

PERFORMANCE DATA:

REVERSIBLE CORE GRILLES AND REGISTERS • 51RC SERIES

MODELS: 51RC, 51RCD

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity		200	300	400	500	600	700	800	900	1000
				Velocity	Pressure	.003	.006	.010	.016	.022	.031	.040	.051	.062
6 x 6	8 x 4 10 x 4	0.20		CFM		40	60	80	100	120	140	160	180	200
				Noise Criteria		-	-	-	-	18	23	27	30	33
				Throw	0°	2-5-10	5-7-13	7-9-16	8-12-18	10-14-20	11-15-21	12-16-23	14-17-24	15-18-25
22 1/2°	2-4-8	4-6-10	6-7-13		6-10-14	8-11-16	9-12-17	10-13-18	11-14-19	12-14-20				
8 x 6	10 x 5 12 x 4	0.27		CFM		54	81	108	135	162	189	216	243	270
				Noise Criteria		-	-	-	-	19	24	28	31	34
				Throw	0°	2-5-12	5-8-15	8-12-18	10-14-20	11-16-23	13-18-25	15-19-27	16-20-28	17-21-30
22 1/2°	2-4-10	4-6-12	6-10-14		8-11-16	9-13-18	10-14-20	12-15-22	13-16-22	14-17-24				
10 x 6	12 x 5 16 x 4	0.35		CFM		70	105	140	175	210	245	280	315	350
				Noise Criteria		-	-	-	15	20	25	29	32	35
				Throw	0°	3-6-14	6-9-18	9-13-21	10-16-24	12-19-26	15-20-28	17-21-30	19-22-31	20-23-33
22 1/2°	2-5-11	5-7-14	7-10-17		8-13-19	10-15-21	12-16-22	14-17-24	15-18-25	16-18-26				
8 x 8	14 x 5	0.38		CFM		76	114	152	190	228	266	304	342	380
				Noise Criteria		-	-	-	16	21	26	30	33	36
				Throw	0°	3-6-15	6-9-19	9-14-22	11-16-25	13-19-27	16-21-29	18-22-32	18-23-32	19-24-34
22 1/2°	2-5-12	5-7-15	7-11-18		9-13-20	10-15-22	13-17-23	14-18-26	14-18-26	15-19-27				
12 x 6	18 x 4	0.42		CFM		84	126	168	210	252	294	336	378	420
				Noise Criteria		-	-	-	16	21	26	30	33	36
				Throw	0°	3-6-15	6-9-19	9-14-22	11-16-25	13-19-27	16-21-30	18-22-32	18-23-32	19-11-16
22 1/2°	2-5-12	5-7-15	7-11-18		9-13-20	10-15-22	13-17-24	14-18-26	14-18-26	15-19-27				
14 x 6	10 x 8	0.50		CFM		100	150	200	250	300	350	400	450	500
				Noise Criteria		-	-	-	17	22	27	31	34	37
				Throw	0°	3-7-16	6-11-20	10-15-23	12-18-25	15-20-28	16-22-31	19-23-33	20-24-34	21-25-36
22 1/2°	2-6-13	5-9-16	8-12-18		10-14-20	12-16-22	13-18-25	15-18-26	16-19-27	17-20-29				
12 x 8	16 x 6 24 x 4	0.58		CFM		116	174	232	290	348	406	464	522	580
				Noise Criteria		-	-	-	18	23	28	32	35	38
				Throw	0°	3-7-17	7-11-21	10-15-24	12-19-27	15-21-30	17-23-32	20-24-34	21-26-36	22-27-38
22 1/2°	2-6-14	6-9-17	8-12-19		10-15-22	12-17-24	14-18-26	16-19-27	17-21-29	18-22-30				
10 x 10	14 x 7 26 x 4	0.61		CFM		122	183	244	305	366	427	488	549	610
				Noise Criteria		-	-	-	18	23	28	32	35	38
				Throw	0°	3-7-17	7-11-21	10-16-24	13-19-28	16-21-30	17-23-32	20-24-35	22-27-37	23-28-39
22 1/2°	2-6-14	6-9-17	8-13-19		10-15-22	13-17-24	14-18-26	16-19-28	18-22-30	18-22-31				
18 x 6	14 x 8 28 x 4 30 x 4	0.65		CFM		130	195	260	325	390	455	520	585	650
				Noise Criteria		-	-	-	19	24	29	33	36	39
				Throw	0°	3-8-18	7-12-22	11-16-25	13-20-29	16-22-32	18-24-34	21-25-36	23-27-38	24-29-40
22 1/2°	2-6-14	6-10-18	9-13-20		10-16-23	13-18-26	14-19-27	17-20-29	18-22-30	19-23-32				
12 x 10	20 x 6 24 x 5	0.74		CFM		148	222	296	370	444	518	592	666	740
				Noise Criteria		-	-	-	19	24	29	33	36	39
				Throw	0°	4-8-19	8-13-24	11-17-27	14-21-31	17-24-33	20-26-36	22-27-39	24-29-41	25-31-43
22 1/2°	3-6-15	6-10-19	9-14-22		11-17-25	14-19-26	16-21-29	18-22-31	19-23-33	20-25-34				
22 x 6	16 x 8 28 x 5 36 x 4	0.80		CFM		160	240	320	400	480	560	640	720	800
				Noise Criteria		-	-	-	20	25	30	34	37	40
				Throw	0°	4-8-20	8-13-25	11-18-28	15-22-32	18-25-35	20-27-38	23-28-41	25-30-43	26-32-45
22 1/2°	3-6-16	6-10-20	9-14-22		12-18-26	14-20-28	16-22-30	18-22-33	20-24-34	21-26-36				
12 x 12	14 x 10 18 x 8 24 x 6 38 x 4	0.90		CFM		180	270	360	450	540	630	720	810	900
				Noise Criteria		-	-	-	20	25	30	34	37	40
				Throw	0°	4-9-21	9-14-26	12-18-29	15-23-33	18-26-36	21-27-39	24-29-42	26-31-45	27-33-47
22 1/2°	3-7-17	7-11-21	10-14-23		12-18-26	14-21-29	17-22-31	19-23-34	21-25-36	22-26-38				
					45°	1-4-10	5-7-13	6-9-15	8-12-17	9-13-18	11-14-20	12-15-22	13-15-22	14-17-24

For performance data notes, see F137.

PERFORMANCE DATA:

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Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity		200	300	400	500	600	700	800	900	1000
				Velocity	Pressure	.003	.006	.010	.016	.022	.031	.040	.051	.062
42 x 12	36 x 14	3.27	1.95 1.81 1.68	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318
30 x 18	24 x 22 34 x 16 40 x 14	3.54	2.10 1.95 1.81	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318
24 x 24	26 x 22 28 x 20 32 x 18 36 x 16	3.79	2.25 2.09 1.93	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318
36 x 18	32 x 20 40 x 16 46 x 14	4.29	2.53 2.36 2.18	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318
26 x 26	28 x 24 48 x 14	4.47	2.62 2.44 2.25	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318
30 x 24	32 x 22 36 x 20 40 x 18	4.77	2.81 2.62 2.42	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318
28 x 28	30 x 26 36 x 22 40 x 20	5.20	3.09 2.88 2.66	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318
36 x 24	40 x 22 44 x 20	5.74	3.38 3.15 2.91	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318
42 x 24	36 x 28 42 x 24 46 x 22	6.72	3.95 3.68 3.40	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318
36 x 30	38 x 28	7.22	4.23 3.94 3.64	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318
48 x 24	34 x 34 36 x 32 38 x 30 42 x 28	7.69	4.51 4.20 3.88	CFM	0°	.007	.016	.029	.045	.065	.089	.117	.147	.181
				Noise Criteria	22 1/2°	.008	.019	.033	.052	.075	.102	.134	.169	.209
				Throw	45°	.013	.029	.051	.079	.113	.156	.205	.258	.318

Performance Notes:

1. All pressures are in inches w.g..
2. Core Velocity is in feet per minute.
3. Tabulated data includes opposed opposed blade damper. Without OBD, multiply Total Pressure (TP) by x 0.8. Subtract 4 Noise Criteria (NC) from the Noise Criteria value shown.
4. Throw values are given for terminal velocities

- of 150, 100 and 50 fpm under isothermal conditions.
5. Noise Criteria (NC) values were obtained using a 0° horizontal deflection rear blade setting. For deflection settings of 22 1/2° and 45°, add 2 and 7 NC to the tabulated NC level respectively.
6. When used as a return grille, the negative static pressure is obtained by multiplying the

- tabulated Total Pressure @ 0° deflection by x 0.8. Add 4 Noise Criteria to the Noise Criteria value shown.
7. Noise Criteria (NC) values are based on a room absorption of 10 dB, re 10⁻¹² watts. Dash (-) in space denotes a Noise Criteria level of less than 15.
8. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.