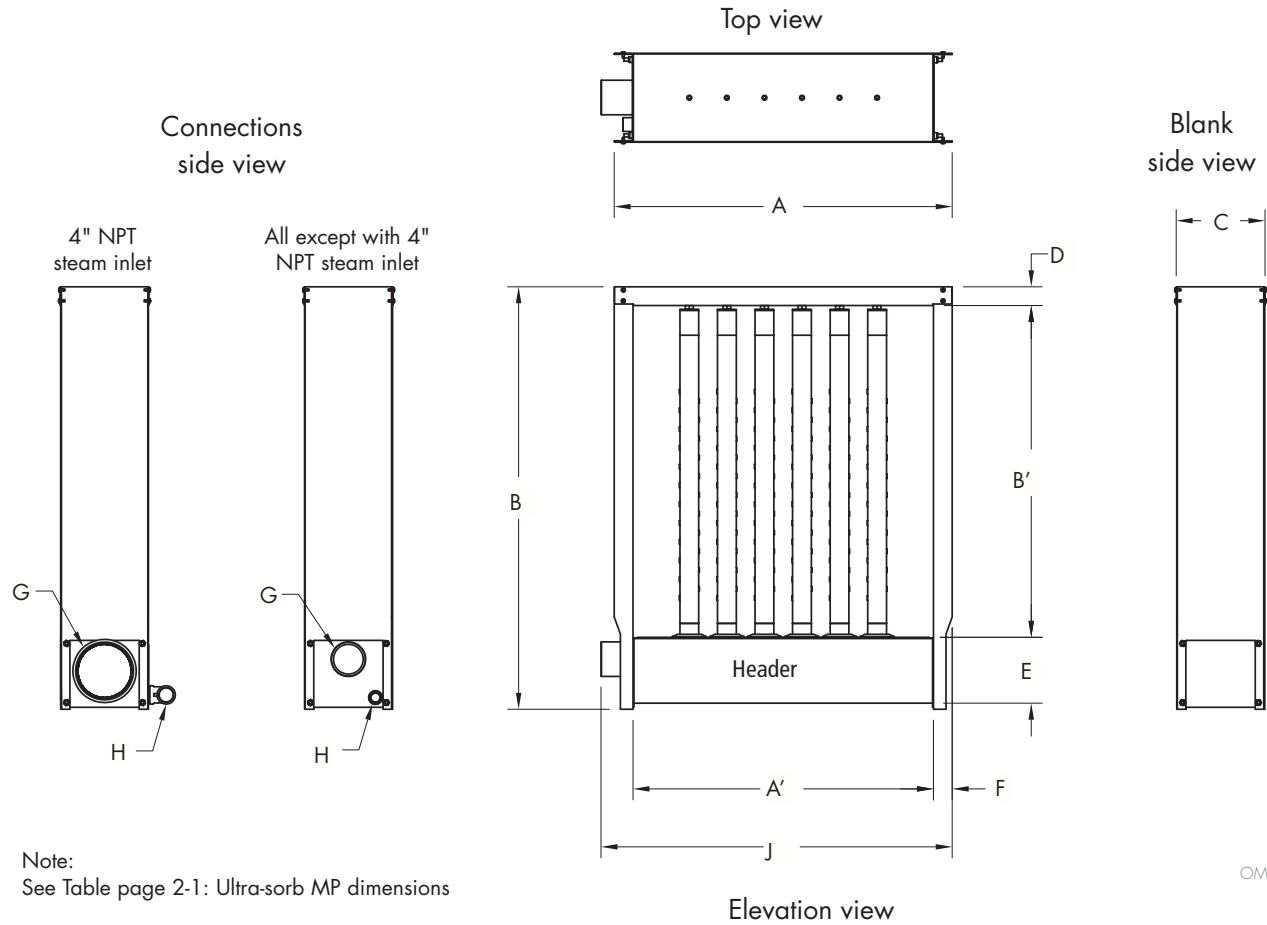


# Ultra-sorb Model MP steam dispersion panel mechanical specifications

**FIGURE 1-1: ULTRA-SORB MODEL MP DIMENSIONS**



Note:  
See Table page 2-1: Ultra-sorb MP dimensions

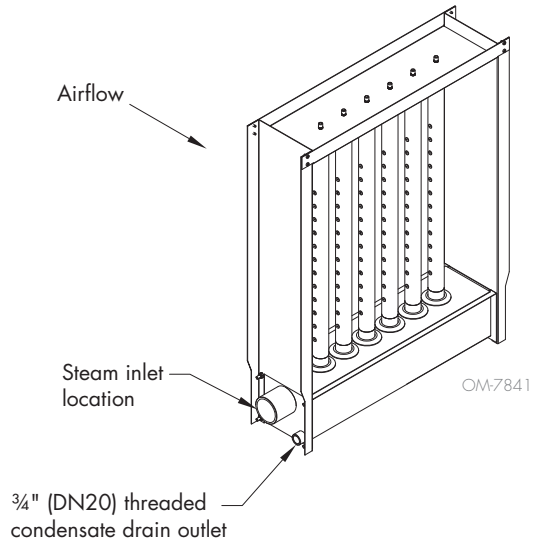
OM7915\_mp

**Table 2-1:  
Ultra-sorb Model MP dimensions**

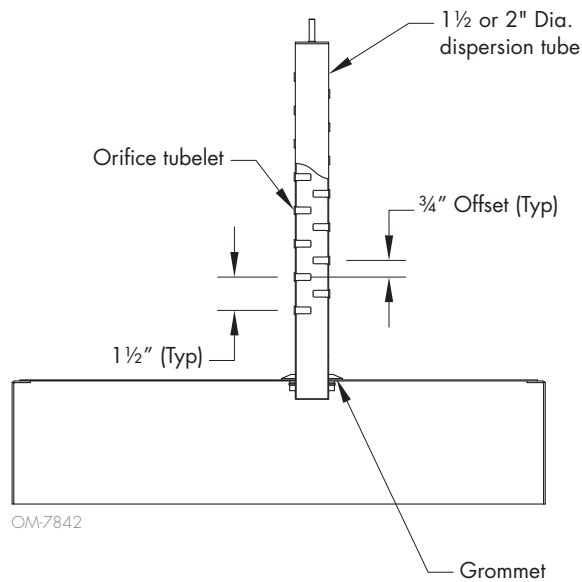
<b>Dimension</b>	<b>Inches (mm)</b>
<b>A</b> Unit width	15" (380 mm) min, 147" (3735 mm) max, in ½" (13 mm) increments
<b>A'</b> Face width	12" (305 mm) min, 144" (3660 mm) max, in ½" (13 mm) increments
<b>B</b> Unit height*	19.375" (492 mm) min, 151.375" (3845 mm) max, in ½" (13 mm) increments
<b>B'</b> Face height	12" (305 mm) min, 144" (3660 mm) max, in ½" (13 mm) increments
<b>C</b> Frame depth	7.2" (183 mm) 2.3" (58 mm) for side drain port (H) when 4" coupling (DN100) steam inlet
<b>D</b> Frame enclosure	1.5" (38 mm)
<b>E</b> Header enclosure	5.85" (149 mm)
<b>F</b> Mounting flange	1.5" (38 mm)
<b>G</b> Humidification steam inlet	<ul style="list-style-type: none"> <li>• 1" or 2" NPT coupling, for pressurized steam</li> <li>• 1½" or 2" NPT coupling, for evaporative steam</li> <li>• 3" or 4" flange, for evaporative steam</li> <li>• DN25 or DN50 BSPT nipple, for pressurized steam</li> <li>• DN50, DN80, or DN100 BSPT nipple, for evaporative steam</li> <li>• 1½" or 2" (DN40 or DN50) hose, for evaporative steam</li> </ul>
<b>H</b> Drain port (internal thread)	¾" NPT (DN20) coupling
<b>J</b> Overall width	<ul style="list-style-type: none"> <li>• 1" NPT coupling, dimension A + 1/8";</li> <li>• 1½" NPT coupling, dimension A + ½";</li> <li>• 2" NPT coupling, dimension A + 1"</li> <li>• 3" and 4" flange connection, dimension A + 6.5"</li> <li>• DN25, DN50, DN80 BSP nipple, dimension A + 38 mm</li> <li>• DN100 BSP nipple, dimension A + 64 mm</li> <li>• 1½" or 2" (DN40 or DN50) hose connection, dimension A + ½" (dimension A + 13 mm)</li> </ul>
* Panels with unit height more than 120" (3048 mm) have two-piece side flanges and are shipped with brackets for easy field assembly. Panels with unit height more than 98" (2490 mm) are shipped unassembled.	

# Ultra-sorb Model MP connections, capacities, and dispersion tube detail

**FIGURE 3-1: ULTRA-SORB MODEL MP STEAM INLET AND CONDENSATE OUTLET POSITIONS**



**FIGURE 3-2: DISPERSION TUBE DETAIL**



**Table 3-1:**  
Ultra-sorb Model MP unit capacity

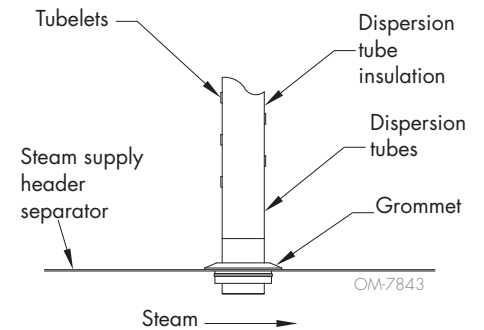
Evaporative steam		Pressurized steam (2-50 psi)	
lbs/hr	kg/hr	lbs/hr	kg/hr
700	318	2720	1235

**Table 3-2:**  
Ultra-sorb Model MP tube capacity\*

Tubes		lbs/hr	kg/hr
1.5"	Uninsulated	40	18.1
	Insulated	43	19.5
2.0"	Uninsulated	77	34.9
	Insulated	80	36.3

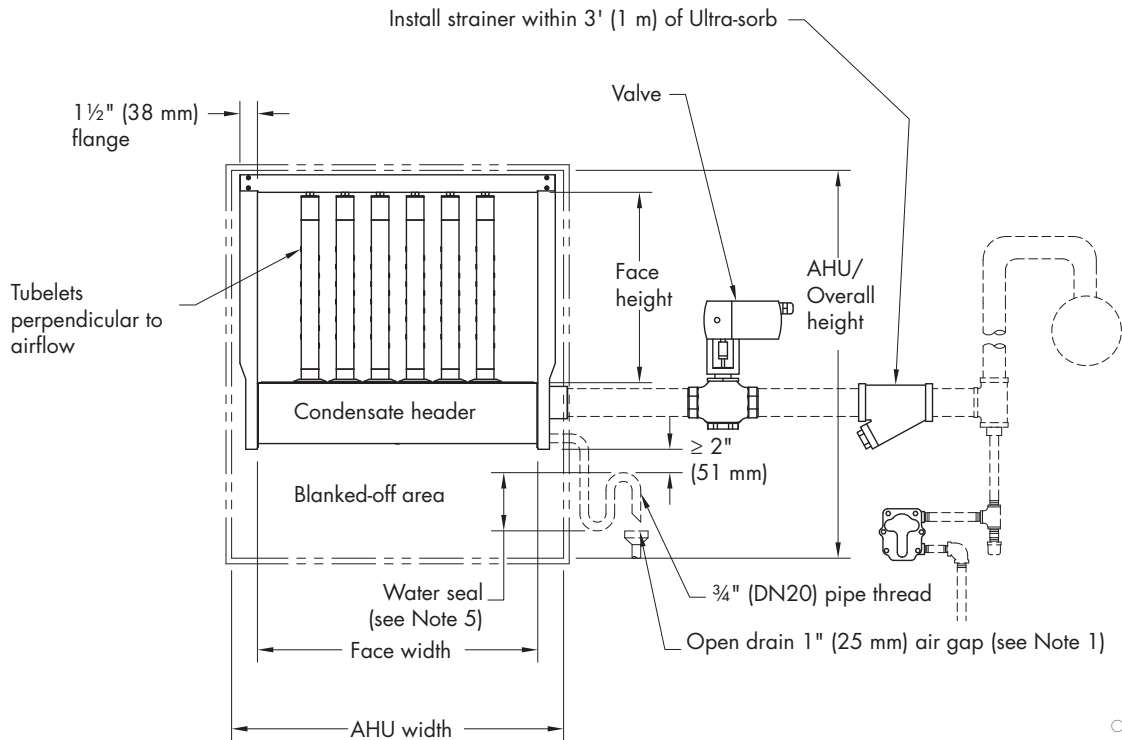
\* If face height (B') is <17" (432 mm), consult DriSteam or see DriCalc for the correct calculation.

**FIGURE 3-4: INSULATED TUBE DETAIL (HIGH-EFFICIENCY TUBE OPTION)**



# Ultra-sorb Model MP mounting - pressurized steam application

**FIGURE 4-1: MOUNTING ULTRA-SORB MODEL MP (PRESSURIZED STEAM APPLICATION SHOWN)**



OM-7839

**Notes:**

1. Locate drain air gap only in spaces with adequate temperature and air movement to absorb flash steam; otherwise, condensation may form on nearby surfaces. Refer to governing codes for drain pipe size and maximum discharge water temperature.
2. Dashed lines indicate provided by installer.
3. Steam supply line to unit and piping are not included.
4. Mount the Ultra-sorb Model MP vertically (for horizontal airflow only).
5. For pressurized steam applications provide a 10" (255 mm) minimum water seal.
6. Locate drain air gap only in spaces with adequate temperature and air movement to absorb flash steam; otherwise, condensation may form on nearby surfaces. Refer to governing codes for drain pipe size and maximum discharge water temperature.
7. When mounting an Ultra-sorb in a duct, headers and flanges are mounted outside the duct.
8. 100% of the airflow must pass through the Ultra-sorb, which means that any openings surrounding it must be sealed. The blanked-off area below the Ultra-sorb provides clearance height for water seals, and condensate piping connections.
9. Due to the pressure drop across the valve, the steam pressure at the header traps is minimal. Condensate must be drained.
10. Dispersion tubes are available at : 3" (76 mm), 4" (102 mm; for 2" diameter only), 6" (152 mm), 9" (228 mm), 12" (305 mm) centers.
11. Ultra-sorb humidifiers will be assembled, crated, and shipped intact in all sizes up to 98" (2490 mm) tall. Ultra-sorb can be shipped unassembled, by request, requiring field assembly.
12. Sizes are 12" to 144" (305 mm to 3658 mm) x 12" to 144" (305 mm to 3658 mm) in 1" (25 mm) increments.

**Each Ultra-sorb humidifier is furnished with:**

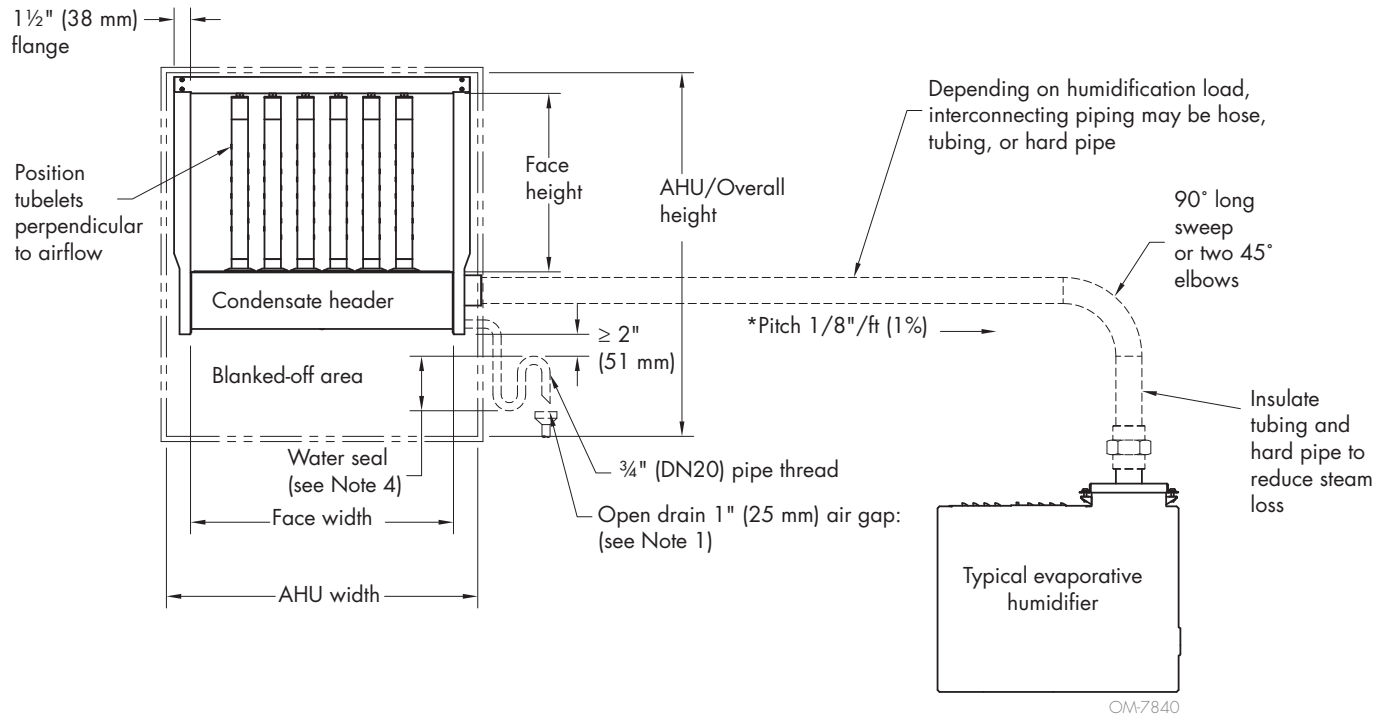
1. Type 304 stainless steel header/separator and dispersion tubes when shipped unassembled.
2. Hardware for connection of dispersion tubes to header when shipped unassembled.
3. Tube grommets for connection when shipped unassembled.

**Each Ultra-sorb humidifier used with boiler steam is also furnished with:**

1. One 3/4" NPT float and thermostatic trap ( $\leq 15$  psi steam source) or an inverted bucket trap for steam main drip leg use ( $> 15$  psi).
2. Inlet "Y" strainer.
3. Normally closed steam valve with stainless steel parabolic plug and seat.

# Ultra-sorb Model MP mounting - nonpressurized steam application

**FIGURE 5-1: MOUNTING ULTRA-SORB MODEL MP (NONPRESSURIZED STEAM APPLICATION SHOWN)**



## Notes:

1. Locate drain air gap only in spaces with adequate temperature and air movement to absorb flash steam; otherwise, condensation may form on nearby surfaces. Refer to governing codes for drain pipe size and maximum discharge water temperature.
2. When mounting an Ultra-sorb in a duct, headers and flanges are mounted outside the duct.
3. Mount the Ultra-sorb Model MP vertically (for horizontal airflow only).
4. For non-pressurized steam, provide a 5" (127 mm) minimum water seal with a 2" (51 mm) minimum drop from the header connection.
5. 100% of the airflow must pass through the Ultra-sorb, which means that any openings surrounding it must be sealed. The blanked-off area below the Ultra-sorb provides clearance height for water seals and condensate piping connections.
6. Condensate must be drained.
7. Dispersion tubes are available at: 3" (76 mm), 4" (102 mm; for 2" diameter only), 6" (152 mm), 9" (228 mm), 12" (305 mm) centers.
8. Ultra-sorb humidifiers will be assembled, crated, and shipped intact in all sizes up to 98" (2490 mm) wide. Ultra-sorb can be shipped unassembled, by request, requiring field assembly.
9. Sizes are 12" to 144" (305 mm to 3658 mm) x 12" to 144" (305 mm to 3658 mm) in 1" (25 mm) increments.

## Each Ultra-sorb humidifier is furnished with:

1. Type 304 stainless steel header/separator and dispersion tubes when shipped unassembled.
2. Hardware for connection of dispersion tubes to header when shipped unassembled.
3. Tube grommets for connection when shipped unassembled.

\*For electrode type humidifiers pitch towards Ultra-sorb MP steam dispersion panel.