



Low Profile Ionizing Bar

IONforce with PFC or visION Controllers

The Simco-Ion IONforce Low Profile Ionizing Bar provides rapid neutralization of static charges to prevent electrostatic attraction of particles (ESA) and electrostatic discharge (ESD) in applications such as cleanrooms and workstations. Powered with a Simco-Ion PulseFlow® (PFC) or visION Controller unit, the IONforce bar produces positive and negative ions that rapidly neutralize any potentially destructive charges in the work area.

IONforce bar produces bipolar ions in the air that neutralize electrostatic charges in the target area. It features a low profile with a height less than 3 centimeters and can be easily mounted on many types of equipment and in areas such as those using robotics with low clearance.

An Air-assist version is available for use in applications where laminar air flow is not present. By providing a stream of Compressed Dry Air (CDA) around each emitter point, ions can be delivered to product surfaces further away, as well as provide a “sheath” of clean air around the emitter points themselves to lengthen the cleaning cycle.

Features




- Low Profile
- Operates in either steady state DC or pulse DC mode
- Optional compressed air assist feature
- Tungsten and ultra-clean silicon emitter point options

Benefits

- Fits in low clearance applications
- Optimized Ionization designed to fit the specific application
- Ionization with no laminar airflow at distances up to 39 inches (1 meter) from the target area
- Choose the emitter points based upon the operating environment criteria



Specifications

IONforce	
Input Voltage	±3.5 kVDC (min), ±8 kVDC (max)
Discharge	<10 sec (typ), 24" with 50 fpm laminar airflow; <5 sec (typ) with 90 lpm CDA air assist
Balance	<30V (typ), 24" with 50 fpm laminar airflow
Operating Modes	Steady state DC, Pulsed DC
Emitter Points	Replaceable Ultra-clean Silicon and Tungsten
Operating Env.	Temperature 10-35°C (50-95°F) recommended; relative humidity 20-65%
Ozone	<0.020 ppm
EMI	Below background level
Air Fitting	Accepts 6 mm plastic tubing
Air Gas Supply	25-45 psi (172-310 kPa)
Mounting	Stainless steel spring clamp hangers provided with each bar
Enclosure	Polycarbonate and stainless steel
Dimensions	14, 20, 32, 44, 56, 67L x 1.13H x .98W in. (35.6, 50.8, 81.3, 111.8, 142.2, 170.2 x 2.9H x 2.5W cm)
Weight	0.35 lb per 12" (0.16 kg per 30.5 cm)
Warranty	Two year limited warranty
Certifications	RoHS Compliant
PulseFlow Controller (Steady-state and Pulsed DC operation)	
Input Voltage	120 VAC or 230 VAC; 50/60 Hz
Output Voltage	Factory set at 6 kVDC; adjustable 3.5-8.0 kV
Output Current	3.0-7.0 µA
Dimensions	5.75L x 5W x 1.65D in. (14.6 x 12.7 x 4.2 cm)
Weight	22.5 oz (700g)
Certifications	 230V, 50 Hz
visION Controllers (Steady-state operation only)	
Input Voltage	120 VAC or 230 VAC; 50/60 Hz
Output Voltage	±10 kV (max)
Output Current	20 µA (max)
Dimensions	4.75L x 7.75W x 2.75D in. (12.1 x 19.7 x 7.0 cm)
Weight	3.8 lb (1.73 kg)
Certifications	 230V, 50 Hz  120V, 60 Hz

1. Tested in accordance with ANSI/ESD STM3.1-2006.

DC Power Supplies and Controllers

The IONforce is designed to be used with Simco's PulseFlow® (PFC-20), the visION2 or visIONi Controllers. visIONi includes a "warning" indicator for notice of maintenance as well as a fault indicator, enhanced functions including remote power switching and fault condition monitoring. visION2 provides a sensor operating mode to provide closed-loop control for the most sensitive applications.



PulseFlow® (PFC-20) Controller

The PFC may be switched between pulse (1.0 Hz, 1.3 Hz, 2.2 Hz or 10 Hz) and steady state operating modes and provides independent control of positive and negative polarity. The controller's design is user adjustable to both Pulse and Steady State DC operating modes. Controls are on the front panel for easy access and mounting. The PFC allows independent voltage level control and provides four different pulse rates. Operating modes include:

- Pulse DC operating mode alternating cycles positive and negative ions resulting in a fast discharge time at extended distances from the target surface.
- Steady State DC operating mode provides balanced (an equal number of positive and negative ions produced by the bar). The best performance is achieved when using the ion bar in laminar airflow applications, in close proximity to the target, or with the IONforce optional compressed gas delivery system.

Ordering Information

4011443-4011453 (odd numbers only)	IONforce Ionizing Bar, Tungsten (W) emitters in 14" (7), 20" (7), 32" (11), 44" (15), 56" (19), 67" (19) bar lengths
4015579-4015584	IONforce Ionizing Bar, Ultra-clean Silicon (SCSi) emitters in 14" (7), 20" (7), 32" (11), 44" (15), 56" (19), 67" (19) bar lengths
4011455-4011465 (odd numbers only)	IONforce Ionizing Bar w/Air Assist, Tungsten (W) emitters in 14" (7), 20" (7), 32" (11), 44" (15), 56" (19), 67" (19) bar lengths
4015585-4015590	IONforce Ionizing Bar w/Air Assist, Ultra-clean Silicon (SCSi) emitters in 14" (7), 20" (7), 32" (11), 44" (15), 56" (19), 67" (19) bar lengths
4005184	PFC-20 PulseFlow® Controller, 120V, 60 Hz
4005185	PFC-20 PulseFlow Controller, 230V, 50 Hz, EU
4009734	PFC-20 PulseFlow Controller, 230V, 50 Hz, UK
4011154	visIONi™ Controller, 120V, 60 Hz
4011155	visIONi Controller, 230V, 50 Hz, EU
4011156	visIONi Controller, 230V, 50 Hz UK
4010726	visION2™ Controller, 120V, 60 Hz
4010727	visION2 Controller, 230V, 50 Hz, EU
4010730	visION2 Controller, 230V, 50 Hz UK
5050538	HV2 - Two to One Connector Kit
5050539	HV4 - Four to One Connector Kit
5050548	7' High Voltage Extension Cable
5050533	12' High Voltage Extension Cable
5050534	18' High Voltage Extension Cable
4371327	IONforce Replacement Ultra-clean Silicon (SCSi) emitter point
4370760	IONforce Tungsten (W) emitter point

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