

## CRYSTAL-AIRE® uv Ambient Air Purifier

The Parker **CRYSTAL-AIRE® uv** air purifier is a mobile, wall or ceiling mount particle irradiation and filtration system. It utilizes ultraviolet germicidal irradiation (UVGI) and high efficiency True-HEPA filtration to continuously filter and

purify the air for heavily occupied, high turnover indoor spaces, up to 48,000 ft<sup>3</sup>\*. The innovative four stage design of **CRYSTAL-AIRE® uv** captures, irradiates and filters bacteria, dust, mold spores, odors and virus particles as small as 0.3 microns.

### Theory of Operation

As the air enters at the base of the unit and into the first stage, large particles are filtered out of the airstream by the MERV 8 pre-filter. The air then passes into a second stage, where particles are dosed with high-intensity UVGI energy. In the third stage, the high-efficiency True-HEPA filter captures particles as small as 0.3 micron, and the UVGI high intensity energy irradiates them. The cleaned and purified air is then returned out through an air diffuser and back into the indoor space. Prior to the air diffuser, there is also an optional fourth stage where the air can pass through a carbon filter to help with odors in difficult environments.

**CRYSTAL-AIRE® uv** provides the ultimate combination of UV irradiation to deactivate living microorganisms and high efficiency True-HEPA filtration to capture and contain particles up to 250 times smaller than a human hair.

### Product Highlights

- Available configurations: Mobile, Wall, Ceiling & Hanging
- UV-C Germicidal Technology
- MERV 8 pre-filter
- 99.97% True-HEPA main filter
- Illuminated On/Off switch
- 4 position fan speed selector
- EC motor for long life
- Laminated safety UV viewing glass
- Change filter indicator light
- Access door safety switch
- 4 lockable casters (installed)
- Optional Carbon filter for odors
- Optional outlet duct flange for negative pressure room air applications



### Product Applications

Administrative Office	Municipal Center
Assisted Living Facility	Offices & Work Center
Bar/Nightclub	Passenger Terminal
Breakroom	Police Station
Classroom	Physical Fitness Center
Conference & Meeting Space	Reception Area
Courtroom	Residential Hall
Fast Food Dining Room	Restroom
Gymnasium/Weight Room	Restaurant
Hotel Lobby	Retirement Center
Library	Waiting Room
Lunchroom	Worship Center

Part Description	Part Number
Mobile Unit	01-10258-00
Wall Unit	01-10258-01
Ceiling Unit	01-10258-02
Hanging Unit	01-10258-03
MERV 8 Pre-filter	DPHT-101
MERV 13 Main Filter	2809349
MERV 14 Main Filter	2909349
HEPA Main Filter	2971351
Carbon Filter	33-10163
Outlet Duct Flange	18-11551

Product Specifications	
Airflow, SCFM:	300 - 800
Sound Level, dB(A):	50 - 65
Input Power:	115V/1Ph/60Hz
Operating Current, FLA:	12
Pre-filter area, sq.ft.:	4.8
Main filter area, sq.ft.:	113
UV Lamp Type:	(4) Non-Ozone, High Output, Germicidal C band, 254nm
UV Lamp estimated life, hrs:	17,000
Product Dimensions, inch:	19L x 20W x 48H
Product Weight, lbs:	158
Electrical Certification:	cETLus
Lockable casters included on mobile unit	
8ft power cord with NEMA 5-15 receptacle	

## Room Application

The application of CRYSTAL-AIRE<sup>®</sup>uv is dependent on air changes per hour (ACH) or the amount of time it takes to change out or replace all the air that takes up a volumetric space. The Center for Disease Control (CDC) and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) publish recommended ACH for various room types and spaces, refer to ASHRAE or CDC websites for recommended room ACH.

The chart below is to be used for reference only and shows the CFM required to meet number of air changes per hour (# ACH) based on a room size. For example, an ACH of 6 for a 20x30 room with a 10ft ceiling requires 600 CFM. One CRYSTAL-AIRE<sup>®</sup>uv set at speed 3 will deliver 600 CFM and achieve the desired room ACH. \*Maximum room size for CRYSTAL-AIRE<sup>®</sup>uv: 48,000 ft<sup>3</sup> (Max. airflow @ 1 ACH).

CFM CHART for ROOM SIZES and AIR CHANGES PER HOUR (ACH)							
# ACH	150 ft <sup>2</sup> 10x15	300 ft <sup>2</sup> 15x20	400 ft <sup>2</sup> 20x20	500 ft <sup>2</sup> 20x25	600 ft <sup>2</sup> 20x30	750 ft <sup>2</sup> 25x30	1200 ft <sup>2</sup> 30x40
3	75	150	200	250	300	375	600
6	150	300	400	500	600	750	1200
9	225	450	600	750	900	1125	1800
12	300	600	800	1000	1200	1500	2400

CFM Chart assumes 10ft ceiling height.

