

IonRinse™

Ionised Air Rinsing System
for sustainable rinsing performance

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We've got the world covered

Wherever you are in the world, you'll find Meech hard at work, providing a wide range of businesses with specialist expertise. From our Headquarters and Technical Centre in the UK, our manufacturing subsidiary in the USA and sales offices in Belgium, Hungary and China, we've got the world covered. In fact, our distribution network now covers 50 countries, providing easy access to fully trained, carefully selected Meech distributors, who can provide in-depth support – wherever you are based.

Outstanding quality as standard

As with every Meech system, quality is at the heart of the IonRinse™ ionising air rinsing system. We always work to the highest possible quality standards in everything we do: manufacturing, customer support and technical know-how. Our quality management system is certified by BSI to ISO9001. Products manufactured by Meech are also appropriately certified to international standards which include CENELEC EN 60950, UL/CSA (CUL) and CE. We also hold ATEX and UL“EX” approvals for use in hazardous environments. So, you can be sure you've chosen a solution and a company that will meet your own exacting standards.

World leaders in Static Control and Air Technology

No-one knows the specialist fields of static control and air technology better than Meech. The practical benefits can be seen at work in IonRinse. Unique design characteristics such as custom designed airflow distributors and integral ionising bars, deliver important benefits – including enhanced performance and extended lifespan – that help you to maximise the return on your investment.

All the experience you need

Established in 1907, Meech has earned a worldwide reputation for the design and manufacture of effective, durable systems that are supported by our knowledgeable technical team. With so much to offer, no wonder our global user list has grown to in excess of 7,000 companies, including:

- Coca-Cola Enterprises Ltd
- Coors Brewers Ltd
- Cott Beverages Ltd
- Dairy Crest Ltd
- Del Monte S.A.
- Glaxo Smithkline PLC
- H J Heinz Co Ltd
- Premier Foods Ltd

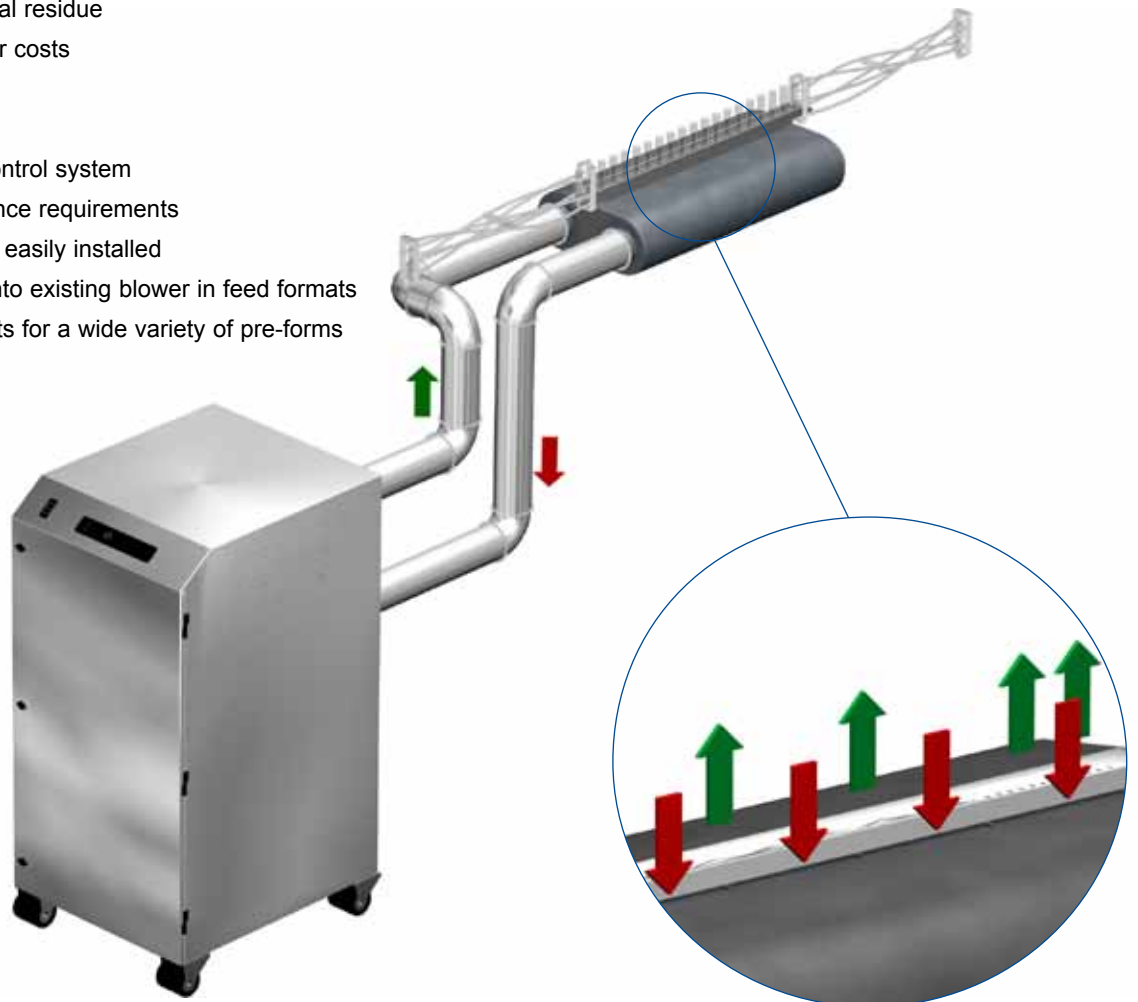
Meech and ionised air rinsing

Meech has been involved in container (blown container/ bottle/can/jar/pre-form) ionised cleaning for many years through the supply of our compressed air ionising nozzles. Over the past year we have invested in the design of a new fan driven ionised air rinsing system, the IonRinse.

The IonRinse project has been driven as a result of feedback through our network of food and beverage industry contacts, from which two requirements have been repeated to us; “energy savings” and “sustainability”.

Energy savings and sustainability are hot topics in all industries, not least food and beverage. Due to this, traditional pre-fill water rinse systems are becoming far less attractive as ionised air rinsing systems develop further. Meech has engineered the next stage of energy efficient, sustainable ionised air rinsing which offers the following advantages:

- Improved cleaning quality
- No water costs
- No water / chemical residue
- No compressed air costs
- No chemical costs
- No effluent costs
- Fully integrated control system
- Minimal maintenance requirements
- Very compact and easily installed
- Easy integration into existing blower in feed formats
- Common twist units for a wide variety of pre-forms



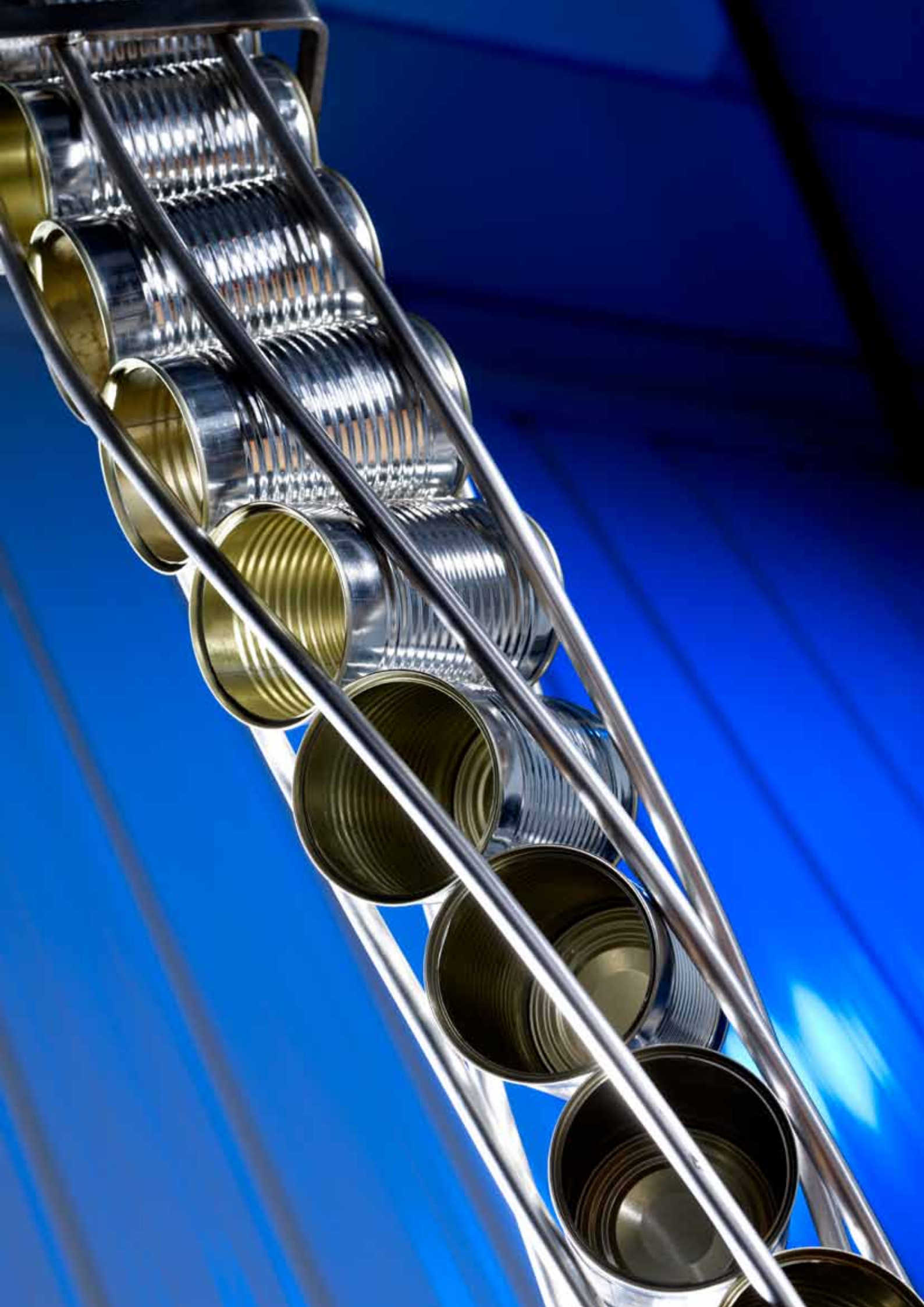
How the IonRinse system works

The IonRinse system combines powerful AC ionisation, a custom designed airflow distributor and high quality inline filtration to provide the ultimate in ionised air rinsing.

The high velocity, filtered ionised air exits the IonRinse head unit via the airflow distributor and enters the container. The control of the airflow coupled with the neutralisation of static charges releases contamination from the container inner walls, which is caught by the vacuum airflow and extracted to the inline filter unit.

The blow and vacuum airflows are provided by the central blow, vacuum and filtration unit.

Cleaning performance is maximised with the container fully inverted (opening facing down) as it travels over the IonRinse head. Meech can provide the required container handling and installation as part of the system, if required.





The IonRinse system

The IonRinse head

The IonRinse head has been developed to provide maximum performance with ease of maintenance. It has the following features:

Feature	Benefit
Stainless steel construction	High quality and suitable for use in washdown environments
Teflon airflow distributor	Customised to suit the container and line speed to ensure maximum performance. Teflon material allows the container to run in contact with the surface
Twin AC ionising bars	Built in redundancy with stand alone 'primary' and 'reserve' ionisation systems
Large plenums	Help ensure even airflows along both the air distribution and vacuum slots
Constant vacuum along length	Designed to catch the maximum level of removed contamination
Drop down access panel	Easy maintenance; the ionising bars drop out of the head unit mounted to the access panel
Selectable handing	The air inlet and vacuum ducts can be connected at either end of the head unit to suit the installation space available



The blow, vacuum and filter unit

The all in one blow, vacuum and filter unit is designed to make installation and setup as simple as possible. It incorporates the following features:

Feature	Benefit
Stainless steel construction	High quality and suitable for use in washdown environments
Single phase 90 - 250V AC, 50/60Hz electrical supply	Ease of installation irrespective of available voltage and frequency
Variable flow control	Performance can be optimised to suit the process
HEPA and bag filtration	Excellent level of filtration; 6m ² of E13 media efficient to 99.99% at 0.3 micron and 6m ² F8 media efficient to 90 - 95% at 0.4 micron
Contacts for auto start/stop	Can be linked to run with the line giving further energy savings
Contacts for filter condition status	Filter status can be linked to line monitoring system
LED displays for ionisation status	Allows ease of monitoring
Houses ionisation power supplies	Ease of installation
Wall or floor mounts	Can suit all installation areas

Further system enhancements

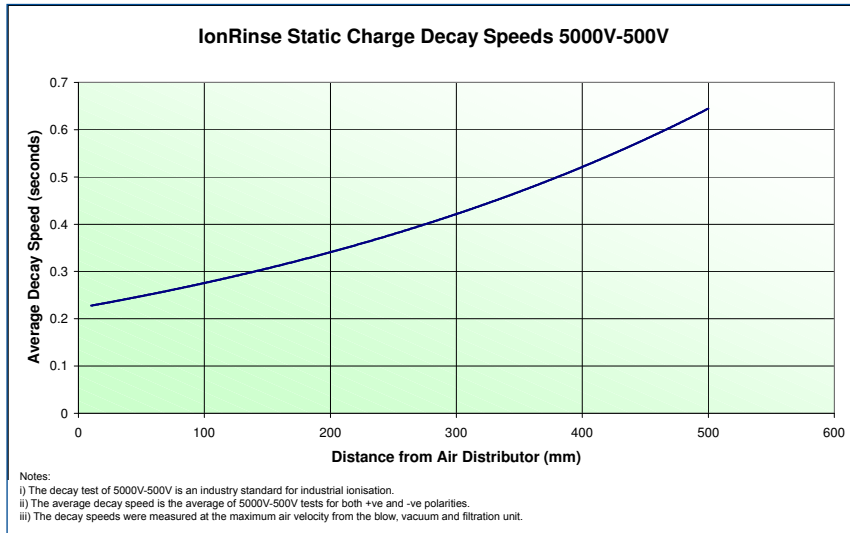
In addition to the IonRinse head and blow, vacuum and filter unit, the system can be enhanced to suit the requirements of the individual installation. Typical enhancements include:

- Infeed and outfeed twists
- Enclosures to house the head unit
- Framework and brackets
- Installation; mechanical and electrical
- After sales inspection and maintenance contracts

Performance Graphs and Technical Drawings

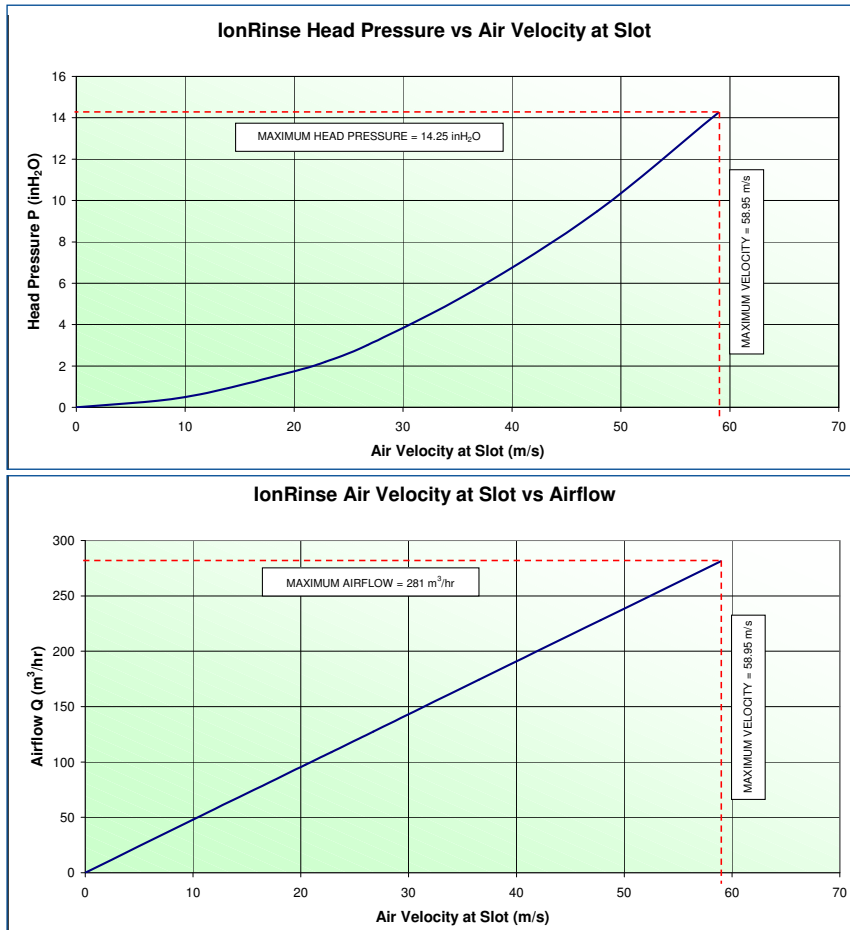
Static Charge Decay

To effectively rinse a container, the system needs to have powerful ionisation to break any static bond holding contamination to the surface. The rate at which a static charge can be reduced is measured as a decay speed and this is evaluated using the industry standard of 5000 – 500 volts. The IonRinse system includes powerful AC ionising bars which neutralise both +ve and -ve polarity static charges at speeds of less than 0.3 seconds at typical installation distances of less than 100mm from air distributor to container opening.

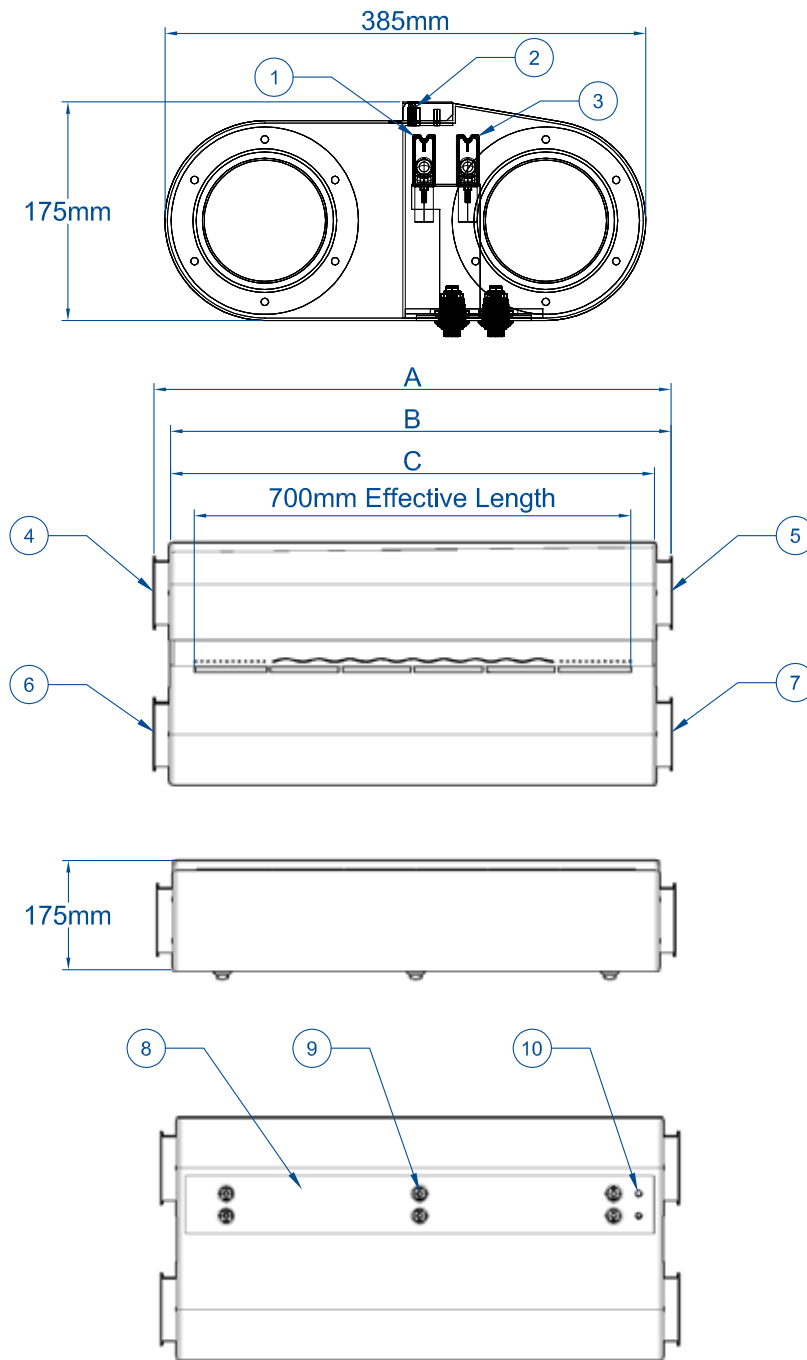


Airflow Characteristics

The air volume and velocity of the IonRinse is fully adjustable to allow accurate setup for each application, as our experience shows different containers require different airflow characteristics to achieve maximum rinsing performance.



IonRinse Head Dimensions



Key

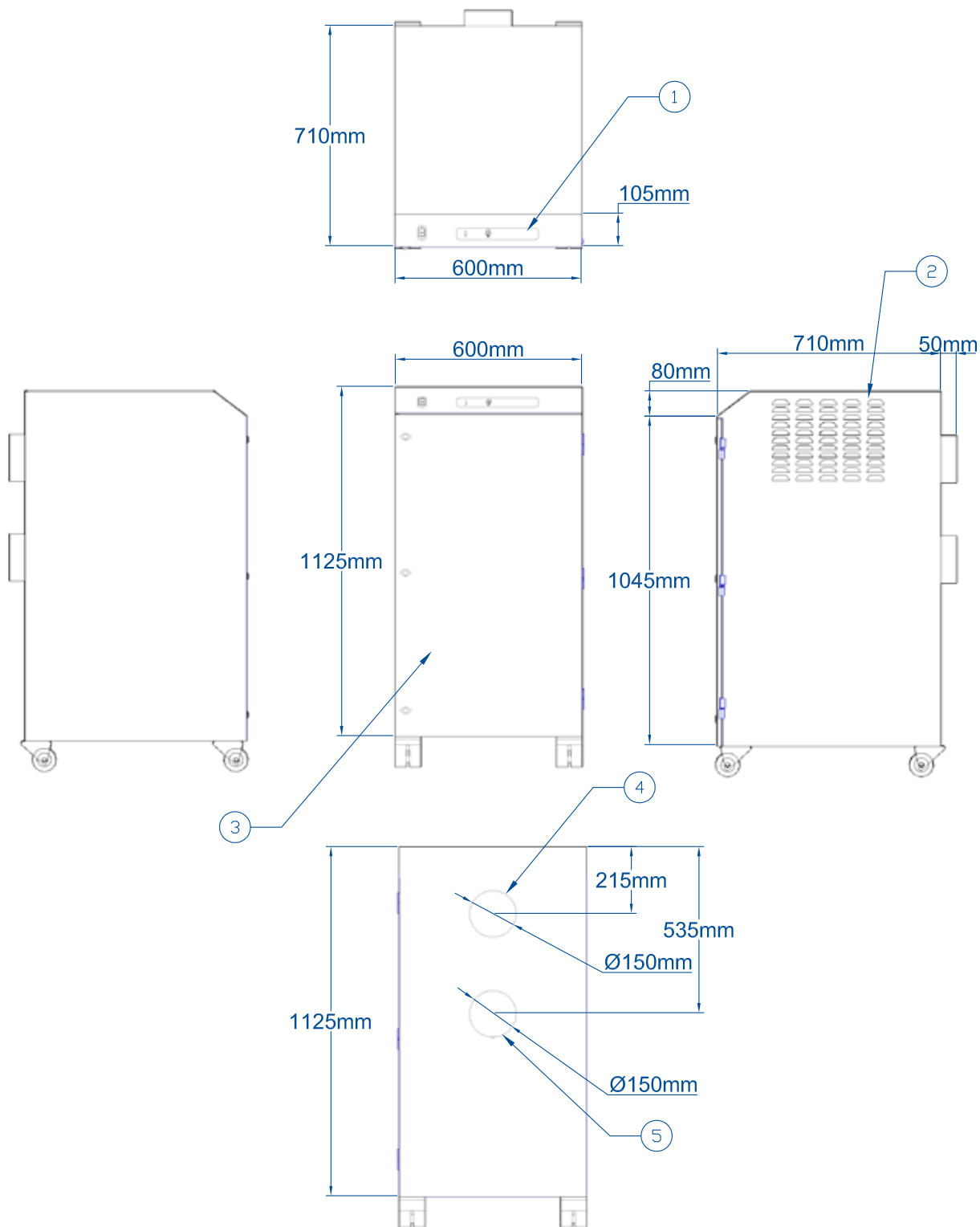
1	Primary 915 Ionising Bar
2	Airflow Distributor
3	Reserve 915 Ionising Bar
4/5	Air Inlet
6/7	Air Outlet
8	Drop Down Access Panel
9	Sealed Latch x 6
10	Ionising Bar Cable Gland x 2

Air Inlet / Outlet Options

A	829mm Double Sided Length
B	803mm Single Sided Length
C	776mm Head Length

The air inlets / outlets can be any combination of those shown above.

Blow, Vacuum and Filter Unit Dimensions



Key

1	Control & Status Display Panel
2	Air Vents
3	Filter Access Door
4	$\text{Ø}150\text{mm}$ Outlet
5	$\text{Ø}150\text{mm}$ Inlet





All you need, from the best in the business

Meech is also a leading provider of:

- **Industrial Static Control Systems** – Eliminating unwanted static or creating a controlled static charge in industrial processes can increase productivity, reduce waste and enhance quality.
- **Web Cleaning Systems** – Typically used within the printing and packaging industries to remove contamination, improve print quality and increase productivity.
- **JetStream Air Knife Systems** – Energy efficient air knife systems that are used for contamination and surface moisture removal.
- **Air Technology Equipment** – Compressed air products that save energy, reduce noise levels and provide efficient cooling.
- **ESD** – High sensitivity static control for electronic cleanroom environments to prevent ESD damage and reduce failure rates.

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