

Site Walk-Through Checklist

1. Site Details

Site Name		_____
Location		_____
Humidification Equipment (Model/ SN)		_____
Contact details	Name	_____
	Phone	_____

2. Document Overview

Use this document in collaboration with the Atmospheric Steam Lines Quick Start Guide (PN 2585252) and Installation and Operation Manuals for the specific Condair equipment. Specific system details, accessories, and components are detailed in the above-mentioned manuals.

3. Steam Lines General Considerations

- 3.1 Always minimize the overall length and number of bends in the steam supply lines and avoid multiple turns, elbows and other directional changes in the steam line over a short span. Heat loss from steam lines reduces the atmospheric steam supply. As the overall length is increased, a greater amount of steam will be lost as condensate which may limit the capacity of the humidifier. Condensate in the line may also lead to backpressure issues on the system.
- 3.2 Always refer to the Installation and Operation Manual for the humidifier being installed for values of maximum equivalent steam line runs. These values will vary based on humidifier type, steam line materials, steam line diameters, etc.
- 3.3 Short lengths of Condair steam hose can be used to connect the steam line (if using a rigid material) to the humidifier and distributor. Secure steam hose with clamps; max. torque is 12 in lbs. for 7/8" clamps and 16 in lbs. for clamps 1-3/4" or larger.
- 3.4 Properly support steam lines to ensure the weight of the steam line is not supported by the humidifier or distributor.
- 3.5 When determining the length and routing of the steam lines allowance must be made for thermal expansion. If steam hose is used allowance must be made for shrinkage in the length of the hose due to aging.
- 3.6 After the steam line installation, the line must be purged to remove contaminants and installation debris.

4. Materials

4.1 Proper steam line material is shown in the table below:

Material	Type
Copper*	MED-L tube
Stainless Steel*	0.065 in wall thickness
Condair Steam Hose	high temperature hose (inspect every 5 years)

**Preferred*

Distance	Steam Hose	Copper Tube	Stainless Steel Tube
Short run ≤ 10 ft.	Y	Y	Y
Long run > 10 ft.		Y	Y
DI/RO Water			Y
Indicate the steam line material	_____	_____	_____

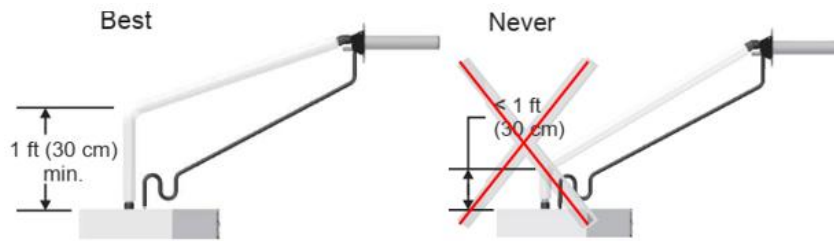
4.2 Condair steam hose is only used for atmospheric steam applications where the distance from the humidifier to the distributor is short (10 ft or less). Initials _____

4.3 Stainless steel/copper lines are insulated along the entire length (recommendation: 1" fiberglass insulation). Initials _____

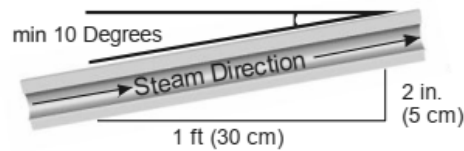
4.4 Materials such as black iron pipe, or plastic tubing, were not used for the installation. Initials _____

5. Orientation and Geometry

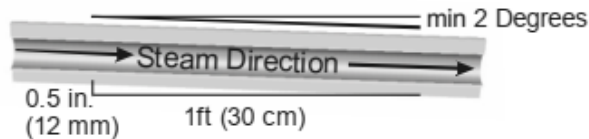
5.1 The vertical run directly from the humidifier is at least 12in (1ft) before any slope or bend occurs. Initials _____



5.2 For upward slopes, the minimum grade is a 10° slope (2 in vertical up per 12 in horizontal run). Initials _____



5.3 For downward slopes, the minimum grade is a 2° slope (0.5 in vertically down per 12 in horizontal run). Initials _____



5.4 To calculate the total equivalent steam line length, correction factor lengths are used for bends, elbows, or tees within the steam line. (Note: refer to the table below and add for each bend, elbow or tee the corresponding length to the total steam lines length)

Steam Line length (ft)	Nominal Tube Diameter	Standard 90° Elbow	Standard 45° Elbow	Side Outlet Tee
Total Equivalent length:	0.75 in - 0.875 in	2 ft	1 ft	4 ft
#/type of Elbows:	1.5 in - 1.75 in	3.5 ft	1.75 ft	7 ft
	3 in	5 ft	2.5 ft	11 ft
	4 in	8 ft	4 ft	15 ft

5.5 For steam lines ensure a minimum bend radius. 12" when using flexible steam hoses and 5 times the internal diameter for rigid steam lines. Initials _____



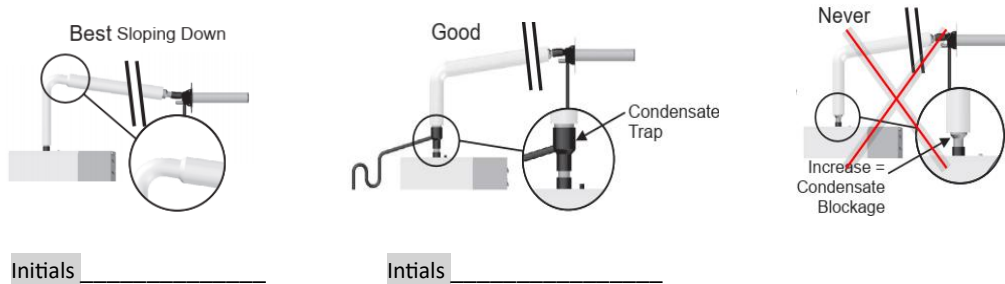
5.6 Steam hoses are supported at frequent intervals along the steam line run. Initials_____

(Note: any low point in the line collects condensate, this must be avoided or properly sloped to prevent any back pressure issues with the humidifier)

5.7 Steam line diameter size increases follow the rules below (guidance in the pictures below):

- Ideally the line diameter increase is done on **downward slope**
- Steam lines diameter increases on an **upward slope** are done with a properly installed trap.

(Note: Steam line diameter sizing may be increased for applications with relatively long steam line runs. Additional details for oversizing values and associated maximum steam line runs are available in the Installation and Operation Manual.)



5.8 When connecting multiple steam lines to one single distributor, separate steam lines are used for the entire run. Steam lines are not connected on an upward slope (guidance in the pictures below). Initials_____

(Note: Humidifier units must operate in parallel. For double EL units, the cylinders must operate in parallel)

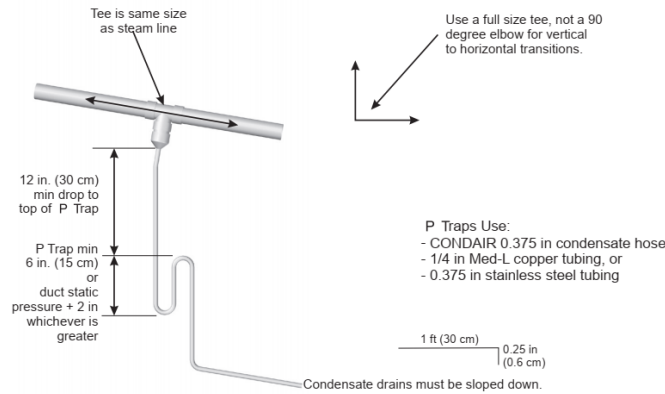


5.9 No valves or reducers are installed along the steam line run. Initials_____

Note: If a steam line reducer is required, it must be installed directly at the connection to the steam distributor along with a condensate trap that needs to be installed at the reducer.



6. Condensate Lines and Traps



6.1 Condensate lines have a minimum slope of 1 in for 48 in horizontal run (1.2° grade). Initials _____

6.2 Full size condensate tees are used to properly collect the condensate and egress it to the drain. Initials _____

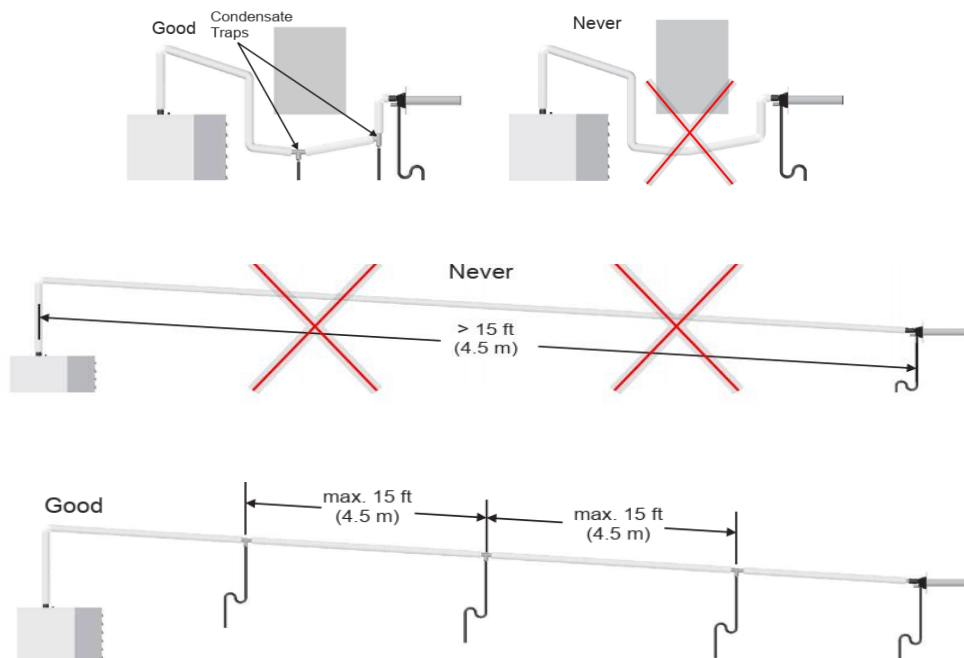
6.3 Traps have min. 12" head, and the drip has a greater value of either 6" or the duct static pressure +2". Initials _____

6.4 Condensate traps are using (select all that are applicable):

- Condair condensate hose ☐
- 3/8 in stainless steel pipe ☐
- 1/4 in copper pipe ☐

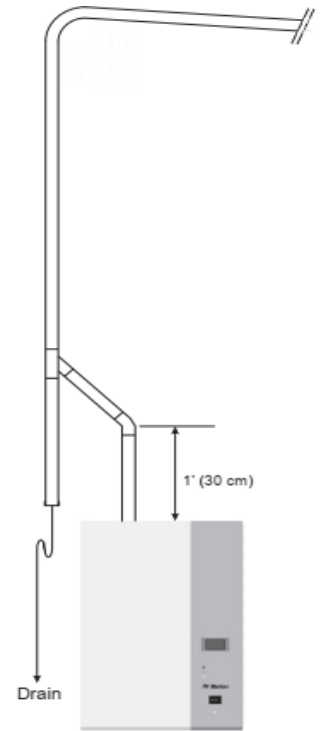
6.5 At minimum, condensate traps are installed along the steam line for each of the following configurations. Initials _____

- At the base of horizontal to vertical transitions
- At any low point along the steam lines
- After a length of steam line run 15 ft or greater



- 6.6 For applications with long vertical steam runs out of the humidifier, a full-size condensate trap is installed along the vertical run to catch the condensate load (rather than have it all flow back to the humidifier reservoir). Initials _____
- 6.7 Condensate trap lines do not empty into a sink used by personnel. Initials _____
- 6.8 Condensate trap lines are connected to a drain according to applicable national and local plumbing codes and regulations. Initials _____
- 6.9 Before starting humidifiers, condensate lines are filled with water (as applicable).
Initials _____

Note: All water supply and drain line connections must be installed in accordance with local plumbing codes by a licensed plumbing specialist



7. Notes

Add in the box below any additional comments and notes that are relevant to this installation.

Inspection performed by (name and phone): _____

Inspection date: _____

Form completed by (name and phone): _____