

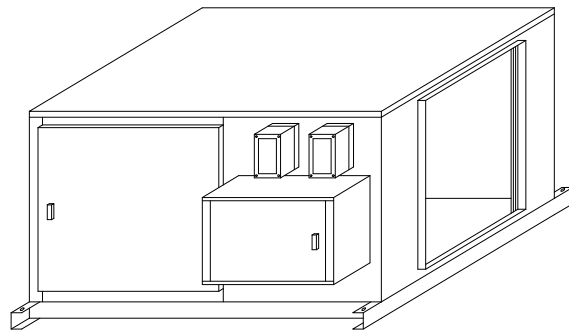
Enviro Fan Unit Commercial Kitchen Exhaust

KESF

Used in Conjunction With the
KES-ISH Enviro Filter Box
1,000 to 40,000 CFM

General Description

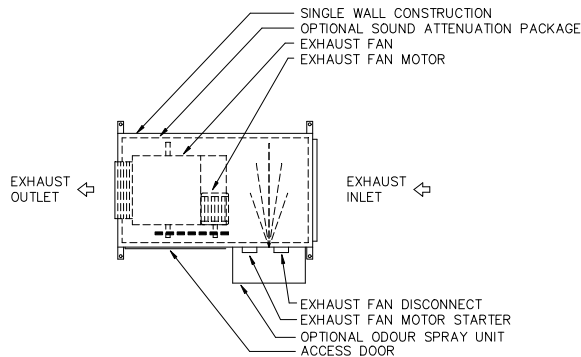
The KESF, UL/ULC listed *Enviro Fan Unit* is a separate package containing a backward inclined, AMCA rated exhaust fan with heavy-duty bearings, fan isolators, optional sound attenuation package, and two groove sheaves. The exhaust air from the KESF is either discharged to atmosphere or recirculated to the commercial kitchen. Recirculation is usually achieved with a KRS Recirculation Unit. (See the KRS Engineering Manual.)



The unit casing is 16-gauge steel, primed and painted suitably reinforced to ensure rigidity. An optional sound attenuation package is available for the interior of the fan unit. This sound package is highly recommended on all indoor units. The KESF unit is supported by channels running along the length of each side. Lifting and support points are at the four corners of the KESF unit, at the ends of these channels. An access door is provided to the exhaust fan motor and drive section.

The following options are available:

- Internally or externally isolated exhaust fan. The externally isolated exhaust fan reduces the height of the KESF.
- Single Width, Single Inlet (SWSI) or Double Width, Double Inlet (DWDI). The SWSI provide discharge at right angles to the exhaust inlet on either side of the KESF.
- Indoor or outdoor design.
- Cooling Coil when recirculating exhaust air back to kitchen.



The UL/ULC listing allows recirculation only with electric cooking and only up to 80% of the total exhaust air.

KESF Component Schematic with DWDI fan

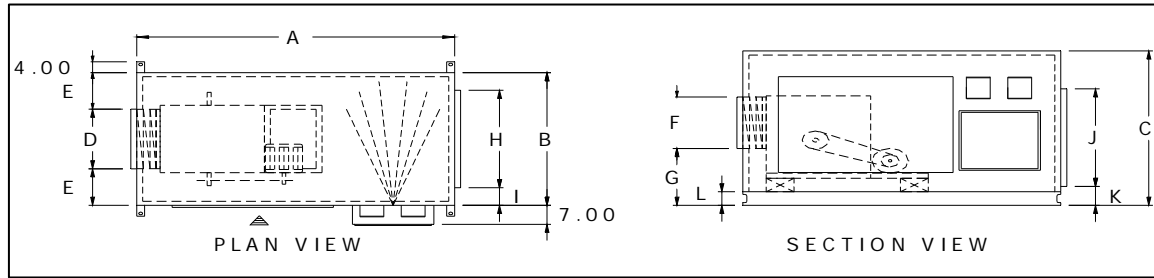
KESF Fan Chart - 1000 CFM to 10,000 CFM

KES	CFM	External Static Pressure ("W.C.") *									
		1.50		1.75		2.00		3.00		4.00	
		HP	RPM	HP	RPM	HP	RPM	HP	RPM	HP	RPM
10	1000	2.78	2630	2.98	2645	3.80	2760	3.81	2916	n/a	n/a
20	1500	2.08	2261	2.27	2334	2.46	2406	3.21	2576	3.27	2676
20	2000	3.41	2636	3.70	2699	3.92	2761	4.26	2830	4.86	2997
30	2500	2.91	2377	3.13	2444	3.35	2511	3.85	2610	4.28	2762
30	3000	4.40	2707	4.66	2766	4.91	2825	5.21	3110	n/a	n/a
40	3500	4.03	2547	4.29	2609	4.55	2671	5.61	2900	5.81	2294
40	4000	5.61	2833	5.90	2888	6.19	2943	7.62	3085	n/a	n/a
50	4500	5.12	2074	5.45	2127	5.78	2179	6.31	2201	7.17	2376
50	5000	6.40	2219	6.76	2268	7.12	2317	8.10	2433	n/a	n/a
60	5500	6.20	2143	6.87	2223	7.53	2320	7.61	2440	7.99	2755
60	6000	7.49	2271	7.88	2318	8.27	2364	9.81	2730	n/a	n/a
80	7000	7.10	1697	7.56	1741	8.02	1785	9.90	2019	11.27	1734
80	8000	9.32	1841	9.84	1881	10.32	1921	12.5	2178	n/a	n/a
100	9000	10.34	1575	10.96	1611	11.57	1648	13.1	1702	14.10	1854
100	10000	12.72	1675	13.38	1709	14.04	1742	15.8	1963	n/a	n/a

*The above fan chart includes internal static pressure of the KES-ISH, and KESF fan unit. The chart is for a DWDI exhaust fan in a vertical or horizontal arrangement either indoor or outdoor design. For other selections options or higher CFM's, call your local Spring Air Systems representative. The "External Static Pressure" is the sum of the exhaust hood, all exhaust ductwork and discharge cowl or louver.



KESF FAN DIMENSIONS Indoor, DWDI with Odour Spray Option



KES F	Max CFM	A	B	C	D	E	F	G	H	I	J	K	L
10	1000	67	37	32	15.5	10.75	13.5	15.5	23	7	18	5	3
20	2000	67	37	32	15.5	10.75	13.5	15.5	23	7	25	5	3
30	3000	67	37	32	15.5	10.75	13.5	15.25	34	1.5	25	5	3
40	4000	67	49	36	18.5	15.25	16	16.75	34	7.5	25	5	3
50	5000	72	49	44	18.5	15.25	16	16.75	34	7.5	25	5	3
60	6000	72	49	44	22	13.5	19	18.5	38	5.25	25	5	3
80	8000	80	49	57	22	13.5	19	21	36	6.5	36	7	5
100	10000	88	60.25	58	25.5	17.38	25.5	20.5	44	8.13	48	7	5
120	12000	88	72.25	58	28	22.12	28	22.25	44	14.1	48	7	5
140	14000	95	74.5	70	28	23.25	28	22.25	56	9.25	54	7	5
160	16000	95	72.25	70	28	22.13	28	22.25	56	8.13	54	7	5
180	18000	100	72.25	82	31.5	20.38	31.5	23.88	60	6.13	54	7	5
200	20000	100	95.5	70	31.5	32	31.5	23.75	60	17.7	54	7	5
240	24000	102	95.5	82	35.5	30	35.5	25.75	72	11.7	54	7	5
280	28000	119	95.5	94	35.5	30	35.5	25.75	72	11.7	60	7	5
320	32000	129	95.5	106	39.5	28	39.7	28	72	11.7	72	7	5
360	36000	129	106.75	106	44.5	31.13	44.5	30.25	72	17.3	72	7	5
400	40000	129	118.75	106	44.5	37.13	44.5	30.25	84	17.3	72	7	5

** For dimensions of units with SWSI or DWDI fans, with or without odour spray and pellets refer the Spring Air Systems Enviro Engineering Manual. Refer to the KES-ISH specification sheet for details on Enviro Filter Box.

Spring Air Systems KESF Enviro Fan Unit Specification

The commercial kitchen *Enviro* fan unit shall be a Spring Air Systems Inc. model no. KESF____, indoor/outdoor design, horizontal/vertical arrangement, assembled, wired and tested prior to shipment with exhaust capacity of _____ CFM at _____" W.C. total static pressure. The KES fan unit shall be listed by UL/ULC installed in accordance to NFPA-96, and local authorities having jurisdiction.

Unit Casing:

The exhaust fan motor and drive section shall be single wall construction with minimum 16 gauge wall and optional 1" sound attenuation insulation. The exhaust fan section shall be internally/externally spring isolated.

Exhaust Fan:

The KES unit shall be supplied with an AMCA rated double width, double inlet, (single width, single outlet SWSI) airfoil centrifugal fan statically and dynamically balanced. The fan shall be mounted on a heavy duty

turned, ground and polished steel shaft, internally isolated, (externally isolated with hanging isolators shipped loose for field installation). The bearings shall be heavy duty, prelubricated type. V-belt drives shall be two groove, adjustable up to 7.5 HP motors, sized with a capacity 25% greater than the motor horsepower. The exhaust fan shall be a _____ Hp, _____V/3/60, TEFC motor.

Controls:

The unit shall have a fused disconnect switch, motor starter and overload in EEMAC 1 enclosure.

Options: Internal/external fan isolation, sound attenuation package, odour pellets, odour spray, coiling coil, and SWSI fan.

Mechanical Services:

All exhaust ductwork from the filter box to the KESF fan inlet shall be supplied and installed in accordance to standard HVAC construction.



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