

## **SECTION 23 38 13**

### **SPECIFICATIONS**

#### **TAG: Commercial Kitchen Ventilation Hoods, Listed Commercial Kitchen Hoods**

#### **PART 1- GENERAL**

##### **1.1 SUMMARY**

- A. The BD2 series is a Type I, low proximity hood for use over 450°F/600°F/700°F cooking surface temperatures. The low proximity hood refers to the close location of the hood with respect to the cooking appliances.
- B. The BLL series is a Type I, low proximity passover hood for use over 400°F/600°F cooking surface temperatures. The top of the hood can be used as a plate shelf, and the low hanging height allows for passover design.
- C. The ND2 series is a Type I, wall canopy hood for use over 450°F/600°F/700°F cooking surface temperatures. The aerodynamic design includes a mechanical baffle and performance enhancing lip for exceptional capture and containment.
- D. The SND-2 series is a Type I, sloped wall canopy hood for use over 450°F/600°F cooking surface temperatures. The sloped canopy is the ideal hood choice for low ceiling heights.
- E. The VHB Series is a Premier Type II, exhaust only hood used over equipment not producing grease laden vapors. Type II hoods are used for condensation or heat removal applications.
- F. The NDI Series is a Type I, double island V-bank hood for use over 400°F/600°F/700°F cooking surface temperatures. Double island hoods are used over cooking equipment where no walls exist or for display cooking.
- G. The ND-2WI series is a Type I, single island hood for use over 450°F/600°F/700°F cooking surface temperatures. Single island hoods are used over cooking equipment where no walls exist or for display cooking.
- H. The hood shall have the size, shape, and performance specified on drawings.

##### **1.2 SUBMITTALS**

- A. The manufacturer assumes no liability for the use or results of use from this document. Specifications are to be reviewed by the engineer to confirm the project's requirements and meet Federal, State, and Local codes and regulations.
- B. As the manufacturer continues product development, it reserves the right to change design and specifications without notice.
- C. The manufacturer shall supply complete computer generated submittal drawings, including hood section view(s) and hood plan view(s). These drawings must be available to the engineer, architect, and owner for their use in construction, operation, and maintenance.

##### **1.3 QUALITY ASSURANCE**

- A. This hood is ETL-listed to standard UL710, ULC710, and ULC-S646 when installed in accordance with these installation instructions and National Fire Protection Association Standard "NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations."
- B. Built-in compliance with NSF/ANSI Standard 2.
- C. Approved for use in New York City per the Fire Department of New York Certificate of Approval #5804.
- D. The hood shall be ETL Listed as:

1. "Exhaust Hood Without Exhaust Damper."
2. ETL Sanitation Listed and built in accordance with NFPA 96.
3. The ETL label shall list temperature rating(s) and minimum CFM/ft rating(s).

#### **1.4 WARRANTY**

- A. All units shall be provided with the following standard warranty:
  1. This equipment is warranted to be free from defects in materials and workmanship, under normal use and service, for a period of 2-years from date of shipment.
- B. The manufacturer shall not be liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment. Should any part of the equipment prove to be defective in material or workmanship within the 2-year warranty period, upon examination by the manufacturer, such part will be repaired or replaced by manufacturer at no charge. The buyer shall pay all labor costs incurred in connection with such repair or replacement. Equipment shall not be returned without manufacturer's prior authorization, and all returned equipment shall be shipped by the buyer, freight prepaid to a destination determined by the manufacturer.
- C. Refer to Manufacturer's Operation, Installation, and Maintenance (OIM) Manual for detailed descriptions of what is/is not covered and contact information for warranty claims.

### **PART 2- PRODUCTS**

#### **2.1 GENERAL**

- A. Construction shall be dependent on the structural application to minimize distortion and other defects. All seams, joints, and penetrations of the hood enclosure to the lower outermost perimeter, which directs and captures grease-laden vapor and exhaust gases, shall have a liquid-tight continuous external weld in accordance with NFPA 96.
- B. Duct sizes, CFM, and static pressure requirements shall be as shown on drawings. Static pressure requirements shall be precise and accurate; air velocity and volume information shall be accurate within 1-ft increments along the length of the ventilator.

#### **2.2 CONSTRUCTION**

- A. Construction shall be type 304/430 stainless steel.
- B. Double wall insulated front to eliminate condensation and increase rigidity on wide sizes. The insulation shall have a flexural modulus of 475 EI, meet UL 181 requirements and be in accordance with NFPA 90A and 90B.
- C. Hood shall be equipped with a minimum of four connections for hanger rods. Hood lengths greater than 12' will have added hangers.
- D. Exhaust duct collar to be 3" or 4" high with flange.
- E. The grease drain system shall be an enclosed integral part of the hood back and have slopes with an exposed, removable 1/2 grease cup to facilitate cleaning.
- F. Low profile design to allow plate shelf and passover design (BLL Hoods).
- G. Removable grease cup for easy cleaning.
- H. An integral baffle to direct grease laden vapors toward the exhaust filter bank (ND2).
- I. Hood shall be furnished with UL classified filters, supplied in size and quantity as required by ventilator.
- J. All seams shall be welded and have stainless steel on exposed surfaces.

## 2.3 LIGHTING

- A. Recessed LED light, 3K warm output.
- B. Recessed LED light, 4K natural output.
- C. L55 Series canopy light fixture, includes clear thermal and shock resistant globe.
- D. Recessed round dimmable LED fixture and LED light, 3500K Warm output.
- E. Recessed round LED fixture and LED light, 3500K Warm output.
- F. Recessed incandescent light.
- G. Screw-in compact fluorescent bulb. High temperature assembly includes clear and shock resistant globe.
- H. Screw-in halogen bulb. High temperature assembly includes clear and shock resistant globe.
- I. Wire Guards

## 2.4 FILTERS

- A. Stainless Steel Captrate Combo Filter (redesigned for low static pressure) with hook, ETL Listed. Particulate capture efficiency: 99% efficient at 9 microns, 92% efficient at 3 microns.
- B. Stainless Steel Captrate Solo filter with hook, ETL Listed. Particulate capture efficiency: 85% efficient at 9 microns, 76% efficient at 5 microns.
- C. SS Single wall filter with Bottom Hanging Hook. For use in Type 2 Hoods only.
- D. Spark Arrestor Filters with Hook. Stainless Steel Filter with Baffle and Spark Arrestor Screen and Bottom Hanging Hook.
- E. High Velocity Cartridge Filter, Stainless steel with Bottom Hanging Hook.
- F. High Velocity Cartridge Filter, Stainless steel with Bottom Hanging Hook. 2 inches Wide Maximum, for Self Cleaning Hoods with Drip Blanks.
- G. Kleen-Gard Stainless Steel Baffle Filter with Handles and Bottom Hanging Hook, UL Classified.
- H. Kleen-Gard Stainless Steel Baffle Filter with Handles, UL Classified.

## 2.5 OPTIONS

- A. Fire Suppression System: UL 300 fire suppression system. «FIRESYSTEM»
- B. Optional perforated supply plenum shall provide make-up air discharged below the cooking equipment. «PSP»
  - 1. Perforated diffuser plates shall be included in the design to provide even air distribution.
  - 2. Unexposed surfaces shall be constructed of aluminized steel. Plenum shall be insulated to prevent condensation.
  - 3. Perforated Supply Plenum (PSP)
  - 4. Dual Plenum (AC-PSP)
- C. Hood or Wall Mounted Utility Cabinet – The cabinet can store listed fire suppression system, listed components, and pre-wired electrical controls.

## 2.6 ACCESSORIES

- A. CORE Protection – CORE Protection plenum spray bar added.
- B. Balance Damper - Used to manually balance exhaust flow rate. Installed in hood plenum.

- C. End Panel(s) maximize hood performance and eliminate the effects of cross drafts in the kitchen. Units constructed of stainless steel and sized according to hood width and cooking equipment. Exposed edges hemmed for safety and rigidity. Selected panels:
- End Panel
  - Quarter End Panel
  - Vertical End Panel
  - Wall as End Panel
  - Wide Vertical End Panel
- D. Splash panel(s) selected:
- Backsplash
  - Backsplash - Inside Corner
  - Backsplash - Outside Corner
  - Left Sidesplash
  - Right Sidesplash
- E. Standoff(s) selected:
- Back Standoff «BACK» Bolt Together
  - Left End Standoff
  - Right End Standoff
  - Front Standoff
- F. Wrapper(s) may be installed from the factory or field installed. Wrapper(s) selected:
- Wrapper
  - Wrapper Channel
- G. Miscellaneous option(s) selected:
1. 16 Gauge Hood Top – Option for pass-through hoods to stiffen top shelf.
  2. Minimum 18 Gauge Hood – Upgrade option to hood's construction from 20 gauge to 18 gauge.
  3. 1-Pint Grease Cup – Replaces 1/2 pint grease cup.
  4. DI-PSP – Drop-In Perforated Supply Plenum for supply air.
  5. Ground/Polished Corners – Corners of hood welded along seams. Grind and polished corners for final finish.
  6. Finished Top – Finished top for storage/pass-through top.
  7. Full Dimension Hanging Bracket – Unistrut added to allow for various hood mounting locations.
  8. Insulation for Top of Hood – Fully insulated top of hood.
  9. Insulation for Back of Hood – Backside of hood is fully insulated.
  10. NYC Construction – Hood construction will follow NYC construction requirements. All filters stamped with NYC certificate of approval.
  11. Pizza Oven Top Mount Flanges – Flanged brackets added to mount hood over pizza oven.
  12. Prison Package – Includes security screws in place of standard screws and cabinet locks.
  13. Riser Sensor Install – Sensor set-up for 3" thick double wall duct.
  14. Riser Sensor Install – Sensor set-up for 6" plenum.
  15. Sensor-Capture Volume – Duct stat installed in the capture volume of the hood.

16. Structural Front Panel – Front panel made with 18 gauge material.
17. Timer Bracket – Centered bracket along the length of the hood.
18. Top Anchor – Angle iron added to the top of the back support.
19. Wall End Cap – Stainless steel U channel.
20. Wall Mount Bracket – Used to hang hood onto a back wall.
21. Dye Test Plenum – Plenum and exhaust risers dye tested from the factory.
22. GFCI Duplex Outlet – GFCI outlet added to hood.
23. Self Cleaning – Self cleaning spray bar, self cleaning filters, and water wash drain kit added.
24. Heat Recovery Coil – Heat Recovery Coil for hood plenum.
25. Concession Trailer Install Kit – Hardware kit for concession trailer hood installation.
26. Condensate Gutter – Full perimeter condensate gutter.

## **PART 3- EXECUTION**

### **3.1 EXAMINATION**

- A. Examine areas and conditions under which the system is installed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

### **3.2 INSTALLATION**

- A. Install in accordance with manufacturer's instructions, drawings, written specifications, manufacturer's installation manual, and all applicable building codes.