

# PERFORMANCE DATA

			NC 20					NC 30			
Core Area	Core Velocity (fpm)		300	400	500	600	700	800	1000	1200	1400
	Velocity Pressure (in. w.g.)		0.006	0.01	0.016	0.022	0.03	0.04	0.062	0.09	0.122
	Total Pressure (in. w.g.)	0°	0.017	0.028	0.045	0.062	0.084	0.112	0.174	0.252	0.341
22.5°		0.019	0.031	0.05	0.068	0.093	0.124	0.192	0.279	0.378	
45°		0.020	0.034	0.054	0.075	0.102	0.136	0.211	0.306	0.415	
Ac = 0.18 ft. <sup>2</sup> 8 x 4 7 x 5 6 x 6	Flow Rate (cfm)		55	70	90	110	125	145	180	215	250
	Sound (NC)		-	-	-	-	17	21	27	33	38
	Throw (ft)	0°	4-7-13	6-8-15	7-12-17	10-14-19	11-15-20	12-16-22	14-17-24	15-19-26	17-21-29
22.5°		3-6-10	5-6-12	6-10-14	7-11-15	8-12-16	10-13-18	11-14-19	12-15-21	14-17-23	
45°		2-3-7	3-4-08	4-5-9	4-7-10	5-7-10	6-8-11	7-9-12	8-10-13	8-10-14	
Ac = 0.26 ft. <sup>2</sup> 12 x 4 10 x 5 8 x 6	Flow Rate (cfm)		80	105	130	155	180	210	260	310	365
	Sound (NC)		-	-	-	-	18	22	28	34	39
	Throw (ft)	0°	5-8-16	7-12-19	10-14-21	11-17-23	13-17-24	15-19-26	17-21-29	19-23-32	20-25-35
22.5°		4-6-13	6-10-15	7-11-17	8-14-18	11-14-19	12-15-21	14-17-23	15-18-26	16-20-23	
45°		3-4-8	4-5-9	4-7-10	5-8-11	6-9-12	7-9-13	8-11-15	9-12-16	10-13-17	
Ac = 0.34 ft. <sup>2</sup> 16 x 4 12 x 5 10 x 6	Flow Rate (cfm)		100	135	170	205	240	270	340	410	475
	Sound (NC)		-	-	-	-	19	23	29	35	40
	Throw (ft)	0°	5-10-18	8-13-21	11-16-24	13-20-26	15-20-28	17-22-30	20-24-33	22-26-37	23-28-40
22.5°		4-7-14	6-11-17	8-13-19	11-16-22	12-16-22	14-18-24	16-19-26	18-21-30	18-22-32	
45°		3-4-9	4-6-11	5-8-12	6-10-13	7-10-14	8-11-15	10-12-17	11-13-18	12-14-20	
Ac = 0.39 ft. <sup>2</sup> 18 x 4 14 x 5 12 x 6 8 x 8	Flow Rate (cfm)		115	155	195	235	275	310	390	470	545
	Sound (NC)		-	-	-	15	20	24	30	36	41
	Throw (ft)	0°	6-10-19	10-14-23	12-17-25	14-20-28	16-22-30	18-23-32	21-26-36	23-27-40	25-30-42
22.5°		5-7-15	7-11-18	10-14-20	11-16-22	13-18-24	15-18-26	17-21-29	18-22-32	20-24-34	
45°		3-5-10	4-6-11	5-8-13	7-11-14	8-11-15	10-12-16	11-13-18	12-14-20	12-15-21	
Ac = 0.52 ft. <sup>2</sup> 24 x 4 18 x 5 16 x 6	Flow Rate (cfm)		155	210	260	310	365	415	520	625	730
	Sound (NC)		-	-	-	16	21	25	31	37	42
	Throw (ft)	0°	7-12-23	11-16-26	14-20-29	16-23-32	19-25-35	21-26-37	24-30-41	27-33-45	29-35-49
22.5°		6-10-18	8-13-21	11-16-23	13-19-26	15-20-28	17-21-30	19-24-33	22-26-36	23-28-39	
45°		3-5-11	5-7-13	6-10-15	8-12-16	10-12-17	11-13-18	12-15-21	13-16-23	14-18-24	
Ac = 0.60 ft. <sup>2</sup> 28 x 4 20 x 5 18 x 6 12 x 8 10 x 10	Flow Rate (cfm)		180	240	300	360	420	480	600	720	840
	Sound (NC)		-	-	-	17	22	26	32	38	43
	Throw (ft)	0°	7-13-24	12-17-28	15-21-31	17-25-34	20-27-37	23-29-40	26-32-45	29-35-48	31-38-52
22.5°		6-11-19	10-14-22	12-17-25	14-20-27	16-22-30	19-23-32	21-26-36	23-28-38	25-30-42	
45°		4-6-12	5-8-14	7-11-16	8-13-17	11-13-19	12-14-20	13-16-22	14-17-24	15-19-26	
Ac = 0.69 ft. <sup>2</sup> 30 x 4 24 x 5 20 x 6 14 x 8 12 x 10	Flow Rate (cfm)		205	275	345	415	485	550	690	830	965
	Sound (NC)		-	-	-	17	22	26	32	38	43
	Throw (ft)	0°	8-14-26	13-18-30	16-23-34	19-27-37	22-29-40	25-31-43	28-34-47	30-38-52	33-40-56
22.5°		6-11-21	11-15-24	13-19-27	15-22-30	18-23-32	20-25-34	22-27-38	24-30-42	26-32-45	
45°		4-6-13	6-10-15	7-12-17	10-14-18	11-14-20	13-15-21	14-17-24	15-19-26	16-20-28	

For performance notes see end of section.

# PERFORMANCE DATA

		NC 20				NC 30			NC 40		
Core Velocity (fpm)		300	400	500	600	700	800	1000	1200	1400	
Velocity Pressure (in. w.g.)		0.006	0.01	0.016	0.022	0.03	0.04	0.062	0.09	0.122	
Core Area	Total Pressure (in. w.g.)	0°	0.017	0.028	0.045	0.062	0.084	0.112	0.174	0.252	0.341
		22.5°	0.019	0.031	0.05	0.068	0.093	0.124	0.192	0.279	0.378
	45°	0.020	0.034	0.054	0.075	0.102	0.136	0.211	0.306	0.415	
Ac = 0.81 ft. <sup>2</sup> 36 x 4 28 x 5 22 x 6	Flow Rate (cfm)		245	325	405	485	565	650	810	970	1130
	Sound (NC)		-	-	-	18	23	27	33	39	44
	Throw (ft)	0°	8-15-28	14-20-33	17-24-37	20-29-40	24-31-43	27-33-46	30-37-51	33-41-56	36-44-60
		22.5°	6-12-22	11-16-26	14-19-30	16-23-32	19-25-34	22-26-37	24-30-41	26-33-45	29-35-48
45°		4-7-14	6-10-16	8-13-18	11-15-20	12-15-22	14-17-23	15-19-26	17-20-28	18-22-30	
Ac = 0.90 ft. <sup>2</sup> 40 x 4 30 x 5 26 x 6 12 x 12 18 x 8 16 x 10	Flow Rate (cfm)		270	360	450	540	630	720	900	1080	1260
	Sound (NC)		-	-	-	19	24	28	34	40	45
	Throw (ft)	0°	10-16-30	15-21-34	18-26-39	22-31-42	25-33-45	28-35-48	32-39-55	35-43-59	37-46-63
		22.5°	7-13-24	12-17-27	15-21-31	18-25-34	20-26-36	23-28-38	26-31-44	28-34-47	30-37-50
45°		5-8-15	7-11-17	10-14-19	11-16-21	13-16-23	15-17-24	16-20-27	17-21-29	19-23-32	
Ac = 1.07 ft. <sup>2</sup> 48 x 4 36 x 5 30 x 6 18 x 10 14 x 12	Flow Rate (cfm)		320	430	535	640	750	855	1070	1280	1500
	Sound (NC)		-	-	14	19	24	28	34	40	45
	Throw (ft)	0°	11-17-32	16-23-38	19-30-42	23-35-46	28-36-49	31-38-53	35-43-59	38-46-64	41-50-69
		22.5°	8-14-26	13-19-30	15-23-34	19-28-37	22-29-39	24-30-42	28-34-47	30-37-51	33-40-55
45°		5-8-16	7-12-19	10-15-21	12-18-23	14-18-25	15-19-26	17-21-29	19-23-32	20-25-35	
Ac = 1.18 ft. <sup>2</sup> 34 x 6 24 x 8 20 x 10 16 x 12 14 x 14	Flow Rate (cfm)		355	470	590	710	825	945	1180	1420	1650
	Sound (NC)		-	-	-	19	24	28	34	40	45
	Throw (ft)	0°	11-18-34	16-24-40	20-30-44	24-37-48	29-38-52	33-40-56	36-45-62	40-48-67	43-52-73
		22.5°	8-15-27	13-19-32	16-23-35	19-30-38	23-30-42	27-32-45	29-36-50	32-38-54	34-42-58
45°		5-8-17	8-12-20	11-15-22	13-18-24	14-19-26	16-20-28	18-22-31	20-24-34	21-26-36	
Ac = 1.34 ft. <sup>2</sup> 60 x 4 48 x 5 36 x 6 18 x 12 16 x 14	Flow Rate (cfm)		400	535	670	805	940	1070	1340	1610	1880
	Sound (NC)		-	-	15	20	25	29	35	41	46
	Throw (ft)	0°	12-19-36	17-25-42	21-32-47	25-39-51	30-40-56	34-43-59	39-47-65	42-52-72	45-56-78
		22.5°	10-15-29	14-20-34	17-25-38	20-32-41	23-32-45	28-34-47	31-38-52	34-42-58	36-45-62
45°		6-10-18	8-13-21	11-16-23	13-19-26	15-20-28	17-21-29	19-23-33	21-26-36	23-28-39	
Ac = 1.60 ft. <sup>2</sup> 72 x 4 30 x 8 24 x 10 16 x 16 22 x 12 18 x 14	Flow Rate (cfm)		480	640	800	960	1120	1280	1600	1920	2240
	Sound (NC)		-	-	16	21	26	30	36	42	47
	Throw (ft)	0°	14-21-40	19-28-46	22-34-51	29-41-56	33-43-60	37-46-64	42-51-72	46-56-79	49-61-85
		22.5°	11-17-32	15-22-37	19-28-41	23-33-45	27-34-48	30-37-51	34-41-58	37-45-63	39-49-68
45°		6-11-20	10-14-23	12-17-25	14-21-28	16-22-30	18-23-32	21-26-36	23-28-39	25-30-43	
Ac = 1.80 ft. <sup>2</sup> 60 x 5 48 x 6 20 x 14 36 x 8 18 x 16 30 x 10 24 x 12	Flow Rate (cfm)		540	720	900	1080	1260	1440	1800	2160	2520
	Sound (NC)		-	-	17	22	27	31	37	43	48
	Throw (ft)	0°	14-22-42	20-30-48	25-37-55	31-45-59	34-46-63	39-49-68	45-55-76	48-60-84	52-65-90
		22.5°	11-18-34	16-23-38	20-30-44	24-36-47	28-37-50	32-39-54	36-44-61	38-48-67	42-52-72
45°		7-12-21	10-15-24	13-18-27	15-22-29	17-23-32	20-24-34	22-27-38	24-30-42	26-32-45	

For performance notes see end of section.

NC 20

NC 30

NC 40

# PERFORMANCE DATA

Core Area	Core Velocity (fpm)		NC 20				NC 30		NC 40		
	Velocity Pressure (in. w.g.)		300	400	500	600	700	800	1000	1200	1400
	Total Pressure (in. w.g.)	0°	0.017	0.028	0.045	0.062	0.084	0.112	0.174	0.252	0.341
22.5°		0.019	0.031	0.05	0.068	0.093	0.124	0.192	0.279	0.378	
Throw (ft)	45°	0.020	0.034	0.054	0.075	0.102	0.136	0.211	0.306	0.415	
	<b>Ac = 2.08 ft.<sup>2</sup></b>	Flow Rate (cfm)		<b>625</b>	<b>830</b>	<b>1040</b>	<b>1250</b>	<b>1460</b>	<b>1660</b>	<b>2080</b>	<b>2500</b>
Sound (NC)		-	-	<b>17</b>	<b>22</b>	<b>27</b>	<b>31</b>	<b>37</b>	<b>43</b>	<b>48</b>	
72 x 5 60 x 6 18 x 18 40 x 8 36 x 10 30 x 12 24 x 14 20 x 16	Throw (ft)	0°	15-24-45	21-32-52	28-40-58	32-47-63	37-49-68	42-53-73	48-59-82	52-64-90	56-69-97
		22.5°	12-19-36	17-25-42	22-32-46	25-37-50	30-39-54	34-42-58	38-47-66	42-51-72	45-55-78
		45°	7-12-23	11-16-26	14-20-29	16-23-32	18-25-34	22-26-37	24-29-41	26-32-45	28-35-48
<b>Ac = 2.45 ft.<sup>2</sup></b>	Flow Rate (cfm)		<b>735</b>	<b>980</b>	<b>1220</b>	<b>1470</b>	<b>1720</b>	<b>1960</b>	<b>2450</b>	<b>2940</b>	<b>3430</b>
	Sound (NC)		-	-	<b>18</b>	<b>23</b>	<b>28</b>	<b>32</b>	<b>38</b>	<b>44</b>	<b>49</b>
72 x 6 32 x 12 26 x 14 24 x 16 20 x 18 20 x 20 48 x 8	Throw (ft)	0°	16-27-49	23-35-57	29-42-62	34-51-68	40-54-74	46-57-80	52-64-89	57-70-97	61-76-106
		22.5°	13-21-39	19-28-46	23-34-50	28-40-54	32-43-59	36-46-64	42-51-71	46-56-78	49-61-85
		45°	7-13-24	12-17-28	15-21-31	17-25-34	20-27-37	23-28-40	26-32-45	28-35-49	32-38-53
<b>Ac = 2.78 ft.<sup>2</sup></b>	Flow Rate (cfm)		<b>835</b>	<b>1110</b>	<b>1390</b>	<b>1670</b>	<b>1950</b>	<b>2220</b>	<b>2780</b>	<b>3340</b>	<b>3890</b>
	Sound (NC)		-	-	<b>18</b>	<b>23</b>	<b>28</b>	<b>32</b>	<b>38</b>	<b>44</b>	<b>49</b>
36 x 12 26 x 16 22 x 20 30 x 14 24 x 18	Throw (ft)	0°	17-28-52	24-36-60	31-45-67	37-53-73	42-57-79	48-57-79	55-68-95	60-75-104	65-81-112
		22.5°	14-22-42	19-29-48	24-36-54	30-42-58	34-46-63	38-49-68	44-54-76	48-60-83	52-65-90
		45°	8-14-26	13-18-30	15-22-33	18-27-37	21-28-40	24-30-42	28-34-47	30-37-52	33-40-56
<b>Ac = 3.11 ft.<sup>2</sup></b>	Flow Rate (cfm)		<b>935</b>	<b>1240</b>	<b>1560</b>	<b>1870</b>	<b>2180</b>	<b>2490</b>	<b>3110</b>	<b>3730</b>	<b>4350</b>
	Sound (NC)		-	-	<b>19</b>	<b>24</b>	<b>29</b>	<b>33</b>	<b>39</b>	<b>45</b>	<b>50</b>
60 x 8 48 x 10 24 x 20 40 x 12 36 x 14 30 x 16 26 x 18	Throw (ft)	0°	18-29-55	25-38-63	36-48-71	43-56-78	50-60-84	51-64-90	58-72-100	64-79-110	69-86-118
		22.5°	15-23-44	11-31-50	29-38-57	35-45-62	40-48-67	40-51-72	46-58-80	51-63-88	55-69-94
		45°	8-15-28	13-19-31	18-23-35	21-28-39	23-30-42	26-32-45	29-36-50	32-40-55	35-43-59
<b>Ac = 3.61 ft.<sup>2</sup></b>	Flow Rate (cfm)		<b>1080</b>	<b>1440</b>	<b>1800</b>	<b>2170</b>	<b>2530</b>	<b>2890</b>	<b>3610</b>	<b>4330</b>	<b>5050</b>
	Sound (NC)		-	-	<b>20</b>	<b>25</b>	<b>30</b>	<b>34</b>	<b>40</b>	<b>46</b>	<b>51</b>
60 x 10 48 x 12 36 x 16 30 x 18 36 x 20	Throw (ft)	0°	19-31-59	28-40-68	34-50-76	40-59-84	47-59-90	54-69-97	63-78-108	69-86-118	75-93-128
		22.5°	15-24-47	22-32-54	28-40-61	32-48-67	37-52-72	43-55-78	50-62-86	55-69-94	60-74-102
		45°	10-15-29	14-20-34	17-24-38	20-30-42	23-32-45	27-35-48	31-39-54	35-43-59	38-46-64
<b>Ac = 4.65 ft.<sup>2</sup></b>	Flow Rate (cfm)		<b>1400</b>	<b>1860</b>	<b>2320</b>	<b>2790</b>	<b>3260</b>	<b>3720</b>	<b>4650</b>	<b>5580</b>	<b>6510</b>
	Sound (NC)		-	-	<b>21</b>	<b>26</b>	<b>31</b>	<b>35</b>	<b>41</b>	<b>47</b>	<b>52</b>
72 x 10 48 x 16 30 x 24 36 x 20	Throw (ft)	0°	21-35-67	31-46-78	38-57-87	47-69-95	54-74-103	61- 79-110	72-89-123	79-97-135	86-105-146
		22.5°	17-28-54	24-36-62	31-46-70	37-55-76	43-59-82	49-63-88	58-71-98	63-78-108	69-84-117
		45°	11-17-33	16-23-39	19-29-43	24-34-48	27-37-52	31-40-55	36-44-61	39-49-67	43-52-73
<b>Ac = 5.58 ft.<sup>2</sup></b>	Flow Rate (cfm)		<b>1670</b>	<b>2230</b>	<b>2790</b>	<b>3350</b>	<b>3910</b>	<b>4460</b>	<b>5580</b>	<b>6700</b>	<b>7810</b>
	Sound (NC)		-	<b>15</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>36</b>	<b>42</b>	<b>48</b>	<b>53</b>
72 x 12 60 x 14 36 x 24 48 x 18	Throw (ft)	0°	23-38-73	33-50-85	42-63-95	50-76-104	58-81-113	67-87-122	79-97-135	87-107-148	93-116-160
		22.5°	19-31-58	27-40-68	34-50-76	40-61-83	47-65-90	53-70-98	63-78-108	70-86-118	74-93-130
		45°	12-19-37	17-24-43	21-32-48	24-38-52	30-41-57	33-44-61	39-49-67	45-53-74	47-58-80

**Performance Notes:**

- Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
- Air flow is in cfm.
- All pressures are in in. w.g.
- Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).
- Throw data is based on supply air and room air being at isothermal conditions.
- NC values are based on a room absorption of 10 dB re 10<sup>-12</sup> watts, with a single register operating at 0° horizontal deflection setting. For deflection settings of 22.5° and 45°, increase the stated sound levels by 1 and 4 NC respectively
- Blanks "-" indicate an NC level below 15.
- The stated deflection settings refer to horizontal deflections. Horizontal deflection is adjusted by means of the optional individually adjustable rear blades.