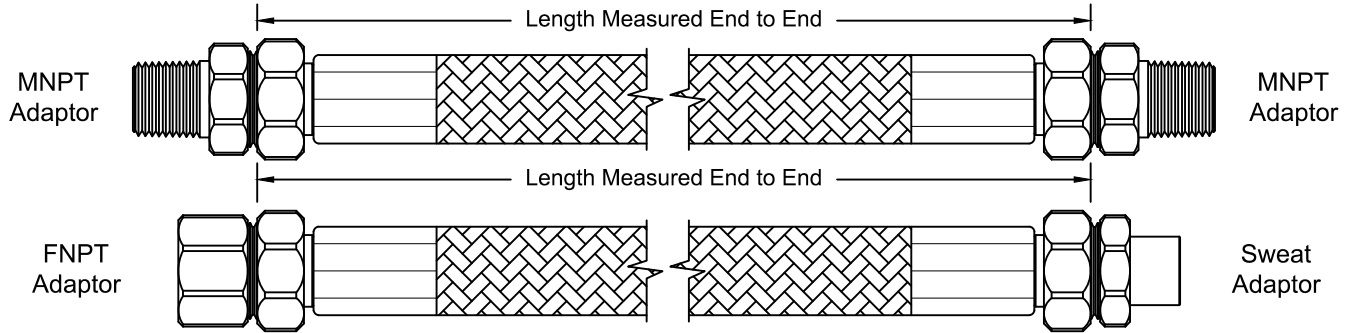




## HSA Series Installation & Operations Manual Stainless Steel Braided Hose



**PRODUCT DESCRIPTION:** The Model HSA is a stainless steel hose braided hose that is abrasion resistant. The HSA has a CPE inner tube with brass end connections and stainless steel ferrules for ½" - 1" sizes. The flexible hose eases installation in hot or cold applications and is designed to withstand high pressures and varying temperatures.

*PRO* Hydronic Specialties (*PROHS*) assumes no responsibility for injuries or damages that result from the nonobservance or noncompliance with installation and operational procedures. It is the responsibility of each link in the supply chain between the factory and the ultimate installation to assure each subsequent party has a copy of this document and understands the proper installation and cautions concerning this product. Upon receipt of shipment, the product should be thoroughly inspected for any damage. Once installed, the product should be checked under pressure for leaks and thereafter at least annually.

**Limited Warranty:** *PROHS*'s liability is limited to the repair or replacement of the defective component. By purchasing and/or installing *PROHS* products, it is understood the purchaser/installer contractually agrees with the warranty terms as stated here and elaborated in the full warranty statement found at [www.prohydronicsspecialties.com](http://www.prohydronicsspecialties.com). *PROHS* makes no general claim of usability of this product unless *PROHS* is directly advised of the specific use and installation of this product and responds in writing.

**WARNING:** Under normal installation and use, it is recommended that this hose be replaced no longer than seven (7) years after the original installation. While certain conditions may maximize the life cycle of a hose, due to factors being outside of the manufacturer's control, and due to the failure mode of a hose, replacement of the hose prior to the end of its life cycle is crucial. Heeding the accompanying warning and performing regular inspections are essential in optimizing the life cycle of the hose and avoiding losses due to hose failure.

### CAUTION

CAREFULLY FOLLOW THESE INSTRUCTIONS. FAILURE TO DO SO MAY RESULT IN SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE.

ALWAYS use properly engineered pipe supports and avoid placing excessive loads on the product.

ALWAYS ensure that the hose is not rubbing against other products.

ALWAYS perform no less than annual inspections on components. These products are dynamic in nature and due to varying system conditions there are no representations as to the duration of useful life for these products in excess of the warranty.

ALWAYS inspect annually for: rubbing, leaks, corrosion, and other indicators of possible failure. Be aware of subsequent modifications to installation after initial installation and inspection.

ALWAYS pressure test the components once installed to assure no leaks exist. If a leak or defect is found, immediately isolate from pressure and contact the factory for repair or replacement under warranty.

ALWAYS isolate the product from pressure when leaks or damage are detected to avoid property damage and contact the factory immediately to determine appropriate actions. The factory is not responsible for damages as the result of any repairs performed on the products while under pressure.

Failure to follow these cautions, not following standard industry practices, and/or using non-trained/unqualified installers could result in catastrophic failure.

## Installation Procedures - HSA Series

**WARNING: FAILURE TO FOLLOW INSTALLATION PROCEDURES CAN LEAD TO CATASTROPHIC HOSE FAILURE.**

### GENERAL:

The stainless steel braided covering is the pressure controlling component of the hose assembly. Care should be taken to avoid causing any external damage to the braided cover.

- DO NOT allow the hose to rub against anything
- DO NOT drag the hose
- DO NOT use any tool on the braid
- DO NOT place the hose near chemicals that may corrode the braid

Install the hose assembly using the proper tools.

- ALWAYS install the fixed end of the hose first, then install the swivel or union end.
- DO NOT use any tool on the braided section of the hose or on the stainless steel ferrules
- DO NOT apply torsion to the hose
- DO NOT over tighten the end fittings

Install the hose assembly in accordance with the factory's bend radius specifications. *(See below for bend radius information.)*

- DO NOT exceed bend radius
- DO NOT bend the hose near the fittings
- DO NOT twist the hose
- DO NOT compress the hose

Determine the proper hose length. Note that the hose length will change once the hose is under pressure.

- ALWAYS allow some slack in the hose to allow for contraction and expansion
- DO NOT stretch the hose

After installation, check for leaks and free movement.

- DO NOT exceed the specified pressure limitations for the hose
- DO NOT allow interference in the movement of the hose

Inspect the hose assemblies.

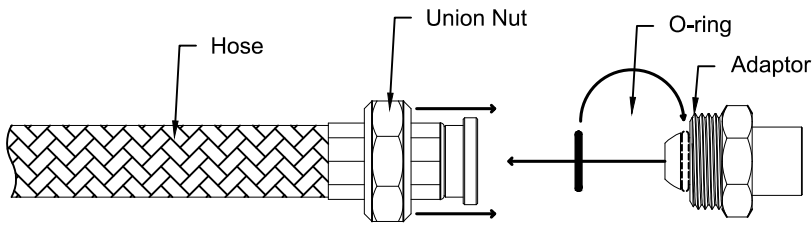
- ALWAYS inspect upon installation and pressurization
- ALWAYS inspect the product(s) at least annually
- IMMEDIATELY relieve pressure and replace hose assembly if visual inspection shows damage to the exterior braid
- Products do not have an infinite life and should be replaced prior to failure. The product should be replaced at least every seven (7) years

Annual Inspection Points:

- Drips of water from hose:  
*Note:* If drip is determined to be from the fitting connection, isolate the hose and remove pressure before tightening the fitting. Once tightened, be sure to inspect closely for continuing leaks or quality issues.
- Stainless steel braiding damage: Fraying, broken wires, or other braiding issues indicate the hose should be replaced. If properly installed and within the warranty period, the hose will be replaced at no charge (excluding labor and freight).
- Bend radius and other products touching hose: Make sure subsequent equipment does not touch the hose and/or alter the bend radius. If it does, the hose should be replaced (our of warranty). Once the bend radius has been exceeded, the hose will continue to be at risk of failure even in the situation is resolved.

Hose Size	Bend Radius	Working PSI
1/2"	5"	500 PSI
3/4"	7"	500 PSI
1"	10"	500 PSI

## Installation Recommendations - HSA Series

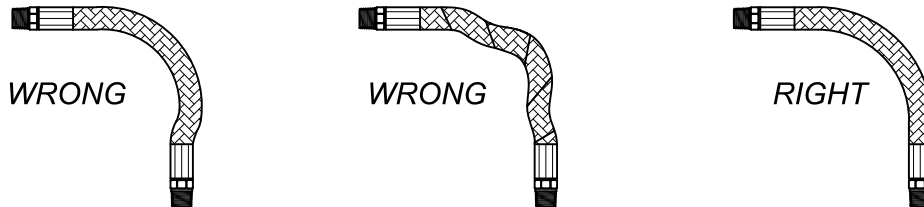


Adaptor Size	O ring Size
1/2"	AS568-014
3/4"	AS568-018
1"	AS568-119

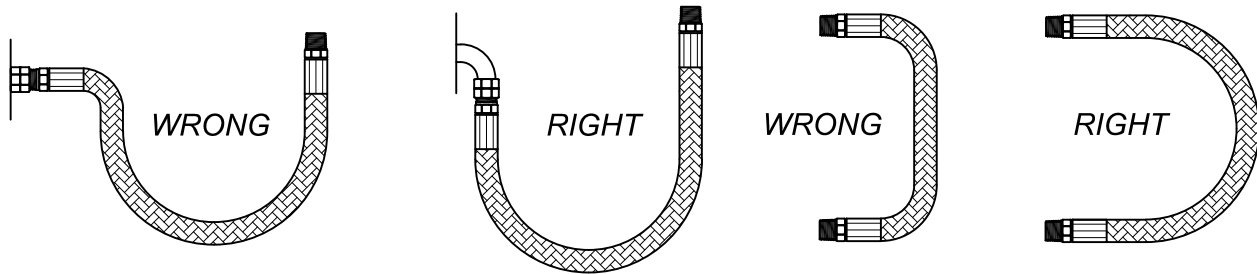
Avoid stretching and/or pulling the hose or end connections to fit a gap longer than the factory furnished length.



Avoid twisting the hose which can be caused by improper bends and torque.



It is recommended that angle adaptors be utilized for hose assemblies to avoid sharp bends. Use of these products will aid in relieving stress on the hose assembly. Keep the bend radius as large as possible to avoid sharp bends that may restrict flow and possibly collapse the hose.



Always use proper support for a horizontal loop installation to prevent sagging.

