



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.

This new, improved version of the 5710 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%.

Features




- Unique corona wire design (no emitter points)
- MicroPulse high voltage technology
- Flexible and powerful setup

Benefits

- 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
- 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
- Standard "plug-and-play" use or user-optimized performance for specialized applications



Specifications

Input Voltage	24 VDC \pm 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 $<$ \pm 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	   RoHS 2 Compliant

Ordering Information

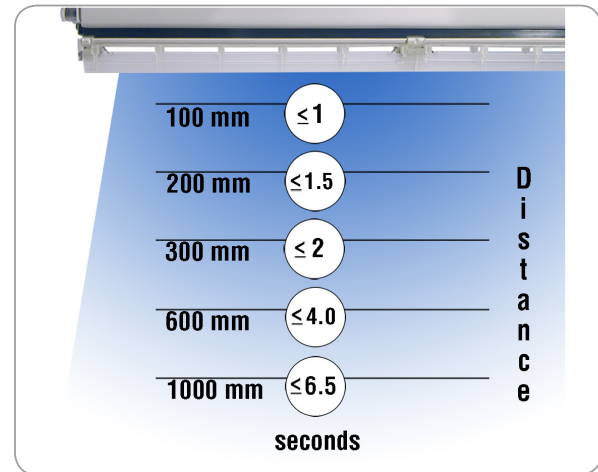
91-5710-xxxx-25-02	25 mm spacing: 400/500/650/750/900/1000/1150/1250/1400/1500 mm lengths
91-5710-xxxx-50-02	50 mm spacing: 400/500/650/750/900/1000/1150/1250/1400/1500/1650/1750/1900/2000/2150/2250/2400/2500/2650/2750/2900/3000 mm lengths
91-5700-HHT-01	Handheld Terminal (HHT) with 4-line LCD display 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)
25-20xxx	IEC Power Cord, xxx = 660 (US plug), 710 (UK plug), 735 (German Schuko plug), 750 (China plug)
33-1710-xx	Interconnect cable, xx = 10, 15, 20, 40 ft lengths
25-0540-xx	CAT-5 with RJ-45 Ethernet Cable, xx = 06, 10, 15 ft lengths
32-2504-01*	Low Profile Fixed Middle Bar SST Mounting Bracket
32-2211-01*	Rotatable Middle Bar SST Mounting Bracket*
32-2213*	Flush Middle Bar SST Mounting Bracket
33-25xx-01*	End Mounting Bracket Kit (incl 2 brackets & screws; xx = 11 (fixed); xx = 12 (low profile fixed); xx = 13 (low profile wide fixed); xx = 20 (low profile rotatable); xx = 21 (rotatable)
91-5700-02	μ Wire AeroBar Model 5710 Emitter Wire Cleaner with 3 ft rod (must order 22-1100)
33-5715-01	μ Wire AeroBar Model 5710 Emitter Wire Cleaner with 3 ft extension rod
22-1100	Foam Head Swab Emitter Cleaners (box of 100)

* Two total (combination of middle bar and end) brackets per bar $<$ 1800 mm in length; three total brackets per bar 1800-2450 mm in length; four total brackets per bar $>$ 2450 mm in length.

Application Flexibility

The μ Wire 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 5710 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. Air jet spacing at either 25 mm (recommended for target distances up to 600 mm) or 50 mm distance offers optimal performance for each individual application..

Discharge Time Performance



μ Wire 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.

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, high voltage 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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