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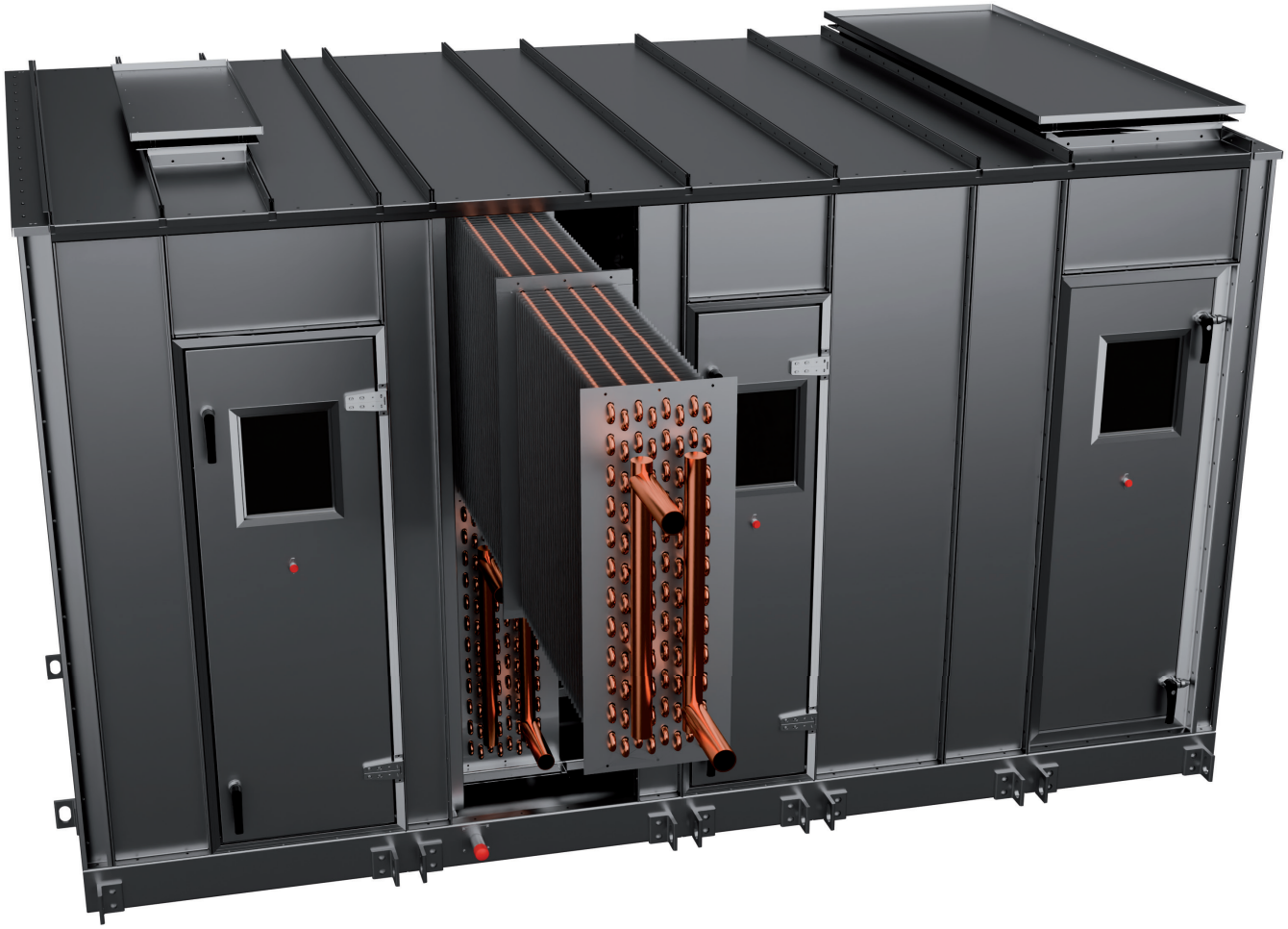
ClimateCraft
A NIBE GROUP MEMBER

Reduction in Maintenance Space

ClimateCraft units offer a unique opportunity to increase profits in healthcare by reducing the required space for maintenance when compared with the industry-standard air handling units



Reduction in Maintenance Space

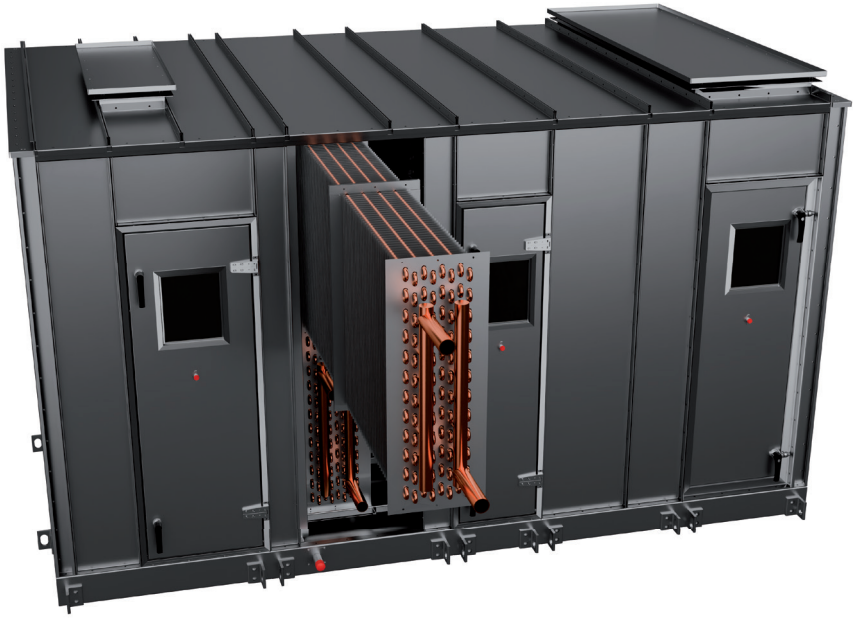
ClimateCraft air handling units (AHUs) offer a unique opportunity for healthcare facilities to increase operational efficiency and profitability by significantly reducing the space required for coil maintenance when compared to traditional industry-standard AHUs. This reduction in maintenance space allows facilities to reclaim valuable square footage for additional equipment, rentable areas, or to lower overall building construction costs. Also, when replacing an existing AHU, the reduced clearance area may enable an easier installation of your new ClimateCraft unit and more flexible installation opportunities.

Traditional vs. ClimateCraft Coil Maintenance Requirements

In a typical AHU, coil maintenance involves disconnecting water lines, removing the coil panel, and extracting the coil—requiring a clearance equal to the coil's fin length plus an additional 12 inches to accommodate headers and facilitate removal.

ClimateCraft units, however, feature removable panels on both the upstream and downstream sides of the coil section. This design enables the coil to be rotated during removal, significantly minimizing the space needed for maintenance. While the coil must still be maneuvered through the upstream air seal, or the air seal must be temporarily removed, the overall maintenance footprint is substantially reduced.

Figure 1. Industry Standard Coil Pull

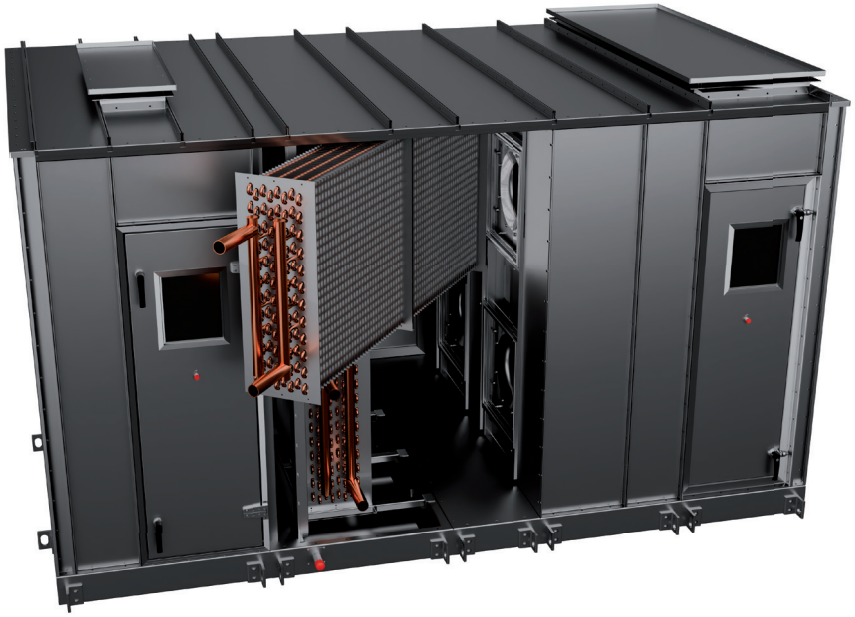


Industry Standard Coil Maintenance Area Equation

$$\text{Area} = \frac{ML * Unit\ Length}{144}$$

ML= Maintenance length = Coil Fin Length + 12 inches*=(Header + Safety Factor)

Figure 2. Climate Craft Coil Pull Clearance



To determine the coil pull clearance for a ClimateCraft unit, identify the three primary points of contact as the coil is angled out of the housing:

1. **First Point of Contact**
   Calculate the maximum removal angle by using the coil's length and the size of the coil access opening. This angle defines the first point of contact between the coil and the removed filter panel.
2. **Second Point of Contact**
   Identify where the coil may come into contact with the fan wall. Measure the maximum length between the first and second points of contact to establish the clearance envelope inside the unit.
3. **Third Point of Contact**
   Use iterative calculations to determine the maximum coil depth as it extends outside the unit. This defines the third point of contact with the external wall or adjacent structure.

Using these data points, a series of geometric equations can determine the minimum required clearance and maximum removable coil length. ClimateCraft engineers utilize a proprietary software tool to accurately calculate these dimensions. For assistance, contact your local ClimateCraft representative.

Customer Impact: Reduced Mechanical Room Space and Cost Savings

The reduced maintenance space requirement directly benefits customers by allowing for smaller mechanical rooms and associated construction savings. When replacing an existing AHU, the reduced clearance area may enable an easier installation of your new ClimateCraft unit and more flexible installation opportunities. The following chart illustrates the comparative difference in required clearance and cost between a ClimateCraft unit and a standard custom AHU, based on hospital or medical office rental or construction costs.

Example Calculation Using the ClimateCraft Coil Clearance Calculator:

To use the coil clearance calculator, enter the coil length and depth. The calculator will then calculate and compare the industry standard coil clearance to the coil clearance required for a ClimateCraft unit. This difference in area is multiplied by average rent and building rates (2025 rates for New York City) from CBRE and Veterans Affairs office to provide clear rent and building cost differences.

Table 1. Coil Clearance Calculator Example

Coil Clearance Calculator	
Fin Length	120″
Coil Depth	15″
Maximum Coil Clearance	71.43″
Standard Coil Clearance	132″
Difference	60.57″
Area	84.12 ft^2
Building Cost Difference	$48,436
Possible Rent Cost Difference	$2,692

Building cost Equation = (Difference in Coil Clearance) * (Length of Unit) * (Building cost of area)

Utilizing the calculator, Table 2 shows the difference in cost for an average unit around 200-inches in length. Small units have 60-inch fin length coil, medium units have 90-inch fin length coil, and large units have 120-inch fin length coil.

Table 2. Mechanical Maintenance Cost for Build and Rent

Unit Type	Build Rate		Rent Rate ($/Month)		Difference in Build Rate	Difference in Rent Rate
	ClimateCraft	AHU X	ClimateCraft	AHU X		
Small	$38,009	$57,576	$4,291	$6,500	$19,567	$2,209
Medium	$44,926	$81,527	$5,072	$9,208	$36,601	$4,136
Large	$48,436	$105,536	$5,468	$11,917	$57,100	$6,449

In conclusion, ClimateCraft units optimize customer's space by reducing the required space for coil maintenance. This space can be used for additional equipment, rentals, or omitted from building plans to reduce the cost of building.

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Reference Table 1. Rent Cost for Medical Office or Hospital in the United States for 2025

CBRE	Rent sqr/ft/month
San Antonio, TX	$15
Phoenix, AZ	$19-25
New York	$65
Dublin, OH	$21-23
Boca, FL	$26
Morristown, NJ	$15
Hollywood, FL	$32

Reference Table 2. Building Cost for Medical Office or Hospitals in the United States for 2025

Building cost per sqr foot	
National Average	$445
New York, NY	$575
Chicago, IL	$525
Boston, MA	$505
Los Angeles, CA	$507
Ann Arbor, MI	$437
Omaha, NE	$408
Denver, CO	$405
Atlanta, GA	$402
Phoenix, AZ	$398
Houston, TX	$382

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