



INDUSTRIAL PROCESS AND
COMMERCIAL VENTILATION SYSTEMS

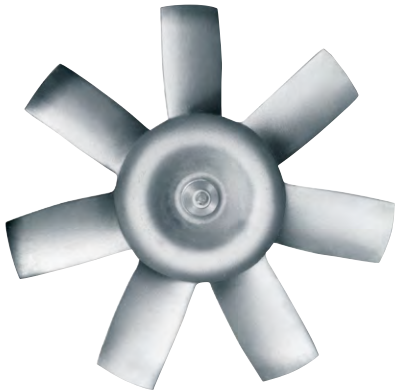
AXIFAN® TUBEAXIAL FANS

MODEL TCTA





TCTA Arr. 9



AXIFAN® Wheel



Model TCTA is available with UL/cUL 705 listing for electrical, File No. E158680.

Model Nomenclature

36 B 5

Approximation of Hub-To-Tip Ratio
Where: 3 = 40%, 4 = 43%, 5 = 50%
6 = 57%, 7 = 66%

Drive
B = Belt Driven (Arr. 9)
D = Direct Drive (Arr. 4)

Fan Diameter (inches)

Model TCTA

The model TCTA AXIFAN® Tubeaxial Fan from Twin City Fan & Blower is designed to handle a wide range of requirements ranging from general ventilation to process air supply. Its mounting flexibility, which allows it to be mounted as part of the ductwork, makes it ideal for many industrial and commercial applications.

The model TCTA includes all of the design advantages of the TCVA AXIFAN® Vaneaxial Fan, except that guide vanes are not provided. This makes the TCTA more suitable for lower pressures and provides cost savings.

Capabilities

- Wheel diameters 12" to 60"
- Airflow to 96,000 CFM
- Static pressures to 5" w.g.
- 37 unique diameters and hub-to-tip ratios

AXIFAN® Wheel

The heart of the TCTA AXIFAN® fan lies in its wheel. Cast of high strength aluminum alloy, the one-piece TCTA AXIFAN® wheel has been developed to maximize the highest efficiency possible. Attention to detail in blade and hub design have created what is felt to be the most efficient and reliable axial fan on the market today. With the wide range of hub-to-tip ratios available, there is a TCTA AXIFAN® to meet any air movement requirement.

Hub-To-Tip Ratio

The multitude of TCTA AXIFAN® wheels evolves from nine basic castings. Each casting is machined and cut to the proper diameter. By cutting the same model casting to one of several different diameters, different hub-to-tip ratios are created. Since each hub ratio has slightly different pressure/efficiency characteristics, the freedom of having several wheels (different hub ratios) for a set diameter provides the opportunity to maximize efficiency at the required point of rating.

Housing

TCTA AXIFAN® housings are one-piece, heavy-gauge, hot-rolled steel construction. Flanges on both the inlet and outlet are integrally rolled and punched for attachment to ductwork or accessories as necessary. The seam is continuously welded and ground smooth to assure efficient airflow through the housing.

Drive Isolated from Airstream

The shaft and bearing assembly is mounted within the inner cylinder to isolate these components from the high velocity airstream.

The V-belt drive assembly is extended through a two-piece belt fairing. The belt fairing is an aerodynamically designed tube, designed to maximize fan efficiency, minimize air blockage and reduce noise generation.

Additional Information

For additional information on the TCTA and TCVA AXIFAN® tubeaxial and vaneaxial fans, refer to Twin City Fan & Blower Catalog AX100.

This catalog contains performance tables for Arrangement 9 belt driven fans. For Arrangement 4 direct drive selections and additional selections not shown, refer to the Twin City Fan & Blower Fan Selector Program.

TCTA 12B6 – 12B7

Wheel Dia.: 12"

Outlet Area: 0.807 ft²

Tip Speed: 3.14 x RPM

MODEL	CFM	OV	0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
12B6	800	991																					
	1000	1239	1873	0.16																			
	1200	1487	2073	0.22																			
	1400	1735	2285	0.28	2636	0.46																	
	1600	1983	2506	0.36	2831	0.56	3123	0.77															
	1800	2230	2736	0.45	3039	0.68	3309	0.90	3562	1.14													
	2000	2478	2974	0.56	3253	0.81	3509	1.06	3746	1.32	3971	1.59											
	2200	2726	3217	0.69	3474	0.96	3717	1.24	3941	1.52	4155	1.80	4358	2.10									
	2400	2974	3464	0.85	3701	1.13	3931	1.43	4145	1.74	4347	2.04	4542	2.35	4729	2.68							
	2600	3222	3714	1.03	3933	1.32	4149	1.65	4356	1.98	4549	2.31	4733	2.64	4913	2.98	5088	3.33	5250	3.67			
2800	3470	3967	1.24	4171	1.55	4373	1.89	4570	2.25	4757	2.60	4933	2.96	5104	3.31	5271	3.68	5435	4.05	5589	4.42		
3000	3717	4222	1.47	4413	1.80	4602	2.16	4789	2.53	4969	2.92	5140	3.30	5304	3.68	5463	4.06	5619	4.45				
12B7	800	991	1845	0.18																			
	1000	1239	2121	0.26	2455	0.43																	
	1200	1487	2431	0.38	2696	0.55	2979	0.77															
	1400	1735	2750	0.54	2978	0.72	3213	0.94	3456	1.20													
	1600	1983	3071	0.74	3285	0.95	3480	1.16	3689	1.42	3902	1.72	4103	2.02									
	1800	2230	3398	0.98	3601	1.24	3776	1.46	3952	1.71	4139	2.01	4328	2.34	4514	2.68							
	2000	2478	3727	1.26	3921	1.57	4086	1.83	4241	2.08	4401	2.36	4569	2.69	4740	3.06	4909	3.44	5072	3.81			
	2200	2726	4060	1.61	4242	1.96	4403	2.26	4547	2.53	4688	2.81	4834	3.12	4986	3.48	5141	3.88	5296	4.29	5449	4.71	
	2400	2974	4396	2.01	4567	2.40	4722	2.76	4861	3.07	4992	3.36	5121	3.67	5254	4.00	5392	4.38	5534	4.81	5676	5.25	
	2600	3222	4733	2.48	4894	2.91	5043	3.31	5179	3.67	5304	4.00	5423	4.32	5543	4.65	5664	5.00					
2800	3470	5072	3.02	5224	3.49	5366	3.93	5499	4.34	5620	4.72												
3000	3717	5412	3.64	5557	4.15	5692	4.63																

Regular type face = Class I **Bold type face** = Class II

Maximum RPM: Class I = 4455 Class II = 5729

TCTA 15B5 – 15B7

Wheel Dia.: 15"

Outlet Area: 1.253 ft²

Tip Speed: 3.93 x RPM

MODEL	CFM	OV	0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
15B5	1400	1117																					
	1600	1277	1557	0.23																			
	1800	1437	1648	0.26																			
	2000	1596	1746	0.31																			
	2400	1915	1951	0.42	2264	0.69																	
	2800	2235	2159	0.53	2455	0.86	2710	1.19															
	3200	2554	2377	0.68	2660	1.07	2894	1.42	3115	1.80													
	3600	2873	2608	0.86	2866	1.29	3093	1.71	3296	2.11	3492	2.54	3680	2.99									
	4000	3192	2846	1.09	3074	1.53	3299	2.03	3492	2.47	3673	2.92	3851	3.40	4021	3.90							
	4400	3512	3089	1.36	3292	1.81	3505	2.36	3697	2.89	3868	3.37	4032	3.86	4195	4.39	4351	4.93	4504	5.49			
4800	3831	3336	1.68	3519	2.15	3713	2.72	3903	3.32	4072	3.88	4228	4.41	4378	4.94	4527	5.50						
5200	4150	3585	2.05	3753	2.55	3928	3.12	4109	3.77	4278	4.41	4430	5.00										
5600	4469	3836	2.49	3991	3.00	4150	3.58	4318	4.26	4484	4.97												
15B6	1400	1117	1419	0.21																			
	1600	1277	1511	0.25																			
	1800	1437	1609	0.30																			
	2000	1596	1712	0.36	2015	0.61																	
	2400	1915	1925	0.48	2203	0.78	2446	1.09															
	2800	2235	2148	0.64	2407	1.00	2630	1.34	2837	1.70													
	3200	2554	2383	0.84	2618	1.24	2829	1.64	3022	2.03	3204	2.44											
	3600	2873	2625	1.09	2836	1.52	3037	1.98	3218	2.42	3389	2.86	3554	3.33									
	4000	3192	2873	1.40	3061	1.84	3250	2.36	3424	2.86	3585	3.35	3739	3.84	3890	4.35	4031	4.87					
	4400	3512	3124	1.76	3295	2.24	3468	2.78	3636	3.35	3791	3.89	3936	4.42	4077	4.96	4216	5.52	4348	6.09	4474	6.67	
4800	3831	3379	2.20	3535	2.70	3693	3.26	3851	3.87	4002	4.49	4142	5.08	4276	5.67	4405	6.25	4533	6.85				
5200	4150	3635	2.70	3780	3.24	3924	3.82	4071	4.46	4215	5.13	4353	5.80	4482	6.44								
5600	4469	3893	3.28	4028	3.85	4162	4.46	4297	5.12	4433	5.83												
15B7	1400	1117	1476	0.27																			
	1600	1277	1590	0.33																			
	1800	1437	1714	0.40	1992	0.67																	
	2000	1596	1846	0.49	2098	0.77	2332	1.08															
	2400	1915	2120	0.72	2333	1.02	2542	1.38	2741	1.75													
	2800	2235	2401	1.01	2591	1.36	2772	1.73	2951	2.15	3126	2.59	3283	3.01	3493	3.60	3640	4.10					
	3200	2554	2689	1.38	2863	1.79	3023	2.19	3181	2.62	3338	3.10	3493	3.60	3640	4.10							
	3600	2873	2980	1.84	3142	2.31	3288	2.76	3429	3.21	3569	3.70	3710	4.24	3848	4.79	3984	5.36	4112	5.91			
	4000	3192	3276	2.40	3424	2.92	3562	3.43	3691	3.93	3817	4.43											

TCTA 18B4 – 18B7

Wheel Dia.: 18"

Outlet Area: 1.799 ft²

Tip Speed: 4.71 x RPM

MODEL	CFM	OV	0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
18B4	2000	1112	1334	0.26																			
	3000	1668	1603	0.44	1926	0.80																	
	4000	2223	1925	0.70	2194	1.14	2437	1.61	2669	2.11													
	5000	2779	2276	1.09	2507	1.61	2717	2.16	2913	2.74	3105	3.34	3291	3.96									
	6000	3335	2648	1.62	2839	2.22	3031	2.87	3207	3.53	3373	4.20	3534	4.90	3695	5.62	3851	6.36					
	7000	3891	3031	2.34	3193	3.01	3359	3.73	3523	4.49	3676	5.26	3821	6.03	3962	6.83							
8000	4447	3421	3.28	3562	4.02	3705	4.80	3851	5.64	3995	6.51												
9000	5003	3815	4.45	3941	5.27																		
18B5	2000	1112			1772	0.83																	
	3000	1668	1490	0.48	2037	1.23	2250	1.69															
	4000	2223	1789	0.76	2333	1.75	2524	2.32	2697	2.89	2864	3.50											
	5000	2779	2111	1.15																			
	6000	3335	2456	1.72	2636	2.36	2821	3.12	2981	3.81	3128	4.47	3271	5.16	3410	5.89	3544	6.65					
	7000	3891	2811	2.50	2962	3.18	3121	4.00	3279	4.88	3419	5.70	3549	6.47	3673	7.25	3796	8.06	3916	8.90			
8000	4447	3173	3.51	3304	4.25	3437	5.08	3579	6.05	3717	7.06	3845	8.03	3962	8.92								
9000	5003	3539	4.78	3655	5.59	3772	6.47	3892	7.44														
18B6	2000	1112			1713	0.90																	
	3000	1668	1460	0.53	1992	1.37	2184	1.86															
	4000	2223	1769	0.87	2295	1.98	2470	2.60	2626	3.20	2776	3.82	2915	4.46									
	5000	2779	2106	1.37																			
	6000	3335	2458	2.09	2614	2.75	2773	3.51	2920	4.27	3054	4.98	3181	5.70	3307	6.45	3425	7.21					
	7000	3891	2820	3.07	2953	3.79	3088	4.60	3224	5.50	3353	6.40	3471	7.24	3584	8.07	3693	8.91	3801	9.77			
8000	4447	3188	4.35	3304	5.14	3420	6.00	3539	6.95	3658	7.97	3773	9.01										
9000	5003	3559	5.96	3662	6.84	3765	7.76																
18B7	2000	1112	1197	0.35																			
	3000	1668	1520	0.66	1743	1.07																	
	4000	2223	1886	1.18	2065	1.68	2233	2.21	2395	2.78	2541	3.35											
	5000	2779	2271	1.96	2422	2.57	2564	3.20	2700	3.85	2833	4.55	2962	5.26	3085	5.97							
	6000	3335	2667	3.06	2797	3.79	2921	4.53	3039	5.28	3154	6.05	3267	6.85	3378	7.69	3486	8.54	3592	9.40	3694	10.25	
	7000	3891	3070	4.56	3184	5.41	3293	6.26	3399	7.12	3501	7.99	3601	8.88	3699	9.79	3796	10.73					
8000	4447	3478	6.52	3578	7.47	3676	8.44	3771	9.42														
9000	5003																						

Regular type face = Class I **Bold type face** = Class II Maximum RPM: Class I = 2971 Class II = 4000 (Sizes 18B4 and 18B5)
 Class II = 3820 (Sizes 18B6 and 18B7)

TCTA 21B4 – 21B7

Wheel Dia.: 21"

Outlet Area: 2.448 ft²

Tip Speed: 5.50 x RPM

MODEL	CFM	OV	0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
21B4	3000	1225	1166	0.40																			
	4000	1634	1339	0.59	1614	1.06																	
	5000	2042	1536	0.84	1773	1.39	1991	2.00															
	6000	2451	1743	1.15	1961	1.82	2150	2.49	2332	3.21													
	7000	2859	1964	1.57	2158	2.33	2334	3.10	2495	3.89	2652	4.72	2805	5.59									
8000	3268	2194	2.10	2362	2.92	2529	3.82	2679	4.70	2820	5.59	2959	6.53	3095	7.51	3227	8.51						
10000	4085	2669	3.59	2800	4.53	2935	5.56	3072	6.69	3200	7.81	3320	8.91	3434	10.01	3546	11.14	3657	12.31	3767	13.51		
12000	4902	3156	5.75	3264	6.82	3373	7.96	3485	9.19	3600	10.52	3713	11.88	3820	13.23	3921	14.55						
21B5	3000	1225	1091	0.42																			
	4000	1634	1262	0.63																			
	5000	2042	1449	0.90	1667	1.47	1860	2.08															
	6000	2451	1643	1.22	1849	1.95	2020	2.62	2182	3.35													
	7000	2859	1851	1.66	2036	2.49	2199	3.31	2345	4.09	2486	4.93											
8000	3268	2068	2.23	2227	3.10	2387	4.11	2524	5.01	2651	5.89	2777	6.84	2896	7.82								
10000	4085	2517	3.84	2639	4.79	2767	5.91	2899	7.18	3020	8.39	3129	9.51	3232	10.61	3333	11.73	3433	12.89	3531	14.11		
12000	4902	2976	6.17	3077	7.25	3179	8.42	3286	9.75	3396	11.23	3504	12.76	3604	14.21	3697	15.58						
21B6	3000	1225	1058	0.45	1457	1.18																	
	4000	1634	1235	0.69																			
	5000	2042	1425	0.99	1626	1.60	1801	2.22															
	6000	2451	1626	1.38	1812	2.14	1969	2.85	2117	3.59													
	7000	2859	1839	1.92	2002	2.76	2153	3.63	2287	4.46	2415	5.31	2535	6.19									
8000	3268	2059	2.61	2199	3.49	2342	4.52	2470	5.50	2588	6.44	2700	7.39	2811	8.40	2914	9.42						
10000	4085	2512	4.54	2623	5.55	2735	6.67	2850	7.93	2961	9.22	3064	10.45	3159	11.62	3252	12.80	3342	13.98	3432 </			

TCTA 24B4 – 24B7

Wheel Dia.: 24"

Outlet Area: 3.191 ft²

Tip Speed: 6.28 x RPM

MODEL	CFM	OV	0.5' SP		1' SP		1.5' SP		2' SP		2.5' SP		3' SP		3.5' SP		4' SP		4.5' SP		5' SP		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
24B4	5000	1567	1132	0.72																			
	6000	1880	1261	0.96	1476	1.64																	
	7000	2194	1394	1.24	1593	2.02	1771	2.84															
	8000	2507	1533	1.57	1720	2.48	1881	3.36	2037	4.33	2186	5.34											
	10000	3134	1831	2.50	1984	3.55	2133	4.70	2265	5.80	2391	6.93	2515	8.13	2636	9.38							
	12000	3761	2143	3.82	2267	4.98	2397	6.31	2522	7.69	2635	9.01	2743	10.34	2848	11.70	2953	13.13	3055	14.59	3155	16.08	
	14000	4387	2462	5.61	2568	6.91	2676	8.32	2787	9.88	2896	11.50	2997	13.07	3093	14.62	3185	16.16	3276	17.74			
	16000	5014	2785	7.95	2878	9.39	2971	10.91	3066	12.56	3163	14.33	3260	16.19									
24B5	5000	1567	1077	0.76																			
	6000	1880	1202	1.02	1399	1.71																	
	7000	2194	1328	1.31	1514	2.13	1676	2.95															
	8000	2507	1460	1.65	1638	2.63	1786	3.52	1926	4.48													
	10000	3134	1744	2.64	1891	3.77	2032	5.00	2153	6.10	2268	7.23	2381	8.45	2489	9.71							
	12000	3761	2041	4.05	2159	5.25	2284	6.69	2403	8.19	2509	9.55	2607	10.86	2703	12.22	2798	13.65	2890	15.13	2979	16.64	
	14000	4387	2346	5.99	2445	7.29	2548	8.76	2655	10.47	2760	12.25	2855	13.90	2944	15.47	3028	17.00	3110	18.55			
	16000	5014	2654	8.50	2741	9.94	2829	11.5	2919	13.23	3013	15.17	3107	17.22									
24B6	5000	1567	1053	0.85																			
	6000	1880	1180	1.15	1359	1.88																	
	7000	2194	1312	1.50	1480	2.38	1625	3.22															
	8000	2507	1451	1.94	1607	2.95	1742	3.92	1868	4.90													
	10000	3134	1744	3.19	1869	4.32	1994	5.61	2106	6.83	2209	8.02	2310	9.25	2405	10.52							
	12000	3761	2047	4.98	2150	6.22	2256	7.66	2360	9.20	2458	10.71	2548	12.15	2634	13.57	2718	15.02	2802	16.55	2880	18.06	
	14000	4387	2356	7.41	2445	8.81	2533	10.32	2624	12.00	2714	13.80	2801	15.60	2883	17.34	2960	19.01					
	16000	5014	2669	10.60	2746	12.15	2824	13.80	2902	15.56													
24B7	5000	1567	1091	1.04	1267	1.74																	
	6000	1880	1240	1.47	1393	2.25	1537	3.11															
	7000	2194	1397	2.03	1532	2.90	1661	3.85	1783	4.85													
	8000	2507	1557	2.72	1680	3.71	1796	4.74	1907	5.84	2014	6.98	2114	8.12									
	10000	3134	1888	4.63	1991	5.85	2088	7.08	2182	8.36	2273	9.68	2362	11.05	2448	12.45	2533	13.89	2614	15.32			
	12000	3761	2227	7.38	2315	8.82	2399	10.28	2481	11.77	2559	13.26	2637	14.81	2713	16.40	2787	18.03	2860	19.69			
	14000	4387	2570	11.11	2646	12.77	2721	14.48	2793	16.19	2863	17.91											
	16000	5014																					

Regular type face = Class I **Bold type face** = Class II Maximum RPM: Class I = 2228 Class II = 3310 (Size 24B4) Class II = 3152 (Size 24B5)
 Class II = 2971 (Size 24B6) Class II = 2865 (Size 24B7)

TCTA 28B4 – 28B7

Wheel Dia.: 28"

Outlet Area: 4.353 ft²

Tip Speed: 7.33 x RPM

MODEL	CFM	OV	0.5' SP		1' SP		1.5' SP		2' SP		2.5' SP		3' SP		3.5' SP		4' SP		4.5' SP		5' SP		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
28B4	6000	1378	919	0.82																			
	8000	1838	1078	1.26	1267	2.17																	
	10000	2297	1248	1.82	1416	2.93	1565	4.08	1708	5.32													
	12000	2757	1431	2.58	1581	3.90	1715	5.23	1839	6.59	1960	8.04	2077	9.55									
	14000	3216	1624	3.61	1752	5.05	1878	6.62	1991	8.16	2098	9.73	2204	11.39	2307	13.11	2407	14.88					
	16000	3676	1822	4.93	1932	6.47	2046	8.22	2155	10.03	2254	11.79	2349	13.57	2442	15.41							
28B5	6000	1378	863	0.86																			
	8000	1838	1017	1.35	1188	2.26																	
	10000	2297	1176	1.93	1334	3.12	1469	4.27															
	12000	2757	1348	2.73	1492	4.19	1615	5.55	1727	6.91	1835	8.38											
	14000	3216	1531	3.83	1652	5.37	1772	7.12	1876	8.69	1972	10.24	2067	11.91	2158	13.65							
	16000	3676	1718	5.25	1821	6.85	1931	8.81	2033	10.77	2124	12.57	2210	14.34	2293	16.16	2376	18.11	2455	20.09			
28B6	6000	1378	841	0.94																			
	8000	1838	997	1.48	1154	2.44																	
	10000	2297	1162	2.17	1306	3.43	1428	4.61	1541	5.87													
	12000	2757	1339	3.15	1465	4.61	1580	6.09	1682	7.50	1780	8.99											
	14000	3216	1524	4.47	1631	6.03	1739	7.84	1835	9.53	1924	11.17	2010	12.86	2092	14.61	2170	16.40					
	16000	3676	1713	6.18	1805	7.84	1901	9.79	1994	11.85	2079	13.80	2158	15.67	2234	17.56	2309	19.52	2381	21.53	2450	23.57	
28B7	6000	1378	851	1.08																			
	8000	1838	1024	1.76	1165	2.79	1292	3.88															
	10000	2297	1210	2.73	1332	3.99	1443	5.29	1548	6.63													
	12000	2757	1406	4.10	1510	5.55	1610	7.09	1703	8.64	1792	10.22	1878	11.86									
	14000	3216	1607	5.94	1698	7.57	1786	9															

TCTA 32B4 – 32B7

Wheel Dia.: 32"

Outlet Area: 5.672 ft²

Tip Speed: 8.38 x RPM

MODEL	CFM	OV	0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
32B4	8000	1410	804	1.11																		
	10000	1763	909	1.54	1078	2.70																
	12000	2116	1020	2.07	1172	3.41	1309	4.84														
	14000	2468	1136	2.71	1278	4.30	1400	5.85	1518	7.55												
	16000	2821	1260	3.53	1388	5.31	1503	7.09	1609	8.90	1712	10.82	1812	12.83								
	20000	3526	1519	5.82	1619	7.81	1723	10.09	1818	12.34	1906	14.55	1990	16.79	2073	19.14	2155	21.59	2235	24.09		
	24000	4231	1786	9.09	1869	11.34	1953	13.80	2040	16.54	2123	19.30	2199	21.95	2272	24.59	2343	27.26				
	28000	4937	2058	13.54	2129	16.07	2200	18.76	2272	21.65	2347	24.81										
32B5	8000	1410	763	1.16																		
	10000	1763	866	1.64	1019	2.80																
	12000	2116	972	2.20	1113	3.57	1237	5.01														
	14000	2468	1082	2.85	1217	4.56	1329	6.12	1435	7.82												
	16000	2821	1199	3.72	1323	5.65	1430	7.49	1526	9.27	1620	11.23										
	20000	3526	1446	6.16	1542	8.23	1642	10.73	1732	13.12	1812	15.32	1889	17.55	1965	19.92	2038	22.37				
	24000	4231	1702	9.69	1779	11.94	1860	14.56	1944	17.56	2023	20.55	2094	23.29	2161	25.93	2226	28.59				
	28000	4937	1962	14.51	2028	17.03	2095	19.78	2164	22.84												
32B6	8000	1410	745	1.25																		
	10000	1763	849	1.78	991	2.97																
	12000	2116	957	2.40	1088	3.86	1202	5.31														
	14000	2468	1070	3.18	1193	4.95	1297	6.57	1395	8.29												
	16000	2821	1189	4.20	1300	6.15	1400	8.11	1489	9.96	1575	11.91	1656	13.96								
	20000	3526	1438	7.06	1524	9.17	1614	11.69	1698	14.23	1773	16.56	1844	18.87	1914	21.26	1982	23.76	2046	26.29		
	24000	4231	1695	11.20	1766	13.56	1838	16.19	1913	19.20	1986	22.32	2053	25.27	2116	28.09						
	28000	4937	1955	16.83	2016	19.49	2077	22.34	2139	25.43												
32B7	8000	1410	760	1.51																		
	10000	1763	878	2.21	1002	3.53																
	12000	2116	1005	3.17	1114	4.70	1215	6.32	1308	7.99												
	14000	2468	1137	4.42	1234	6.16	1324	7.96	1410	9.86	1493	11.84										
	16000	2821	1273	6.03	1359	7.96	1441	9.97	1520	12.07	1595	14.23	1668	16.46	1737	18.69						
	20000	3526	1550	10.43	1622	12.81	1690	15.22	1757	17.73	1821	20.27	1884	22.90	1945	25.57	2005	28.32	2063	31.08	2121	33.92
	24000	4231	1834	16.83	1894	19.61	1953	22.47	2010	25.36	2066	28.32	2121	31.34								
	28000	4937	2120	25.55																		

Regular type face = Class I **Bold type face** = Class II Maximum RPM: Class I = 1671 Class II = 2396 (Size 32B4) Class II = 2234 (Size 32B5) Class II = 2149 (Sizes 32B6 and 32B7)

TCTA 36B4 – 36B7

Wheel Dia.: 36"

Outlet Area: 7.166 ft²

Tip Speed: 9.42 x RPM

MODEL	CFM	OV	0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
36B4	10000	1395	706	1.39																		
	12000	1675	777	1.80	931	3.22																
	14000	1954	854	2.31	993	3.88																
	16000	2233	932	2.87	1063	4.67	1180	6.54														
	20000	2791	1100	4.36	1215	6.62	1317	8.85	1411	11.11	1503	13.55	1591	16.08								
	24000	3349	1279	6.52	1374	8.99	1469	11.77	1555	14.46	1635	17.13	1712	19.89	1788	22.79	1862	25.79				
28000	3907	1464	9.42	1543	12.08	1626	15.16	1708	18.45	1782	21.57	1852	24.65	1920	27.79	1987	31.06	2052	34.39	2116	37.82	
32000	4466	1652	13.19	1721	16.13	1791	19.33	1864	22.92	1936	26.68	2003	30.32	2066	33.86	2127	37.41	2186	40.98	2244	44.62	
36B5	10000	1395	674	1.44																		
	12000	1675	745	1.90	886	3.33																
	14000	1954	820	2.44	949	4.03																
	16000	2233	895	3.03	1018	4.90	1125	6.76														
	20000	2791	1056	4.59	1167	7.02	1262	9.30	1349	11.56	1432	13.99										
	24000	3349	1228	6.88	1318	9.45	1410	12.47	1490	15.21	1564	17.87	1635	20.62	1705	23.58	1772	26.60				
28000	3907	1406	9.99	1481	12.71	1561	16.00	1639	19.52	1710	22.81	1774	25.87	1836	28.96	1898	32.23	1958	35.61	2016	39.06	
32000	4466	1587	14.04	1652	17.00	1719	20.33	1789	24.18	1859	28.27	1922	32.08	1981	35.69	2037	39.22	2091	42.74	2145	46.41	
36B6	10000	1395	656	1.60																		
	12000	1675	730	2.13	856	3.60																
	14000	1954	806	2.75	923	4.45	1026	6.23														
	16000	2233	885	3.48	996	5.48	1092	7.42														
	20000	2791	1053	5.49	1148	7.92	1235	10.42	1313	12.79	1388	15.28	1458	17.85								
	24000	3349	1229	8.37	1307	10.99	1386	14.03	1460	17.07	1527	19.94	1591	22.82	1653	25.78	1713	28.87				
28000	3907	1410	12.28	1477	15.18	1544	18.41	1612	22.00	1676	25.56	1736	28.98	1792	32.29	1847	35.66	1901	39.11	1954	42.68	
32000	4466	1594	17.39	1652	20.57	1710	23.99	1769	27.78	1829	31.90	1887	36.06									

TCTA 42B4 – 42B6

Wheel Dia.: 42"

Outlet Area: 9.793 ft²

Tip Speed: 11.00 x RPM

MODEL	CFM	OV	0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP			
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
42B4	14000	1430	624	1.95																				
	16000	1634	670	2.35	807	4.26																		
	18000	1838	718	2.82	844	4.86																		
	20000	2042	768	3.34	887	5.58	995	7.99																
	24000	2451	871	4.59	980	7.27	1075	9.96	1166	12.85														
	28000	2859	982	6.27	1079	9.30	1167	12.41	1247	15.53	1326	18.87	1402	22.34										
	32000	3268	1097	8.41	1181	11.67	1265	15.30	1339	18.79	1410	22.38	1479	26.11	1547	30.01	1614	34.08						
	36000	3676	1215	11.10	1288	14.56	1364	18.50	1437	22.58	1503	26.53	1566	30.53	1628	34.67	1689	38.96	1749	43.37				
	40000	4085	1335	14.39	1400	18.10	1468	22.27	1536	26.75	1600	31.23	1660	35.64	1717	40.04	1773	44.56						
	44000	4493	1456	18.33	1515	22.33	1575	26.65	1637	31.39	1699	36.38	1757	41.30										
	48000	4901	1578	22.99	1632	27.28	1687	31.87	1743	36.80	1800	42.07												
	42B5	14000	1430	586	2.04																			
16000		1634	631	2.51																				
18000		1838	678	3.03	792	5.09																		
20000		2042	725	3.59	833	5.86	930	8.31																
24000		2451	821	4.87	924	7.78	1010	10.46	1091	13.39														
28000		2859	925	6.62	1018	9.98	1100	13.25	1172	16.33	1243	19.72												
32000		3268	1034	8.92	1114	12.43	1193	16.42	1262	20.04	1326	23.60	1388	27.33	1448	31.28								
36000		3676	1145	11.80	1214	15.41	1287	19.81	1356	24.28	1416	28.28	1473	32.25	1529	36.38	1584	40.74	1637	45.22				
40000		4085	1258	15.33	1320	19.18	1384	23.65	1449	28.67	1510	33.57	1564	38.02	1616	42.43	1667	46.95						
44000		4493	1373	19.62	1428	23.67	1485	28.23	1544	33.46	1604	39.12	1658	44.40										
48000		4901	1488	24.67	1538	28.96	1590	33.72	1643	39.00														
42B6		14000	1430	572	2.23																			
	16000	1634	618	2.76	728	4.70																		
	18000	1838	665	3.34	770	5.50																		
	20000	2042	713	3.97	813	6.40	900	8.86																
	24000	2451	813	5.54	906	8.57	985	11.41	1058	14.34														
	28000	2859	919	7.66	1001	11.04	1076	14.52	1143	17.80	1207	21.20	1267	24.75										
	32000	3268	1030	10.45	1100	13.98	1171	18.08	1235	22.00	1294	25.76	1350	29.55	1405	33.56	1457	37.66						
	36000	3676	1142	13.91	1204	17.67	1267	22.00	1330	26.70	1386	31.05	1439	35.29	1489	39.48	1539	43.89	1587	48.40	1633	53.00		
	40000	4085	1256	18.17	1311	22.17	1367	26.64	1425	31.73	1481	36.93	1532	41.81	1580	46.52	1626	51.18						
	44000	4493	1371	23.31	1421	27.60	1472	32.30	1524	37.53	1576	43.16	1626	48.82										
	48000	4901	1487	29.41	1533	34.02	1579	38.94	1626	44.28														

Regular type face = Class I **Bold type face** = Class II

Maximum RPM: Class I = 1273 Class II = 1805 (Size 42B4)
Class II = 1684 (Size 42B5) Class II = 1637 (Size 42B6)

TCTA 48B4 – 48B5

Wheel Dia.: 48"

Outlet Area: 12.77 ft²

Tip Speed: 12.57 x RPM

MODEL	CFM	OV	0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP			
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
48B4	20000	1566	566	2.90																				
	24000	1879	630	3.84	738	6.56																		
	28000	2193	697	4.95	796	8.07	886	11.38																
	32000	2506	766	6.27	860	9.91	941	13.47	1018	17.28	1093	21.36												
	36000	2819	840	7.95	925	11.93	1002	15.96	1072	19.99	1141	24.32	1208	28.87										
	40000	3132	915	9.97	992	14.21	1066	18.78	1132	23.18	1196	27.77	1258	32.57	1318	37.52								
	44000	3446	993	12.42	1062	16.86	1132	21.89	1196	26.83	1255	31.67	1312	36.65	1369	41.93	1424	47.32	1478	52.88				
	48000	3759	1071	15.26	1134	19.93	1198	25.20	1261	30.77	1318	36.09	1372	41.40	1424	46.80	1476	52.48	1527	58.31	1578	64.40		
	52000	4072	1151	18.62	1208	23.50	1267	28.99	1327	35.00	1382	40.84	1434	46.59	1484	52.37	1532	58.18	1581	64.37	1628	70.57		
	56000	4385	1231	22.46	1284	27.62	1338	33.27	1394	39.57	1448	46.01	1499	52.34	1546	58.42	1593	64.70	1638	70.97				
	60000	4699	1312	26.86	1361	32.28	1411	38.15	1462	44.55	1514	51.44	1564	58.36	1611	65.10								
	64000	5012	1393	31.82	1439	37.54	1485	43.60	1533	50.22	1582	57.39	1630	64.76										
48B5	20000	1566	538	3.05																				
	24000	1879	601	4.10	700	6.84																		
	28000	2193	664	5.24	757	8.50	838	11.79																
	32000	2506	730	6.62	819	10.52	893	14.07	963	17.92														
	36000	2819	800	8.39	882	12.72	953	16.84	1018	20.90	1080	25.26												
	40000	3132	872	10.55	945	15.05	1016	20.00	1077	24.45	1134	28.91	1190	33.74	1244	38.79								
	44000	3446	946	13.16	1011	17.77	1079	23.31	1139	28.47	1193	33.30	1245	38.24	1297	43.60	1346	49.04						
	48000	3759	1021	16.24	1079	20.95	1142	26.77	1202	32.79	1254	38.16	1304	43.51	1352	48.93	1399	54.60	1445	60.53	1490	66.63		
	52000	4072	1096	19.78	1150	24.76	1207	30.64	1264	37.17	1317	43.48	1365	49.32	1410	54.98	1455	60.89	1499	67.01	1542	73.36		
	56000	4385	1173	23.95	1223	29.19	1274	35.06	1328	41.93	1380	48.99	1428	55.65	1472	61.88	1514	68.00						
	60000	4699	1250	28.68	1296	34.13	1343	40.14	1393	47.12	1443	54.68	1491	62.22	1534	69.11								
	64000	5012	1327	34.02	1370	39.73	1414	45.97	1460	52.96	1507	60.75												

Regular type face = Class I **Bold type face** = Class II

TCTA 54B3 – 54B4

Wheel Dia.: 54"

Outlet Area: 16.12 ft²

Tip Speed: 14.14 x RPM

MODEL	CFM	OV	0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
54B3	24000	1489	512	3.31																			
	28000	1737	558	4.12	665	7.37																	
	32000	1985	606	5.09	704	8.68	795	12.54															
	36000	2233	656	6.26	747	10.13	830	14.33	910	18.77													
	40000	2481	709	7.67	793	11.79	870	16.34	945	21.15	1016	26.12											
	44000	2730	764	9.33	842	13.76	914	18.56	982	23.66	1050	29.00	1114	34.44									
	48000	2978	819	11.21	891	15.94	960	21.03	1024	26.44	1086	32.06	1148	37.89	1207	43.83							
	52000	3226	876	13.40	943	18.49	1008	23.83	1069	29.53	1127	35.47	1185	41.68	1241	47.88	1296	54.31					
	56000	3474	934	15.92	995	21.27	1057	26.95	1115	32.86	1171	39.17	1225	45.68	1278	52.30	1331	59.08	1382	65.92	1431	72.93	
	60000	3722	992	18.75	1049	24.43	1107	30.40	1163	36.60	1216	43.11	1268	49.99	1318	56.97	1367	63.99	1417	71.31			
	64000	3970	1051	21.96	1104	27.93	1158	34.19	1212	40.73	1263	47.48	1313	54.65	1360	61.85	1407	69.33					
	68000	4218	1110	25.52	1161	31.90	1211	38.44	1262	45.26	1312	52.36	1359	59.63	1405	67.24							
72000	4467	1170	29.54	1217	36.15	1265	43.09	1313	50.20	1361	57.59	1407	65.17										
76000	4715	1230	33.97	1275	40.95	1320	48.18	1365	55.57	1411	63.27												
80000	4963	1290	38.83	1333	46.17	1375	53.63	1418	61.38														
54B4	24000	1489	486	3.42																			
	28000	1737	529	4.29	629	7.54																	
	32000	1985	575	5.32	667	8.91	751	12.84															
	36000	2233	621	6.44	709	10.52	786	14.69															
	40000	2481	670	7.79	753	12.35	825	16.81	894	21.66													
	44000	2730	720	9.36	799	14.39	867	19.25	931	24.29	993	29.69											
	48000	2978	773	11.28	845	16.56	911	21.96	971	27.27	1030	32.97	1086	38.84									
	52000	3226	826	13.46	892	18.93	957	24.98	1014	30.67	1069	36.54	1122	42.65	1174	49.07	1225	55.73					
	56000	3474	880	15.97	940	21.58	1002	28.05	1059	34.42	1111	40.59	1161	46.91	1211	53.64	1259	60.50	1306	67.56			
	60000	3722	935	18.84	990	24.62	1049	31.45	1104	38.36	1155	45.06	1203	51.71	1249	58.46	1296	65.74	1341	73.09			
	64000	3970	990	22.05	1042	28.13	1096	35.06	1150	42.55	1200	49.84	1246	56.85	1290	63.88	1334	71.24					
	68000	4218	1045	25.62	1094	31.97	1144	39.01	1196	46.92	1245	54.81	1290	62.34	1333	69.81							
72000	4467	1101	29.65	1147	36.25	1194	43.49	1243	51.62	1291	60.08	1336	68.33										
76000	4715	1158	34.19	1201	41.02	1245	48.44	1291	56.72	1337	65.55												
80000	4963	1214	39.07	1255	46.20	1297	53.90	1340	62.29														

Regular type face = Class I **Bold type face** = Class II Maximum RPM: Class I = 990 Class II = 1444 (Size 54B3)
 Class II = 1348 (Size 54B4)

TCTA 60B3

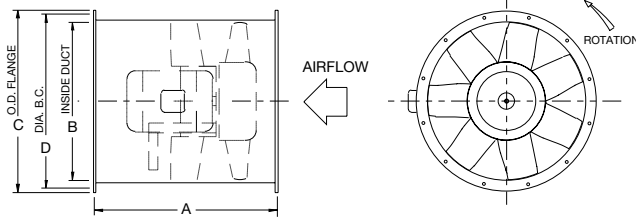
Wheel Dia.: 60"

Outlet Area: 19.87 ft²

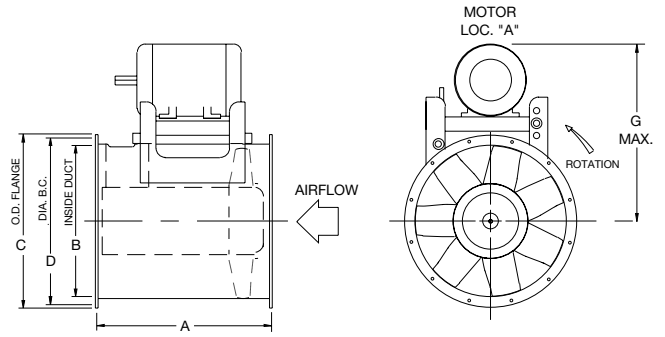
Tip Speed: 15.71 x RPM

MODEL	CFM	OV	0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
60B3	24000	1208	421	3.16																			
	28000	1409	448	3.79																			
	32000	1610	480	4.53	583	8.37																	
	36000	1812	514	5.39	608	9.54																	
	40000	2013	550	6.43	637	10.87	719	15.72															
	44000	2214	587	7.62	669	12.35	744	17.49	816	22.91													
	48000	2416	625	8.97	702	13.96	773	19.49	841	25.22													
	52000	2617	664	10.51	737	15.81	804	21.62	868	27.75	930	34.04											
	56000	2818	704	12.26	773	17.89	836	23.87	897	30.41	956	37.10	1013	43.94									
	60000	3020	745	14.23	809	20.14	870	26.42	928	33.24	983	40.23	1038	47.46	1091	54.86							
	64000	3221	787	16.47	846	22.63	905	29.23	960	36.25	1013	43.64	1065	51.25	1116	58.95							
	68000	3422	829	18.94	885	25.47	941	32.34	994	39.60	1045	47.33	1094	55.24	1142	63.23							
72000	3624	871	21.64	924	28.51	977	35.66	1029	43.26	1077	51.10	1124	59.32										
76000	3825	914	24.68	964	31.86	1014	39.29	1064	47.15	1111	55.30												
80000	4026	957	27.99	1004	35.44	1052	43.27	1100	51.41	1146	59.86												
84000	4227	1000	31.60	1045	39.39	1090	47.46	1136	55.90														
88000	4429	1043	35.51	1086	43.62	1130	52.17																
92000	4630	1087	39.85	1128	48.28																		
96000	4831	1131	44.54																				

Regular type face = Class I **Bold type face** = Class II Maximum RPM: Class I = 891 Class II = 1146



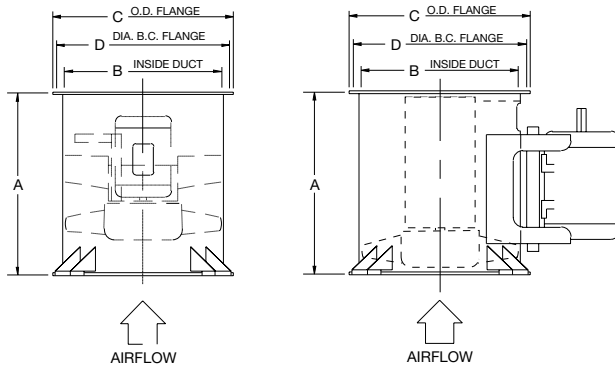
ARR. 4 - HORIZONTAL



ARR. 9 - HORIZONTAL

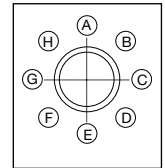
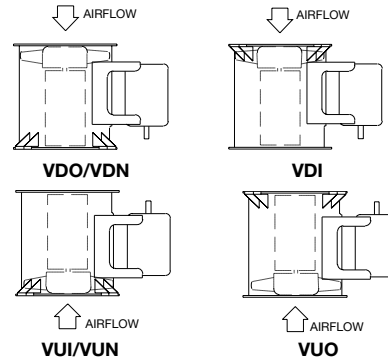
HORIZONTAL DISCHARGES

HOR = Horizontal - No Clips or Legs **HCH** = Horizontal Ceiling Hung with Suspension Clips **HBM** = Horizontal Base Mounted with Support Legs



ARR. 4 - VERTICAL

ARR. 9 - VERTICAL



HORIZONTAL MOTOR LOCATIONS (VIEWED FROM FAN OUTLET)

VERTICAL DISCHARGES

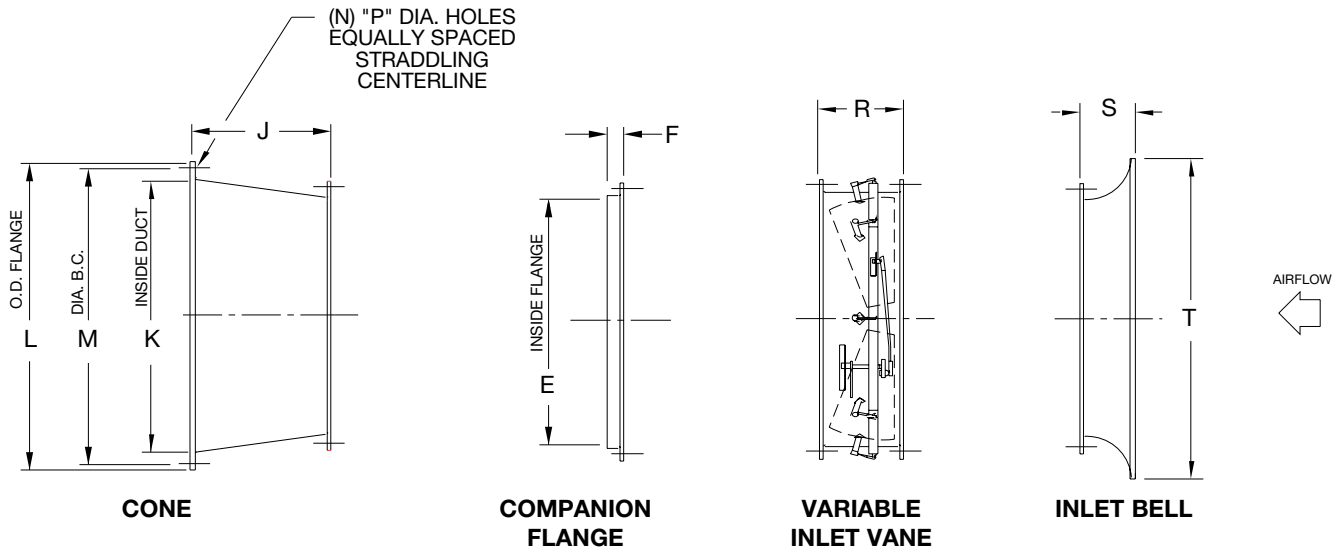
VDO = Vertical Down Floor Mounted With Legs **VUI** = Vertical Up Floor Mounted With Legs
VDN = Vertical Down Discharge Without Legs **VUN** = Vertical Up Discharge Without Legs
VDI = Vertical Down Ceiling Hung With Legs **VUO** = Vertical Up Ceiling Hung With Legs

FAN SIZE	A				B	C	D	G (MAX.)	MAXIMUM MOTOR FRAME										
	ARR. 9 HUB RATIO		ARR. 4 HUB RATIO						ARR. 9 - HUB RATIO					ARR. 4 - HUB RATIO					
	3-5	6-7	3-5	6-7					3	4	5	6	7	3	4	5	6	7	
12	NA	24.50	NA	24.50	12.16	15.16	13.88	19.25	NA	NA	NA	184T	184T	NA	NA	NA	NA	145T	184T
15	22.00	27.00	NA	27.00	15.16	18.16	16.88	20.50	NA	NA	215T	215T	215T	215T	NA	NA	NA	145T	184T
18	24.50	28.00	24.50	28.00	18.16	21.16	19.88	27.50	NA	215T	215T	215T	215T	NA	NA	145T	184T	215T	215T
21	27.00	32.00	27.00	32.00	21.19	24.19	22.88	31.75	NA	256T	256T	256T	256T	NA	145T	184T	215T	215T	215T
24	28.00	36.25	28.00	36.25	24.19	27.19	25.88	34.50	NA	256T	256T	256T	256T	NA	184T	215T	215T	215T	256T
28	32.00	40.25	32.00	40.25	28.25	31.25	30.00	38.25	NA	286T	286T	286T	286T	NA	215T	215T	215T	256T	286T
32	36.25	47.00	36.25	47.00	32.25	35.25	34.00	41.00	NA	286T	286T	286T	286T	NA	215T	256T	286T	365T	365T
36	40.25	53.25	40.25	53.25	36.25	39.25	38.00	45.25	NA	326T	326T	326T	326T	NA	256T	286T	365T	405T	405T
42	47.00	53.25	47.00	53.25	42.38	46.38	44.63	49.50	NA	326T	326T	326T	326T	NA	286T	365T	405T	405T	NA
48	53.25	NA	53.25	NA	48.38	52.38	50.63	53.25	NA	326T	326T	NA	NA	NA	365T	405T	NA	NA	NA
54	53.25	NA	53.25	NA	54.38	58.38	56.63	59.00	365T	365T	NA	NA	NA	365T	405T	NA	NA	NA	NA
60	53.25	NA	53.25	NA	60.38	64.38	63.38	60.25	365T	NA	NA	NA	NA	405T	NA	NA	NA	NA	NA

AC13596B AC13792B
 AC13597B AC13793A

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.

DIMENSIONAL DATA



FAN SIZE	COMPANION FLANGE		CONE						VARIABLE INLET VANE	INLET BELL		FAN AREA (FT ²)	CONE AREA (FT ²)
	E	F	J	K	L	M	N	P		R	S		
12	12.16	1.50	8.50	15.16	18.44	16.88	8	0.56	5.50	2.52	15.19	0.81	1.25
15	15.16	1.50	8.50	18.16	21.44	19.88	8	0.56	6.50	3.12	19.77	1.25	1.80
18	18.16	1.50	8.50	21.19	24.50	22.88	8	0.56	7.50	3.71	23.72	1.80	2.45
21	21.19	1.50	8.50	24.19	27.50	25.88	12	0.56	8.75	4.31	27.67	2.45	3.19
24	24.19	1.50	11.50	28.25	31.56	30.00	12	0.56	10.00	4.96	31.63	3.19	4.35
28	28.25	1.50	11.50	32.25	35.56	34.00	12	0.56	11.50	5.75	36.90	4.35	5.67
32	32.25	1.50	11.50	36.25	39.56	38.00	16	0.56	13.00	6.54	42.17	5.67	7.17
36	36.25	1.50	17.00	42.38	46.81	44.63	16	0.69	10.00	7.39	47.44	7.17	9.80
42	42.38	2.00	17.00	48.38	52.81	50.63	16	0.69	11.75	8.59	55.34	9.80	12.77
48	48.38	2.00	17.00	54.38	58.69	56.63	16	0.69	13.25	9.76	63.25	12.77	16.13
54	54.38	2.00	17.00	60.38	64.94	63.38	20	0.69	14.75	10.98	71.16	16.13	19.88
60	60.38	3.00	17.00	66.44	70.94	69.38	24	0.69	16.25	12.20	79.06	19.88	24.08

AC13716M

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.



Fans shall be Model TCTA AXIFAN® Tubeaxial Fans as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota. Fans shall be Arrangement 9, V-belt driven with the wheel mounted on a separate shaft and bearings supported completely within an enclosed tube isolated from the high velocity airstream or Arrangement 4, with the propeller mounted directly on the motor shaft and with the propeller and motor assembly enclosed entirely within the fan casing.

PERFORMANCE — Fans shall be tested in accordance with ANSI/AMCA Standard 210 (air performance) and 300 (sound performance) in an AMCA accredited laboratory.

Model TCTA shall be available UL 705 listed. Fans shall bear a permanently attached nameplate displaying model and serial number of the unit for future identification.

HOUSING — Fan housings shall be welded of 14-gauge ASTM A-569 hot rolled steel on size 12, 12-gauge hot rolled steel on sizes 15 through 21, 10-gauge hot rolled steel on sizes 24 through 36, and 7-gauge hot rolled steel on sizes 42 through 60. Inlet and outlet flanges are standard.

WHEEL — The fan wheel shall be a solid one-piece sand casting of 319 alloy aluminum and shall contain seven blades and an integral center hub. The wheel shall have blades of airfoil shape designed with a variable hub ratio system to allow the selected fan to operate at the highest efficiency possible. Wheels shall be machined to the proper diameter so that blade tip clearance shall be within tolerance necessary to insure certified fan performance. The wheel shall be secured to the fan/motor shaft with a Trantorque® or taperlock bushing.

SHAFT (ARR. 9) — Shafts shall be AISI 1040 or 1045 hot rolled steel, accurately turned, ground, polished, and ring gauged for accuracy. Shafts shall be sized for the first critical speed of at least 1.43 times the maximum speed.

BEARINGS (ARR. 9) — Bearings shall be heavy duty, grease lubricated, anti-friction ball or roller, self-aligning, pillow block type and selected for a minimum average bearing life (AFBMA L-50) in excess of 200,000 hours at the maximum fan RPM. All bearings are provided with pre-filled factory extended lubrication lines terminating at the housing exterior.

DRIVE (ARR. 9) — The fan shall be equipped with a (fixed/adjustable) pitch V-belt drive selected to operate the fan at the correct operational RPM. The V-belt drive shall consist of cast iron sheaves and anti-static conducting belts and shall be selected with a (1.2/1.5) safety factor based upon the required brake horsepower of the fan.

The complete fan shaft and bearing assembly is mounted within a steel fabricated inner cylinder. The V-belt drive assembly is extended through a two-piece belt fairing. The belt fairing shall be an aerodynamically shaped tube designed to maximize fan efficiency. The belt fairing is welded continuously to both the inner cylinder that houses the fan shaft and bearings and the fan housing.

MOTOR — Motors for Arrangement 9 fans shall be manufactured in accordance with current applicable standards. Motors shall be foot-mounted, NEMA standard (ODP, TEFC, Explosion-Proof), continuous duty, ball bearing type with class (B, F) insulation and of cast iron construction when commercially available.

Motors for Arrangement 4 fans shall be foot-mounted, NEMA standard, totally enclosed fan cooled (TEFC), continuous duty, ball bearing type with class “F” insulation and of cast iron construction when commercially available. For ease in wiring the motor, wiring connections shall be extended to an exterior conduit box located on the exterior of the fan housing. A duplicate motor nameplate shall be mounted on the exterior of the fan adjacent to the fan nameplate. External grease fittings with pre-filled factory extended grease leads shall be supplied for lubrication of the motor bearings on all motors that provide grease fittings.

FINISH — The entire fan assembly, excluding the shaft, shall be thoroughly degreased and deburred before application of a rust-preventative primer. After the fan is completely assembled, a finish coat of paint shall be applied to the entire assembly. The fan shaft shall be coated with a petroleum-based rust protectant. Aluminum components shall be unpainted.

FACTORY RUN TEST — All fans with motors and drives mounted by Twin City Fan & Blower shall be completely assembled and test run as a unit at the specified operating speed prior to shipment. Each wheel shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 “Balance Quality and Vibration Levels for Fans” to Fan Application Category BV-3, Balance Quality Grade G6.3. Balance readings shall be taken by electronic type equipment in the axial, vertical, and horizontal directions on each of the bearings. Records shall be maintained and a written copy shall be available upon request.

GUARANTEE — The manufacturer shall guarantee the workmanship and materials for its TCTA AXIFAN® tubeaxial fans at least one (1) year from startup or eighteen (18) months from shipment, whichever occurs first.

INDUSTRIAL PROCESS AND COMMERCIAL VENTILATION SYSTEMS

CENTRIFUGAL FANS | UTILITY SETS | PLENUM & PLUG FANS | INLINE CENTRIFUGAL FANS
MIXED FLOW FANS | TUBEAXIAL & VANEAXIAL FANS | PROPELLER WALL FANS | PROPELLER ROOF VENTILATORS
CENTRIFUGAL ROOF & WALL EXHAUSTERS | CEILING VENTILATORS | GRAVITY VENTILATORS | DUCT BLOWERS
RADIAL BLADED FANS | RADIAL TIP FANS | HIGH EFFICIENCY INDUSTRIAL FANS | PRESSURE BLOWERS
LABORATORY EXHAUST FANS | FILTERED SUPPLY FANS | MANCOOLERS | FIBERGLASS FANS | CUSTOM FANS



TWIN CITY FAN & BLOWER
WWW.TCF.COM

5959 TRENTON LANE N | MINNEAPOLIS, MN 55442 | PHONE: 763-551-7600 | FAX: 763-551-7601

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