

# Engineering Submittal - AHU Series Air Handlers



Job Name \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_  
Designer / Engineer \_\_\_\_\_  
Wholesaler \_\_\_\_\_  
Contractor \_\_\_\_\_  
Model / Quantity     AHU 800 \_\_\_\_\_     AHU 1200 LV \_\_\_\_\_  
                                  AHU 1200 \_\_\_\_\_     AHU 1600 \_\_\_\_\_  
                                  AHU 2000 LV \_\_\_\_\_  
Date \_\_\_\_\_

## Features

- » Extremely quiet operation
- » Galvalume cabinet, for a pre-finished, clean design
- » Wifi programmable controller
- » High efficiency ECM motor with variable speed centrifugal fans
- » Supply air opening compatible with standard cased and uncased AC and heat pump coils
- » High efficiency fin tube coil
- » Certified lead-free heating coil
- » Can manage external pump
- » Six position mounting
- » Return air openings on left, right, and bottom
- » Electrical connections on both sides
- » Compatible with most thermostat types (conventional and power stealing)

## IBCconnect app

- » Connect your smartphone to the AHU controller for advanced settings and diagnostics on the IBCconnect app, available on iOS and Android.

## Warranties

- » 5 year limited warranty on the heating coil
- » 5 year limited warranty on component parts

## AHU 800 Dimensions

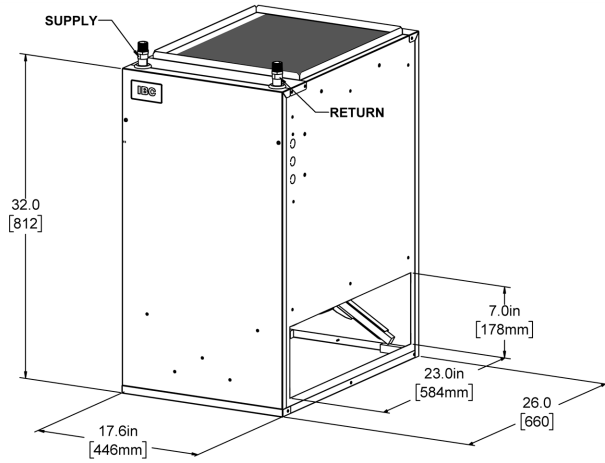


Figure 1 Front / right view

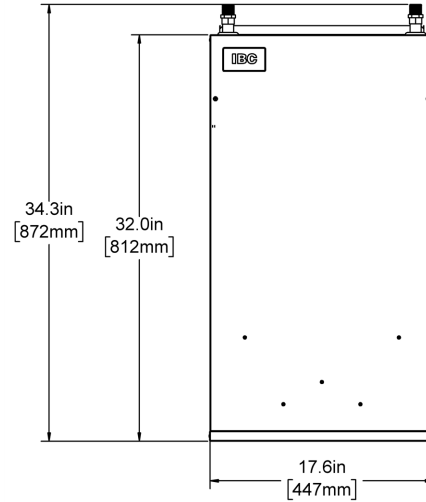


Figure 2 Frontal view

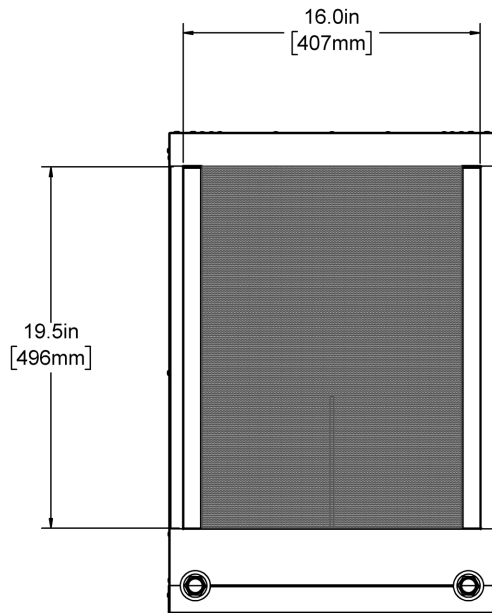


Figure 3 Top supply air opening

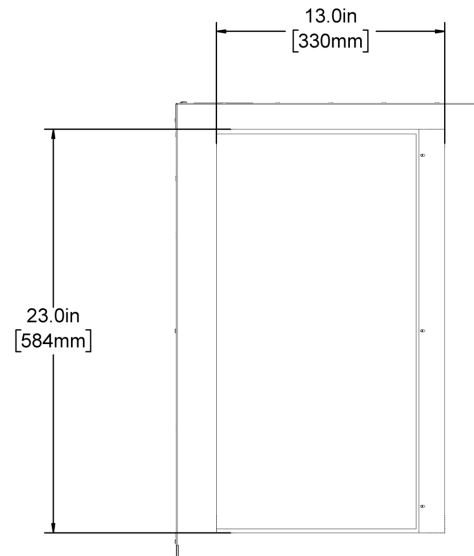


Figure 4 Bottom return air opening

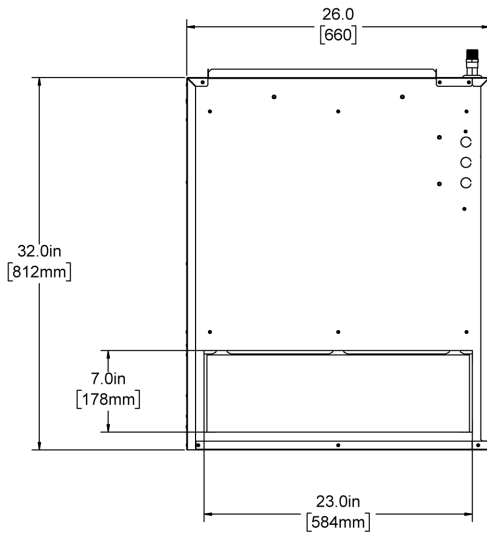


Figure 5 Left side return air opening

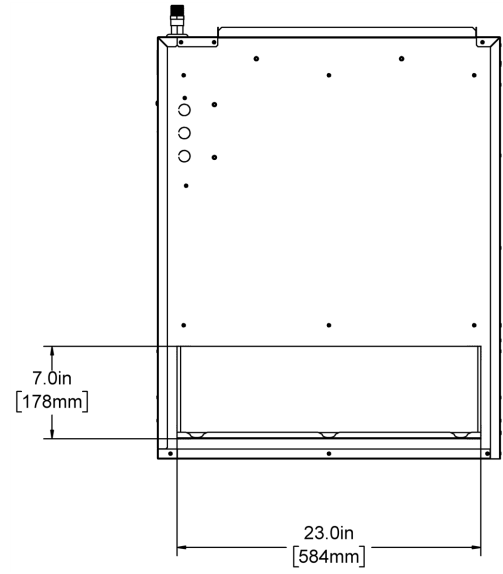


Figure 6 Right side return air opening

## AHU 1200 LV and AHU 1200 Dimensions

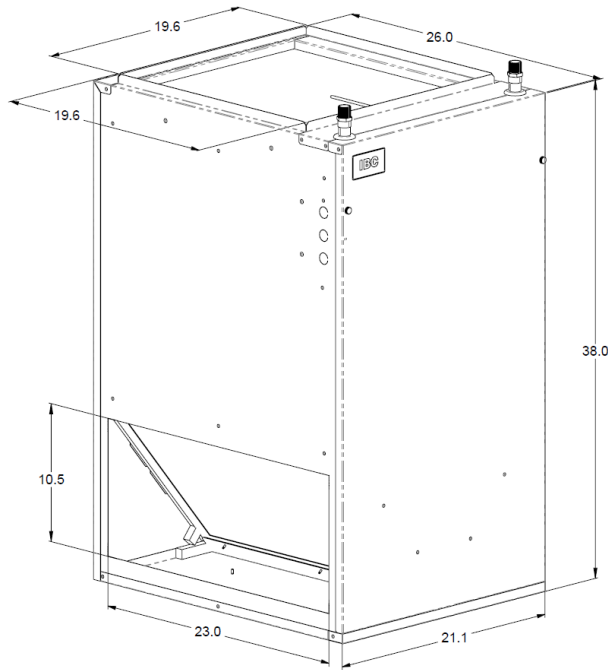


Figure 7 Front / left view

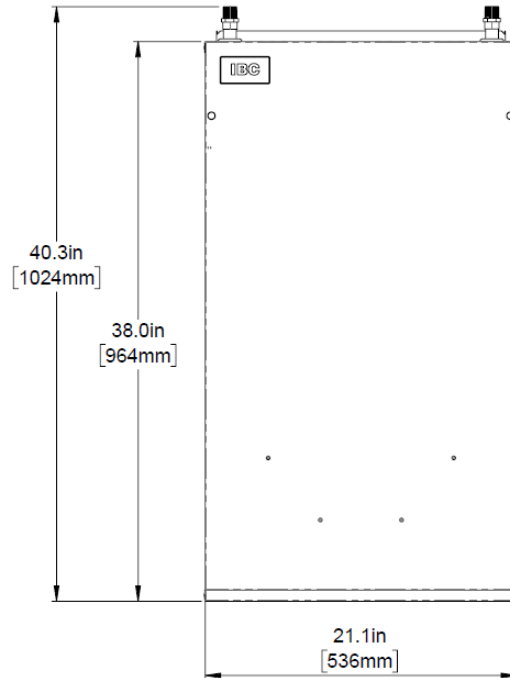


Figure 8 Frontal view

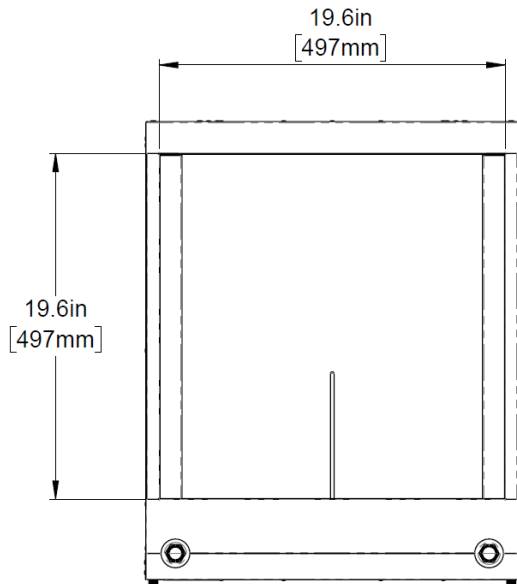


Figure 9 Top view

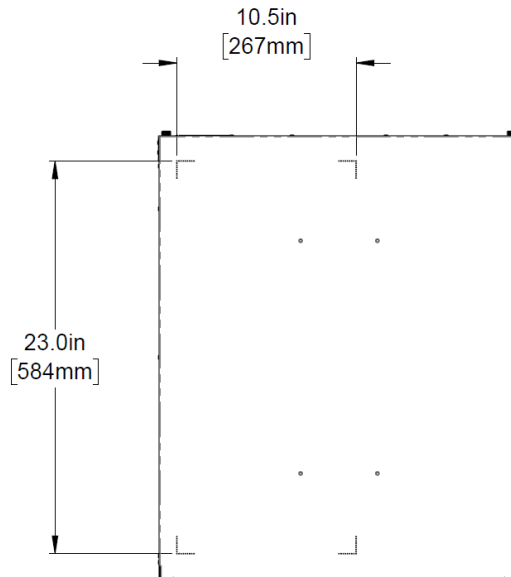


Figure 10 Bottom view

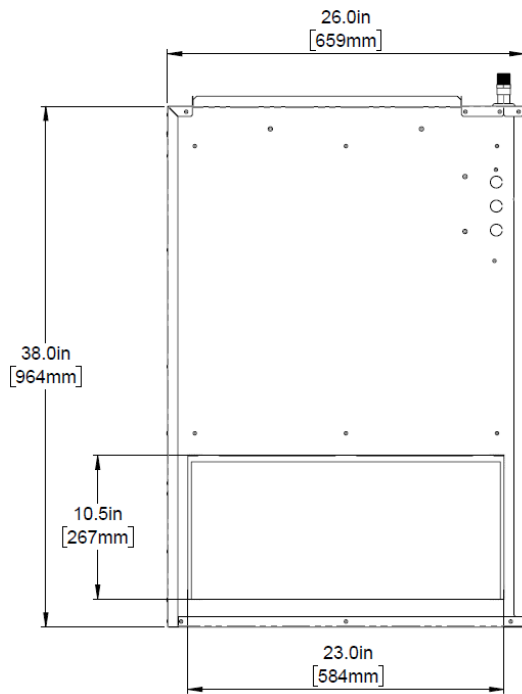


Figure 11 Left side return air opening

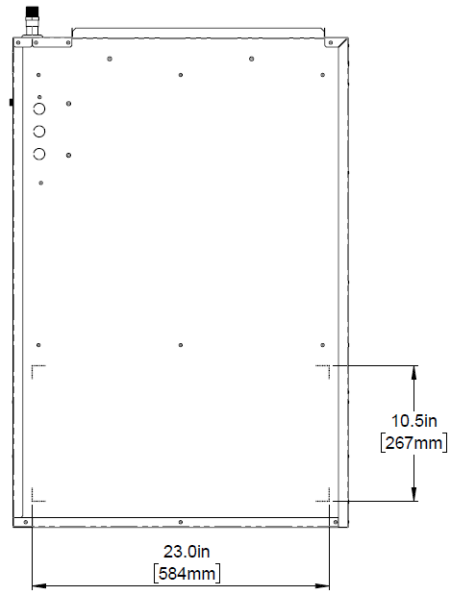


Figure 12 Right side return air opening

## AHU 1600 and AHU 2000 LV Dimensions

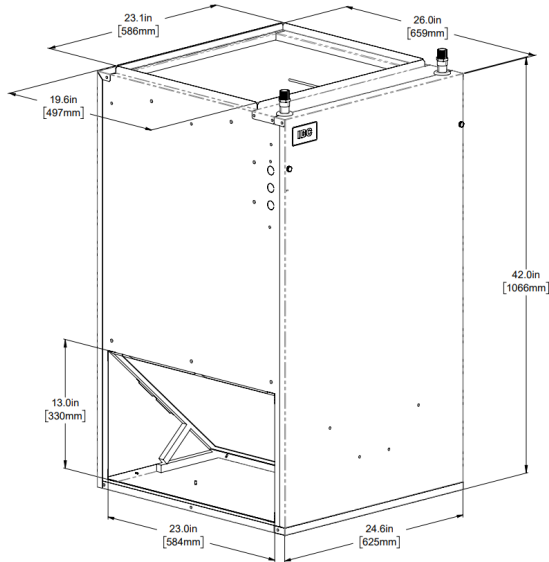


Figure 13 Front / left view

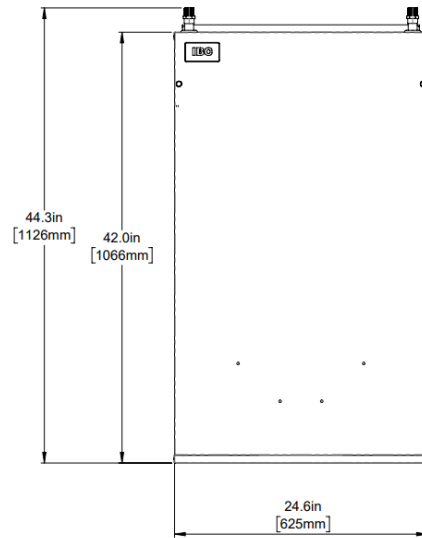


Figure 14 Frontal view

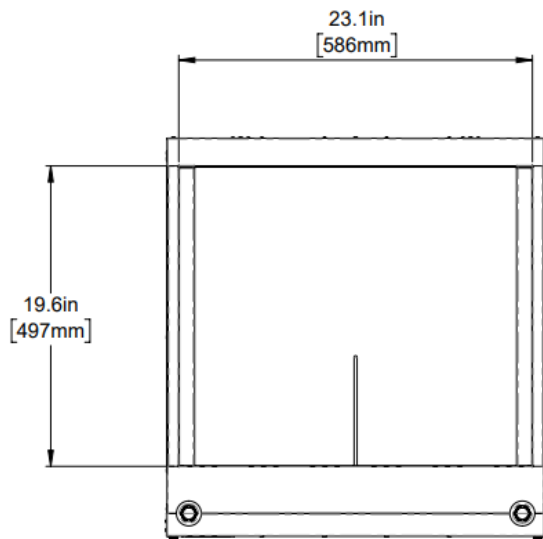


Figure 15 Top view

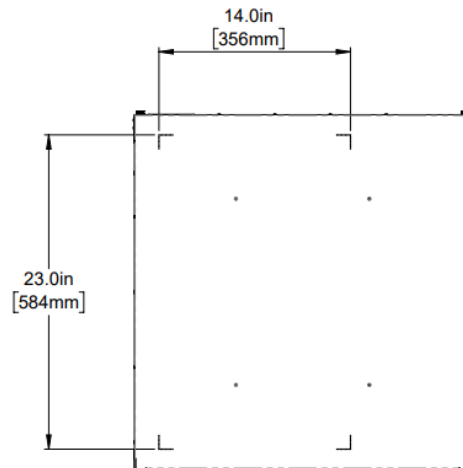


Figure 16 Bottom view

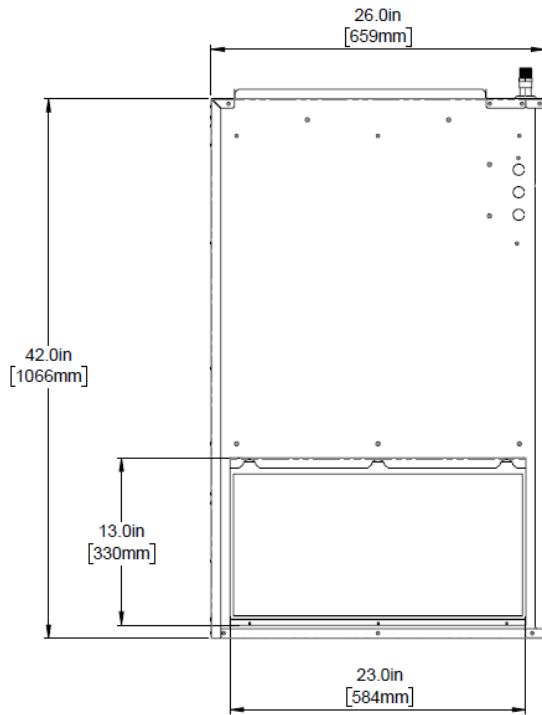


Figure 17 Left side return air opening

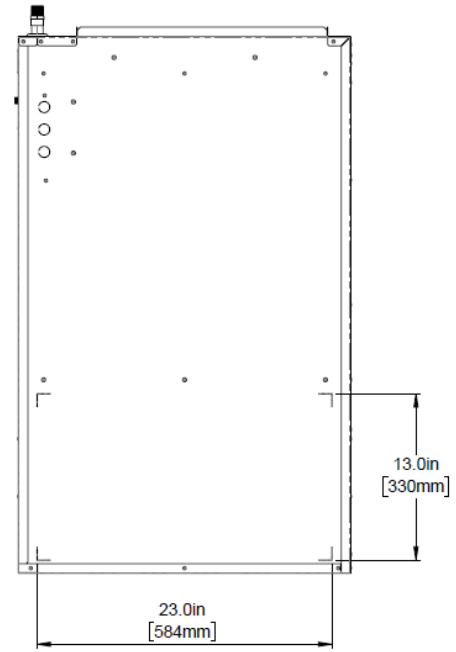


Figure 18 Right side return air opening

## Product Specifications

Specification	AHU 800	AHU 1200 LV*	AHU 1200	AHU 1600	AHU 2000 LV*
Max. water temperature (°F/C°)	195 / 90	195 / 90	195 / 90	195 / 90	195 / 90
Coil performance at 180°F (Btu/hr)	66,800	80,600	80,600	99,300	110,300
Water pipe connections (inches)	¾ MPT	¾ MPT	¾ MPT	¾ MPT	¾ MPT
External static pressure (") default Low	0.50	0.50	0.50	0.50	0.50
Medium	1.0	-	1.0	1.0	-
High	1.5	-	1.5	1.5	-
Max. operating water pressure (PSI)	150	150	150	150	150
Width (inches)	17.5	21	21	24.6	24.6
Depth (inches)	26	26	26	26	26
Height (inches)	32	38	38	42	42
Supply air opening width (inches)	16	19.6	19.6	23	23
Supply air opening depth (inches)	19.6	19.6	19.6	19.6	19.6
Side return air opening height (inches)	7	10.5	10.5	13	13
Side return air opening width (inches)	23	23	23	23	23
Bottom return air opening width (inches)	13	10.5	10.5	14	14
Bottom return air opening depth (inches)	23	23	23	23	23
Max. internal current power rating 120 Volts (Amp)	2.4	2.8	3.2	3.3	3.3
External pump supply 120V (Amp)	4	4	4	4	4
Voltage (V)	120	120	120	120	120
Max. air flow @ 0.5" rated external static pressure (CFM)	1134	1341	1707	2219	2219
Max. return air temperature (°F/C°)	122 / 50	122 / 50	122 / 50	122 / 50	122 / 50
Filter size - not supplied (inches)	16 x 25 x 1	25 x 20 x 1	25 x 20 x 1	25 x 20 x 1	25 x 20 x 1
Weight (boxed)	98 lbs	111 lbs	111 lbs	130 lbs	130 lbs

\* Low velocity only



## Coil Head Losses

Air Handler Coil Head Loss - AHU 800			
Flow rate (gpm)	3	4	5
Fluid pressure drop (ft)	1.6	2.7	3.5

**Table 1** Air handler coil head loss at 180°F (82°C) - AHU 800

Air Handler Coil Head Loss - AHU 1200 LV and AHU 1200			
Flow rate (gpm)	3	4	5
Fluid pressure drop (ft)	2.7	4.6	6.3

**Table 2** Air handler coil head loss at 180°F (82°C) - AHU 1200 & AHU 1200 LV

Air Handler Coil Head Loss - AHU 1600 and AHU 2000 LV			
Flow rate (gpm)	3	4	5
Fluid pressure drop (ft)	2.2	3.4	5.1

**Table 3** Air handler coil head loss at 180°F (82°C) - AHU 1600 & AHU 2000 LV

## Heating Capacity

AHU 800 - Heating Capacity (Entering Dry Bulb Temperature 70°F) @ 800 CFM			
Entering Water Temperature	3 GPM	4 GPM	5 GPM
195°F (90°C)	68.6 MBH	73.2 MBH	76.2 MBH
190°F (88°C)	65.7 MBH	70.2 MBH	73.0 MBH
180°F (82°C)	60.0 MBH	64.1 MBH	66.8 MBH
170°F (77°C)	54.4 MBH	58.1 MBH	60.5 MBH
160°F (71°C)	48.7 MBH	52.1 MBH	54.3 MBH
150°F (66°C)	43.1 MBH	46.2 MBH	48.1 MBH
140°F (60°C)	37.6 MBH	40.2 MBH	41.9 MBH
130°F (54°C)	32.0 MBH	34.3 MBH	35.8 MBH
120°F (49°C)	26.5 MBH	28.5 MBH	29.7 MBH
110°F (43°C)	21.1 MBH	22.6 MBH	23.7 MBH

AHU 1200 & AHU 1200 LV - Heating Capacity (Entering Dry Bulb Temperature 70°F) @ 1200 CFM			
Entering Water Temperature	3 GPM	4 GPM	5 GPM
195°F (90°C)	81.3 MBH	87.7 MBH	91.8 MBH
190°F (88°C)	78.0 MBH	84.1 MBH	88.1 MBH

**AHU 1200 & AHU 1200 LV - Heating Capacity (Entering Dry Bulb Temperature 70°F) @ 1200 CFM**

Entering Water Temperature	3 GPM	4 GPM	5 GPM
180°F (82°C)	71.3 MBH	76.9 MBH	80.6 MBH
170°F (77°C)	64.6 MBH	69.8 MBH	73.1 MBH
160°F (71°C)	58.0 MBH	62.6 MBH	65.6 MBH
150°F (66°C)	51.4 MBH	55.5 MBH	58.2 MBH
140°F (60°C)	44.8 MBH	48.4 MBH	50.8 MBH
130°F (54°C)	38.3 MBH	41.4 MBH	43.4 MBH
120°F (49°C)	31.8 MBH	34.3 MBH	36.0 MBH
110°F (43°C)	25.3 MBH	27.4 MBH	28.7 MBH

**AHU 1600 - Heating Capacity (Entering Dry Bulb Temperature 70°F) @ 1600 CFM**

Entering Water Temperature	3 GPM	4 GPM	5 GPM
195°F (90°C)	96.9 MBH	106.7 MBH	113.2 MBH
190°F (88°C)	92.9 MBH	102.3 MBH	108.6 MBH
180°F (82°C)	84.9 MBH	93.5 MBH	99.3 MBH
170°F (77°C)	77.0 MBH	84.8 MBH	90.0 MBH
160°F (71°C)	69.1 MBH	76.1 MBH	80.8 MBH
150°F (66°C)	61.2 MBH	67.4 MBH	71.6 MBH
140°F (60°C)	53.3 MBH	58.8 MBH	62.5 MBH
130°F (54°C)	45.5 MBH	50.2 MBH	53.4 MBH
120°F (49°C)	37.7 MBH	41.6 MBH	44.3 MBH
110°F (43°C)	30.0 MBH	33.2 MBH	35.3 MBH

**AHU 2000 LV - Heating Capacity (Entering Dry Bulb Temperature 70°F) @ 2000 CFM**

Entering Water Temperature	3 GPM	4 GPM	5 GPM
195°F (90°C)	105.2 MBH	117.4 MBH	125.8 MBH
190°F (88°C)	100.8 MBH	112.5 MBH	120.6 MBH
180°F (82°C)	92.1 MBH	102.9 MBH	110.3 MBH
170°F (77°C)	83.5 MBH	93.2 MBH	100.0 MBH
160°F (71°C)	74.9 MBH	83.6 MBH	89.7 MBH
150°F (66°C)	66.3 MBH	74.1 MBH	79.5 MBH
140°F (60°C)	57.8 MBH	64.6 MBH	69.3 MBH
130°F (54°C)	49.3 MBH	55.1 MBH	59.1 MBH
120°F (49°C)	40.9 MBH	45.7 MBH	49.1 MBH
110°F (43°C)	32.5 MBH	36.4 MBH	39.1 MBH

## Cabinet Clearance

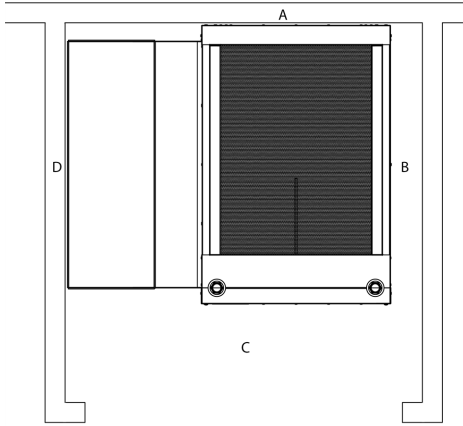


Figure 19 View from top of air handling appliance and duct in a closet

	Orientation	Clearance to Combustible	Clearance for servicing
	Top	0	6 inches
D	Left Side	0	min. 3 inches
B	Right Side	0	min. 3 inches
	Bottom	0	0 (if no connection)
C	Front	1 inch	24 inches
A	Back	0	0

## Boiler Pipe Sizing Guide - Copper

Copper Pipe Sizing	BTU / HR Capacity @ 20°F (11°C) ΔT
1/2"	16,000 BTU
3/4"	36,000 BTU
1"	72,000 BTU
1 1/4"	110,000 BTU