

Steam Service Hose

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Steam Service Hose

Intro

Important Steam Hose Safety Information!

⚠ WARNING: Exposure to steam is hazardous. If not properly controlled, steam can cause property damage, serious bodily injury, or death. In order to avoid property damage, serious injury, or death, you must select the proper steam hose for the given application. Also, proper installation, usage and maintenance of the steam hose you select will contribute to increased operator safety.

⚠ WARNING: Failure to properly follow the manufacturer's recommended procedures for the care, maintenance and storage of a particular hose may result in its failure to perform in the manner intended and may result in serious injury, death, and damage to property.

⚠ WARNING: Only specially trained persons should engage in applications or testing procedures that require particular skills. Failure to do so may result in damage to the hose products or to other property and more importantly, may result in serious injury.

⚠ WARNING: Steam heat is hotter than 212°F (boiling water) and increases in temperature as pressure increases. See safety information in this catalog.

STEAM HOSE BENEFITS

10:1 Safety Factor (Burst: Working Pressure)

- Safer operation
- Longer hose life

Heat Resisting Patrex or EPDM Tubes

- Eaton products' exclusive elastomers with superior heat resistance provide for longer service life...and will resist flaking rubber particles (popcorning) and will handle most steam cleaner detergents.

Hi-Strength Steel Wire Braided Reinforcement

- Keeps the hose limber and easy to handle. Adds versatility...hot water cleaning to high pressure process steam service.

EPDM or Oil Resistant

- Stand up to the dragging, scuffing and abuse found in many applications.

Covers

- Ensures maximum service life and value. Exceptional aging, weathering, and heat resisting properties keep the hose flexible and easy to use.

Permanent Branding for Easy Identification

- The name of the hose and the working pressure are molded into the hose cover...can't rub off. This lets the operator know that the hose is for steam service.

The Eaton Brand Reputation for Quality

- Your assurance of dependable performance.

Steam Service Hose

Safety Tips

Common Sense with Steam Hose

- Provide operators with adequate safety clothing. Include gloves, rubber boots, full length protective clothing and eye protection. The objective is to provide protection from scalding burns resulting from splash back of steam or hot water.
- Ensure that the work area is free of tripping hazards and other clutter.
- Check the tightness of the coupling with each use.
- Do not allow the hose to remain pressurized when not in service. Turning off the pressure can provide dramatic increases in steam hose service life.
- Periodic maintenance of steam hose can pay big dividends. All steam hoses are expected to wear out in time. It is important to continually be on the lookout for hose that has deteriorated to the point where it can no longer provide safe service. The following guidelines can help in that determination.

Operators should be aware of the obvious signs of trouble.

They include:

- Cover blisters or lumps
- Cuts or gouges in the outside of the hose which expose the reinforcement
- Hardened or inflexible hose
- Steam leakages at the coupling ends or anywhere along the length of the hose
- Flattened or kinked areas which have damaged the hose
- A reduction of steam flow indicating that the tube is swelling

When any of the above abnormalities appear it is good safety sense to immediately remove the hose from service. Once removed, the hose can be carefully inspected before further use. Steam hose failures occur near the ends due to flexing and strain at the couplings. In those cases the hose can frequently be cut back and recoupled, providing additional service life. Hose used in continuous high pressure/ temperature service should be inspected periodically for signs of tube hardening. In most cases it is necessary to remove a coupling for tube inspection.

Steam Service Hose

Safety Tips

Make Your Selection With Safety in Mind

- Be sure to select a hose identified as steam hose.
- Hose identification should be in the form of permanent branding on the hose outer cover, not just on the package.
- You must identify the type of service the steam hose is required to accomplish.
 - a) Is the hose manually handled?
 - b) What is the anticipated frequency of use?
 - c) What is the actual pressure of the steam service?
 - d) Is it subject to surges or peak pressures?
 - e) What is the temperature of the steam?
 - f) Saturated (wet) or superheated (dry) steam?
 - g) What are the external conditions in the area where the hose will be used?
- You should recognize that spillage or accumulations of corrosive chemicals or petroleum based materials externally can have a deteriorating effect on the hose cover.

Making Sure the Hose is Installed Properly

- Be certain to use hose couplings designed for steam hose service. Follow the coupling manufacturer's instruction for coupling attachment. Check tightness with each use.
- Avoid extreme flexing of the hose near the coupling. If necessary use elbows in the piping system to assure a straight line connection with the hose.
- Installing and using a shut-off valve between the steam source and the hose will maximize service life and operator safety, and we consider such a value mandatory for safe operation.
- The use of spring guards can relieve some of the acute flexing encountered in heavy manual handling applications.
- Provide a suitable means of storing the hose when not in use. A permanent rack or tray will minimize the damage to the hose in storage. Do not hang the hose on a hook, nail, or other device which could cut or damage the hose.

Steam Service Hose

Recommendations

The Wolf Coupling offers significant advantages over the traditional bolt-style steam hose end. The Wolf ferrule is designed to grip the hose reinforcement to provide long-lasting coupling retention. This design avoids the problem of “cold flow” by involving the reinforcement as part of the coupling retention method rather than relying on the compression of the rubber cover by a bolt-style coupling. By using the Wolf Permanent Attach Coupling, the requirement for periodically re-tightening a bolt-style clamp is avoided. Additionally, there are no clamps to get hung up on obstacles in the plant.

- 1 Install an OSHA approved safety cable on the hose at every junction to prevent whipping of the end if the coupling should disconnect.
- 2 Ensure continuous static grounding of the hose at each coupling.
- 3 If the clamps are a bolt-on style, tighten them to the correct torque before use. Use calibrated torque wrenches, not impact or other types.
- 4 Repairs on steam hoses and couplings should be done only by fully qualified distributors or fabricators.
- 5 All workers near the hose should wear full protective safety gear including gloves, safety shoes, full-length protective clothing and protective glasses or goggles.
- 6 Perform a complete safety check before the steam is turned on. Inspect the area and remove all unnecessary objects and debris. Inspect the hose for gouges, kinks, worn areas, loose couplings and other potential safety problems.
- 7 Install a shut-off valve between the source of steam and hose assembly.
- 8 Use spring guards to protect the hose from kinking when handling of the hose is required.
- 9 Avoid excessive flexing of the hose, particularly near couplings. Flexing can weaken the assembly.
- 10 Examine connections to the steam source. Use straight connections instead of bending the hose. Install pipe elbows to ensure either straight vertical connections pointing downward, or a 45° downward angle that allows the hose to gently contact the ground without too much flexing.
- 11 Be aware of the danger of hammer effect and take steps to prevent it. Hammer effect is caused by spikes of extreme pressure; it can damage hose assemblies and break couplings free. The usual causes are blockage, pinched-off flow or valves being opened or closed too fast. Make personnel aware of both the danger and causes, and urge them to avoid actions that can cause the hammer effect.
- 12 When finished using steam, always close the pressure valve from the steam source. In addition to providing an extra safety margin, this action can extend the working life of the hose.
- 13 Add an extra measure of safety by ensuring that all steam hose connections are incompatible with other hoses in the plant or by color-coding for different applications. Manufacturers can often cooperate with these requests and suggest good color-coding systems.
- 14 Train workers to look for signs of problems during usage, such as steam leakage, loose clamps, hose shrinkage, cover damage or exposed reinforcement.

200 L.L.



Tube: EPDM

Reinforcement: Wire, 1 Braid

Cover: EPDM/Pinpricked

Color: Black

Temperature Range: +388°F

Type Of Branding: Ink Print

Working Pressure: 200 psi (Depending on coupling)
10:1 Safety Factor

Type Of Coupling: Wolf Permanent Crimp Couplings or Interlocking. Clamps—Interlocking, (2 Bolt, 4 Bolt).

Features:

- EPDM cover
- EPDM tube
- Continuous ink print and date code
- Minimum 10-to-1 safety factor
- Long lengths

Advantages:

- Heat, age, ozone and weather resistant.
- Excellent heat resistance
- Handles most steam cleaning detergents
- Easy identification
- Meets safety standards of RMA
- Economical
- Fewer couplings

Markets:

- Chemical/Petroleum industry
- Industrial cleaning markets
- Lumber/Woodworking
- Plywood manufacturing
- Pulp processing
- Ship building
- Food industry

Applications:

- Transfer of steam for processing products and cleaning equipment
- Transfer of steam for cleaning of equipment, tanks, buildings, etc.
- Transfer of hot water and steam

Product Number	Nominal I.D. (in.)	Nominal I.D. (mm)	Reinf.	Nominal O.D. (in.)	Nominal O.D. (mm)	Approx. lbs. Weight Per 100 Ft	Maximum Working Press. (psi)	Standard Length (Ft)
H602706-350R*	3/8	9.5	1 Br	13/16	20.6	25	200	350
H602708-350R*	1/2	12.7	1 Br	15/16	23.8	28	200	350
H602712-350R	3/4	19.1	1 Br	1-3/16	30.2	40	200	350

Not to be used as a pressure washer hose

** MTO - Made to Order - Contact Eaton at 800-833-3837 for availability, minimum run quantity, and ordering information.*

Concord 250



Tube: EPDM

Reinforcement: Wire, 2 Braid

Cover: EPDM/Pinpricked

Color: Black (BK), Available in Red (RD)

Temperature Range: +450°F

Type Of Branding: Ink Print

Working Pressure: 250 psi (Depending on coupling)
10:1 Safety Factor

Type Of Coupling: Wolf Permanent Crimp Couplings or Interlocking. Clamps—Interlocking, (2 Bolt, 4 Bolt).

Features:

- EPDM cover
- EPDM tube
- Continuous ink print and date code
- Minimum 10-to-1 safety factor
- Available with red cover (made-to-order)
- Date code

Advantages:

- Heat, age, ozone and weather resistant.
- Excellent heat resistance
- Handles most steam cleaning detergents
- Easy identification
- Meets safety standards of RMA
- Color coding
- Safety & maintenance records

Markets:

- Chemical/Petroleum Industry
- Industrial cleaning markets
- Ship building
- Food industry
- Lumber/Woodworking
- Plywood mfg./Cardboard
- Pulp processing

Applications:

- Transfer of steam for processing products and cleaning equipment
- Transfer of steam or hot 200°F detergent-type solutions for cleaning of equipment, tanks, buildings, etc.
- Transfer of steam to melt glues, waxes, etc.

Product Number	Nominal I.D. (in.)	(mm)	Reinf.	Nominal O.D. (in.)	(mm)	Approx. lbs. Weight Per 100 Ft	Maximum Working Press. (psi)	Standard Length (Ft)
H956808	1/2	12.7	2 Br	1-1/32	26.2	46	250	50(BK,RD)
H956808-100*	1/2	12.7	2 Br	1-1/32	26.2	46	250	100(BK)
H956812	3/4	19.1	2 Br	1-11/32	34.1	70	250	50(BK,RD)
H956812-100*	3/4	19.1	2 Br	1-11/32	34.1	70	250	100(BK,RD)
H956816	1	25.4	2 Br	1-9/16	39.7	96	250	50(BK,RD)
H956816-100*	1	25.4	2 Br	1-9/16	39.7	96	250	100(BK)

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Concord 250 O.R.



Tube: EPDM

Reinforcement: Wire, 2 Braid

Cover: Special Oil Resistant Compound/Pinpricked

Color: Black (BK) or Red (RD)

Temperature Range: +450°F

Type Of Branding: Ink Print

Working Pressure: 250 psi (Depending on coupling)
10:1 Safety Factor

Type Of Coupling: Wolf Permanent Crimp Couplings or Interlocking. Clamps—Interlocking, (2 Bolt, 4 Bolt).

Features:

- Special cover
- EPDM tube
- Continuous ink print and date code
- Minimum 10-to-1 safety factor
- Date code

Advantages:

- Oil resistant.
- Excellent heat resistance
- Handles most steam cleaning detergents
- Easy identification
- Meets safety standards of RMA
- Safety & maintenance records

Markets:

- Chemical/Petroleum industry
- Industrial cleaning markets
- Ship building
- Food industry
- Lumber/Woodworking
- Plywood mfg./Cardboard
- Pulp processing

Applications:

- Transfer of steam for processing products and cleaning equipment
- Transfer of steam or hot 200°F detergent-type solutions for cleaning of equipment, tanks, buildings, etc.
- Transfer of steam to melt glues, waxes, etc.

Product Number	Nominal I.D. (in.)	Nominal I.D. (mm)	Reinf.	Nominal O.D. (in.)	Nominal O.D. (mm)	Approx. lbs. Weight Per 100 Ft	Maximum Working Press. (psi)	Standard Length (Ft)
H968212*	3/4	19.1	2 Br	1-11/32	34.1	70	250	50 (BK,RD)

Not to be used as a pressure washer hose

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Concord Standard Steam & Concord Standard Steam-Spiral Stripe



Tube: Patrex (Chlorobutyl)

Reinforcement: Wire, 2 Braid, 2 Stainless Steel Static Wires

Cover: EPDM/Pinpricked

Color: Black (BK), Black and Red Stripe (RD)

Temperature Range: +450°F

Type Of Branding: Embossed

Working Pressure: 250 psi (Depending on coupling)
10:1 Safety Factor

Type Of Coupling: Interlocking.
Clamps—Interlocking, (2 Bolt, 4 Bolt).

Features:

- EPDM cover
- Patrex (Chlorobutyl) tube
- Continuous Embossed brand and date code
- Minimum 10-to-1 safety factor
- Built in separate static wire
- Barber pole striped cover (RD)

Advantages:

- Heat, age, ozone and weather resistant.
- Excellent heat resistance
- Handles most steam cleaning detergents
- Easy identification
- Safety & maintenance records
- Meets safety standards of RMA
- Assures safe grounding
- Safety
- Color code system

Markets:

- Chemical/Petroleum industry
- Industrial cleaning markets
- Ship building
- Lumber/Woodworking
- Plywood mfg./Cardboard
- Pulp processing

Applications:

- Transfer of steam for processing products and cleaning equipment
- Transfer of steam or hot 200°F detergent-type solutions for cleaning of equipment, tanks, buildings, etc.
- Transfer of steam to melt glues, waxes, etc.

Product Number	Nominal I.D. (in.)	(mm)	Reinf.	Nominal O.D. (in.)	(mm)	Approx. lbs. Weight Per 100 Ft	Maximum Working Press. (psi)	Standard Length (Ft)
H008408*	1/2	12.7	2 Br	1-1/8	28.6	55	250	50 (BK*,RD)
H008412	3/4	19.1	2 Br	1-3/8	34.9	78	250	50 (BK,RD)
H008416	1	25.4	2 Br	1-5/8	41.3	100	250	50 (BK,RD)
H008420	1-1/4	31.8	2 Br	1-15/16	49.2	135	250	50 (BK,RD)
H008424 *	1-1/2	38.1	2 Br	2-3/16	55.6	155	250	50 (BK,RD*)
H008432*	2	50.8	2 Br	2-11/16	68.3	194	250	50 (BK,RD*)

Not to be used as a pressure washer hose

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