

## PERFORMANCE DATA:

### CURVED BLADE • SUPPLY GRILLES AND REGISTERS • 51C AND 61C SERIES

#### MODELS: 51C, 51CD, 61C, 61CD

Core Area, Square Feet	Nominal Duct Size, Inches	Core Velocity, FPM											
		100	200	300	400	500	600	700	800	900	1000		
.12	6 x 4	CFM	10	25	35	50	60	70	85	95	110	120	
		Noise Criteria	–	–	–	–	20	23	27	30	33	36	
		Throw	4-Way				5-7-11	5-8-13	7-10-16	8-12-18	9-13-20	10-15-23	11-16-25
			3-Way				5-7-12	9-6-14	7-11-16	8-12-19	10-14-22	10-16-24	12-17-27
.16	8 x 4	CFM	15	30	50	65	80	95	110	130	145	160	
		Noise Criteria	–	–	–	15	20	25	29	31	34	37	
		Throw	4-Way			4-6-9	5-7-12	6-9-14	7-11-16	8-12-19	9-14-21	10-16-24	12-17-27
			3-Way			4-6-10	5-8-13	6-9-15	8-12-18	9-14-21	10-15-23	11-16-26	12-18-29
.20	10 x 4 6 x 6	CFM	20	40	60	80	100	120	140	160	180	200	
		Noise Criteria	–	–	–	15	21	26	29	32	35	38	
		Throw	4-Way			4-6-9	5-8-13	6-9-15	8-11-17	9-13-20	10-15-23	11-16-26	12-17-28
			3-Way			4-6-10	6-9-14	7-10-16	8-12-19	10-14-22	11-16-25	12-18-29	13-19-31
.26	12 x 4 8 x 6	CFM	25	50	80	105	130	155	180	210	235	260	
		Noise Criteria	–	–	–	16	22	27	30	33	36	39	
		Throw	4-Way		3-4-7	4-6-10	6-9-14	7-10-16	8-12-19	10-14-22	11-16-25	12-17-29	13-19-31
			3-Way		3-4-7	5-7-11	6-9-15	8-11-17	9-13-20	10-15-23	11-16-26	13-18-30	14-20-33
.30	14 x 4	CFM	30	60	90	120	150	180	210	240	270	300	
		Noise Criteria	–	–	–	17	22	27	31	34	37	40	
		Throw	4-Way		3-4-7	4-6-10	6-9-14	7-11-16	7-11-16	9-13-20	10-15-23	12-18-29	14-20-32
			3-Way		3-5-8	5-7-11	6-9-15	8-12-18	8-12-18	9-14-21	10-16-24	13-19-31	15-21-34
.35	16 x 4 10 x 6 8 x 8	CFM	35	70	105	140	175	210	245	280	315	350	
		Noise Criteria	–	–	–	18	23	28	31	35	37	40	
		Throw	4-Way		3-4-7	5-7-11	6-9-15	8-11-17	9-13-20	10-16-24	12-17-27	13-18-30	14-20-33
			3-Way		3-5-8	5-7-12	6-9-15	8-12-18	10-14-22	11-16-25	14-18-29	14-20-32	15-22-36
.40	18 x 4 12 x 6	CFM	40	80	120	160	200	240	280	320	360	400	
		Noise Criteria	–	–	–	19	24	29	32	35	38	41	
		Throw	4-Way		3-5-8	5-7-11	6-9-15	8-12-18	9-14-21	11-16-25	12-17-28	13-19-31	15-21-34
			3-Way		3-5-8	5-7-12	7-10-16	8-12-19	10-15-23	11-16-26	13-18-30	15-21-34	16-23-37
.45	20 x 4 14 x 6 10 x 8	CFM	45	90	135	180	225	270	315	360	405	450	
		Noise Criteria	–	–	–	19	25	29	32	36	39	42	
		Throw	4-Way		3-5-8	5-7-12	6-9-15	8-12-18	10-14-22	11-16-25	12-18-29	14-20-32	15-22-36
			3-Way		3-5-8	5-8-13	7-11-16	9-13-20	10-15-23	12-17-27	13-19-31	15-21-35	16-23-38
.55	24 x 4 16 x 6 12 x 8	CFM	55	110	165	220	275	330	385	440	495	550	
		Noise Criteria	–	–	–	20	25	29	33	37	39	42	
		Throw	4-Way	2-3-4	3-5-8	5-7-12	7-10-16	8-12-19	10-15-23	12-17-27	13-18-30	15-22-34	16-23-38
			3-Way	2-3-5	4-6-9	5-8-13	8-11-17	9-14-21	11-16-25	12-18-29	14-20-32	16-23-37	16-25-40

For performance data notes, see F93.

## PERFORMANCE DATA:

### CURVED BLADE • SUPPLY GRILLES AND REGISTERS • 51C AND 61C SERIES

#### MODELS: 51C, 51CD, 61C, 61CD

Core Area, Square Feet	Nominal Duct Size, Inches	Core Velocity, FPM	100	200	300	400	500	600	700	800	900	1000	
		Total Pressure	.003	.015	.032	.058	.094	.136	.182	.234	.302	.369	
.62	18 x 6 10 x 10	CFM	60	125	185	250	310	370	435	495	560	620	
		Noise Criteria	-	-	-	20	26	30	34	37	40	43	
		Throw	4-Way	2-3-4	4-6-9	5-8-13	7-11-16	9-13-20	10-16-24	12-17-27	13-19-21	15-21-35	16-24-39
			3-Way	2-3-5	4-6-9	6-9-14	8-11-17	9-14-21	11-16-26	13-18-30	14-20-33	16-24-38	17-26-42
			2-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-33	16-23-37	17-26-42	19-28-46
1-Way	2-4-6		5-7-12	8-11-17	10-15-27	12-18-29	15-21-24	17-25-40	18-28-45	20-31-49	23-35-55		
.70	30 x 4 20 x 6 14 x 8 12 x 10	CFM	70	140	210	280	350	420	490	560	630	700	
		Noise Criteria	-	-	-	20	26	30	34	38	40	43	
		Throw	4-Way	2-3-5	4-6-9	5-8-13	7-11-16	9-13-20	10-16-24	12-19-28	14-20-32	15-22-36	16-25-40
			3-Way	2-3-5	4-6-9	6-9-14	8-12-18	10-14-22	11-16-26	13-19-31	15-21-35	16-24-39	17-26-43
			2-Way	2-4-6	5-7-11	7-10-16	9-13-20	10-16-24	12-18-29	15-21-34	17-24-39	17-26-43	19-30-48
1-Way	3-4-7		5-8-13	8-12-18	10-16-24	12-18-29	15-21-35	17-25-41	19-28-46	21-32-52	24-36-57		
.81	36 x 4 24 x 6 16 x 8 14 x 10	CFM	80	160	245	325	405	485	565	650	730	810	
		Noise Criteria	-	-	15	21	27	31	35	38	41	44	
		Throw	4-Way	2-3-5	4-6-9	6-9-14	8-11-17	9-14-21	11-16-25	12-18-29	14-20-33	16-23-37	17-26-42
			3-Way	2-3-5	4-6-10	6-9-15	8-12-19	11-16-25	12-17-27	14-20-32	15-22-36	16-25-40	18-28-45
			2-Way	2-4-6	5-7-11	7-10-16	9-14-21	11-16-25	13-18-30	15-21-35	17-24-39	18-28-45	20-31-49
1-Way	3-4-7		5-8-13	8-12-18	11-16-25	13-19-31	16-23-37	17-26-43	19-30-48	22-33-53	25-38-60		
.87	18 x 8 12 x 12	CFM	85	175	260	350	435	520	610	695	785	870	
		Noise Criteria	-	-	-	21	27	31	35	38	41	44	
		Throw	4-Way	2-3-5	4-6-9	6-9-14	8-12-18	10-14-22	11-16-26	13-18-30	15-21-34	16-23-38	17-26-42
			3-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-32	16-23-37	17-25-41	19-28-46
			2-Way	2-4-6	5-7-11	7-11-16	9-14-21	11-16-26	13-19-31	15-22-36	17-25-41	19-28-46	21-31-51
1-Way	3-4-7		6-9-14	8-12-19	11-16-25	13-19-30	16-23-38	18-27-44	20-30-49	22-35-55	25-38-62		
1.02	30 x 6 20 x 8 16 x 10 14 x 12	CFM	100	205	305	410	510	610	715	815	920	1020	
		Noise Criteria	-	-	15	22	28	32	36	39	42	45	
		Throw	4-Way	2-3-5	4-6-10	6-9-15	8-12-18	10-15-23	12-17-27	13-19-31	15-21-35	16-25-40	18-27-44
			3-Way	2-4-6	4-6-10	7-10-16	9-13-20	10-16-24	12-18-29	15-21-34	16-23-38	17-26-43	19-29-47
			2-Way	2-4-6	5-7-12	7-11-16	10-14-22	12-17-27	14-20-32	16-23-38	17-26-42	19-30-48	22-33-53
1-Way	3-4-7		6-9-14	9-13-20	11-16-26	14-20-33	16-24-39	18-28-45	21-31-50	24-46-57	26-40-63		
1.15	24 x 8 18 x 10 16 x 12	CFM	115	230	345	460	575	690	805	920	1040	1150	
		Noise Criteria	-	-	16	23	29	32	36	40	43	46	
		Throw	4-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-32	16-23-37	17-25-41	18-28-45
			3-Way	2-4-6	5-7-11	7-10-16	9-13-20	11-16-25	13-18-30	15-21-35	16-25-40	18-27-44	20-30-49
			2-Way	2-4-6	5-7-12	8-11-17	10-14-22	12-17-28	14-20-33	16-24-39	18-27-44	20-30-49	22-34-54
1-Way	3-5-8		6-9-15	9-14-21	12-17-27	15-21-34	17-25-40	19-28-46	21-33-53	24-36-58	27-41-66		
1.25	36 x 6 20 x 10 14 x 14	CFM	125	250	375	500	625	750	875	1000	1120	1250	
		Noise Criteria	-	-	16	23	29	33	37	40	43	46	
		Throw	4-Way	2-3-5	4-6-10	6-9-15	8-12-19	10-16-24	12-17-28	14-20-33	16-23-37	17-26-42	19-28-46
			3-Way	2-4-6	5-7-11	7-10-16	9-14-21	11-16-26	13-19-31	15-22-36	16-25-40	18-28-45	20-31-49
			2-Way	2-4-6	5-7-12	8-11-17	10-15-23	12-18-29	15-21-34	16-25-40	18-28-45	20-31-49	23-35-55
1-Way	3-5-8		6-9-15	9-14-21	12-17-28	15-21-34	17-25-40	19-29-47	22-33-53	25-38-60	28-42-67		
1.35	16 x 14 18 x 12	CFM	135	270	405	540	675	810	945	1080	1220	1350	
		Noise Criteria	-	-	16	23	29	33	37	40	43	46	
		Throw	4-Way	2-4-6	4-6-10	7-10-16	9-13-20	10-16-24	12-18-29	15-21-34	16-23-38	17-26-38	19-29-47
			3-Way	2-4-6	5-7-11	7-11-16	9-14-21	11-16-28	13-19-31	15-22-36	17-25-41	19-27-46	21-31-50
			2-Way	3-4-7	5-8-13	8-12-18	10-16-24	12-18-29	15-21-35	17-25-41	19-28-46	21-32-51	24-36-57
1-Way	3-5-8		6-9-15	10-14-22	12-17-28	15-21-35	17-26-42	20-30-49	22-34-54	25-38-61	28-43-68		
1.53	30 x 8 24 x 10 18 x 14 16 x 16	CFM	155	305	460	610	765	920	1070	1220	1380	1530	
		Noise Criteria	-	-	17	24	29	34	38	41	44	47	
		Throw	4-Way	2-4-6	5-7-11	7-10-16	9-13-20	11-16-25	13-18-30	15-21-35	16-24-39	18-27-44	20-30-49
			3-Way	2-4-6	5-7-12	7-11-16	10-14-22	12-17-27	14-20-32	16-23-38	17-26-43	19-30-48	21-33-52
			2-Way	3-4-7	5-8-13	8-12-18	10-16-24	13-19-31	15-22-36	17-26-42	19-29-46	22-33-53	24-36-58
1-Way	3-5-8		7-10-16	10-14-22	12-18-29	15-22-36	17-26-43	2-31-49	23-35-49	26-40-63	29-45-71		

For performance data notes, see F93.

## PERFORMANCE DATA:

### CURVED BLADE • SUPPLY GRILLES AND REGISTERS • 51C AND 61C SERIES

#### MODELS: 51C, 51CD, 61C, 61CD

Core Area, Square Feet	Nominal Duct Size, Inches	Core Velocity, FPM		100	200	300	400	500	600	700	800	900	1000
		Total Pressure		.003	.015	.032	.058	.094	.136	.182	.234	.302	.369
1.82	36 x 8 30 x 10 24 x 12 20 x 14 18 x 16	CFM		182	365	545	730	910	1090	1279	1460	1640	1820
		Noise Criteria		–	–	18	25	30	34	38	42	45	48
		Throw	4-Way	2-4-6	5-7-11	7-11-16	9-14-21	11-16-26	13-19-31	15-22-36	17-25-41	19-28-46	21-32-51
			3-Way	2-4-6	5-7-12	8-11-17	10-15-23	12-17-28	15-21-34	16-24-39	18-27-44	20-31-49	23-35-55
			2-Way	3-4-7	6-9-14	8-12-19	11-16-26	14-20-32	16-23-38	18-27-44	20-30-49	23-35-55	25-38-61
1-Way	3-5-8		7-10-16	10-15-23	13-19-31	16-23-38	18-28-45	21-33-52	24-36-58	28-41-66	31-47-74		
2.10	24 x 14 20 x 16 18 x 18	CFM		210	420	630	840	1050	1260	1470	1680	1890	2100
		Noise Criteria		–	–	19	25	30	35	39	42	45	48
		Throw	4-Way	2-4-6	5-7-12	8-11-17	10-14-22	12-17-27	14-20-33	16-23-43	17-26-43	19-30-48	22-33-53
			3-Way	3-4-7	5-8-13	8-12-18	10-16-24	12-17-28	15-21-35	17-25-41	19-28-46	21-32-51	24-36-57
			2-Way	3-4-7	6-9-14	9-13-20	12-17-29	14-20-33	17-24-39	18-28-45	21-31-50	24-36-57	27-40-64
1-Way	4-6-9		7-11-16	10-16-24	14-20-32	16-24-39	20-39-47	22-33-53	25-38-60	28-43-68	32-49-78		
2.35	36 x 10 30 x 12 24 x 16 20 x 18	CFM		235	470	705	940	1180	1410	1640	1880	2120	2350
		Noise Criteria		–	–	19	26	31	35	39	43	46	49
		Throw	4-Way	2-4-6	5-7-12	8-11-17	10-15-23	12-17-28	15-21-34	16-24-39	18-27-44	20-30-49	23-35-55
			3-Way	3-4-7	5-8-13	8-12-19	10-16-24	13-18-30	15-22-36	17-26-42	19-30-48	22-33-53	24-36-58
			2-Way	3-5-8	6-9-15	9-14-21	12-17-27	15-21-34	17-25-41	19-29-47	21-33-52	24-37-59	33-49-80
1-Way	4-6-9		7-11-16	11-16-25	14-20-33	17-25-41	19-30-48	23-35-55	26-39-62	29-44-70	33-49-80		
2.68	36 x 12 30 x 14 24 x 18 20 x 20	CFM		270	535	805	1070	1340	1610	1880	2140	2410	2680
		Noise Criteria		–	–	19	26	31	36	40	43	46	48
		Throw	4-Way	3-4-7	5-8-13	8-12-18	10-16-24	12-18-29	15-21-35	17-25-41	19-28-46	21-31-50	24-36-57
			3-Way	3-4-7	6-9-14	8-12-19	11-16-25	14-20-32	16-23-38	18-27-44	20-30-49	23-35-55	25-38-61
			2-Way	3-5-8	6-9-15	9-14-21	12-17-28	15-21-35	19-29-47	19-30-48	22-34-54	25-38-60	27-43-68
1-Way	4-6-9		8-11-17	11-16-26	15-21-34	17-26-42	20-31-49	24-36-57	27-40-64	30-46-73	34-51-82		
3.15	36 x 14 30 x 16 24 x 20	CFM		315	630	945	1260	1580	1890	2200	2520	2840	3150
		Noise Criteria		–	–	20	27	32	37	41	44	47	49
		Throw	4-Way	3-4-7	5-8-13	8-12-18	11-16-25	13-18-30	15-22-36	17-26-42	19-30-48	22-34-53	25-38-60
			3-Way	3-4-7	6-9-14	9-13-20	11-16-26	14-20-33	16-24-39	18-28-45	21-31-50	24-37-57	27-40-64
			2-Way	3-5-8	7-10-16	10-13-23	12-18-29	16-23-37	18-27-44	20-31-49	23-35-56	26-41-63	29-45-71
1-Way	4-6-10		8-12-18	12-17-27	15-20-37	18-27-44	21-32-51	25-38-60	28-42-67	32-49-77	36-54-86		
3.65	36 x 16 30 x 18 24 x 24	CFM		365	730	1100	1460	1820	2190	2560	2920	3280	3650
		Noise Criteria		–	–	20	28	33	37	41	45	48	50
		Throw	4-Way	3-4-7	6-9-14	8-12-19	11-16-26	14-20-32	16-23-38	18-27-44	20-30-49	23-35-55	26-39-62
			3-Way	3-5-8	6-9-15	9-14-21	12-17-27	15-21-34	17-25-41	19-29-47	22-33-53	24-37-59	27-41-66
			2-Way	3-5-8	7-10-16	10-15-23	13-19-31	16-23-38	18-28-45	21-33-52	24-36-58	27-41-66	31-47-74
1-Way	4-6-10		8-12-19	12-17-28	15-22-36	18-28-45	22-33-53	26-39-62	29-44-70	33-50-80	37-55-89		
4.05	36 x 18 30 x 20	CFM		405	810	1220	1620	2020	2430	2830	3240	3640	4050
		Noise Criteria		–	–	21	28	33	38	42	45	48	50
		Throw	4-Way	3-4-7	6-9-14	9-13-20	11-16-26	14-20-33	16-24-39	18-28-45	21-31-50	24-36-57	27-40-64
			3-Way	3-5-8	6-9-15	9-14-21	12-17-28	15-21-35	17-26-42	19-30-48	22-34-54	25-38-61	28-43-68
			2-Way	4-6-9	7-11-16	10-15-24	13-19-31	16-24-39	19-28-46	22-33-53	25-38-60	28-43-68	32-48-77
1-Way	4-6-10		8-12-19	12-18-29	16-23-38	19-28-46	23-35-55	27-40-64	30-45-72	34-50-81	38-57-91		
4.72	36 x 20 30 x 24	CFM		470	945	1420	1890	2360	2830	3300	3780	4250	4720
		Noise Criteria		–	–	21	30	34	38	42	46	48	51
		Throw	4-Way	3-5-8	6-9-15	9-14-21	12-17-27	15-21-34	17-26-41	19-29-47	31-33-52	24-37-59	27-41-66
			3-Way	3-5-8	7-10-16	10-14-23	12-18-29	16-23-37	18-27-44	21-31-50	23-35-56	27-40-64	30-45-72
			2-Way	4-6-9	7-11-16	11-16-25	14-20-33	17-25-41	19-30-48	23-35-55	26-39-62	29-45-71	33-49-80
1-Way	5-7-11		9-13-20	13-18-30	16-24-39	19-30-48	24-36-57	27-41-66	31-48-76	36-53-85	40-59-95		
5.82	36 x 24 30 x 30	CFM		580	1160	1750	2330	2910	3490	4070	4660	5240	5820
		Noise Criteria		–	–	22	29	35	39	43	47	49	52
		Throw	4-Way	3-5-8	6-9-15	10-14-22	12-18-29	15-22-36	17-26-43	20-31-49	23-35-56	26-39-62	29-44-70
			3-Way	4-6-9	7-10-16	10-16-24	13-19-31	16-24-39	19-28-46	22-33-53	24-37-59	28-43-68	31-48-76
			2-Way	4-6-9	8-11-17	11-16-26	15-21-34	17-26-43	21-31-50	24-36-58	27-41-66	31-47-75	35-52-84
1-Way	5-7-11		9-14-21	13-19-31	11-25-41	21-31-50	25-38-60	28-44-70	33-49-80	38-56-90	43-64-102		

For performance data notes, see F93.

## PERFORMANCE DATA:

### CURVED BLADE • SUPPLY GRILLES AND REGISTERS • 51C AND 61C SERIES

#### MODELS: 51C, 51CD, 61C, 61CD

Core Area, Square Feet	Nominal Duct Size, Inches	Core Velocity, FPM	100	200	300	400	500	600	700	800	900	1000	
		Total Pressure	.003	.015	.032	.058	.094	.136	.182	.234	.302	.369	
7.17	36 x 30	CFM	715	1430	2150	2870	3580	4300	5020	5740	6450	7170	
		Noise Criteria	–	–	23	29	35	40	44	48	50	53	
		Throw	4-Way	3-5-8	7-10-16	10-15-23	13-19-31	16-22-38	18-28-45	21-33-52	24-36-58	27-41-66	31-47-74
			3-Way	4-6-9	7-11-16	11-16-25	14-20-33	17-25-41	20-30-49	23-35-55	26-40-63	29-45-71	33-49-80
			2-Way	4-6-10	8-12-19	12-17-28	15-22-36	18-28-45	22-33-53	26-39-62	29-44-70	33-49-80	37-55-89
1-Way	5-7-12		10-14-22	14-20-33	17-26-43	22-33-53	27-40-64	31-47-75	35-52-84	40-59-95	45-67-107		
8.63	36 x 36	CFM	865	1730	2590	3450	4320	5180	6040	6900	7700	8630	
		Noise Criteria	–	–	24	30	36	41	45	48	50	53	
		Throw	4-Way	4-6-9	7-11-16	10-16-24	14-20-32	16-25-40	19-30-48	22-34-54	26-39-62	29-43-69	32-49-78
			3-Way	4-6-10	8-11-17	11-16-26	15-21-34	17-28-43	21-31-50	24-36-58	27-41-66	31-47-75	35-52-85
			2-Way	4-6-10	8-12-19	12-18-29	16-23-38	19-30-47	23-35-56	27-41-65	31-47-66	35-52-83	39-59-93
1-Way	5-8-13		10-15-23	15-21-35	18-28-45	23-35-57	28-35-57	32-49-78	37-55-88	42-62-100	47-70-113		

#### Performance Notes:

- All pressures are in inches w.g..
- Core Velocity is in feet per minute.
- Throw values are given for terminal velocities of 150, 100 and 50 fpm, with a cooling temperature differential ( $\Delta T$ ) of 20°F and are based on surface mount units benefitting from the ceiling coanda effect. The blade settings were set for optimum discharge, parallel to the face of the grille, which has the outer blades closest to the frame, set with an opening of 1/8" (3) and progressively wider spacings between blades away from the frame. (**Note:** The throw values may be increased or decreased by as much as 20% by changing the blade setting).
- Blades in the full open position
  - reduce the Noise Criteria by 6.
  - multiply the Total Pressure x 0.3.
- Noise Criteria (NC) values are based on a room absorption of 10 dB, re 10<sup>-12</sup> watts. Dash (-) in space denotes a Noise Criteria level of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.