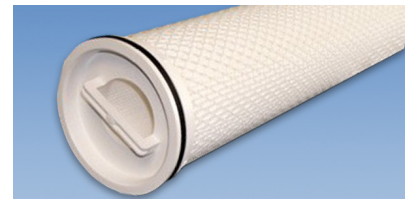
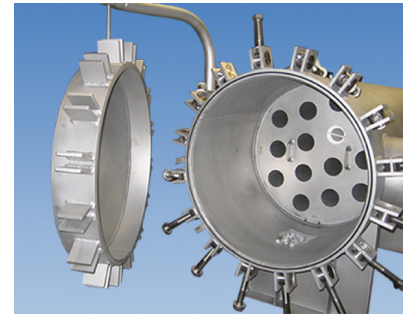
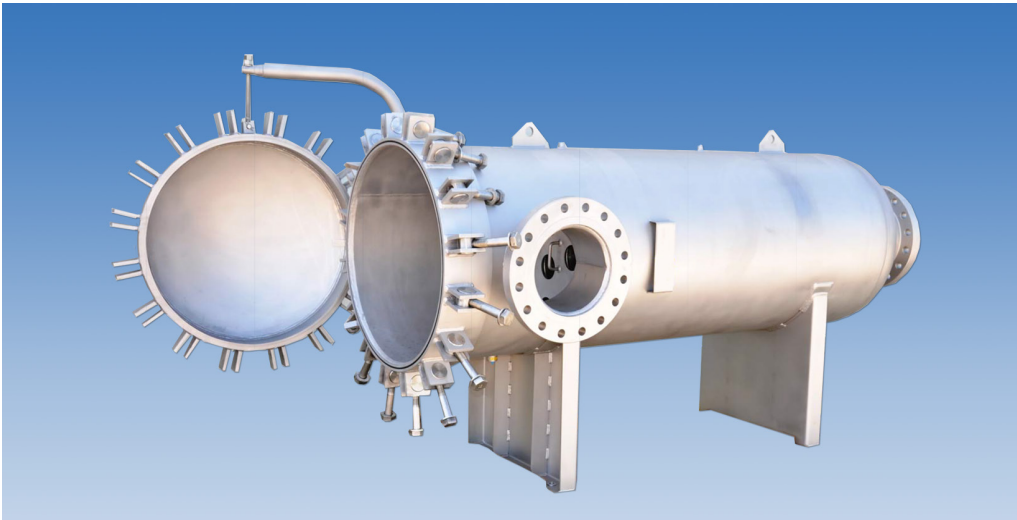


TurboGuard® Condensate Filter



Graver's TurboGuard® High Flow Filter is designed specifically for use in condensate streams or other critical utility applications where substantial dirt holding and CRUD removal properties are essential. TurboGuard High Flow Filters are available in a variety of retention ratings, lengths and gasket materials to meet the specific needs of your project.

Advantages of the TurboGuard® Filter System

- High flow in a compact footprint, space saving design
- Inside-to-outside flow prevents contamination during element replacement
- TurboGuard Filters are wrapped in a one-piece extruded outer cage preventing excessive media expansion due to inside-to-outside flow
- TurboGuard's one-piece extruded outer cage allows for easier maintenance and removal after use
- One-piece molded end caps, including molded-in handle for secure handling during installation and removal
- Quad Seal gasket system provides maximum sealing surfaces with no bypass of inlet to outlet water
- High dirt holding capacity: approximately 25 lbs (11.5 Kg) before removal is required
- Low pressure drop: < 0.2 bar at the beginning of a service run at specified flow rate
- Optimized media surface area allows full use of installed media area - not blocked off by media "squeezing"
- Ergonomic vessel design with Davit Arm or hinged cover
- Dirty elements can be crushed or incinerated for easy disposal

Typical Applications:

- Pre-filter for removal of CRUD and TSS to extend deep bed demineralizer service life
- Pre-filter to prevent premature fouling of RO membranes
- Used in boiler condensate for both nuclear and fossil plants, heat recovering steam generators, Pre-Ro and combined cycle plants

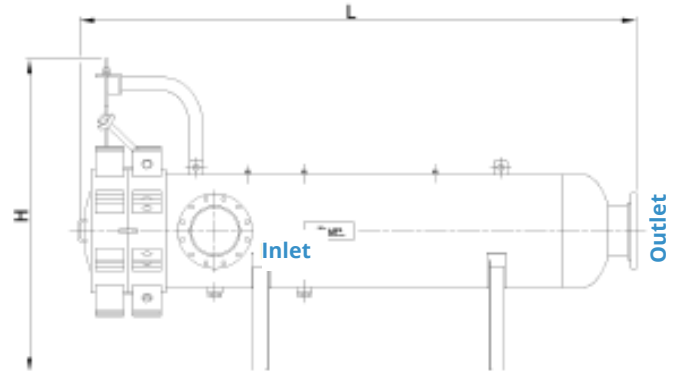
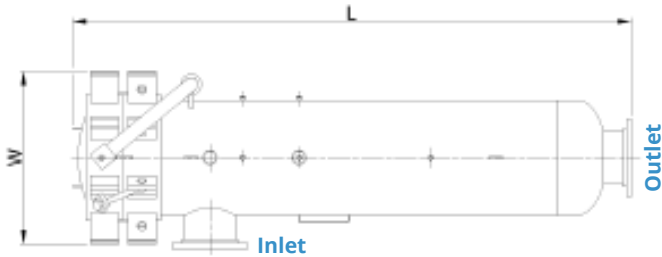
Vessel Sizing Information

- Fits many applications including full-flow or partial-flow condensate filtration, deep bed demineralizer protection, RO pre-filtration and the retrofit of competitive large geometry units.
- All standard vessels are sized to accommodate Graver Technologies' 60" TurboGuard filter elements. 20" and 40" sized units are available by request.
- All vessels are ASME Code Section VIII Division I stamped
- Horizontal design facilitates easy filter cartridge change out and minimizes pressure drop
- Equipped with 2" Clean and Dirty Drains and 1/2" Gauge and Vent Taps

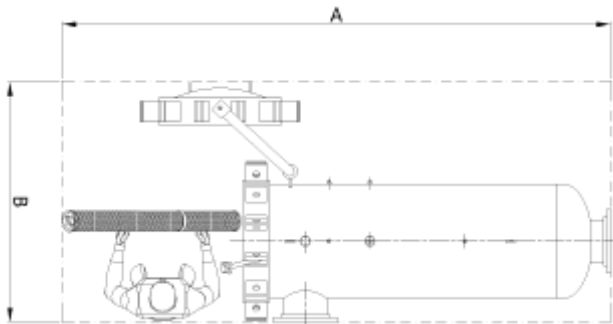
TurboGuard® Condensate Filter



Unit Dimensions



Floor Space



- Filter elements are available in a variety of pore sizes to facilitate specific site conditions
- Units can be paralleled for additional flow
- Helps in lowering waste disposal costs
- Inside to outside flow
- Filter contains no metal for ease in disposal
- Easy access to filter elements
- No special maintenance required
- Design temperatures to 180°F (higher temperatures available)

TurboGuard® Vessel Guide

Vessel selection is based upon first selecting the proper material of construction. The next critical component to select is the maximum operating design pressure. The final design criteria to select is the maximum design flow rate for the filter.

Materials of Construction	Design Pressure @ 190° F	Nom Flow Rates (GPM)*	Nominal Housing Diameter	Elements/Housing	Length (L)	Height (H)	Width (W)	Inlet/Outlet Dia	Ship. Weight	Flooded Weight	Floor Space (A)	Floor Space (B)
Carbon Steel (Unlined) or 316 Stainless Steel	250 or 400 psig	1200	14"	3	9'-10"	5'-4"	2'-8"	8"	2000 lbs	2800 lbs	13'-6"	4'-6"
		2500	24"	7	9'-11"	5'-7"	3'-2"	10"	2200 lbs	4000 lbs	13'-6"	5'-0"
		5000	36"	14	10'-11"	6'-7"	4'-0"	14"	3500 lbs	6500 lbs	13'-6"	6'-0"
Additional Sizes and Pressures Available Upon Request												

*Maximum flow rates must be verified based on filter micron rating, operating conditions and process requirements such as fluid viscosity and contaminants present.

Notes: Add'l floor space required for valves and interconnecting piping; 60" minimum pull-space for elements included in A dimension; Dimensions based on 60" elements.

Contact Us

Graver Water Systems, LLC
 30 Technology Drive Suite 2F
 Warren, NJ 07059

T: 908 516 1400
 F: 908 516 1401
 E: sales@graver.com