

# Island Filter Hood

# Double Box Canopy Double Row Appliances with Makeup Air

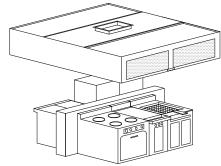
### **General Description**

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 heated makeup air is discharged through perforated panels located on the front of the hood. **Efficiency** 

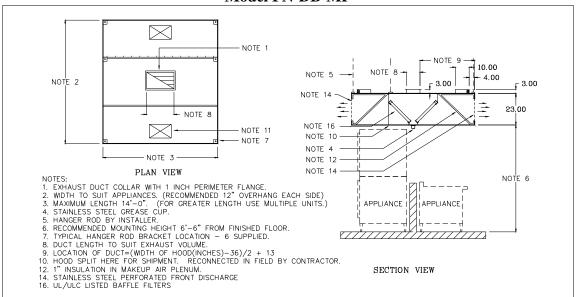
The hood is equipped with high efficiency UL/ULC listed baffle grease filters. The exhaust air accelerates through multiple turns within the baffle filter. Centrifugal forces causes grease dirt and lint to deposit on the baffles. The liquefied grease drains down the baffles, along the grease trough, 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. Refer to the *Ventilator Engineering Manual* for supply air volume calculations.

Unheated fresh air volume between 50 and 80% of the total exhaust is recommended for compensating makeup "MI" air systems. For detailed calculations refer to the *Spring Air Systems Compensating Hood Engineering Manual.* 







Engineering Data								
Typical Exhaust and Supply Air Flow Rate for Heated Makeup Air MG & MP types (EFR*)				Typical Exhaust and Supply Air Flow Rate for Unheated Makeup Air MI types (EFR*)				
Exhaust @ 500 CFM/ft		Supply @ 400 CFM/ft (80% exhaust)		Exhaust @ 600 CFM/ft		Supply @ 420 CFM/ft (70% exhaust)		
Exhaust	Exhaust	Supply	Supply Duct	Exhaust	Exhaust	Supply	Supply duct	
Volume		Volume	Size				Size	
				-		-	in x in	
1500	10 x 13.5	1200	4 @ 10 x 6		10 x 17	1260	4 @ 10 x 6	
1750	10 x 16	1400	4 @ 10 x 6	2100	10 x 19	1470	4 @ 10 x 7	
2000	10 x 18	1600	4 @ 10 x 7	2400	10 x 21.5	1680	4 @ 10 x 7.5	
2250	10 x 20	1800	4 @ 10 x 7.5	2700	10 x 23.5	1890	4 @ 10 x 7.5	
2500	10 x 22.5	2000	4 @ 10 x 8.5	3000	10 x 27	2100	4 @ 10 x 8.5	
2750	10 x 25	2200	4 @ 10 x 9.5	3300	10 x 30.5	2310	4 @ 10 x 10	
3000	10 x 27	2400	4 @ 10 x 10	3600	10 x 31.5	2520	4 @ 10 x 11	
3250	10 x 29	2600	4 @ 10 x 11	3900	10 x 35	2730	4 @ 10 x 12	
3500	10 x 31.5	2800	4 @ 10 x 12	4200	10 x 37	2940	4 @ 10 x 13	
3750	10 x 34	3000	4 @ 10 x 13	4500	10 x 40.5	3150	4 @ 10 x 13.5	
4000	10 x 36	3200	4 @ 10 x 13.5	4800	14 x 30.5	3360	4 @ 10 x 14.5	
4250	10 x 38	3400	4 @ 10 x 14.5	5100	14 x 33	3570	4 @ 10 x 15	
4500	10 x 40.5	3600	8 @ 10 x 7.5	5400	14 x 34.5	3780	8 @ 10 x 8.5	
4750	14 x 30.5	3800	8 @ 10 x 8.5	5700	14 x 36	3990	8 @ 10 x 8.5	
5000	14 x 32	4000	8 @ 10 x 8.5	6000	14 x 38.5	4200	8 @ 10 x 9.5	
5250	14 x 33.5	4200	8 @ 10 x 9.5	6300	14 x 40	4410	8 @ 10 x 9.5	
5500	14 x 35.5	4400	8 @ 10 x 9.5	6600	14 x 37	4620	8 @ 10 x 10	
5750	14 x 37	4600	8 @ 10 x 10	6900	14 x 38.5	4830	8 @ 10 x 10	
6000	14 x 38.5	4800	8 @ 10 x 10	7200	14 x 40	5040	8 @ 10 x 11	
6250	14 x 40	5000	8 @ 10 x 11	7500	14 x 42	5250	8 @ 10 x 11	
6500	16 x 36.5	5200	8 @ 10 x 11	7800	2 @ 10 x 35	5460	8 @ 10 x 12	
6750	16 x 38	5400	8 @ 10 x 12	8100	2 @ 10 x 36	5670	8 @ 10 x 12	
7000	16 x 39.5	5600	8 @ 10 x 12	8400	2 @ 10 x 37	5880	8 @ 10 x 13	
	Hea Exhaust Volume CFM 1500 1750 2000 2250 2500 2750 3000 3250 3500 3750 4000 4250 4500 4500 5500 5750 6000 6250 6500 6750	Heated Makeup (E   (E   Exhaust @ 500   CFM/ft   Exhaust Exhaust Duct Size   CFM in x in 10 x 13.5   1750 10 x 16 2000 10 x 13.5   1750 10 x 16 2000 10 x 18   2250 10 x 22.5 2750 10 x 22.5   2750 10 x 27 3250 10 x 34   4000 10 x 31.5 3750 10 x 34   4000 10 x 36 4250 10 x 38   4500 10 x 40.5 5000 14 x 32   5250 14 x 33.5 5500 14 x 37   6000 14 x 38.5 6250 14 x 40   6500 16 x 36.5 6750 16 x 38	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Typical Exhaust and Supply Air Flow Rate for Heated Makeup Air MG & MP types (EFR*)Exhaust @ 500 CFM/ftSupply @ 400 CFM/ft (80% exhaust)ExhaustExhaustSupplySupply DuctVolumeDuct SizeVolumeSizeCFMin x inCFMin x in150010 x 13.512004 @ 10 x 6175010 x 1614004 @ 10 x 7225010 x 2018004 @ 10 x 7.5250010 x 22.520004 @ 10 x 9.5300010 x 2724004 @ 10 x 10325010 x 2724004 @ 10 x 12375010 x 3430004 @ 10 x 13.5400010 x 3632004 @ 10 x 13.5450010 x 3632004 @ 10 x 14.5450010 x 40.536008 @ 10 x 7.5550014 x 30.538008 @ 10 x 8.5525014 x 33.542008 @ 10 x 9.5575014 x 3746008 @ 10 x 10600014 x 38.548008 @ 10 x 11650016 x 36.552008 @ 10 x 11650016 x 36.552008 @ 10 x 11	Typical Exhaust and Supply Air Flow Rate for Heated Makeup Air MG & MP types (EFR*)Typica foExhaust @ 500 CFM/ftSupply @ 400 CFM/ft (80% exhaust)Typica foExhaust @ 500 CFM/ftSupply @ 400 CFM/ft (80% exhaust)Exhaust CIExhaustSupplySupply Duct SizeExhaust VolumeCFMin x in CFMCFM150010 x 13.512004 @ 10 x 61800175010 x 1614004 @ 10 x 72400200010 x 1816004 @ 10 x 7.52700250010 x 2018004 @ 10 x 8.53000275010 x 2522004 @ 10 x 103600325010 x 2724004 @ 10 x 113900350010 x 31.528004 @ 10 x 134500400010 x 3632004 @ 10 x 13.54800425010 x 3834004 @ 10 x 13.55100450010 x 40.536008 @ 10 x 7.55400475014 x 30.538008 @ 10 x 9.56300550014 x 33.542008 @ 10 x 106000575014 x 3746008 @ 10 x 107200625014 x 4050008 @ 10 x 117500650016 x 38.54008 @ 10 x 128100	Typical Exhaust and Supply Air Flow Rate for Heated Makeup Air MG & MP types (EFR*)Typical Exhaust and for Unheated M (EExhaust @ 500 CFM/ftSupply @ 400 CFM/ft (80% exhaust)Typical Exhaust @ 600 CFM/ftExhaust @ 500 CFM/ftExhaust @ 500 CFM/ftExhaust @ 600 CFM/ftExhaustSupplySupply Duct SizeExhaust VolumeExhaust Duct SizeExhaust Upt in x in CFMExhaust Duct SizeExhaust Duct SizeExhaust Duct Size200010 x 13.512004 @ 10 x 6180010 x 17175010 x 1614004 @ 10 x 7.5270010 x 21.5225010 x 2018004 @ 10 x 7.5270010 x 23.5250010 x 22.520004 @ 10 x 10360010 x 31.5300010 x 2724004 @ 10 x 11390010 x 31.5325010 x 2724004 @ 10 x 13450010 x 40.5300010 x 31.528004 @ 10 x 13450010 x 40.5400010 x 3430004 @ 10 x 13.5480014 x 33.5425010 x 40.536008 @ 10 x 7.5540014 x 34.5475014 x 33.534008 @ 10 x 9.5630014 x 34.5525014 x 33.544008 @ 10 x 9.5630014 x 37575014 x 35.544008 @ 10 x 10690014 x 38.5525014 x 36.55200 </td <td>Typical Exhaust and Supply Air Flow Rate for Heated Makeup Air MG &amp; MP types (EFR*)Typical Exhaust and Supply Air for Unheated Makeup Air MG for Unheated Makeup Air MG (EFR*)Exhaust @ 500 CFW/ftSupply @ 400 CFM/ft (80% exhaust)Typical Exhaust and Supply @ (CFW/ftExhaust @ 500 CFW/ftSupply @ 400 CFM/ftCFM/ft (70%ExhaustSupply @ 400 CFM/ftSupply @ (CFW/ftSupply @ (CFW/ftVolume Duct Size VolumeSupply Out SizeExhaust VolumeSupply Out (CFM150010 x 13.5120010 x 17126010 x 1310 x 10Supply Out N 1816004 @ 10 x 171260225010 x 2010 x 7.5270010 x 23.51890250010 x 22.5200010 x 30.52310300010 x 22.5200010 x 31.52520252010 x 22.5200010 x 30.5230010 x 22.5200010 x 30.5230010 x 22.5200010 x 30.5<td colspa<="" td=""></td></td>	Typical Exhaust and Supply Air Flow Rate for Heated Makeup Air MG & MP types (EFR*)Typical Exhaust and Supply Air for Unheated Makeup Air MG for Unheated Makeup Air MG (EFR*)Exhaust @ 500 CFW/ftSupply @ 400 CFM/ft (80% exhaust)Typical Exhaust and Supply @ (CFW/ftExhaust @ 500 CFW/ftSupply @ 400 CFM/ftCFM/ft (70%ExhaustSupply @ 400 CFM/ftSupply @ (CFW/ftSupply @ (CFW/ftVolume Duct Size VolumeSupply Out SizeExhaust VolumeSupply Out (CFM150010 x 13.5120010 x 17126010 x 1310 x 10Supply Out N 1816004 @ 10 x 171260225010 x 2010 x 7.5270010 x 23.51890250010 x 22.5200010 x 30.52310300010 x 22.5200010 x 31.52520252010 x 22.5200010 x 30.5230010 x 22.5200010 x 30.5230010 x 22.5200010 x 30.5 <td colspa<="" td=""></td>	

## **Engineering Data**

\*For flow Rates not shown above refer to the *Ventilator Engineering Manual* for Exhaust and Supply Volumes for MG and MP hoods and the *Compensating Engineering Manual* for Exhaust and Supply Volumes for MI hoods.

Exhaust Flow Rate CFM/ft	Exhaust Static Pressure (in W.C.)
400	0.35
500	0.45
600	0.676
Supply Air Rate	Supply static Pressure ("W.C.)
MG & MP	0.20
MI	0.45

Notes:

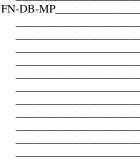
- Exhaust duct can be located anywhere along length of the filter hood.
- For lengths greater than 14' (4270 mm) join multiple sections together.

#### Spring Air Systems Model No. FN-DB-M Hood Specification

The filter hood shall be a Spring Air Systems model no. FN-DB-MP, double box canopy, high efficiency, filter hood, with make up air plenum, 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 heated makeup air discharges through stainless steel perforated panels located on the front of the hood.

The unit casing shall be a minimum 18 GA. stainless steel on all exposed surfaces. The make-up air plenum shall be insulated with 1" attenuating foam. The supply duct collars shall each have a fire damper with a 165'F fusible link. The 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**



FNDBMP



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