

PURCHASE SPECIFICATIONS FOR NUAIRE LABGARD ES ENERGY SAVER NU-S125 WALK-IN BIOLOGICAL SAFETY CABINET

The intent herein is to provide a concise statement of requirements for a quality Class II, Type A2 Walk-In Biological Safety Cabinet designed for high volume automation systems, fermentation equipment or any large device requiring Class II performance, which may be used to augment your purchase request/order.

The LABGARD ES NU-S125 meets the containment performance requirements of NSF/ANSI 49. Your confidence is well placed in a Biological Safety Cabinet that meets these requirements.

NuAire sales representatives will be pleased to explain the importance of the performance and control affected by each of the following requirements. The NuAire LABGARD ES NU-S125 meets all of the requirements in the following SPECIFICATION.

1. Models & Dimensions (Inches)

Models (NU-S125)	-436	-636	-648	-836	-848	-1036	-1048
Overall Dimensions							
Width	62	86	86	110	110	134	134
Depth*	48	48	60	48	60	48	60
Height	104	104	104	104	104	104	104
Interior Dimensions							
Width	47-7/8	71-7/8	71-7/8	95-7/8	95-7/8	119-7/8	119-7/8
Depth**	34-7/8	34-7/8	46-7/8	34-7/8	46-7/8	34-7/8	46-7/8
Height	78-7/8	78-7/8	78-7/8	78-7/8	78-7/8	78-7/8	78-7/8

* Add additional 1" for decorative panel and 2-1/2" for minihelic gauge on top blower/filter module.

** Depth of floor pan is 2" (51mm) less due to 1" high threshold.

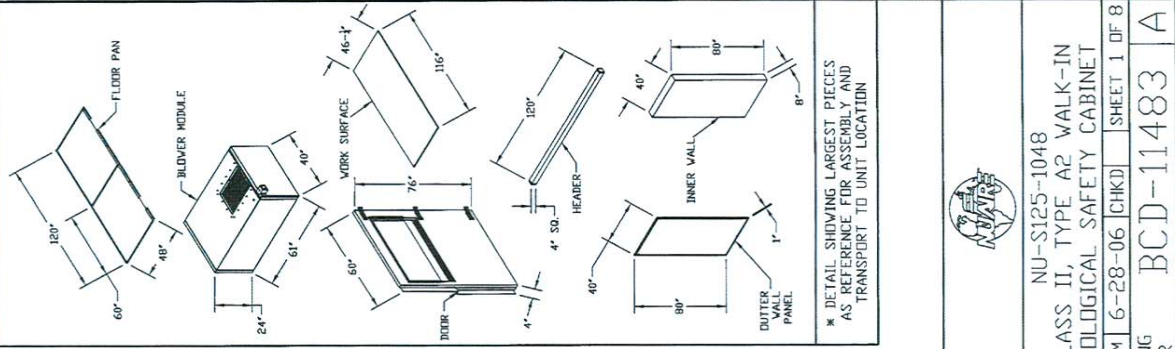
2. Cabinet shall provide airflows & biological safety performance as specified.

- a. Cabinet shall provide biological containment protection for both operator and product proven by an actual test, (e.g. test conducted by NuAire).
- b. Base Cabinet shall be constructed from 16GA, Type 304 stainless steel wall panels, gasketed and bolted together. Painted exterior 16 GA CRS cover panels shall be gasketed and bolted to wall panels. All biologically contaminated panels and ducts shall be maintained under negative pressure.
- c. Top blower/filter module(s) shall be painted 16 GA CRS bolted to base cabinet assembly.
- d. Hinged front door(s) shall be all stainless steel design with heavy duty SST hinges and door latch.
- e. Cabinet shall be easily fumigated employing an established procedure such as that recommended by NSF.
- f. Supply HEPA filter(s) shall be of full cabinet work zone width and depth; work zone below supply HEPA shall be of fixed cross-sectional area (sloping back wall or viewing window is unacceptable).
- g. Supply HEPA filter(s) shall be protected by perforated metal diffusers covering the entire top of the work zone.
- h. Air Velocity from the supply filter shall average 55 to 65 FPM.
- i. Work access opening shall be 8 inches. Average inflow velocity shall nominally be 105 LFPM (.53 m/s).

3. The cabinet shall have all positive pressure plenums surrounded by a vacuum relative to the room (the LABGARD™ ES employs the HEPEX™ Zero Leak Airflow System).

4. HEPA filters shall be 99.99% efficient on 0.3 micron, aluminum framed, meeting the requirements of IEST-RP-CC001.4, Type C.

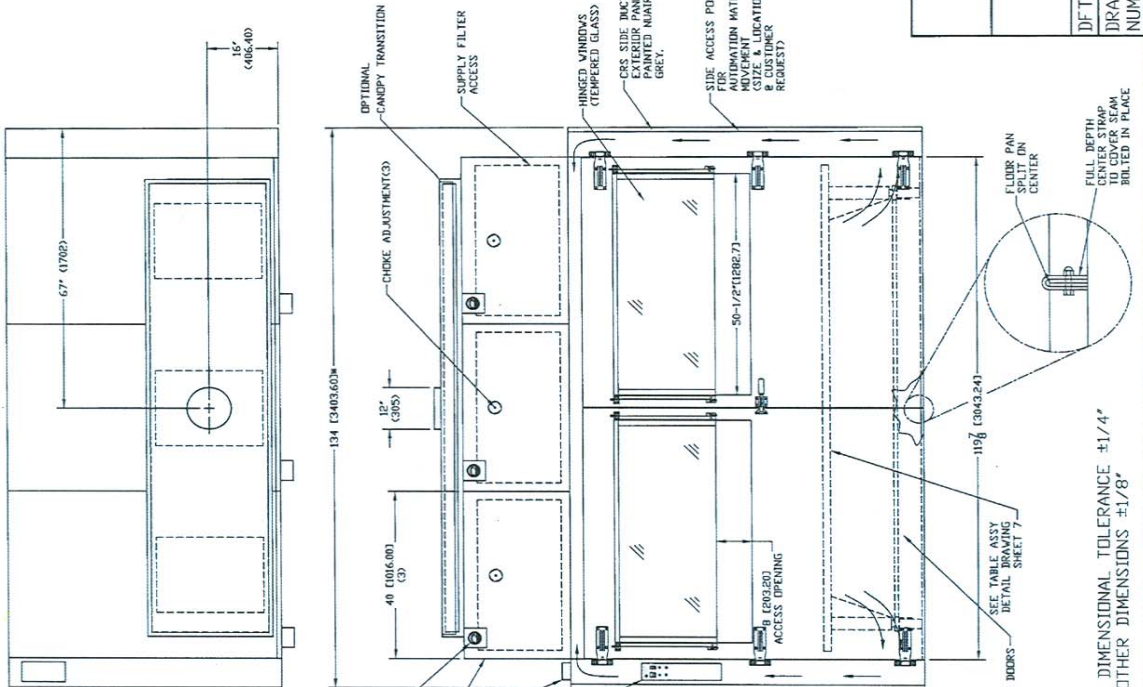
5. Electrical power shall be supplied by customer (Hard connected) to junction box. Electrical supply should be 220 VAC, 60 Hz, 20 Amps for main cabinet (115 V, 60 Hz, 20 Amps for 436,636,648 models) and 115 VAC, 60 Hz, 15 Amps for outlets or as specified by the customer protected with thermal circuit breaker from distribution panel.
6. The cabinet shall have two internal electrical circuits; one for blower/lights and one for the outlets.
7. The cabinet shall meet the requirements of UL61010-1 for both the U.S. and Canada for electrical/mechanical integrity.
8. The cabinet 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.
9. Total cabinet airflow shall be controlled via solid-state DC motor controller with adjustment available on the Control Center.
10. Balancing of cabinet workzone downflow (recycling flow) to exhaust flow shall be accomplished with an internal exhaust flow damper, externally adjustable with screwdriver and sealed with liquid tight fastener.
11. Sound level shall be no more than 67 dbA measured 15 inches (381mm) above the work tray and 12 inches (305mm) in front of viewing window.
12. Fluorescent lighting shall be internally mounted on top/rear panel of workzone and provide 40 to 120 foot-candles (LUX) on work surface. The ballast to be electronic, containing thermal protection with automatic reset.
13. Cabinet shall have an audible and visual door alarm.
14. Cabinet shall have no more than 4°C temperature rise with DC motor/blower and lights running.
15. Cabinet shall have a minihelic gauge(s) to display pressure drop over the supply HEPA filters.
16. Cabinet shall come standard with two GFCI outlets with drip proof covers (one on each sidewall).
17. Cabinet shall have a permanent positive pressure plenum with quick release supply filter removal.
18. Motor/blower shall be positioned so as to create an even filter loading, thereby prolonging the life of the supply HEPA filter, and shall deliver over 200% the initial HEPA filter static pressure with no more than a 10% decrease of CFM.
19. Cabinet shall come standard with an all stainless steel work table designed with the following features; top table, top dimensions are the interior cabinet size minus 1-3/4" depth and minus 4" width, electric autolift, 5" lockable SST castors and 800 lb. capacity.
20. The following optional equipment shall be available to support installation and user requirements:
 - Ultraviolet Light
 - Additional Service Valves for Gas, Air, Vacuum
 - Additional Dedicated Outlets (115V, 220V)
 - Airflow Alarm Systems
 - Exhaust Transitions
 - Cord Pass-Throughs
 - Robotic Pass-Throughs
 - Automation Pass-Throughs



* DETAIL SHOWING LARGEST PIECES AS REFERENCE FOR ASSEMBLY AND TRANSPORT TO UNIT LOCATION

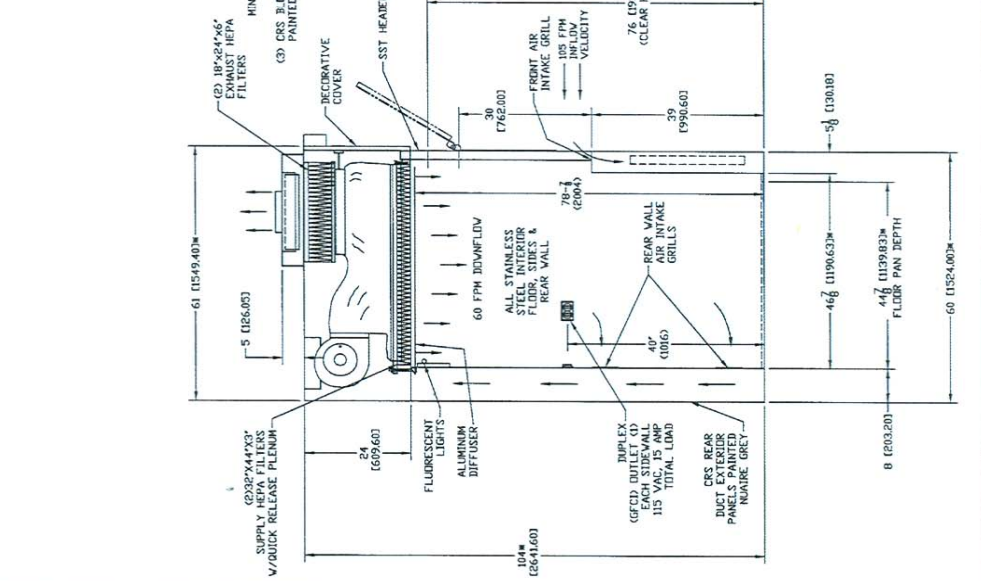


NU-S125-1048
 CLASS II, TYPE A2 WALK-IN
 BIOLOGICAL SAFETY CABINET
 DFTM/PM 6-28-06 (CHKD) SHEET 1 OF 8
 DRAWING NUMBER BCD-11483 A

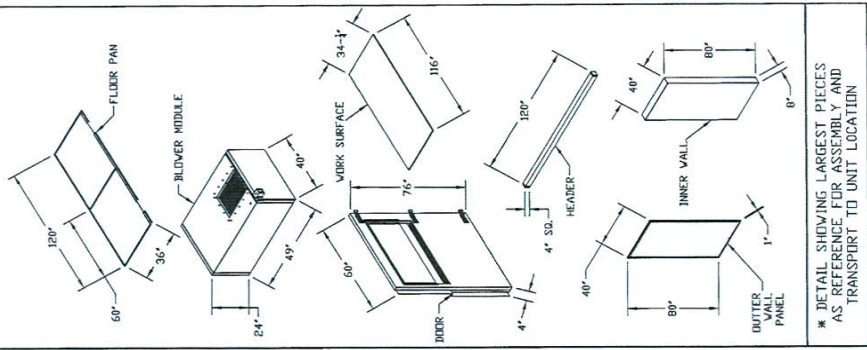


*OVERALL DIMENSIONAL TOLERANCE ±1/4"
 ALL OTHER DIMENSIONS ±1/8"

-POWER REQUIREMENTS: 220V, 60 HZ, 20 AMP (MAIN CABINET)
 FOR JUNCTION BOX CONNECTION, 115V, 60 HZ, 15 AMP (OUTLETS)
 -HEAT REJECTED: 120 BTU'S PER MINUTE
 -EXHAUST VOLUME @ 0.2' W.G.: CABINET 590 CFM
 CANDY 200 CFM
 TOTAL 790 CFM



-POWER REQUIREMENTS: 220V, 60 HZ, 20 AMP (MAIN CABINET)
 FOR JUNCTION BOX CONNECTION, 115V, 60 HZ, 15 AMP (OUTLETS)
 -HEAT REJECTED: 110 BTU'S PER MINUTE
 -EXHAUST VOLUME @ 0.2" W.G.: CABINET 590 CFM
 CANOPY 200 CFM
 TOTAL 790 CFM



* DETAIL SHOWING LARGEST PIECES
 AS REFERENCE FOR ASSEMBLY AND
 TRANSPORT TO UNIT LOCATION

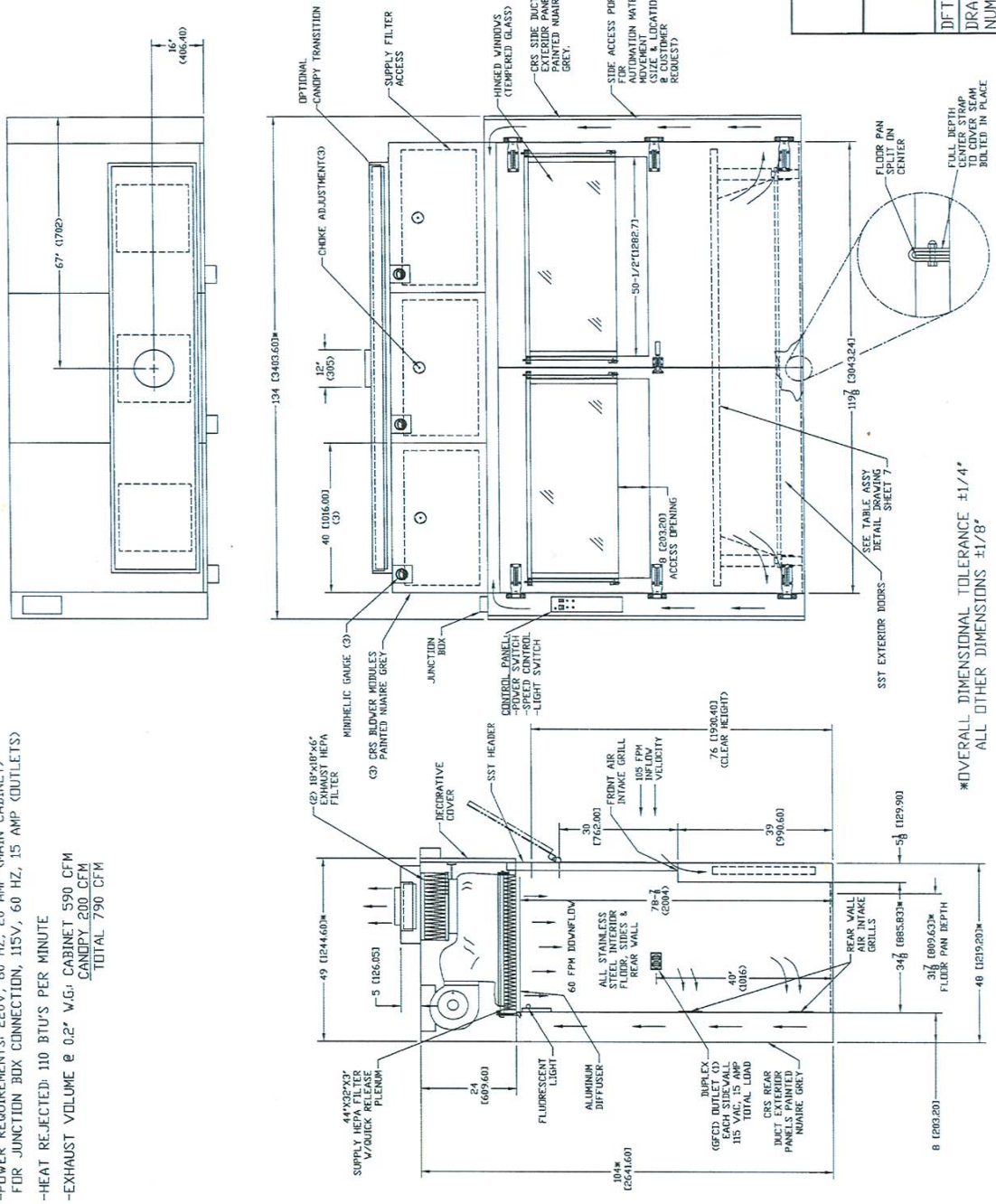


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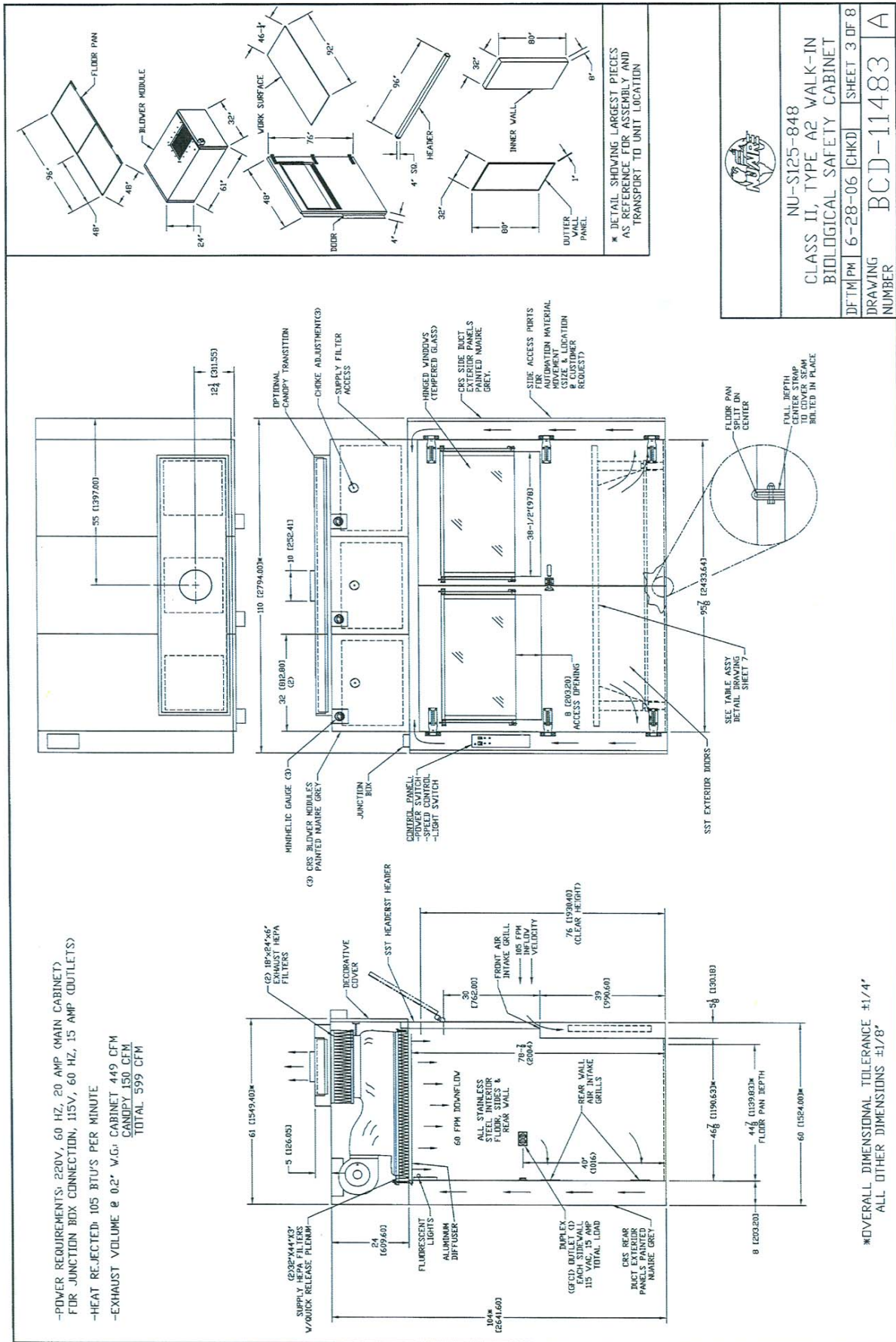
CLASS II, TYPE A2 WALK-IN
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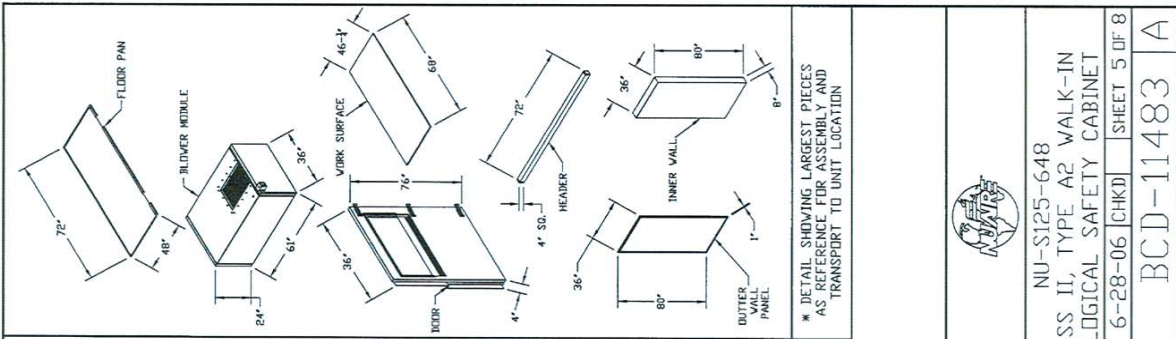
DFT/PM 6-28-06 (CHKD) SHEET 2 OF 8

DRAWING NUMBER BCD-11483 A



*OVERALL DIMENSIONAL TOLERANCE ±1/4"
 ALL OTHER DIMENSIONS ±1/8"





* DETAIL SHOWING LARGEST PIECES AS REFERENCE FOR ASSEMBLY AND TRANSPORT TO UNIT LOCATION



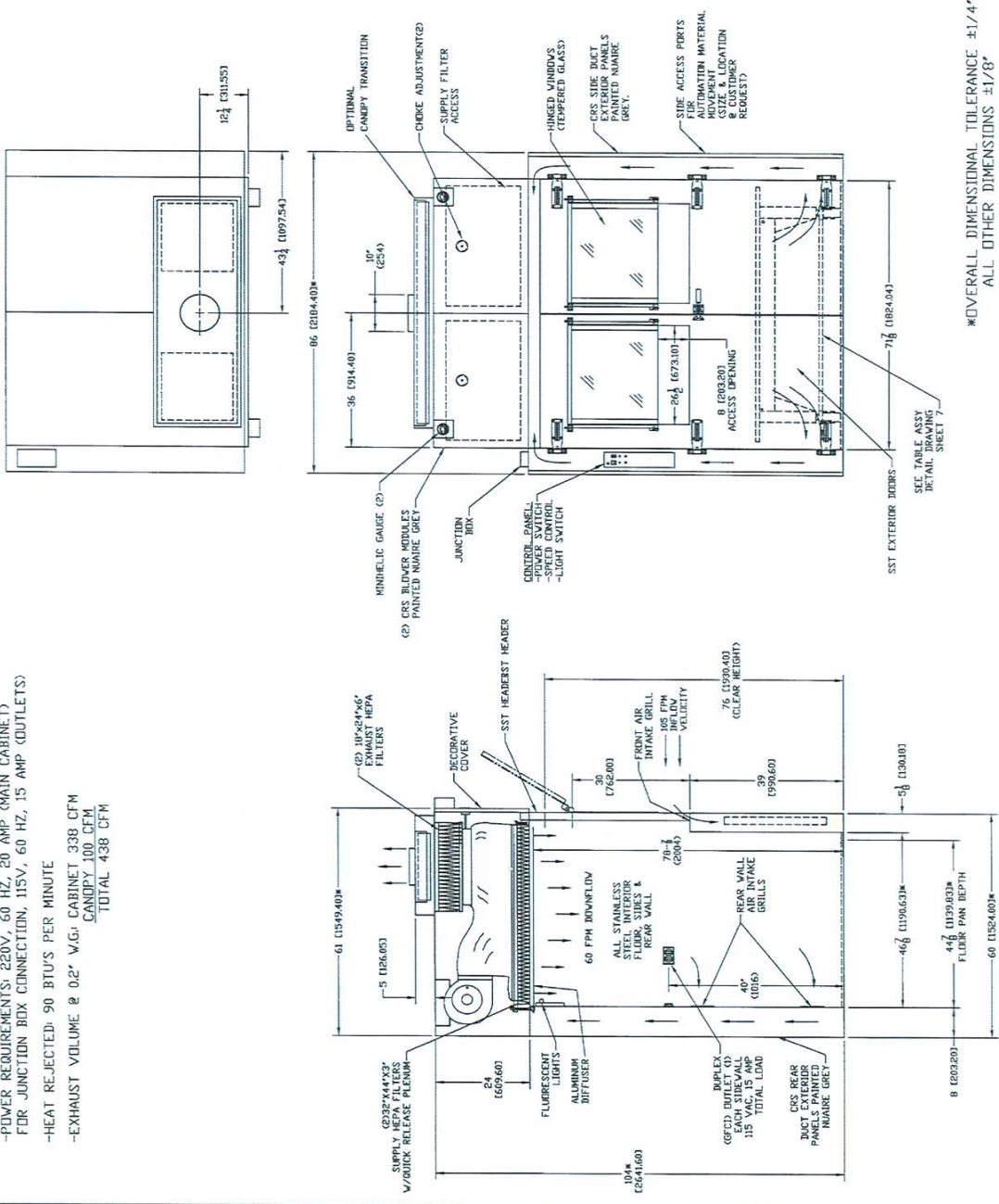
NU-S125-648

CLASS II, TYPE A2 WALK-IN BIOLOGICAL SAFETY CABINET

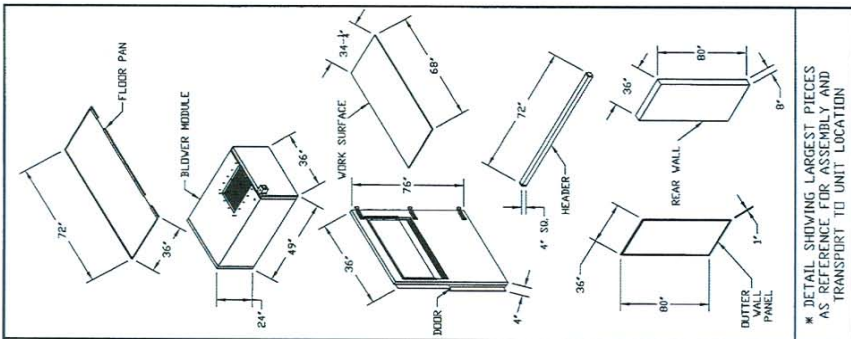
DFTM/PM 6-28-06 CHKD/ SHEET 5 OF 8

DRAWING NUMBER BCD-11483 A

-POWER REQUIREMENTS: 220V, 60 HZ, 20 AMP (MAIN CABINET)
 FOR JUNCTION BOX CONNECTION, 115V, 60 HZ, 15 AMP (OUTLETS)
 -HEAT REJECTED: 90 BTU'S PER MINUTE
 -EXHAUST VOLUME @ 0.2" W.G.: CABINET 338 CFM
 CANOPY 100 CFM
 TOTAL 438 CFM



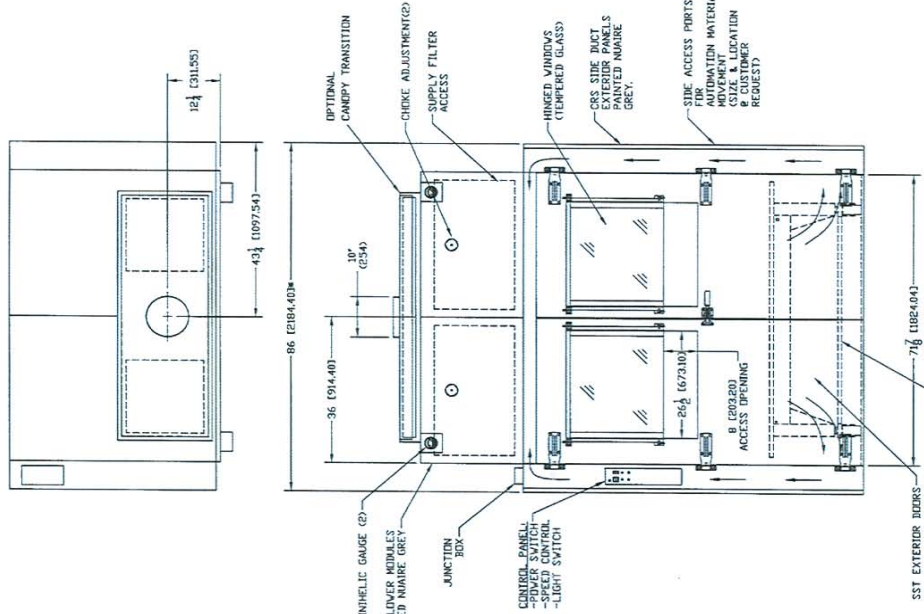
*OVERALL DIMENSIONAL TOLERANCE ±1/4" ALL OTHER DIMENSIONS ±1/8"



* DETAIL SHOWING LARGEST PIECES AS REFERENCE FOR ASSEMBLY AND TRANSPORT TO UNIT LOCATION

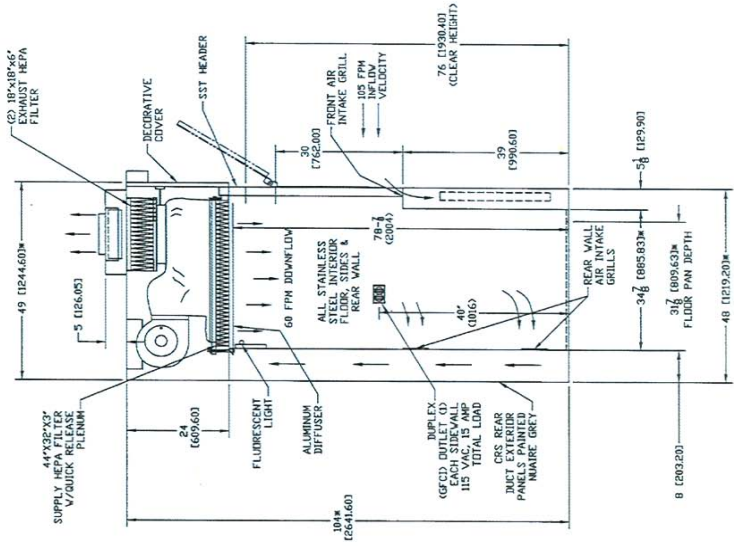


NU-S125-636	CLASS II, TYPE A2 WALK-IN BIOLOGICAL SAFETY CABINET
DF TM/PM 6-28-06 [CHKD]	SHEET 6 OF 8
DRAWING NUMBER	BCD-11483 A

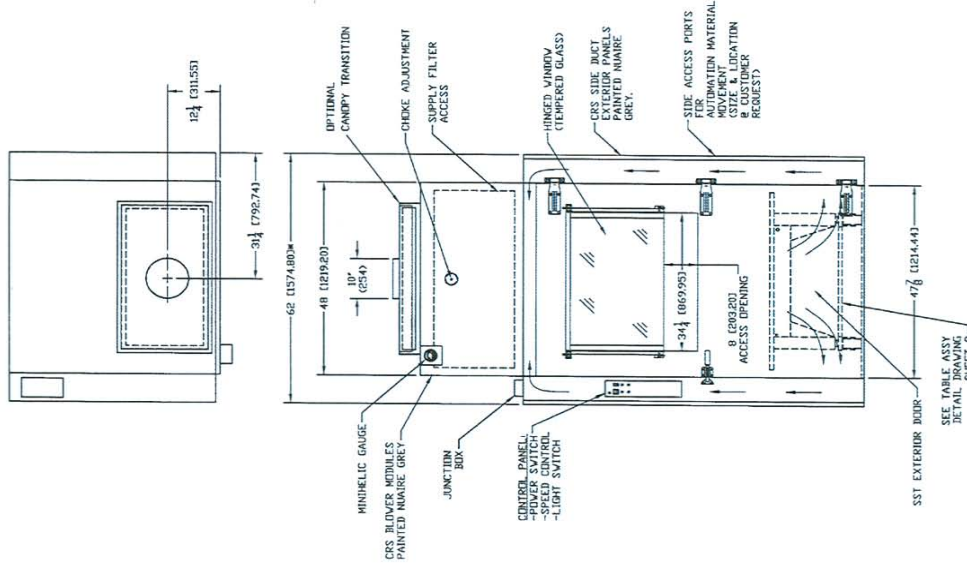
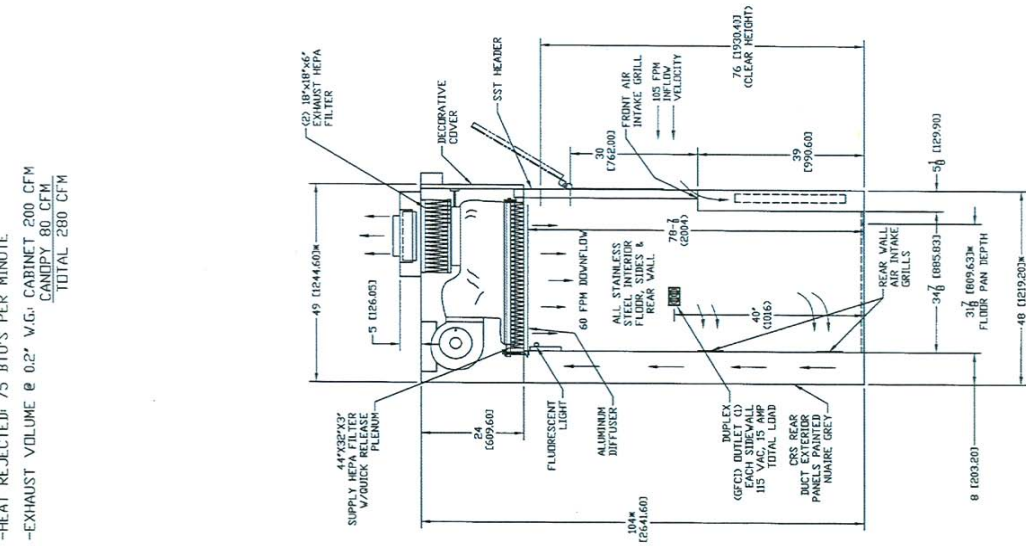


* OVERALL DIMENSIONAL TOLERANCE ±1/4" ALL OTHER DIMENSIONS ±1/8"

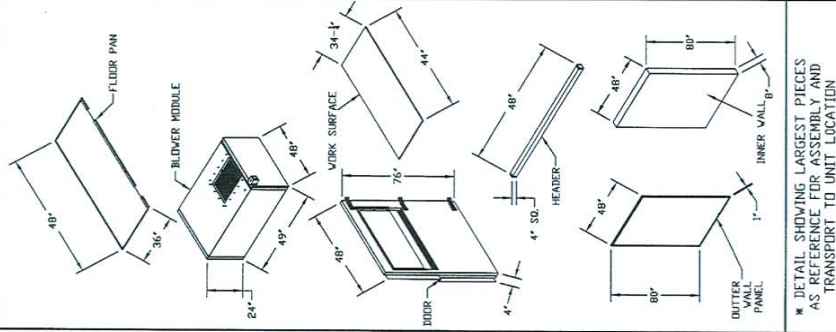
- POWER REQUIREMENTS: 220V, 60 HZ, 20 AMP (MAIN CABINET) FOR JUNCTION BOX CONNECTION, 115V, 60 HZ, 15 AMP (OUTLETS)
- HEAT REJECTED: 80 BTU'S PER MINUTE
- EXHAUST VOLUME @ 0.2' W.G.: CABINET 338 CFM CANOPY 100 CFM TOTAL 438 CFM



- POWER REQUIREMENTS: 115V, 60 HZ, 20 AMP (MAIN CABINET)
FOR JUNCTION BOX CONNECTION, 115V, 60 HZ, 15 AMP (OUTLETS)
- HEAT REJECTED: 75 BTU'S PER MINUTE
- EXHAUST VOLUME @ 0.2" W.G.: CABINET 200 CFM
CANOPY 80 CFM
TOTAL 280 CFM



OVERALL DIMENSIONAL TOLERANCE ±1/4"
ALL OTHER DIMENSIONS ±1/8"



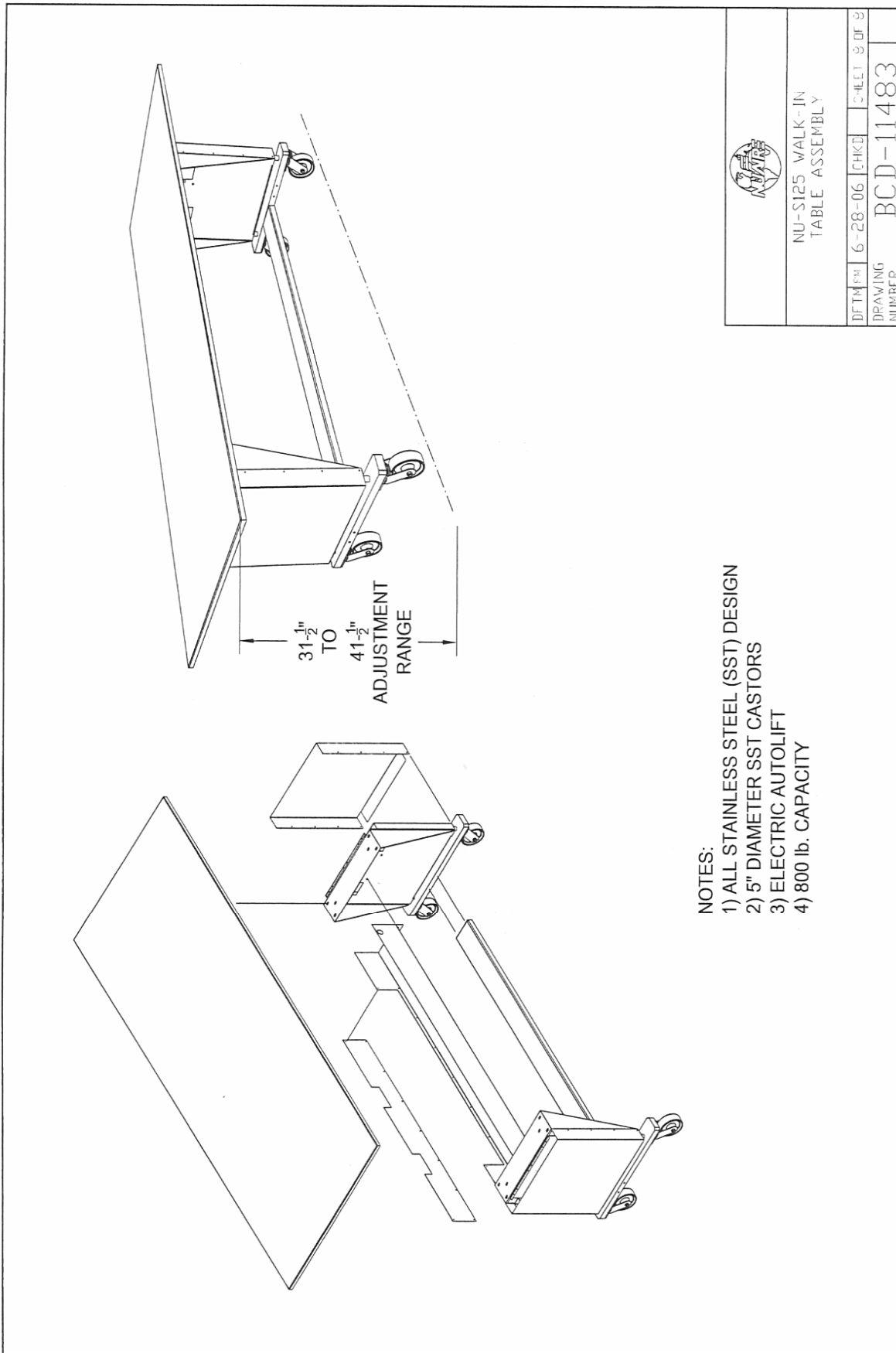
* DETAIL SHOWING LARGEST PIECES
AS REFERENCE FOR ASSEMBLY AND
TRANSPORT TO UNIT LOCATION



NU-S125-436

CLASS II, TYPE A2 WALK-IN
BIOLOGICAL SAFETY CABINET

DF/TM/PM 6-28-06 [CHKD] SHEET 7 OF -
DRAWING NUMBER BCD-11483 A



NOTES:

- 1) ALL STAINLESS STEEL (SST) DESIGN
- 2) 5" DIAMETER SST CASTORS
- 3) ELECTRIC AUTOLIFT
- 4) 800 lb. CAPACITY