

# FCP's Lubricant and Oil Filter Products

FCP uses a variety of filter designs for oil and lubricant applications, depending on each customer's specifications. These designs include:

- Pleated Wire Cloth
- Stacked Disc
- Sintered Metal Media
- Perforated Metal and Wire Mesh Strainers
- Pleated Non-Metallic Media.

## Pleated Wire Cloth

FCP wire cloth filters offer outstanding performance, especially in withstanding very high differential pressures and temperature extremes. Depending upon the application, these cleanable filters can have an absolute micron rating that ranges upwards from 5 microns. The cloth can be woven from a variety of materials, and can be pleated or non-pleated. Wire cloth filters can be welded, brazed or epoxied, as required by each individual application.

## Stacked Disc Filters

Stacked Disc filters are relatively costly, but are ideally suited for applications involving high viscosity liquids like lube oils. They can provide protection at high pressure differentials and flow rates, especially during cold starts. The design provides depth filtration which gives the filter a high dirt loading capacity. As a result, stacked disc filters offer reliable, long life gearbox protection. They are also relatively easy to service (clean) in the field.

## Sintered Metal Media

Sintered metal filters offer some advantages over pleated wire cloth elements. Because they are rigid the filter element is self-supporting, so it can be formed in a wide variety of shapes. The filter media consists of tiny spheres that are compressed in a mold to the desired shape. This method of manufacturing creates a cleanable, depth-type filter element. Sintered metal filter elements hold less dirt than pleated elements, but can withstand higher pressures than non-metallic filter elements. They may also offer cost advantages over pleated wire cloth filter elements.

## Strainers

Typically, strainers filter out particles that are 100 microns in size or larger. These particles can cause severe damage to engines, gearboxes, pumps and other major system components. FCP manufactures strainers in a wide variety of sizes, shapes and configurations using wire mesh or perforated metal. The key design parameters are flow rate, pressure drop and particle size. FCP has developed strainers ranging in size from the inlet to a 1/8th inch (3.2 mm) fitting to a unit 6 feet (1.83m) tall. In some applications, magnets can be incorporated in the strainer to remove metallic particles.

## Filter Performance Data

Most filters used in Lube and Oil filtering applications fall within the performance boundaries listed below, but FCP can work outside these individual parameters when required:

- Working pressures to 3000 psig (207 bar)
- Element collapse pressures up to 1000 psid (69 bar)
- Particle retention down to 3 microns
- Flow rates up to 38 gpm (.14 m<sup>3</sup>/min)
- Temperature range of -65°F (-54°C) to 700°F (371°C)

Note that these are typical characteristics, not a specific combination.

## Pleated Non-Metallic Media

FCP develops and manufactures disposable filters for the removal of contaminating particles ranging in size from 3 - 150 microns absolute. Disposable filter media are relatively flexible and fragile, and so must be layered with wire mesh for structural support. This makes it possible to pleat the filter, which greatly increases its surface area and, as a result, its dirt-loading capacity.

## Why Select FCP?

FCP provides a wide variety of custom engineered filters for air, hydraulic fluid, lubricant, oil, fuel, water, and steam filtration applications. We specialize in precision filters designed to meet rigorous temperature, chemical, and pressure specifications. We maintain the certifications and approvals needed to support our customers. These include:

- AS9100, Rev. B.
- ISO 9001: 2000
- NADCAP
- MIL-I-45208, and
- Sub-Safe Level 1.

The world's largest defense contractors, jet engine manufacturers, and nuclear submarine builders depend on FCP, so you can too.

**Contact us today!**



**Fluid Conditioning Products, Inc.**

*Precision Filtration. Proven Performance.*

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