



Armstrong ManiPack™

Steam Distribution Manifold Assembly



Armstrong offers a pre-assembled, steam jacketed, distribution manifold bank specifically for air handling units.

The ManiPack is for applications requiring a direct steam injection humidifier (i.e. Series 9000/1000) with multiple steam jacketed distribution manifolds. It is designed for economy and ease of installation.

Features

- Pre-assembled to reduce installation time.
- Convenient mounting tabs for easy attachment.
- All stainless steel steam supply header, steam jacketed distribution manifolds, and interconnecting pipes, with a choice of 304 SS or brass compression fittings.
- No black iron piping.
- Optional all stainless design for D.I. service.
- Standard, interchangeable replacement parts.
- Field convertible from left hand to right hand mounting.
- Custom tube spacing above 6" minimum.

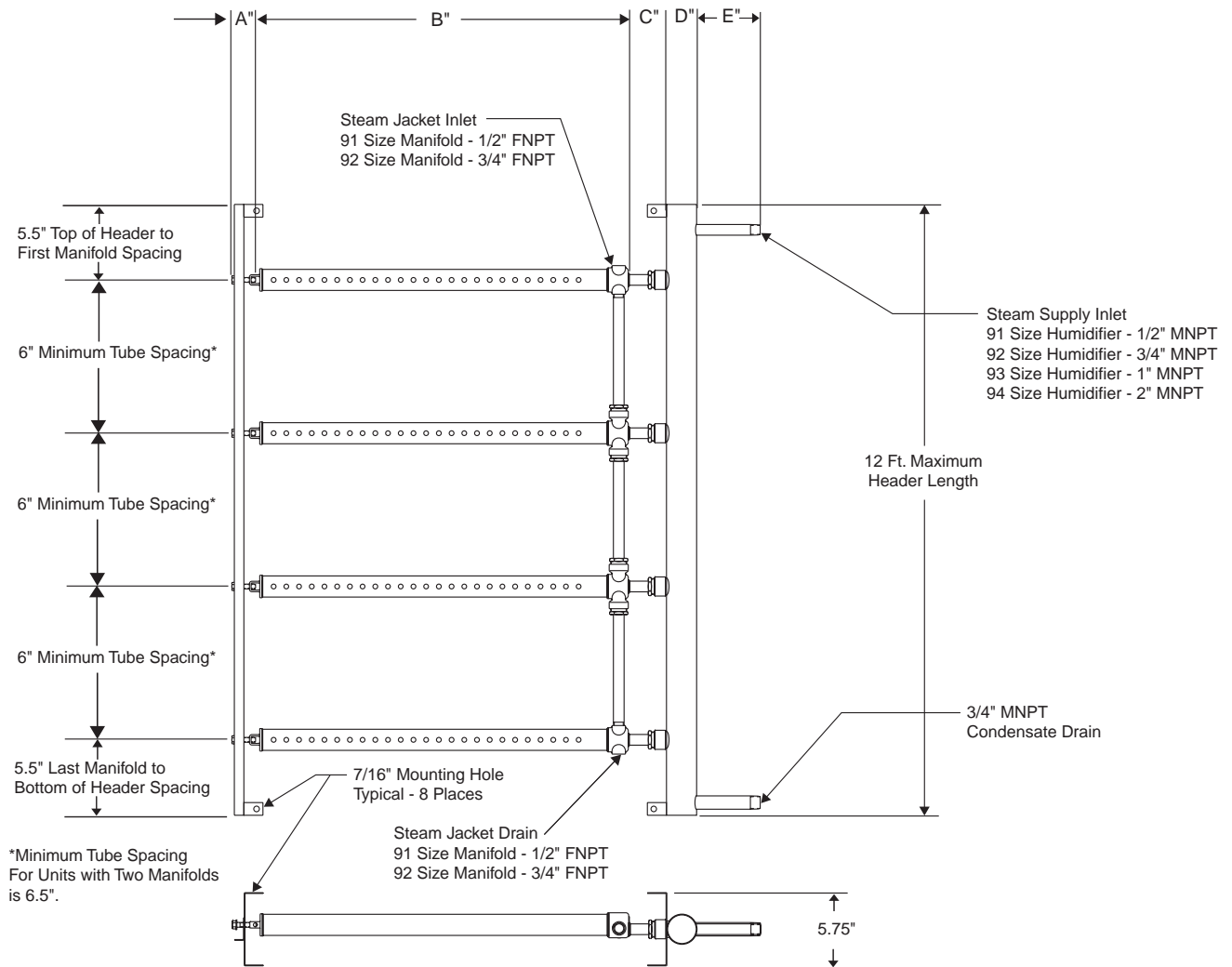
Table 82-1. List of Materials

Description	Material
Header Assembly Steam Jacketed Distribution Manifolds Interconnecting Distribution Manifold Piping Outboard Manifold Support	304 Stainless Steel
Header and Manifold Compression Fittings	Brass or 304 Stainless Steel

Table 82-2. Physical Data

Steam Supply Inlet	
91 Size Humidifier	1/2" MNPT
92 Size Humidifier	3/4" MNPT
93 Size Humidifier	1" MNPT
94 Size Humidifier	2" MNPT
Steam Condensate Drain	
All Sizes	3/4" MNPT
Steam Jacket Inlet & Condensate Drain	
91 Size Manifold	1/2" FNPT
92 Size Manifold	3/4" FNPT

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.


Table 83-1. ManiPack Dimensions and Header Capacities

A in(mm)	B in(mm)	Dimensions Based on Steam Capacity and Manifold Size									E in(mm)
		Steam Capacity lb/hr (kg/hr)									
		0 - 486 (0 - 220)			487 - 1000 (221 - 453)			1001+ (454+)			
		C in(mm)		D in(mm)	C in(mm)		D in(mm)	C in(mm)		D in(mm)	
91 Manifold	92 Manifold		91 Manifold	92 Manifold		91 Manifold	92 Manifold				
2 (51)	12 (305)	2 (51)	5 (127)	2-3/8 (60)	2 (51)	4-1/2 (114)	3-1/2 (89)	2 (51)	3-1/2 (89)	5-9/16 (141)	3 (76) 4 (100) 5 (127) 6 (152) 7 (178)
	18 (457)										
	24 (610)										
	36 (914)										
	48 (1219)										
	60 (1524)										
	72 (1829)										
	84 (2133)										
	96 (2438)										
	108 (2743)										
	120 (3048)										
132 (3352)											
144 (3657)											

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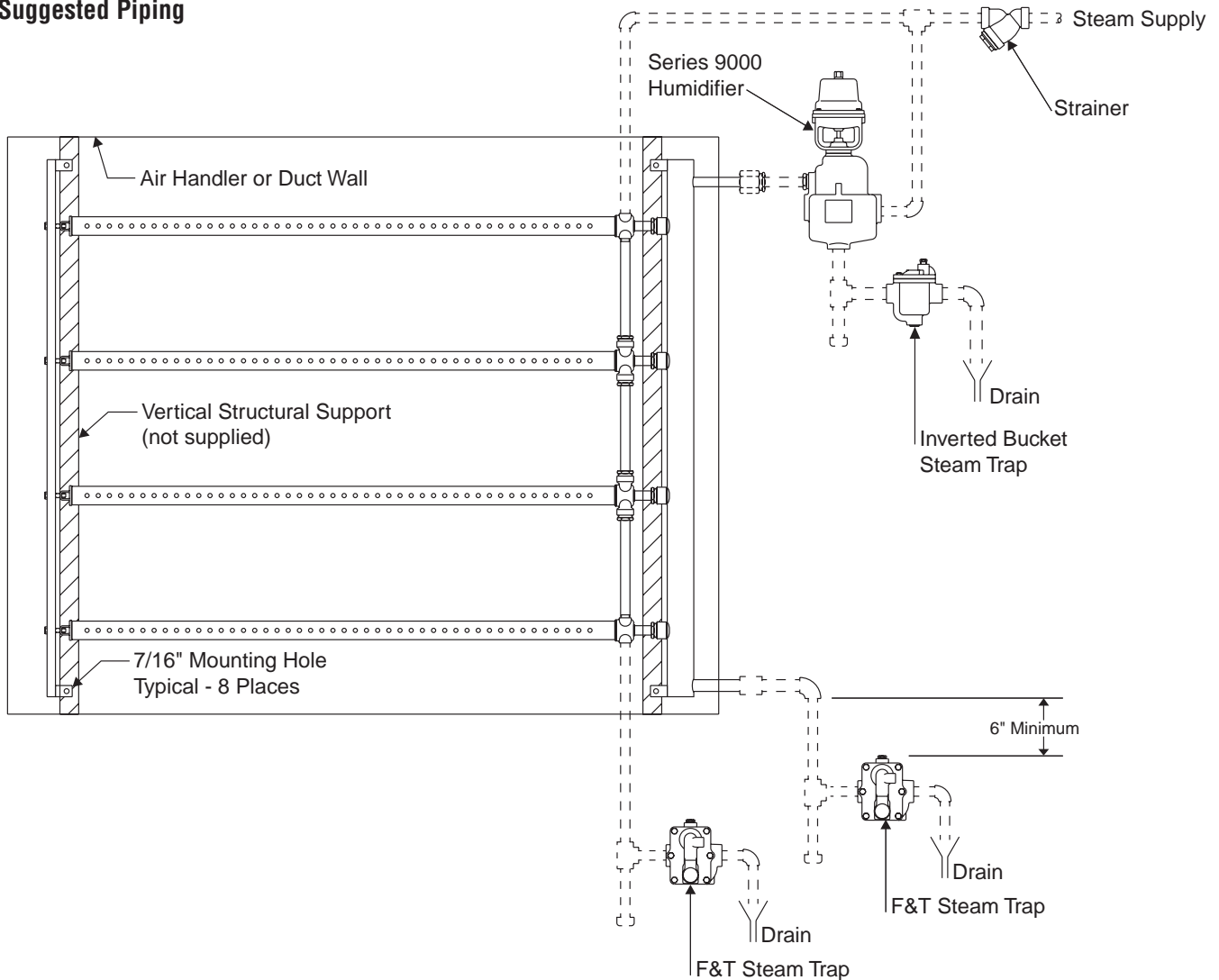
Application Considerations

The ManiPack is designed for applications where it is desirable to use multiple steam distribution manifolds to achieve a downstream non-wetting distance (i.e. "vapor trail") as short as three feet.

For non-wetting distances less than three feet, the Armstrong HumidiPack® or HumidiPackPlus® should be considered. Calculation of the non-wetting distance can be performed with the Armstrong Humid-A-ware™ Humidification Sizing & Selection Software which can be downloaded from www.armstrong-intl.com.

Steam jacketing is desirable because it improves steam quality and reduces the chance of spitting or dripping condensate into the air handling system. For applications that are sensitive to duct heat gain, it is advisable to keep steam jacketing pressures below 20 psig.

Suggested Piping



All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

Suggested Specification for ManiPack

Steam injection into air handling system for humidification purposes shall be by means of a pre-assembled, steam jacketed, multiple manifold bank. The header assembly and steam-jacketed distribution manifolds shall be 304 Stainless Steel. Use of black iron piping shall not be permitted.

The multiple manifold bank shall be capable of distributing up to 60 psig steam from a direct steam injection humidifier without dripping or spitting.

The multiple manifold bank shall have pre-drilled mounting tabs in four corners to allow easy attachment to structural supports within the air handler.

The multiple manifold bank shall be field repairable with standard interchangeable parts and shall be field convertible from left handed header configuration to right handed header configuration.

Required Ordering Information

1. Specify steam pressure and capacity required.
2. Determine steam injection humidifier size, manifold size, and manifold quantity as determined by Armstrong's Humid-A-ware Humidification Sizing and Selection software. Visit www.armstrong-intl.com to download.
3. Specify duct dimensions.
4. Specify required steam header orientation (i.e. left-handed or right handed).
5. Specify required materials of construction (i.e. brass and 304 stainless steel or all 304 stainless steel).
6. Consult Armstrong's HVAC Application Engineering Department for vertical airflow applications.