Spring Air
Solutions for Energy Savings

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DYNAFLOW
Dry Extractor Type, Back-to-Back Island
Double Row Island Arrangement
Box Canopy, Exhaust Fire Damper

DD-DI-MB

c(UL)us NSF

**Dynaflow
UL listed for 87"
mounting height**

General Description
The hood is NFPA-96 Type 1 listed for use with all temperature appliances in a double row, island cooking equipment lineup. The unit is ceiling hung with a maximum mounting height of 87" (2209 mm) from the lower edge of the canopy to the floor. The ventilator is installed with the core extractor section over the chef's head. The hood is finished with a number 4 finish on exposed sides. The *Dynaflow* hood is available with fluorescent or incandescent lights wired to a J-box.

Efficiency
The *Dynaflow* hood is a revolutionary idea in commercial kitchen ventilator design. The *Dynaflow* allows the exhaust flow to be field adjusted from 61 cfm/ft to 450cfm/ft over each appliance without affecting the overall efficiency of the ventilator.   Dynaflow operates with the lowest minimum exhaust. After your kitchen is complete, appliances can be Relocated, Added, or Removed from under the hood! It's a simple adjustment to fine-tune your ventilator to provide excellent smoke capture with maximum grease extraction.
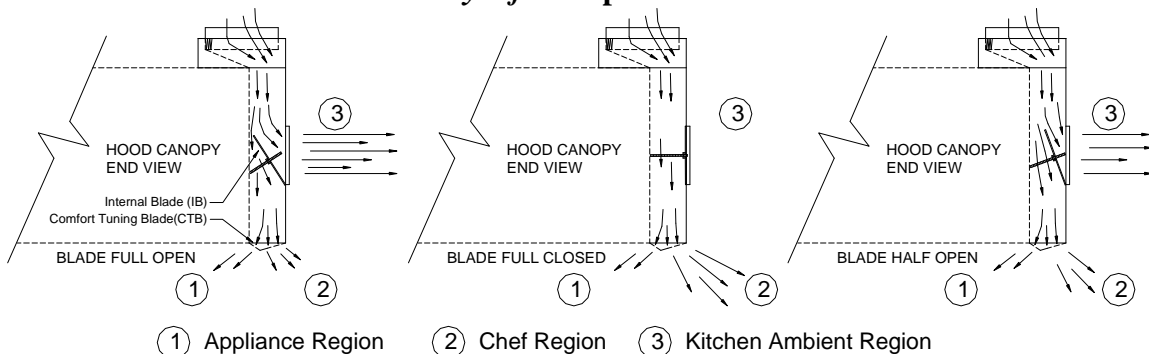
Exhaust and Supply
The *Dynaflow* design provides the complete commercial kitchen ventilation package. The *Dynaflow hood* exhaust volume is based on the appliances below the hood. Heated and/or cooled fresh air ducting is connected to the two supply duct collars on the top, front of the hood. The fresh air enters the fire damper in each supply duct connection and then discharges into the *Dynaflow* plenum. Within the plenum the fresh air is routed to three (3) regions within the boundaries of the appliances.

MAXIMUM 87"
MOUNTING HEIGHT!
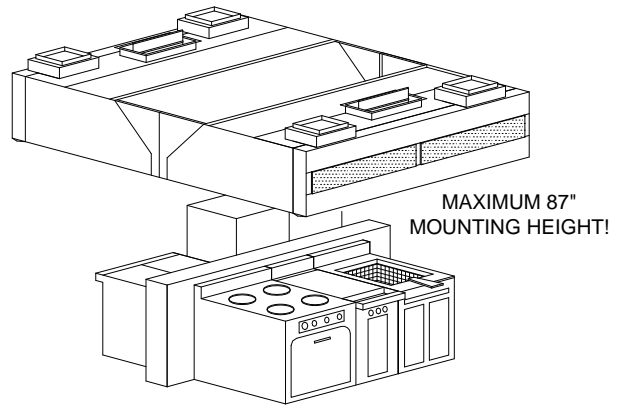
Three Appliance Boundary Regions
1. **Appliance Region**: Fresh air discharges down through a full length S/S perforated panel toward the kitchen appliances to reduce each appliance net exhaust required.
2. **Chef Region**: Fresh air discharges down through a full length S/S perforated panel towards the chef for a more comfortable work environment in front of the hood.
3. **Kitchen Ambient Region**: The horizontal fresh air discharges through a s/s perforated panel out the front of the hood into the kitchen to provide the exact amount of air to balance the kitchen and ensure optimum capture.
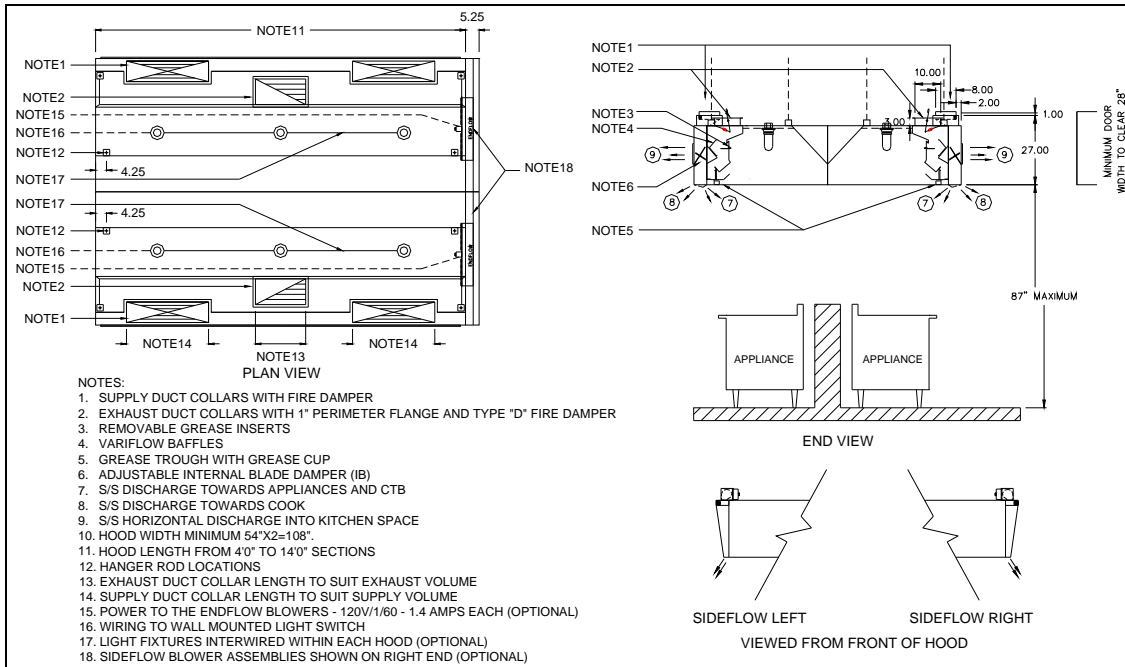4.

Dynaflow Operation

HOOD CANOPY END VIEW — Internal Blade (IB) — Comfort Tuning Blade(CTB) — BLADE FULL OPEN

HOOD CANOPY END VIEW — BLADE FULL CLOSED

HOOD CANOPY END VIEW — BLADE HALF OPEN

① Appliance Region   ② Chef Region   ③ Kitchen Ambient Region

The internal blade (IB) is adjusted to direct fresh air between the Kitchen Ambient (3) Region, the Appliance (1) Region, and Chef(2) Region. The Comfort Tuning Blade (CTB) is adjusted to direct fresh air between the Appliance (1) Region and the Chef(2) Region. The complete kitchen ventilation system is always balanced. The IB and CTB are adjustable every 24" (610mm) along the length of the Dynaflow hood to match the appliances underneath. Dynaflow operates with the lowest minimum exhaust. After your kitchen is complete, appliances can be Relocated, Added, or Removed from under the hood while maintaining maximum capture and chef comfort within the commercial kitchen.

Model DDDIMB

NOTES:
1. SUPPLY DUCT COLLARS WITH FIRE DAMPER
2. EXHAUST DUCT COLLARS WITH 1" PERIMETER FLANGE AND TYPE "D" FIRE DAMPER
3. REMOVABLE GREASE INSERTS
4. VARIFLOW BAFFLES
5. GREASE TROUGH WITH GREASE CUP
6. ADJUSTABLE INTERNAL BLADE DAMPER (IB)
7. S/S DISCHARGE TOWARDS APPLIANCES AND CTB
8. S/S DISCHARGE TOWARDS COOK
9. S/S HORIZONTAL DISCHARGE INTO KITCHEN SPACE
10. HOOD WIDTH MINIMUM 54"X2=108".
11. HOOD LENGTH FROM 4'0" TO 14'0" SECTIONS
12. HANGER ROD LOCATIONS
13. EXHAUST DUCT COLLAR LENGTH TO SUIT EXHAUST VOLUME
14. SUPPLY DUCT COLLAR LENGTH TO SUIT SUPPLY VOLUME
15. POWER TO THE ENDFLOW BLOWERS - 120V/1/60 - 1.4 AMPS EACH (OPTIONAL)
16. WIRING TO WALL MOUNTED LIGHT SWITCH
17. LIGHT FIXTURES INTERWIRED WITHIN EACH HOOD (OPTIONAL)
18. SIDEFLOW BLOWER ASSEMBLIES SHOWN ON RIGHT END (OPTIONAL)

Spring Air Systems Model No. DD-DI-MB Hood Specification

The *Dynaflow* hood, dry extractor shall be a Spring Air Systems model no. DD-DI-MB, box canopy, high efficiency hood, with exhaust fire damper, "MB" Dynaflow air plenum, UL/ULC listed, NSF certified and built in accordance with the NFPA-96. The DD-DI-MB is two DD-DF-MB models back to back in a double row island arrangement.

The unit casing shall be a minimum 18 GA. stainless steel, with No. 4 finish on all exposed surfaces. The ventilator shall have a full-length inlet exhaust slot, a centrifugal vortex chamber, a vortex and a *VARIFLOW* baffle. The vortex chamber shall provide a full 270-degree centrifugal spin around the vortex baffle. The *VARIFLOW* baffles are field adjustable without special tools to provide the minimum exhaust volume.

Both the exhaust chamber, and the *VARIFLOW* baffles, shall be fully accessible through removable front grease inserts. The grease inserts shall also be removable without special tools. The grease trough and cup shall be constructed of stainless steel. The exhaust fire damper shall be an arrangement "D", butterfly type, constructed of stainless steel with blade and edge seals. The fire damper shall be activated by a fusible link and dead weight arrangement.

The Dynaflow plenum provides all the fresh air required for the commercial kitchen. The fresh air is routed to three (3) regions within the boundaries of the appliances. Each region includes an aerodynamically designed s/s perforated discharge panel.

The first (1) region discharges through a full length s/s panel located at the bottom of the Dynaflow plenum. Fresh air is directed through the Comfort Tuning Blade (CTB) towards the appliances providing maximum exhaust air reduction. The second (2) Region discharges through a full length s/s angular panel located at the bottom front of the Dynaflow plenum. The fresh air is directed towards the chef to provide a more comfortable work environment in front of the hood. The third (3) region provides horizontal discharge of fresh air through a s/s perforated panel out the front of the hood into the kitchen. The third region provides the exact amount of fresh air to balance the kitchen and ensure optimum capture.

The s/s front discharge shall include multiple s/s perforated panels every 24" (610mm) long across the front face of the hood. A manually operated Internal Blade (IB) damper shall be located behind each front s/s discharge panel. The CTB and IB dampers are field adjustable through the lower s/s discharge panel. The hood shall have _____ incandescent/fluorescent lights evenly spaced along the length of the hood.

- Optional Sideflow right blower
- Optional Sideflow left blower

Engineering Data

Item Number: _____
Model Number: DDDIMB_____
Number of Sections: _____
Hood Length: _____
Hood Width: _____
Lights: _____
Exhaust Volume: _____
No. of Exhaust Duct Collars: _____
Size of Exhaust Duct Collar _____
Exhaust Static Pressure: _____
Supply Volume: _____
Supply No. of Duct Collars: _____
Supply Size of Duct Collar: _____
Supply Static Pressure: _____
SideFlow LEFT: _____
SideFlow RIGHT: _____

dddimb