



**USAIRE**

# MODEL 3100SA

**Model 3100SA**  
Commercial Round Ceiling Diffuser

Neck Size	Neck Area Sq FT	Inlet Velocity PS	200	300	400	500	600	700	800	900	1000	1100
			CFM	NC	CFM	NC	CFM	NC	CFM	NC	CFM	NC
6"	.165	CFM	39	59	79	98	118	137	157	177	196	216
		NC	<15	<15	16	18	21	23	26	28	31	33
8"	.307	CFM	70	105	140	175	209	244	279	314	349	384
		NC	<15	16	18	21	23	26	28	31	33	36
10"	.493	CFM	109	164	218	273	327	382	436	491	545	600
		NC	16	18	20	23	25	28	30	33	35	38
12"	.722	CFM	157	236	314	393	471	550	628	707	785	864
		NC	17	20	22	24	27	29	32	34	37	39
14"	.995	CFM	214	321	428	535	641	748	855	962	1069	1176
		NC	18	21	23	26	28	31	33	36	38	40
16"	1.312	CFM	279	419	559	698	838	977	1117	1257	1396	1536
		NC	20	22	25	27	29	32	34	37	39	42
18"	1.673	CFM	353	530	707	884	1060	1237	1414	1590	1767	1944
		NC	21	23	26	28	30	33	35	38	40	43
20"	1.673	CFM	436	654	873	1091	1309	1527	1745	1963	2182	2400
		NC	22	24	26	29	31	34	36	39	41	44
22"	1.673	CFM	528	792	1056	1320	1584	1848	2112	2376	2640	2904
		NC	22	25	27	30	32	35	37	39	42	44
24"	3.016	CFM	628	942	1257	1571	1885	2199	2513	2827	3142	3456
		NC	23	26	28	30	33	35	38	40	43	45
Throw			5	8	10	13	15	18	20	23	25	28

Damper Table

% Damper Open	Add to Listed NC
100 %	0
82 %	4
70 %	8
50%	16

Performance Notes

1. Tabulated radial throw in feet is based on a 9' ceiling height, with supply air 20°F cooler than room temperature, MAX Horizontal Throw @ Vt = 50 fpm.
2. Vertical down projection air pattern with cooling supply air temperature 20° below room temperature, and diffuser inner cones in up position: multiply the tabulated radial throw values by a factor of 0.80 to obtain vertical down projection distance at MIN and MAX (Vt) terminal velocities.
3. Vertical down projection air pattern with heating supply air temperature 20° above room temperature, and diffuser inner cones in up position: multiply the tabulated radial throw values by a factor of 0.60 to obtain vertical down projection distance at MIN and MAX (Vt) terminal velocities.
4. PS - are in inches of water.
5. 3100 Round Diffusers are tested in accordance with ASHRAE 70-2006. Sound data are calculated in accordance with International Standard ISO 3741 comparison method. The NC values are based on a room absorption of 10 dB for sound power level (Lw) RE: 10E-12 watts. ( < ) symbol indicates NC less than number given. The NC data are for single diffusers; for results of throttling a volume damper, see Damper Table.
6. All data are applicable for exposed duct mounting or ceiling installation.
7. Inlet Velocity = fpm (Feet Per Minute)

For sizes not shown, refer to online tools **GRD Selection Program** performance calculator on Home Page