

LIGHT COMMERCIAL / RESIDENTIAL PRODUCTS

AHRTM MODULAR AIR HANDLERS

AHR™

Small Systems

Modular Air Handler



Blower & Heat Strip

HPT Z-Coil™
Z-33, Z-44, Z-55

Optional:
Filter Enclosure (not shown)
2" Washable filter

Specifically Designed for Humidity Control

INDOOR ENVIRONMENTAL CONTROL

HPT AHR™ Modular Air Handler

The HPT AHR™ cooling/dehumidification system includes the following components:

- Blower Module Available in Four models ranging from 520 to 2000 cfm @ .50 Static
- Blower Motor B-08 -- 1/4 HP
 B-12 -- 1/2 HP
 C-16 -- 1/2 HP
 D-20 -- 3/4 HP
- Heat Pipe Technology Dehumidifier Z-Coil™ Three models from 2 ton through 5 ton

The Blower Modules are sized to deliver design air quantity both efficiently and quietly. The direct drive, three-speed blower motors provide a selection of air quantities to match any application. All models include a one minute blower off relay as standard to enhance system efficiency ratings. The durable, prepainted steel protects the unit against rust and corrosion. All models have 1/2" fiberglass insulation.

Electric Heaters

Heat strips are available in both single and three-phase models. All heaters include nickel-chromium elements with a five-year limited warranty on one-phase elements and one-year limited warranty on three-phase elements. Sequencers are provided to control heaters in all models. Circuit breakers are used in 208/230-volt single-phase units of 13 kW and larger. Models equipped with circuit breakers may be altered in the field to use multi-source power supply. Over-temperature limit switches provide protection from airflow loss.

These units must be wired and installed in accordance with all national and local safety codes. Voltage limits are as follows:

| Blower Voltage | Normal Operating Voltage Range |
|-----------------------|---------------------------------------|
| 115-1-60 | 104-128 |
| 208/230-1-60 (06) | 187-253 |
| 460-3-60 (46) | 414-506 |

Heat strips are shipped separately and field installed.

The HPT Dehumidifier Z-Coil™ is a cased evaporator coil with passive Precool and Reheat Heat Pipes to greatly enhance the latent capability of the system. The Z-Coil™ has a built in expansion valve, and a stainless steel drain pan with dual drains. The Z-Coil™ has 1" duct flanges, top and bottom, for ease of connection to ductboard or metal duct.

Refer to the Z-Coil™ Specifications and Installation and Operations Manual for additional features and benefits.

Installation, operation, and maintenance instructions, and assembly instructions are included with each AHR™ Modular Air Handler.

A system check sheet is included in each Installation, Operations manual. This check sheet is required to be completed with each installation. Proper start-up and check-out of each system will ensure maximum performance at minimal operational cost to the owner.

Assembly Instructions for HPT AHR™ Modular Air Handler

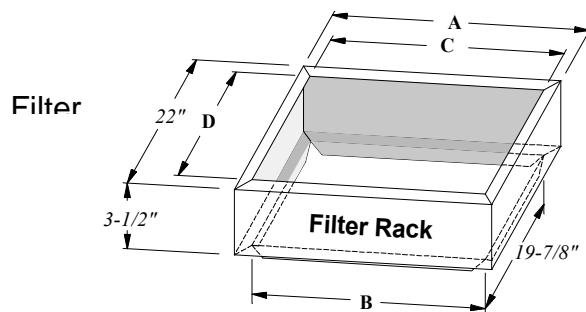
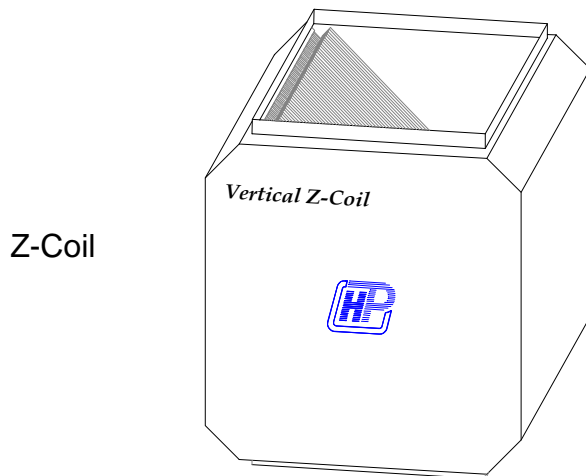
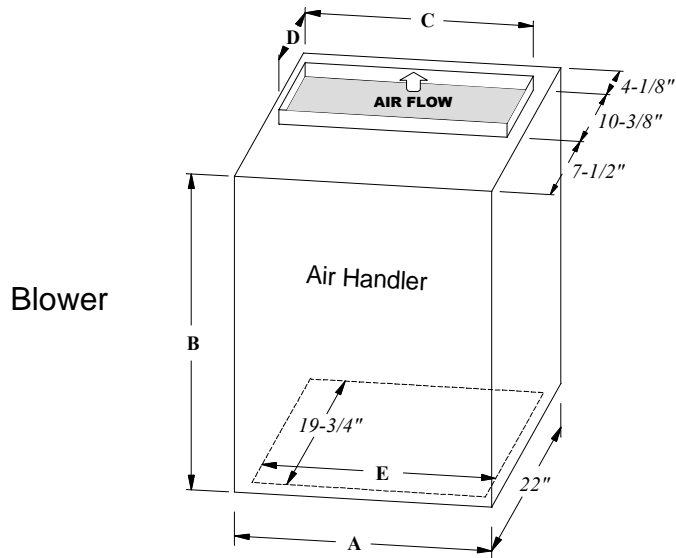
1. Check all components for hidden damage.
2. Report any damage to the trucking company within 24 hours.
3. Start assembly using foam insulating tape on all connecting flanges to prevent air leakage.
4. Install the filter enclosure with the duct flange down into platform or duct.
5. Insert the bottom flange on the Z-Coil™ into the top of the filter enclosure.
6. Mount the blower over the flange on the Z-Coil™.
7. Install heat strips in the blower and connect the wiring per instructions.
8. Wire to the single point connection per code and the instructions in the blower assembly.
9. Charge the system per the condenser or heat pump manufacturer's recommendations.
10. Complete the enclosed check sheet on the Z-Coil™ performance as required for warranty.
11. Return the enclosed warranty registration form to Heat Pipe Technology, Inc., 4340 NE 49th Avenue, Gainesville, Florida 32609.

Notes:

In the process of assembly it is best to attach each component to the other with screws. If the installation is horizontal, make sure airflow is from left to right facing the access panel. Follow the instructions included with the Z-Coil™ for installation and charging.

AHR-33 Modular Air Handler

DIMENSIONS



Air Handler Model N1AHB12

| | |
|-------------------------------|--------|
| A – Overall Width (in) | 17 1/2 |
| B – Overall Height (in) | 24 1/4 |
| C – Duct Flange Width (in) | 16 1/2 |
| D – Duct Flange Depth (in) | 10 3/8 |
| E – Bottom Width Opening (in) | 16 1/2 |

FAN MODULE

Heat Strip Options:

| | |
|--------------------|--------|
| 1 phase @208/230 V | 5 kW |
| | 7.5 kW |
| | 10 kW |
| | 15 kW |
| 3 phase @208/230 V | 10 kW |
| | 15 kW |
| | 18 kW |

Blower Drives:

Available 920 cfm to 1120 cfm @ 0.50 ESP
3 speed, 1/2 HP, 1075 RPM

Filter Enclosure:

Designed for 2" Washable filter

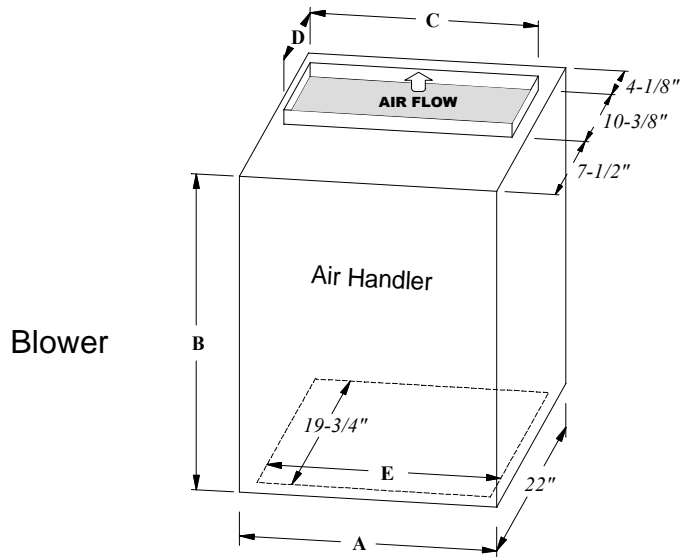
All components can be purchased separately or in any combination.

Filter Rack Model 1FR0617

| | |
|------------------------------|--------|
| A – Overall Width (in) | 17 1/2 |
| B – Duct Flange Width (in) | 16 3/8 |
| C – Upper Opening Width (in) | 16 1/2 |
| D – Upper Opening Depth (in) | 21 |

AHR-44 Modular Air Handler

DIMENSIONS



Air Handler Model N1AHC16

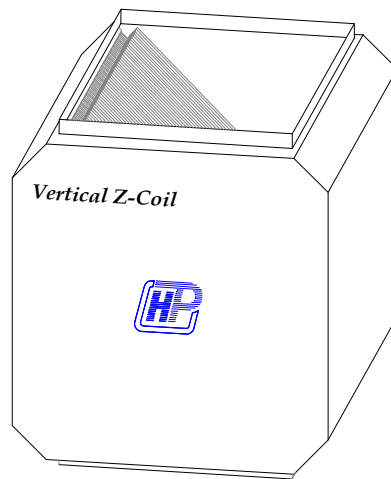
| | |
|-------------------------------|--------|
| A – Overall Width (in) | 21 |
| B – Overall Height (in) | 24 1/4 |
| C – Duct Flange Width (in) | 20 |
| D – Duct Flange Depth (in) | 10 3/8 |
| E – Bottom Width Opening (in) | 20 |

FAN MODULE

Heat Strip Options:

| | |
|--------------------|--------|
| 1 phase @208/230 V | 5 kW |
| | 7.5 kW |
| | 10 kW |
| | 15 kW |
| 3 phase @208/230 V | 10 kW |
| | 15 kW |
| | 18 kW |

Z-Coil



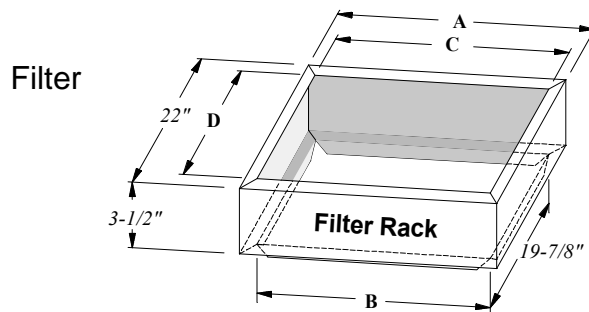
Blower Drives:

Available 1270 cfm to 1525 cfm @ 0.50 ESP
3 speed, 1/2 HP, 1085 RPM

Filter Enclosure:

Designed for 2" Washable filter

All components can be purchased separately or in any combination.

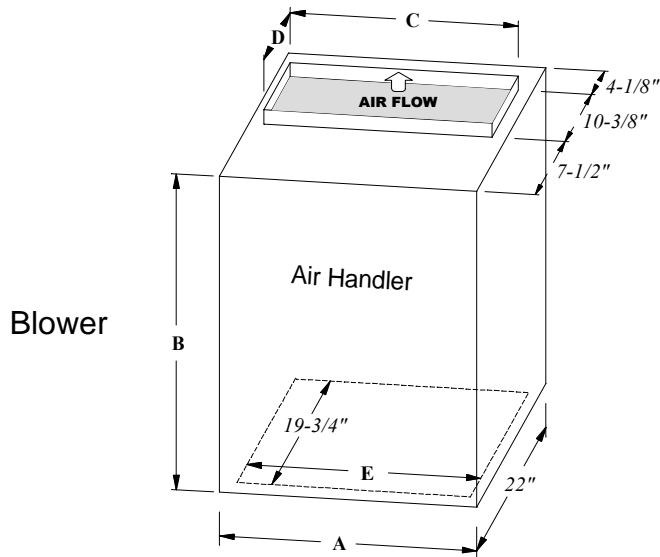


Filter Rack Model 1FR0621

| | |
|------------------------------|--------|
| A – Overall Width (in) | 21 |
| B – Duct Flange Width (in) | 19 7/8 |
| C – Upper Opening Width (in) | 20 |
| D – Upper Opening Depth (in) | 21 |

AHR-55 Modular Air Handler

DIMENSIONS



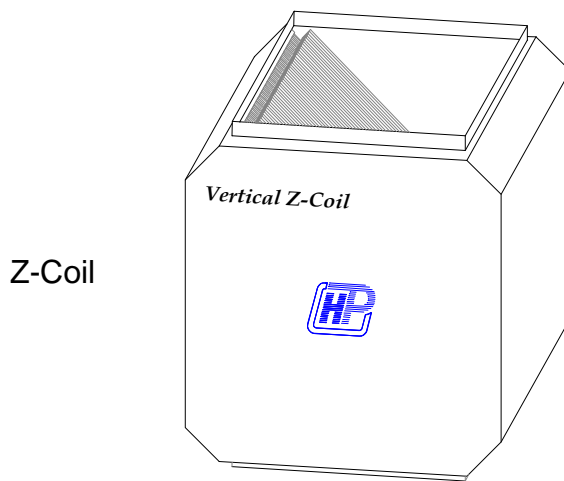
Air Handler Model N1AHD20

| | |
|-------------------------------|--------|
| A – Overall Width (in) | 24 1/2 |
| B – Overall Height (in) | 24 1/4 |
| C – Duct Flange Width (in) | 22 1/2 |
| D – Duct Flange Depth (in) | 10 3/8 |
| E – Bottom Width Opening (in) | 23 1/2 |

FAN MODULE

Heat Strip Options:

| | |
|--------------------|--------|
| 1 phase @208/230 V | 5 kW |
| | 7.5 kW |
| | 10 kW |
| | 15 kW |
| | 20 kW |
| 3 phase @208/230 V | 10 kW |
| | 15 kW |
| | 18 kW |



Blower Drives:

Available 1505 cfm to 2000 cfm @ 0.50 ESP
3 speed, 3/4 HP, 1100 RPM

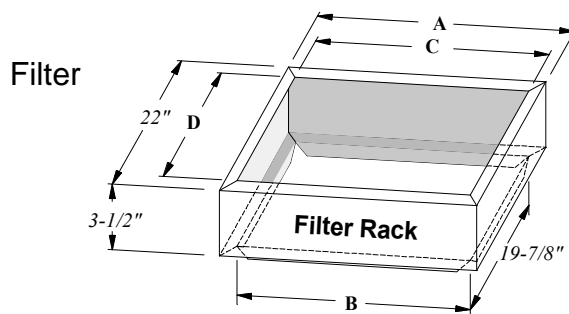
Adapter:

24 ga. Galvanized steel and insulated

Filter Enclosure:

Designed for 2" Washable filter

All components can be purchased separately or in any combination.



Filter Rack Model 1FR-624

| | |
|------------------------------|--------|
| A – Overall Width (in) | 24 1/2 |
| B – Duct Flange Width (in) | 23 3/8 |
| C – Upper Opening Width (in) | 23 1/2 |
| D – Upper Opening Depth (in) | 21 |

AHR™ Modular Air Handler Guide Specifications

AHR™ Modular Air Handler

General: Furnish and install one AHR model _____ ☐ Vertical ☐ Horizontal modular air handler system per the installation instructions included with the unit. The AHR™ shall be by Heat Pipe Technology and manufactured in accordance with industry standards.

The installed weight shall not be more than _____ lbs. The AHR™ shall have a width of not more than _____ inches, a height or not more than _____ inches and a depth not to exceed _____ inches. The AHR™ shall be shipped in separate components and field assembled. Those components are to include a _____ HP blower motor, a _____ kW heat strip, one Z-Coil™ complete, and a Filter enclosure which accommodates 1" or 2" filters. The AHR™ will be used in an ☐ upflow ☐ horizontal configuration.

DX Cooling system: The total cooling capacity shall not be less than _____ Btuh with an evaporator air volume of _____ CFM and a _____ °F coil evaporating temperature.

The coil shall be fabricated with aluminum fins machine fitted to copper tubes. The coil shall be equipped with a factory installed expansion valve and stainless steel drain pan. The coil face area shall not be less than _____ sq. ft.

Blower: The heating elements are to be of nickel chromium construction. All elements are to have in line over temperature protection and fuse links for secondary protection. All units are to be equipped with a 208/240/24 volt transformer. Twin circuit protection will be provided on all units exceeding 48 amps. The blower is to be designed with a direct drive motor capable of delivering _____ CFM at an external static pressure of _____ inches water gauge.

Approvals: The AHR™ shall be comprised of UL/ETL/ARI components listed and bear the approved labels.

Equipment Warranty: The AHR™ blower has a one year limited warranty. The Z-Coil™ has a five-year limited warranty. Refer to the Heat Pipe Technology warranty form included in the installation manual shipped with each AHR™ modular air handler.

Cabinet: Shall be of painted galvanized steel thermally and acoustically lined. Refrigerant lines, dual condensate drains and the expansion valve sensor will have external connection ports.

Service Access: The AHR™ shall be equipped with removal panels for servicing of serviceable parts.

The AHR Blower Module Five-Year Limited Warranty

Subject to the following conditions, **Heat Pipe Technology, Inc. (HPT)**, warrants this product to be free from defects in material and workmanship for a period of ONE YEAR from the date of installation. This warranty is in lieu of all other warrants not expressly set forth herein, whether expressed or implied by operation of law or otherwise. In the event this product fails under normal use and service within the applicable period, HPT will correct, repair or, at its sole discretion, replace the defective product or refund the purchase price of products which are returned freight prepaid to HPT for inspection, when accompanied by proof of purchase and written claims of defect, and which upon inspection by HPT, do comply with the terms of this warranty.

This warranty applies to the first retail buyer and extends to any subsequent owners of the systems.

The cost of replacement parts or components shall be determined by the price schedule in effect at the time of submission of warranty claim.

Repair or replacement parts will be furnished F.O.B. factory in all cases.

If HPT elects to replace or provide a refund, the defective product must be returned to HPT free and clear of liens or other encumbrances.

Limitations on Liability

This warranty does not cover and no warranty is made with respect to:

- A. Failures not reported to HPT within the period specified above;
- B. Failures or damage due to misapplication, misuse, abuse, improper storage or handling, abnormal conditions of temperature, water, dirt, corrosive substances or other contaminants;
- C. Products which have been repaired with parts or materials not furnished or approved by HPT or by its authorized dealers or representatives, or products which have been in any way tampered with or altered;
- D. Products damaged in shipment or storage or otherwise without fault of HPT;
- E. Normal maintenance as outlined in the installation and servicing instructions or owners manual including coil cleaning, filter cleaning and periodic flushing of systems;
- F. Damage or repairs required as a consequence of faulty installation or application by others;
- G. Damage or repairs required as a consequence of any misapplication, abuse, improper servicing, unauthorized alteration or improper operation;
- H. Damage as a result of floods, winds, fires, lightning, accidents, corrosive atmosphere or other conditions beyond the control of HPT;
- I. Damage resulting from freezing of domestic water or condensate, inadequate or interrupted water supply, use of corrosive water, fouling or restriction of the water circuit by foreign material or like causes;
- J. Damage resulting from operation with an inadequate supply of air or water;

HPT total responsibility for any claims, damages, losses or liabilities related to the product covered hereunder shall not exceed the purchase price of such product. In no event shall HPT be liable for any special, indirect, incidental or consequential damages of any character, including but not limited to loss of use of productive facilities or equipment, lost profits, property damage, transportation, installation or removal, lost production, or personal injury whether suffered by Purchaser or any third party. HPT disclaims all liability for any and all costs, claims, demands, charges, expenses or other damages, either direct or indirect, incident to personal injury or property damage arising out of any cause of action based on strict liability.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the exclusion or limitation above of consequential damages or the limitation of time above on implied warranties may not apply to you.

This warranty gives you specific legal rights and you may have other rights which may vary from state to state.

The AHR-Z-Coils™ Five-Year Limited Warranty

Subject to the following conditions, **Heat Pipe Technology, Inc. (HPT)**, warrants this product to be free from defects in material and workmanship for a period of FIVE YEARS from the date of installation. This warranty is in lieu of all other warrants not expressly set forth herein, whether expressed or implied by operation of law or otherwise. In the event this product fails under normal use and service within the applicable period, HPT will correct, repair or, at its sole discretion, replace the defective product or refund the purchase price of products which are returned freight prepaid to HPT for inspection, when accompanied by proof of purchase and written claims of defect, and which upon inspection by HPT, do comply with the terms of this warranty.

This warranty applies to the first retail buyer and extends to any subsequent owners of the systems.

The cost of replacement parts or components shall be determined by the price schedule in effect at the time of submission of warranty claim.

Repair or replacement parts will be furnished F.O.B. factory in all cases.

If HPT elects to replace or provide a refund, the defective product must be returned to HPT free and clear of liens or other encumbrances.

Limitations on Liability

This warranty does not cover and no warranty is made with respect to:

- A. Failures not reported to HPT within the period specified above;
- B. Failures or damage due to misapplication, misuse, abuse, improper storage or handling, abnormal conditions of temperature, water, dirt, corrosive substances or other contaminants;
- C. Products which have been repaired with parts or materials not furnished or approved by HPT or by its authorized dealers or representatives, or products which have been in any way tampered with or altered;
- D. Products damaged in shipment or storage or otherwise without fault of HPT;
- E. Normal maintenance as outlined in the installation and servicing instructions or owners manual including coil cleaning, filter cleaning and periodic flushing of systems;
- F. Damage or repairs required as a consequence of faulty installation or application by others;
- G. Damage or repairs required as a consequence of any misapplication, abuse, improper servicing, unauthorized alteration or improper operation;
- H. Damage as a result of floods, winds, fires, lightning, accidents, corrosive atmosphere or other conditions beyond the control of HPT;
- I. Damage resulting from freezing of domestic water or condensate, inadequate or interrupted water supply, use of corrosive water, fouling or restriction of the water circuit by foreign material or like causes;
- J. Damage resulting from operation with an inadequate supply of air or water;
- K. **Z-Coil, DHP and Hot Plate when used in a non-residential application.**

HPT total responsibility for any claims, damages, losses or liabilities related to the product covered hereunder shall not exceed the purchase price of such product. In no event shall HPT be liable for any special, indirect, incidental or consequential damages of any character, including but not limited to loss of use of productive facilities or equipment, lost profits, property damage, transportation, installation or removal, lost production, or personal injury whether suffered by Purchaser or any third party. HPT disclaims all liability for any and all costs, claims, demands, charges, expenses or other damages, either direct or indirect, incident to personal injury or property damage arising out of any cause of action based on strict liability.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the exclusion or limitation above of consequential damages or the limitation of time above on implied warranties may not apply to you.

This warranty gives you specific legal rights and you may have other rights which may vary from state to state.

Heat Pipe Technology, Inc.

Gainesville, FL 32609

Fax: (352) 367-1688

