

**TES-CLEAN AIR SYSTEMS**

“Best in class”  
Modulated  
Pulse  
Technology  
from  
Simco-Ion

No ion bar before or  
since has more different  
ways to deliver ions to  
the job, all while being  
cleanest ion AeroBar<sup>®</sup>  
ever produced

ISO 14644-12 @ 0.01 micron and ISO 14644-1 on 0.1 micron particles at 50% output




## AeroBar® 5635M MP



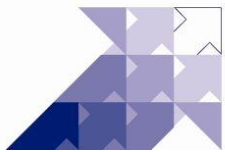
Modulated Pulse Technology with Wide Adjustability & ISO 14644-12 Ionization



# Technical specifications for Simco-Ion family of Modulated Pulse (MP) AeroBar<sup>®</sup>

Specifications	
<b>Input Voltage</b>	24 VDC ±10%
<b>Output Voltage</b>	13.5 kV p-p (max), adjustable
<b>Distance</b>	150-1000 mm distance to surface; application & customer specification dependent
<b>Frequency</b>	Default setting at 5 Hz; adjustable from 1-33 Hz
<b>Balance</b>	Auto balancing system <±20V over time and across the bar length (measured in a controlled environment at 24" distance)
<b>Ion Emission</b>	Modulated pulse (MP) technology
<b>Emitters</b>	Single crystal silicon emitter points
<b>Emitter Pitch</b>	50 mm spacing between nozzles on 350-600 mm length bars 75 mm spacing on longer bars
<b>Ionization Performance</b>	15 sec (typ) with no air-assist, Vp-p Swing of 80 Vp-p; measured at 24" below an emitter center group of points
<b>Cleanliness</b>	Meets ISO 14644-12 cleanliness (0.01 µm particles or nanoparticles) and ISO 14644-1 (0.1 µm particles) using 45-50% output voltage setting
<b>Air Supply</b>	Clean dry air (CDA) or nitrogen
<b>Airflow</b>	45 psi max gas pressure; 1-3.5 lpm/nozzle thru 8 mm OD one-touch fitting (optional)
<b>Ozone</b>	<0.05 ppm
<b>EMI</b>	Below background level
<b>Operating Env.</b>	Temperature 15-35°C (59-95°F); humidity 30-60% RH, non-condensing
<b>Bar Settings</b>	DIP switches for general power settings; trim pots for fine tuning balance, frequency and power output or use the serial output to the MP 5635 Bar Control software for fine adjustments
<b>Enclosure</b>	ABS chassis (ground plate – carbon filled ABS)
<b>Dimensions</b>	3.1"H x 1.3"W x 14/18/24/34/39/45/51/57/63/69/75/81/87/93"L (78 x 34 x 350/450/600/850/1000/1150/1300/1450/1600/1750/1900/2050/2200/ 2350 mm)
<b>Certifications</b>	  
<b>Model 5601 Power Distribution Box</b>	





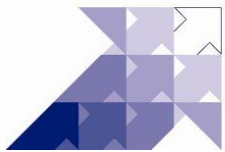
**TES-CLEAN AIR SYSTEMS**

Our value proposition:  
Full integration of the MP AeroBar<sup>®</sup> with your FFU

-Attach to the FFU

-Power the Bar

-Program the AeroBar<sup>®</sup> -  
Alarm output and standby mode



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First, we arrange for the AeroBar<sup>®</sup> to attach to a section of the filter frame extending below the filter media

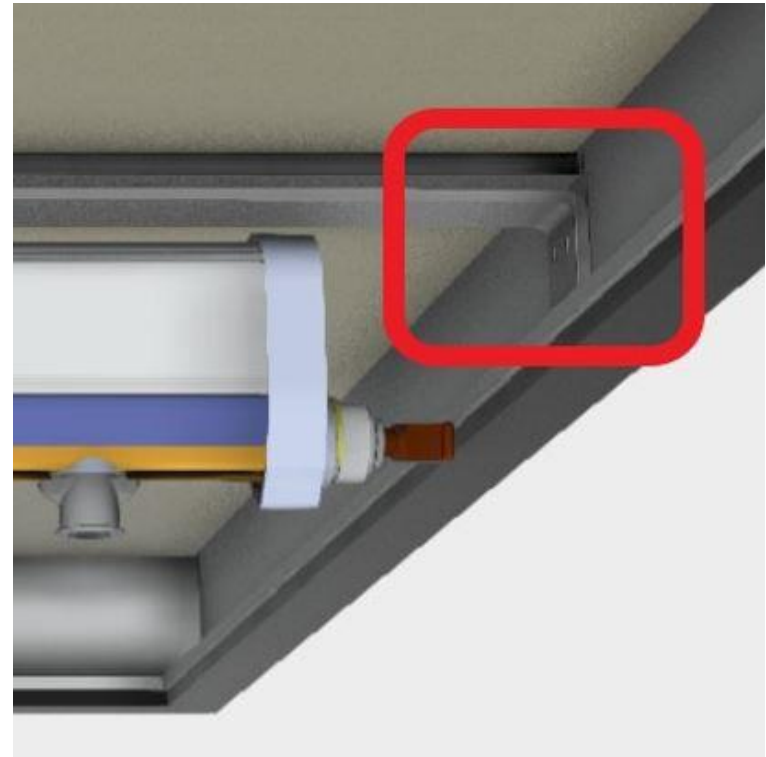
Details follow on the next slide

The particulate filter is constructed with a section that extends below the filter media, our surface to attach stainless steel “L” brackets.

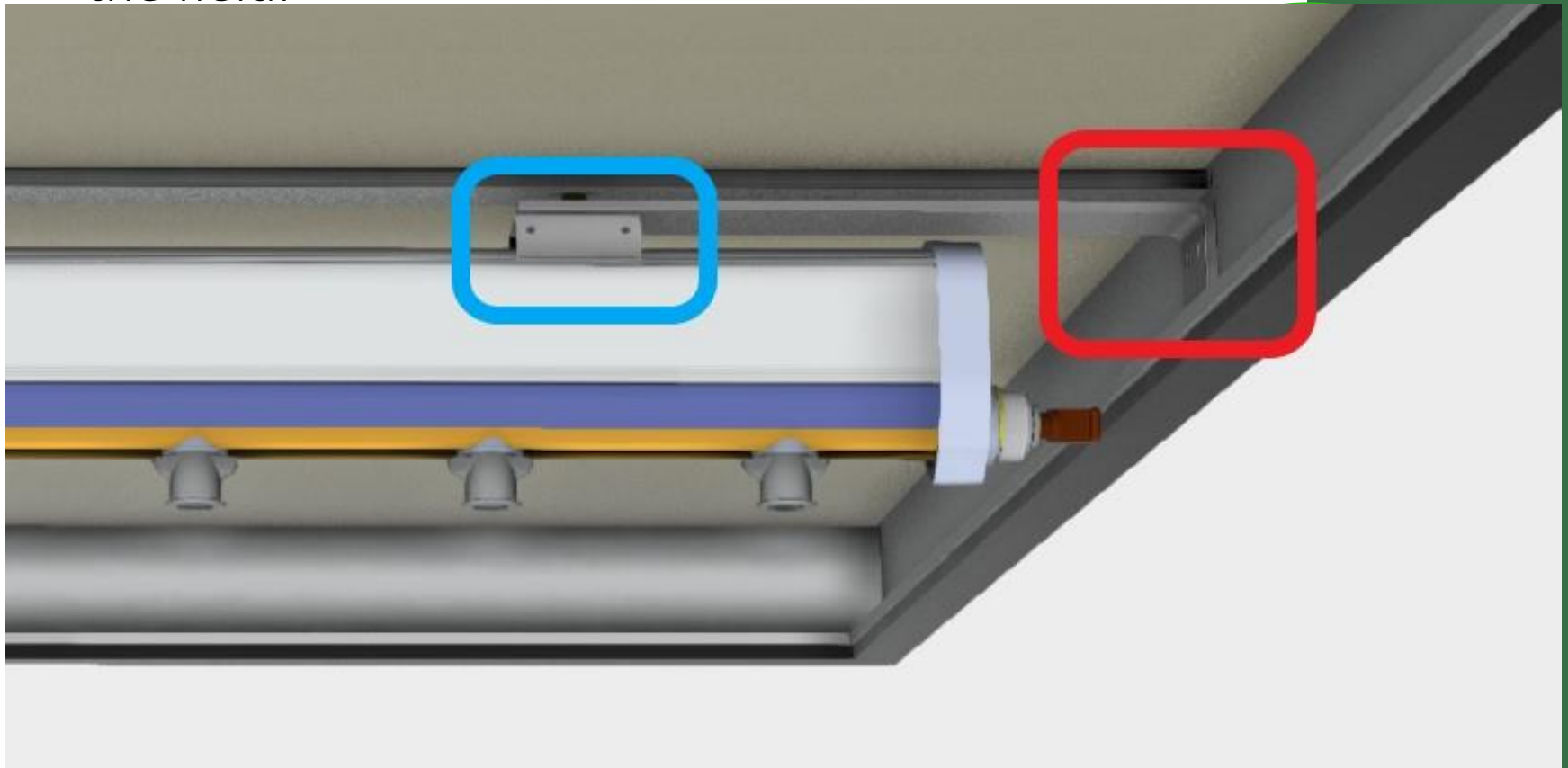
**The extended filter frame**



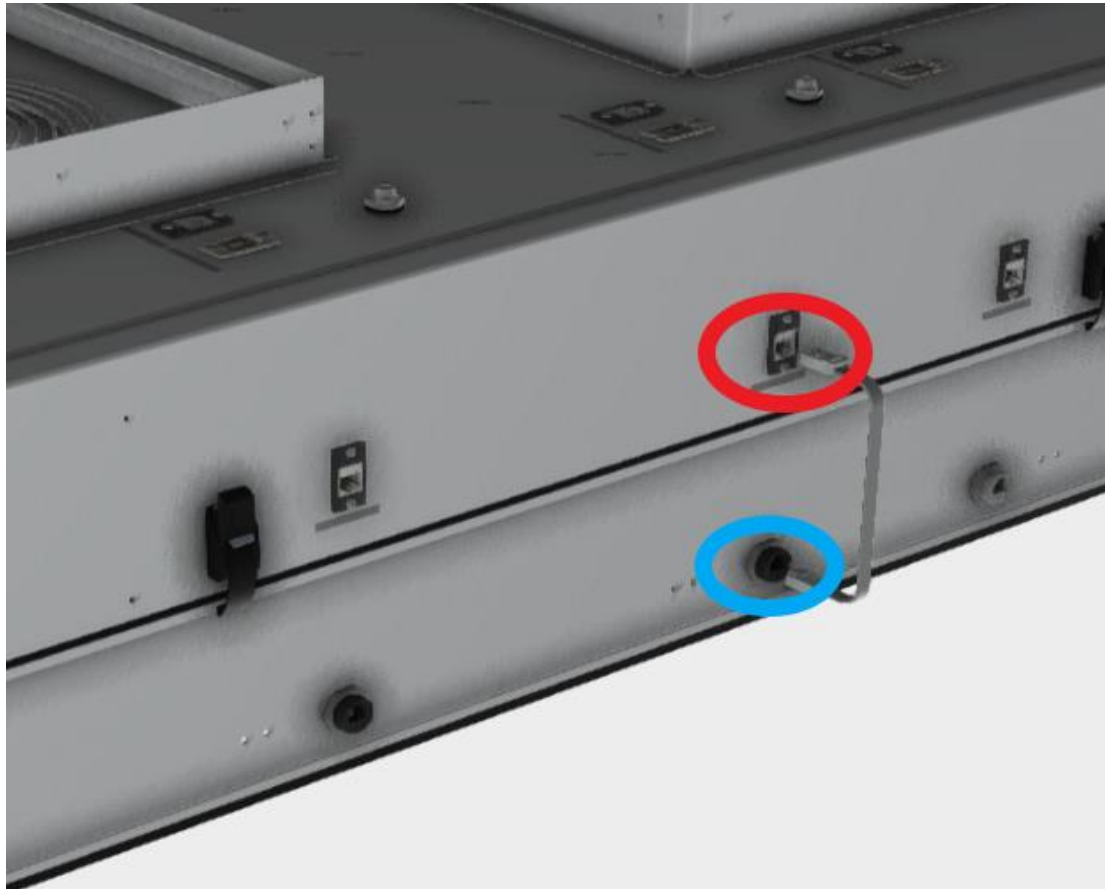
**“L” Bracket attached to this extended frame piece**



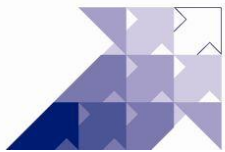
With the FFU “L” bracket in place (in red), the ionizer mounting brackets (in blue) are installed, and the MP AeroBar<sup>®</sup> snapped into place. Note: For safety to the MP AeroBar<sup>®</sup> they are typically not shipped installed in the FFU, but snap into place in the field.



Now that the bar is securely mounted, the combination power/program/alarm/standby cable included with the FFU connects the FFU Fan housings (red connector), to the filter, and terminates at a feed-through connector (blue) on the side of the filter frame.





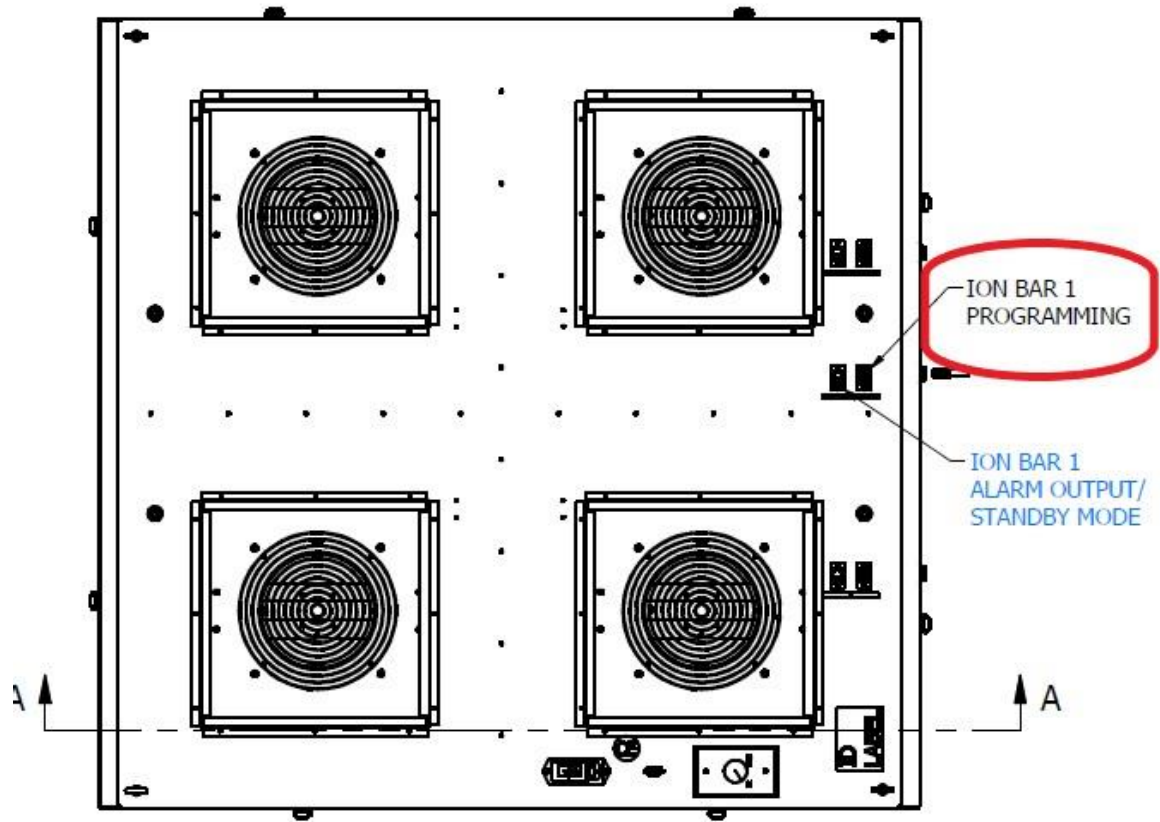


**TES-CLEAN AIR SYSTEMS**

Now that the  
MP AeroBar<sup>®</sup> is  
attached and  
receiving power  
from the FFU

How to  
program the  
bar?

Using the “AeroBar MP” software from Simco-Ion, plug into the **programming port**. From here all settings and adjustments to the AeroBar® are made.





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## Additional features

AeroBar<sup>®</sup> status (alarm feature), putting the AeroBar<sup>®</sup> in “standby” mode

By wiring your tool to the “alarm output/standby” connector your tool will see the status of the bar (OK versus alarm condition). Additionally you can put the bar into “standby mode” for testing. When in “standby mode” the AeroBar<sup>®</sup> is powered and remains warmed up and ready to go-but with no ion output

