

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

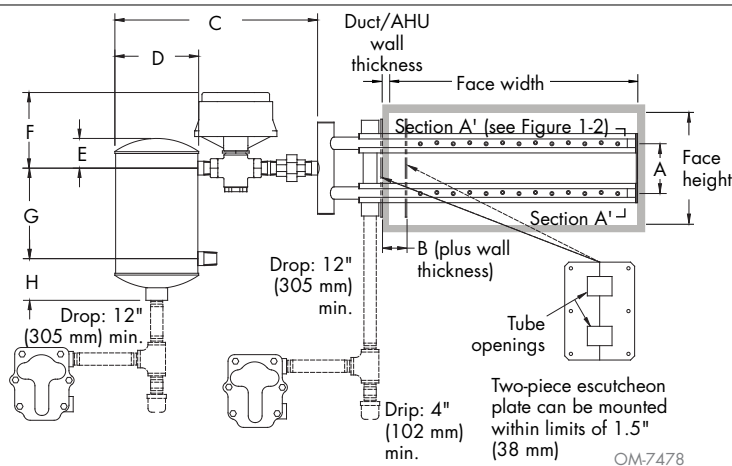
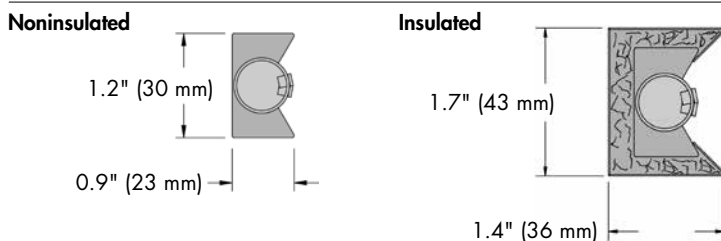


FIGURE 1-2: VIEW A' TO A' FROM FIGURE 1-1



**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:

- Centrifugal type steam separator and steam jacketed dispersion tube with calibrated orifices for proper steam distribution:
 - _____ 304 stainless steel
 - _____ 316 stainless steel
- Piping:
 - _____ Black iron
 - _____ 304 stainless steel
 - _____ 316 stainless steel
- Inlet Y strainer with stainless steel screen:
 - _____ Cast iron body
 - _____ 304 stainless steel body
- Normally closed steam valve with stainless steel plug and seat:

Valve body:

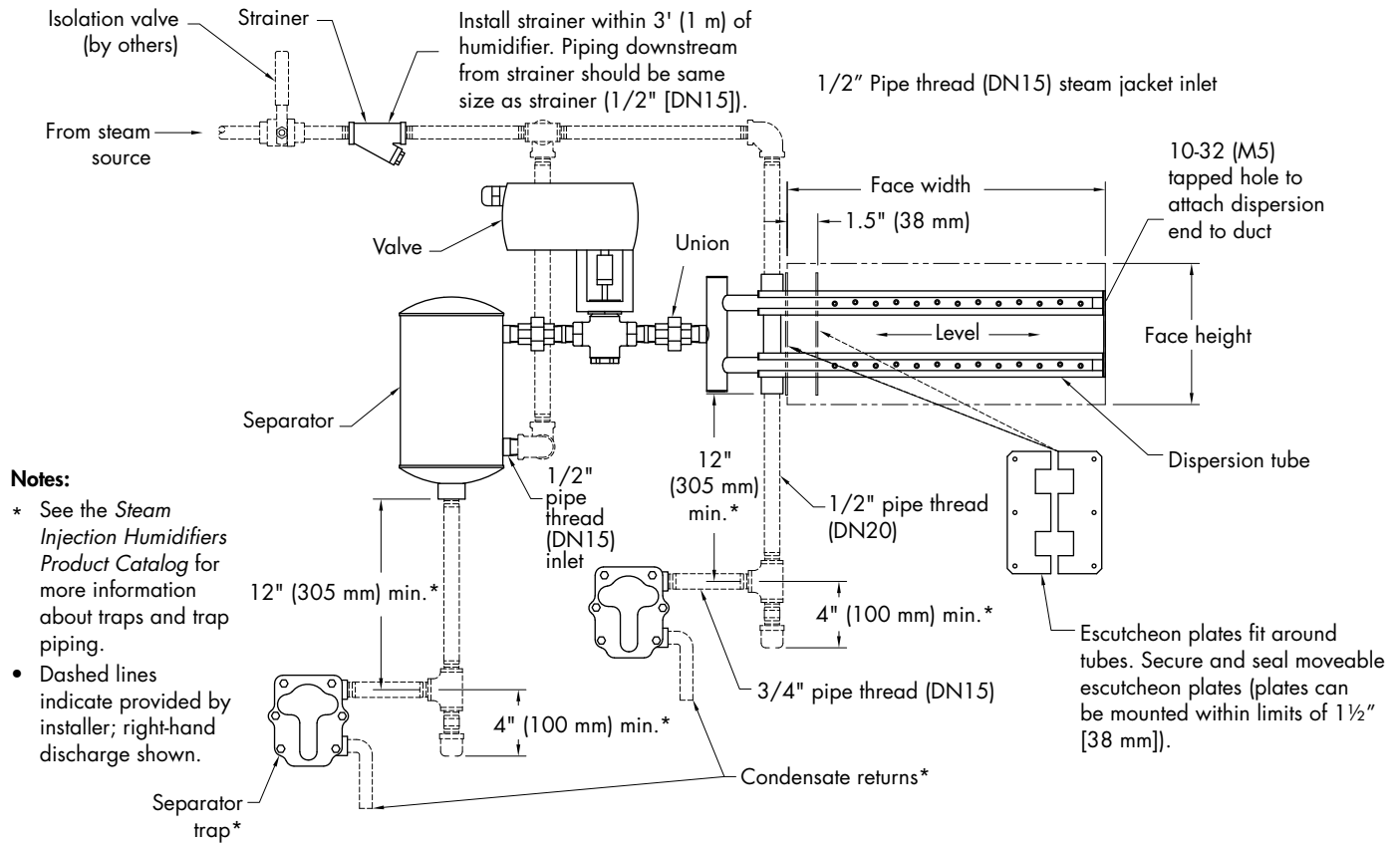
 - _____ Bronze
 - _____ Stainless steel

Actuator:

 - _____ Pneumatic valve
 - _____ Electric modulating valve
 - _____ Other: _____
- Two-piece escutcheon plate to seal opening where tube penetrates duct:
 - _____ Galvanized
 - _____ 304 stainless steel
- 3/4" pipe thread (DN20) steam traps:
 - _____ Cast iron float and thermostatic (F&T)
 - _____ Stainless steel float and thermostatic (F&T)

Mini-bank Steam Injection humidifier

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



QM-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) For face dimensions larger than 48" x 24" (w x h) (1220 mm x 610 mm), use Multiple-tube humidifier.	Tubes: 0.3 lbs per tube foot (0.4 kg per tube meter) Remaining components (separator, valve, traps, etc.): 8.5 lbs (3.8 kg)
10-12	250-305	3		
13-15	330-380	4		
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

Air velocity		Static pressure loss				Heat gain			
fpm	m/s	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