



CLEAR|EDGE
Filtration Group®

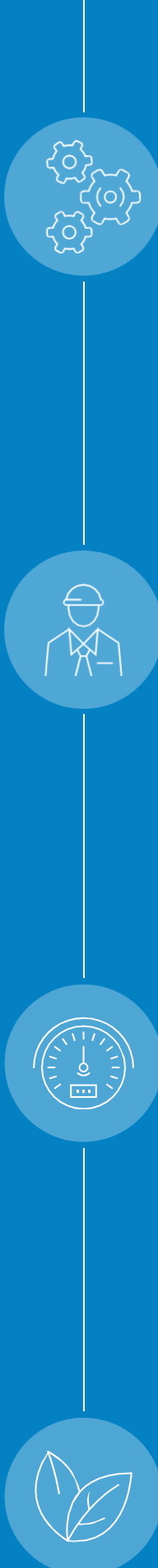


Enabling Productivity and Making
the World Safer.

INTRODUCTION TO CLEAR EDGE



Expertly designed
products with
Material Science™
By Clear Edge



MAKING PROCESSES SAFER, HEALTHIER AND MORE PRODUCTIVE.

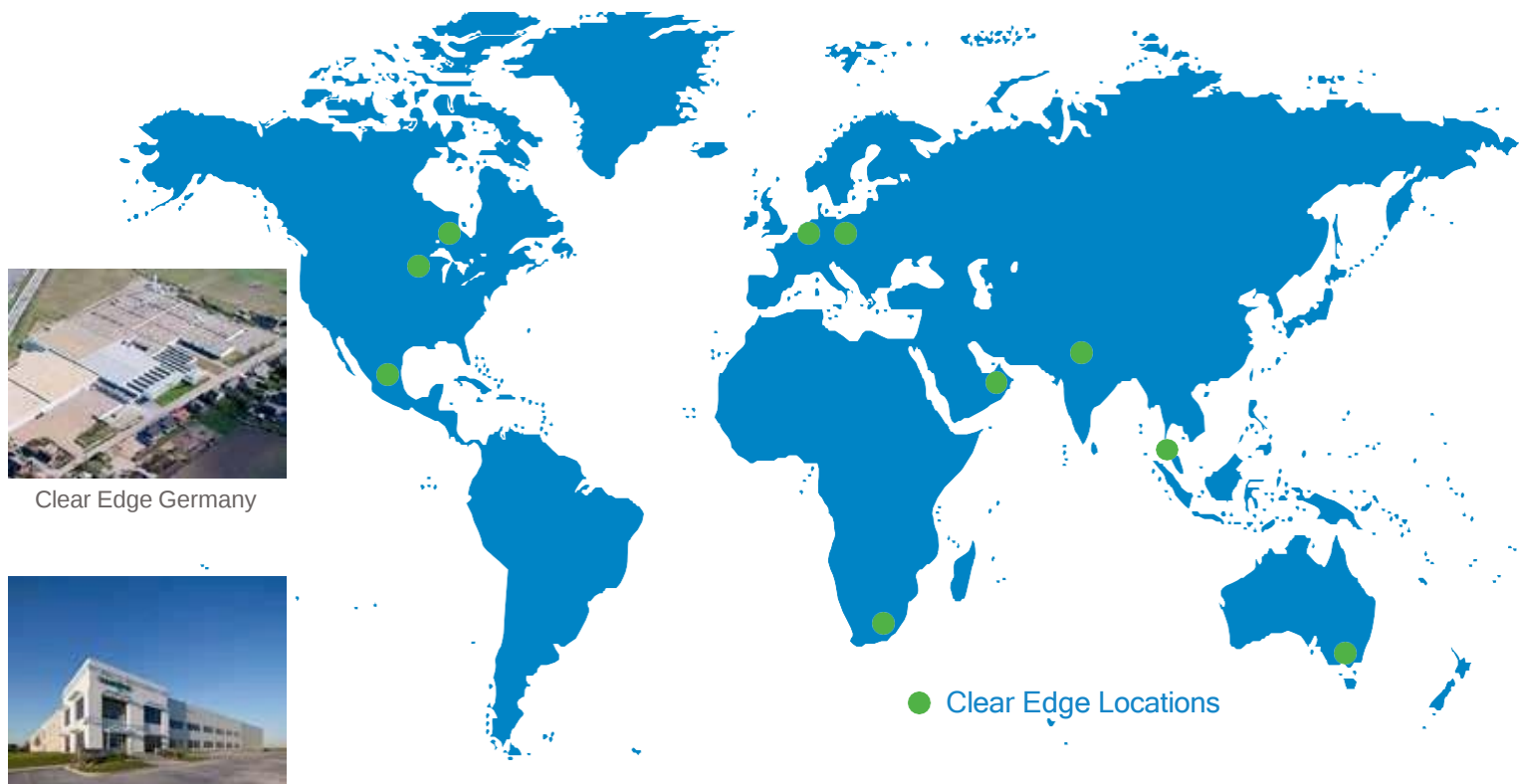
Clear Edge and its company lineage have almost two centuries of experience of achieving the most from our customers' processes. Our filtration products are designed to deliver process excellence. As part of Filtration Group Corporation, our ability to collaborate and partner with customers' process around the world and in many industries is unparalleled. Listening to our customers and then meeting, often exceeding, their needs is at the heart of our philosophy.

- Clear Edge is a fully integrated, global filtration solutions company.
- For our woven product lines, our filtration media is manufactured in our ISO accredited fully owned weaving plants.
- We offer an extensive, quality assured filtration fabric portfolio, not limited to the media types we weave.
- Our final product fabrication plants are strategically located close to our customers.
- Our products are supported in our customers' processes by technically trained sales teams covering six global regions, by local culturally aware Customer Service teams, vertical market experts and application specialists (the Clear Edge TechApps team) able to provide global on-site assistance.

Successful customers are the cornerstone of Clear Edge's business culture. We are focused on helping our customers achieve the very best value from their process.



WORLDWIDE PRODUCTION AND SUPPORT



Clear Edge Germany



Clear Edge Minnesota,
USA

OUR MARKETS



MINING AND MINERALS

Clear Edge has experienced each resources cycle alongside our mining and mineral processing partners and understands the challenges faced by the modern mining sector. We have worked with our customers as environmental and safety standards change, as mineral and water resources become scarcer and as commodity prices hit new highs and lows. Whether your process is focused on aluminium or steel, coal or precious metals, base metals or rare earth elements, we have experience in tuning filtration step performance to maximise value.

CHEMICALS

The chemical sector includes a diverse range of industries; from the production of fertilizer, vital to feeding the world's growing population, to pigments used for the manufacturer of everything from paints and coatings to clothing. Filtration is often critical to achieving accredited product standards and the economic success of the process. Whether your product is the filter cake or filtrate, a bulk, fine or speciality chemical; Clear Edge specialises in realising the value of all chemical processes by ensuring each filtration step is as efficient as it can be.



FOOD AND BEVERAGE

From sugar refining to brewing, edible oils to dried milk products, Clear Edge's products have been relied upon by the Food and Beverage sector for many years. Food industry and related government regulations rightly demand every food contact item to be manufactured to high, and often accredited, standards. Our products deliver consummate levels of performance with the highest food safety standards always front of mind.



WATER TREATMENT

Standards of water treatment, both waste and potable, continue to improve as technology innovates and environmental and consumer expectations grow. Clear Edge is at the forefront of the filtration technology employed to continually improve the quality of water being distributed by our municipalities for consumption in households, hospitals and businesses or being treated for discharge to the environment.

MORE KEY SECTORS

Clear Edge's market leading products deliver process excellence in many more key sectors including:

- Building products
- Pulp and paper
- Power generation
- Healthcare
- Transportation
- Other industrial applications.



FILTER PRESS

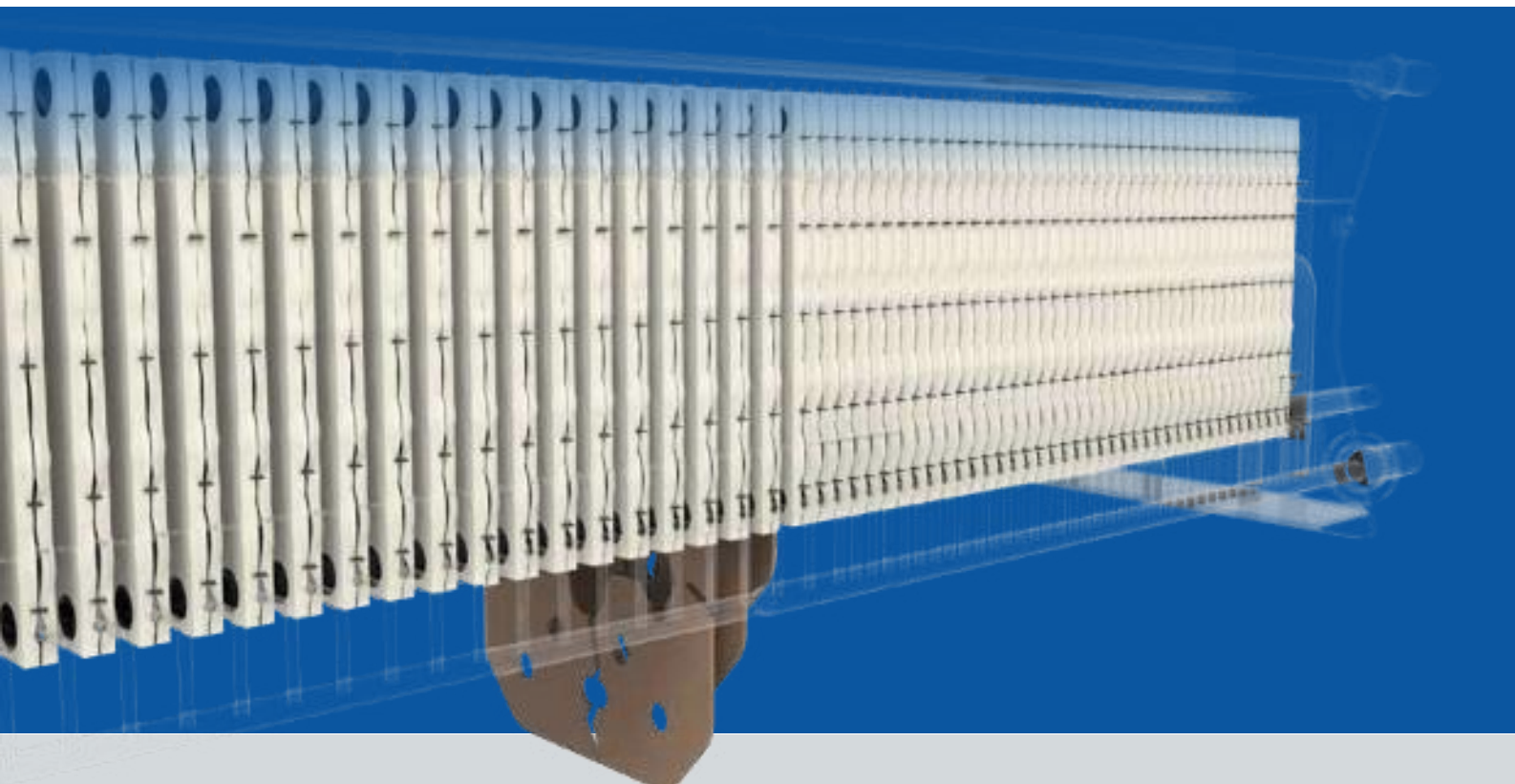
Filter Presses have been a mainstay of industrial solid/liquid separation for many decades. Clear Edge's filter press cloth range has developed alongside this evolving process technology in conjunction with end-user and original equipment manufacturer partners for today's best performance.

Specialist filter press media for:

- Mining and minerals
- Chemicals
- Water treatment
- Food and beverage
- Many other applications



Many fabrication options available





2.5m wide filter press cloth



Coreflo™ welded barrel neck



Azurtext™ for fine partical size distributions

Key features:

- Broad range of media choices to help optimise your process
- Capability to manufacture press cloth of over 3m in width
- Variety of fabrication options, for example Coreflo™ welded thermoplastic barrel necks
- High filtration efficiency and throughput
- Excellent cake release



PROCESS BELTS

Vacuum belt filters • Multi-roll belt presses • Horizontal plate tower filters Linear screens • Continuous and open daylight board lines • Gravity belts

Clear Edge's extensive woven filter belt range has its origins in our European ancestor companies, Scandiafelt™ and Verseidag-Techfab GmbH. Both iconic businesses produced best in class products, which together make the most comprehensive and technically accomplished range of woven process filtration belts available anywhere in the world. Coupled with Clear Edge's highly regarded Filterlink™ spiral belt range, we offer belts to add value to any process.

These include:

- Phosphoric Acid
- Waste water treatment
- Flue gas desulfurization
- Mineral concentrates and tailings
- Wood and mineral fibre board
- Food and biomass drying
- Bakery
- Sand and gravel
- Pulp and Paper



Waste Water Sludge De-Watering



Tower filter belts



Gypsum washing (Phosphoric acid)



Food drying belts



Vacuum belt filter

Key Features:

- Robust, industry leading seam design, edging and construction for long operational life
- Wide range of process enhancing fabrics
- High filtration efficiency and throughput
- Outstanding cake release
- Woven belt widths up to 8m



Spiral belt media
with robust edging



Non-marking belt join



Innovative belt seam

VACUUM FILTER

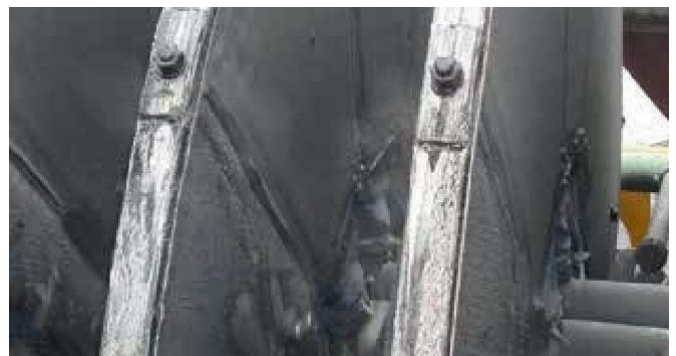
Rotary disc • Rotary drum • Vacuum pan • Vacuum leaf



Clear Edge's extensive range of vacuum filtration cloths are designed to fit your filter perfectly, while providing unsurpassed process performance for a wide range of applications.



Tilting Pan Filter



Vacuum Disc Filter



Drum filter with Frame-Trak™

Key Features:

- Extensive range of process designed filter fabrics
- Chemical and temperature compatibility
- State of the art fabrication
- High filtration efficiency and throughput
- Excellent cake release
- Robust for long operational life

Frame-Trak™: Ask us about our unique cloth fixing system for pan and drum filters, offering fast cloth change, reduced operator risk, extended cloth life and improved solids capture.

PRESSURE LEAF & CANDLE FILTERS



Candle Filter Sleeve



Pressure Leaf Bag

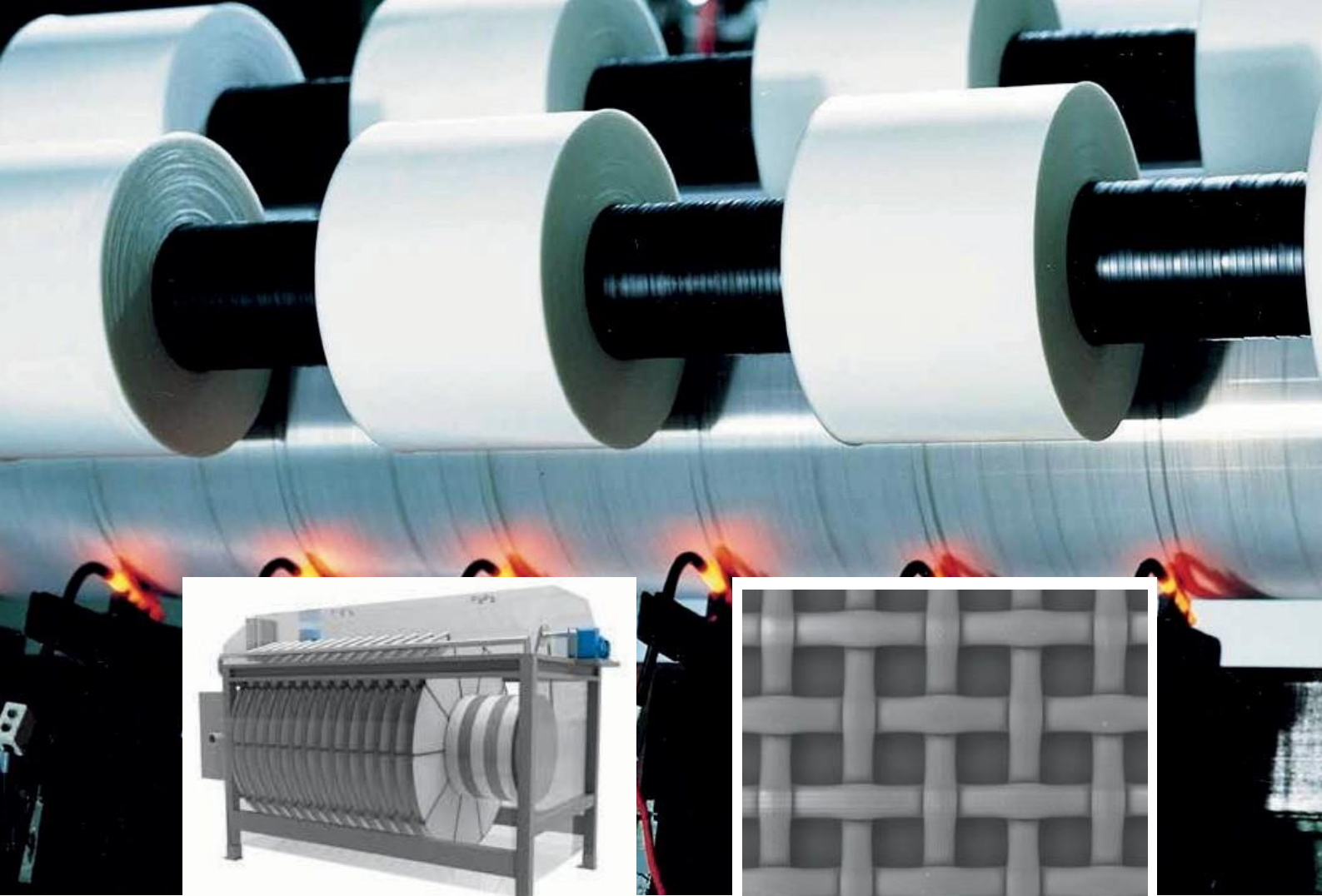
Pressure leaf and candle style filters are used for polishing applications in many mining and minerals, chemical, food and beverage, pharmaceutical and pulp and paper processes. The cloths or bags come in many shapes and sizes, requiring high quality media and robust product fabrication to provide the capture, throughput and operation life, demanded to achieve process excellence. Clear Edge delivers on every front.

Key Features:

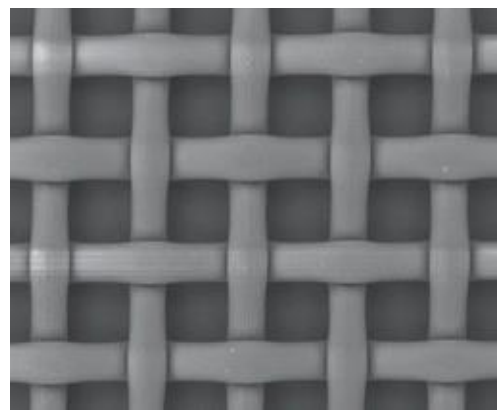
- Broad range of media options to add value to your process
- Chemical and temperature compatibility
- State-of-the-art product fabrication
- Superior filtration efficiency and throughput
- High flow rates with long cycle times

Multi-pocket bag





Tertiary Water Filtration



A Monodur™ Mesh
(x150)

MONODUR™ WOVEN MESH

Clear Edge Monodur™ screen fabrics are available in a comprehensive selection of mesh openings and are woven from Polyamide (Nylon), Polyester, Polypropylene, PFA, PEEK and FEP monofilament fibres.

Our in-house capabilities include value-added processing such as slitting, stamping, tubing, dyeing and finishing of products used in medical and highly demanding electronic applications.

Applications for Monodur™ include:

- Screening
- Separating / filtering / straining
- Classifying
- Sifting
- Automotive
- Chemical
- Food processing
- Appliance
- Water treatment
- Biomedical / Pharmaceutical



Filter element made
with
Monodur™

DRY FILTRATION



Clear Edge offers a broad range of dust filtration products for efficient dry process capture and pollution control. From elevated temperature and aggressive chemical environments to food and pharmaceutical contact grade bag media and a range of accessories.

Dry Filtration Machine Types:

- Pulse Jet Dust Collectors
- Reverse Air Dust Collectors
- Shaker Dust Collectors
- Blower Units
- Fluidized Bed Dryers

Accessories include:

Cages, Clamps, Venturis, Caps, Thimbles, Hangers, Seals, Valves, Leak Detection Kits.



Support Cage



Dust Bag
and Cage

MORE FABRICATED PRODUCTS



Centrifuge Bag

Other expertly fabricated products available to suit your needs such as:

- Plating Bags (anode and cathode)
- Centrifuge Bags
- Tube Press Cloths
- Deep Pile Disc Filter Bags for tertiary water filtration



Tube Press Filters

ROLL GOODS

Many of Clear Edge's filter media fabrics are available as roll goods:

- Precision woven, quality assured
- Various weave patterns, yarn types, polymer types and finishes
- Technical support available for selection
- Samples for application testing available



Filter Media Roll Goods

HARDWARE SPARES



FILTER PRESS PLATES

Clear Edge's range of filter press plates are custom designed and manufactured to help you achieve the highest performance. Replacing the filter media with a new set of Clear Edge's filter press cloths increases a filter's performance, replacing some or all the plates in a filter press can provide immediate and long-lasting performance benefits.

PRESSURE FILTER LEAVES

The quality and condition of the filter leaves has a direct impact on the productivity and filtration efficiency of any pressure leaf filter. Clear Edge, in conjunction with our Filtration Group partners, offers new high-performance pressure filter leaves and the refurbishment of your used leaves, to an "as new" standard.



ULTRAFLO™ DISC FILTER SECTORS

Ultraflo™ disc filter sectors are delivering significant process and safety benefits to customers' operations around the world. Built for the tough environment of rotary vacuum disc filters, the unique design of Ultraflo™ offers improved hourly throughput, reduced maintenance, greater filter availability and lower risk manual handling.

INNOVATION & TECHNOLOGY

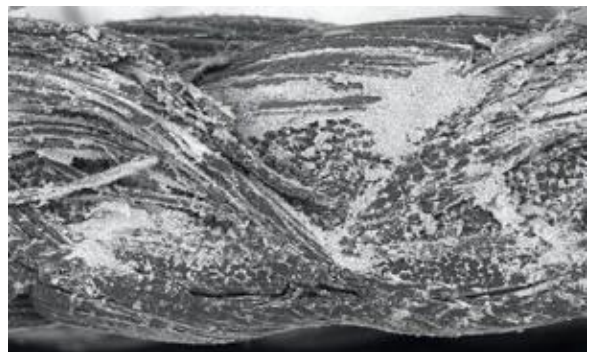


Clear Edge continues to invest in innovation with resources, equipment and tools to both mimic complex processes within the laboratory and scale-up technology to fit with customer specific systems.

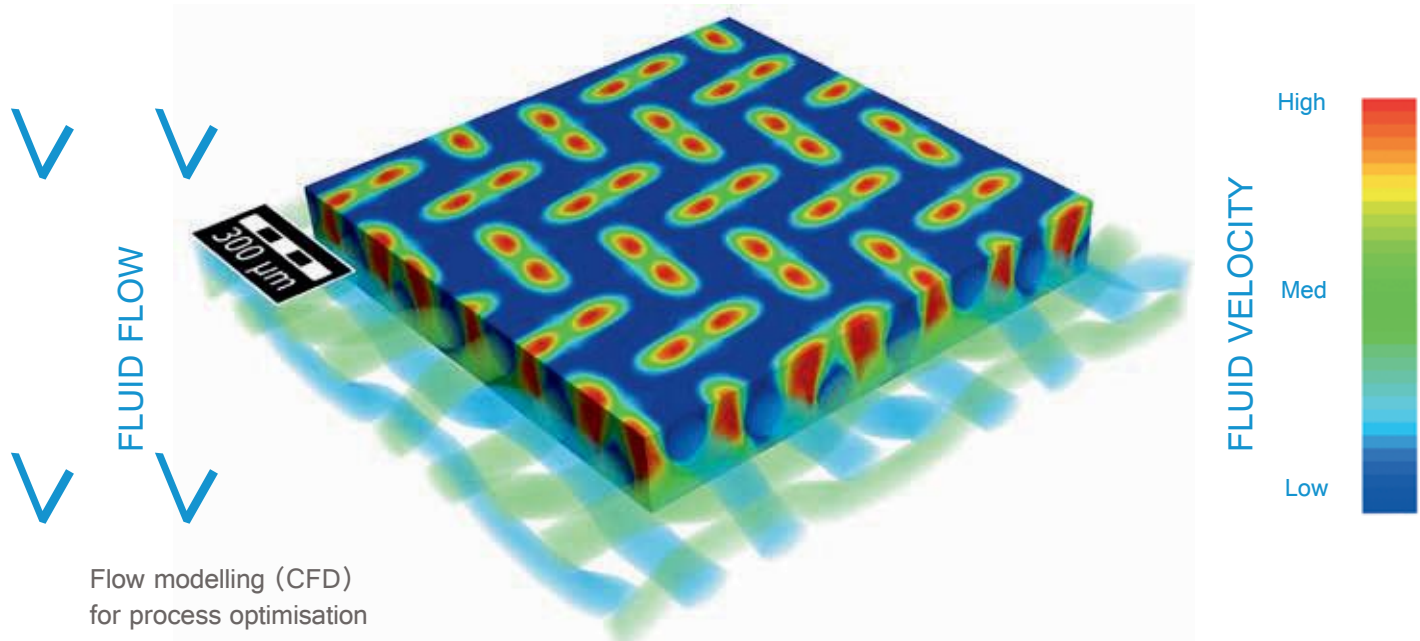
Innovation at Clear Edge is critical to our continued growth and success. We are committed to outstanding innovation and new product development. Our team of Scientists and Engineers work closely with customers to add real value to their Industrial Processes by:

- Working on the next generation of innovative solutions
- Providing more up-time (on plant and equipment)
- Saving Energy
- Identifying Process efficiencies

We do this by working in collaboration with our customers and understanding their true needs. Our experienced multi-disciplinary innovation team work across the globe and have between them years of experience in handling and managing complex process steps and understanding project management.



Used cloth analysis (x60)



Using a stage-gate process, innovation of our filtration technology progresses in a series of well-established steps to develop new products and solutions for customers and target markets.

We have established partnerships with OEMs and system integrators to help our customers stay ahead and be a world class innovator.

Being part of Filtration Group, a pure play filtration company, we have access to a significant global network of engineers and equipment, with over 20 leading internal laboratories dedicated to filtration. In addition, we are working in close collaboration with prominent Universities and Institutes around the world to shape the long term future of Filtration & Separation. This provides insight for us into tomorrow's technologies today, such as computational fluid dynamics (CFD), process monitoring sensors, smart filtration media and the Internet of Things (IoT). Our culture of innovation can be viewed in our Intellectual Property portfolio, at leading conferences and exhibitions and with like-minded customers we partner globally.



Media selection testing



Throughout our vertically integrated global supply chain, Clear Edge is ISO 9001 certified. We embrace the latest ISO standards in our culture of continual improvement as we develop and innovate our business and how we support our customers. We are highly tuned to the regulations governing markets such as Food and Beverage, Pharmaceutical and Medical and use Quality Management System (QMS) to track and trace all manufacturing steps through standardised and documented processes.

FILTRATION GROUP

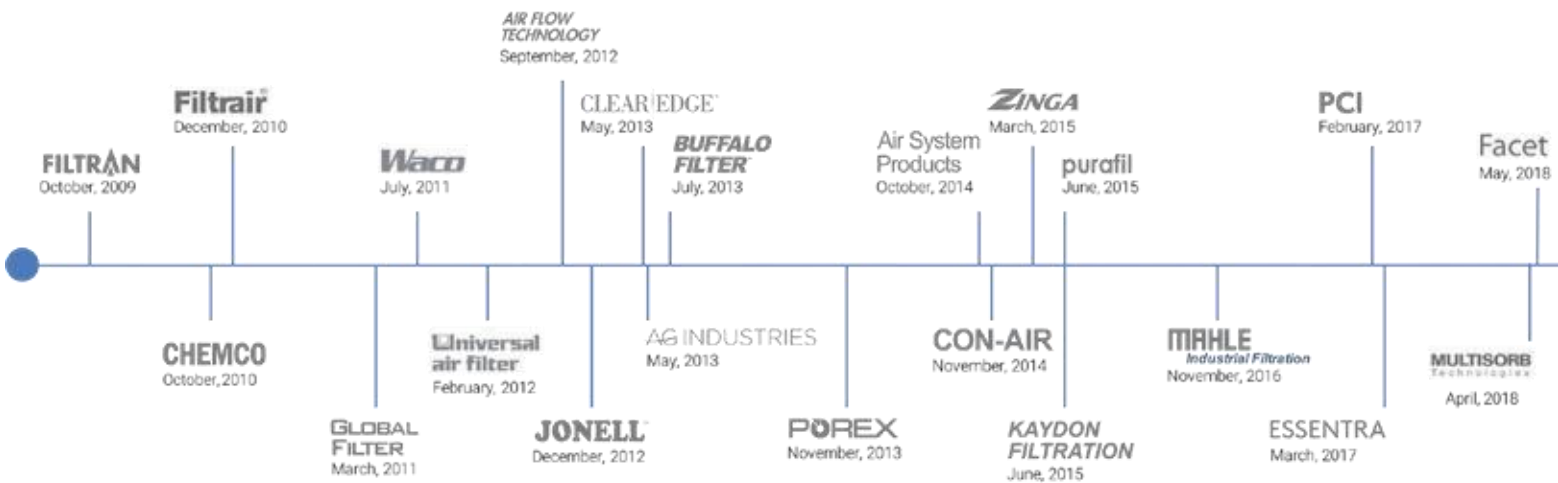
The world's fastest growing filtration company.

Our four market aligned divisions of Process Technologies, Life Sciences, Fluid and Indoor Air Quality offer the most comprehensive range of filtration products, services and advanced solutions for every application, touching much of the world’s population every day.

As part of Filtration Group – the world’s fastest growing filtration company, partnering with Clear Edge provides access to a broad range of market leading filtration products and expertise. Products from our growing number of Filtration Group sister companies often complement traditional Clear Edge product types on the same customer sites, offering customers a true one-stop-shop option.

Learn more at filtrationgroup.com

OUR HISTORY



LIFE SCIENCES



INDUSTRIAL



INDOOR AIR QUALITY



CLEAR EDGE

A legacy of enabling productivity and making the world safer.

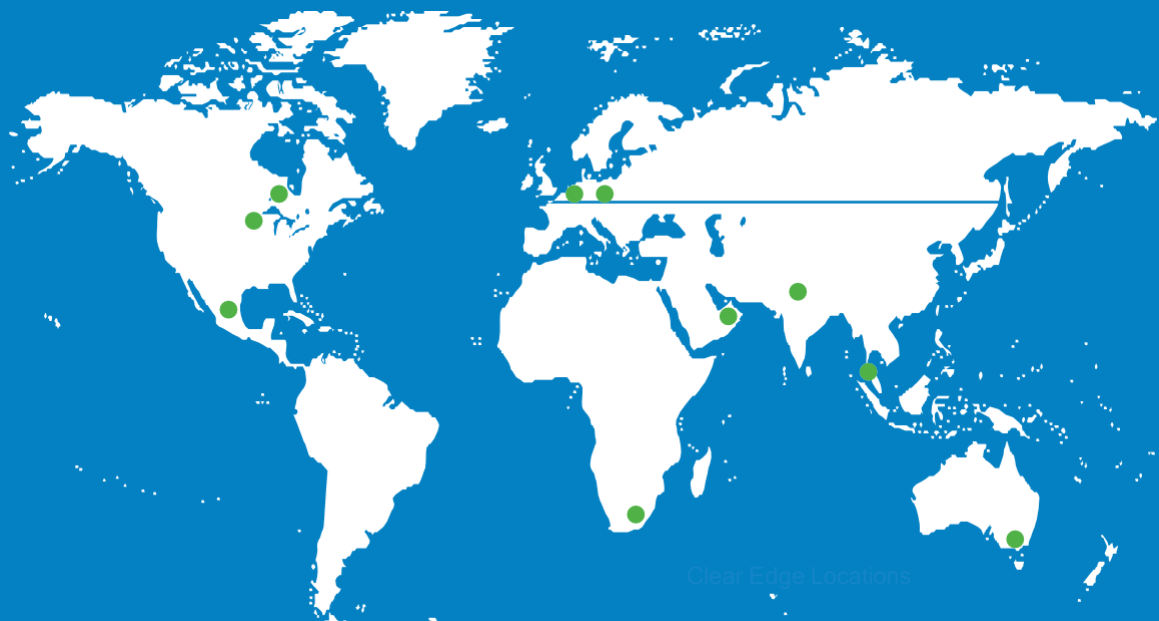
Clear Edge's rich heritage can be traced to the first half of the 1800s in the United Kingdom. Over the last almost two centuries Clear Edge has developed a global production and customer support network alongside a deep understanding of process filtration and environmental protection.

Today, as part of Filtration Group, Clear Edge serves large multinational to boutique customers around the world with process critical filtration and drying products and industrial pollution control solutions in industry sectors such as Mining and Minerals, Chemicals, Food and Beverage, Water Treatment, Building Products, Pulp and Paper, Power Generation, Healthcare, Transportation and other Industrial applications. Many major world leading companies rely on Clear Edge and the Filtration Group family to make them successful every day.

Our philosophy at Clear Edge is perfectly tuned with that of the wider Filtration Group as we make processes safer, healthier and more productive.



WORLDWIDE PRODUCTION AND SUPPORT



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Excellence in filtration solutions since 1800s

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