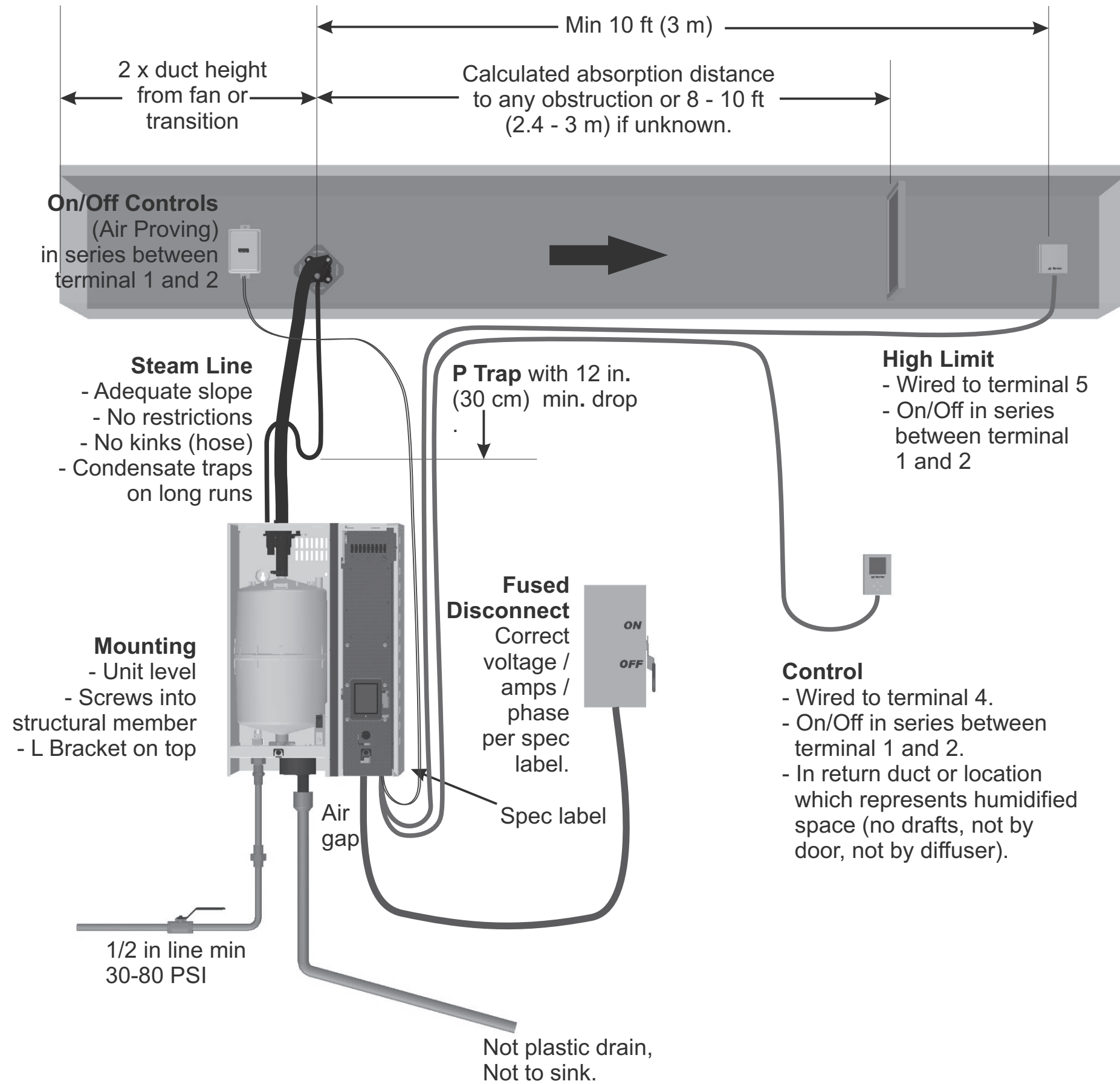


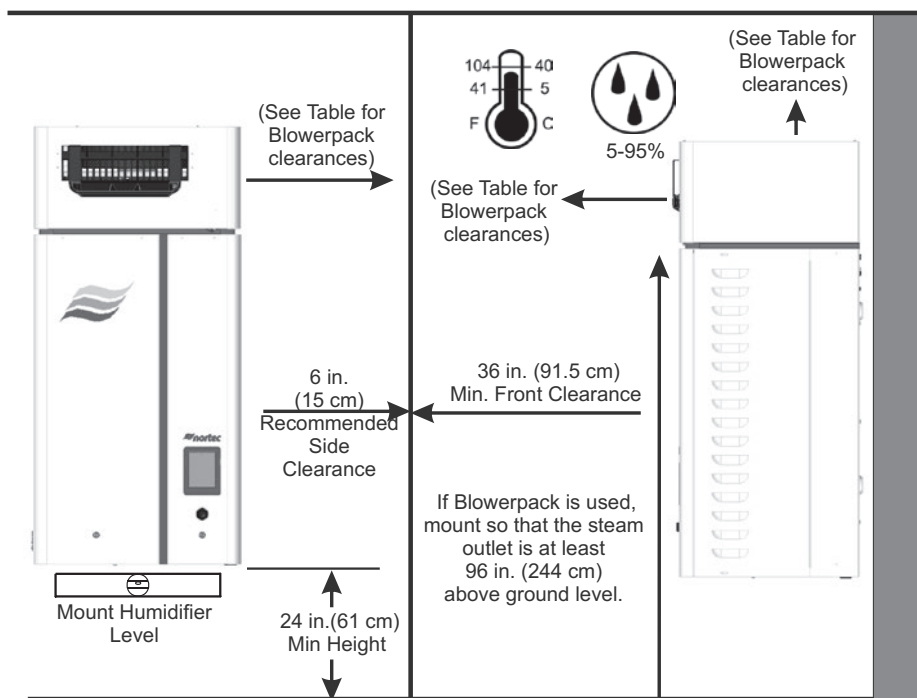


Quick Start Installation Guide



Mounting
Plumbing
Electrical
Steam Distribution





Humidifier Capacity lbs/hr (kg/hr)	Minimum No. of Blower Packs	Min. Frontal Clearance Inches (cm)	Min. Overhead Clearance Inches (cm)	Min. Left side Clearance Inches (cm)	Min. Right side Clearance Inches (cm)
Low Speed					
30 (13.6)	1	132 (336)	12(31)	12 (31)	12 (31)
100 (45.4)	1	Not recommended	Not recommended	Not recommended	Not recommended
High Speed					
30 (13.6)	1	120 (305)	12(31)	12 (31)	12 (31)
100 (45.4)	1	248 (630)	36 (91)	30 (76)	30 (76)

***NOTES:** Nominal Conditions 72°F (22.2°C), 43% RH. Low speed not recommended for 100 lbs/hr humidifier. Consult factory for recommendations. Blower Pack should not be installed near cold surfaces or where due point may be reached. Higher humidity or lower room temperature may result in longer absorption distances.

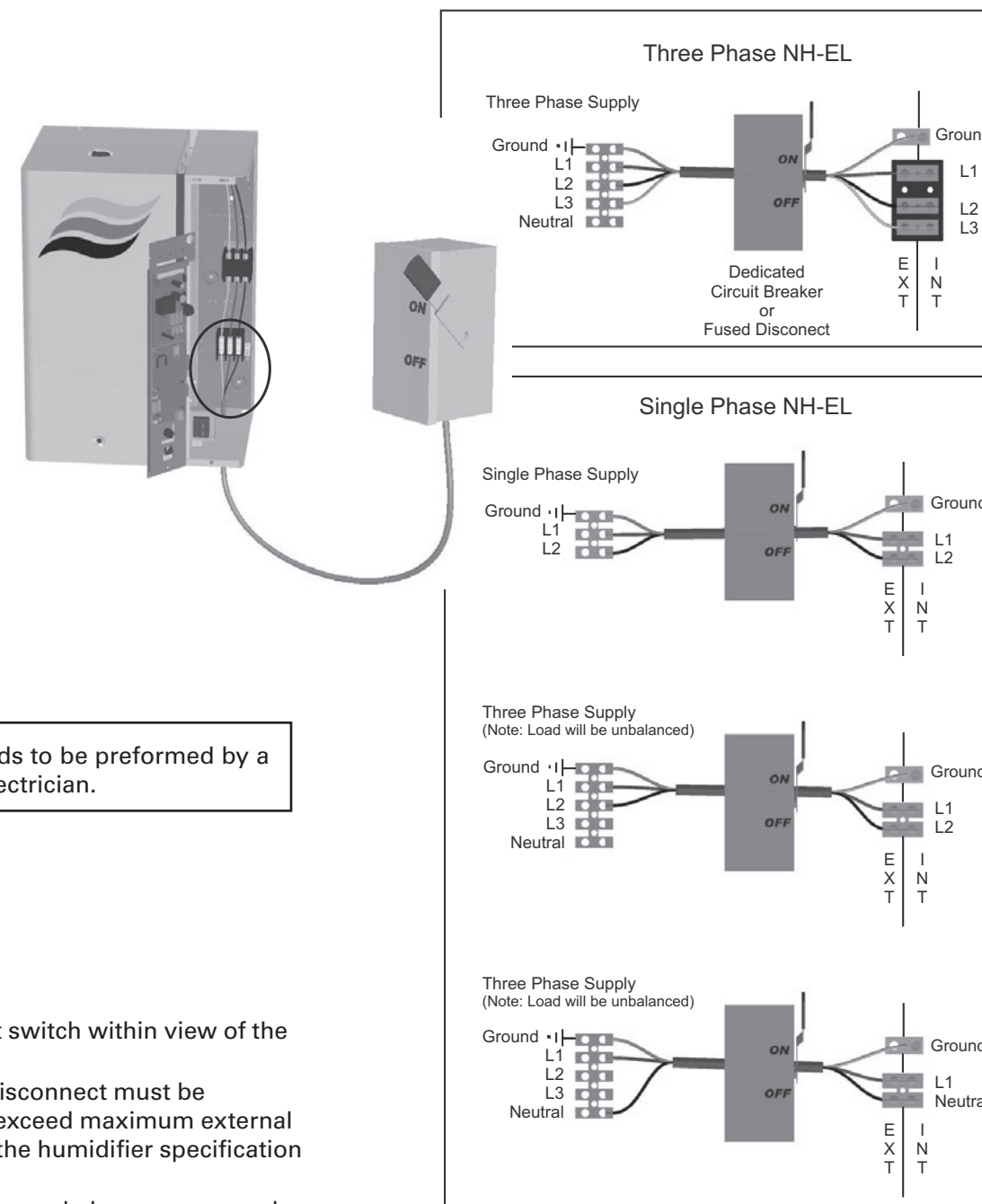
Mounting

Nortec does not accept responsibility for installation code violations.

1. Install the NH-EL unit as close as possible to steam distributor. Net output will be reduced as a result of heat loss through the steam line.
2. Mount on a suitable wall or vertical surface. Do not sit the humidifier on the floor.
3. Allow clearances required for plumbing and electrical connections. Consult local and national codes before final location and installation.
4. Install only in areas with ambient temperature 41-104°F (5 - 40°C) relative humidity of 5 - 95% (non-condensing).
5. Mount the NH-EL humidifier at a height convenient for servicing.
6. Do not mount on hot surfaces, where freezing can occur, vibrating surface, or floor.

How to Mount

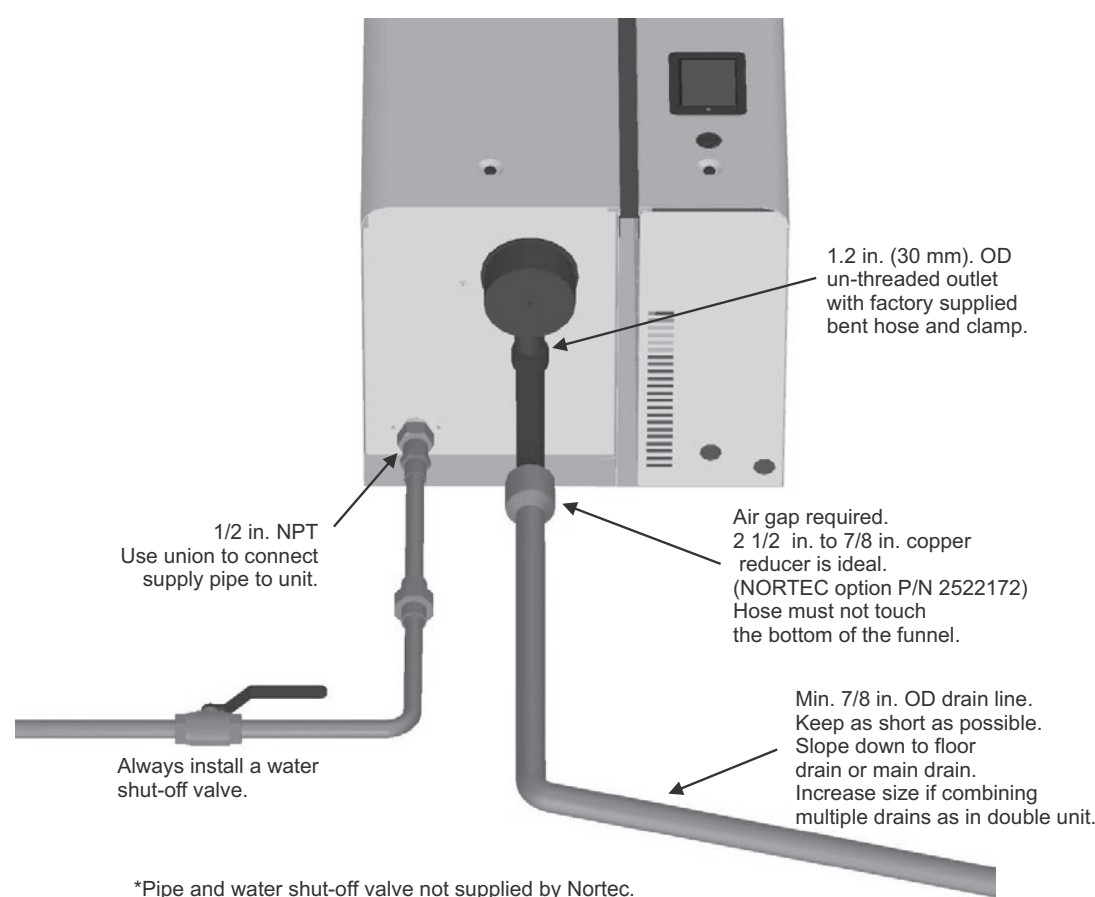
1. The NH-EL humidifier is mounted using keyholes on the back of the humidifier.
2. Use #12 x 3 in. (7.5 cm) screws mounted into 2x4 studs or better. 2 screws are needed for a single unit (NH-EL 010 to 100). 3 screws are needed for a double unit (NH-EL 150 to 200). Use screws longer than 3/4" (7.5cm) if drywall or other spacer is present.
3. Keyholes are spaced 16 in. (40.6 cm) apart center to center for large units and 10.7 in. (27.2 cm) apart for small units. Insert screws into the studs until there is 1/4 in. of screw exposed. Be sure the screws are level to one another.
4. Raise the unit and place the screws through the keyholes. Make sure the unit is level then tighten the screws to secure the unit in place.
5. Place "L" shaped brackets on top of the unit, with holes in line with the studs. Using the appropriate sized wood screw fasten the "L" brackets to the studs securing the unit from any upward motion.



WARNING Wiring needs to be preformed by a licensed Electrician.

Install Requirements

1. Install a labeled disconnect switch within view of the humidifier.
2. Dedicated external fused disconnect must be installed. Fusing must not exceed maximum external protection as indicated on the humidifier specification label.
3. Ensure that available voltage and phase corresponds with humidifier voltage and phase as indicated on humidifier's specification label.
4. All wiring is to be done in accordance with national and local electrical codes by a licensed electrician.
5. Humidifier optional internal fusing is not a substitute for external fuses/disconnect.



Water Supply

Nortec does not accept responsibility for installation code violations.

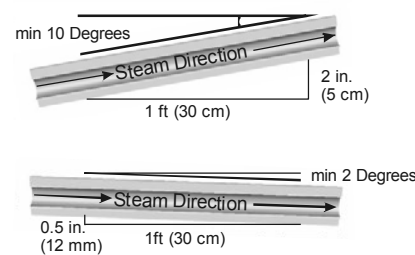
1. Use 1/2" OD Copper or plastic supply lines rated for use with the water in use.
2. Flush supply lines with fresh clean water after soldering/brazing prior to operating humidifier.
3. Do not solder/braze copper lines while connected to the water inlet or you will melt the fill valve.
4. Supply the humidifier with potable water only. The NH-EL will not operate on reverse osmosis (RO) or de-ionized (DI) water.
5. Water conditions must be within the following tolerances for optimal unit operation:
 - Conductivity: 150 to 750 micro-Siemens
 - Hardness: 0-12 GPG
 - Pressure: 30-80 PSIG
 - Temperature: 1-20°C/33.8-68°F

Drain Line(s)

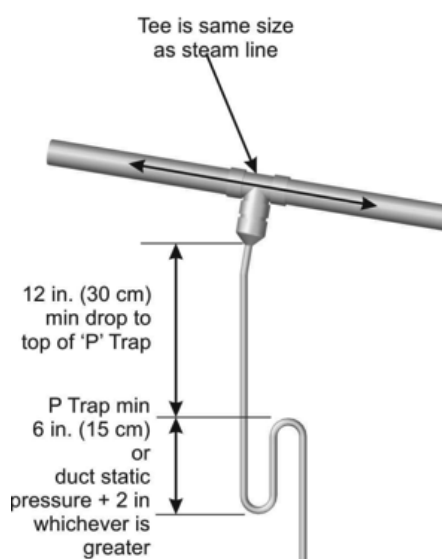
1. Do Not use PVC for drain lines. Copper or iron is preferred.
2. Use minimum 7/8" OD drain lines
3. Install air gap within three feet of the humidifier.
4. Use sufficient slope away from air gap to building drainage system to prevent water from backing up and overflowing the air gap.

Install Requirements

1. The use of steam line other than copper, stainless steel tube or Nortec supplied steam line will void the warranty and may adversely affect the operation of the humidifier.
2. Steam lines must not have any restrictions which could allow steam pressure to build in the cylinders.
3. The first vertical 12 inches of steam line off the humidifier must not have any bends or turns.
4. Slope the steam line. If the slope is with the flow of steam, then slope at least 1/2 inch for every horizontal run of 12 inches. If the slope is against the flow of steam, then slope at least 2 inches for every horizontal run of 12 inches.



5. Insulate the steam line with 1.0 inch (2.5 cm) pipe insulation (minimum).
6. Do not over tighten hose clamp at cylinder steam outlet. The maximum torque is 12 in-lbs for 7/8" Nortec steam hose and 16 in-lbs for 1 3/4" Nortec steam hose.
7. Support Steam line so weight is not on the cylinder.
8. When installing double units, or multiple units to a single inlet distributor systems ensure Double Mode is configured to parallel (see page 56 of the IOM).
9. Trap condensate at low points/elbows (Use full size 'T' for traps).



NH Model	Maximum Line Length ft (m)	MED-L Copper Tube	Stainless Steel Tube		
005	7 (2)	3/4	0.875 X 0.049W		
010	12 (3.5)				
020	17 (5)				
030	22 (6.5)	1 1/2	1.75 X 0.065W		
050	43 (13)				
075/150*	47 (14)				
100/200*	50 (15)	2	2.0 X 0.065W		
Oversized Steam Lines (for longer steam runs)**					
5	14 (4)			1	1.125 X 0.049W
10	24 (7)				
20	34 (10)				
30	44 (13)				
50	86 (26)	2	2.0 X 0.065W		
75/150*	94 (28)				
100/200*	100 (30)				
Nortec Steam Hose					
5-30	10 (3)	Pt No 1328810 (7/8")			
50-200*	10 (3)	Pt No. 1328820 (1 3/4")			

* Use one steam line per cylinder for NH-EL 150-200 humidifiers. Do not combine lines except at distributor using a Nortec adapter designed for that purpose with the humidifier configured for Double mode: Parallel Operation. (see page 56 of the IOM)

** These diameters require a reducer at humidifier and steam distributor connection

WARNING The NH is an atmospheric humidifier that will only operate properly when the steam distribution system provides less than 5.5" Water Column (W.C.) of back pressure.

Installing the NH in such a way that backpressure can develop during operation could result in serious injury or damage to the property.

All information contained in this Quick Start Guide is for general information purposes only. For complete Nortec installation/operation recommendations for your Nortec equipment, please refer to the installation manual for your specific system, accessories, and components.

All electrical connections must be installed in accordance with local and national electrical code requirements by a licensed electrician.

All water supply and drain line connections must be installed in accordance with local plumbing codes by a licensed plumber.

Nortec does not accept any liability for installations of humidity equipment installed by unqualified personnel or the use of parts/components/equipment that are not authorized or approved by Nortec.



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