HYDRAULIC SEPARATOR
INSTALLATION & SERVICING INSTRUCTIONS

Webstone® a brand of NIBCO®
P: (800) 225-9529
F: (800) 336-5133
www.webstonevalves.com
webstone@nibco.com

The Webstone Hydraulic Separator balances flow between the primary/secondary piping and ensures ongoing system performance and efficiency. The built-in stainless steel mesh and high powered magnet helps protect the system from both ferrous and non-ferrous debris, which can easily be removed using the rotating drain valve. The stainless steel mesh also captures air bubbles, which are automatically removed by the built in air separator. **Note:** This unit is not designed for potable water applications.

IMPORTANT: Follow all federal/national, state, and local codes when installing, testing, or performing work on systems. All parts are covered by a lifetime warranty against manufacturing defects, provided they are installed by a licensed plumber and operated under normal working conditions. If you have any questions or comments, please contact us at (800) 225-9529 or visit us on the web at www.webstonevalves.com.

WARNING! Contains high-strength magnet. *Keep away from electronics and other magnetically sensitive media and devices during installation and service.*

INSTALLATION INSTRUCTIONS

The Hydraulic Separator is designed for use in systems with primary/secondary piping configurations. The Hydraulic Separator must be installed in a straight run of horizontal piping and positioned precisely upright, with the drain valve at the bottom of the unit. Do not exceed a 50% water/glycol ratio in the system.

The side ports can function interchangeably as inlets or outlets, allowing flow to be directed in either direction. However, boiler supply/return piping and zone supply/return piping must be on the same side of the unit. Hot system supply fluid should be directed through the upper set of ports, cold boiler return fluid should be directed across the lower set of ports. Hot and cold flowpaths should be in opposite directions.

System piping must be aligned to prevent side loading of the union joints. Before assembly, ensure all union gaskets and o-rings are in good condition and placed in the locations shown. Leak check the unit after installation.

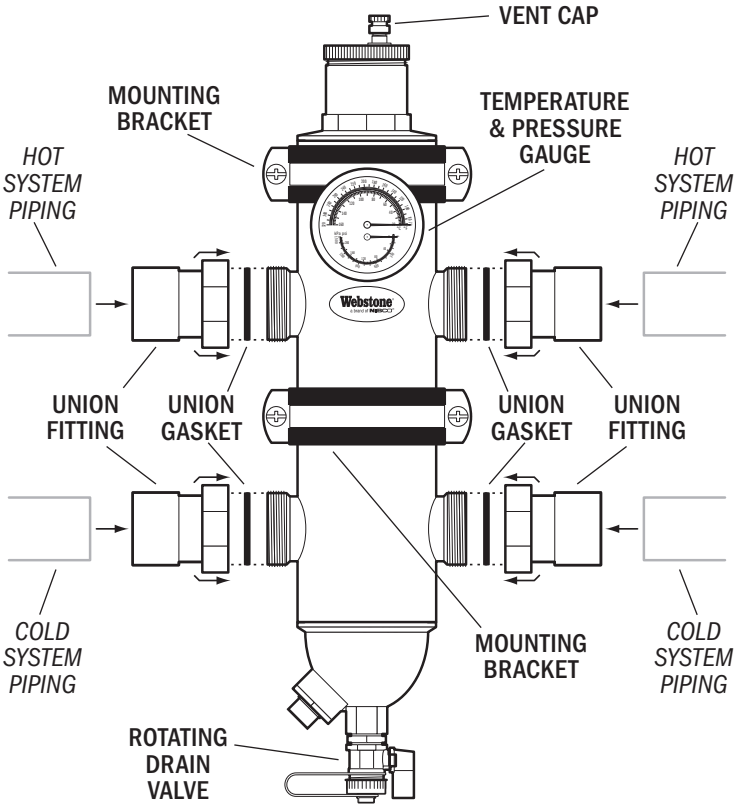
Installation of the included mounting brackets is required to support the unit and prevent damage to union connections and piping during system operation and unit service. Brackets must be installed flush and properly secured to the unit.

Each mounting support foot should be installed directly behind and centered on the back of a mounting bracket. Secure support foot to the mounting surface using screws and anchors (if required) that are appropriate for the material. Cut the threaded rod to length (if necessary), thread nuts onto the rod, and insert the rod into the mounting foot and mounting bracket. Tighten the nuts at each end of the bracket and foot to lock the rod in place. **Caution!** Over-tightening of the nuts may result in the mounting support foot pulling from the mounting surface.

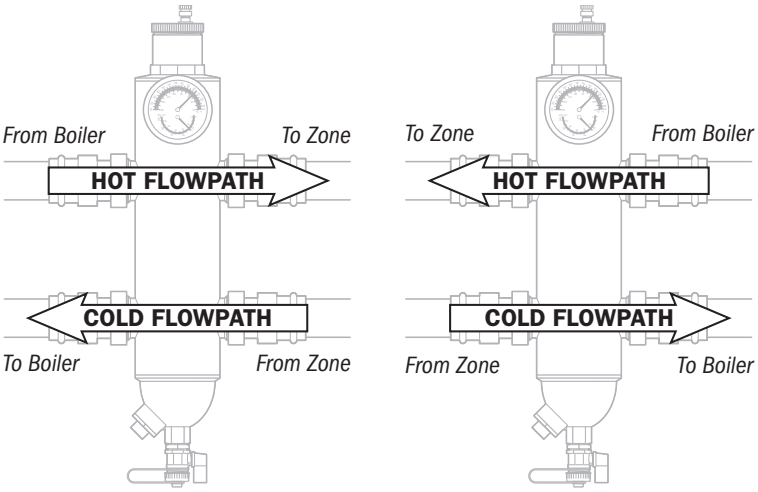
Note: When filling the system, ensure vent cap is tightened to help prevent possible damage to the unit. The air vent is designed to extract micro bubbles and static air, it is not intended to be used to bleed the entire system.

After system is filled and manual bleed performed, loosen vent cap to automatically vent any air that accumulates in the future.

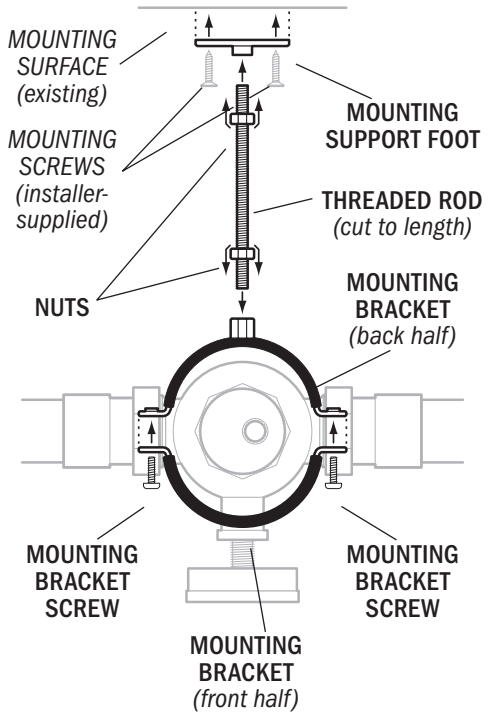
INSTALLATION



SYSTEM PIPING CONFIGURATION OPTIONS



MOUNTING BRACKET INSTALLATION-TOP VIEW



HYDRAULIC SEPARATOR
INSTALLATION & SERVICING INSTRUCTIONS

Webstone® a brand of NIBCO®
P: (800) 225-9529
F: (800) 336-5133
www.webstonevalves.com
webstone@nibco.com

SERVICE INSTRUCTIONS

Regular maintenance of the unit is not required. However, over time debris may collect in the unit and impact performance. Accumulated debris should be removed from this unit periodically, depending on system conditions. The unit may be disassembled for deep cleaning of its various components if needed.

CAUTION! *System fluid under pressure can be very hazardous.* ***Before servicing, shut down the heating system and, if possible, isolate the Hydraulic Separator from the system.*** *Water temperatures above 120°F can also be very hazardous. Allow the system to cool to below 120°F before proceeding. Keep body away from unit while open. Failure to follow these instructions may cause serious bodily injury or property damage.*

FLUSHING ACCUMULATED DEBRIS

1. Shut down the heating system.
2. Remove magnet bar from Hydraulic Separator body, releasing captured ferrous debris.
3. Remove the drain valve cap and attach a hose leading to a bucket.
4. Slowly open the drain valve and allow fluid to drain from the unit until debris is removed. **Caution!** Fluid will be under pressure.
5. Return the drain valve to the closed position and replace the cap.
6. Reinstall the magnet bar.
7. Check the unit after servicing and return the system to operating condition.

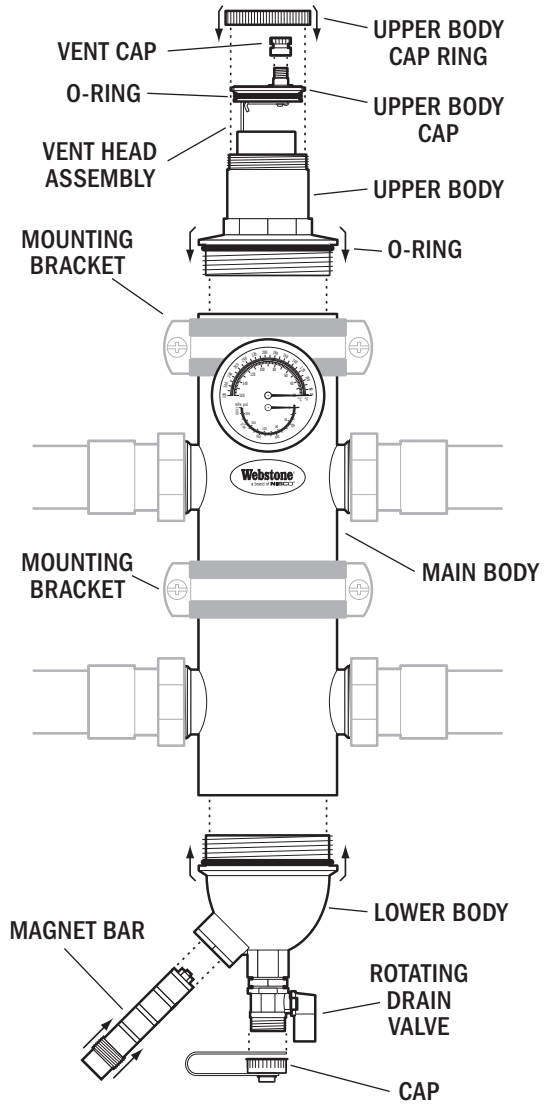
REMOVING VENT ASSEMBLY

1. Shut down the heating system. Isolate Hydraulic Separator from system.
2. Remove the drain valve cap and attach a hose leading to a bucket.
3. Slowly open the drain valve and allow fluid to drain from the unit. **Caution!** Fluid will be under pressure.
4. Using two strap wrenches, hold the upper body in place and remove the upper body cap ring, taking care not to damage the O-ring. Lift the vent cap to remove the vent head assembly.
5. Use a mild detergent or water/vinegar solution to clean the vent head assembly. If there is excessive buildup, soak the vent head assembly in mineral spirits for several hours and then clean thoroughly. If damaged or inoperable, the vent head assembly is available separately for purchase (Item# H-74000).
6. Lower the upper body cap and vent assembly into the upper body while carefully guiding the float onto the float alignment pin.
7. While supporting the hydraulic separator from underneath, press down on the outer edges of the upper body cap until the O-ring is fully seated and the top of the cap is level.
8. Replace the upper body cap ring and tighten using a strap wrench while holding the upper body with another strap wrench.
9. If the system was drained extensively, manual bleeding will be required. When filling the system, ensure vent cap is tightened to help prevent possible damage to the unit. The air vent is designed to extract micro bubbles and static air, it is not intended to be used to bleed the entire system. After system is filled and manual bleed performed, loosen vent cap to automatically vent any air that accumulates in the future.
10. Leak check the unit after servicing. Return system to operating condition.

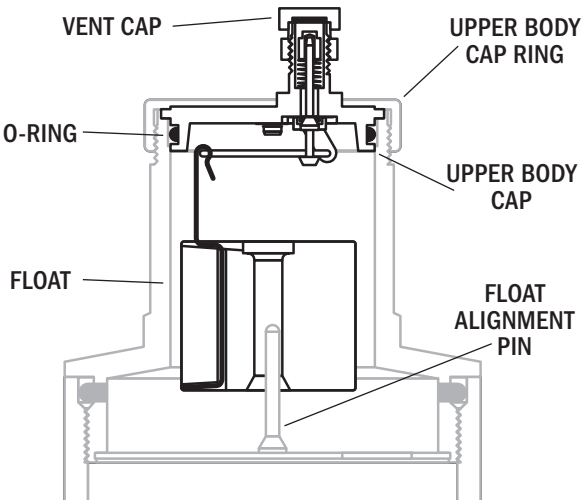
REMOVING UPPER OR LOWER BODY

1. Shut down the heating system. Isolate Hydraulic Separator from system
2. Remove the drain valve cap and attach a hose leading to a bucket.
3. Slowly open the drain valve and allow fluid to drain from the unit. **Caution!** Fluid will be under pressure.
4. Using two strap wrenches, hold the main body in place and remove the upper or lower body, taking care not to damage the O-ring. **Caution!** Stainless steel mesh is very sharp - do not touch!
5. Rinse the removed body component thoroughly with mild detergent or water/ vinegar solution to remove any buildup that may have occurred.
6. Carefully reassemble the Hydraulic Separator body, ensuring that no damage is caused to the O-rings. Tighten the upper body and/or lower body until flush with the main body ***DO NOT OVER-TIGHTEN!***
7. If the system was drained extensively, manual bleeding will be required. When filling the system, ensure vent cap is tightened to help prevent possible damage to the unit. The air vent is designed to extract micro bubbles and static air, it is not intended to be used to bleed the entire system. After system is filled and manual bleed performed, loosen vent cap to automatically vent any air that accumulates in the future.
8. Leak check the unit after servicing and return the system to operating condition.

SERVICE



VENT HEAD ASSEMBLY DETAIL



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov