



AG
INDUSTRIES
Filtration Group®

YOUR **PARTNER**
FROM
DESIGN THROUGH **MANUFACTURING**

DESIGN & ENGINEERING •

QUALITY & REGULATORY •

SPECIALIZED FILTRATION •

CONTRACT MANUFACTURING •

PROCESS TECHNOLOGIES •



Design, ISO, Quality & Regulatory

For projects that require more than just manufacturing support, AG provides full-service design and engineering services for your filtration needs, including:

- Conceptual Design
- Design Engineering & CAD Modeling
- Filter Development & Prototyping
- Pre-Production Testing & Validation
- ISO & FDA Registered Facility
- CMDR Certified



Intertek



Specialized Filtration

AG works hard to develop custom and universal filtration products to fit your specific needs - designed for the medical OEM that needs a readily available solution. We design our products in-house for a wide variety of applications, including:

- Smoke Evacuation Equipment
- Laboratory Applications
- Insufflation
- Suction Filters and Tube Sets
- Anesthesia
- Oxygen Concentrators
- Gas Sampling
- HME/HMEF Filters
- Ventilators
- Syringe Filters
- CPAP
- Surgical Applications
- Transducer Filters
- Pharmaceutical Filters

Process Technologies & Regulatory

AG's additional manufacturing capabilities include:

- Injection Molding & Extrusion
- Ultrasonic, Thermal & Spin Welding
- Die Cutting/Media Converting
- Lamination and Surface Treating
- Adhesive and Mechanical Bonding
- Slitting
- HEPA/ULPA Pleating Services
- Custom Kit Creation & Packaging
- Medical Foam Converting
- Sound Attenuating Foam Development
- 510 (K) Assistance
- CE Marking



When your company needs a manufacturing partner to help bring new products from concept to market, AG Industries has the experience and the dedication necessary to achieve your goals.

Our vertically integrated manufacturing process enables close monitoring and alignment of every step of the design production cycle and efficient fine-tuning at each step.

37 years of design and manufacturing excellence guarantees you will receive the highest-quality product at a manageable cost.

Medical Filtration

Over 37 years of experience & a vertically integrated manufacturing process ensure you receive the highest-quality product at a manageable cost.



Whether you're developing a stand-alone device, a component to a larger system, or protecting a patient, device, or the environment, we can help. Our design and engineering process will help you develop the most innovative and effective products. Over the last 37 years, AG Industries has worked to develop custom and universal medical filtration products for the medical device OEM industry.

For those looking for a readily available solution to an existing issue, our portfolio includes a wide variety of custom and universal products, designed in-house for a variety of applications, including:

- CPAP
- Oxygen Concentrators
- Suction Filters and Tube Sets
- Smoke Evacuation Equipment
- Laboratory Applications
- Insufflation
- Anesthesia
- HME
- Ventilators
- Syringe Filters
- Liquid/Transducer

Filtration Design & Engineering

Over 37 years of experience & a vertically integrated manufacturing process ensure you receive the highest-quality product at a manageable cost.



If your company has goals to reduce contamination and provide safety to your customers by bringing a whole new product to market, AG is the perfect partner. We can assist with any step in the process or help align and lead all elements of the project to achieve your goals, including:

- Conceptual Design
- Design Engineering
- Development and Prototyping
- Pre-Production Testing and Validation
- CAD Modeling

For a project that requires customized design and manufacturing of filtration devices, AG has the answers for both the medical and industrial markets. Our extensive knowledge of filter media and fluid dynamics allows us to develop complex filtration solutions. Whether you are looking to improve the performance of your current filtration system or are in need of a custom device for your application, AG Industries is your partner in medical and industrial liquid filtration.

Manufacturing

Over 37 years of experience & a vertically integrated manufacturing process ensure you receive the highest-quality product at a manageable cost.



Our manufacturing techniques and inspection systems ensure the consistency and speed of production to achieve your goals.

AG Industries provides a full-service design-manufacturing process for your filtration needs. Our vertically integrated manufacturing process enables careful monitoring during every step of the production cycle, and fine-tunes when necessary to create the perfect environment for your product. Our quality team closely monitors your project through the manufacturing process, ensuring the highest-quality product at a manageable cost.

AG Industries will work with your project leaders to meet all your manufacturing process needs, including:

- Injection Molding and Extrusion
- Ultrasonic, Thermal, and Spin Welding
- Die Cutting/Media Converting
- Lamination and Surface Treating
- Adhesive and Mechanical Bonding
- Slitting
- Custom Kit Creation, Assembly & Kitting
- HEPA/ULPA Pleating

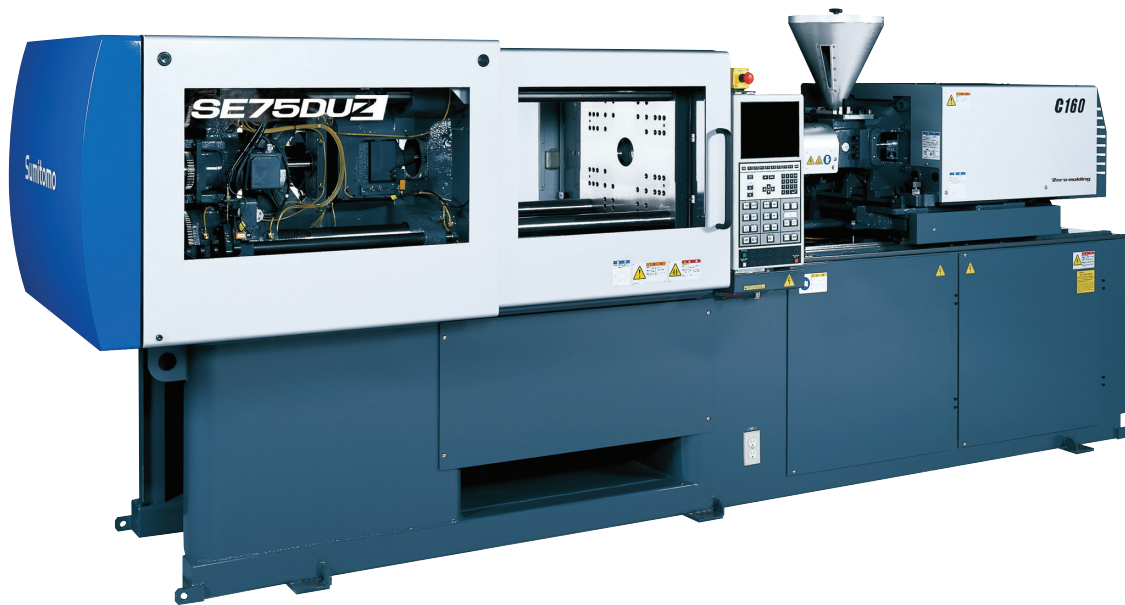
For more information, please contact a sales representative.

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Your Industrial Partner

Over 37 years of experience & a vertically integrated manufacturing process ensure you receive the highest-quality product at a manageable cost.

As a manufacturer, we understand the substantial investment you put into your equipment and its maintenance. Protecting that equipment and ensuring its safe and effective operation can make a significant difference in your ability to meet your customers' needs. Controlling intake and output of your equipment is an important part of everyday operation, which is why AG Industries offers custom and universal solutions to filter the air that enters your machinery and interacts with vital components. In addition to air filtration, we offer custom solutions for sound attenuation, acoustical controls, and thermal insulation and protection.

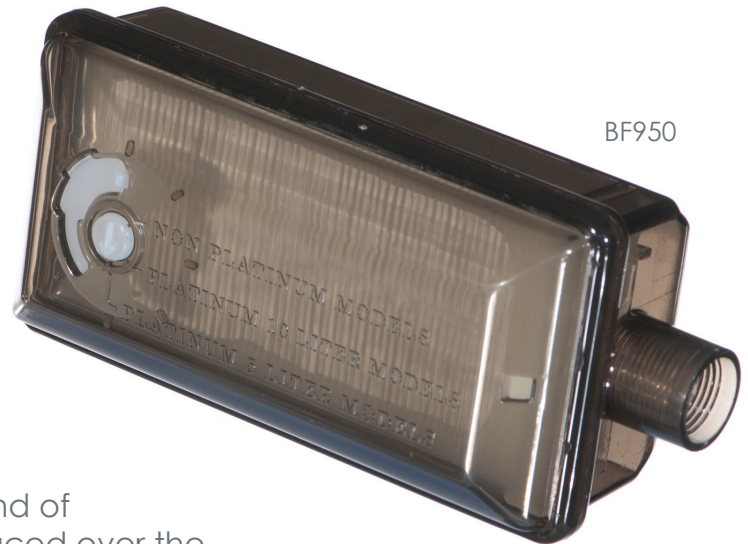


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Universal Oxygen Concentrator Filter

An adaptable filter system for use across three generations of oxygen concentrators



BF950

Challenge:

Three iterations of the most popular brand of Oxygen Concentrator had been introduced over the course of 15 years, each with the same filter footprint, but different connection methods, air flow requirements, and sound attenuation needs.

AG Industries was challenged to create a single universal design for use in all three iterations of this popular unit. This design would combine a female thread connection, high airflow, with low sound attenuation; 22mm male connection, low airflow, with high sound attenuation; and 22mm male connection, medium airflow, with High sound attenuation.

Solution:

AG Industries created a universal filter by designing a method for male and female connections to be used on a single shot. To regulate the airflow and give end users the flexibility to tune the filter to their specific unit, AG developed a patented Air Dial Inlet feature. This allows the air dial to be easily adjusted to the appropriate level of inlet flow. These two solutions not only combined all three filter needs in a durable and customizable way, but cut down on mold changes, inserts and parts.

Result:

The customer can now stock just one universal filter to cut down inventory levels and issues with stock matching.

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Long Life HEPA Compressor Filter

A durable filter muffler that provides years of HEPA filtration without adhesives.



CF105/
CF107/
CF100

Challenge:

Because compressor filters operate in harsh conditions such as: temperature fluctuations and constant vibration, AG Industries' client needed a HEPA filter with a brass female thread that would provide 5 years of consistent performance & durability in the closed compressor environment.

Solution:

AG Industries determined the best solution would be a specialized filter/muffler device designed to protect the patient and compressor from contamination. Research determined a durable, high-temp Valox® Plastic with very stable characteristics was the best material for the job. Using proprietary thermal welding techniques AG Industries built a three-part filter housing system to encapsulate a modified synthetic HEPA pleat pack without using sealant.

Result:

Using a multi-step approach and these techniques, the filter material, brass thread, and filter seals are airtight, secure, and able to withstand the stress of large temperature fluctuations and the constant vibratory conditions. Additionally, the filter serves as a muffler to regulate air intake into the compressor and reduce noise generated by the motor.

HEPA & Bacteria Filter Retrofit

A unique solution to retrofit a single interchangeable filter into two separate devices

Challenge:

Two radioaerosol delivery devices, commonly used in pulmonary imaging studies for nuclear medicine applications require both a HEPA filtration device and a bacterial filtration device. The filters are essential to protect the patient from contamination and to safeguard the study environment from radioactive exhaled particulate. The client needed to cut costs, improve efficiency, and improve aesthetics to help brand their new device. AG Industries was contracted to deliver custom filter solutions that allowed for HEPA & Bacterial filtration in a universal housing.



VF30

Solution:

AG Industries developed a unique filter housing using a single injection-molding tool with interchangeable inserts, sonic welding and interchangeable filter membranes. Extensive prototyping, testing, and modeling were done up front to create an intricate tool design so that each of the three versions of the filter can be manufactured quickly and efficiently with a simple tool insert change.

Result:

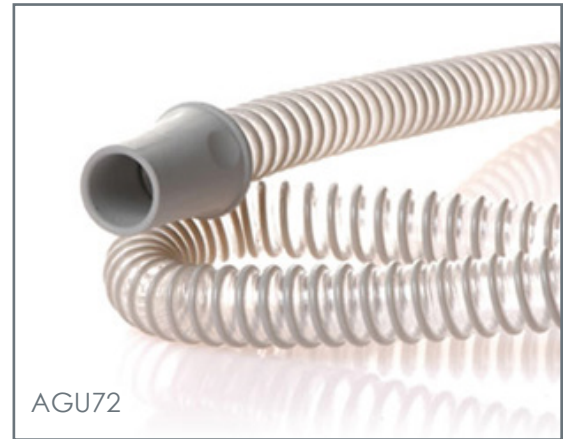
The customer's goals for an interchangeable device with a universal look for each of their mechanisms were met as well as the need to complete the project with low capital investment.

Ergonomic Hose Cuff

A carefully designed lightweight hose cuff, vital to ensuring a pleasurable experience for all users.

Challenge:

Customer inquiries and market research indicated a need for an innovative update to the design of CPAP tubing hose cuffs. During research, AG Industries found that users had two major issues with existing hose cuffs: the weight of the hose cuff at the interface and difficulty detaching from the connection port without damaging the hose or the port.



Solution:

AG industries worked to engineer a cuff that would fit ergonomically in user's hands and make attachment and detachment much easier. In addition to a slimmer shape, we used AG redesigned the entire cuff & tube interface to reduce the overall size and weight of the cuff.

Result:

Weight reduction greatly decreased the pull of the cuff at the interface, thereby giving the user a more comfortable feel to their mask. The design patented ergonomic shape of the hose cuff fit securely into user's hands and firmly on the port, simplifying attachment and detachment and reducing the likelihood of a compromised mask seal as well. With less drag on the mask, patients will rest easier and increase compliance with their sleep therapy.

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