (in an ISO 14644 Class 4 or better environment)
Ion Emission	Micropulsed high voltage technology
Performance	3.5 sec decay average @ 600 mm (typ) measured at 5711 AeroBar center and 25 mm straight air jet spacing, 18 l/m purging air, (250 mm long AeroBar), no laminar flow; setting 1 Hz, 100% output, CPM: balance <±10V; swing 100V pk-pk
Corona Wire	Tungsten, 80 micron dia.
Gas Supply	Clean dry air (CDA)
Airflow	150 mm AeroBar = 10 lpm, overall per bar; 250 mm AeroBar = 18 lpm, overall per bar (recommended flow is 2 lpm per jet orifice)
Alarm Output	Relay contact, rated ±24 VDC @ 0.2A max
Cleanroom Class	ISO 14644-1 Class 2 (better than Fed. Std. 209E Class 1)
Operating Env.	Temperature 15-35°C (59-95°F); humidity 30-60% RH, non-condensing
Ozone	<0.05 ppm
EMI	Below background level
Bar Settings	All operating parameters set via a Handheld Terminal (HHT) by either wired connection or by battery powered IR control to the 5711-CTRL Controller
Indicators	Green POWER; Yellow COMMUNICATION; Red ALARM (combinations of LEDs indicate specific status conditions of the bar)
Enclosure	5711 AeroBar: ABS chassis; Stainless steel reference plates 5711-CTRL Controller: Stainless steel chassis
Dimensions	5711 AeroBar Ionizer: 3.0"H x 1.3"W x 6.3 or 10.2"L (76 x 34 x 160 or 260 mm) 5711-CTRL: 4.7"H x 1.9"W x 3.2"D (119 x 48 x 83 mm)
Warranty	Two year warranty
Certifications	CE KC c UL us RoHS2

Ordering Information

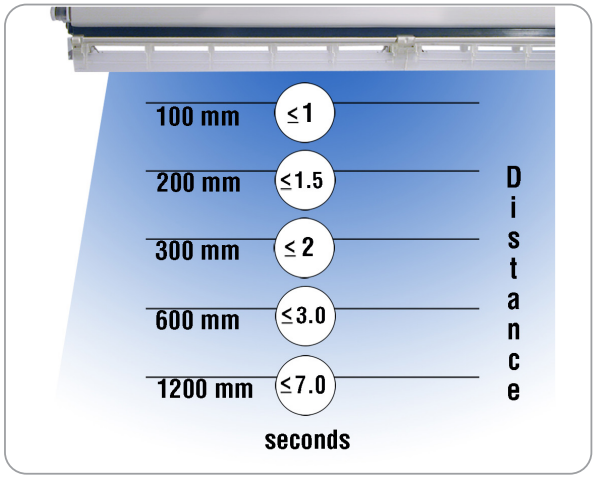
91-5711-150-25-01	µWire AeroBar Model 5711 with 25 mm straight air jet spacing, 150 mm length
91-5711-250-25-01	µWire AeroBar Model 5711 with 25 mm straight air jet spacing, 250 mm length
92-5711-150-01	µWire AeroBar Model 5711 kit includes Model 5711 bar (150 mm), 5711-CTRL controller, 25-0541-3M cable and AC to DC power adapter 14-21328
92-5711-250-01	µWire AeroBar Model 5711 kit includes Model 5711 bar (250 mm), 5711-CTRL controller, 25-0541-3M cable and AC to DC power adapter 14-21328
91-5711-CTRL-01	µWire AeroBar Model 5711 controller (supports one Model 5711 bar)
25-0541-3M	CAT-5e bar to controller RJ-45 shielded interconnect cable, (3m)
14-21328	100-240 VAC to 24 VDC power adapter for 5711-CTRL controller

See µWire AeroBar Model 5711 Accessory datasheet for information on µWire AeroBar Model 5711 accessory products.

Application Flexibility

The µWire AeroBar can be operated with the factory default settings in "plug-and-play" mode, or optimized for a specific application using the Handheld Terminal. The bar's ability to perform well in either a vertical or horizontal position along with the µWire AeroBar low profile height and length design makes it easy to install in a variety of flat-panel tool locations (mail-slot, conveyor and load/unload cassette areas as well as within many back-end semiconductor assembly and test areas

Discharge Time Performance (Typical)



µWire AeroBar Model 5711 (250 mm length) with 25 mm Air Jet Spacing. Measured using Simco-Ion CPM Model 280A with CDA flow at 2 l/m per air jet (18 l/m total) and no HEPA flow.

5711-CTRL Controller

The µWire AeroBar 5711 features a controller that can be placed in a convenient location for easy access to power input (local 24 VDC or power adapter from AC wall power), ionization status lights, handheld terminal setup connection and remote status connection.

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