

QuadBar™ Ionizer

MODEL 4635

SIMCO ION™
An ITW Company



The 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 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 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
- ✓ Fits into confined spaces of process equipment
- ✓ Emitter point material meets ISO 14644-1 Class 1 with 24 VDC power, and ISO 14644-1 Class 2 when with 24 VAC power
- ✓ Ensures immediate notification of catastrophic system failure

invisible problems
visible results™
Tackling Static & Particulate Contamination

Model 4635	
Input Voltage	24 VAC, 35 mA via 24 VAC Transformers (P/N 33-14xx-01, where xx = 21, 31, 34, 46); or 24 VDC via tool power or P/N 33-1440-01; or Model 4030 Controller, up to 16 QuadBar's (max)
Discharge¹	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
Ion Emission	Steady-state DC Technology
Emitter	Single-crystal Silicon
Cleanroom Class	ISO 14644-1 Class 1 when power with 24 VDC ISO 14644-1 Class 2 when power with 24 VAC
LED Indicator	Green POWER; red ALARM
Coverage	12" x 12" (30.5 x 30.5 cm) @ 12" (30.5 cm)
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	Via Model 5090 FMS Interface attachment, or through Model 4030 Controller signals OK or system failure
Operating Env	59-122°F (15-50°C) recommended; 30-60% RH (non-condensing)
Daisy-chain	Up to 4 units via transformer or up to 16 QuadBar's via Model 4030 Controller
Mounting	Can be mounted to any process tool or flowhood using four #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	   

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

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	Model 4030 Controller, powers up to 16 QuadBar's*
91-5090R	Model 5090 FMS Interface
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
33-1446-01	Power Supply Kit, 230V/24 VAC 500 mA, interconnect cable with RJ-9 4P/4C plug, AU/CN
33-1440-01	DC Power Supply Kit, 100-240 VAC to 24 VDC 1A, interconnect cable with RJ-9 4P/4C plug*
33-1723-6	DC Power Cable (QuadBar & 24 VDC tool power), 6' (1 connector/1 pigtail)
22-1000	Emitter Point Cleaner, IPA swab

* IEC power cord required, contact Sales Services for detail.

Insert Cartridge Options

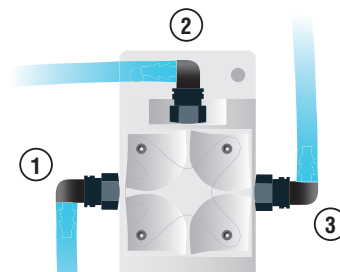


Standard cross-channel cartridge with airflow sheath around the emitter points extends cleaning periods.



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, Technology Group'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.



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