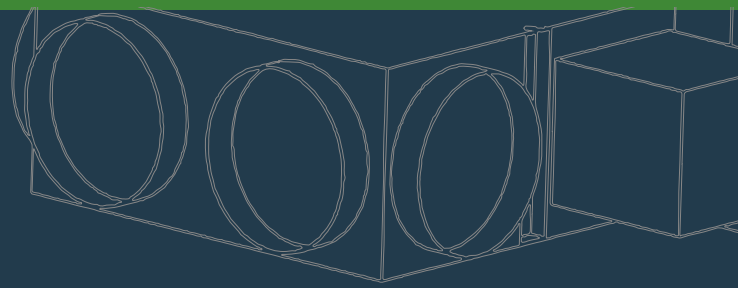


QUARTZ

FAN COILS AND HVAC



Quartz SHIELD

Built-in Virus Protection



Helping to safeguard employees
in the workplace

Developed in Partnership with Bipolar Ionisation Ltd



A Solution for Protection

Quartz SHIELD now provides the solution by significantly improving indoor air quality (IAQ) in buildings through a wide range of product innovations.

Employer confidence in protecting the workforce in the workplace has never been more important.

The capability to destroy viruses, bacteria and mould, can now be realised through the widespread deployment of 'Bipolar ionisation' technology.

Powered by:  **PlasmaAir**



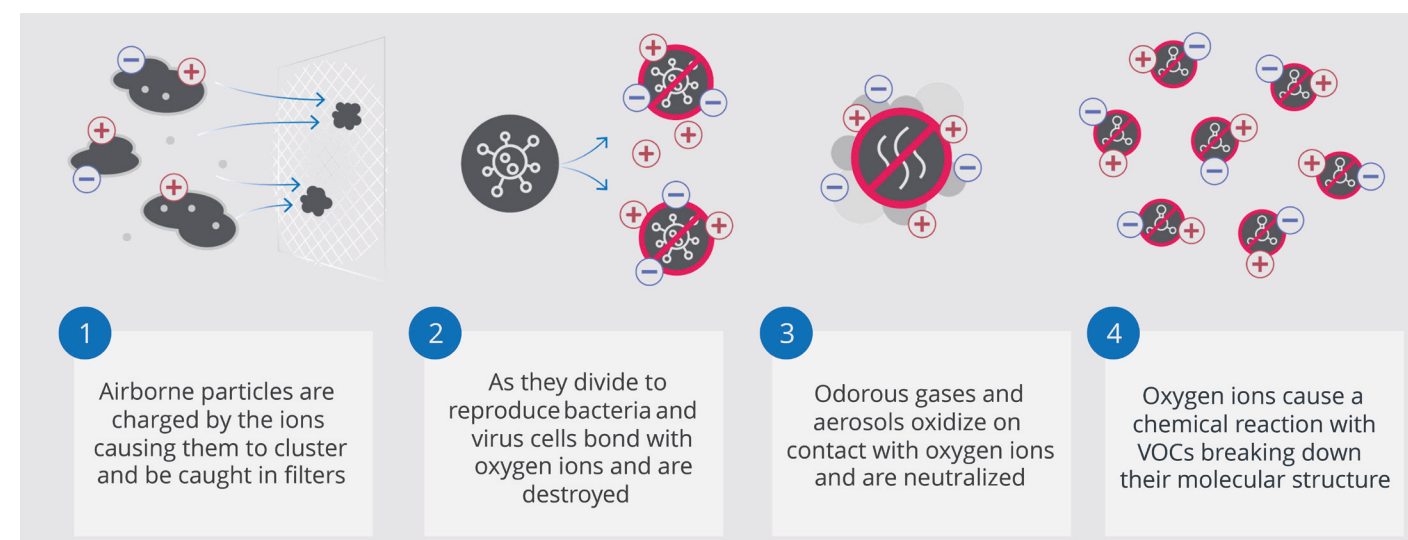
What is Bipolar Ionisation?

Ionisation is a natural process that occurs in the environment. It releases charged atoms, which attach to airborne pathogens destroying harmful substances in the environment.

This proven technology has already been repeatedly deployed in various products, applications and sectors across the globe.

How it works in buildings?

Bipolar Ionisation technology replicates a natural process by releasing positive and negative ions into the air, significantly improving indoor air quality and destroying harmful substances like viruses, bacteria and mould.



Key Benefits of Bipolar Ionisation

- ✓ Inhibits the transmission of viruses
- ✓ Inhibits the growth of bacteria, mould and allergens
- ✓ Kills pollutants within the room
- ✓ Oxidises odorous gasses
- ✓ Balances static electricity
- ✓ Superior performance over air filtration systems
- ✓ Reduction of cleaning chemical use
- ✓ Safeguarding employees in the workplace
- ✓ Promoting well-being to employees
- ✓ Reduced sick pay and loss of resource
- ✓ Reduced cleaning costs
- ✓ Can be retro-fitted to existing installer fan coils



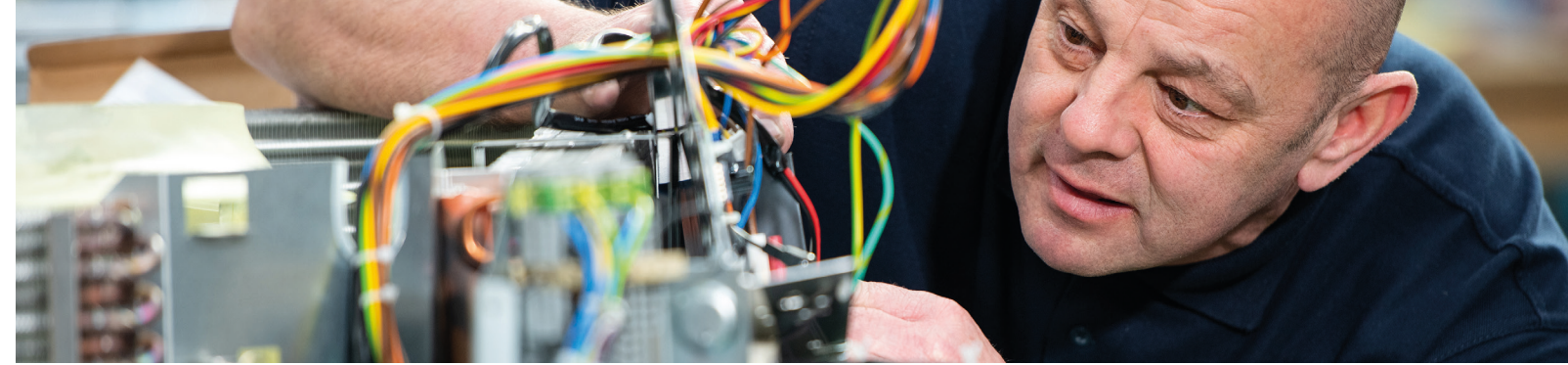
Independently Tested & Proven

Dr. John Oxford, internationally recognised virologist and professor at the **Institute of Cell and Molecular Sciences at St. Bartholomew's and The Royal London Hospital**, states that Bipolar ionisation has been proven to be effective against a number of viruses, by deactivating and rendering them harmless, so they can no longer spread or cause infection.

Recent testing carried out by **Tayra and backed by the Spanish Ministry of Defence Biological Laboratory in Spain** on Bipolar Ionisation technology, also showed a significant reduction of MS2 Bacteriophage, a surrogate for SARS-CoV-2 (COVID-19), in indoor environments. Results showed a reduction in Coronavirus surrogate by 99% airborne and 80% on surfaces within 10 Minutes.



Topaz - Minislim



TOPAZ – Minislim range provides the innovative wall mounted solution, designed with built-in Bipolar Ionisation technology as standard. These units deliver increased protection, comfort, and low noise emissions offering flexible installation options for a wide range of applications.

Built-In Bipolar Ionisation Technology:

Innovative 'needlepoint brush' ionizer produces an equal amount of positive and negative ions, neutralizing harmful pollutants and odours. This self-balancing unit is UL2998 validated and tested to ensure zero ozone emissions



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Ultra-low noise emissions:

The TOPAZ - Minislim has guaranteed lowest noise emissions for minimal disturbance and greatest user benefit.

Flexible Installation:

The TOPAZ - Minislim comes with various options for both vertical and horizontal wall mounting



Ultra-thin:

Compact dimensions distinguished by a thickness of only 130 mm, the elegant and minimal design and the high performance with low energy consumption, make the TOPAZ – Minislim range the perfect solution for all applications

Energy Efficient:

Installed with an EC/ED high efficiency Fan

Controls:

Built in 7 day digital timer control with DC speed control as standard

Low Maintenance:

Engineered with fewer moving parts, the TOPAZ – Minislim range requires minimum maintenance



Ducted Fan Coil Units

Ducted range provides the innovative solution including Sapphire 285mm, Amber 235mm and Amethyst 175mm, designed with built-in Bipolar Ionisation technology as standard. These units deliver increased protection, comfort, and low noise emissions offering flexible installation options for a wide range of applications.

Built-In Bipolar Ionisation Technology:

Innovative 'needlepoint brush' ionizer produces an equal amount of positive and negative ions, neutralizing harmful pollutants and odours. Ionisers can be installed as either factory fitted option on new installs or can be retro-fitted to existing fan coils



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Ultra-low noise emissions:

The Ducted range offers 'whisper quite' comfort to the user, in any room environment with low NR levels on all models

Bespoke options:

All Ducted models are available with painted finishes to your specific RAL colour



Size options for all applications:

With 3 size options 285mm, 235mm and the slim-line Amethyst 175mm the ducted range provides the perfect solution for all applications

Spigots:

Flexible range of spigot options including size and position

Filters:

Comprehensive filter range including stainless steel mesh washable filters

Low Maintenance:

Engineered to the highest standard, all ducted options require minimum maintenance, ensuring lower total cost of ownership (TCO) for end users



CWC 600 Cassette



The **CWC 600** provides the innovative ceiling mounted solutions, fitting easily into a standard ceiling tile, designed with built-in Bipolar Ionisation technology as standard. These units deliver increased protection, comfort, and low noise emissions offering flexible installation options for a wide range of applications.

Built-In Bipolar Ionisation Technology:

Innovative 'needlepoint brush' ionizer produces an equal amount of positive and negative ions, neutralizing harmful pollutants and odours. This self-balancing unit is UL2998 validated and tested to ensure zero ozone emissions



Powered by:  PlasmaAir



Small and compact:

Compact dimensions and easily fitted into ceiling tiles the CWC range is the perfect solution for all applications. The CWC 600 is the size of a single ceiling tile

Bespoke options:

Cassettes fascias are available with painted finishes to your specific RAL colour

Ultra-low noise emissions:

The CWC 600 offers 'whisper quite' comfort to the user, in any room environment, with low NR values for all applications

Controls:

Built in 7 day digital timer control with DC speed control as standard

Low Maintenance:

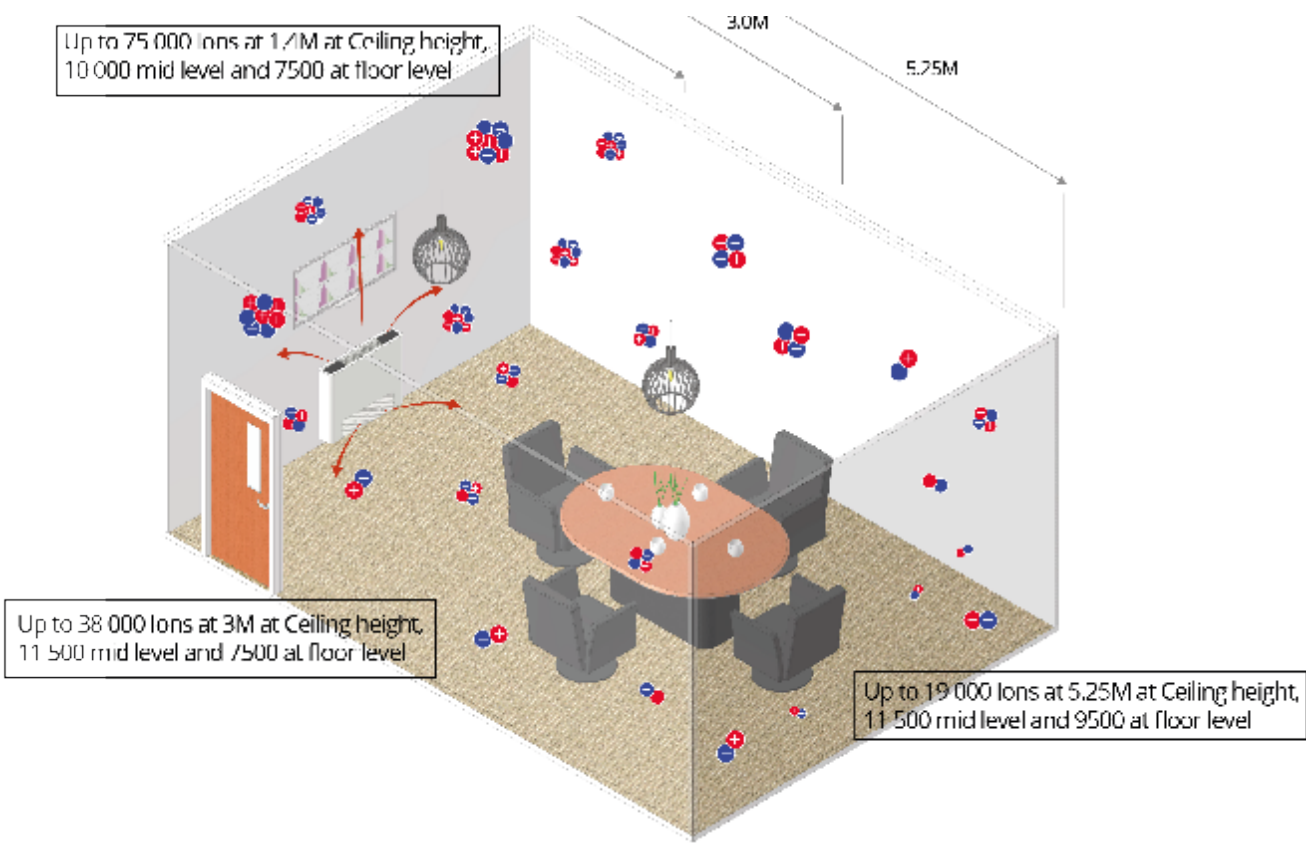
Unique 1-piece lightweight chassis for easy installation and servicing



Technical Data

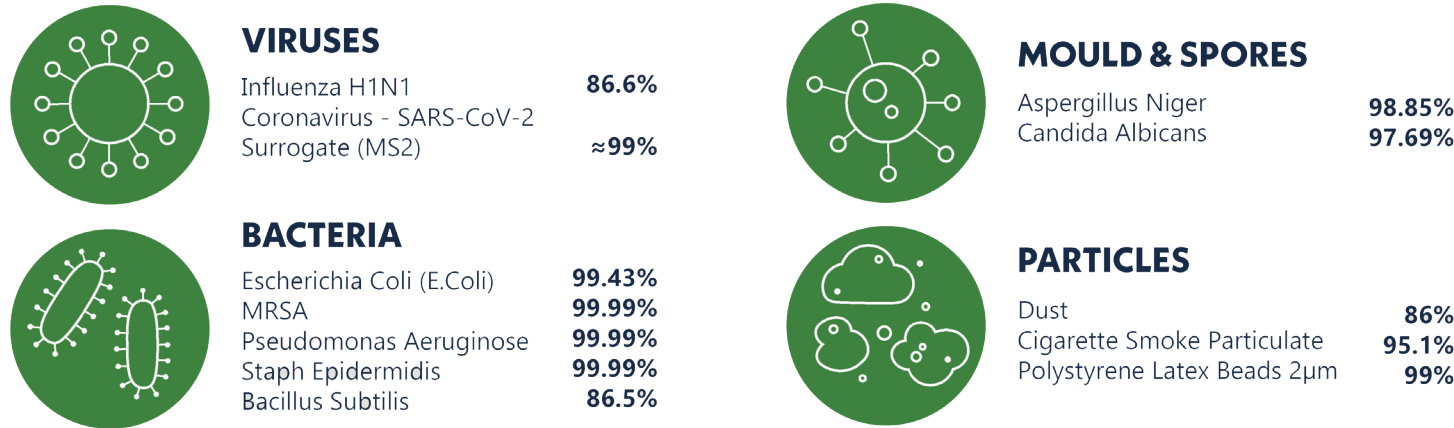


Testing was carried out on the Topaz Minislim fitted with a bipolar ioniser which was installed vertically in a 3.6m X 5.25m X 2.6m room. Testing was completed at 45l/s and 69l/s airflow rates and ion density measurements in ions/cc were taken in a total of 27 locations, as a 3x3 horizontal grid at floor, ceiling and mid levels.



Verified Testing Results

Test results showing the % reduction impact of bipolar ionisation on indoor air contaminants.



How Bipolar Ionisation Compares

Bipolar ionisation technology is a superior solution and pro actively treats the air in the occupied space at the source of contamination. Traditional end-of-pipe solutions utilise a reactive “pass-through” or “filtered” approach. These units have been independently tested to ensure zero ozone emmissions.

	Bipolar Ionisation	PCO	Ozone Generators	Traditional Filtration	HEPA / Fine Grain Filters	Carbon	UV Lights
Success Rates	99%	Marginal	99%	Minimal	0 - 99.7%	Marginal	Marginal
Particle Size	Small < 2.5µm	Large > 5µm	Small < 2.5µm	Large > 5µm	Small > 0.3µm	N/A	N/A
Treats in Room Air	YES	YES	YES	NO	NO	NO	NO
Replacement Parts Needed	NO	YES	YES	YES	YES	YES	YES
Produces Harmful Byproducts	NO	YES	YES	NO	NO	NO	NO
Energy Costs	£	££	£	££	£££	£££	£

Worldwide Reference Projects

Over the past few years, bipolar ionisation has been utilised globally as a proven indoor air quality solution for a wide range of buildings.. Clients have already adopted, specified and installed this technology across numerous projects worldwide.



Offices

- SL Green Graybar Bldg – New York
- L&L Holdings 142 West 57th – NYC



Hotels

- Ritz Carlton - Luxury hotels & resorts
- Four Seasons - International portfolio of hotels



Education

- Patrick Henry College – Purcellville, VA
- Georgetown Middle School - KY



Transport

- LAX Airport – Los Angeles, CA
- Van Nuys Airport –Van Nuys, CA



Government

- 911 Call Center – Los Angeles, CA
- Army Barracks – Fort Benning, GA



Why QUARTZ?

Quartz is your trusted partner for HVAC-R product solutions, with a proven ability to deliver bespoke designs for all project applications. Ensuring market leading customer satisfaction in our chosen HVAC-R sectors.

Developed in Partnership with bipolar ionisation Ltd

QUARTZ

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In partnership with



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