HARMSCO[®]

Patented Up-Flow Filtration Process

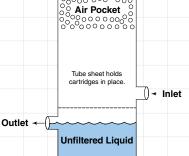
CONVENTIONAL CARTRIDGE FILTER DESIGN

Potential For Air Entrapment

With outlets located **below** inlets, air travels upward so vents are needed to expel air that can accumulate within the filter vessel during operation.

Potential For By-Pass

With outlets located **below** inlets, by-pass can occur as unfiltered liquid drains downward to the sump while the cartridges are removed. This may result in by-pass when the filter is put back into service.

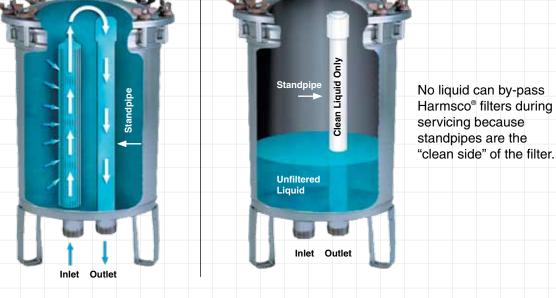


HARMSCO[®] UP-FLOW CARTRIDGE FILTER

No Air Entrapment

No By-Pass During Service

Air is self purged from Harmsco[®] Up-Flow filters because outlets (top of standpipes) are at the high point of the filters.



Note: This publication is to be used as a guide. The data within has been obtained from many sources and is considered to be accurate. Harmsco does not assume liability for the accuracy and/or completeness of this data. Changes to the data can be made without notification. Temperature, Pressure, Flow Rates, Differential Pressures, Chemical Combinations and other unknown factors can affect performance in unknown ways. Limited Warranty: Harmsco warrants their products to be free of material and workmanship defects. Determination of suitability of Harmsco products for uses and applications contemplated by Buyer shall be the sole responsibility of Buyer. The end user/installer/buyer shall be liable for the product's performance and suitability regarding their specific intended applications. End users should perform their own tests to determine suitability for each application.