



QuadBar™ with Air Assist

MODEL 4635

Simco-Ion's QuadBar™ Ionizer with Air Assist Model 4635 provides effective static charge control in a small format. The unique Quadropole emitter point configuration enables the ionizer to be as close as 3 inches (7.6 cm) to the product. The Model 4635's compact size is designed to fit easily into the tight confines of any process equipment. With its independent air delivery system, the Model 4635 provides ionization where airflow is limited or unavailable.

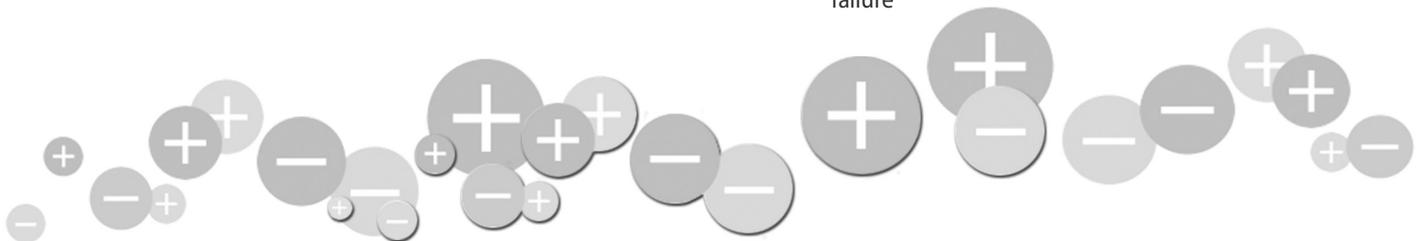
The Model 4635 offers two air assist cartridge design options. Each utilizes a cross-channel air cartridge built around the emitter points that provides optimal air distribution with minimal field voltage. The 'Standard' cartridge has sheathed emitter points, delivering the airflow around each emitter point and providing a protective sheath that extends cleaning periods. The 'Jet' cartridge is designed to move high-velocity ionized air through a center orifice to provide extremely fast discharge times. The Model 4635 ionizer can be powered with either 24 VDC directly to tool power or 24 VAC using a transformer or the Model 4030 controller.

Features

- Air assist cartridge design with cross-channel air delivery; two cartridge design options
- Rotatable cartridge design
- Quadropole configuration with IsoStat technology
- Compact size
- Single-crystal Silicon emitter points
- Alarm output to FMS or process tool controller

Benefits

- Choice of a Standard cartridge with sheathed emitter point for extended cleaning periods or a high-velocity Jet cartridge for extremely fast discharge times
- Allows positioning of air inlet line on either side or the end for installation flexibility
- Provides stable balance at distances as close as 3" (7.6 cm) from the product
- Small format fits into the tight confines of process equipment
- Semi standard for emitter point material provides ISO 14644-1 Class 1 or Class 2 cleanliness depending on the input power
- Ensures immediate notification of catastrophic system failure



Model 4635	
Input Voltage	24 VAC ±5% @ 0.10A, 50/60 Hz, 2.4W; 24 VDC ±5% @ 0.025A, 0.6W (typ)
Discharge	Standard Cartridge: <15 sec @ 12" (30.5 cm) directly under emitter points with 15 lpm (min) purging gas airflow Jet Cartridge: <6 sec @ 12" (30.5 cm) directly under emitter points with 15 lpm (min) purging gas airflow
Balance	±50V @ 6" & 12" (15.2 & 30.5 cm) directly under the emitter points
Coverage¹	12" x 12" (30.5 x 30.5 cm) at a distance of 12"
Ion Emission	Steady-state DC Technology
Emitter	Single-crystal Silicon standard, 2-3 year est. life (depending on process environment)
Cleanroom Class	ISO 14644-1 Class 1 when powered with 24 VDC ISO 14644-1 Class 2 when powered with 24 VAC with 33-1421-01 transformer or Model 4030 Controller
LED Indicator	Green POWER; red ALARM
Air Supply	Input: Clean Dry Air (CDA) or Nitrogen Flow: 0-25 lpm @ 0-7 psi Connection: 0.15" (0.38 cm) OD tubing with 2 micron filter or better
Status Output	FMS Model 5090 interface with 33-1421-01 transformer or direct wire; Controller Model 4030 signal OK or system failure
Operating Env	59-122°F (15-50°C) recommended; 20-65% RH
Daisy-chain	Up to 4 units when used with 33-1421-01 transformer; up to 16 units via Controller Model 4030
Maintenance	Emitter point cleaning at monthly to quarterly intervals depending on environment; no adjustment or calibration required
Mounting	Can be mounted to any process tool or flowhood using 4 #6 screws
Enclosure	ABS, polycarbonate air assist cartridges, mylar & stainless steel labels
Dimension	1.42"H x 1.32"W x 4.5"L (3.61 x 3.35 x 11.4 cm) with flange Air connection elbow on the side, width 1.92" (4.88 cm) Air connection elbow on the end, ionizer body length 3.9" (9.91 cm)
Weight	0.24 lb (0.11 kg)
Warranty	Two-year limited warranty
Certification	   
33-1421-01 Transformer	
Input Voltage	120 VAC ±10%, 50 Hz
Output Voltage	24 VAC ±5% @ 500 mA
Dimension	3.0"H x 1.9"W x 1.6"D (7.62 x 4.83 x 4.06 cm)
Weight	0.9 lb (0.4 kg)
Certification	 
33-1431-01 & 33-1434-01 Transformer	
Input Voltage	230 VAC ±10%, 60 Hz
Output Voltage	24 VAC ±5% @ 500 mA
Dimension	3.2"H x 2.2"W x 1.9"D (8.13 x 5.59 x 4.83 cm)
Weight	0.9 lb (0.4 kg)
Certification	 

1. Measurements were taken with an airflow rate of 100 fpm using a charged plate monitor in accordance with ANSI/ESD STM3.1-2015.

Insert Cartridge Options

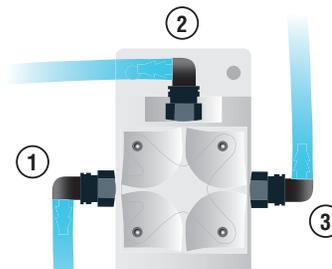


Standard cross-channel cartridge with airflow sheath around the emitter points extends cleaning periods.



Jet cross-channel cartridge with center orifice produces high velocity for fast discharge times.

Air Line Location Options



Air Line location choices #1, #2 or #3 as shown below

IsoStat Technology

Simco-Ion's IsoStat Technology guarantees intrinsically balanced ionization and eliminates complicated feedback circuits. Ionizers incorporating this technology never need calibration and require very little maintenance. IsoStat is based on a law of physics, Conservation of Charge, which states that charge cannot be created or destroyed in an isolated system. By isolating the ionizer's emitter points from the ground, IsoStat ensures equal numbers of positive and negative ions to better protect the sensitive product.

Ordering Information

91-4635EU-X-Y	QuadBar, standard or jet insert, choice of air inlet location, cable included
-S	QuadBar, standard insert with sheathed emitter points
-J	QuadBar, jet insert with center orifice
-1	Air Inlet on Left Side
-2	Air Inlet on Center Front
-3	Air Inlet on Right Side
91-4030R	QuadBar Controller, powers up to 16 QuadBar (IEC power cord required, contact Sales Services for detail)
33-1421-01	Power Supply Kit, 120V/24 VAC 500 mA, interconnect cable with RJ-9 4P/4C plug, US
33-1431-01	Power Supply Kit, 230V/24 VAC 500 mA, interconnect cable with RJ-9 4P/4C plug, EU
33-1434-01	Power Supply Kit, 230V/24 VAC 500 mA, interconnect cable with RJ-9 4P/4C plug, UK
33-1440-01	DC Power Supply Kit, 100-240 VAC to 24 VDC 1A, interconnect cable with RJ-9 4P/4C plug (IEC power cord required, contact Sales Services for detail)
33-1723-6	DC Power Cable (QuadBar & 24 VDC tool power), 6', 1 connector/1 pigtail

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