



FIRE SMOKE DAMPER MODEL KFSD-111 & KFSD-L-111

PERFORMANCE DATA

FREE AREA CONVERSION

DAMPER FREE AREA (FA)									
WIDTH (inches)									
HEIGHT (inches)	8"	12"	16"	20"	24"	28"	30"	32"	36"
8 "	0.21	0.35	0.49	0.63	0.77	0.83	0.91	0.95	1.00
10 "	0.25	0.43	0.59	0.74	0.91	1.09	1.18	1.21	1.23
12 "	0.30	0.49	0.69	0.87	1.09	1.29	1.37	1.41	1.54
14 "	0.38	0.63	0.87	1.14	1.39	1.69	1.77	1.80	2.00
16 "	0.45	0.74	1.14	1.39	1.69	2.00	2.15	2.20	2.50
20 "	0.59	1.00	1.39	1.77	2.15	2.56	2.74	2.86	3.23
24 "	0.71	1.20	1.77	2.15	2.63	3.08	3.33	3.51	4.00
28 "	0.87	1.47	2.06	2.67	3.23	3.77	4.08	4.35	4.88
32 "	1.01	1.68	2.35	3.03	3.64	4.35	4.65	5.00	5.56
36 "	1.14	1.89	2.63	3.39	4.17	4.88	5.26	5.56	6.25
40 "	1.27	2.10	2.91	3.75	4.70	5.40	5.87	6.12	6.94
44 "	1.41	2.31	3.20	4.11	5.11	5.99	6.38	6.77	7.62
48 "	1.54	2.52	3.48	4.47	5.58	6.50	7.03	7.42	8.30

Free area factors listed are for standard type "A" sleeves. Performance testing performed in accordance with AMCA std 500.

Given:

1. Width "X height" of damper.
2. Operating C.F.M. (cubic feet per minute)

To determine damper pressure drop:

1. Establish the free area (FA); use the free area based on the damper width "X height". (Example: 24" W x 24" H damper =2.63 FA).
2. Establish the velocity use the formula $FPM = CFM / FA$ (example: $FPM = 4000 CFM / 2.63 FA = 1520 FPM$)
3. Determine the pressure drop:
Using the pressure drop table find the free area number (2.63) on the bottom line of the table.
4. Project a line vertically locating the conversion velocity previously determined.
5. Project this intersect horizontally to the left or right and read the pressure drop in inches of water (example: 0.18 inches W.G.)

PRESSURE DROP TABLE

