

HILCO® Filter Cartridges

Revolutionizing the Filtration Industry



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.

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®.

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.

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



Long Life. Superior Quality.

Microgard™ Cartridges for highest efficiency available

Microgard cartridges feature three filtration layers: outer cellulose media layer for coarse filtration; an intermediate glass media for micro-filtration; and an inner cellulose-media layer for added support.



Typical Applications Include:

- Close tolerance hydraulic
- Refrigeration compressors (tube & coolant)
- Gas turbines
- Centrifugal lubrication couplings
- High-pressure fluid filtration
- Test stands

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 to 5 microns

Safeguard™ Cartridges

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.



Typical Applications Include:

- Hydraulic systems
- Test stands
- Diesel, gas, or dual fuel engines
- Compressors
- Paper machines
- Turbo chargers
- Low-pressure hydraulic
- Turbine lube
- Bearings

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	10 to 50 microns

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 7"x20" and 7"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.

Typical Applications Include:

- Diesel, gas or dual fuel engine turbine lube



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 to 100 microns

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 is 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.



Typical Applications Include:

- Transformers
- Circuit breakers
- Voltage regulators
- Load tap changers

Cartridge Dimensions	Fits Centerpost	Micron Rating
3"x10" to 7"x18"	3/4" to 3"	1 to 44 microns

High Pressure Hydraulic Fluid Filter Cartridges

High-pressure hydraulic cartridges are engineered for up to 3000 psi collapse 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	Fits Centerpost	Max. Flow @ 3 PSID w/200 SUS Fluid	Micron Rating
3"x11" to 3"x21"	3/4" to 3"	9 GPM	2 microns



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"



Typical Applications Include:

- Speed reducers
- Diesel, gas, or dual fuel engines
- Gas compressors w/ common lube systems
- Gun drilling
- Frequent cold starts
- Oil bath or air filters

Long Life. Superior Quality.

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.



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 10, 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 7"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



Strainer Baskets to remove large particulate

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 particles of 75 to 100 micrometers and larger.



Filter Cartridges

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"	6



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

Typical Applications Include:

- Transformers
- Vacuum pumps
- Diffusion pumps
- EDM machines
- Refrigeration compressors



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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"	.4 to 2 GPM



Typical Applications Include:

- Hydraulic systems
- Transformers
- Vacuum pumps
- Diffusion pumps
- EDM machines

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.

These cartridges feature metal ambients for added strength, as 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



Typical Applications Include:

- Gas turbines
- Steams turbines
- EHC control systems

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 need to be reviewed to define acceptable levels.

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



Filter Cartridges

Coalescer HC 628-01-CSP Cartridges

Originally developed for the U.S. Air Force for refueling B-1 bombers, the 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. 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



Separator HS 611-200-CSP Cartridges

The separator is a hydrophobic screen element to be used in series downstream from the 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 is 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.



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

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

Cartridge Selection Table*

*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.

Cartridge Type	Application	Fluid Types	Contaminants To Be Removed
Microguard™ pleated paper	Close tolerance hydraulic Refrigeration compressors (tube & coolant) Gas turbines Centrifugal lubrication 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 Turbo chargers Low-pressure hydraulic Turbine lube Bearings Test stands	Ethylene Fuel oil Seal oil Quench oil Amine 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 (fomblin fluids)	Acid Varnish Tar Lacquer Gum Particulate matter
Selexsorb™	Gas turbines Steams 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/ 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



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

Your Local Representative:

HILLIARD™
HILCO® Division

The Hilliard Corporation

100 West Fourth Street
Elmira, New York 14902-1504 USA
PHONE: 607.733.7121
FAX: 607.737.1108
hilliardcorp.com
hilliard@hilliardcorp.com



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