PERFORMANCE DATA:

FIXED BLADE RETURN GRILLES AND REGISTERS • 5100, 6100 AND 6700 SERIES

MODELS: 51FH, 61FH, 67FH, 51FV, 61FV, 67FV, 51FBS, 61FBS

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure Neg. Static Pressure	100 .001 .002	200 .002 .009	300 .006 .020	400 .010 .035	500 .016 .055	600 .022 079	700 .031 .107	800 .040 .140	900 .050 .177	1000 .062 .219
6 x 6	8 x 4 10 x 4	0.20	0.23	**CFM** Noise Criteria	**20** –	**40** –	**60** –	**80** –	**100** –	**120** 16	**140** 18	**160** 21	**180** 25	**200** 30
8 x 6	10 x 5 12 x 4	0.28	0.30	**CFM** Noise Criteria	**28** –	**56** –	**84** –	**112** –	**140** –	**168** 17	**196** 19	**224** 22	**252** 26	**280** 31
10 x 6	12 x 5 16 x 4	0.35	0.37	**CFM** Noise Criteria	**35** –	**70** –	**105** –	**140** –	**175** –	**210** 18	**245** 20	**280** 23	**315** 27	**350** 32
8 x 8	14 x 5	0.38	0.40	**CFM** Noise Criteria	**38** –	**76** –	**114** –	**152** –	**190** –	**228** 19	**266** 21	**304** 24	**342** 28	**380** 32
12 x 6	18 x 4	0.42	0.45	**CFM** Noise Criteria	**42** –	**84** –	**126** –	**168** –	**210** 15	**252** 19	**294** 22	**336** 25	**378** 29	**420** 33
12 x 8	16 x 6 24 x 4	0.58	0.59	**CFM** Noise Criteria	**58** –	**116** –	**174** –	**232** –	**290** 15	**348** 19	**406** 22	**464** 26	**522** 30	**580** 34
10 x 10	14 x 7 26 x 4	0.61	0.62	**CFM** Noise Criteria	**61** –	**122** –	**183** –	**244** –	**305** 15	**366** 19	**427** 22	**488** 27	**549** 30	**610** 35
18 x 6	14 x 8 30 x 4 28 x 4	0.65	0.67	**CFM** Noise Criteria	**65** –	**130** –	**195** –	**260** –	**325** 16	**390** 20	**455** 23	**520** 27	**585** 31	**650** 35
12 x 10	16 x 8 20 x 6 24 x 5	0.74	0.74	**CFM** Noise Criteria	**74** –	**148** –	**222** –	**296** –	**370** 16	**444** 21	**518** 24	**592** 28	**666** 32	**740** 35
12 x 12	14 x 10 24 x 6 18 x 8 38 x 4	0.90	0.89	**CFM** Noise Criteria	**90** –	**180** –	**270** –	**360** –	**450** 17	**540** 21	**630** 24	**720** 29	**810** 32	**900** 35
14 x 14	16 x 12 24 x 8 20 x 10 34 x 6	1.24	1.22	**CFM** Noise Criteria	**124** –	**248** –	**372** –	**496** –	**620** 17	**744** 22	**868** 25	**992** 29	**1116** 33	**1240** 36
18 x 12	16 x 14 28 x 8 22 x 10 38 x 6	1.37	1.34	**CFM** Noise Criteria	**137** –	**274** –	**411** –	**548** –	**685** 18	**822** 23	**959** 26	**1096** 31	**1233** 34	**1370** 37
24 x 10	20 x 12 30 x 8	1.52	1.49	**CFM** Noise Criteria	**152** –	**304** –	**456** –	**608** –	**760** 18	**912** 23	**1064** 27	**1216** 32	**1368** 35	**1520** 38
16 x 16	18 x 14 30 x 8 22 x 12	1.64	1.58	**CFM** Noise Criteria	**164** –	**328** –	**492** –	**656** –	**820** 19	**984** 23	**1148** 27	**1312** 32	**1476** 35	**1640** 38
24 x 12	18 x 16 30 x 10 20 x 14 36 x 8	1.85	1.78	**CFM** Noise Criteria	**185** –	**370** –	**555** –	**740** –	**925** 19	**1110** 24	**1295** 27	**1480** 32	**1665** 35	**1850** 39
18 x 18	20 x 16 28 x 12 24 x 14 32 x 10	2.10	2.01	**CFM** Noise Criteria	**210** –	**420** –	**630** –	**840** –	**1050** 19	**1260** 24	**1470** 28	**1680** 33	**1890** 36	**2100** 39
30 x 12	20 x 18 26 x 14 22 x 16 36 x 10	2.32	2.23	**CFM** Noise Criteria	**232** –	**464** –	**696** –	**928** –	**1160** 19	**1392** 24	**1624** 28	**1856** 33	**2088** 36	**2320** 40
20 x 20	24 x 18 30 x 14 26 x 16 36 x 12	2.61	2.48	**CFM** Noise Criteria	**261** –	**522** –	**783** –	**1044** –	**1305** 19	**1566** 24	**1827** 28	**2088** 33	**2349** 36	**2610** 40
22 x 22	24 x 20 30 x 16 26 x 18 36 x 14	3.17	3.00	**CFM** Noise Criteria	**317** –	**634** –	**951** –	**1268** 15	**1585** 20	**1902** 25	**2219** 29	**2536** 33	**2853** 36	**3170** 40
30 x 18	24 x 22 40 x 14 34 x 16	3.54	3.34	**CFM** Noise Criteria	**354** –	**708** –	**1062** –	**1416** 15	**1770** 20	**2124** 25	**2478** 29	**2832** 34	**3186** 37	**3540** 41
24 x 24	26 x 22 32 x 18 28 x 20 36 x 16	3.79	3.56	**CFM** Noise Criteria	**379** –	**758** –	**1137** –	**1516** 15	**1895** 20	**2274** 25	**2653** 30	**3032** 34	**3411** 37	**3790** 41
36 x 18	32 x 20 46 x 14 40 x 16	4.27	4.01	**CFM** Noise Criteria	**427** –	**854** –	**1281** –	**1708** 17	**2135** 22	**2562** 26	**2989** 30	**3416** 35	**3843** 38	**4270** 42
26 x 26	28 x 24 48 x 14	4.47	4.19	**CFM** Noise Criteria	**447** –	**894** –	**1341** –	**1788** 17	**2235** 22	**2682** 26	**3129** 30	**3576** 35	**4023** 38	**4470** 42
30 x 24	28 x 26 36 x 20 32 x 22 40 x 18	4.77	4.46	**CFM** Noise Criteria	**477** –	**954** –	**1431** –	**1908** 18	**2385** 23	**2862** 27	**3339** 31	**3816** 35	**4293** 39	**4770** 43
28 x 28	30 x 26 40 x 20 36 x 22	5.20	4.85	**CFM** Noise Criteria	**520** –	**1040** –	**1560** –	**2080** 18	**2600** 23	**3120** 27	**3640** 31	**4160** 36	**4680** 39	**5200** 43
36 x 24	30 x 28 44 x 20 40 x 22	5.74	5.35	**CFM** Noise Criteria	**574** –	**1148** –	**1722** –	**2296** 18	**2870** 23	**3444** 27	**4018** 31	**4592** 36	**5166** 40	**5740** 44
30 x 30	34 x 26 48 x 20 38 x 24	5.99	5.57	**CFM** Noise Criteria	**599** –	**1198** –	**1797** –	**2396** 18	**2995** 23	**3594** 28	**4193** 32	**4792** 36	**5391** 40	**5990** 44

For performance data notes, see F44.

PERFORMANCE DATA:

FIXED BLADE RETURN GRILLES AND REGISTERS • 5100, 6100 AND 6700 SERIES

MODELS: 51FH, 61FH, 67FH, 51FV, 61FV, 67FV, 51FBS, 61FBS

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure Neg. Static Pressure	100 .001 .003	200 .002 .014	300 .006 .031	400 .010 .055	500 .016 .086	600 .022 .124	700 .031 .168	800 .040 .220	900 .050 .278	1000 .062 .344
32 x 32	36 x 30 46 x 22 38 x 28	6.84	6.34	**CFM** Noise Criteria	**684** –	**1368** –	**2052** –	**2736** 18	**3420** 24	**4104** 28	**4788** 32	**5472** 37	**6156** 41	**6840** 45
48 x 24	34 x 34 38 x 30 36 x 32 48 x 28	7.69	7.13	**CFM** Noise Criteria	**769** –	**1538** –	**2307** –	**3076** 18	**3845** 24	**4614** 29	**5383** 33	**6152** 37	**6921** 41	**7690** 45
36 x 36	38 x 34 46 x 28 42 x 30 48 x 26	8.69	8.02	**CFM** Noise Criteria	**869** –	**1738** –	**2607** –	**3476** 19	**4345** 24	**5214** 29	**6083** 34	**6952** 38	**7821** 42	**8690** 46
38 x 38	42 x 34 48 x 30 44 x 34	9.70	8.94	**CFM** Noise Criteria	**970** –	**1940** –	**2910** –	**3880** 19	**4850** 25	**5820** 30	**6790** 34	**7760** 38	**8730** 42	**9700** 46
40 x 40	42 x 36 48 x 32 46 x 34	10.77	9.90	**CFM** Noise Criteria	**1077** –	**2154** –	**3231** –	**4308** 20	**5385** 26	**6462** 30	**7539** 35	**8616** 38	**9693** 43	**10770** 47
42 x 42	46 x 42	11.89	10.92	**CFM** Noise Criteria	**1189** –	**2378** –	**3567** –	**4756** 20	**5945** 26	**7134** 31	**8323** 35	**9512** 39	**10701** 43	**11890** 47
44 x 44		13.07	11.98	**CFM** Noise Criteria	**1307** –	**2614** –	**3921** 15	**5228** 20	**6535** 26	**7842** 31	**9149** 35	**10456** 39	**11763** 43	**13070** 47
46 x 46		14.30	13.10	**CFM** Noise Criteria	**1430** –	**2860** –	**4290** 15	**5720** 21	**7150** 27	**8580** 32	**10010** 36	**11440** 40	**12870** 44	**14300** 48
48 x 48		15.59	14.26	**CFM** Noise Criteria	**1559** –	**3118** –	**4677** 16	**6236** 21	**7795** 27	**9354** 32	**10913** 36	**12472** 40	**14031** 44	**15590** 48

Performance Notes:

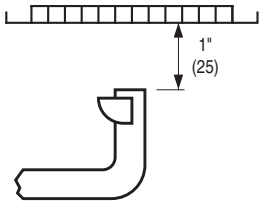
1. All pressures are in inches w.g..
2. Core Velocity is in feet per minute.
3. Performance data is for grille with opposed blade damper. Apply the following correction factors for grille without damper.

Negative Static Pressure Listed Value x 0.91.

Noise Criteria Listed value – 4.

4. Noise Criteria (NC) values are based upon 10dB room absorption, re 10^{-12} watts. Dash (-) in space indicates an Noise Criteria of less than 15.
5. Data derived from tests conducted in accordance with ANSI/ ASHRAE Standard 70 – 2023.

Air Measurement



Alnor Velometer with 2220A or 6070P Jet Probe

Airflow Measurements:

1. Balancing factors are applicable with or without dampers, providing uniform airflow exists into grille or register.
2. Take velocity readings at a number of locations on the inlet face (a minimum of 4), while positioning probe as shown above, one inch out from the face.
3. Total the various velocity readings and divide by the number of readings taken to arrive at an average inlet velocity (Vk in FPM).
4. Calculate the airflow (CFM) by multiplying the average velocity by the appropriate Ak factor.
Airflow (CFM) = Average velocity (Vk) x Ak.