



ULTRA-CLEAN IONIZATION SOLUTIONS



Micro Series	Model 4210 (u)(n)	Model 4214 (un)	Model 4630 Quadbar	Model 4635 Quadbar	Model fusION In-line
Feature	<p>Model 4210: CDA or N₂ high output tungsten emitters for general use in-line applications</p> <p>Model 4210u: CDA with Single-crystal Silicon emitters for ISO 14644-1 Class 3</p> <p>Model 4210un: N₂ with Single-crystal Silicon emitters for ultra-clean applications</p>	<p>Self-balanced, no calibration required; unlike other N₂ ionizers which depend on the trace gases in the nitrogen stream to produce ionization, it is designed to ionize N₂ (99.999%) gas flow in ultra-clean semiconductor and other high purity processes</p>	<p>Unique quadrupole ensure effective ionization as close as 3" from the product</p>	<p>Quadrupole configuration with unique cross-channel air cartridge around emitter points for independent air delivery in tight space</p> <p>Standard Cartridge: Fits around emitter points to provide CDA or N₂</p> <p>Jet Cartridge: High-velocity jet for air centered between all 4 emitter points to greatly reduced discharge times</p>	<p>Fast decay times through output tubes; tubes may be split into multiple tubes to service multiple locations</p> <p>Optimal Performance: Use nitrogen kit for pure N₂ or 1-2% CDA mixture application</p>
Discharge	<p>4210: 10 sec 4210u: 5 sec 4210un: 10 sec</p> <p>Measured through 6" long, 1/4" ID Teflon tube held 6" from the CPM, airflow rate of 2 scfm</p>	<p>Without manifold: <10 sec @ 6" (15.2 cm)</p> <p>With manifold: <100 sec @ 19.6" (49.8 cm)</p>	<p><30 sec @ 12" (30.5 cm) Directly under emitter points (80-100 fpm airflow)</p>	<p>Standard Cartridge: <15 sec @ 12" (30.5 cm) Jet Cartridge: <6 sec @ 12" (30.5 cm) Directly under emitter points (0.53 cfm purging gas airflow)</p>	<p><5 sec @ 6" (15 cm) (10 psi gas pressure)</p>
Balance	<p><±25V @ 6" (15.2 cm) (specified flow & pressure)</p>	<p>±25V @ 6" (15.2 cm)</p>	<p>Intrinsically balanced ±50V @ 6" & 12" Directly under emitter points with airflow</p>	<p>Intrinsically balanced ±50V @ 6" & 12" Directly under emitter points with airflow</p>	<p><±50V</p>
Ion Emission	<p>IsoStat Technology</p>	<p>High Frequency AC Technology</p>	<p>Steady-state DC Technology</p>	<p>Steady-state DC Technology</p>	<p>Steady-state DC Technology</p>
Cleanroom Class	<p>4210: ISO 14644-1 Class 5 4210u: ISO 14644-1 Class 3 4210un: ISO 14644-1 Class 3</p>	<p>ISO 14644-1 Class 1 (0.1 µm particles) Extended ISO Class 1 (0.01 µm particles)</p>	<p>ISO 14644-1 Class 1 (24 VDC) ISO 14644-1 Class 2 (24 VAC & Ctrl)</p>	<p>ISO 14644-1 Class 1 (24 VDC) ISO 14644-1 Class 2 (24 VAC & Ctrl)</p>	<p>ISO 14644-1 Class 4</p>
Airflow	<p>CDA or N₂ (min 1.5 cfm @ 10-50 psi)</p>	<p>N₂ 3.53 cfm @ 30 psi (100 lpm @ 207 kPa), max</p>	<p>Laminar Flow (80-100 fpm)</p>	<p>CDA or N₂ 0-25 lpm @ 0-7 psi</p>	<p>CDA or N₂ (0.8 scfm @ 5 psi to 3.6 scfm @ 50 psi)</p>
Dimension/Weight	<p>2.38"D x 4.75"L x 3.13"W (6.06 x 12.0 x 7.95 cm) 2.31 lb (1.04 kg)</p>	<p>6.01"L x 2.85"W x 1.26"H (15.2 x 7.26 x 3.20 cm) 1.4 lb (0.64 kg)</p>	<p>1.38"H x 1.28"W x 4.50"L (3.56 x 3.30 x 11.4 cm) with flange 0.22 lb (0.10 kg)</p>	<p>1.42"H x 1.32"W x 4.50"L (3.61 x 3.35 x 11.4 cm) with flange 0.24 lb (0.11 kg)</p>	<p>2.52"H x 1.28"W x 4.50"L (6.40 x 3.25 x 11.4 cm) includes air connectors 0.3 lb (0.136 kg)</p>