



CLEAN LIQUIDS
DRY SOLIDS

PRESSURE FILTRATION SYSTEMS

SINCE 1964

FOR OIL AND WATER-BASED METALWORKING FLUIDS



Model OPF-9MLP Coolant Filter

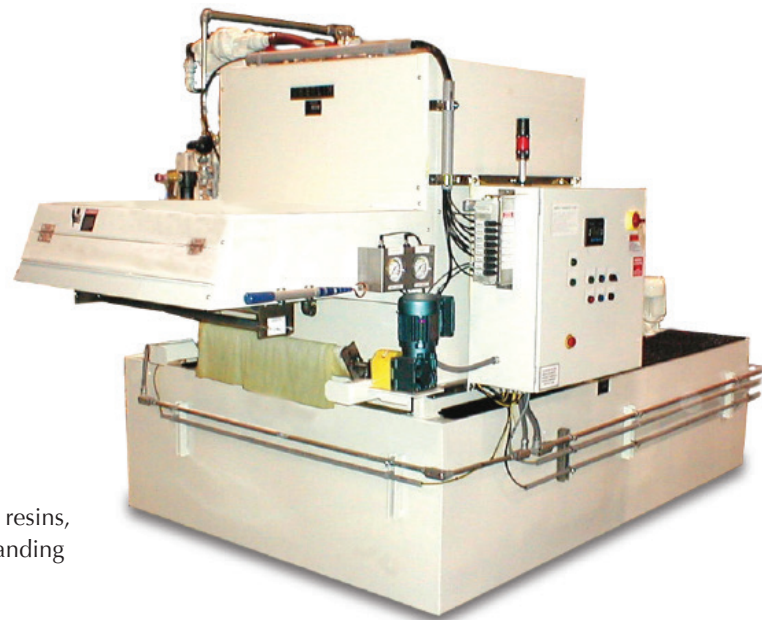
THE CLEAR CHOICE FOR COOLANT FILTRATION





OBERLIN PRESSURE FILTERS

PROVEN PERFORMERS FOR MOST METALLIC AND NON-METALLIC GRINDING AND HONING APPLICATIONS

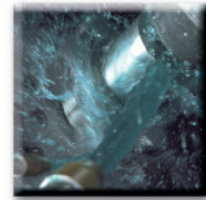


- Gear grinding
- Creep feed grinding
- Surface grinding
- Slot grinding
- Tungsten carbide grinding
- Honing
- Machining systems
- Piston ring grinding
- Bearings: race, track, ball and needle grinding
- ID, OD, centerless grinding
- Driveshaft, crankshaft, connecting rod grinding
- Non-metallic - countertops, fiberglass, phenolic resins, ceramics, powdered carbon grinding, sawing, sanding

OBERLIN FILTERS ALLOW YOU TO PRODUCE BETTER RESULTS WHILE LOWERING YOUR OPERATING COSTS.

NEED:	FEATURE:	BENEFIT:
• Produce better grinding results	• High performance media and depth filtration delivers < 10 ppm solids above 10 microns	• Improved surface finish • Less wheel loading/burn • Better part size control • Less heat build-up
• Reduce metalworking costs	• Virtually all particles > 15 microns removed • Filter cakes 80% by weight in typical steel grinding	• Less tool wear • Less wheel dressing • Minimal coolant loss in cake, less makeup coolant • Extended coolant life
• Cut swarf disposal costs/increase reclamation revenues	• Automatic drying of filter cake with compressed air	• Reduced landfill costs • Easy reclamation
• Reduce medical costs and increase productive time	• Clean coolant	• Removal of fines cuts down on growth sites for bacteria and fungus • Reduces dermatitis
• Decrease filtration costs	• High-pressure filtering • Completely automatic operation • Optional cleanable media	• Lengthens water-based coolant life 5 to 10 times • No labor needed to unload • Less media usage

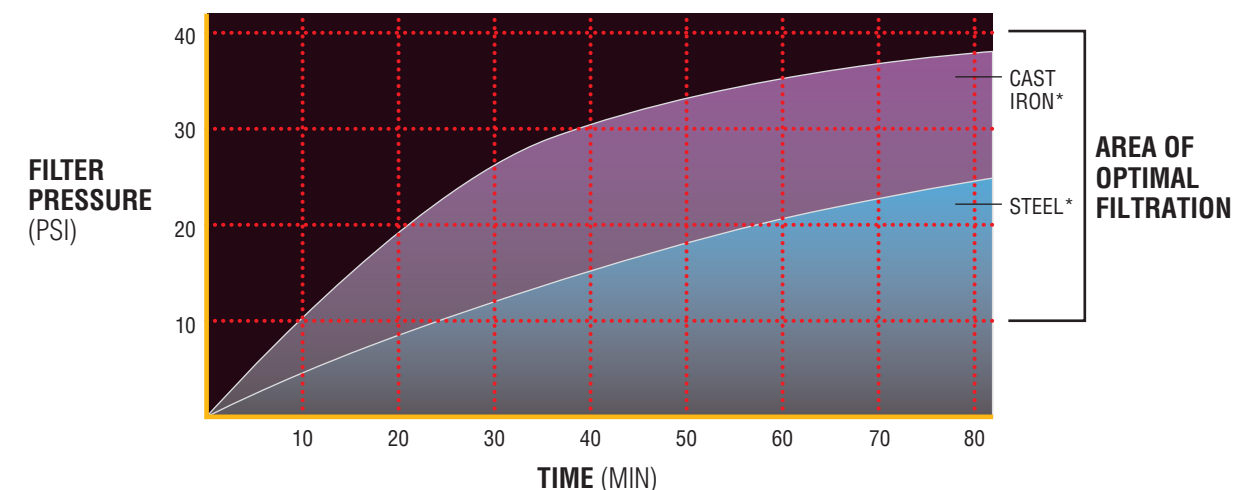
OBERLIN PRESSURE FILTERS



BASIC CONCEPT: DIRT FILTERS DIRT. GOAL: ECONOMICAL FILTRATION.

The idea is to pass liquids contaminated with solids through media, trapping the unwanted solids in, then on, the media. The goal for the most economical filtration cost is to lengthen the filter's cycle time. This maximizes the quantity of the unwanted solids per area of media to reduce media costs. Long cycles mean the filtration process is working with fewer interruptions for media changes. This increases the capacity of a filter. Smaller filters cost less and take up less space than larger filters. As the unwanted solids build up on the media, the flow of the liquid is impeded. Unless the liquid is highly pressurized, the flow of the liquid through the filter will drop quickly and not satisfy the flow capacity required.

Oberlin Filters pressurize the liquid by pumping it into a chamber whose only outlet is through the unwanted solids on the media. The pressure is limited only by the size of the pump, not by atmospheric pressure. 30-40 psi is typical of an Oberlin Filter. This is about three to four times more pressure than gravity or vacuum filters can develop. The time it takes to reach 10 psi is much less than the time to reach 30-35 psi in many applications. The graph below shows a typical relationship of filter pressure versus time.

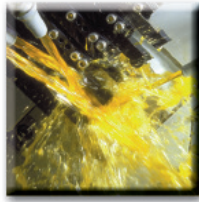


* Actual cycle times will vary from application to application and even on the same coolant and machine depending on the workpiece material, wheel, stock removal, particle size removed and amount of wheel dressing.



EXTEND YOUR OIL OR WATER-BASED COOLANT SERVICE LIFE. OBERLIN'S THICKER CAKES TRAP FAR MORE GRINDING FINES.

- Filter cakes over 80% solids by weight in typical steel grinding.
- Lengthens water-based coolant life 5-10 times.
- High performance media and depth filtration typically delivers less than 10 ppm solids above 10 microns.
- Accepts most commercially available disposable media – low-cost/light weight or heavy/high-performance types.
- Optional, cleanable, semi-permanent belts available for certain applications.
- Discharges a dry cake with less coolant loss.

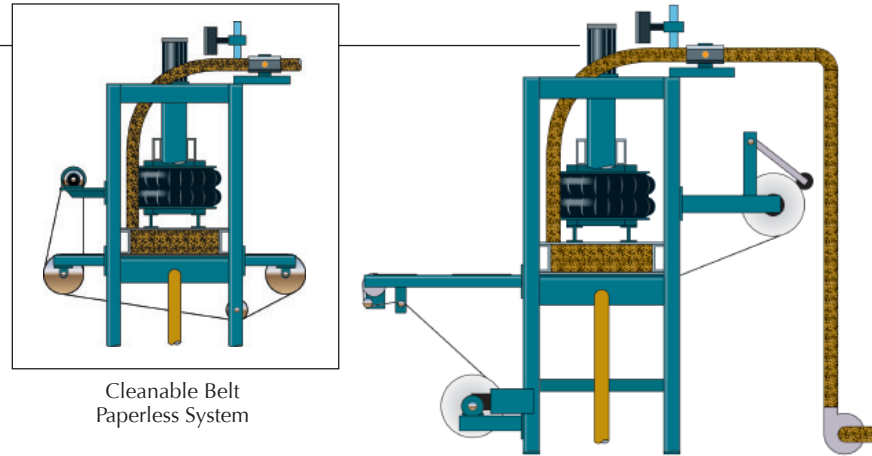


OBERLIN PRESSURE FILTERS

HOW THE FILTER WORKS

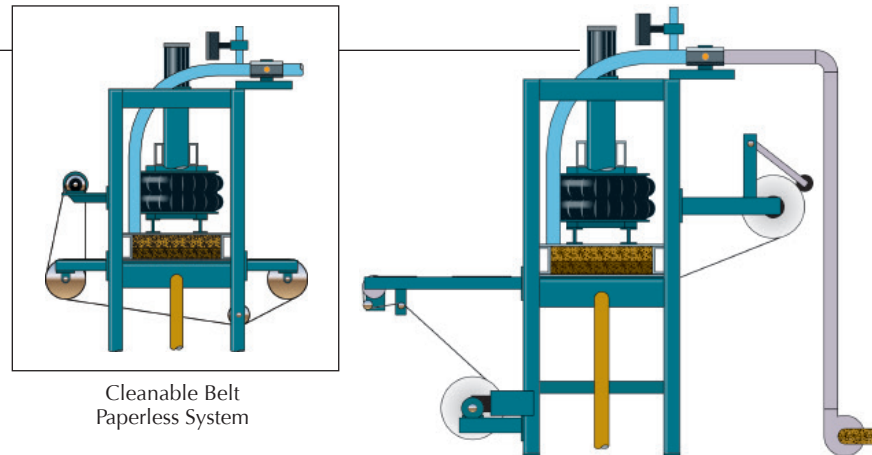
1. FILTERING CYCLE:

First the pneumatic airbag holds the filter upper chamber against the lower chamber. Platen seals on the perimeter of the chambers create a liquid-tight seal completely around the filter media or cleanable belt. Solids-bearing liquid is pumped into the upper chamber. Pump pressure forces the liquid through the filter media or cleanable belt. The filtered liquid is collected in the lower chamber and drains out. Solids are held back by the filter media or cleanable belt.



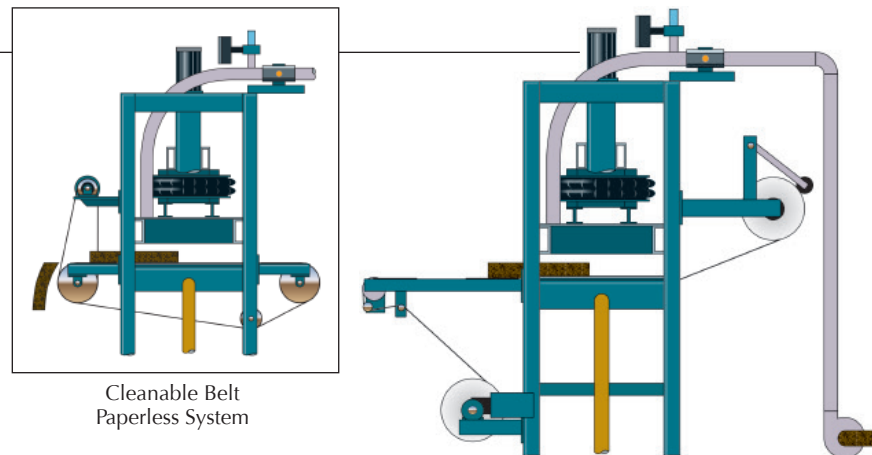
2. DRYING CYCLE:

When the filter pressure reaches 30-40 psi (or higher in some applications), pressurized air or gas is fed into the upper chamber. This forces the liquid through the filtered solids and media or cleanable belt. After the solids are dried, determined by the back pressure and time elapsed, the chamber is lifted.



3. DISCHARGE CYCLE:

The solids are automatically discharged using a disposable media reroller or an endless cleanable belt conveyor. The solids are discharged into a hopper. After discharging, the upper chamber automatically descends and a new filtration cycle starts.



OBERLIN COMPLETE COOLANT SYSTEMS

DESIGNED TO MEET YOUR SPECIFIC REQUIREMENTS

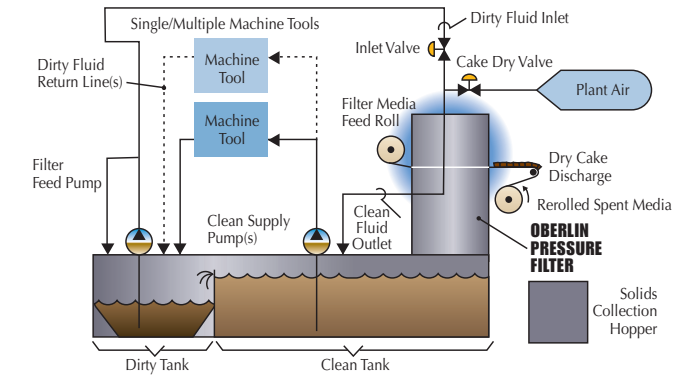


High-Performance Filtration for Grinding Applications

When your need is for 100% filtration, an Oberlin high-performance stand-alone system will provide you with a continual flow of the highest quality clean coolant. Installing an Oberlin high-performance pressure filter is your assurance that your machine tools always receive clean coolant and never need to stop for filter cycling.

How a high-performance system works: used coolant flows by gravity or is pumped into the dirty compartment. From there, the used coolant is pumped into the filter where it gravity flows out of the filter into the clean compartment. Excess flow from the clean compartment overflows to the dirty tank where it is refiltered. When the filter pauses to dry and discharge, the dirty tank acts as a buffer and stores coolant. When the filter comes back on line in 1.5 - 2 minutes, the dirty fluid level is lowered and the clean compartment returns to full.

HIGH PERFORMANCE CENTRAL SYSTEM

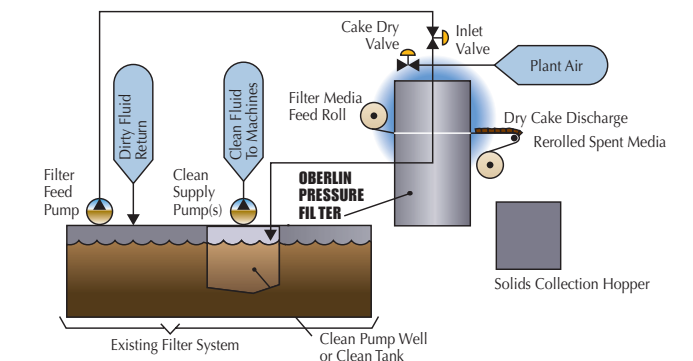


Polishing Systems for a Wide Range of Grinding or Machining Applications

For general machining applications requiring a high-flow capability, an Oberlin slipstream pressure filter will provide you with high-removal efficiency of fine, non-settling solids. With only 10-20% slipstreams, significant reductions in solids levels have been achieved.

How a high-flow slipstream system works: used coolant is pumped out of an existing tank to the filter. From there, the clean coolant flows back to the tank. There is minimal disruption to the existing system. The bulk of the solids are typically discharged with the existing dragout/conveyor.

SLIPSTREAM SYSTEM



Ancillary System Components

- Chillers
- Automatic Coolant Makeup
- Level Controls
- Tamp Oil Removal Systems
- Sump Tank Systems
- All components specially engineered to your requirements.



OBERLIN PRESSURE FILTERS

AVAILABLE IN A WIDE RANGE OF SIZES AND FLOWS

English & *Metric* Specifications

Model	Filtering Area (Sq. Ft.)	Footprint (in.) L x W x H	Tank (Nominal) L x W x H	Capacity (gpm) Water Base*	Capacity (gpm) 200SSu Oil**
OPF-2MLP	2	63 x 47 x 56	108 x 72 x 36	95	50
OPF-2MD	2	93 x 57 x 66	108 x 72 x 36	95	50
OPF-4MLP	4	68 x 53 x 56	129 x 84 x 36	100	60
OPF-4MD	4	96 x 62 x 66	129 x 84 x 36	160	80
OPF-6MLP	6	77 x 60 x 56	165 x 108 x 48	240	100
OPF-7MD	7	107 x 71 x 68	190 x 108 x 48	280	115
OPF-9MLP	9	93 x 60 x 56	190 x 108 x 48	240	150
OPF-12MLP	12	112 x 62 x 56	190 x 108 x 48	240	200
OPF-12MD	12	110 x 87 x 81	190 x 108 x 84	480	200
OPF-18MD	18	134 x 94 x 81	240 x 130 x 84	720	300
OPF-21MLP	21	131 x 71 x 64	190 x 108 x 84	440	325
OPF-24MD	24	148 x 94 x 81	276 x 120 x 84	960	400
OPF-36MD	36	191 x 94 x 87	360 x 130 x 84	1440	600
OPF-50MD	50	174 x 129 x 91	Application Dependent	2000	835

Model	Filtering Area (Sq. Meters)	Footprint (m) L x W x H	Tank (Nominal) L x W x H	Capacity (lpm) Water Base*	Capacity (lpm) 200SSu Oil**
OPF-2MLP	0.2	1.6 x 1.2 x 1.4	2.7 x 1.8 x 0.9	350	180
OPF-2MD	0.2	2.4 x 1.4 x 1.7	2.7 x 1.8 x 0.9	350	180
OPF-4MLP	0.4	1.7 x 1.3 x 1.4	3.3 x 2.1 x 0.9	370	220
OPF-4MD	0.4	2.4 x 1.6 x 1.7	3.3 x 2.1 x 0.9	600	300
OPF-6MLP	0.6	2.0 x 1.5 x 1.4	4.2 x 2.7 x 1.2	900	370
OPF-7MD	0.7	2.7 x 1.8 x 1.7	4.8 x 2.7 x 1.2	1050	430
OPF-9MLP	0.8	2.4 x 1.5 x 1.4	4.8 x 2.7 x 1.2	900	560
OPF-12MLP	1.1	2.8 x 1.6 x 1.4	4.8 x 2.7 x 1.2	900	750
OPF-12MD	1.1	2.8 x 2.2 x 2.1	4.8 x 2.7 x 2.1	1810	750
OPF-18MD	1.7	3.4 x 2.4 x 2.1	6.1 x 3.3 x 2.1	2720	1130
OPF-21MLP	2	3.3 x 1.8 x 1.6	4.8 x 2.7 x 2.1	1660	1230
OPF-24MD	2.2	3.8 x 2.4 x 2.1	7.0 x 3.0 x 2.1	3630	1510
OPF-36MD	3.3	4.9 x 2.4 x 2.2	9.1 x 3.3 x 2.1	5450	2270
OPF-50MD	4.6	4.4 x 3.3 x 2.3	Application Dependent	7570	3160

* Nominal rate for steel OD grinding with 60 grit wheel. Consult factory for more precise estimates.

** Nominal rate for gear grinding, decrease for higher viscosity, increase for lower viscosity oil.

UTILITY REQUIREMENTS

ELECTRICAL:

- All voltages Supported Including 120, 230, 400, 460 VAC and 24 VDC
- 50 Hz and 60 Hz
- 5-Amp Base Power

PRESSURE LIMITS:

- 45 PSIG Standard
- **3.1 bar Standard**

AIR:

- 4-6 SCFM/ft² for 1-2 Minute Duration/Cycle
- 80-100 PSIG
- **70-110 m³/hour/m² for 1-2 minutes Duration/Cycle**

CAPACITY:

- Up to 3 ft³ Solids/hr/ft² of Filter Area

DESIGN STANDARDS:

- NFPA (Oberlin Standard), UL, CSA, IEC, CE, Automotive
- **IEC, CE, Automotive**

OBERLIN FILTER MEDIA & PARTS

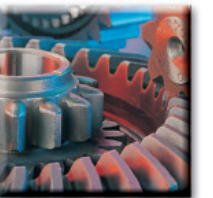
The Oberlin Filter Media Department prides itself on providing only quality, 1st tier filtration grade filter paper at competitive prices for all sizes of Oberlin Filter models. In addition we also carry an extensive line of various gravity & vacuum filter paper as well.

Oberlin Filter Company stocks a large assortment of common items, along with proprietary parts for all models of Oberlin Filtration systems. Our experienced Oberlin Sales team is committed to making the ordering process as easy and accurate as possible.



WHY OBERLIN

- **Experience:** Oberlin Filter Company has been designing and manufacturing High Quality Pressure Filtration Systems for over **50 years** for all types of Metalworking Applications
- **Quality and Integrity:** Oberlin Filter is a family owned company that truly understands reputation means everything and is guided by the simple principle : **Make Filters that Really Work**
- **Pressure Filtration Authority:** Oberlin Filter Company only manufactures Pressure Filtration Systems and we make them better than anyone else. Others may offer pressure filters as an option, but they do not have the experience of Oberlin in applying and making them work
- **Dedication to Service:** Our Knowledge & Experience allows Oberlin to provide World-Class Service/Support for our customers in the field
- **Global Presence:** Oberlin Filter Company has additional facilities located in England and Germany to provide global support. Each facility provides equipment, service and support along with filter paper/parts



WHY OBERLIN PRESSURE FILTRATION

- **Cleanest Liquid:** Highest Differential Pressure of 30+ PSI (4X Greater than Vacuum Filters Operate At) and True 4-Sided Sealing allows optimal filtration providing the cleanest liquid for your process
- **Dry Solids:** Dry solids minimize or eliminate disposal and fluid makeup costs
- **Reliability & Maximum Machine Up-Time:** The Oberlin Filter has very few moving parts with a simple heavy duty design. Filter is located above the Tank which eliminates need to drain Tank allowing easier maintenance
- **Modular Design:** Oberlin Filtration Systems are completely Modular allowing the system to fit into tight or irregular shaped spaces to help maximize floor space
- **Versatility:** The Oberlin Pressure Filter can handle high volumes of coarse solids or low volumes of very small solids
- **Economical and Environmentally Friendly: Clean Liquids / Dry Solids**
 - REDUCE AMOUNT of MATERIAL to LANDFILL = MINIMIZE / ELIMINATE FILTER PAPER USAGE and REDUCE VOLUME of SOLIDS
 - REDUCE CHEMICAL CONSUMPTION
 - EXTEND LIFE of COOLANT and TOOLING
 - MAXIMIZE EFFICIENCY with CENTRAL SYSTEM FILTRATION while using MINIMAL FLOOR SPACE
 - DRY CAKE AUTOMATICALLY DISCHARGED from FILTER
 - LESS REJECT PARTS
 - REDUCED MACHINE WEAR
 - MINIMIZE COOLANT CARRY-OUT



THE LAST FILTER YOU WILL EVER NEED TO BUY BECAUSE OBERLIN PRESSURE FILTERS WORK !!!!!

OBERLIN PRESSURE FILTERS FOR ALL YOUR FILTRATION NEEDS

LOW SOLIDS – POLISHING:

- Phosphate System
- Plating Baths
- Cooling Towers
- Alkaline/Caustic Cleaner Baths
- UF/RO Prefiltration
- Clarifier Overflows
- Metal Working Fluids and Coolants

HIGH SOLIDS/HIGH TEMPERATURE/ HIGH CORROSION:

- Crystallizers
- Wet Scrubbers
- Reactor Separations/Cleanouts
- Radioactive Processing

BACKWASH SEPARATIONS FROM TUBULAR/PRESSURE LEAFS:

- Brewery
- Winery
- Chlor-Alkali
- Juice Processing
- Chemical

BATCH PROCESSING:

- Specialty Chemical Separations
- Sludge Dewatering
- Clarifier Underflows
- Pelletizer Water
- Colloidal Solutions



OBERLIN FILTER COMPANY

OFFERS COMPLETELY INTEGRATED SERVICES

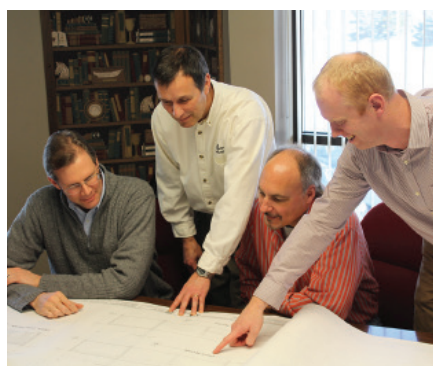


Oberlin Filter Company's modern, newly expanded offices and manufacturing facility are conveniently located on ten acres in Waukesha, Wisconsin (a Milwaukee suburb). Our completely integrated operation includes lab, design and engineering, prototyping, manufacturing with total quality control, startup and testing. We also offer continuing technical support for media selection and our industry-wide database allows us to ensure that you are getting optimal results for your filtration. The plant warehouses a large inventory of components and disposable media to support all Oberlin Pressure Filters along with other brands.



LABORATORY

We offer free lab testing for process evaluation and equipment sizing. Small samples can be analyzed for dewatering rate, filtrate quality and cake dryness. Upon test completion, a report summarizing the results is issued. Pilot filters are available for field testing. Laboratory support is always available to our existing clients for process improvements.



ENGINEERING

Our engineering group works closely with our customers to develop system specifications and to insure all systems meet those specifications. All phases of design and manufacturing are documented as part of our quality program. A manual is provided with each filter complete with drawing, parts list, sequence of operations and maintenance.



SERVICE

As part of our commitment to quality, our service department was established for after-sale customer support. Our service and engineering staff are available 24 hours a day to answer technical questions, assist in troubleshooting and to ship out spare parts. Qualified field service personnel are available for on site start-ups and maintenance work anytime, anywhere.



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