

AirByDesign



Smart, Highly Efficient HEPA
Wall Mounted Portable Air Purifier | 12V



Indoor Air Quality is a hot topic today, and for good reason. Although indoor air quality has always been important, **AirByDesign** understands that providing clean and safe indoor air is vital, perhaps now more than ever, to families, businesses, and communities.

Our board-certified **AirByDesign** air purifiers use only the latest in air filtration technology to provide solutions to improve your building's indoor air quality. We've designed a product for every indoor environment including high-density spaces like offices and classrooms, and small, low-traffic spaces like homes and hotel rooms. Each of our purifiers is equipped with the same layers of control. A HEPA filter (99.97% effective), a carbon filter, UV-C lighting, and plasma.

These controls reduce and eliminate harmful viruses, dust, allergens, other contaminants, and even unpleasant odors. So, take a deep breath and trust that your building's occupants are breathing the cleanest, and safest, air possible.

Portable | 12V



What's Included?

- Woven Nylon Pre-Filter
- HEPA Filter (99.97% Effective)
- Activated Carbon Filter
- UVC Lighting
- Odor Control
- Nanometer Photocatalyst Filter
- Heavy Concentration Plasma

Additional Features

- Wall anchors
- Aluminum panel exterior (available in various colors)
- Wifi and Smart Home Compatible
- IR Remote Control
- Humidification Controls (Optional)
- Outside Air Intake (Optional)

Layers of Controls



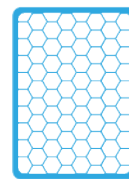
Woven Nylon
Pre Filter



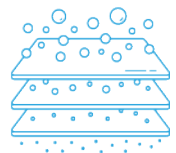
Photocatalyst
Filter



UV-C Lamp

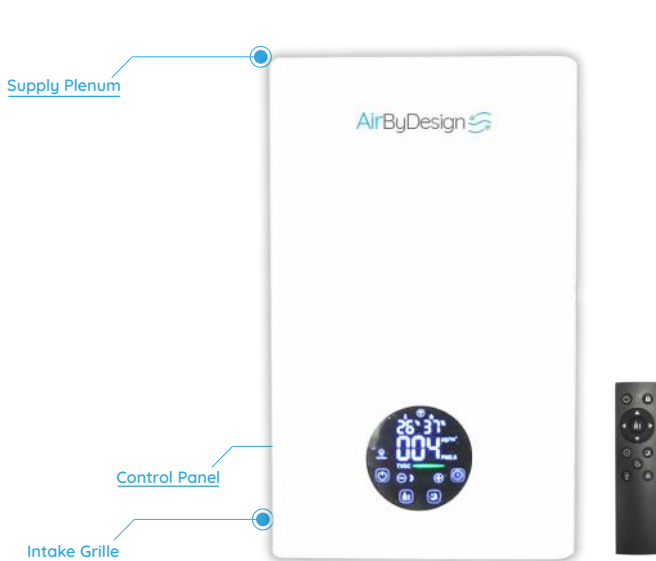


Activated
Carbon



H13 HEPA

Operation | 12V



Control Panel

The state-of-the-art control panel makes viewing the status and modifying the settings of your Pro easy.



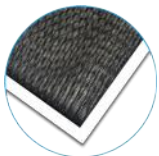
Intake Grille

Indoor air is pulled through the bottom intake grille for purification.



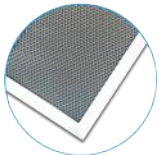
Supply Plenum

Sterilized and purified air passes through a final filter then to the top discharge grille and into the room.



Pre-Filter

The Woven Nylon Pre-Filter removes larger contaminants from entering the HEPA filter.



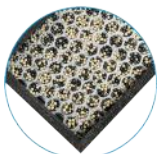
Photocatalyst Filter

The Photocatalyst Filter effectively kills bacteria, viruses, fungi, and other potentially harmful microorganisms.



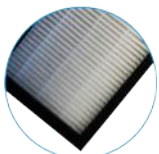
UV-C Lamp

36W UV-C germicidal lamps further destroy bacteria and viruses in the air.



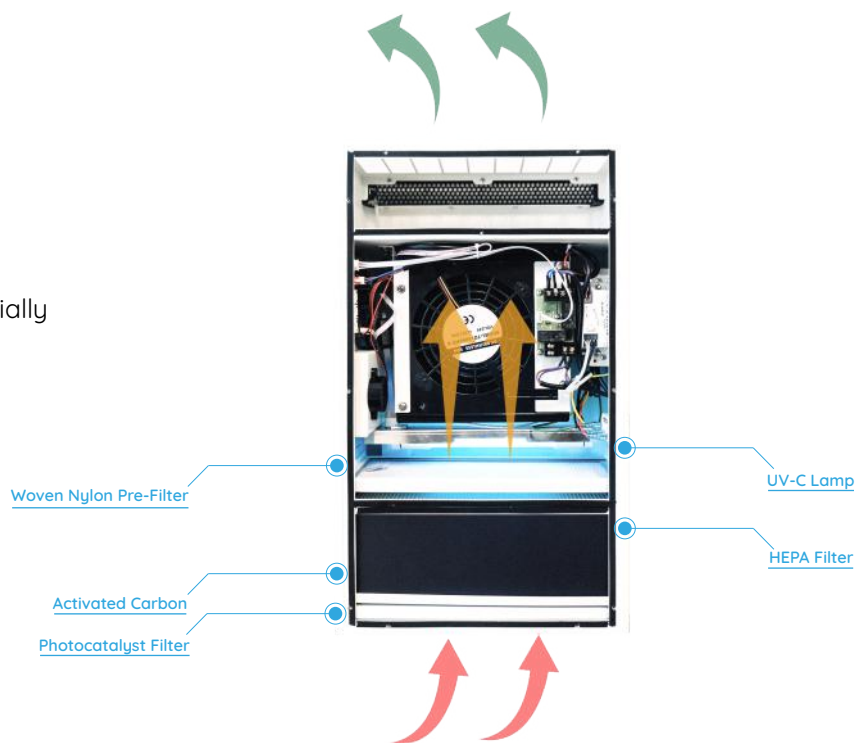
Activated Carbon

The Activated Carbon Filter is a large capacity filter with fast absorption and desorption speeds.



HEPA Filter

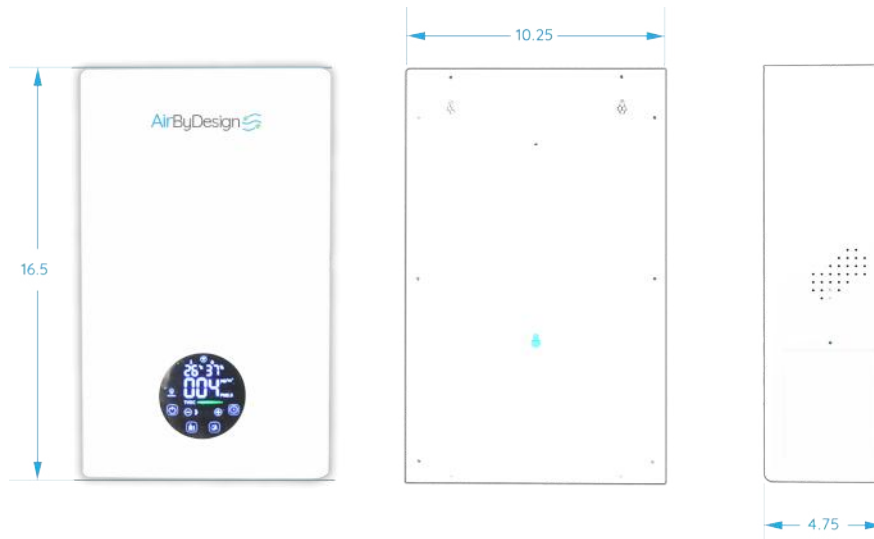
The H13 HEPA Filter is up to 99.97% efficient at removing the remaining particulate from the air.



Wifi | Smart Home Compatible

Unit can be controlled through our Tuya Smart App and a smart home interface.

Dimensions and Specifications | 12V



AirByDesign 12V (H13 HEPA + UV)

| | | |
|---------------------|-----------|---------------------------------------|
| Electrical | V/Hz/Ph | 120 / 60 / 1 |
| Connection | Type | 3-Prong 120V plug with 5' wire |
| Airflow (CFM) | High | 107 / 76 / 46 / 22 |
| Max Power Usage | Watts | 45W - 50W (depending on adaptor used) |
| Sound Level dBA | Range | 50 - 25 |
| Pre-Filter 1 | Type | Woven Nylon |
| Pre-Filter 2 | Type | Activated Carbon |
| Main Filter | Type | H13 HEPA 99.97% Efficiency |
| Additional Filter 1 | Type | Nanometer Photocatalyst |
| Sterilization 1 | Type | UV-C (254 nm) |
| Sterilization 2 | Type | Heavy Concentration Plasma |
| Controls 1 | Type | Unit Mounted Touchscreen w/ Lockout |
| Controls 2 | Type | IR Remote Control |
| Dimensions | H x W x D | 16.5" x 10.25" x 4.75" |
| Cabinet | Material | Powder Coated Steel |
| Weight | Lbs | 15.4 |

The **AirByDesign 12V** compact wall mount air sterilizer that is designed to remove indoor particles as small as 0.3 microns, with an H13 HEPA filter, photocatalyst filter and UV-C lamp. The tested virus removal rate and bacterial removal rate for the **AirByDesign 12V** is >99.97%.

Typical installations for the **AirByDesign 12V** includes:

- Buses
- Trains
- Hotel Rooms
- Motel Rooms
- Independent Care Facility Rooms
- Retail Stores
- Enclosed Kiosks
- Student Housing



Unit Air Changes | 12V

| | | Room Width (Feet) | | | | | | | | | | | | | | | |
|-------------------|----|-------------------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 6 | 7 | 8 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 |
| Room Depth (Feet) | 6 | 17.8 | 15.3 | 13.4 | 11.9 | 10.7 | 8.9 | 7.6 | 6.7 | 5.9 | 5.4 | 4.9 | 4.5 | 4.1 | 3.8 | 3.6 | 3.3 |
| | 7 | 15.3 | 13.1 | 11.5 | 10.2 | 9.2 | 7.6 | 6.6 | 5.7 | 5.1 | 4.6 | 4.2 | 3.8 | 3.5 | 3.3 | 3.1 | 2.9 |
| | 8 | 13.4 | 11.5 | 10.0 | 8.9 | 8.0 | 6.7 | 5.7 | 5.0 | 4.5 | 4.0 | 3.6 | 3.3 | 3.1 | 2.9 | 2.7 | 2.5 |
| | 9 | 11.9 | 10.2 | 8.9 | 7.9 | 7.1 | 5.9 | 5.1 | 4.5 | 4.0 | 3.6 | 3.2 | 3.0 | 2.7 | 2.5 | 2.4 | 2.2 |
| | 10 | 10.7 | 9.2 | 8.0 | 7.1 | 6.4 | 5.4 | 4.6 | 4.0 | 3.6 | 3.2 | 2.9 | 2.7 | 2.5 | 2.3 | 2.1 | 2.0 |
| | 12 | 8.9 | 7.6 | 6.7 | 5.9 | 5.4 | 4.5 | 3.8 | 3.3 | 3.0 | 2.7 | 2.4 | 2.2 | 2.1 | 1.9 | 1.8 | 1.7 |
| | 14 | 7.6 | 6.6 | 5.7 | 5.1 | 4.6 | 3.8 | 3.3 | 2.9 | 2.5 | 2.3 | 2.1 | 1.9 | 1.8 | 1.6 | 1.5 | 1.4 |
| | 16 | 6.7 | 5.7 | 5.0 | 4.5 | 4.0 | 3.3 | 2.9 | 2.5 | 2.2 | 2.0 | 1.8 | 1.7 | 1.5 | 1.4 | 1.3 | 1.3 |
| | 18 | 5.9 | 5.1 | 4.5 | 4.0 | 3.6 | 3.0 | 2.5 | 2.2 | 2.0 | 1.8 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 |
| | 20 | 5.4 | 4.6 | 4.0 | 3.6 | 3.2 | 2.7 | 2.3 | 2.0 | 1.8 | 1.6 | 1.5 | 1.3 | 1.2 | 1.1 | 1.1 | 1.0 |
| | 22 | 4.9 | 4.2 | 3.6 | 3.2 | 2.9 | 2.4 | 2.1 | 1.8 | 1.6 | 1.5 | 1.3 | 1.2 | 1.1 | 1.0 | 1.0 | 0.9 |
| | 24 | 4.5 | 3.8 | 3.3 | 3.0 | 2.7 | 2.2 | 1.9 | 1.7 | 1.5 | 1.3 | 1.2 | 1.1 | 1.0 | 1.0 | 0.9 | 0.8 |
| | 26 | 4.1 | 3.5 | 3.1 | 2.7 | 2.5 | 2.1 | 1.8 | 1.5 | 1.4 | 1.2 | 1.1 | 1.0 | 0.9 | 0.9 | 0.8 | 0.8 |
| | 28 | 3.8 | 3.3 | 2.9 | 2.5 | 2.3 | 1.9 | 1.6 | 1.4 | 1.3 | 1.1 | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 |
| | 30 | 3.6 | 3.1 | 2.7 | 2.4 | 2.1 | 1.8 | 1.5 | 1.3 | 1.2 | 1.1 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 |
| | 32 | 3.3 | 2.9 | 2.5 | 2.2 | 2.0 | 1.7 | 1.4 | 1.3 | 1.1 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 |

AC/H with Unit on High Speed, with a 10 Foot Ceiling

| | | Room Width (Feet) | | | | | | | | | | | | | | | |
|-------------------|----|-------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 6 | 7 | 8 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 |
| Room Depth (Feet) | 6 | 12.7 | 10.9 | 9.5 | 8.4 | 7.6 | 6.3 | 5.4 | 4.8 | 4.2 | 3.8 | 3.5 | 3.2 | 2.9 | 2.7 | 2.5 | 2.4 |
| | 7 | 10.9 | 9.3 | 8.1 | 7.2 | 6.5 | 5.4 | 4.7 | 4.1 | 3.6 | 3.3 | 3.0 | 2.7 | 2.5 | 2.3 | 2.2 | 2.0 |
| | 8 | 9.5 | 8.1 | 7.1 | 6.3 | 5.7 | 4.8 | 4.1 | 3.6 | 3.2 | 2.9 | 2.6 | 2.4 | 2.2 | 2.0 | 1.9 | 1.8 |
| | 9 | 8.4 | 7.2 | 6.3 | 5.6 | 5.1 | 4.2 | 3.6 | 3.2 | 2.8 | 2.5 | 2.3 | 2.1 | 1.9 | 1.8 | 1.7 | 1.6 |
| | 10 | 7.6 | 6.5 | 5.7 | 5.1 | 4.6 | 3.8 | 3.3 | 2.9 | 2.5 | 2.3 | 2.1 | 1.9 | 1.8 | 1.6 | 1.5 | 1.4 |
| | 12 | 6.3 | 5.4 | 4.8 | 4.2 | 3.8 | 3.2 | 2.7 | 2.4 | 2.1 | 1.9 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 |
| | 14 | 5.4 | 4.7 | 4.1 | 3.6 | 3.3 | 2.7 | 2.3 | 2.0 | 1.8 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 |
| | 16 | 4.8 | 4.1 | 3.6 | 3.2 | 2.9 | 2.4 | 2.0 | 1.8 | 1.6 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 1.0 | 0.9 |
| | 18 | 4.2 | 3.6 | 3.2 | 2.8 | 2.5 | 2.1 | 1.8 | 1.6 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.9 | 0.8 | 0.8 |
| | 20 | 3.8 | 3.3 | 2.9 | 2.5 | 2.3 | 1.9 | 1.6 | 1.4 | 1.3 | 1.1 | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 |
| | 22 | 3.5 | 3.0 | 2.6 | 2.3 | 2.1 | 1.7 | 1.5 | 1.3 | 1.2 | 1.0 | 0.9 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 |
| | 24 | 3.2 | 2.7 | 2.4 | 2.1 | 1.9 | 1.6 | 1.4 | 1.2 | 1.1 | 1.0 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 |
| | 26 | 2.9 | 2.5 | 2.2 | 1.9 | 1.8 | 1.5 | 1.3 | 1.1 | 1.0 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 |
| | 28 | 2.7 | 2.3 | 2.0 | 1.8 | 1.6 | 1.4 | 1.2 | 1.0 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 |
| | 30 | 2.5 | 2.2 | 1.9 | 1.7 | 1.5 | 1.3 | 1.1 | 1.0 | 0.8 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 |
| | 32 | 2.4 | 2.0 | 1.8 | 1.6 | 1.4 | 1.2 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.4 |

AC/H with Unit on Medium 1 Speed (estimated), with a 10 Foot Ceiling

Unit Air Changes | 12V

| | | Room Width (Feet) | | | | | | | | | | | | | | | |
|-------------------|----|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 6 | 7 | 8 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 |
| Room Depth (Feet) | 6 | 7.7 | 6.6 | 5.8 | 5.1 | 4.6 | 3.8 | 3.3 | 2.9 | 2.6 | 2.3 | 2.1 | 1.9 | 1.8 | 1.6 | 1.5 | 1.4 |
| | 7 | 6.6 | 5.6 | 4.9 | 4.4 | 3.9 | 3.3 | 2.8 | 2.5 | 2.2 | 2.0 | 1.8 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 |
| | 8 | 5.8 | 4.9 | 4.3 | 3.8 | 3.5 | 2.9 | 2.5 | 2.2 | 1.9 | 1.7 | 1.6 | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 |
| | 9 | 5.1 | 4.4 | 3.8 | 3.4 | 3.1 | 2.6 | 2.2 | 1.9 | 1.7 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 1.0 |
| | 10 | 4.6 | 3.9 | 3.5 | 3.1 | 2.8 | 2.3 | 2.0 | 1.7 | 1.5 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 0.9 | 0.9 |
| | 12 | 3.8 | 3.3 | 2.9 | 2.6 | 2.3 | 1.9 | 1.6 | 1.4 | 1.3 | 1.2 | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 |
| | 14 | 3.3 | 2.8 | 2.5 | 2.2 | 2.0 | 1.6 | 1.4 | 1.2 | 1.1 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 |
| | 16 | 2.9 | 2.5 | 2.2 | 1.9 | 1.7 | 1.4 | 1.2 | 1.1 | 1.0 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 |
| | 18 | 2.6 | 2.2 | 1.9 | 1.7 | 1.5 | 1.3 | 1.1 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 |
| | 20 | 2.3 | 2.0 | 1.7 | 1.5 | 1.4 | 1.2 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.4 |
| | 22 | 2.1 | 1.8 | 1.6 | 1.4 | 1.3 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 |
| | 24 | 1.9 | 1.6 | 1.4 | 1.3 | 1.2 | 1.0 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 |
| | 26 | 1.8 | 1.5 | 1.3 | 1.2 | 1.1 | 0.9 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 |
| | 28 | 1.6 | 1.4 | 1.2 | 1.1 | 1.0 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 |
| | 30 | 1.5 | 1.3 | 1.2 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 |
| | 32 | 1.4 | 1.2 | 1.1 | 1.0 | 0.9 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 |

AC/H with Unit on Medium 2 Speed (estimated), with a 10 Foot Ceiling

| | | Room Width (Feet) | | | | | | | | | | | | | | | |
|-------------------|----|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 6 | 7 | 8 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 |
| Room Depth (Feet) | 6 | 3.7 | 3.1 | 2.8 | 2.4 | 2.2 | 1.8 | 1.6 | 1.4 | 1.2 | 1.1 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 |
| | 7 | 3.1 | 2.7 | 2.4 | 2.1 | 1.9 | 1.6 | 1.3 | 1.2 | 1.0 | 0.9 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 |
| | 8 | 2.8 | 2.4 | 2.1 | 1.8 | 1.7 | 1.4 | 1.2 | 1.0 | 0.9 | 0.8 | 0.8 | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 |
| | 9 | 2.4 | 2.1 | 1.8 | 1.6 | 1.5 | 1.2 | 1.0 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 |
| | 10 | 2.2 | 1.9 | 1.7 | 1.5 | 1.4 | 1.1 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 |
| | 12 | 1.8 | 1.6 | 1.4 | 1.2 | 1.1 | 0.9 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.3 |
| | 14 | 1.6 | 1.3 | 1.2 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 |
| | 16 | 1.4 | 1.2 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| | 18 | 1.2 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 |
| | 20 | 1.1 | 0.9 | 0.8 | 0.7 | 0.7 | 0.6 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 |
| | 22 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 |
| | 24 | 0.9 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | 26 | 0.8 | 0.7 | 0.6 | 0.6 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| | 28 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 |
| | 30 | 0.7 | 0.6 | 0.6 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 |
| | 32 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 |

AC/H with Unit on Low Speed (estimated), with a 10 Foot Ceiling