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Ionization Solutions

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µWire AeroBar®

MODEL 5710

Simco-Ion's µWire ("Microwire") AeroBar Model 5710 is a cost-effective, high-performance ionizer specifically designed to eliminate static charge on large surface areas. The µWire AeroBar is particularly suited for sensitive flat panels where fast discharge times and low swing voltages are desired. 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 combined with optimal positioning of the gas orifices along the emitter cartridge offers a lower cleaning frequency over time.

This latest version of the µWire AeroBar includes numerous changes to expand the number of applications and improve performance. The overall height of the bar has been reduced by 8 mm (0.3"), and new, lower-profile brackets have been introduced, reducing the overall installed height a total of 15 mm (0.6"). The diameter of the wire has been reduced, improving ion output by 5-10%. Coverage area from the µWire AeroBar can be expanded by utilizing the new angled air jets at either 25 mm or at 50 mm spacing.

Features	Benefits
• Unique corona wire design (no emitter points)	• Significantly longer cleaning intervals than with standard emitter point technology products • Fast cleaning with a single swipe of the wire, accomplished with the bar in place • Allows mounting close to product without danger of striping
• MicroPulse high voltage technology	• Long-term balance stability and discharge time performance, surpassing emitter point technology product capabilities • Uniform balance over the length of the bar • Lower cost-of-ownership than emitter-point technology ionizers
• Flexible and powerful setup	• Standard "plug-and-play" use or user-optimized performance for specialized applications

Specifications

Input Voltage	24 VDC ±10%, 12W (max)
Output Voltage	Adjustable, 13 kV pk-pk (typ)
Range	50-2000 mm, application and specification dependent
Frequency	Default setting at 5 Hz, adjustable from 0.1-35 Hz
Balance	Inherently self-balancing system <±25V over the length of the bar; maintain balance setting >6 months without cleaning
Ion Emission	Micropulsed high voltage technology
Corona Wire	Tungsten, 80 micron dia.
Gas Supply	Clean dry air (CDA)
Airflow	50 psi (opt); 90 psi (max) thru 6 mm O.D. quick fitting (400-1500 mm length bars) or 8 mm O.D. quick fitting (1650-3000 mm length bars w/50 mm spacing); 50 psi (opt); 90 psi (max) thru 8 mm O.D. quick fitting (400-1500 mm length bars w/25 mm spacing)
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 wired handheld terminal (HHT)
LED Indicators	Green POWER; Yellow COMMUNICATION; Red ALARM (LED combinations indicate specific status conditions)
Enclosure	ABS chassis; stainless steel reference plates
Dimensions	3.0H x 1.3W x 15.75/19.7/25.6/29.5/35.4/39.4/45.3/49.2/55.1/59.1/65/68.9/74.8/78.75/84.65/88.6/94.5/98.4/104.3/108.25/114.15/118.1L in. (76H x 33W x 400/500/650/750/900/1000/1150/1250/1400/1500/1650/1750/1900/2000/2150/2250/2400/2500/2650/2750/2900/3000L mm)
Warranty	Two year warranty
Certifications	CE, KC, cULus, RoHS 2 Compliant

Ordering Information

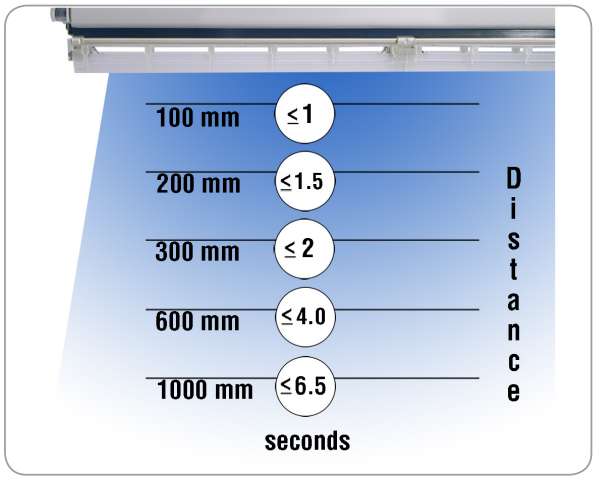
91-5710-xxxx-25-02	µWire AeroBar Model 5710 with 25 mm straight air jet spacing: XXXX = 400/500/650/750/900/1000/1150/1250/1400/1500 mm bar lengths
91-5710A-xxxx-25-02	µWire AeroBar Model 5710 with 25 mm angled air jet spacing: XXXX = 400/500/650/750/900/1000/1150/1250/1400/1500 mm bar lengths
91-5710-xxxx-50-02	µWire AeroBar Model 5710 with 50 mm straight air jet spacing: XXXX = 400/500/650/750/900/1000/1150/1250/1400/1500/1650/1750/1900/2000/2150/2250/2400/2500/2650/2750/2900/3000 mm bar lengths
91-5710A-xxxx-50-02	µWire AeroBar Model 5710 with 50 mm angled air jet spacing: XXXX = 400/500/650/750/900/1000/1150/1250/1400/1500/1650/1750/1900/2000/2150/2250/2400/2500/2650/2750/2900/3000 mm bar lengths

See µWire AeroBar Model 5710 Accessory datasheet for information on µWire AeroBar Model 5710 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 design makes it easy to install in a variety of flat-panel tool locations, including mail-slot, conveyor and load/unload cassette areas. An additional bar in a single tool can be "slaved" to a master bar to make setup and monitoring easier.

Discharge Time Performance

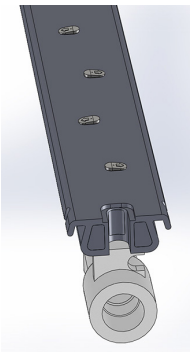


µWire AeroBar Model 5710 (500 mm length) with 50 mm Air Jet Spacing. Measured using Simco-Ion CPM Model 280A w/HEPA flow (60 fpm or 0.3m/sec) & CDA flow at 50 lpm.

Air Delivery Options

An air delivery system improves performance of ion distribution to the target area. Air jet spacing at either 25 mm (recommended for target distances up to 600 mm) or 50 mm offers optimal performance for each individual application.

The µWire AeroBar can also be ordered with alternately left and right angled (7.5°) air jets that position the air stream across a wider area for increased coverage.



Angled Air Jets

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