



# CELLGARD HD 481ES<sup>energy saver</sup>

ADVANCED SAFETY ENGINEERING FOR EFFECTIVE  
HANDLING OF HAZARDOUS PARTICULATE DRUGS  
AND POWDERS IN A CLASS II, TYPE A2 BIOLOGICAL  
SAFETY CABINET



The CellGard™ HD (Hazardous Drug) ES (Energy Saver) Class II, Type A2 Biological Safety Cabinet offers personnel, product, and environmental protection for handling of hazardous particulate drugs and powders. ISO Class 5 sterility and protection for your valuable in process work materials..

#### Levels of Protection

True laminar airflow provides a sterile environment that minimizes cross contamination. A strong air barrier 105 fpm (0.53 m/s) protects the end user from hazardous materials in the work zone. Multiple oval HEPA pre-filters located underneath the work surface provide the primary means for particulate filtration that allows for an efficient and safe bag-in/bag-out filter change procedure without exposing the interior HEPA filters. Environmental protection is achieved by all contaminated air passing through a 99.99% HEPA filter.

#### Benefits of NuAire Cabinets

- Largest HEPA filters with the most pleats per square inch
- TOUCHLINK™ Electronic Control System
- Internal exhaust damper
- An optimally determined fan for each model size/width



TOUCHLINK™ Electronic Control System Display



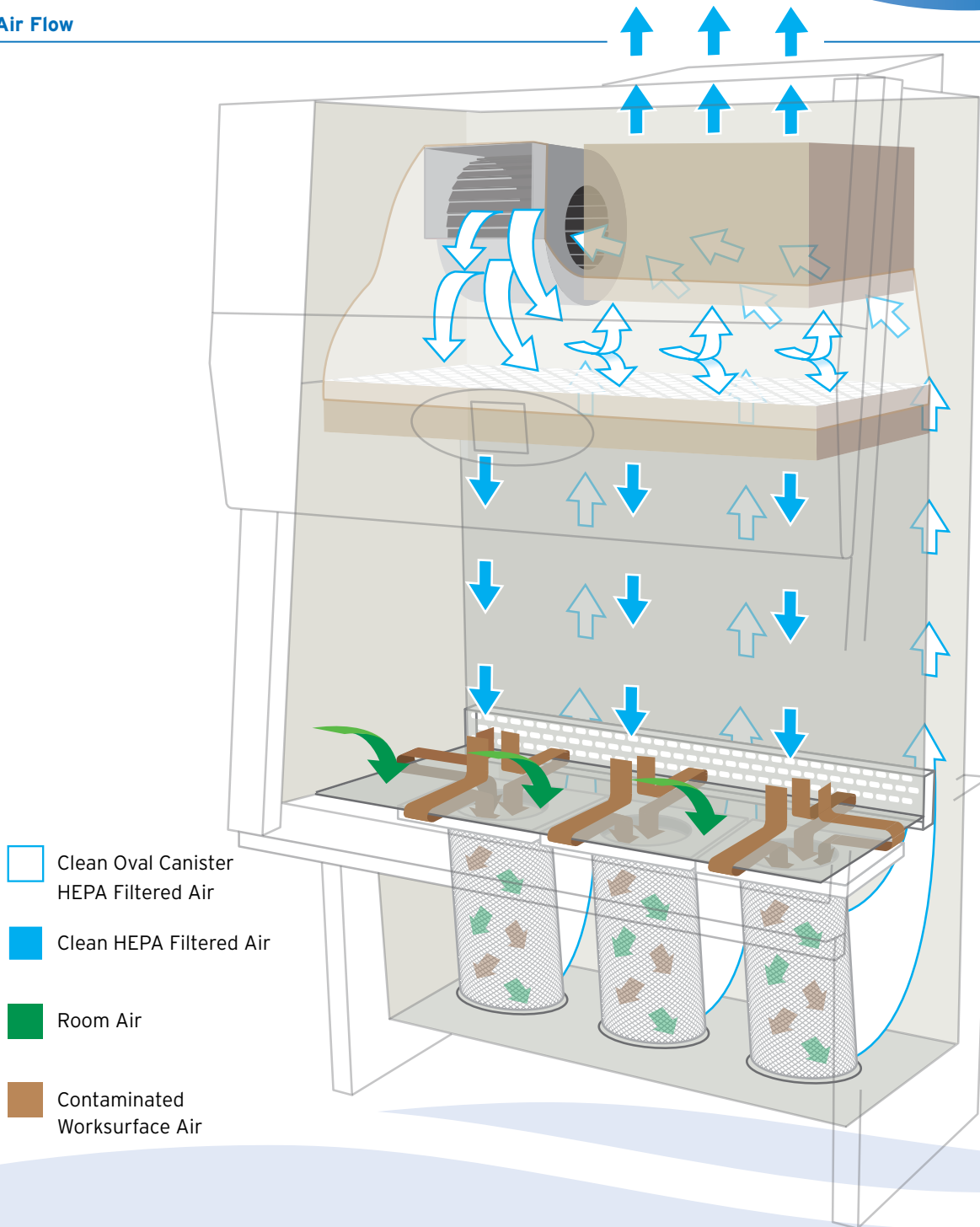
#### TOUCHLINK™ Electronic Control System

- On/off functions for fluorescent and germicidal ultraviolet lights, blower motor, and interior outlets.
- Monitors high/low limits for airflow and window position.
- Date/clock display
- Timer function (laboratory timer, set purge cycles, outlet timer, UV light timer, auto-run timer, night setback, or weekend turn-off.
- Complete diagnostic functions for a NSF trained service technician or certifier.

**nitecare™**- A unique system initiated by the window closure, will reduce motor / blower operational airflow to conserve energy while maintaining work zone sterility. (Configurable)

**intelliflow™**- Fast, Accurate, Reliable, Dual Thermistor Airflow Sensors powered by TSI. The sensor technology used in certification instruments to assure BSC optimal performance.

## Air Flow



**Energy Saver Technology**

NuAire incorporates our existing technology and new DC ECM technology to give you the best VALUE - lower energy costs, longer filter life, and reduced noise and vibration.



DC ECM Motor

**Added benefits from DC ECM Technology**

- Less energy to operate
- Greater horsepower and lower potential RPM
- Integrated digital control system
- Longer filter life
- Lowest possible noise and vibration

**Oval Canister HEPA 99.99% Filter Technology**

The oval canister size and shape of the HEPA pre-filter provides the necessary surface area for a longer filter life, and optimizing the replacement process.



**The Ease of Bag-In / Bag-Out**

1. Remove work surface
2. Remove paper catch grill over each oval HEPA prefilter
3. Seal contaminated interior of each oval HEPA filter
4. Remove four (4) fasteners per each oval HEPA prefilter
5. Bag-Out used oval HEPA prefilter and replace



**Note:** Filter change process should be performed by a qualified service technician.



NU-481

**Experience Ergonomics™**

The NU-481 provides an ergonomically correct environment by providing the following:

- Ability to sit or stand at a range of heights (Telescoping or Auto)
- Expanded vision zone reduces awkward postures and proper lighting reduces glare
- Forearm support for comfort and safety
- Effective work zone area for more “user-friendly” space



critical cleaning components™



## CellGard™ HD ES NU-481 Biological Safety Cabinet

### Specifications

Catalog Number	NU-481-400 Nominal 4 Foot (1.2 m)	NU-481-500 Nominal 5 Foot (1.5 m)	NU-481-600 Nominal 6 Foot (1.8 m)
Performance Specifications:			
1. Personal Protection	NSF/ANSI 49	NSF/ANSI 49	NSF/ANSI 49
2. Product Protection			
NSF / ANSI 49 (Class / Type)	Class II, Type A2	Class II, Type A2	Class II, Type A2
Style of Cabinet	Bench Top / Console w/base stand /Storage Cabinet	Bench Top / Console w/base stand /Storage Cabinet	Bench Top / Console w/base stand /Storage Cabinet
Cabinet Construction	All welded stainless steel 16GA, Type 304 pressure tight design	All welded stainless steel 16GA, Type 304 pressure tight design	All welded stainless steel 16GA, Type 304 pressure tight design
Diffuser for Air Supply (Metal)	Non-flammable	Non-flammable	Non-flammable
HEPA Filter Seal Type:			
Supply Filter - 99.995% Eff. on 0.3 Microns	<b>HEPEX™</b> Seal	<b>HEPEX™</b> Seal	<b>HEPEX™</b> Seal
Exhaust Filter - 99.995% Eff. on 0.3 Microns	Neoprene	Neoprene	Neoprene
Oval PreFilter - 99.995% Eff. on 0.3 Microns	Neoprene	Neoprene	Neoprene
Fumigation: Automated per NIH/NSF Procedures	Yes	Yes	Yes
Standard Services:			
Service Coupling (3/8 inch NPT)	One, Right Sidewall	One, Right Sidewall	One, Right Sidewall
Gas Valve / Service Coupling (3/8 inch NPT)	One, Right Sidewall	One, Right Sidewall	One, Right Sidewall
Duplex Outlet	Two, Backwall	Two, Backwall	Two, Backwall
Optional Services:			
Gas Cocks (3/8 inch NPT)	Up to 3 each Sidewall	Up to 3 each Sidewall	Up to 3 each Sidewall
Remote Controlled Valves	Up to 3 each Sidewall	Up to 3 each Sidewall	Up to 3 each Sidewall
Ultraviolet Light	One, Backwall	One, Backwall	One, Backwall
Standard/Cup Sinks	Left or Right Work Surface	Left or Right Work Surface	Left or Right Work Surface
Cabinet Size Inches (mm):			
Height (Fully Assembled), Min/Max	87 7/8 (2232) / 93 7/8 (2384)	87 7/8 (2232) / 93 7/8 (2384)	87 7/8 (2232) / 93 7/8 (2384)
Height (Min for Transport)	79 3/8 (2016)	79 3/8 (2016)	79 3/8 (2016)
Width	54 7/8 (1394)	66 7/8 (1699)	78 7/8 (2003)
Depth	33 (838)	33 (838)	33 (838)
Work Access Opening Inches (mm):			
Standard Opening Height/Optional	10 (254) / 8 (203)	10 (254) / 8 (203)	10 (254) / 8 (203)
Standard Inflow Velocity	105 fpm (.53 m/s)	105 fpm (.53 m/s)	105 fpm (.53 m/s)
Work Zone Inches (mm):			
Height	28 1/2 (724)	28 1/2 (724)	28 1/2 (724)
Width	46 3/8 (1178)	58 3/8 (1483)	70 3/8 (1788)
Depth	28 1/8 (664)	28 1/8 (664)	28 1/8 (664)
Viewing Window Inches (mm):			
Standard safety plate sliding glass	Fully Closed to 18 (457) Open	Fully Closed to 18 (457) Open	Fully Closed to 18 (457) Open
Required Exhaust CFM / CMH	8 (203) / 10 (254) Opening	8 (203) / 10 (254) Opening	8 (203) / 10 (254) Opening
Thimble (NU-906/908)	359 (610) / 426 (724)	445 (756) / 531 (902)	532 (904) / 634 (1077)
Thimble (NU-907)	389 (660) / 456 (755)	474 (806) / 560 (952)	563 (935) / 665 (1130)
Plant Duct Static Pressure Eng / Metric	0.05 - 0.1" / 1.27 - 2.54 mm	0.05 - 0.1" / 1.27 - 2.54 mm	0.05 - 0.1" / 1.27 - 2.54 mm
Heat Rejected, BTU / Hr			
(non-vented)	2669	2983	3140
(vented)	157	198	198
Electrical:			
Volts, AC 60 Hz	U.L. / U.L.-C Listed 115	U.L. / U.L.-C Listed 115	U.L. / U.L.-C Listed 115
Amps*: Blower/Lights (10 / 8 Openings)	6.0 / 5.8	6.0 / 5.8	6.0 / 5.8
Amps: Outlets	3	3	3
Amps: Total	14	14	14
3.7 m Power Cord (one)	12 GA - 3 Wire, 20A	12 GA - 3 Wire, 20A	12 GA - 3 Wire, 20A
Crated Shipping Weight**	750 lbs. / 340 kg.	840 lbs. / 381 kg.	930 lbs. / 422 kg.
Net Weight	700 lbs. / 318 kg.	790 lbs. / 358 kg.	880 lbs. / 399 kg.

\*Based on cabinet with new filters running at 115 VAC \*\*Crated shipping weight does not include weight for accessories or options



For more information please visit  
[www.nuaire.com](http://www.nuaire.com) or call **1.800.328.3352**

