

MCI™ Multi-Cluster Ionization Technology (Power of Dual Cells)

MCI PureSynAIRg™

WHY? The trademarked MCI™ Multi-cluster Ionization technology is a unique, proactive, award-winning and wholistic approach to cleaning both the air/surfaces of indoor contaminants. By combining a unique UV w/target plate (PCO-Photo-Catalytic Oxidation) with the patented ionization cell (DBI-Dielectric Barrier Ionizer), Best Living Systems takes the best characteristics of both and provides a synergy that enhances each. Whether in an induct probe, ceiling-mounted or free standing stand-alone unit, these technologies reduce and/or eliminate mold, mildew, bacteria, particulates and VOCs from our breathing space creating cleaner and healthier indoor environments.



COMPARISON—When compared to other technologies on the market, the components utilized to produce the MCI™ Multi-Cluster Ionization process are advanced technologies and are, in some cases, patented or trademark protected. How do they compare?

Technology	BLS Uniqueness	Advantage(s)
UV Lamp	NO Ozone	With competitors, ozone can accumulate near the device and exceed the .05ppm considered safe in indoor environments. Ozone produced in BLS units is about the same as a computer, copier or ceiling fan and is dissipated by dilution after leaving the unit.
UV Lamp	24,000 hour	Most germicidal UV lamps are only 10,000 hr. & begin degrading in the first six (6) months, virtually ineffective after nine (9) months. With UV, annually replace for optimal use.
Target Plate	Quad-Metallic Coating	Typical PCO technology utilizes only TiO ₂ . Though effective, it is less effective than the quad-metallic coating BLS uses to produce a much greater number of hydroxyls and ionization.
Target Plate	Honeycomb Shape	The catalytic process is dependent on the amount of surface area directly exposed to the target. Honeycomb exposes a greater surface area to the UV, producing more hydroxyls.
UV w/Target	PCO Cell Unit	The nature of PCO technology makes the target plate self-cleaning so there is no reason to replace the PCO cell for the life of the product. Designed for maximum air flow distribution
DBI	Patented	There are, of course, some other copy-cats on the market but they use less expensive & effective electrodes and transformer. The patented DBI cell is a 3 year cell w/LED indicator.
DBI	Clustered Ions	Other units use either needle point or brush ionizers which are limited by air flow and obstructions making it impossible for them to get through spaghetti ductwork, VAVs or grills.
Ozone Stick	Life-Time Warranty	The unit provides scaleable ozone (NO OZONE in default mode) to enable the user to use as much ozone as needed to oxidize odors and other contaminants.
Ozone Stick	“AWAY” Mode	The circuitry allows the ozone to be maximized in “AWAY” mode when the space is unoccupied to sanitize the environment for 2 hours and then reset back to original no ozone.
Ballast	Low Voltage	Ballasts are convertible from 110v or 220v (by changing the plug) to 12v making the units extremely energy efficient without the restriction of distance from plug to device.
Combined	Synergistic Approach	PCO technology is good on VOCs but especially good on odors and microbes. DBI is good on odors and microbes but especially good on VOCs. By combining the two technologies synergistically, the effectiveness of each is improved and this accomplished without ozone.

How MCI Works

“The benefits of the multi-clustered ion can hardly be overstated. In my IAQ presentations I normally say that, “IAQ is a multi-faceted problem that needs a multi-strategic solution”. The multi-clustered ion does that. A single piece of equipment can deal with the particles floating in the air, the odors, the gases (includes VOCs) and biologicals. But more importantly, the multi-clustered ion is extremely effective on surfaces. In fact, 80% of the testing that has been done on this technology, both clinical and in the field, has been done on surfaces rather than the air. Why? Because it is much easier to quantify contaminants on surfaces. Air quality is extremely dynamic and difficult to test, especially in living environments. It goes without saying that if this proactive technology is keeping the surfaces clean, it’s certainly keeping the air that it’s moving through clean, too.”

Doug Hoffman, Executive Director of NORMI
Author of www.MoldFreeConstruction.com

Tests were conducted for BLS by GreenTech Environmental, Inc. in 02/2017 utilizing an ion meter placed 3’ from the downstream side of each unit. Unit used was the MCI™PureSynAIRg™ base unit (identified as MCI22K) NO O₃ producing PCO cell and patented DBI.

TOTAL ±Ions Produced

MCI PureSynAIRg™

PCO Only 2Kpm³

PCO+DBI 230Kpm³

Demonstrates the value of synergy.