PURCHASE SPECIFICATIONS : FOR NUAIRE AIREGARD™ ES ENERGY SAVER NU-240 VERTICAL LAMINAR FLOW WORK STATION

The intent herein is to provide a concise statement of requirements for a quality Horizontal Laminar Airflow Work Station which may be used to augment your purchase request/order.

The AIREGARD™ ES NU-240 meets the performance requirements of the IEST-RP-CC002.4 and ISO 14644-1.

NuAire sales representatives will be pleased to explain the importance of the performance and control affected by each of the following requirements. The NuAire AIREGARD™ ES NU-240 meets all of the requirements in the following SPECIFICATION.

1. Dimensions Inches (mm)

Overall Dimensions	NU-240-230	NU-240-330	NU-240-430	NU-240-530	NU-240-630
	--------	NU-240-336	NU-240-436	NU-240-536	-------
Width (W)	26 (660)	38 (965)	50 (1270)	62 (1575)	74 (1880)
Depth (D)	32 (813)	32 (813)	32 (813)	32 (813)	32 (813)
Height (H) (w/30" HEPA filter)	55 3/8 (1406)	55 3/8 (1406)	55 3/8 (1406)	55 3/8 (1406)	55 3/8 (1406)
Height (H) (w/36" HEPA filter)	--------	61 3/8 (1559)	61 3/8 (1559)	61 3/8 (1559)	--------
Basestand, 30" W.S. (w/30" to 36" HEPA filter)	81 7/8 (2080) to 89 7/8 (2282)	81 7/8 (2080) to 89 7/8 (2282)	81 7/8 (2080) to 89 7/8 (2282)	81 7/8 (2080) to 897/8 (2282)	81 7/8 (2080) to 897/8 (2282)
Basestand, 36" W.S. (w/30" to 36" HEPA filter)	---------	87 7/8 (2232) to 95 7/8 (2435)	87 7/8 (2232) to 95 7/8 (2435)	87 7/8 (2232) to 95 7/8 (2435)	--------
Interior Dimensions					
Width (W)	23 7/8 (606)	35 7/8 (911)	47 7/8 (1216)	59 7/8 (1521)	71 7/8 (1826)
Depth (D)+	19 5/8 (498)	19 5/8 (498)	19 5/8 (498)	19 5/8 (498)	19 5/8 (498)
Height (H) (w/30" HEPA filter	32 (813)	32 (813)	32 (813)	32 (813)	32 (813)
Height (H) (w/36" HEPA filter	--------	38 (965)	38 (965)	38 (965)	-------

2. Work station shall provide airflow performance as specified.
    a. Work station shall provide ISO 5 quality airflow over the entire work zone for product protection proven by particle test, (e.g. test conducted by NuAire) validated by NuAire.
    * b. Work station work zone shall be constructed from 16/18 gauge, Type 304 stainless steel.
    c. Supply HEPA filter 99.99% efficient @ 0.3 microns shall be of full work zone width and height.
    * d. Supply HEPA filter shall be protected by a perforated metal diffuser.
    e. Air Velocity from the supply filter shall average 80 to 100 FPM (.41 to .51 m/s) with no single point outside the 20% of average range measured in a horizontal plane defined by 6 inches (102mm) from the diffuser.

    *Having all of these features is unique ONLY to NuAire work stations.

3.* The Work station shall be ergonomically designed for maximum user comfort and adjustability to meet the requirements of the American Disabilities Act (ADA).
    - Work station shall have a large armrest/airfoil radius on the leading edge of the work surface designed for comfort while maximizing product protection performance.
    - Work station shall have a centrally located control center that is easily serviced with quick disconnects.
    - Work station shall have the capability of incorporating a user adjustable basestand or base storage Work station as an option.
    - Work station shall have a large work surface (19-5/8" inch (498mm) depth) by work station width with raised rear spill lip for improved cleaning.

4.* The Work station shall have all positive pressure plenums surrounded by a vacuum relative to the room (the AIREGARD™ ES employs the HEPEX™ Zero Leak Airflow System).

5. Electrical power shall be supplied with a 12-foot (2.5m), 3-wire cord with molded plug. Electrical supply should be 115 VAC, 60 Hz (Current rating varies per Work station size. Reference electrical requirements) protected with thermal circuit breaker from distribution panel.

6. The Work station shall use a DC ECM Motor with an optimally determined forward-curved fan for each model size/width to maximize both energy efficiency and filter loading capacity.

7. The Work station shall have one internal electrical circuit for the blower and lights. The circuit shall be protected with fuse(s) located in the Control Center on the electronic module.

8.* The Work station shall be listed by Underwriters Laboratories to meet the requirements of both the U.S. and Canada for electrical/mechanical integrity.

9.* Work station shall contain the Aeromax™ control system consisting of electronic modules that will perform the following functions:
    - Easy user interface via LED's and function keys
    - Control blower via solid state switch.
    - Control lights via solid state switch.
    - Disable audible alarm switch with ring back function.
    - Control blower DC ECM motor with solid-state DC Motor Controller that provides automatic compensation (constant volume control) for both filter loading and line voltage variances.
    - Monitor and display airflow system performance via PresurFlow™ monitor.

10.* Work station shall contain the Aeromax™ control system that provides the following optional functional features (included with Work station, but must be configured during certification):
    - Security password protection of Work station use.
    - Work station usage sync functions with blower, fluorescent light.
    - Work station usage auto duration timers, fluorescent light.

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11.	The Work station shall be easily transportable through a standard 34 inch (864mm) wide door without disassembly.

12.	Fluorescent lighting shall be externally mounted and provide a minimum of 90 (968) foot-candles (LUX) on work surface. The ballast is to be electronic containing thermal protection with automatic reset.

13.	Work station shall be easily converted to a free-standing console model with the addition of the optional base support stand.

14.*	Work station work zone shall be all 16/18 gauge stainless steel.

15.	Work station exterior shall be constructed of 16/18 gauge powdered coated (light gray) cold rolled steel.

16.*	Work station shall have a permanent positive pressure plenum with quick release supply filter removal.

17.*	Motor/blower shall be positioned so as to create an even filter loading, thereby prolonging the life of HEPA filters, automatically handling a 250% minimum increase in filter loading without reducing total air delivery by more than 10%.

18.*	Work station shall be capable of front filter removal through the work zone without exterior disassembly.

19.	The following optional equipment shall be available to support installation and user requirements:
- LED Lighting
- Additional Service Valves for Gas, Air, Vacuum
- Outlets (separate power cord)
- IV Bar with 6 Stainless Steel Hooks
- Base Support Stand (available as telescoping for work surface heights of 30 to 36 inches) (762 to 914mm) with or without Storage Shelves
- Adjustable Control for Support Stand or Storage Work station
- Storage Pull-Out Trays
- GFI Outlets
- Ergotron monitor/keyboard holders
- Polycarbonate side walls
- Laminate (white) work surface

AIREGARD™ ES Energy Saver Horizontal Laminar Flow Work station
Models NU-240-230/330/336/430/436/530/536/630

Catalog Number	Catalog Number				
	NU-240-230 Nominal 2 foot (0.6m)	**NU-240-330** **NU-240-336** Nominal 3 foot (0.9m)	**NU-240-430** **NU-240-436** Nominal 4 foot (1.2m)	**NU-240-530** **NU-240-536** Nominal 5 foot (1.5m)	**NU-240-630** Nominal 6 foot (1.8m)
Performance Specifications 1. Product Protection	IEST-RP-CC002.4 ISO 14644-1	IEST-RP-CC002.4 ISO 14644-1	IEST-RP-CC002.4 ISO 14644-1	IEST-RP-CC002.4 ISO 14644-1	IEST-RP-CC002.4 ISO 14644-1
ISO 14644-1	ISO 5	ISO 5	ISO 5	ISO 5	ISO 5
Style of Work station	Bench top/console w/base stand/storage Work station	Bench top/console w/base stand/storage Work station	Bench top/console w/base stand/storage Work station	Bench top/console w/base stand/storage Work station	Bench top/console w/base stand/storage Work station
Work station Construction	16/18 GA, powder coated steel exterior; 16/18 GA type 304 SST work zone	16/18 GA, powder coated steel exterior; 16/18 GA type 304 SST work zone	16/18 GA, powder coated steel exterior; 16/18 GA type 304 SST work zone	16/18 GA, powder coated steel exterior; 16/18 GA type 304 SST work zone	16/18 GA, powder coated steel exterior; 16/18 GA type 304 SST work zone
Diffuser for Air Supply (Metal)	Non-flammable	Non-flammable	Non-flammable	Non-flammable	Non-flammable
HEPA Filter Seal Type: Supply Filter-99.99% Eff. on 0.3 microns	HEPEX Seal- Neoprene, Spring-loaded	HEPEX Seal- Neoprene, Spring-loaded	HEPEX Seal- Neoprene, Spring-loaded	HEPEX Seal- Neoprene, Spring-loaded	HEPEX Seal- Neoprene, Spring-loaded
Optional Services: Service Coupling (3/8 inch NPT) Gas Valve/Service Coupling (3/8inch NPT) Outlet	(3) Right/left sidewalls (3) Right/left sidewalls (2) Right/left sidewalls	(3) Right/left sidewalls (3) Right/left sidewalls (2) Right/left sidewalls	(3) Right/left sidewalls (3) Right/left sidewalls (2) Right/left sidewalls	(3) Right/left sidewalls (3) Right/left sidewalls (2) Right/left sidewalls	(3) Right/left sidewalls (3) Right/left sidewalls (2) Right/left sidewalls
Work station Size Inches (mm): Height (w/30" HEPA filter) Height (w/36" HEPA filter) Width Depth	55 3/8 (1406) --------- 26 (660) 32 (813)	55 3/8 (1406) 61 3/8 (1559) 38 (965) 32 (813)	55 3/8 (1406) 61 3/8 (1559) 50 (1270) 32 (813)	55 3/8 (1406) 61 3/8 (1559) 62 (1575) 32 (813)	55 3/8 (1406) -------- 74 (1880) 32 (813)
Work Zone Inches (mm): Height (w/30" HEPA filter) Height (w/36" HEPA filter) Width Depth	32 (813) -------- 23 7/8 (606) 19 5/8 (498)	32 (813) 38 (965) 35 7/8 (911) 19 5/8 (498)	32 (813) 38 (965) 47 7/8 (1216) 19 5/8 (498)	32 (813) 38 (965) 59 7/8 (1521) 19 5/8 (498)	32 (813) ---------- 71 7/8 (1826) 19 5/8 (498)
Airflow Volume at 90 fpm (.46 mps) CFM/CMH (w/30" HEPA filter) (w/36" HEPA filter)	477 (810) ------	718 (1220) 852 (1448)	958 (1628) 1137 (1932)	1198 (2036) 1422 (2416)	1438 (2443) ------
Heat Rejected, BTU, Per Hour (w/30" HEPA filter) (w/36" HEPA filter)	706 -----	863 1099	1256 1491	1648 1884	1962 -----
Electrical: Volts, AC 60 Hz +Amps: Blower/Lights (30"/36") Rated Amps: 12 ft. Power Cord (one)	U.L./U.L.-C Listed 115 1.8 7 14 GA - 3 Wire, 15A	U.L./U.L.-C Listed 115 2.2/2.8 7 14 GA - 3 Wire, 15A	U.L./U.L.-C Listed 115 3.2/3.8 8 14 GA-3 Wire, 15A	U.L./U.L.-C Listed 115 4.2/4.8 8 14 GA-3 Wire, 15A	U.L./U.L.-C Listed 115 5.0 8 14 GA-3 Wire, 15A
Work station weights:*** Crated Shipping Weight (30") Net Weight (30") Crated Shipping Weight (36") Net Weight (36")	280 lbs. /127 kg. 240 lbs. /109 kg. ------- -------	330 lbs. /150 kg. 290 lbs. /132 kg. 345 lbs. /156 kg. 305 lbs. /138 kg.	390 lbs. /177 kg. 340 lbs. /154 kg. 405 lbs. /184 kg. 355 lbs. /161 kg.	450 lbs. /204 kg. 400 lbs. /181 kg. 470 lbs. /213 kg. 420 lbs. /191 kg.	540 lbs. /245 kg. 470 lbs. /213 kg. ------ ------

***Crated shipping weight does not include weight for accessories or options
+ Based on Work station with new filters running at 115VAC.

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