

Mini-bank® Steam Injection humidifier

The Mini-bank® humidifier is designed for use in small ducts. It is a pre-engineered and pre-assembled packaged unit, ready for mounting and hookup.

Slimline dispersion tubes with laboratory-tested, optimum tube spacing promote rapid steam absorption without excessive static pressure loss and heat gain.

With precision orifices of varying diameters spaced 1" (25 mm) on center, tubelets ensure proportional steam dispersion along the entire length of the tubes. Smaller diameter tubelets are inserted near the ends of the tubes to compensate for lower velocity airflow along the sides of the duct.

MINI-BANK HUMIDIFIER MAXIMUM CAPACITY

85 lbs/hr (39 kg/h)

FIGURE 1-1: MINI-BANK HUMIDIFIER DIMENSIONS

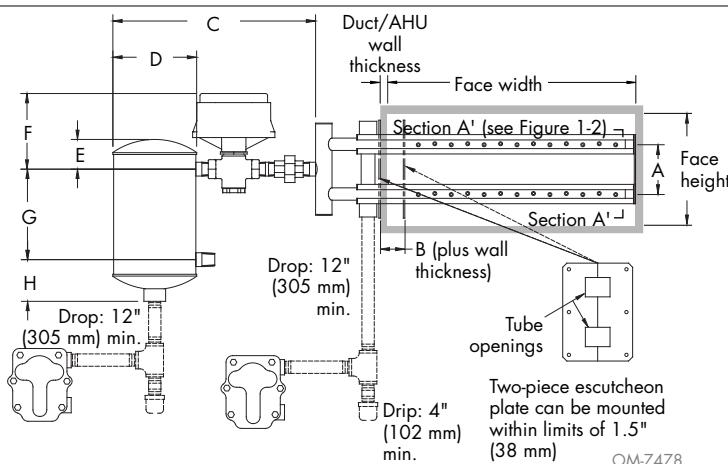


FIGURE 1-2: VIEW A' TO A' FROM FIGURE 1-1

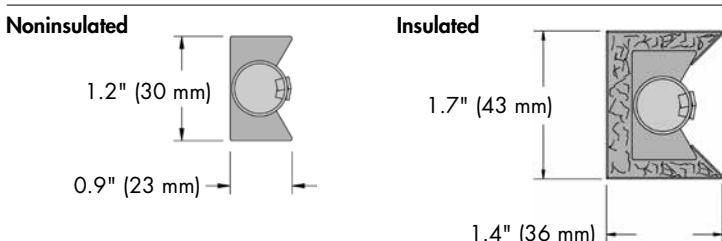


Table 1-1:
Mini-bank humidifier dimensions

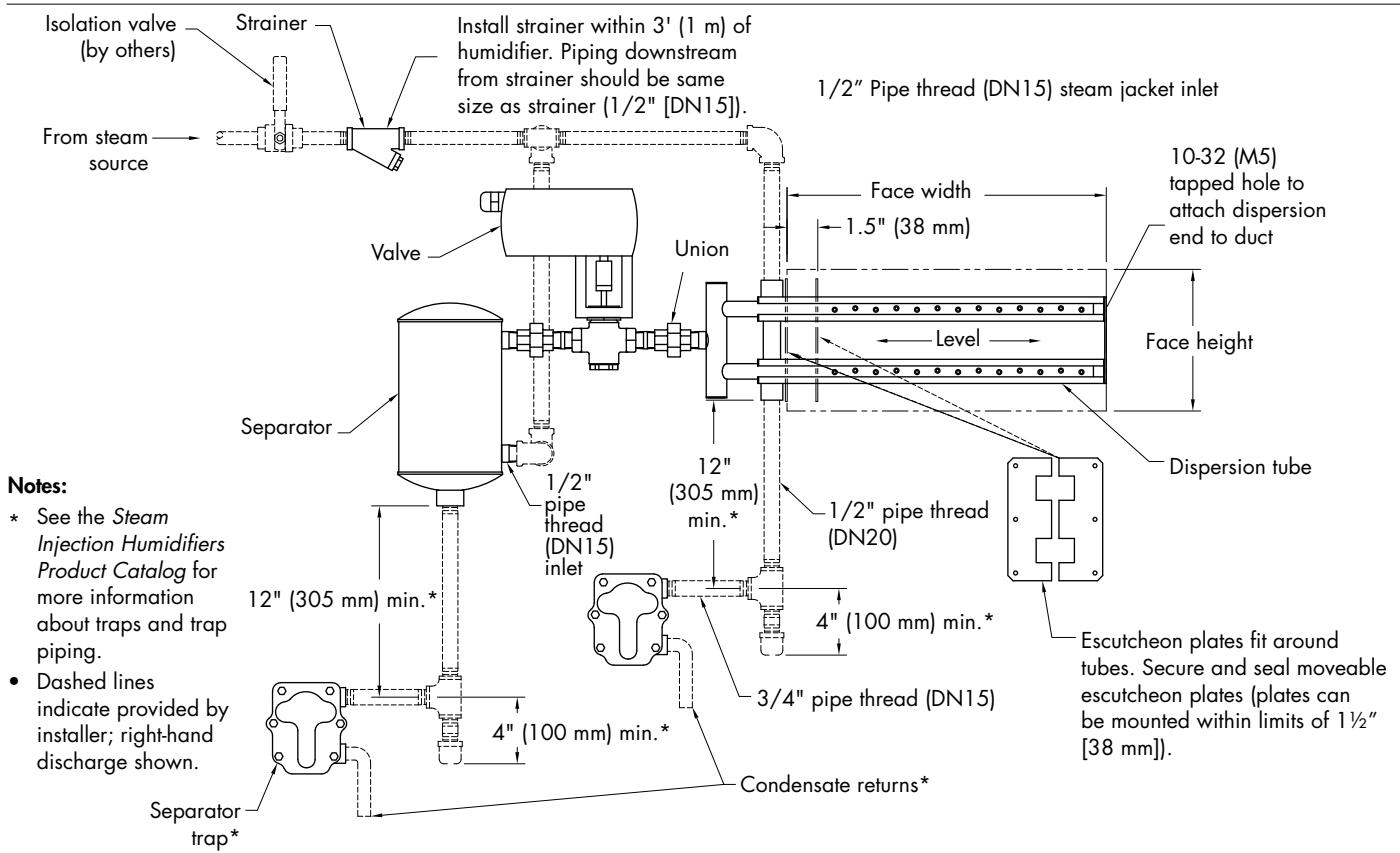
	A	B	C	D	E	F	G	H
inches	3.00	1.50	12.50	5.00	1.75	6.50	5.50	2.50
mm	76	38	318	127	45	165	140	64

Each Mini-bank humidifier is furnished with:

1. Centrifugal type steam separator and steam jacketed dispersion tube with calibrated orifices for proper steam distribution:
 - 304 stainless steel
 - 316 stainless steel
2. Piping:
 - Black iron
 - 304 stainless steel
 - 316 stainless steel
3. Inlet Y strainer with stainless steel screen:
 - Cast iron body
 - 304 stainless steel body
4. Normally closed steam valve with stainless steel plug and seat:
 - Valve body:
 - Bronze
 - Stainless steel
 - Actuator:
 - Pneumatic valve
 - Electric modulating valve
 - Other: _____
5. Two-piece escutcheon plate to seal opening where tube penetrates duct:
 - Galvanized
 - 304 stainless steel
6. 3/4" pipe thread (DN20) steam traps:
 - Cast iron float and thermostatic (F&T)
 - Stainless steel float and thermostatic (F&T)

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FIGURE 2-1: MINI-BANK HUMIDIFIER IN A DUCT HORIZONTAL AIRFLOW



OM-7480

Table 2-1:
Mini-bank humidifier specifications

Face height		Required number of tubes	Face width	Shipping weights
inches	mm			
6-9	150-230	2	6" to 48" in 1/2" increments (150 mm to 1220 mm in 13-mm increments)	Tubes: 0.3 lbs per tube foot (0.4 kg per tube meter)
10-12	250-305	3		Remaining components (separator, valve, traps, etc.): 8.5 lbs (3.8 kg)
13-15	330-380	4	For face dimensions larger than 48" x 24" (w x h) (1220 mm x 610 mm), use Multiple-tube humidifier.	
16-18	405-460	5		
19-21	480-535	6		
22-24	560-610	7		

Note: See Figure 1-1 for face height and face width.

Table 2-2:
Mini-bank humidifier air pressure loss and heat gain

fpm m/s	Air velocity	Static pressure loss				Heat gain			
		Inches wc		Pa		°F		°C	
		Insulated	Noninsulated	Insulated	Noninsulated	Insulated	Noninsulated	Insulated	Noninsulated
500	2.5	0.04	0.02	9.95	4.98	1.8	3.5	1.0	1.9
750	3.8	0.07	0.04	17.42	9.95	1.6	3.2	0.9	1.8
1000	5.1	0.13	0.075	32.35	18.66	1.4	2.8	0.8	1.6