



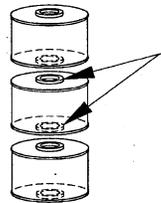
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# INSTALLATION INSTRUCTIONS

## Superdri® Cartridges SD Series

1. Install **Superdri** cartridges in vertically configured housings only. Optimal results cannot be guaranteed if the cartridges are mounted in a horizontal vessel.

2. On some older Cuno and Alsop style filter housings, the vessel lid seals the cartridges. If the installed cartridge stack is too tall and prevents the housing from sealing, simply remove one or two of the gaskets that seal between the cartridges as pictured here.



REMOVE THIS  
GASKET IF  
STACK IS TOO  
TALL

3. The pressure drop across **Superdri** cartridges is higher than with other types of insulating oil purification filters. The chart shows typical pressure drops across the **Superdri** cartridges at optimum flow rates, when the oil temperature is 80 deg F. Pressure drop will not increase appreciably while removing dissolved water.

SD-718	2.5 GPM	6 PSID
SD-807	1.5 GPM	6 PSID
SD-1107	5 GPM	13 PSID

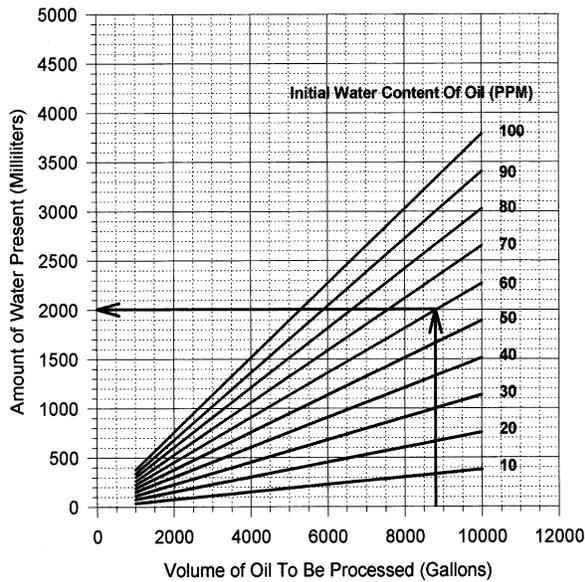
4. The graphs on the reverse side of this sheet can be used to determine the useful life of **Superdri** cartridges. The dissolved water capacity of the cartridges diminishes as flow rate increases. On filtration systems equipped with a bypass around the pump, adjust flow to the rates shown above by opening the manual bypass around the pump. If no flow meter is available, rate can be checked by timing flow into a bucket. On a 30 gpm Viking model 4195 pump with 1.5" piping, opening a 1" bypass valve around the pump all the way will reduce flow to approximately 15 gpm.

5. **Superdri** cartridges that have been used but still have capacity to remove more dissolved water can be saved for future use. If the system is not going to be used for anything else leave the cartridges in the vessel either filled or empty of oil, and make sure the vessel is sealed. Otherwise, drain the free oil from the cartridges and tightly seal them (such as inside two heavy garbage bags, or a plastic pail with tight cover, or a metal 5 gal paint can with cover, etc.) to prevent exposure to moisture in the air.

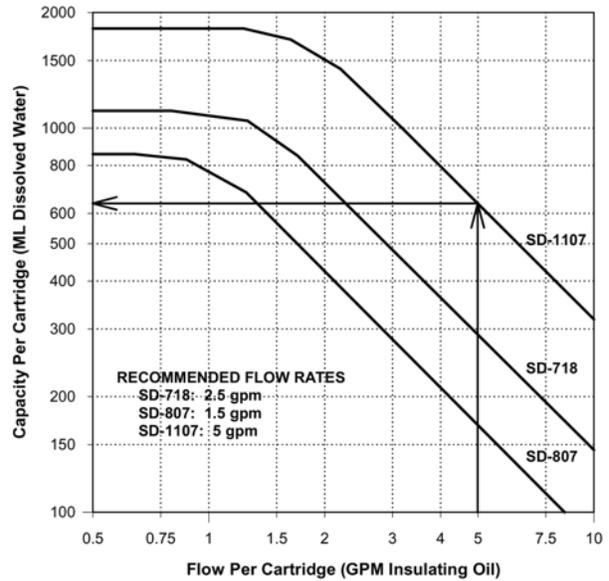
6. **Superdri** cartridges are not recommended for effective use on oil contaminated with carbon or free water. Prefiltration is recommended to insure that carbon and free water are removed before processing with **Superdri**.

7. The filter system that is used with these cartridges should be equipped with inlet/outlet sampling ports and inlet outlet pressure gauges. A flow meter is also beneficial to monitor process rate.

8. Single pass filtration (out of one container, into another) is the most efficient way to process oil using **Superdri** and most cartridge filters. If recirculating, it will take a minimum of five passes to completely dry the oil. For example, a filter system flows at 1200 gph (20 gpm), and the quantity of oil to be processed is 3600 gallons. The reservoir can be turned once every three hours..times 5... equals minimum 15 hours of recirculating time.



**Example:** You have 8800 gallons of oil to process with an initial water content of 60 ppm. Find 8800 gallons on the horizontal scale, and follow up until you intersect the 60 ppm line. Read across to find the total amount of water on the vertical scale.



**Example:** You are filling at 5 gpm per cartridge through SD-1107 cartridges. Follow up from 5 gpm on the horizontal scale until you intersect the SD-1107 line. Read across to find the amount of water one cartridge will remove.

## Superdri<sup>®</sup> cartridges are easy to use:

1. Using Chart (A) above, determine amount of water in oil.
2. Using Chart (B) above, determine amount of water a single cartridge will remove.
3. Divide results from (1) by results from (2):

$$\frac{2000 \text{ ml to be removed}}{620 \text{ ml capacity}} = 3.2 \text{ cartridges required}$$

Unlike ordinary filters, **Superdri** cartridges cannot be monitored for capacity or performance by differential pressure. Regular effluent samples must be taken and analyzed with a Karl Fischer titrator, such as the Aquapal<sup>®</sup>, to monitor the cartridges' effectiveness. In-line moisture sensors such as Doble Domino can also be used to monitor cartridge performance. Without availability of this equipment, the user can estimate cartridge life from the above charts.

Aquapal<sup>®</sup> is a registered trademark of CSC Scientific Company, Inc.

### Recommended Maximum Flow Rates:

SD-718      2.5 gpm per cartridge  
 SD-807      1.5-2 gpm per cartridge  
 SD-1107     5 gpm per cartridge

**Superdri cartridges will not remove dissolved gases, nor are they recommended for use on badly deteriorated or arced oil.**

## Ordering Information

Part Number	Fits These Housings
SD-718	Velcon VF-7, VF-8 Series, Hilco 718 Style
SD-807	Velcon VF-10, VF-12 Series, Cuno PT1 Style, Alsop
SD-1107	Velcon VF-12 Series, Cuno PT1 Style, Alsop

**NOTE: Install Superdri cartridges vertically**

Due to Velcon Filters, Inc. continuing product improvement, drawings, specifications, and pictures are subject to change without notice. For information on recycling used filters, contact FILCare, 719-499-1379