From the desk of Norm Johnson,
CLARCOR Chairman, President and CEO

The key to success of any business is meeting and exceeding the needs of customers. Whether it is product, technology, service, or delivery – we are committed to working with our customers to earn and keep their business.

CLARCOR recognized two decades ago the increasing importance of filtration in our changing world, and has worked to build a complete filtration solution for a wide array of industries and applications. By acquiring some of the most respected companies in their industries, CLARCOR has built a total filtration solution based on the foundation of quality brands.

In the pages that follow, you will see that technology and engineering are emphasized. We have invested in new technical centers to enable us to be a product leader. Investing in the companies has always been of paramount importance to me to stay on top as the industry expert. CLARCOR sets its strategy based on the future. Therefore, you can be assured that the CLARCOR companies are dedicating the necessary resources to research and develop the highest quality products.

So what sets CLARCOR apart from the competition? Filtration is our complete focus. We have more filters for more applications than anyone else. Our complete product line, our commitment to technology, our future-driven strategies, and the customer service-driven attitudes of the people working at our companies have been, and remain, our focus. I am personally committed to ensuring that CLARCOR offers the best products, the best value, and the best customer service.

Whether you are a distributor of one of the CLARCOR product lines or just learning what CLARCOR can offer, I am confident that there is opportunity for you to grow your business with CLARCOR.

Norm Johnson
Filtration is used in numerous applications across a wide range of industries. In many industries, filtration is increasingly critical to reducing operating costs, improving product quality or protecting the environment. While there are literally thousands of filtration companies available that provide niche products for an application, there are only a few companies with the product breadth and expertise to provide integrated solutions to today’s most complex filtration problems.

CLARCOR’s extensive network of filtration experts and engineers have the ability to work with you to develop integrated solutions that can improve product quality, reduce operating costs and increase productivity. These solutions can be deployed globally through the company’s global distribution network.

CLARCOR customers are typically familiar with one or two of the CLARCOR companies. The company’s Total Filtration Program allows you to draw upon CLARCOR’s total network of companies to develop comprehensive filtration programs that enable your company to improve product quality, reduce costs and meet regulatory requirements.

How does that happen? If you already purchase from a CLARCOR company, tell your sales representative that you are interested in looking into the other CLARCOR lines. If you are new to CLARCOR, e-mail the company at info@clarcor.com and provide information about yourself and your business. This information will help CLARCOR develop a plan for the product lines that suit your needs.

Visit www.clarcor.com for additional information and links to the various CLARCOR companies’ web sites.
Mobile/Engine Filtration

Over the years, CLARCOR has expanded and refined its line of mobile filtration products to meet the demands of today’s global market. With some of the most well-respected brands in the industry, CLARCOR offers a complete package of mobile filtration products.

Mobile Filtration Expertise

Heavy-Duty: Over the Road – Commercial Trucking; Off Road – Construction, Mining, Agriculture

Baldwin Filters

Coverage and consistency drive Baldwin’s growth in the heavy-duty market. When it comes to coverage, Baldwin builds the widest range of heavy-duty filters in the industry. Baldwin’s coverage is strengthened by the ability to consistently manufacture filters designed to meet or exceed the quality, performance and supply requirements of original equipment and aftermarket customers.

Baldwin has built a team of highly specialized engineers utilizing the latest technology to design high performance, high quality Baldwin products. All Baldwin filters are tested in the company’s state-of-the-art technical center and also undergo rigorous field testing.

No other mobile filtration company can deliver product and quality like Baldwin can. Baldwin Filters has operations in Mexico, the United Kingdom, Belgium, China, Australia and South Africa.

The Baldwin Catalog Research department leads the industry in research and communication, continually improving coverage by researching and adding new applications and cross-reference information.

(www.baldwinfilters.com)

Light Duty: Automotive, Light Truck

Hastings Premium Filters

The Hastings Filter brand offers, in addition to an extensive heavy-duty product offering, a complete line of quality automotive filters. Automotive air filters, lube filters, automotive fuel filters, in-line fuel filters, transmission filters, and PCV valves round out this brand.

Hastings’ engineering team continually researches and updates information to provide wider coverage within the existing filter line and determine filters to add to ensure complete coverage. Their processes are ISO 9001 and QS 9000 quality system certified.

Hastings is dedicated to supporting the traditional automotive aftermarket with quality products at competitive prices.

(www.hastingsfilters.com)

Railroad & Marine

Clark Filter

Clark Filter, a filtration market leader in the railroad industry, is well known for its full line of OEM-approved filters. Clark Filter incorporates over seventy process controls from beginning to end to ensure product quality for the protection of locomotive and high horsepower marine engines.

Clark Filters are designed to provide long life, high efficiency and superior performance in both railroad and marine applications. The long-life designs help maximize change-out intervals even in cases of poor fuel quality or thermal degradation.

As an innovator of filtration products for the railroad and marine industry, R&D engineers constantly research ways to improve and expand current and future product offerings. Completing the Clark Filter line is a variety of elements, strainers and hardware items for both the railroad and marine industries.

(www.clarkfilter.com)
Types of Mobile Filtration

LUBE FILTRATION
Lube filters, particularly those designed for heavy-duty applications, have the sole purpose of promoting long engine life by keeping damaging contaminants away from sensitive engine parts.

AIR FILTRATION
Clean air is critical to engine survival and vital to performance. Most heavy-duty air filters have minimum initial efficiencies approaching 99%, ensuring long engine life. Urethane Radial Seal air filters combine high performance with ease of service, and are designed to meet or exceed OEM performance requirements.

FUEL FILTRATION
Fuel filters are designed to protect today's engines from contaminants. With spin-ons, elements, fuel managers and fuel/water separators, there are filters available to fit most applications.

WATER SEPARATION
The DAHL Baldwin fuel/water separators offer an additional line of defense for applications where significant amounts of water need to be removed. DAHL fuel/water separators feature a unique, patented depressurizer cone that spreads the flow of fuel, allowing greater separation of water and dirt from fuel.

COOLANT FILTRATION
Leading engine manufacturers estimate that poor maintenance of the cooling system causes 40 percent or more of all premature engine failures. Patented coolant filters containing Controlled Release Supplemental Coolant Additives protect diesel engine cooling systems for one year, 150,000 miles or 4,000 hours of service.

HYDRAULIC FILTRATION
With the demands on today's hydraulic systems, maintaining system cleanliness through proper filtration is essential to insure maximum efficiency and reliability. Cellulose and synthetic media are used to provide the best protection for trouble-free hydraulic system operation.

TRANSMISSION FILTRATION
Transmission filters feature ultracork gaskets that won’t crack or tear. These filters provide the needed protection for an automobile’s transmission.

CLARCOR produces high quality heavy duty filtration solutions for a wide variety of construction, mining, railroad and agricultural equipment.
A growing concern about indoor air quality is driving end-users to become better educated on this subject. With individual desire and government mandates for better indoor air quality, the air filter market is experiencing a growing demand for higher efficiency filters. CLARCOR’s environmental air companies offer an expansive line of filters to address and correct indoor air quality challenges for both private and public sectors.

Air Filtration Expertise

CLARCOR Air Filtration Products
The CLARCOR Air brands are leading manufacturers of HVAC filtration products for residential, commercial, industrial and institutional applications. Engineered for higher efficiency to meet and exceed market concerns and demands, these filters also contribute to controlling and reducing energy costs.

Airguard
This brand offers a full line of air filtration products for the commercial, industrial, institutional and residential markets. Airguard has products in every category of air filters from disposable panel filters and pleated filters to high efficiency extended surface filters and HEPA filters.

ATI
Has the most diverse product base designed to meet or exceed any high efficiency paint overspray collection requirements. ATI offers state-of-the-art paint booth filters, paint overspray filtration, NESHAP approved filters and filtration systems, HVAC air filters and air filtration products for industrial applications. ATI also offers state-of-the-art polyester filtration products and products specialized for airborne particulate removal.

Purolator
Purolator offers HVAC filtration products for residential, commercial and industrial, and HEPA applications. Purolator also supplies equipment including housings and hardware utilized in the pharmaceutical and micro-electronics industry worldwide.

(www.clcair.com)

Types of HVAC Filtration

RETAIL
Fiberglass, pleated, cut-to-fit and specialty filters

COMMERCIAL & INDUSTRIAL
Basic, medium & high efficiency, rigid cell, extended surface area bag, HEPA/Cleanroom products, gas phase, panel, pleated, specialty media, self-supported pockets, paint spray booths, extended surface rigid cell, gas turbine intake, roll media, NESHAP filtration systems

WHOLESALE
Disposable, pleated, high efficiency replacement & specialty filters

Air Pollution Control

United Air Specialists, Inc.
United Air Specialists, Inc. (UAS) is a leading manufacturer of industrial air pollution control equipment, indoor air quality cleaning systems, kitchen emission control equipment and electrostatic oil filtration products. UAS provides air quality solutions to assist companies in meeting federal, state and local clean air standards with high-quality systems customized to each customer’s specific needs.

(www.uasinc.com)
System Solutions

INDUSTRIAL AIR POLLUTION CONTROL EQUIPMENT
UAS serves many industrial air cleaning markets including: ceramics, chemical, coal (mining/power plant), food, foundry, grain (flour/feed mill), metal mining and rock, metalworking (laser/plasma cutting, machining, welding), paper, pharmaceutical, plasticizer, plastics, powder coating, rubber and woodworking. It offers a wide breadth of products including cartridge, bag and media type dust collectors, as well as SMOG-HOG® electrostatic mist/fume collection systems to ensure you get the right solution for your specific application.

INDOOR AIR QUALITY CLEANING SYSTEMS
Owners and employees of bars, restaurants and other public facilities can benefit from UAS’s commercial air cleaning equipment. The SMOKEETTER® and other commercial air cleaners are very effective in reducing airborne pollutants like tobacco smoke, food odors, dust, bacteria and pollen.

KITCHEN EMISSION CONTROL EQUIPMENT
UAS also offers SMOG-HOG® mist/fume collectors designed specifically for commercial kitchen exhaust systems. These heavy-duty electrostatic precipitators can be specified for new buildings or can be retrofitted into existing establishments. Instead of being viewed as a nuisance neighbor due to heavy smoke, grease emissions and exhaust odors, restaurant owners can operate in crowded areas without offending outdoor venues or nearby businesses.

ELECTROSTATIC OIL FILTRATION PRODUCTS
UAS also serves the needs of the power generation, pulp and paper, injection molding and refining/chemical industries with KLEENETEK® varnish removal solutions for lubrication systems. Unlike traditional oil filtration, KLEENETEK’s patented electrostatic technology removes all insoluble contaminants, including degradation by-products that are responsible for varnish creation. This technology allows the ultra-clean lubricant to act as a system cleaner, stripping away varnish one molecular layer at a time. As a result, KLEENETEK’s units keep machinery running at maximum efficiency by avoiding unplanned outages, extending lubricant life and eliminating costly system flushes.

Cartridge Filtration

Clark Filter
Clark Filter cartridges are designed to meet and/or exceed OEM specifications for construction and operation. Clark is currently considered a leading manufacturer of replacement cartridges for all major dust collector markets and Gas Turbine inlet filtration as well as specific markets such as welding, powder coating, wood working and pharmaceutical applications. Their engineering department also custom designs and manufactures for special applications, OEMs and climatic conditions.

(www.clarkfilter.com)

Dust Collection Filtration Applications

GENERAL
Abrasive blasting, carbon black, powder paints, dry chemical processing, pharmaceuticals, battery recycling, foundry, mining

HIGH STRENGTH MEDIA
Cardboard, cement, paper, rubber, grinding, powder coating, polishing, textiles

HIGH FILTRATION EFFICIENCY
Food, asbestos, pesticides, fluidized bed dryers, agglomerating materials

HIGH EXTREME TEMPERATURES
Cement, paint pigments, coal, gypsum

LARGE PARTICLE
Salt, sugar, clay, coffee, detergents, woodworking, textiles

SPARK GENERATING
Welding flame cutting, laser cutting, metal spraying, fiberglass and composites, leather finishing, wood sanding, coarse grinding of ferrous metals, tobacco processing, grain handling
Process Filtration products are used in numerous stringent liquid applications where high quality, engineered products are required. The CLARCOR companies servicing this market are in the Purolator Advanced Filtration Group that consists of five companies: Facet, Purolator Facet, Martin Kurz, Inc., Purolator EFP, and Purolator Liquid Process.

Technical expertise in the development and construction of these filters is critical to product success and a world-class engineering staff and technical sales personnel support each company. Purolator Advanced Filtration has locations in the United States and throughout Europe.

(www.purolator-afg.com)

Process Filtration Expertise

Facet
This company is the world’s market leader in advanced filtration and separation products and systems, serving a variety of customers in the aviation, marine, petrochemical, water treatment, power generation, and general industrial markets.

For over sixty years, Facet has been an innovator in the development of liquid/liquid coalescence and separation. It specializes in the manufacture of two-stage coalescer separators, fuel monitors, portable fueling systems, oil/water separators, bilge water separators, and other systems designed to separate and treat fluids containing a mixture of water, hydrocarbons, and solids. These systems rely on physics and gravity to separate immiscible fluids. They may also employ replacement pre-filter, coalescer, separator, or monitor cartridges for further purification.

Facet aviation fuel handling products are qualified to the latest API standards for jet fuel quality and clarity.

(www.facetusa.com or www.facetinternational.net)

Purolator Facet, Inc.
This company designs and manufactures a broad range of filter products for the aerospace, oil & gas, and specialty industrial markets. Applications include commercial and military aircraft, oil drilling and production rigs, power generation plants, and numerous general manufacturing applications.

Types of filters:

- Sophisticated Hydraulic Filters for Aircraft Flight Controls
- Fuel and Lube Oil Filters for Aircraft Engines
- Air Filters for Aircraft Cabin and Instrument Cooling Systems
- Acoustic Valves for Submarine and Naval Applications
- Sintered Porous Metal Media

These materials are widely used in sand control screens inserted into oil and gas wells. These screens filter sand formation particles out of the oil, thus improving the productivity and life of the well. Purolator also supplies porous metal filters for a wide variety of applications in the automotive, pulp and paper, office products, and general industrial markets.


(www.purolator-facet.com)
**Martin Kurz, Inc.**

Martin Kurz is an innovative manufacturer of sintered porous metal media and products. Marketed under the trade names Dynapore® and Foilmesh® laminates, these sophisticated engineering materials can be formed, rolled, stamped, sheared, and welded into an infinite variety of custom configurations. This flexibility makes them ideal for application-specific products when standard filters don’t work. These products are offered in a wide variety of micron ratings, porosities, alloys, shapes, and sizes. Martin Kurz, Inc. supplies these products to many high technology markets such as pharmaceuticals, power generation, oil and gas, aerospace, and chemical processing. Examples of applications include:

- Flow distribution media in fuel cells
- Sand control screens in oil and gas wells
- Acoustic abatement media in aircraft engine nacelles
- Fluidization of bulk powders in chemical plants

(www.mkicorp.com)

**Purolator EFP**

Manufacturing and selling a wide range of polymer filtration products makes PEFP the largest and most encompassing supplier of screen pack filters to the plastics and synthetic fibers markets. These filters remove contaminants and gels from molten polymers that are extruded into synthetic fibers or film, or molded into the various plastic products used every day.

**Types of filters:**

**POLYMER SPIN PACK FILTERS**
Primarily made from various grades of woven wire mesh, these single or multi-layer filters are available in a variety of sizes, shapes, alloys, and sealing methods. The company offers a full compellment of wire mesh discs, cylinders, cones, cups, and top hat style filter elements for a full range of standard and custom polymer applications.

**AIR QUENCH MEDIA**
Available in panels or cylinders, EFP’s air quench media provides laminar flow of conditioned air for the quenching, solidification, and gathering of extruded synthetic fibers.

**SHATTERED METAL**
Highly effective in removing gels from the polymer extrusion process.

**SINTERED POWDER METAL PRODUCTS**
These products, which are designed to replace shattered metal in more critical applications, are offered in numerous shapes and sizes.

Purolator EFP has the capability to design, test and manufacture specialized parts and filters required by customers in the consumer, automotive, electronics and other end use markets.

**GASKETS**
All types of sealing gaskets are manufactured and sold into the polymer fibers industry.

Purolator EFP is certified to ISO 9001; 2000, offering the quality assurance critical in the plastics and fibers market.

(www.purolator-efp.com)

**Purolator Liquid Process**

This company manufactures a wide variety of filters, disposable media, filter cartridges, and modules for the liquid process industries. Target markets include food and beverage, pharmaceuticals, process water, and paints and coatings.

**Types of filters:**

**MELT BLOWN FILTERS**
Single and multi-zone polypropylene cartridges in continuous lengths up to 40 inches

**STRINGWOUND FILTERS**
Popular disposable cartridges wound with cotton, polypropylene, and other yarns. Available with extruded carbon cores.

**BAG FILTERS**
Mesh and felt media filter bags that fit most bag housings. Made from a variety of materials and end ring configurations.

**DEPTH MEDIA AND MODULES**
Made from inorganic filter aids and fibrillated cellulose media, these products are available in several filtration grades.

**MEMBRANE AND GLASS FIBER PLEATED CARTRIDGES**
Made from micro-fiberglass, polyethersulfone membrane, and polypropylene melt blown media.

(www.purolator-lp.com)
CLARCOR Technical Capabilities

CLARCOR and the CLARCOR Companies are committed to providing technical expertise and leading edge technology for filtration applications. CLARCOR’s investments in technical centers and technical expertise enable our companies to provide products of the highest quality that meet and exceed customer expectations.

Each operating company’s technical center focuses on researching, developing and delivering to market specific products and solutions in its area of expertise. CLARCOR’s technical capabilities are well-established. The company continues to make investments to further develop these capabilities.

In addition to the individual technical centers, the CLARCOR Corporate Filtration Research Center (CFRC) has been established to create new filtration solutions.

Through the research of media furnish recipes, the engineers are able to blend a variety of fiber systems to develop media with increased performance. Collaboration with major universities on the research of surface treatments for filtration media will result in the next generation technology for the air and fluid filtration markets by enhancing the performance of the filtration media. The ability to alter the media furnish and surface treatments allows us to provide specific solutions to meet our customers’ applications.

The CFRC complements the work already being conducted in each CLARCOR operating company research and development technical center, and ensures that CLARCOR remains the technological leader in every filtration market it serves.