

# TCI

## Tubular Centrifugal Inline Fan

### TECHNICAL SPECIFICATIONS



PENNBARRY™

BULLETIN TCI18

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# INTRODUCTION

TCI is a light industrial airfoil tubular centrifugal inline fan that delivers reliable air performance. TCI can be either ceiling hung or floor mounted, making it suitable for both horizontal and vertical applications.

Utilizing an all-aluminum airfoil non-overloading impeller, TCI provides a higher level of efficiency. Every part of the fan airstream is designed and manufactured to produce the highest results under rated operating conditions.

TCI offers industry leading air performance compared to similar products in the market.



## Capacity:

- Flow capacity up to 7,500 cfm
- Static pressure up to 7.0" w.g.

# CERTIFICATIONS & LISTINGS



## AMCA Certification

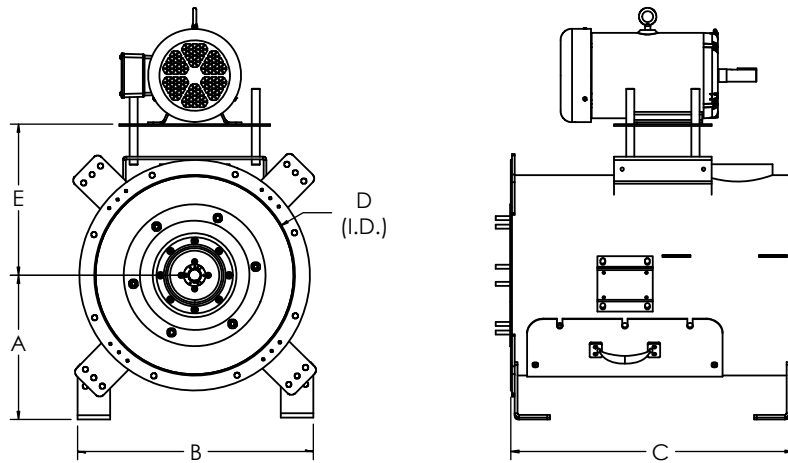
PennBarry certifies that the TCI belt drive models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



## cULus Certification

TCI carries the UL label, UL705, (ZACT / ZACT7), file #E28413.

# DIMENSIONS



Size	A	B	C	D	E
90	13.25	21.75	26	18.50	16
105	13.25	21.75	26	18.50	16
122	13.25	21.75	26	18.50	16
135	13.88	23.13	28	20.25	17.50
150	14.38	24.63	30	22.38	18.25
165	16.13	26.50	30	24.75	18.25
182	18.38	30.38	32	30.13	20.50

All dimensions are in inches.  
 A= Fan centerline height with feet  
 B= Overall width of feet  
 C= Drum length  
 D= Fan drum inside diameter  
 E= Max height of motor plate







# AIR PERFORMANCE DATA

## TCI 182 | Air Performance

CFM	OV	0" SP		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
2000	406	641	0.072	882	0.280	1067	0.511	1238	0.768	1415	1.077												
2250	457	721	0.103	942	0.329	1115	0.581	1275	0.864	1424	1.164	1583	1.514										
2500	507	801	0.141	1007	0.390	1169	0.664	1316	0.959	1456	1.287	1591	1.622	1734	2.006								
2750	558	881	0.188	1075	0.461	1228	0.759	1365	1.066	1497	1.404	1621	1.765	1744	2.138	1874	2.559						
3000	609	962	0.245	1144	0.540	1288	0.857	1418	1.185	1540	1.540	1661	1.908	1774	2.309	1886	2.708	2005	3.172	2123	3.638		
3250	659	1042	0.311	1213	0.627	1349	0.961	1475	1.324	1592	1.685	1703	2.080	1814	2.484	1918	2.922	2021	3.339	2128	3.840	2240	4.342
3500	710	1122	0.389	1284	0.727	1415	1.085	1536	1.474	1645	1.850	1751	2.255	1855	2.686	1957	3.119	2054	3.600	2148	4.018	2246	4.556
3750	761	1202	0.478	1355	0.839	1482	1.222	1596	1.620	1702	2.034	1805	2.449	1901	2.896	1998	3.355	2094	3.821	2184	4.345	2273	4.792
4000	812	1282	0.580	1427	0.963	1550	1.370	1657	1.779	1763	2.235	1858	2.663	1954	3.114	2043	3.597	2135	4.093	2225	4.583		
4250	862	1362	0.695	1500	1.102	1619	1.529	1723	1.964	1823	2.427	1917	2.900	2007	3.361	2095	3.848	2179	4.363	2265	4.888		
4500	913	1442	0.825	1574	1.255	1689	1.704	1790	2.166	1884	2.634	1978	3.151	2062	3.628	2149	4.130	2231	4.653				
4750	964	1522	0.970	1648	1.421	1759	1.893	1858	2.384	1948	2.866	2038	3.392	2123	3.926	2202	4.431	2284	4.961				
5000	1015	1603	1.134	1722	1.602	1830	2.100	1926	2.610	2014	3.119	2099	3.650	2184	4.224	2262	4.768						
5250	1065	1683	1.312	1797	1.801	1901	2.322	1996	2.857	2082	3.398	2162	3.931	2244	4.516								
5500	1116	1763	1.508	1872	2.017	1973	2.564	2065	3.117	2150	3.691	2228	4.243	2305	4.827								
5750	1167	1843	1.723	1948	2.253	2046	2.827	2136	3.402	2218	3.991	2295	4.578										
6000	1217	1923	1.957	2024	2.508	2118	3.104	2206	3.700	2287	4.313	2363	4.937										
6250	1268	2003	2.212	2100	2.782	2192	3.405	2277	4.022	2357	4.659												
6500	1319	2083	2.488	2177	3.080	2265	3.719	2349	4.368														
6750	1370	2163	2.786	2254	3.400	2340	4.063	2421	4.735														
7000	1420	2244	3.110	2331	3.743	2414	4.423																
7250	1471	2324	3.455	2408	4.109																		
7500	1522	2404	3.824																				

Performance certified is for installation Type A: Free inlet, Free outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).



# SOUND POWER DATA

## TCI 090

RPM	Nominal Ps	SOUND POWER BY OCTAVE BANDS dB Lwi								LwiA
		63	125	250	500	1000	2000	4000	8000	
1800	0.00	76	81	75	69	69	73	69	52	77
	0.25	76	81	75	68	68	71	67	51	76
	0.50	75	80	75	66	68	68	61	51	74
2625	0.00	90	86	80	77	75	71	75	66	82
	0.25	90	86	80	76	75	72	75	65	81
	0.50	91	87	79	75	74	72	75	65	81
	1.00	91	87	79	75	73	72	75	63	81
3450	0.00	80	84	82	82	82	74	76	74	86
	0.50	79	87	82	82	81	74	75	74	85
	1.00	79	87	82	82	80	73	75	73	84
	1.50	79	87	82	81	79	73	75	73	84
4050	0.00	88	86	85	86	85	78	78	78	89
	0.50	87	85	86	85	85	78	77	77	89
	1.00	87	86	83	86	84	77	77	77	88
	1.50	88	86	83	85	84	77	77	76	88
	2.00	88	86	83	85	83	77	76	76	87

## TCI 105

RPM	Nominal Ps	SOUND POWER BY OCTAVE BANDS dB Lwi								LwiA
		63	125	250	500	1000	2000	4000	8000	
1800	0.00	77	81	74	70	70	67	65	53	75
	0.25	77	81	75	69	69	65	60	52	74
	0.50	76	80	74	68	68	64	59	52	73
2625	0.00	88	86	81	76	75	70	71	67	81
	0.25	89	86	80	76	75	70	71	66	80
	0.50	89	86	80	76	74	70	70	66	80
	1.00	89	87	81	75	73	69	68	65	79
3450	0.00	78	85	83	83	81	75	76	74	85
	0.50	78	85	83	82	80	74	75	74	85
	1.00	79	84	83	82	79	74	75	73	84
	1.50	79	83	82	82	79	73	74	72	84
4050	0.00	87	86	83	86	85	79	79	79	89
	0.50	86	86	82	86	84	78	79	78	89
	1.00	86	86	82	86	84	78	78	78	89
	1.50	86	86	83	86	83	77	78	77	88
	2.00	87	86	83	85	83	77	77	77	88

## TCI 122

RPM	Nominal Ps	SOUND POWER BY OCTAVE BANDS dB Lwi								LwiA
		63	125	250	500	1000	2000	4000	8000	
1400	0.00	80	77	73	70	68	63	61	68	74
	0.25	80	79	73	69	67	62	61	67	73
	0.50	80	77	73	68	67	62	61	68	73
2075	0.00	83	78	77	75	72	74	76	70	81
	0.25	83	78	76	74	72	73	74	69	80
	0.50	83	78	76	74	72	73	73	69	80
	1.00	83	77	75	73	71	73	71	68	79
2750	0.00	85	81	79	82	78	75	78	75	85
	0.50	85	80	79	81	77	75	78	75	84
	1.00	85	80	78	82	77	75	77	74	84
	1.50	84	79	78	81	76	75	76	73	83
	2.00	85	79	77	81	76	74	76	72	83
2900	0.00	84	83	81	84	79	76	79	76	86
	0.50	85	83	80	83	78	76	78	76	85
	1.00	85	83	79	83	78	76	78	75	85
	1.50	84	83	79	83	77	75	77	75	84
	2.00	84	83	78	82	77	75	76	74	84

## TCI 135

RPM	Nominal Ps	SOUND POWER BY OCTAVE BANDS dB Lwi								LwiA
		63	125	250	500	1000	2000	4000	8000	
950	0.00	62	64	63	59	55	52	40	29	61
	0.25	62	63	61	58	54	50	40	31	60
	0.50	63	62	60	56	52	49	37	25	58
1450	0.00	69	72	73	70	66	63	56	45	72
	0.50	70	72	772	70	65	62	55	45	71
	1.00	72	72	71	68	64	61	54	43	70
2200	0.00	76	80	82	82	78	73	72	61	83
	0.50	76	80	82	81	78	73	71	60	83
	1.00	76	80	82	81	78	73	70	61	82
	1.50	77	80	81	80	77	72	70	61	82
	2.00	79	81	81	80	76	72	70	59	81
2800	0.00	81	84	87	87	85	80	78	70	89
	0.50	81	84	87	87	84	80	77	70	89
	1.00	82	84	86	87	84	80	77	69	89
	1.50	82	84	86	87	84	80	77	69	89
	2.00	82	84	86	86	84	79	76	69	88
	3.00	84	85	86	85	83	79	76	69	88
2971	0.00	82	85	88	89	86	82	79	72	91
	0.50	83	85	88	88	86	82	79	72	91
	1.00	83	85	88	88	86	82	79	72	90
	1.50	83	85	88	88	86	82	78	71	90
	2.00	83	85	88	88	85	81	78	71	90
	3.00	84	86	87	87	84	80	77	71	89

The sound power level ratings shown are in decibels referred to 10<sup>-12</sup> watts calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet LWi and inlet LWiA sound power levels for installation Type A: Free inlet, Free outlet.

# SOUND POWER DATA

## TCI 150

RPM	Nominal Ps	SOUND POWER BY OCTAVE BANDS dB Lwi								LwiA
		63	125	250	500	1000	2000	4000	8000	
725	0.00	72	68	63	61	58	53	53	60	65
	0.13	72	68	63	61	57	53	53	60	64
	0.25	72	68	61	60	57	53	53	60	64
	0.30	72	67	61	60	56	53	53	60	64
	0.32	72	68	61	57	55	53	53	60	63
1950	0.00	86	80	84	80	75	74	74	70	83
	1.00	86	79	81	79	73	72	71	68	81
	2.00	86	78	79	77	72	71	70	67	80
	2.25	86	78	79	77	72	71	70	67	79
2666	2.33	87	79	79	77	72	71	69	67	79
	0.00	86	87	87	90	83	79	81	78	90
	1.00	85	86	85	89	81	78	79	76	89
	2.00	85	86	84	87	80	77	78	75	87
	3.00	84	85	83	86	79	77	76	74	87
4.00	85	85	82	86	79	76	75	74	86	
4.11	85	85	82	86	79	76	75	74	86	

## TCI 165

RPM	Nominal Ps	SOUND POWER BY OCTAVE BANDS dB Lwi								LwiA
		63	125	250	500	1000	2000	4000	8000	
750	0.00	79	74	66	66	62	56	55	61	68
	0.25	80	74	65	64	58	55	55	61	67
1350	0.00	78	74	78	74	69	72	72	65	78
	0.25	78	75	76	72	69	72	71	65	78
	0.50	78	74	74	72	69	71	68	65	76
1950	1.00	78	72	77	70	67	69	64	65	75
	0.00	88	78	84	82	76	76	77	72	85
	0.50	87	78	83	80	74	75	76	71	83
	1.00	86	78	83	79	73	74	75	70	82
	1.50	87	77	83	78	72	73	74	69	82
	2.00	87	77	82	77	71	73	73	69	81
2431	2.50	87	77	81	76	71	72	72	69	80
	0.00	83	83	84	88	83	80	82	79	90
	0.50	83	82	84	88	81	79	81	78	89
	1.00	83	82	83	87	80	78	80	77	88
	1.50	83	83	83	87	79	78	79	76	87
	2.00	83	82	83	87	78	77	78	76	87
	2.50	83	82	82	86	77	77	77	75	86
	3.00	83	81	82	86	77	76	76	75	86
3.50	84	82	81	86	76	76	76	75	85	
4.00	84	81	81	85	76	76	76	75	85	

## TCI 182

RPM	Nominal Ps	SOUND POWER BY OCTAVE BANDS dB Lwi								LwiA
		63	125	250	500	1000	2000	4000	8000	
1667	0.00	79	82	86	83	79	81	82	76	88
	0.50	78	81	86	82	78	80	81	73	87
	1.00	77	81	85	82	78	79	80	71	86
	1.50	76	81	85	81	78	78	78	69	85
	2.00	76	80	85	81	78	77	77	69	85
	2.50	75	80	85	80	78	77	76	69	84
1750	0.00	82	84	86	84	80	80	82	78	88
	0.50	81	84	85	83	79	81	82	75	88
	1.00	80	83	85	82	79	79	81	73	87
	1.50	80	83	85	82	79	79	80	71	86
	2.00	79	83	85	81	79	78	79	71	86
2.50	79	82	83	81	79	78	78	71	85	
1850	0.00	85	83	88	85	80	81	83	80	89
	0.50	85	83	87	84	79	80	82	78	88
	1.00	84	83	87	83	79	79	81	75	88
	1.50	83	83	87	83	79	79	81	73	87
	2.00	83	83	86	82	79	79	80	72	87
2.50	82	83	86	82	79	78	79	72	86	
2300	0.00	85	91	91	92	85	83	85	84	93
	0.50	85	89	91	91	84	83	84	84	93
	1.00	85	89	90	91	84	83	84	83	92
	1.50	85	88	90	90	84	82	83	82	92
	2.00	85	88	90	90	83	82	83	81	91
	2.50	84	88	89	90	83	82	83	81	91
3.00	84	88	89	89	83	82	83	80	91	

The sound power level ratings shown are in decibels referred to  $10^{-12}$  watts calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet LWi and inlet LWiA sound power levels for installation Type A: Free inlet, Free outlet.

# PENNBARRY PRODUCT SOLUTIONS

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## Commercial

- Roof & wall exhaust centrifugal fans
- Ceiling, wall, & inline centrifugal fans
- Roof supply centrifugal fans
- Square & round centrifugal fans
- Wall mounted axial fans
- Hooded roof axial fans
- Upblast roof axial fans
- Gravity ventilators
- Roof curbs



## Industrial

- Freestanding centrifugal fans
- Industrial & material handling fans
- Tubular centrifugal inline fans
- Mixed flow centrifugal fans
- Plug & plenum fans
- Wall mounted propeller fans
- Tube axial fans
- Vane axial fans
- Lab exhaust



## Kitchen ventilation

- Make-up air units
- Exhaust fans

PennBarry is proud to be your preferred manufacturer of commercial and industrial fans and blowers. Learn how PennBarry can assist you in your next application by contacting your PennBarry Representative or visiting us on the web at [www.pennbarry.com](http://www.pennbarry.com)

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