

# High Efficiency Direct Drive Air Handling Unit

Model HCA

## Flexibility & Value

Combined features & benefits deliver more performance at better costs—more value in the same envelope!

## The Features You Require

The HCA product line offers a wide variety of configuration options.

Choose from R410A, Chilled Water, Hot Water, or Steam to create the cooling/heating package your job requires. ECM direct drive forward-curved blower systems provide belt-free maintenance and high efficiency operation. Achieve air-handler coil combinations with fan coil simplicity. Optional double wall construction, 4" MERV 13 filters, and standard double-sloped drain pans contribute to improved IAQ results.



## Promises Made, Promises Kept

Magic Aire's world class customer support and operations delivers on time every time, with 99.8% on time delivery since 2009. You have enough to worry about. Allow us to take care of this for you.

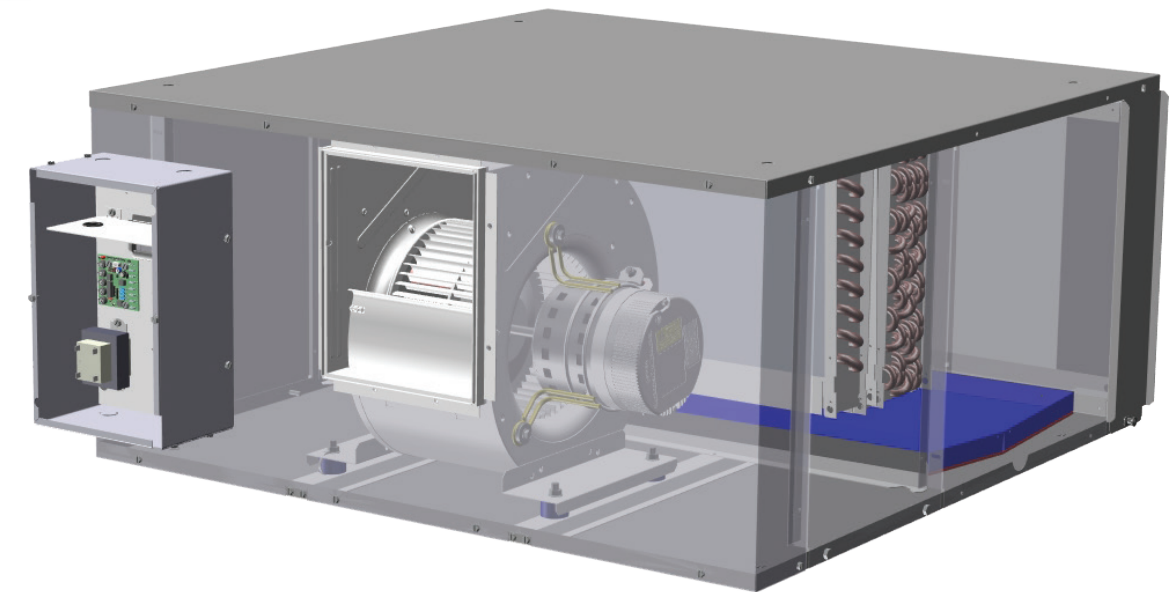


## Direct Drive Solution with AHU Combinations

Combine AHU-grade coil and filter selections with direct drive fan technology for solutions that work for more facilities, without v-belts. A wide variety of hydronic, DX and steam coils, single and double-wall cabinet options, along with 2" or 4" filters (field-changeable) allow a fine-tuned selection to closely match the unit performance and cost to the application. The 4" MERV 13 filter option provides the best IAQ solution and can help earn the filtration LEED credit (see LEED v4 Building Design and Construction Manual, USGBC).

## ECM Fan Control—Flexible & Efficient

Direct drive ECM fans start and stop with a ramp-up, reducing start-up sounds, and can be tuned to operate at just the right speed for less noise. Without belt losses, they are 5% or more efficient than belt drive systems. High efficiency ECM motors with forward curved DWDI fans provide up to 40% energy savings over PSC motors. Full variable speed controls allow perfect load matching and fast commissioning. Save time setting up and save operation cost over the life of the installation.



The entire line of Magic Aire HCA models is ETL listed to US and Canadian Safety Standards, (ANSI/UL 1995) and certified under the AHRI 430 program for Central Station Air Handlers.

Magic Aire is a member of AHRI and participates in the organization's voluntary performance verification programs.



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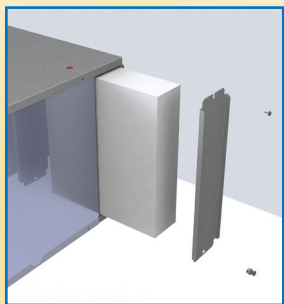
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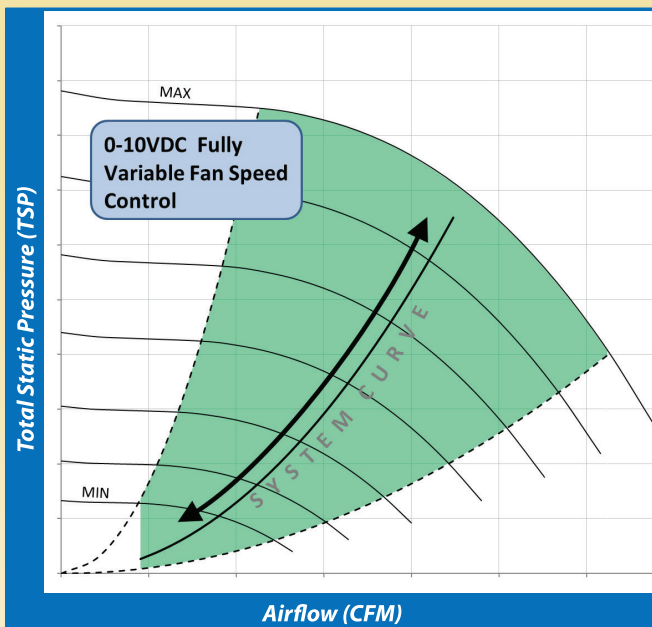


# When So Much Depends On Your Equipment



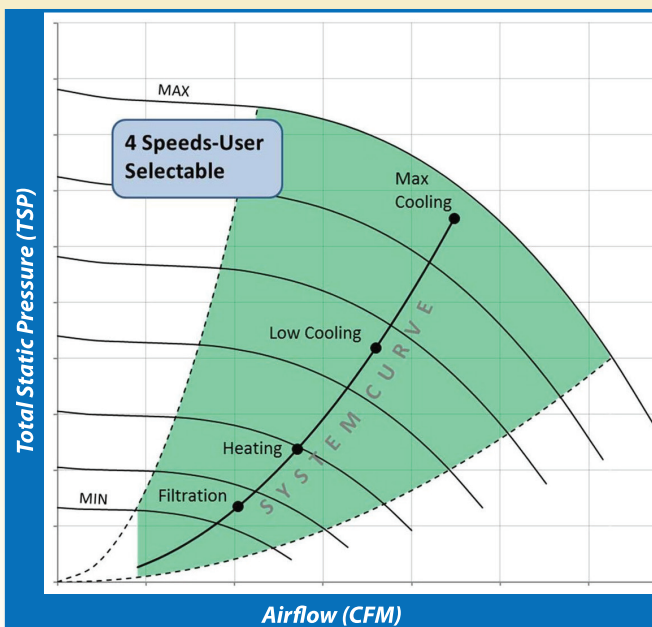
## Model HCA High Efficiency Direct Drive AHU

Magic Aire manufactures the HCA product in Wichita Falls, TX. Our facility is registered both ISO 9000 and ISO 14001, achieving international recognition for quality processes and environmental responsibility. See website for certification dates.



## Single-Zone VAV

The full variable speed option allows a field 0-10VDC fan signal to continuously vary the fan speed, allowing variable air volume benefits in a single zone unit.



## 4-Speed Fan Control

The 4 speed fan control option allows an "on/off" 24V thermostat or building DDC control to activate up to 4 speeds. Each speed is set by the installer, making startup fast and flexible. For example, set two higher speeds for cooling, a lower heating speed, and a filtration speed.

Easy Commissioning: Tune each speed while the unit is running—without opening the blower compartment. No belts or pulleys to adjust.

## MERV 13 Level Applications

- Schools
- Assisted living quarters
- Prototyping rooms and labs
- High End Residential

## MERV 8 Level Applications

- Office build-outs
- Applications requiring wide airflow range

## Energy Saving Technologies

- Low Pressure Drop Filters
- High Efficiency ECM motors
- Full Variable Speed fan control option uses 0-10VDC fan signal provided by field controller or thermostat (Single Zone VAV)
- Up to 4 user-adjustable fan speeds (option) for use with smart thermostats
- Factory Valve Package accessory with on/off or modulating control valves and optional automatic flow control for simple balancing and energy savings

## Highlighted Specifications

### Product Tested in accordance with:

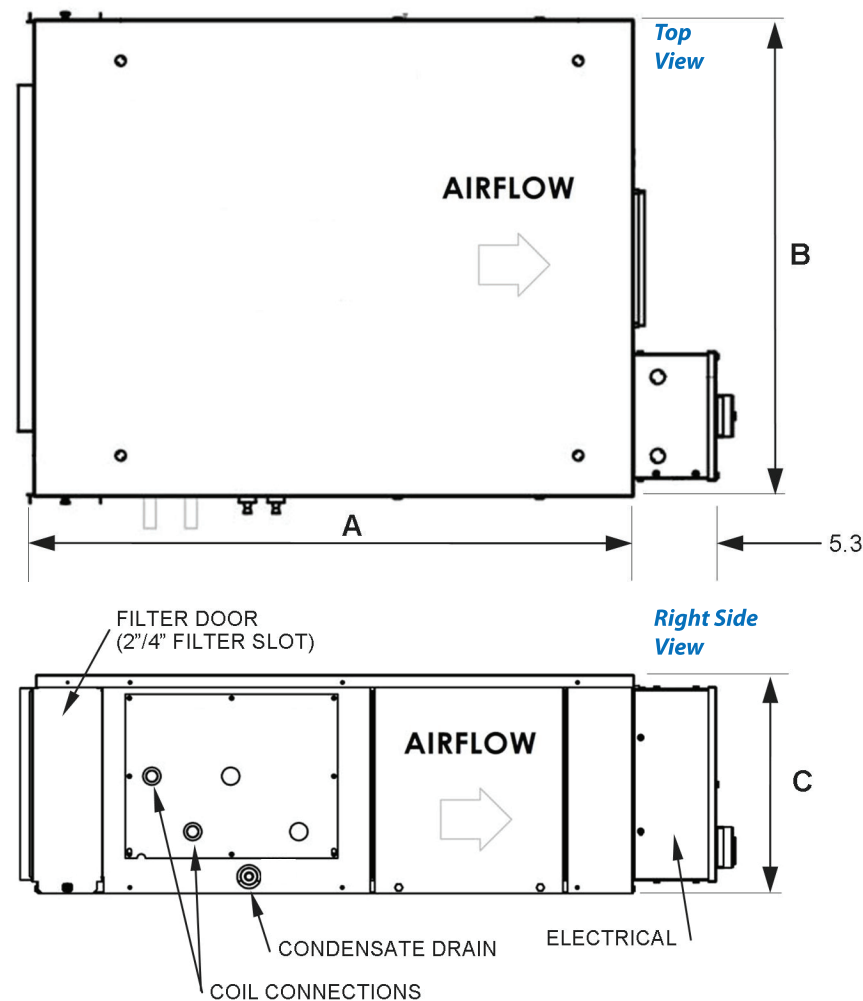
- AHRI 410: Coil Capacity - Hydronic
- AHRI 210: Coil Capacity - DX

### Product Certified:

- UL 1995 5th Ed Heating and Cooling Equipment
- ETL Listed
- AHRI 430: Standard for Performance Rating of Central Station Air-handling Unit Supply Fans

## Highlighted Features and Options

- Optional double wall construction
- Exterior Baked on, Textured, Powder Coat finish
- Pre-Filter slot accommodates 2" or 4" deep filter
  - Choose 2 inch MERV 8, or 4 inch MERV 13 factory options
- Up to 10 total coil rows— DX, Hydronic or Steam Cooling/Heating
- Flexible fan control options allow:
  - Easy integration with 24VAC thermostat, smart thermostat or BAS
  - Simple on/off control to advanced single-zone VAV applications
- Isolated Motor Mount
- Tool-less filter access
- Mixing box and economizer control package
- Factory installed electric heat (coming soon!)



Product Line Capacity Range (Reference software for published values)			
Model	Nominal Airflow (CFM)	Airflow Range (CFM)	Available ESP (in.w.g.)*
HCA04	400	300-500	1.5
HCA06	600	450-750	1.1
HCA08	800	600-1000	1.7
HCA12	1200	900-1500	1.3
HCA16	1600	1200-2000	1.8
HCA20	2000	1500-2500	1.4
HCA30	3000	2750-3250	2.0
HCA40	4000	3000-4000	1.2

\*ESP Available at nominal airflow based on unit with 4-row chilled water, 2" MERV 8 Filter, and high static motor.

Product Line: Overall Dimensions (Inches)				
HCA Model Size	Cabinet Length (A)	Total Length	Width (B)	Height (C)
04, 06	38.1	43.4	30.3	14.0
08, 12	38.1	43.4	37.8	18.0
16, 20	42.1	47.4	46.3	22.0
30, 40	52.6	57.9	59.3	34.0

