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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 sensitive flat panels where fast discharge times and low swing voltages are desired. The µWire Bar 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. Using this breakthrough technology, the µWire Bar maintains peak performance for longer periods between cleanings, resulting in extended cleaning cycles compared with conventional products.

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.

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 • Reduced gas consumption with equivalent performance • 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	100-1000 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 >3 months without cleaning
Ion Emission	Micropulsed high voltage technology
Corona Wire	Tungsten, 100 micron dia.
Gas Supply	Clean dry air (CDA)
Inlet Pressure	50 psi (max); gas flow rate 1.3 lpm (typ per orifice), 3.0 lpm (max)
Cleanroom Class	ISO 14644-1 Class 4 (Fed Std. 209E Class 10)
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 (combinations of LEDs indicate specific status conditions of the bar)
Enclosure	ABS chassis; stainless steel reference plates
Dimensions	3.3H 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. (84H 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	RoHS Compliant

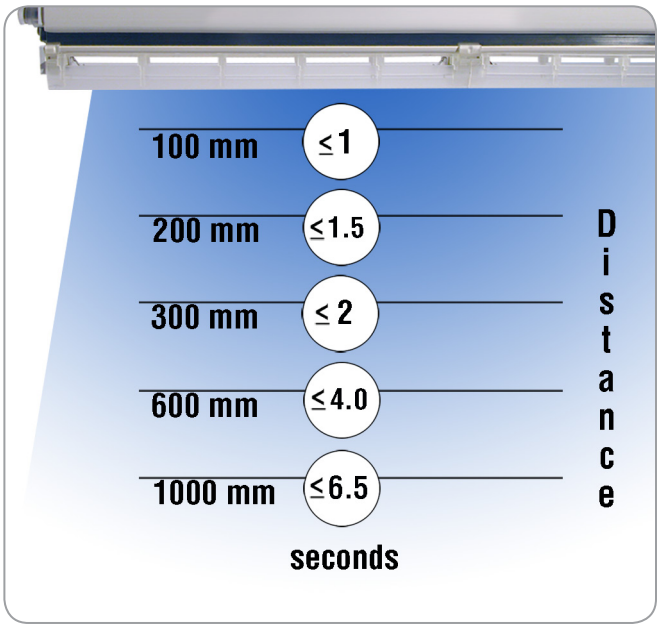
Ordering Information

91-5710-xxxx-01	Model 5710 in 400/500/650/750/900/1000/1150/1250/1400/1500/1650/1750/1900/2000/2150/2250/2400/2500/2650/2750/2900/3000 mm lengths
91-5710-HHT-01	Handheld Terminal (HHT) with 4-line LCD display and two 15 ft (4.5m) cables
33-5700-01	Power-Signal Distribution Box
33-5701-01	24 VDC Power Supply for 5710 (requires 1 power cord, see below)
33-1710-xx	Interconnect cable, xx = 10, 15, 20, 40 ft lengths
32-2213-SC	5710 Flush Mounting Bracket, SST (require 2 per bar <1800 mm, 3 per bar between 1800-2450 mm, 4 per bar >2450 mm lengths)
32-2211-01	5710 Rotatable Mounting Bracket, SST (require 2 per bar <1800 mm, 3 per bar between 1800-2450 mm, 4 per bar >2450 mm lengths)
25-20xxx	IEC Power Cord, xxx = 660 (US plug), 710 (UK plug), 735 (German Schuko plug), 750 (China plug)
25-05xx	CAT-5 Cable, xx = 04, 10, 15 ft lengths

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 makes it easy to install in a variety of flat-panel tool locations, including mail-slot, conveyor and load/unload cassette areas. Multiple bars in a single tool can be "slaved" to a master bar.

Discharge Time Performance



Measured using Simco-Ion CPM Model 280A w/HEPA flow (60 fpm or 0.3m/sec) & CDA flow @ 2.5 l/m/n.

Handheld Terminal (HHT)

The Handheld Terminal allows you to set all operating parameters through either a wired connection or IR line-of-sight. The 4-line LCD readout can display real-time monitored values for system diagnostics, including bar address, frequency, HV output level, standby mode, alarm test and firmware revision. A single HHT can be used to adjust each bar individually, or to adjust all bars via the master when operating in master-slave mode.

Power-Signal Distribution Box

When 5710 AeroBars must be mounted in a difficult-to-reach or difficult-to-see location, use the Power-Signal Distribution Box to provide a convenient location to display ionization status alarm signals and plug in a HHT to modify or monitor AeroBar performance.

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