# Untempered Make-Up Air for Kitchen Systems Models KSFB and KSFD



# **Product Features**



Intertek

## Models KSFB and KSFD

Greenheck's series KSF is available in a belt drive (model KSFB) and direct drive (model KSFD). Both have a compact design providing untempered make-up air for commercial and institutional kitchen applications.

Eight available blower sizes provide airflow capacities up to 10,500 cfm and static pressure capabilities up to 2.0 in. wg.

Installation may be stand-alone or on a combination curb with exhaust fan.

## **Features**

#### Weatherhood and Filters

A weatherhood is standard and meets NFPA 96 requirements when used with a combination package. All weatherhoods come standard with 1-inch aluminum mesh filters.

#### **Vibration Isolators**

The entire fan and motor assembly is mounted on vibration isolators to minimize noise transmission into the building.



### **Reliable Fan Performance**

Air performance ratings from Greenheck's third party registered test chamber ensure accurate data.

Double-width, doubleinlet, forward curved wheels for high efficiency and low sound levels are constructed from heavy gauge steel. Wheels are statically and dynamically balanced to ensure vibration free operation.



## Accessories

#### Kitchen Fan Control Center (KFCC)



Prewired in compliance with the National Electrical Code, the KFCC simplifies field wiring, thereby reducing installation time and mistakes. The control center is a NEMA Type 1 panel for mounting indoors. It is designed to interlock with the fire suppression system.

#### **Kitchen Supply Control Panel (KSCP)**

The KSCP offers safety and reliability for remote operation. The standard NEMA Type 1 housing allows the panel to be mounted indoors. The panels can be provided with an optional kitchen hood light switch.



#### Speed Controller

Available on the KSFD, the speed controller provides an economical means of system balancing.



## **Roof Curbs**

Prefabricated roof curbs are available to reduce installation time and costs by ensuring compatibility between the fan and the roof opening. All curbs are lined with fiberglass insulation to prevent condensation and reduce sound levels. See Greenheck's Roof Curbs, Extensions and Equipment Supports catalog, available on www.greenheck.com. for complete details.

## **Special Coatings**

Special coatings are available for decorative or protective purposes. For more information, refer to Greenheck's catalog, Performance Coatings for Commercial & Industrial Fans, available on www.greenheck.com.



## **Standard Arrangements**

Series KSF has a compact design that is available in both downblast discharge (arrangement DB) and horizontal discharge (arrangement HZ).

Installations may be as stand-alone supply fans as pictured at right or as combination packages with exhaust and supply fans on a common curb as shown below.





Arrangement DB

Arrangement HZ

## **Combination Packages**

The Greenheck combination package simplifies installation in kitchen ventilation applications. The preengineered combination extension ensures that the supply fan, exhaust fan, and curb all interface properly to reduce field labor costs whether three feet of vertical separation or ten feet of horizontal separation is required.

Equally important, Greenheck's combination packages are specifically designed to comply with the National Fire Protection Association (NFPA) code 96 which states:

- Exhaust duct must terminate at least 24 in. above the roof deck
- Fan discharge must terminate at least 40 in. above the roof deck
- There must be at least 10 ft. of horizontal or 3 ft. of vertical separation between the intake and exhaust discharge

#### 3 Ft. Vertical Separation - Short Weatherhood





#### 10 Ft. Horizontal Separation - Extended Weatherhood



Note: Consult local codes and the authority having jurisdiction if there are questions concerning the use of this product.

# **Air Performance**



#### **KSFD-70-H05**

RPM AMPS		Watts	CFM/Static Pressure in inches of WG								
	AIVIPS		0.000	0.100	0.125	0.250	0.375	0.500	0.625	0.750	1.000
1,600	3.77	405	813	783	776	741	707	671	637	603	527

#### **KSFD-80-H08**

RPM AMPS		Watts CFM/Static Pressure in inches of WG									
	vvalis	0.000	0.100	0.125	0.250	0.375	0.500	0.625	0.750	1.000	
1,610	8.32	830	1672	1617	1604	1542	1484	1427	1367	1306	1171

#### **KSFD-90-H08**

RPM	AMPS	PS Watts	CFM/Static Pressure in inches of WG								
			0.000	0.100	0.125	0.250	0.375	0.500	0.625	0.750	1.000
1,100	7.8	735	2249	2175	2156	2044	1900	1701	1424	1114	

#### KSFB-109-H15

CEM	01/				ΤΟΤΑ	L STATIC F	PRESSURE	in inches	of WG		
	Οv		0.125	0.250	0.375	0.500	0.750	1.000	1.250	1.500	2.000
1 200	1 /10	RPM	593	678	762	842	987	1118	1236		
1,300	1,413	BHP	0.15	0.19	0.23	0.27	0.35	0.43	0.52		
1 600	1 720	RPM	691	764	833	902	1032	1153	1265	1371	1561
1,600 1,739	BHP	0.26	0.30	0.35	0.40	0.50	0.60	0.69	0.80	1.02	
1 000	2.065	RPM	793	859	918	976	1091	1201	1303	1404	1588
1,900	2,005	BHP	0.41	0.47	0.52	0.58	0.70	0.82	0.93	1.04	1.28
2 200	0.201	RPM	899	956	1011	1061	1161	1261	1356	1448	
2,200	2,391	BHP	0.61	0.68	0.74	0.80	0.94	1.08	1.22	1.35	
0.575 0.700	0 700	RPM	1034	1082	1132	1178	1265	1349	1435		
2,575 2,798	2,190	BHP	0.95	1.03	1.11	1.18	1.33	1.49	1.65		

#### KSFB-110-H15

CEM					TOTAL	STATIC P	RESSURE	in inches	s of WG		
	00		0.125	0.250	0.375	0.500	0.750	1.000	1.250	1.500	2.000
2 400	0 1 0 2	RPM	741	781	834	885	977	1066	1153	1234	1392
2,400	2,123	BHP	0.54	0.59	0.65	0.72	0.85	0.98	1.12	1.27	1.57
2 750	0 / 22	RPM	839	871	913	958	1046	1124	1202	1279	1423
2,750 2,433	BHP	0.80	0.85	0.91	0.99	1.14	1.29	1.44	1.60	1.93	
2 1 0 0	0 740	RPM	940	967	996	1036	1118	1192	1262	1330	
3,100	2,743	BHP	1.13	1.18	1.24	1.32	1.50	1.67	1.84	2.01	
2 450	2 052	RPM	1041	1064	1089	1119	1191	1264			
3,400	3,055	BHP	1.55	1.60	1.66	1.73	1.92	2.12			
0.005 0.007	2 207	RPM	1092	1112	1137	1160	1230				
3,625 3,207		BHP	1.80	1.84	1.91	1.97	2.16				

#### KSFB-112-H15

CEM			TOTAL STATIC PRESSURE in inches of WG								
CLINI	UV		0.125	0.250	0.375	0.500	0.750	1.000	1.250	1.500	2.000
0 700	1 701	RPM	507	561	617	671	768	860	941	1014	
2,700	1,731	BHP	0.40	0.47	0.55	0.63	0.78	0.94	1.09	1.24	
2 200	0 1 1 5	RPM	596	641	687	733	821	902	979	1052	1183
3,300 2,115	BHP	0.68	0.77	0.87	0.96	1.15	1.33	1.52	1.72	2.09	
2 000	2 500	RPM	691	729	766	804	881	956	1027	1093	1221
3,900	2,500	BHP	1.09	1.19	1.30	1.41	1.63	1.86	2.08	2.28	2.76
4 500	0.005	RPM	787	817	852	884	951	1017	1082	1146	
4,500 2,885	2,000	BHP	1.64	1.74	1.87	2.00	2.25	2.51	2.77	3.03	
5 400 0 000	2 260	RPM	884	911	940	970	1027				
5,100 3,269	3,209	BHP	2.35	2.47	2.60	2.75	3.03				

Power rating (Bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

## **Air Performance**



#### KSFB-115-H25

OEM	OV				TOTAL	STATIC P	RESSURE	in inches	s of WG		
	UV		0.125	0.250	0.375	0.500	0.750	1.000	1.250	1.500	2.000
4 700	0 1 4 6	RPM	524	567	608	1.31	722	790	856	915	1031
4,700	2,140	BHP	1.02	1.16	1.31	1.45	1.74	2.03	2.34	2.63	3.29
F 400	0 465	RPM	589	628	665	700	768	832	891	950	1056
5,400 2,465	BHP	1.49	1.66	1.83	1.99	2.32	2.65	2.98	3.33	4.01	
6 1 0 0	0 705	RPM	656	691	724	757	819	877	934	988	1090
0,100	2,700	BHP	2.10	2.29	2.47	2.66	3.04	3.40	3.79	4.16	4.94
6 900	2 105	RPM	723	755	786	815	872	928	979	1031	
0,000	3,105	BHP	2.86	3.07	3.28	3.48	3.91	4.33	4.72	5.15	
7 500	2 4 0 4	RPM	792	821	849	876	929	980			
7,500	3,424	BHP	3.78	4.02	4.25	4.47	4.94	5.41			

### KSFB-118-H25

CEM					TOTAL	STATIC P	RESSURE	in inches	s of WG		
	00		0.125	0.250	0.375	0.500	0.750	1.000	1.250	1.500	2.000
6 500	0145	RPM	438	473	510	544	608	667	723	776	
0,500	2,140	BHP	1.26	1.42	1.60	1.78	2.13	2.47	2.83	3.20	
7 500	0 475	RPM	495	526	557	588	646	702	754	802	897
7,500	2,475	BHP	1.87	2.06	2.26	2.46	2.86	3.27	3.66	4.05	4.92
9 500	0.005	RPM	554	580	607	636	690	740	790	835	922
0,000	2,005	BHP	2.66	2.87	3.09	3.32	3.79	4.22	4.69	5.14	6.04
0.500	0 1 25	RPM	614	637	661	685	735	783	827	872	954
9,500	3,135	BHP	3.67	3.86	4.13	4.37	4.90	5.41	5.90	6.43	7.43
10 500	2 465	RPM	675	695	715	738	783	827	870		
10,500	3,405	BHP	4.91	5.14	5.39	5.66	6.23	6.80	7.37		

Power rating (Bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

## Dimensional Data Stand-Alone

## Arrangement HZ - Standard Weatherhood





	Α	В	С	D
Housing 05	<b>18</b> %	<b>31</b> %	20	<b>19</b> %
Housing 08	<b>18</b> %	<b>31</b> ¾	37	<b>19</b> %
Housing 15	<b>25</b> <sup>1</sup> / <sub>4</sub>	<b>71</b> 1⁄/8	<b>31</b> 1%	<b>39</b> ½
Housing 25	34	<b>81</b> %	<b>40</b> <sup>1</sup> / <sub>4</sub>	<b>47</b> <sup>3</sup> / <sub>8</sub>

All dimensions are in inches.

## Dimensional Data Stand-Alone



## **Arrangement DB - Standard Weatherhood**



	Α	В	С	D			
Housing 05	<b>14</b> ½	41	20	<b>21</b> <sup>1</sup> ⁄ <sub>4</sub>			
Housing 08	<b>14</b> ½	41	361/8	<b>21</b> 1⁄4			
Housing 15	<b>22</b> <sup>1</sup> / <sub>4</sub>	80¾	31%	40¾			
Housing 25	<b>29</b> ½	<b>99</b> ½	401/4	<b>52</b> <sup>1</sup> / <sub>4</sub>			
All dimensions are in inches.							

## **Arrangement DB - Extended Weatherhood**



	Α	В	C	D
Housing 05	<b>14</b> ½	<b>171</b> ½	20	<b>21</b> ¼
Housing 08	<b>14</b> ½	<b>165</b> ¾	361/8	<b>21</b> ¼
Housing 15	<b>22</b> <sup>1</sup> / <sub>4</sub>	<b>1</b> 45¼	<b>31</b> 1%	<b>40</b> ¾
Housing 25	<b>29</b> ½	<b>152</b> ½	<b>40</b> <sup>1</sup> / <sub>4</sub>	<b>52</b> <sup>1</sup> / <sub>4</sub>

All dimensions are in inches.



## Arrangement DB3 - Standard Weatherhood



	<b>A</b> *	<b>B</b> *	C*
Housing 05	25	50	<b>70</b> ½
Housing 08	35%	<b>52</b> <sup>7</sup> / <sub>8</sub>	<b>82</b> <sup>1</sup> / <sub>2</sub>
Housing 15	<b>42</b> <sup>7</sup> / <sub>8</sub>	55	<b>131</b> ¾
Housing 25	<b>58</b> ¾	<b>66</b> 1/ <sub>8</sub>	<b>164</b> <sup>1</sup> / <sub>4</sub>
All dimensions are	in inches		

Maximum dimensions (dependent on CUBE fan)

\*

All dimensions are in inches.

## **Arrangement DBC - Extended Weatherhood**



	<b>A</b> *	<b>B</b> *	C*
Housing 05	25	50	2001/4
Housing 08	35%	<b>52</b> <sup>7</sup> / <sub>8</sub>	2071/4
Housing 15	421/8	55	<b>196</b> %
Housing 25	<b>58</b> ¾	<b>66</b> <sup>1</sup> / <sub>8</sub>	<b>217</b> <sup>1</sup> / <sub>4</sub>

\* Maximum dimensions (dependent on CUBE fan)

All dimensions are in inches.

# Additional Make-Up Air Products





Direct Gas - Economy Model DGK



Direct Gas - Standard Model DG



Direct Gas - Configurable Model DGX



Indirect Gas - Economy Model IGK



Indirect Gas - Standard Model IG









Indirect Gas - Configurable Model IGX



Modular Supply Model MSX

## **Our Commitment**

As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.

Specific Greenheck product warranties are located on greenheck.com within the product area tabs and in the Library under Warranties.



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Greenheck P.O. Box 410 • Schofield, WI 54476-0410 • Phone (715) 359-6171 • greenheck.com