Spring Air
Engineering Energy Savings

Island Filter Hood

FD-DB with MZ

Double Box Island Double Row Appliances with Down and Horizontal Discharge Makeup Air Exhaust Fire Damper

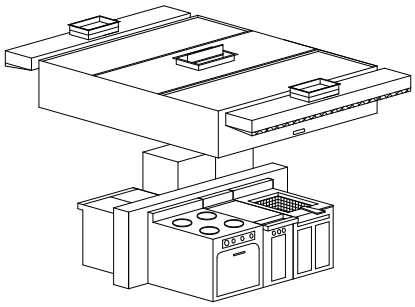
General Description

The island filter hood is used on all cooking equipment in a double row island arrangement. The hood is ceiling hung with a recommended mounting height of 6'6" (1981 mm) from the finished floor. The hood has a full-length "V" bank filter arrangement centered in the canopy width. The baffle filters on each side of the "V" can be sized for unequal exhaust air volumes. The hood is finished in a No. 4 stainless steel finish on all exposed sides. The double box canopy can be tapered to 12" (305 mm) at the front. The filter hood is available with fluorescent or incandescent lights.

The tempered makeup air is discharged down and/or horizontal, through perforated stainless steel panel located forward of the filter hood. The MZ plenums are shipped loose.

Efficiency

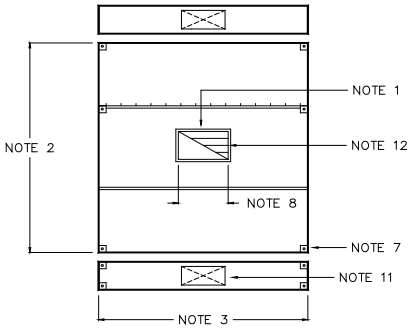
The hood is equipped with high efficiency UL/ULC listed baffle grease filters. The exhaust air accelerates through multiple turns within the baffle filter. Centrifugal forces causes grease dirt and lint to deposit on the baffles. The liquefied grease drains down the baffles, along the grease trough, and into a grease cup.



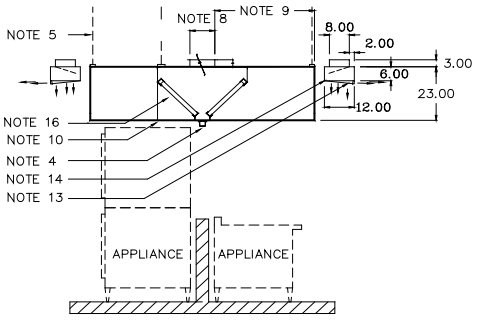
Exhaust and Supply

The total exhaust required to properly ventilate a commercial kitchen is directly related to the type of cooking equipment under the ventilator. An exhaust flow rate between 300 and 700 CFM/ft (465 and 1085 l/s/m) is required for most hoods. Heated fresh air is discharged out the front of the hood canopy for MP and MG types. Fresh air volume of 80% of the total exhaust is recommended for heated makeup air systems.

Model FD-DB with MZ



PLAN VIEW



SECTION VIEW

NOTES:
1. EXHAUST DUCT COLLAR WITH 1 INCH PERIMETER FLANGE.
2. WIDTH TO SUIT APPLIANCES. (RECOMMENDED 12" OVERHANG EACH SIDE)
3. MAXIMUM LENGTH 14'-0". (FOR GREATER LENGTH USE MULTIPLE UNITS.)
4. STAINLESS STEEL GREASE CUP.
5. HANGER ROD BY INSTALLER.
6. RECOMMENDED MOUNTING HEIGHT 6'-6" FROM FINISHED FLOOR.
7. TYPICAL HANGER ROD BRACKET LOCATION - 6 SUPPLIED.
8. DUCT LENGTH TO SUIT EXHAUST VOLUME.
9. LOCATION OF DUCT=(WIDTH OF HOOD(INCHES)-36)/2 + 13
10. HOOD SPLIT HERE FOR SHIPMENT. RECONNECTED IN FIELD BY CONTRACTOR.
11. SUPPLY DUCT COLLAR.
12. EXHAUST DUCT WITH FIRE DAMPER.
13. ADJUSTABLE NOB FOR FRESH AIR HORIZONTAL FLOW.
14. ADJUSTABLE FRONT AND OR BOTTOM AND HORIZONTAL DISCHARG.E
15. STAINLESS STEEL INTERNAL FRESH AIR DISCHARGE
16. UL/ULC LISTED BAFFLE FILTERS

Engineering Data

Ventilator Length (ft)	Typical Exhaust and Supply Air Flow Rate for Heated Makeup Air MC types (EFR*)							
	Exhaust @ 500 CFM/ft		Supply @ 400 CFM/ft (80% exhaust)		Exhaust @ 600 CFM/ft		Supply @ 420 CFM/ft (70% exhaust)	
	Exhaust Volume CFM	Exhaust Duct Size in x in	Supply Volume CFM	Supply Duct Size in x in	Exhaust Volume CFM	Exhaust Duct Size in x in	Supply Volume CFM	Supply duct Size in x in
3.0	1500	10 x 13.5	1200	4 @ 10 x 6	1800	10 x 17	1260	4 @ 10 x 6
3.5	1750	10 x 16	1400	4 @ 10 x 6	2100	10 x 19	1470	4 @ 10 x 7
4.0	2000	10 x 18	1600	4 @ 10 x 7	2400	10 x 21.5	1680	4 @ 10 x 7.5
4.5	2250	10 x 20	1800	4 @ 10 x 7.5	2700	10 x 23.5	1890	4 @ 10 x 7.5
5.0	2500	10 x 22.5	2000	4 @ 10 x 8.5	3000	10 x 27	2100	4 @ 10 x 8.5
5.5	2750	10 x 25	2200	4 @ 10 x 9.5	3300	10 x 30.5	2310	4 @ 10 x 10
6.0	3000	10 x 27	2400	4 @ 10 x 10	3600	10 x 31.5	2520	4 @ 10 x 11
6.5	3250	10 x 29	2600	4 @ 10 x 11	3900	10 x 35	2730	4 @ 10 x 12
7.0	3500	10 x 31.5	2800	4 @ 10 x 12	4200	10 x 37	2940	4 @ 10 x 13
7.5	3750	10 x 34	3000	4 @ 10 x 13	4500	10 x 40.5	3150	4 @ 10 x 13.5
8.0	4000	10 x 36	3200	4 @ 10 x 13.5	4800	14 x 30.5	3360	4 @ 10 x 14.5
8.5	4250	10 x 38	3400	4 @ 10 x 14.5	5100	14 x 33	3570	4 @ 10 x 15
9.0	4500	10 x 40.5	3600	8 @ 10 x 7.5	5400	14 x 34.5	3780	8 @ 10 x 8.5
9.5	4750	14 x 30.5	3800	8 @ 10 x 8.5	5700	14 x 36	3990	8 @ 10 x 8.5
10.0	5000	14 x 32	4000	8 @ 10 x 8.5	6000	14 x 38.5	4200	8 @ 10 x 9.5
10.5	5250	14 x 33.5	4200	8 @ 10 x 9.5	6300	14 x 40	4410	8 @ 10 x 9.5
11.0	5500	14 x 35.5	4400	8 @ 10 x 9.5	6600	14 x 37	4620	8 @ 10 x 10
11.5	5750	14 x 37	4600	8 @ 10 x 10	6900	14 x 38.5	4830	8 @ 10 x 10
12.0	6000	14 x 38.5	4800	8 @ 10 x 10	7200	14 x 40	5040	8 @ 10 x 11
12.5	6250	14 x 40	5000	8 @ 10 x 11	7500	14 x 42	5250	8 @ 10 x 11
13.0	6500	16 x 36.5	5200	8 @ 10 x 11	7800	2 @ 10 x 35	5460	8 @ 10 x 12
13.5	6750	16 x 38	5400	8 @ 10 x 12	8100	2 @ 10 x 36	5670	8 @ 10 x 12
14.0	7000	16 x 39.5	5600	8 @ 10 x 12	8400	2 @ 10 x 37	5880	8 @ 10 x 13

*For flow Rates not shown above refer to the *Ventilator Engineering Manual* for Exhaust and Supply Volumes

Exhaust Flow Rate CFM/ft	Exhaust Static Pressure (in W.C.)
400	0.45
500	0.55
600	0.66
Supply Air Rate	**Supply static Pressure (“W.C.)**
MC	0.20

Notes:

- Exhaust duct can be located anywhere along length of the filter hood.
- For lengths greater than 14’ (4270 mm) join multiple sections together.

Spring Air Systems Model No. FD-DB with MZ Hood Specification

The filter hood shall be a Spring Air Systems model no. FD-DB with MZ, double box canopy, high efficiency, filter hood, with down discharge make up air plenum, The MC plenums ship loose with the hood. UL/ULC listed, and built in accordance with the NFPA-96. The unit casing shall be a minimum 18 GA. Stainless steel with all exposed sides no. 4 finish. The filter hood shall include UL/ULC listed baffle grease filters mounted in an integral stainless steel rack inclined at 45 degrees. The filter rack shall include a full-length stainless steel grease gutter and grease cup. The fire damper shall be an arrangement “D” butterfly type, constructed of 16 Ga. steel with metal blade and edge seals. The fire damper is activated by a fusible link and dead weight arrangement.

The heated makeup air discharges down through stainless steel perforated panels located on the front and back of the hood.

The sheet metal contractor shall supply an access door on the duct above the damper for inspection. The hood shall have incandescent/fluorescent lights evenly spaced along the length of the hood.

Engineering Data

Item Number	_____
Model Number	FD-DB with MZ_____
Number of Sections	_____
Hood Length	_____
Hood Width	_____
Lights	_____
Exhaust Volume	_____
No. Of Duct Collars	_____
Size of Duct Collars	_____
Static Pressure	_____
Supply Volume	_____
No. Of Duct Collars	_____
Size Of Duct Collar	_____
Static Pressure	_____

FDDBMZ