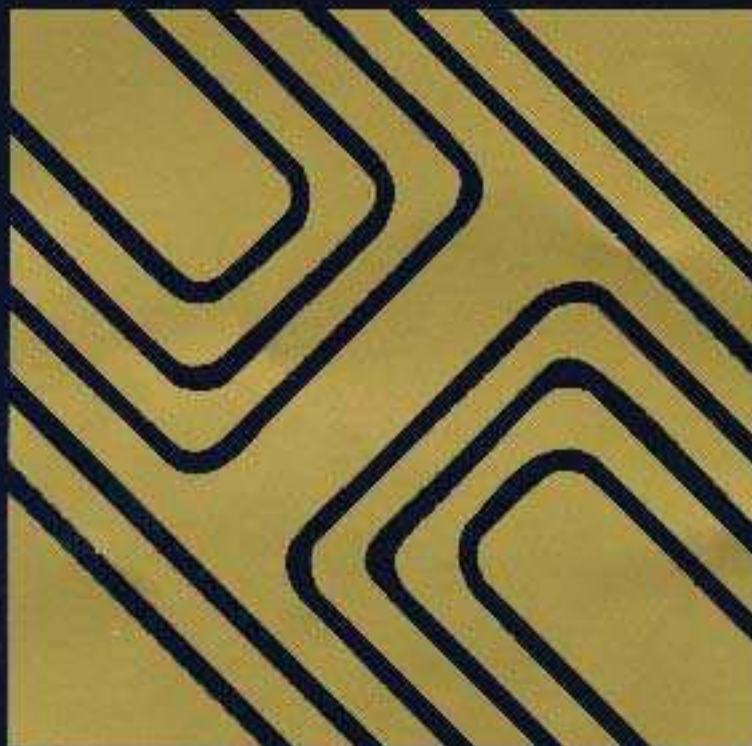


HILCO® FLUID CONTAMINATION CONTROL



**Quality Engineered for
Today... and Tomorrow**



HILCO PRODUCTS

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® Registered Trademark of the Hilliard Corporation.

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We've seen many changes in the industry since our first oil reclaimer was built in 1925. The problems have become more complicated and the filtration techniques more sophisticated.

During these changing times, The Hilliard Corporation has quietly and steadfastly labored to solve all kinds of fluid contamination problems. Through this hard work, our engineers have built a reputation for us as problem solvers.

Hilliard is an engineering company. Every one of our products has been developed and fine tuned by our exceptional staff of engineers. We bring fluid contamination problems under control – cost effectively – with our full range of Hilco engineered filters, cartridges, reclaimers, coolant recyclers & systems.

Hilco products:

- Reduce the cost of new oil purchases.
- Decrease disposal costs.
- Help lessen component wear.
- Reduce downtime.
- Help curtail environmental contamination.

We hope you find this brochure beneficial. If you have any questions about individual products or don't see exactly what you're looking for, give us a call. We're confident we can provide you with the right fluid contamination control for your application. Hilliard will furnish you with quality products that are engineered to perform today and through many tomorrows.



FILTER CARTRIDGES

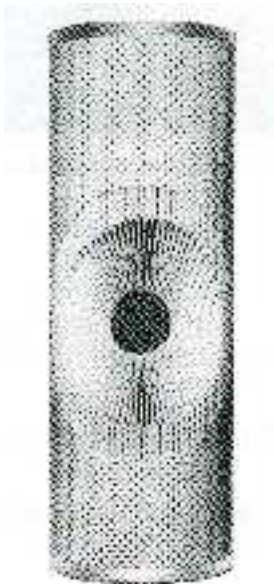
Long life. Superior quality.

The reliability and efficiency of any filtration system is chiefly dependent on the quality of the cartridges used in it.

We've worked hard to develop a full line of quality Hilco cartridges for virtually every application. Hilco can restore many oils and coolants to a like-new condition.

Our full line of filter cartridges includes various sizes, filtration efficiencies and dirt-holding capacities.

Carefully consider the many requirements of your particular application before choosing a cartridge. Factors to be considered include type of contaminant, contaminant levels, type of fluid, flow rate, working pressure, pressure drop and other operating conditions.



- To reduce pinch-offs, caused by sharp pleats which stress the filter media, we've developed a process which features a larger outside radius and a smaller inside radius for stronger, more uniform nesting of pleats. This process is referred to as controlled radius pleating.



All of our filter cartridges are developed to provide long service life and high quality. Hilco cartridges feature quality design and construction.

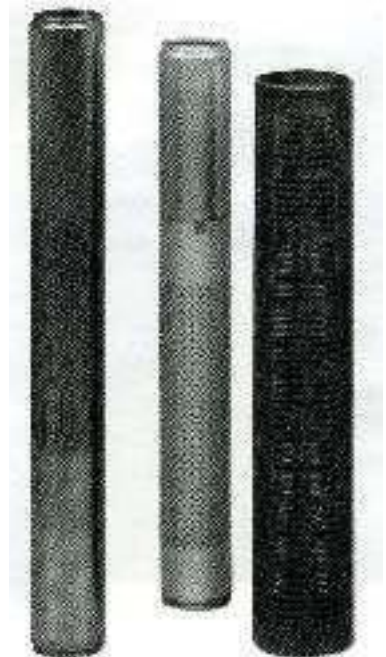
We also make Hilco-quality replacements for other brands of cartridges used in lube oil and fuel oil applications.

Fuel gas, process gas, seal gas, H₂O injection, and transformer oil applications can also be accommodated by Hilco.

- Our controlled radius pleats are designed to maximize filtration area and dirt-holding capacity while resisting pinching, distortion and rupture.
- Gasket materials and adhesives are selected based on their compatibility with the fluids and operating temperatures of each application.



Many different media are specially selected, formulated and fine tuned on a regular basis to provide the most effective combination of fluid compatibility, particle-separation efficiency, low pressure drop and structural properties.



- Cartridges feature rugged, fiber glass filled nylon and plated steel center tubes which resist collapse at high pressure differentials. Special center tube adapters are also available for reuse.

Microgard™ Cartridges for highest efficiency available.



Microgard cartridges feature three filtration layers: outer cellulose media layer for coarse filtration; an intermediate glass media for microfiltration; and an inner

cellulose-media layer for added support. Microgard cartridges have an efficiency rating of Beta 5=75 (Beta 10=1000). They offer excellent protection for sensitive components.

Cartridge Dimensions	Fits Centerpost	Max. Flow @ 3 PSID w/200 SUS Fluid	Micron Rating
3"x10" to 7"x18"	3/4" to 3"	3 to 20 GPM	1/2 micron

For complete product information, request bulletin PPC-2 from our website.

Safeguard™ Cartridges for 3, 5, 10 and 20 micron efficiencies.

Safeguard single-layer pleated paper cartridges are economical for use in applications requiring general rather than fine particulate filtration. These disposable cartridges feature

molded urethane ends on 3"x10", 5"x11", 5"x18" sizes and zinc-plated metal end caps on 7"x18" size with controlled-radius pleats to maximize filtration area.

Cartridge Dimensions	Fits Centerpost	Max. Flow @ 3 PSID w/200 SUS Fluid	Micron Rating
3"x10" to 7"x18"	3/4" to 3"	10 to 60 GPM	3 to 20 microns

For complete product information, request bulletin PPC-2 from our website.



Pleated Synthetic Media PH Cartridges have polyester reinforced glass fibers for maximum flow.



These durable cartridges stand up to continued use without softening and deterioration caused by exposure to water. The key is an advanced synthetic media that provides maximum filtration with minimum pressure drop.

In addition to the standard flow-rate series, we also offer a special series of high-flow 6"x39" and 8"x39" PH Filter Cartridges. These allow you to replace many non-synthetic industry-standard 718- or 310-style cartridges with just one high-flow PH cartridge. This can mean a 50% reduction of first cost and also greatly simplified changeouts.

Cartridge Dimensions	Fits Centerpost	Max. Flow @ 3 PSID w/200 SUS Fluid	Micron Rating
3"x10" to 8"x39"	3/4" to 3"	400- GPM	1/2 to 20 microns

For complete product information, request bulletin PHI-2 from our website.

FILTER CARTRIDGES

Hilsorb™ Dryer Cartridges for moisture and particulate control.

Hilsorb dryer cartridges quickly and effectively remove solid and water contaminants from hydraulic, lube and insulating oils. They give high performance in applications where moisture control and filtration efficiency are of primary importance.

Made with patented four-ply construction, Hilsorb dryer cartridges are available in two efficiency ratings. The maximum moisture holding capacity of 2.54 quarts depends on flow rate and other variables.



Cartridge Dimensions	Fits Centerpost	Micron Rating
3"x10" to 7"x18"	3/4" to 8"	1/2 to 3 microns

For complete product information, request bulletin HDI-2 and HHB-1 from our website.

High Pressure (1500 PSI) Hydraulic Fluid Filter Cartridges.



High-pressure hydraulic cartridges are engineered for 1500 PSI pressure. The ability to withdraw high pressure permits placement in the high-pressure circuit to protect sensitive hydraulic components.

Features include:

- Rugged, machined end caps.
- Centertube designed to withstand collapse from high pressure differential and to prevent media extrusion.
- Micro-glass filter media pleated between protective screens.

Cartridge Dimensions	Max. Flow @ 3 PSID w/200 SUS Fluid	Micron Rating
3"x11" to 3"x21"	9 GPM	1/2 micron

For complete product information, request bulletin HPS-1 from our website.

Saflow™ and Saflow D™ Cartridges withstand cold starts and high pressure differentials.

Available in Saflow and Saflow D efficiencies, these specially designed stacked disc cartridges provide protection at high pressure differentials brought on by cold starts and high viscosities. The stacked cellulose paper discs with labyrinth oil channels also provide depth filtration and high dirt-holding capacity.

Cartridge Dimensions	Fits Centerpost
6"x18" to 7"x36"	1-1/2"

For complete product information, request bulletin SPD-1 from our website.



Center Tube Adapters for cartridge economy.



If you have an application that requires large quantities of cartridges, save up to 25 percent through the use of cartridges without integral center tubes. To do this, use our separate center tube adapter, which is available in sizes to fit 630, 718, and 736 cartridges.

For complete product information, request bulletin SPD-1 from our website.

Pleated Screen Filter Cartridges.

The Pleated Screen Cartridge is a cleanable element with outside in flow. It is a direct replacement for a PL718 cartridge when cartridge disposal is a problem.

Available in 25, 40, 60, 74, and 104 micron absolute screen meshes, this cartridge survives in fluids and conditions where standard PL and PH Series cannot perform.



Cartridge Dimensions	Fits Centerpost	Flow Rate w/max. clean Pressure drop of 3 PSID and a viscosity of 200 SUS	Micron Rating
3"x10" to 8"x39"	2"	25 to 60 GPM	25 to 104 microns

Pleated Strainer Baskets.

The Pleated Strainer Basket contains 3.7 times the area of a plain, cylindrical basket. Recommended for high solids applications. Features inside-out flow and can easily be cleaned by hosing off in a part washing tank, or with steam or a high-pressure water jet (car wash type).

Typical applications include very dirty lube oils, heavy fuels, fuels with catalyst fines, machine tool coolants and cooling or process water.

Basket Dimensions	Micron Rating (Absolute)
7"x24"	25 to 104 microns

Backwash Strainers.

These strainers can be cleansed, flushed or backwashed. Manufactured in standard 10 and 100 micron ratings, but 5 and 60

micron ratings are also available. A backwash strainer is used when frequent disassembly for cleaning from high dirt loading is undesirable.



Backwash Strainer

Basket Dimensions	Micron Rating
3-1/2"x39" and 6"x52"	5 to 100 microns

FILTER CARTRIDGES

Strainer Baskets to remove large particles.

For use in place of or in conjunction with Hilco filter cartridges, these strainer baskets are available in 5"x11" and 7"x18" sizes.

They are useful as pre-filters for the removal of particulates of 75 to 100 micrometers and larger.

O-ring Sealed Cartridges.

Housings for o-ring sealed CG cartridges are used for critical seal applications. O-rings provide a better seal, higher tolerance of misalignment, and greater compatibility with cartridge material.

O-rings are more durable than standard flat gaskets with a higher resistance to heat and water.

Coreless Cartridges cut costs.

Hilco coreless cartridges utilize a vessel with an integral center support that eliminates the need for the cartridge to have a built-in center core to support the element against differential pressure.

Initial cost of the cartridge is reduced because it is made with a built-in metal center core. Fluid costs are reduced by maximizing fluid life through the use of high-efficiency filtration and long

element life. And costs associated with disposal of used cartridges are minimized.

Cartridge	Dimensions	Weight (lbs.)
PH720-CGW	7 x 9	4
PH818-CGW	9 x 18	6
PH830-CGW	9 x 30	8

For complete product information, request bulletin HCC-2 from our website.



Hilite® Cartridges for acid reduction for petroleum-based transformer and turbine lube oils.

Hilite Cartridges feature a high grade calcined fullers' earth media which is superior because of its greater water resistance. They provide a combination of neutralization and adsorption to remove acids, gums and other oxidation products to restore TAN and color. These cartridges come in various sizes and flow rates.

These cartridges are recommended for acid reduction, to stop

hydrolytic degradation and to promote fluid stability.

Cartridge Dimensions	Fits Centerpost	Max. Flow @ 5 PSID w/200 SUS Fluid
3"x10" to 11"x19"	3/4" to 2"	.4 to 2 GPM

For complete product information, request bulletin HFC-2 from our website.

Hilite-A Cartridges for acid reduction.

These cartridges feature a special activated alumina media for the adsorption of acids and other oxidation products from synthetic fluids and petroleum oil. A water-resistant media, activated alumina

will minimize the forming of precipitates or gels when used with phosphate-ester fluids. Hilite-A Cartridges are available in various sizes and flow rates.

Cartridge Dimensions	Fits Centerpost	Max. Flow @ 5 PSID w/200 SUS Fluid
3"x10" to 11"x19"	3/4" to 2"	.2 to 1 GPM

For complete product information, request bulletin HAC-3 from our website.



Selexsorb® GT Cartridges are specially formulated for phosphate ester fluids.

Selexsorb GT is a patented adsorbent specifically designed for use with phosphate ester fluids such as AKZO Chemical's Fyrquel®. It maintains the original quality of fluids for prolonged periods, thus reducing the need for fluid changeouts and increasing equipment life.

well as a polyester media retainer for both chemical resistance and media retention. Other features

include lifting handles and lifting tabs for added convenience in handling.

Cartridge Dimensions	Fits Centerpost	Max. Flow @ 5 PSID w/200 SUS Fluid
7"x18" to 11"x19"	1-1/2" to 2"	.5 GPM

These cartridges feature metal ambients for added strength, as

Please be sure to consult the factory before ordering. For complete product information, request bulletin SEL-3 from our website.

Coolant Coalescer and Oily Water Separator Cartridges.

Inside-out flow for rates up to 6 GPM.

Single-stage polypropylene media for use in industrial machine coolants, quench rinse water, bilge water, air compressor condensate and oily mop water. Ideal for any separation requiring removal of free tramp oil from water or water-based fluids. Laboratory tests have reduced coolants to under 150 ppm free oil. In water applications contaminated with oil, laboratory testing removed oil from the water to under 10 ppm.

The coalescer will extend coolant life by removing oil and solids that promote bio growth. Tramp oil causes smoke when it contacts hot machined parts. Processing with the coolant coalescer removes the tramp oil and thus reduces the amount of smoke in the machine shop atmosphere. In addition, when the separator is used on oil-contaminated water, it can lower oil content to an acceptable limit for legal disposal. Local ordinances need to be reviewed to define acceptable levels.

Cartridge Dimensions	Max. Flow Rate
3"x10" to 7"x18"	6 GPM



FILTER CARTRIDGES

Fuel Coalescer HC 628-01-C Cartridges.



Originally developed for the U.S. Air Force for refueling B-1 bombers, the fuel coalescer is capable of reducing water in fuel from ½% or 5000 ppm to under 10 ppm at 71 GPM per cartridge with inhibited jet fuel per API 1581 procedures. This cartridge also works in No. 2 diesel at a flow rate of 35 GPM and on light oils up to ISO 32 in viscosity, flowing at 4 GPM per cartridge.

Cartridge Dimensions	Max. Flow Rate
6 x 28"	1 micron

Fuel Separator HS 611-200-C Cartridges.

The fuel separator is a hydrophobic screen element to be used in series downstream from the fuel coalescer. Its function is to prevent coalesced water drops from being swept out of the vessel with the clean fuel before they drop into the sump.

Cartridge Dimensions	Mesh Rating
6 x 11"	200



Bag Filter Cartridges.

Hilco's Bag Filters line of pleated cartridges fit into a standard basket to increase dirt-holding capacity and overall efficiency. The cartridge is designed with an external O-ring that seals on the inside diameter of the basket, eliminating potential bypass problems. A wide range of media efficiencies are available.

All industry-standard sizes are available with optional connections in carbon and stainless steel. Contains an O-ring seal between the basket and cartridges. Multiple basket, duplex, and specials are also available.



Cartridge Selection Table*

All cartridges listed in this section are available in various sizes and flow rates depending on your particular application.

Cartridge Type	Application	Fluid Types	Contaminants To Be Removed
Microgard pleated paper	Close tolerance hydraulic Refrigeration compressors (lube and coolant) Gas turbines Centrifugal lubricated couplings High pressure fluid filtration Test stands	Insulating oil Lapping oil Hydraulic oil Fuel oil Coolants Bearing packing grease	Very fine particulate matter
Safeguard 3 pleated paper	Hydraulic systems Test stands	Hydraulic oil	Fine particulate matter
Safeguard 5 pleated paper	Diesel, gas, or dual fuel engines Compressors Paper machines Turbochargers Low-pressure hydraulic Turbine lube Bearings Test stands	Emulsion Fuel oil Seal oil Quench oil Amines Gear lube Draw oil Roll oil Natural gas Nitrogen Butane	Particulate matter
Safeguard 10 & 20 pleated paper	Diesel, gas, or dual fuel engines Compressors-lube	Fuel oil Coolant Cutting oil Seal oil Lube oil	High contaminant level of particulate matter
Hilsorb pleated paper	Transformers Circuit breakers Voltage regulators Load tap changers	Insulating oil Hydraulic oil	Water and some fine particulate matter
Hilite fuller's earth	Transformers Vacuum pumps Diffusion pumps EDM machines Refrigeration compressors	Roll oil Heat transfer fluid Draw oil Seal oil Insulating oil Coolant	Acid Varnish Tar Lacquer Gum Particulate matter
Hilite-A activated alumina	Hydraulic systems Transformers Vacuum pumps Diffusion pumps EDM machines	Fire-resistant synthetic fluids Phosphate esters Per-fluorinated polyester (omblin fluids)	Acid Varnish Tar Lacquer Gum Particulate matter
Selexsorb	Gas turbines Steam turbines EHC control systems	Phosphate ester hydraulic fluids Lubricants	Acid Metal Water
PH pleated synthetic media	Diesel, gas or dual fuel engine turbine lube	Amines Lube and seal oil EDM coolants Fuel oils Glycol Hydraulic fluids	Particulate
Safflow & Safflow D disc	Speed reducers Diesel, gas, or dual fuel engines Gas compressors w/o common lube systems Gun drilling Frequent cold starts Oil bath or air filters	Hydraulic oil Quench oil Insulating oil Lube oil Edible oil Air filter liquid	Particulate and small amount of water

*Note: This table is intended only as a useful reference tool. Final cartridge selection must also consider the ingress rate and protection requirements of the application.

FILTER VESSELS

TurboFlo Duplex Filters.

The Hilco TurboFlo Duplex Filter line is easy to operate and maintain with a low turning torque and no jacking of the sealing pads. Welded-in transfer valves and high flow synthetic elements save space, and flow is under the filter cartridge which does not impinge on the filter elements. With no flanges between the transfer valve and filter housing, there are fewer potential leak points.



Features include ASME Code construction, o-ring sealed covers, coreless elements, and standard carbon steel and 316 stainless steel construction. Also available in 1-1/2" to 8" inlet and outlet connections for flows up to 2000 gpm, and pressures up to 5000 psi.

For complete product information, request bulletins TBF-2 and TEB-2 from our website.

Integral Duplex Filters.

Integral Duplex Filters have the transfer valve built into the head of the duplex and can accept 312, 414, and 518 size elements. Elements are synthetic and o-ring is sealed to eliminate bypass. The bolted manifold of the 312 duplex filter

series allows for easy change of the inlet and outlet connections. Standard connection sizes are 3/4" to 2".

Available in 3/4" or 1" FNPT, 150# flanged, or SAE J514 o-ring sealed.

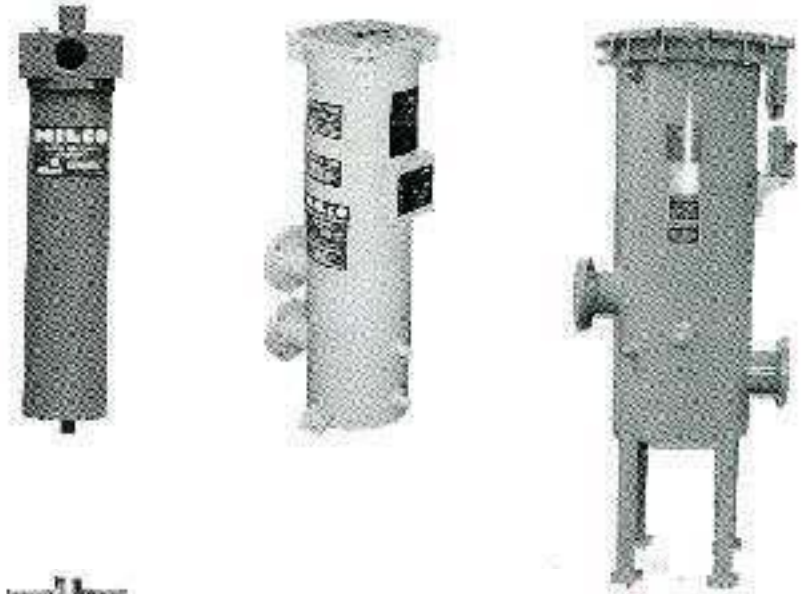
Integral Duplex Filters are typically non-Code, carbon steel construction, making them economical; Code units are also available.



Standard Housings for High Flow Synthetic Elements.

These housings can be used for 312, 414, 518, 720, and 739 elements, for flows up to 2000 gpm. The $\frac{3}{4}$ " FNPT inlet and outlet are up to 10", 150# flanged.

Housing features include ASME construction (non-Code also available), o-ring sealed covers, and carbon steel or 316 stainless steel.



Standard Non-Code Housings.

Well-suited for off-line filtration systems, these housings can be used for o-ring sealed elements as well as Selexsorb, Hilite, Activated Alumina, and Ion Exchange elements.

Features o-ring sealed covers, swing bolt cover hardware, carbon steel or 316 stainless construction, and 1" inlet and outlet.



Bag Filter Housings.

Hilco Bag Filter Housings feature o-ring sealed covers, swing bolt cover hardware, carbon steel or 316 stainless steel construction. Suitable for a variety of inlet and outlet configurations. Also available in duplex arrangement.

For complete product information, request bulletin BFH-1 from our website.



FILTER VESSELS

Hilco Transfer Valves.

Hilco Transfer Valves assure positive sealing for uninterrupted flow and a low pressure drop. They feature an innovative spring loaded pad and shaft design with large cross-section o-ring seals. Top and bottom covers with centering pilots provide support to the body to resist deformation from pipe strain. The turning mechanism features a choice of handle, wormgear or actuator designs to meet your requirements.

Built to Hilliard's exacting standards, these transfer valves allow for replacement of the pads without replacement of the entire valve. Six standard sizes are available (1-1/2" to 8"), as well as a split transfer valve model designed for duplex coolers. Continuous flow transfer valves are available in carbon steel, 304, and 316 stainless steel. "B" design, and

"D" (zero leakage) design valves are available in polymer-coated stainless steel.

Hilco also manufactures 3-way valves coupled together with a common actuator and handle for duplex cooler applications. This helps to minimize extensive piping runs previously required while at the same time, reducing overall costs.

For complete product information, request bulletins TVI-2 and SVI-3 from our website.



Seal Gas Duplex Filter Housings.

Dry seals for compressors and turbines require clean, dry gas to maintain seal integrity and ensure longevity. The Hilco Dry Seal Gas Duplex housings incorporate valves and filters into one assembly which is easy to assemble and operate. Duplex filters eliminate the need for piping in diverter valves and saves space on the seal gas skid.

The simple duplex housing arrangement reduces the possibility for incorrect operation and the potential for shutting off the dry gas seal flow. Costs are also reduced by eliminating expensive stainless

steel fittings and assembly time. Its compact design saves space. Available with coalescing and filter cartridges.

- 316 SS construction (housing only)
- Available designed and/or constructed to ASME code
- Complies with API-614
- Zero-leak integral transfer valve
- Block and bleed capability available



For complete product information, request bulletin DHC-2 from our website.

RECLAIMERS AND RECLAMATION SYSTEMS

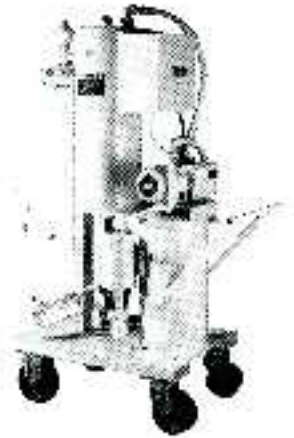
Restore contaminated fluids to like-new condition.

Filters are ideal for removing small amounts of contaminants from a wide range of fluids, but there is another answer for larger quantities of water. With Hilco oil

reclaimers and coolant coalescers, there's no need to waste dirty industrial fluids because you can restore them effortlessly, efficiently and economically.

Hilco reclaimers pay for themselves by the amount of money they save you from spending on new fluids. Hilliard will test your fluid for free and recommend the reclaimer just right for your particular application.

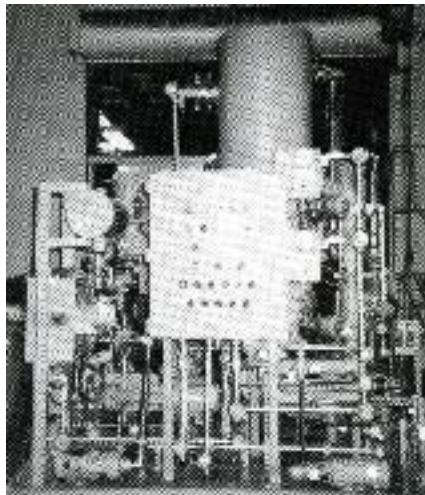
Standard Hilco Oil Reclaimers for most applications.



For reconditioning of industrial oils containing a maximum of 1% water at a flow rate of up to 100 GPH.

For complete product information, request bulletin ORB-4 from our website.

The reclaimer is available with many options including filters.



Seal Oil Degassers.

Seal Oil Degassing Systems remove hydrocarbons and gases to control seal oil flashpoint and viscosity. The systems are designed to remove the gases without harming the seal oil.

Hyflow™ Reclaimers for special applications.



Ideally suited for applications requiring a high degree of purification, such as the dehydration of refrigeration compressor and insulating oils.

Reclaiming systems for processing refrigeration compressor oils are available in various flow rates and can be furnished complete with

purified oil vacuum storage tanks. Reclaimers for insulating oil service are available in three standard capacities: 600, 1200 and 1800 GPH. Custom designs to suit your particular application are also available.

For complete product information, request bulletin HYF-2 from our website.

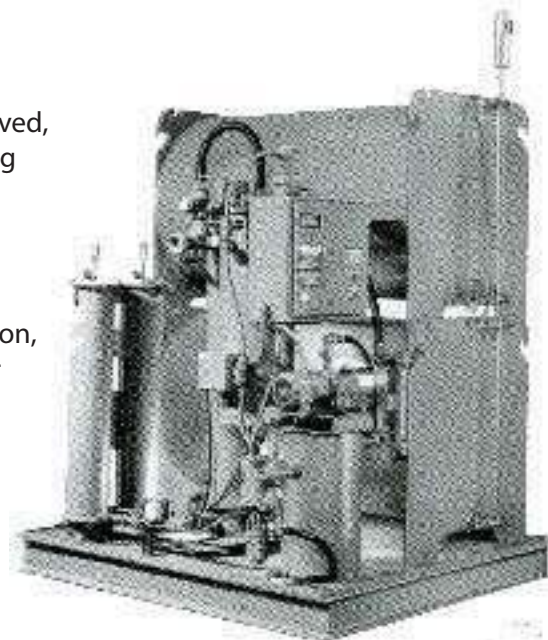
Oil Reclamation Systems.

Complete systems include a reclaimer, a pre-filter, a final filter and storage tanks for contaminated and purified fluids. Simple to operate and easy to maintain, these systems extend fluid life and greatly decrease costs for waste disposal and purchase of new fluids.

Used by heat treating operators to dispose of used quench oils, this system removes moisture, dissolved gases, and particulate contamination from oil-based

quenching fluids. Water is removed, eliminating the cause of foaming and possible explosive and fire hazard. Removal of particulates eliminates smoking.

For complete product information, request bulletin ORS-1 from our website.



Machine Tool Coolant Recyclers.



Save money by recycling your machine tool coolant. The GS 200 and GS 600 quickly and efficiently remove tramp oil and metal fines, restoring coolant to like-new condition. You save on disposal costs and purchases of new fluid, plus you eliminate downtime for coolant removal. These self-contained, compact, portable units clean both water-based and synthetic machine tool coolants.

Machine Tool Coolant Recyclers extend tool life and do not affect coolant chemistry.



Grinder Filtration Systems.

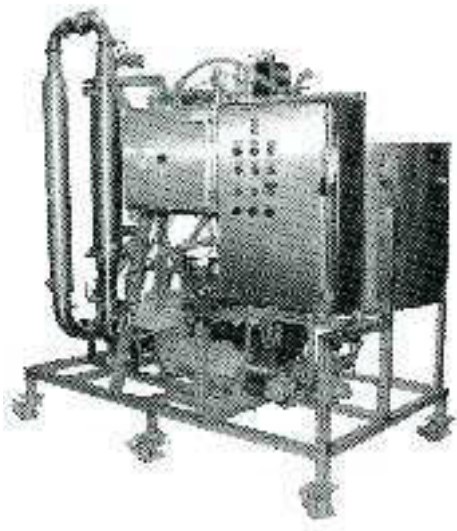
A filtration system, for example, the GF 10, can be used for grinding applications in machine shops. The system eliminates swarf, cleans coolant and improves air quality by reducing odor caused by bacteria growth.



Oil Removal Systems For Compressor Condensate And Parts Washers Are Available.

MEMBRANE FILTRATION SYSTEM

Hilco Ceramic Membrane Filtration System.



For complete product information,
request bulletin CMS-3 from our website.

The Ceramic Membrane System utilizes high-velocity fluid "crossflow" across the face of the membrane to lower oily-water waste disposal costs. The oil-free water passes through the ceramic membrane while the oily waste is concentrated in a process reservoir.

- High-packing density
- Broad PH range of 2-13
- Resistant to thermal shock
- High surface area to unit volume
- Accepts three different micron-rated membranes (0.2 μm , 0.01 μm , 0.005 μm)
- Durable ceramic extends lifetime

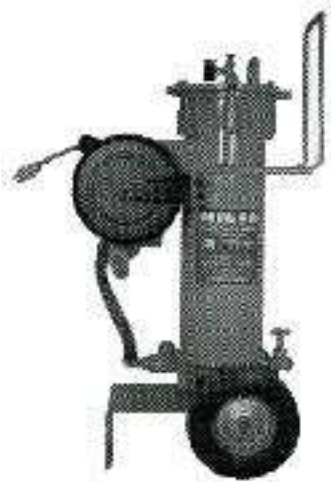
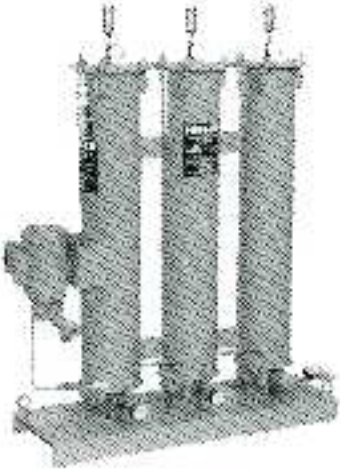
Efficient filtration of sumps, reservoirs and tanks.

This Hilco product line features a number of high quality filtration systems and packages for dependable, efficient, economical filtration of fluids contained in sumps, reservoirs and tanks.

These are self-contained units that come complete with motor-driven pump sets. The capacity of this pump set is the primary selection factor because it provides the fluid flow through the filter.

Typical applications include off-line recirculating filtration of lube sumps and hydraulic reservoirs, batch processing of fluids and portable filtration.

Stationary and Portable Filters with Pump Sets.



Hilco Stationary Filters with Pump Sets provide economical off-line filtration for sumps and reservoirs.

For complete product information, request bulletin HHB-1 and SEL-3 from our website.

Portable filters allow one filter to serve several locations for convenient, reliable filtration of hydraulic fluids, insulating, lubricating and sealant oils and coolants.

For complete product information, request bulletin PFS-3 from our website.

HP4B-HV Gearbox Filtration System.

The HILCO HP4B-HV is designed specifically to filter heavy gearbox fluids to reduce maintenance costs and increase time between maintenance intervals. Its heavy-duty $\frac{3}{4}$ HP, continuous-duty motor can handle oil viscosities up to 3000 SSU.

High-efficiency filter elements are rated to 1 micron absolute. Water removal elements are also available in 5 micron and 25 micron absolute.

For complete product information, request bulletin CTG-1 from our website.



Dryer Filter Systems for electrical insulating oils.



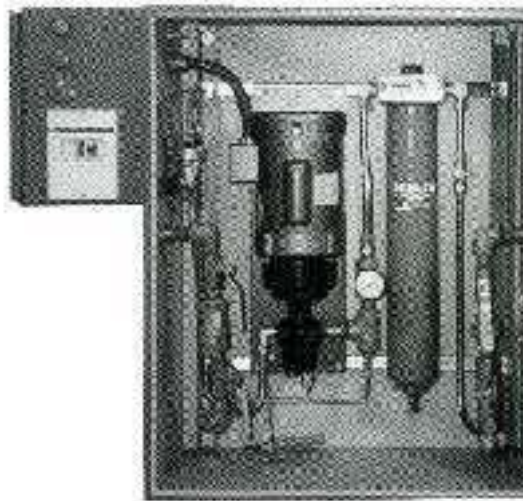
Hilco Dryer Filters quickly and efficiently remove water and air from insulating oils used in transformers, switching equipment and circuit breakers. Engineered to maximize water and carbon removal while increasing dielectric strength, these filters are self contained to eliminate outside contamination.

For complete product information, request bulletin DRY-2 from our website.

Load Tap Changer Filtration Systems.

Hilco has provided Load Tap Changer filtration systems to the utility industry to clean up load tap changer oil compartments. These filter cartridges have extended the time between maintenance intervals by removing free water as well as particulate down to 1 micron. This ensures that the contacts in the load tap changer always operate in oil that is at its prime dielectric strength.

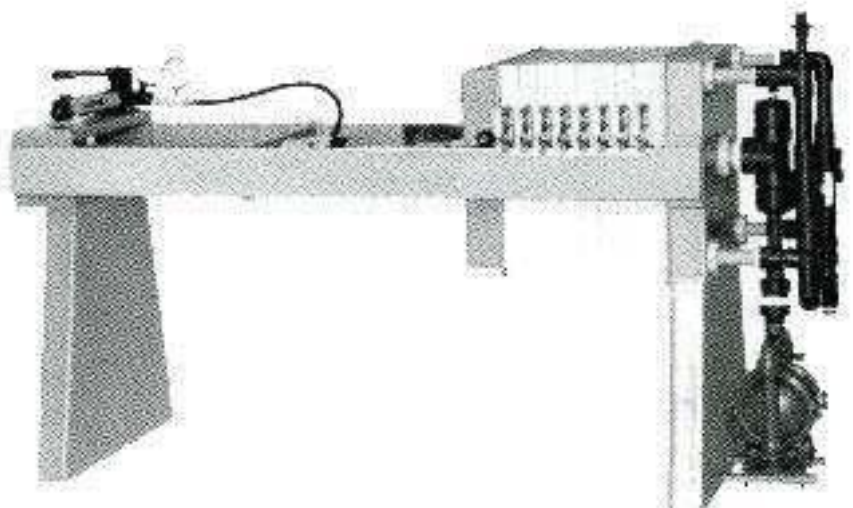
For complete product information, request bulletin LTC-2 from our website.



Star® Filter Presses.

Quality, dependable Stainless Steel Plate and Frame Filters for liquid processing applications and PolyPresses for low-cost, efficient dewatering of wastewater sludges and process slurries are available from Hilliard's Star Filters Filtration Division.

For complete product information, request bulletins from our website.



Air Breather Filters.

Hilco breather filters are specifically designed for use with fluid systems that have reservoirs vented to the atmosphere. These filters feature

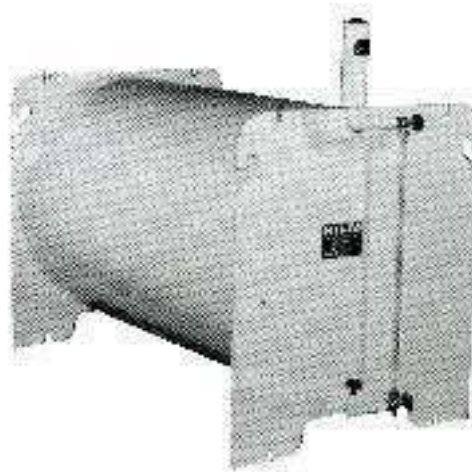
Safeguard pleated paper cartridges and are especially suited for hydraulic sumps.

For complete product information, request bulletin ABF-1 from our website.

Storage Tanks.

Hilco custom manufactures storage tanks for industrial as well as sanitary food and beverage applications.

Bulk storage tanks allow economical processing of large amounts of contaminated fluid because they allow solid contaminants and water to settle out before filtration. Capacities are available as high as 2,500 gallons (9,500 l) in either stainless or carbon steel construction. The tanks can also be used to store processed fluid. Single and stacked models, optional steam jacketing, and ASME code construction are available.



Clean contaminated air vents while recycling the oil.

The Hilco® Vent Mist Eliminator is the answer to economically reclaiming the oily vapor found in the air stream of vents of lubricating oil systems on large, high-speed rotating equipment. These include gas turbines, steam turbines, turbo compressors, reciprocating engines and gearboxes.

Our Vent Mist Eliminator collects, coalesces and filters the mist, significantly reducing visible oil plume. The captured oil is returned to the sump or crankcase, quickly and efficiently for reuse. Available in sizes and models to fit your specific application, Hilco Vent Mist Eliminators are virtually maintenance free.

The Vent Mist Eliminator improves safety by eliminating oily residue caused by setting oil mist on engine room floors, stairways, etc., keeps the environment clean and helps prevent exterior oil contamination of buildings and grounds. Two versions are available. Coalescer only and coalescer with blower and silencer. Both models with DM type coalescers eliminate oil mist with 99.9% efficiency.

For complete product information, request bulletin VME-1 from our website.



Hilliard also makes Hilco-quality replacements for other brands of mist eliminators.



OTHER HILCO PRODUCTS

CHIPS AWAY filtration increases machine tool life.



The CHIPS AWAY high-pressure coolant delivery system from HILCO forces coolant through the machine tool, expelling chips from the bore hole or cutting surface. These chips are smaller and easier to manage which helps prevent chips from getting caught on chucks or wrapping around boring bars.

The system improves finishes and enables higher RPMs and reduced cycle time.

For complete product information, request bulletin PMT-1 from our website.

HILCOSEPT™ Coalescer Separator removes moisture and particulates from turbine lube oil.

HILCOSEPT™ uses a $B_6=200$ pleated polyester cartridge with a 99.5% efficiency rating to remove particulates. Both free and emulsified water are reduced to less than 25 PPM and total water content is lowered to less than 150 PPM.

Compactly designed to operate continuously and efficiently, HILCOSEP extends turbine oil life, reduces maintenance and increases bearing life.

For complete product information, request bulletin HSP-1 from our website.



Hydraulic and Lube Oil Conditioning.

Synthetic lubricating fluids are conditioned with Hilco Phosphate Ester Ionic Exchange Filter. Such lubricating fluids tend to hydrolyze and form acids thus requiring treatment to control acid levels. Treatment of large lube oil reservoirs is accomplished through Hilco's design which enables the system to house six 11"x19" ion exchange cartridges for a total of about six cubic feet of media which conditions and maintains the fluid.

The Hilco Phosphate Ester Ionic Exchange Filter does not remove additives, houses large quantities of medium, and contributes no mineral salts to the system. Typical features include a hydraulic cover filter, flow meter, and drip-pan base with channels for easy movement by fork truck.

For complete product information, request bulletin CSL-1 from our website.



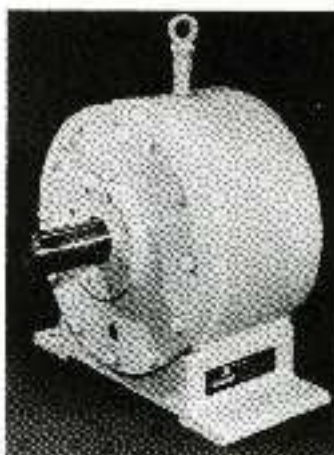
Motion Control Division



Electric Brake



Twiflex Caliper Brake



Enclosed Overrunning Clutch

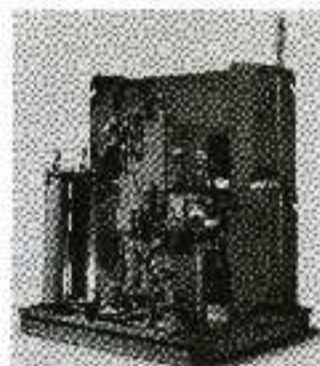


Intermittent Drive Assembly (IDA)

Hilco Division

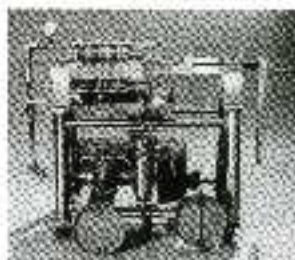


Hilco Cartridges



Oil Reconditioning System

Star Filters



Fiber Press

Turbine Starter



Turbine Engine Starter

Quality since 1905.

Since The Hilliard Corporation was established in 1905, it has been a reliable source of quality industrial products. Today, Hilliard offers a full line of motion control and fluid filtration products.

- Industrial clutches and brakes.
- Fluid filtration equipment.
- Pneumatic engine starters.

*The Hilliard Corporation reserves the right to change specifications and dimensions at any time.
Please contact the factory for the most current information.*

Your local representative:
HILLIARD
Hilco Division



PLB-7

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