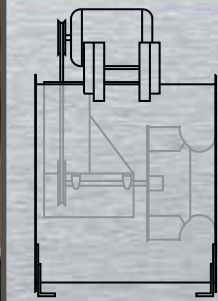


# Tubular Centrifugal Fans Model TCB

**Inline - Horizontal or Vertical  
Roof Upblast and Roof Supply**



 **GREENHECK**  
Building Value in Air.

March  
2007

TCB series of inline centrifugal fans are designed for ducted inline, roof upblast, and roof supply installations. Whether the application is commercial or industrial, Greenheck tubular centrifugal fans provide quiet, efficient, and reliable air performance.

All TCB products are belt driven with motors out of the airstream. Housings are constructed of welded steel or aluminum (optional) and are suitable for indoor or outdoor applications. The backward inclined wheels are manufactured from aluminum and are suitable for clean air or fume exhaust applications. All TCB products meet “Type B” construction as defined by AMCA Standard 99-0401 Classification for Spark Resistant Construction. In addition, the TCB is available with the UL 762 listing for restaurant exhaust applications.



Greenheck Fan Corporation certifies that the model TCB tubular centrifugal inline fans 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 Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



Model TCB is available with the UL 762 Listing (Power Ventilators for Restaurant Exhaust Appliances).



Models TCB, TCBRU, and TCBRS are Listed for electrical (UL/cUL 705). File no. E40001

## Model TCB – Inline Fan

- Sizes from 09 to 36
- Performance Range: 360 to 24,000 cfm (610 - 40,750 m<sup>3</sup>/hr)
- Static Pressure: Up to 4.5 in. wg (1,125 Pa)
- Max Operating Temperature: 200°F (90°C)
- Horizontal or Vertical Mounting
- Options: – Easy Access
  - All Aluminum Construction
  - UL 762 for Restaurant Exhaust



## Model TCBRS – Roof Supply Fan

- Sizes from 09 to 36
- Performance Range: 360 to 24000 cfm (610 - 40,750 m<sup>3</sup>/hr)
- Static Pressure: Up to 4 in. wg (1,000 Pa)
- Max Operating Temperature: 200°F (90°C)
- Options: – Insect Screen or Filters
  - Easy Access
  - All Aluminum Construction

All TCB inline and roof mounted fans are available in two levels of construction to provide the most efficient and economical selections. Construction differences between level 1 and 2 selections include the impeller, the inlet cone, the shaft size, and the bearings. The housings for both levels are identical in material gauge and overall design.



## Level 1 Construction

- Maximum pressure capabilities of 2 in. wg (500 Pa)
- Highest efficiencies at static pressures below 1.5 in. wg (375 Pa)
- Aluminum wheel construction
- Most economical selections

## Level 2 Construction

- Maximum pressure capabilities of 4.5 in. wg (1,125 Pa)
- Highest efficiencies at static pressures above 1.5 in. wg (375 Pa)
- Completely welded aluminum wheel
- Increased shaft and bearing diameter
- Increased horsepower and motor frame size capability



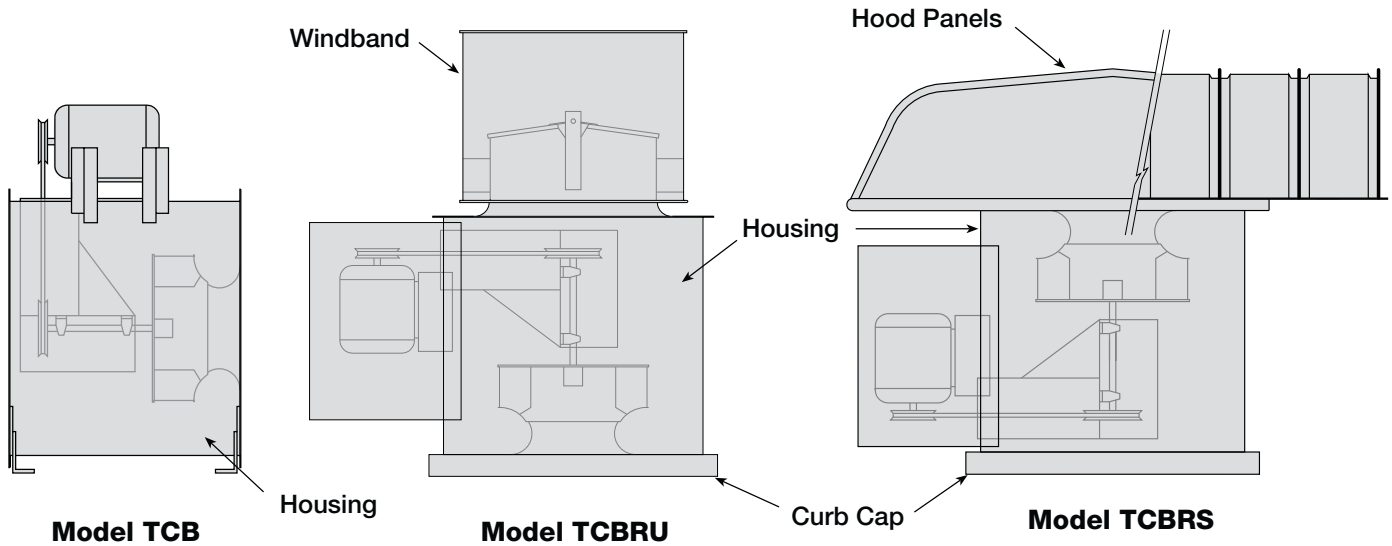
## Easy Access Feature

All models are available with an optional oversized access door for serviceability of fan components without removing the fan or duct. See page 8 for details.



## Model TCBRU – Roof Upblast Fan

- Sizes from 09 to 36
- Performance Range: 425 to 24,000 cfm (722 - 40,750 m<sup>3</sup>/hr)
- Static Pressure: Up to 4 in. wg (1,000 Pa)
- Max Operating Temperature: 200°F (90°C)
- Options: – Easy Access  
– All Aluminum Construction



## Steel Construction (gauge)

Size	Housing	Curb Cap	Windband	Hood Panels	Shaft Diameter (in.)	
					Level 1	Level 2
09	12	12	20	22	¾	1
10	12	12	20	22	¾	1
12	12	12	20	22	¾	1
13	12	12	20	22	¾	1
16	12	12	20	22	1	1 ⅜
18	12	12	20	22	1	1 ⅜
22	10	12	20	22	1	1 ⅞
24	10	12	20	22	1	1 11/16
30	10	12	20	22	1 ¼	1 15/16
36	10	12	20	22	1 ½	1 15/16

## Aluminum Construction (thickness in inches)

Size	Housing	Curb Cap	Windband	Hood Panels	Shaft Diameter (in.)	
					Level 1	Level 2
09	0.125	0.125	0.051	0.051	¾	1
10	0.125	0.125	0.051	0.051	¾	1
12	0.125	0.125	0.051	0.051	¾	1
13	0.125	0.125	0.051	0.051	¾	1
16	0.125	0.125	0.051	0.051	1	1 ⅜
18	0.125	0.125	0.051	0.051	1	1 ⅜
22	0.125	0.125	0.051	0.051	1	1 ⅞
24	0.125	0.125	0.051	0.051	1	1 11/16
30	0.19	0.125	0.051	0.051	1 ¼	1 15/16
36	0.19	0.125	0.051	0.051	1 ½	1 15/16



The Model TCB inline fan is the ideal choice for ducted systems. Greenheck's standard fan can be mounted in any position from horizontal to vertical, allowing installation in the smallest possible space at the lowest installation cost. The centrifugal wheels used in this design provide higher efficiencies and lower sound levels than propeller type inline fans when used in medium pressure ducted systems. TCB fans are available in either painted steel or aluminum construction.

**Typical applications include:**

- General exhaust or supply
- Industrial space ventilation
- Fume hood exhaust (special coatings are available)
- Combustion air
- Roof exhaust or supply (with weatherhood)
- Restaurant grease exhaust

## Universal Mounting

All TCB fans can be mounted horizontally or vertically. For ease of installation, eight mounting brackets are welded on each fan. These eight brackets along with standard mounting supports provide for Greenheck's Universal Mounting System.

**Fig. 1 Horizontal Base Mount**

Each fan is shipped as standard in this arrangement. Motor at 12 o'clock is standard.

**Fig. 2 Horizontal Base Mount with Motor at 3 or 9 o'clock**

A set of optional mounting rails are required for this installation. This is the base mounting position required with the easy access option.

**Fig. 3 Horizontal Ceiling Hung**

In this installation the supports can be positioned for mounting the motor at either 6 or 12 o'clock.

**Fig. 4 Horizontal Ceiling Hung with Motor at 3 or 9 o'clock**

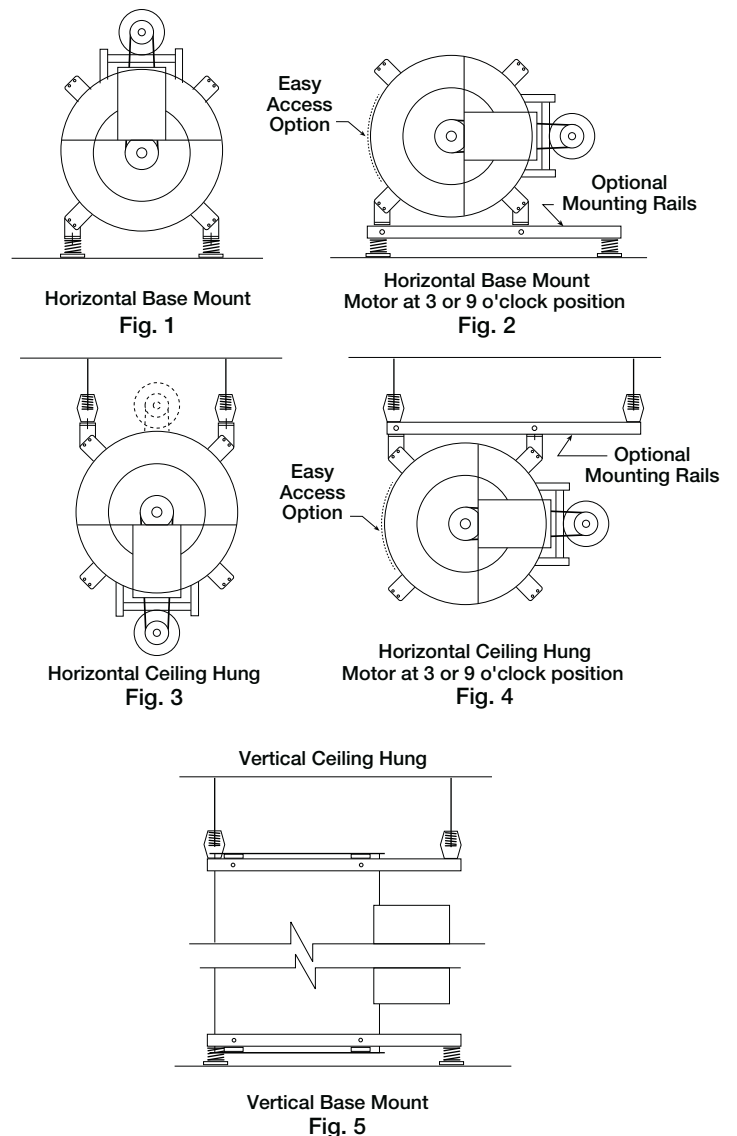
A set of optional mounting rails are required for this installation.

**Fig. 5 Vertical Mount**

All TCB fans can be mounted vertically (ceiling hung or base mount) for either upward or downward airflow. Optional mounting rails are recommended.

**NOTE:**

All fans are shown with optional vibration isolators. See the appropriate submittal drawings or installation manual for complete dimensional data.





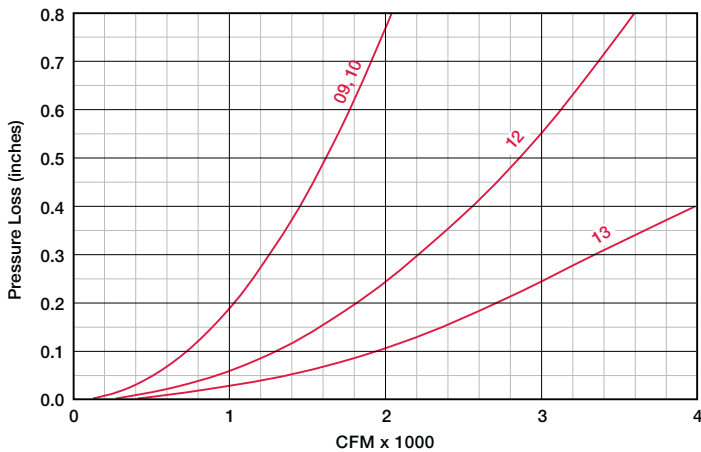
The TCBRU is ideal for roof upblast exhaust systems with moderate system static pressures and for applications where quiet operation is essential. Standard features include a necked-down windband section which creates the high outlet velocities necessary to carry contaminated exhausts away from the roof deck. All TCBRU fans include motor covers for weather protection of the motor and drives, gravity operated dampers to prevent backflow into the building, and a welded curb cap for ease in mounting to a roof curb. TCBRU fans are available in either painted steel or aluminum construction.

**Typical applications include:**

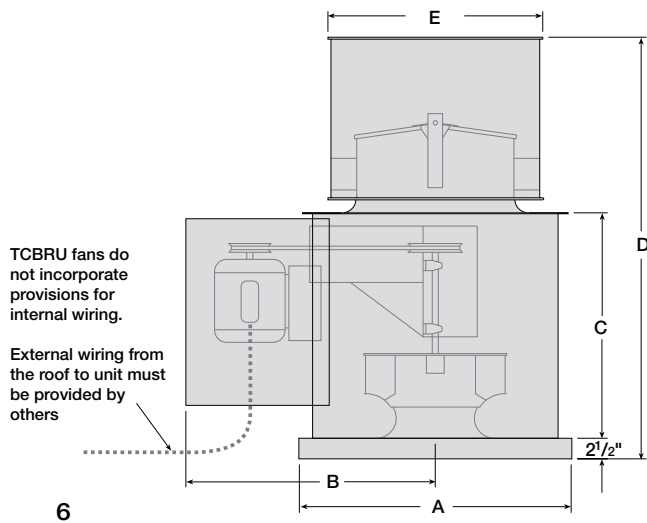
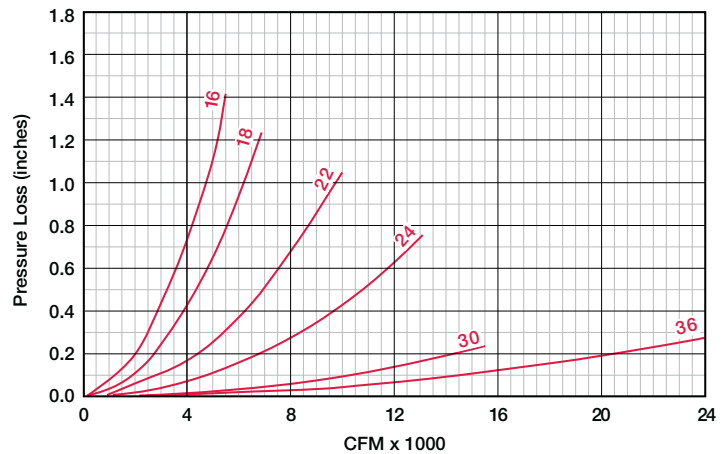
- Low cfm/high velocity exhaust
- General exhaust
- Fume hood exhaust
- Industrial process exhaust

When selecting TCBRU fans, use the TCB inline performance data (pgs. 12 to 31) along with the following system effect curves. The pressure loss determined below must be added to the extended system static pressure to assure accurate selections. Greenheck's Computer Aided Product Selection (CAPS) software will add these system effects automatically.

**System Effect Curves  
Sizes 9-13**



**System Effect Curves  
Sizes 16-36**



**Dimensional Data**

Size	A	B	C	D	E	Minimum CFM Required to Open Dampers
09	22	21½	23	45	20	425
10	22	21½	23	45	20	425
12	22	21½	23	45	20	1250
13	4	23½	24½	50½	24	1800
16	28	25½	28½	53	28	2030
18	34	28½	31	57½	30	2570
22	40	34	35½	64	34	2740
24	46	36½	42	74½	40	4760
30	52	42¼	48½	84	46	6600
36	58	45½	54	94½	52	8700

All dimensions shown in inches.

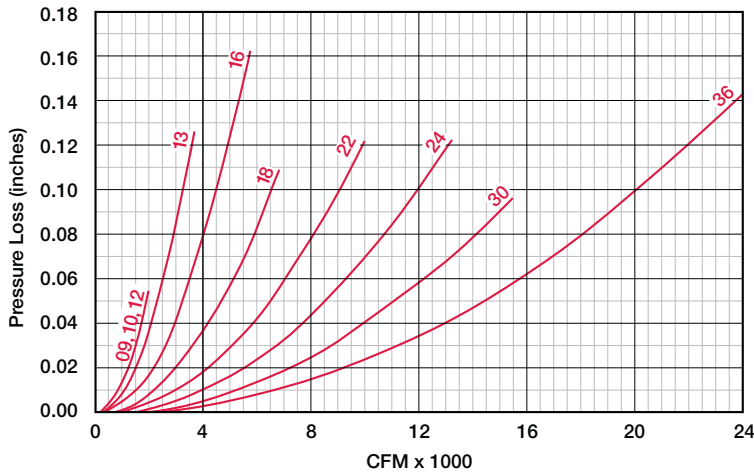


The TCBRS roof mounted supply fan is designed for intake air systems with pressures up to 4 inches of wg and where low sound is required. The TCBRS hood intake is located at a sufficient height above the roof to limit entry of roof debris and snow. In addition, the hood has sufficient intake area to keep velocities low. Filters are available to collect dust and moisture before entering the building. Motor and drive protection is provided with a weatherproof motor cover. For ease of installation, TCBRS fans are shipped assembled and have curb caps for attaching to roof curbs. TCBRS fans are available in either painted steel or aluminum construction.

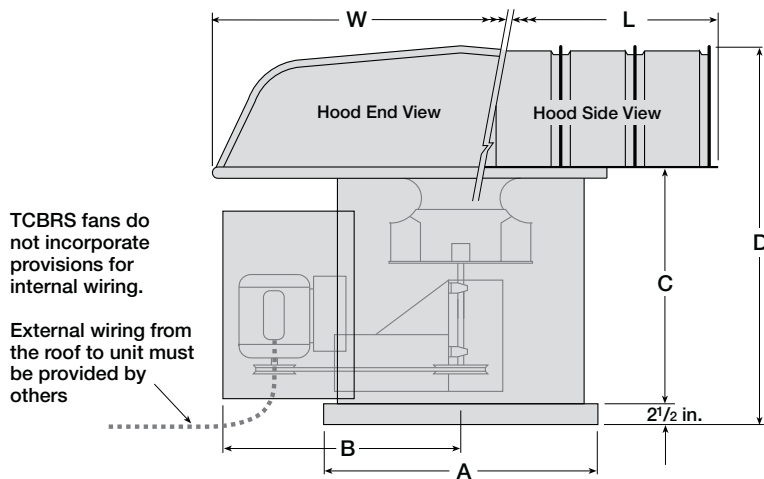
**Typical applications include:**

- Ducted supply systems
- Industrial space supply
- Filtered supply

### System Effect Curves



TCBRS fan selections can be made using the TCB inline performance data (pgs. 12 to 31) along with the following system effect curves. The pressure loss determined to the left must be added to the external system static pressure to assure accurate selections. Greenheck's Computer Aided Product Selection (CAPS) software will add these system effects automatically.



### Dimensional Data

Size	A	B	C	D	L	W
09	22	21½	25½	39½	39	46
10	22	21½	25½	39½	39	46
12	22	21½	25½	39½	39	46
13	24	23½	27	43½	39	54
16	28	25½	31	47½	51	55
18	34	28½	33½	50	63	64
22	40	34	38½	59	75	73
24	46	36½	45	67½	87	82
30	52	42¼	52½	76	99	88
36	58	45½	58	85½	111	88

All dimensions shown in inches.



## Model Number Code

The model number system is designed to completely identify the fan. A detailed explanation of the model number code for TCB fans is shown below.

<b>TCB - 1 - 24 - 30</b>	
Tubular Centrifugal Belt Drive TCB - Inline Fan TCBRU - Roof Upblast Fan TCBRS - Roof Supply Fan	Motor Horsepower 4 = 1/4      30 = 3 3 = 1/3      50 = 5 5 = 1/2      75 = 7 1/2 7 = 3/4      100 = 10 10 = 1        150 = 15 15 = 1 1/2    200 = 20 20 = 2
Level of Construction 1 or 2	Fan Size 09-36

## Standard Construction Features

### Inlet & Outlet Flanges

Flanged inlets and outlets with mounting holes are provided for duct connections (TCB only).

### Housing

Housings are continuously welded steel and coated with Permatecor™.

### Protective Coating

All steel constructed units are coated with Permatecor™, a thermosetting polyester urethane. Aluminum units are uncoated.

### Type B Spark Resistance

All fans have aluminum wheels and a nonferrous (aluminum) rub ring which surrounds the fan shaft where it passes through the drive cover. This construction meets Type B spark resistant requirements.

## Optional Construction Features

### Aluminum Construction

Aluminum construction is available on the TCB, TCBRU and TCBRS. Aluminum fans are an excellent choice for applications involving moisture or coastal installations.

### Easy Access Construction

The Easy Access option is highly recommended to allow for inspection, cleaning and service of internal fan components. By removing one access panel, service to the wheel, shaft, and bearing assembly is possible without removing duct connections. In addition, all internal fan components can be removed from the fan through the easy access panel.

Easy Access construction is available on all levels and sizes of TCB, TCBRU, and TCBRS. Easy Access is also available with aluminum fan construction.

The Easy Access panel is located 180° from the motor position.

### Bearings

Standard bearings are grease lubricated, self-aligning, ball type in pillow block mounts. Bearings are selected for a minimum L<sub>10</sub> life in excess of 80,000 hours (L<sub>50</sub> average life of 400,000 hours) at maximum cataloged operating speeds.

### Belt & Bearing Tube

Belts, bearings, and drives are protected from the airstream by heavy gauge belt tubes and bolted bearing covers with shaft seals.

### Extended Lube Lines

Lubrication lines with grease fittings allow bearing lubrication without disassembling the fan.





# Optional Construction for UL 762 Restaurant Exhaust

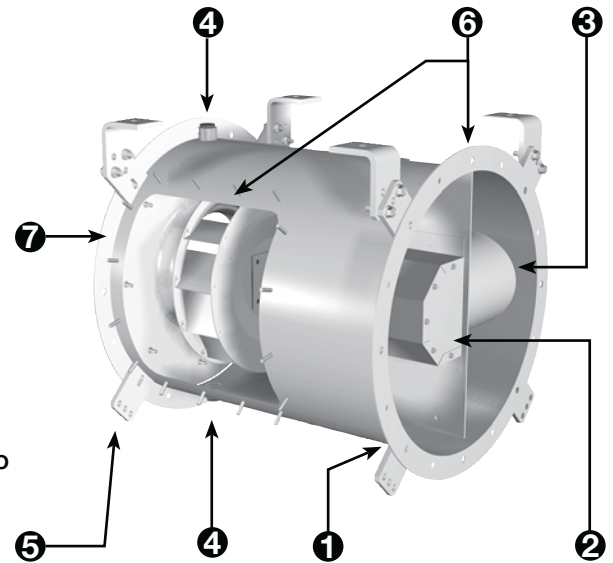
Inline grease exhaust fans are excellent alternative for kitchen applications when roof or wall mounted ventilators are not practical. The TCB with UL 762 grease option is designed to withstand the demands of high temperature kitchen grease exhaust and high-pressure duct washes.

## Leak Resistant Construction Features

- ① Continuously welded housing and integral duct flanges provide air and water tight design.
- ② Bearing cover gasketed and includes a labyrinth shaft seal to prevent moisture leakage during normal operation and while cleaning with high pressure solvents.
- ③ Continuously welded belt tube keeps the belts and bearings clean.
- ④ Two threaded drain connections are located 90° from the motor location to allow for removal of grease and moisture.


## Mounting and Serviceability Features

- ⑤ Universal mounting brackets allow for rotation of the motor to the 3 or 9 o'clock position at the jobsite.
- ⑥ Duct flanges and access door bolt locations are no more than 4 inches (100 mm) on center per NFPA 96.
- ⑦ "Easy Access Door" provides access for duct cleaning and allows removal of the wheel, shaft and bearings for maintenance. Gasket is rated for 400°F (200°C) and prevents leakage during operation [Fan is rated for 300°F (149°C) continuous operation].



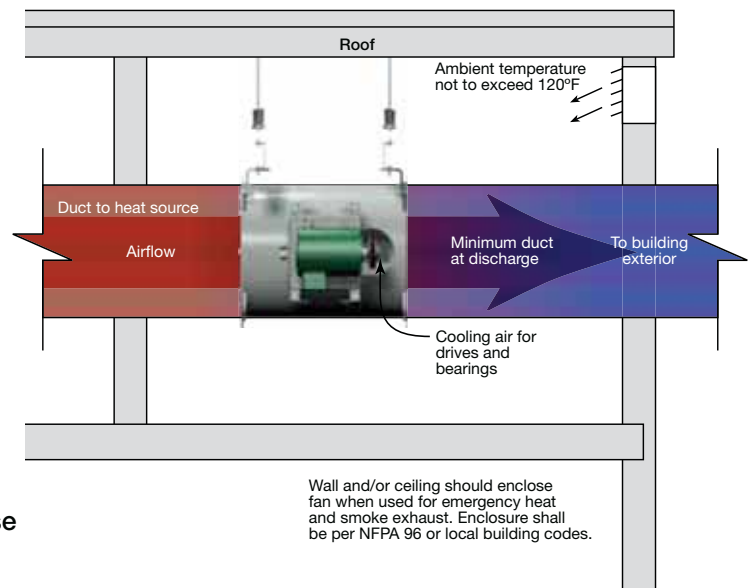
## System Design Guidelines

- Inline grease exhaust fans should be installed near the end of the duct run to reduce sound at the hood.
- Inline fan must be securely bolted to the exhaust duct per NFPA-96 guidelines. Greenheck's companion flanges are recommended for ease of installation.
- Grease exhaust fans and ductwork must maintain 18 inches (46 cm) minimum clearance to combustible material. If the ductwork and fan are insulated, the inspection door must be accessible for maintenance.
- A minimum of 10 ft. (3.0 m) of clearance must be kept from the fan outlet to adjacent buildings, property lines, or the closest point of any air intake or operable window at or below the plane of the exhaust termination.
- Greenheck recommends that all inline grease applications be reviewed by your local code official to ensure compliance with NFPA, IMC, and other local codes.

	<p>UL 762 is concerned with fans designed for removal of smoke and grease laden vapors with airstream temperatures up to 300°F.</p> <ul style="list-style-type: none"> <li>• Meets all UL 705 Requirements</li> <li>• Bolted Access Door</li> <li>• Drain Connection</li> <li>• Meets requirements of NFPA 96 Ventilation Control and Fire Protection of Commercial Cooking Operations</li> </ul>
<p>Listed Power Ventilation for Restaurant Exhaust Appliances 13G3 Maximum Operating Temperature 300°F.</p>	

## A Tough Package to Beat

The TCB inline grease fan is tough to beat when packaged with our full line of kitchen hoods and grease extraction options. Take advantage of Greenheck's expertise in providing a total solution in kitchen ventilation equipment.



## Belt Guard (TCB only)

Belt guards are totally enclosed to provide protection from rotating pulleys and belts. Belt guards meet OSHA guidelines.

## Motor Cover (Weatherhood)

Weatherproof motor covers shield the motor and drive components from dust, dirt and moisture when used in outdoor applications. Motor covers also provide protection from rotating pulleys and belts and meet OSHA guidelines. Motor covers are standard on TCBRU and TCBRS models.

## Inlet and Outlet Companion Flanges (TCB only)

Companion inlet flanges and outlet flanges with pre-punched holes are available for all fan sizes in painted steel construction.

## Inlet and Outlet Guards (TCB, TCBRU)

Removable inlet and outlet guards provide protection for personnel and equipment in non-ducted installations. These guards meet OSHA guidelines. TCBRU fans are available with outlet screens to shield the fan discharge and damper from debris.

## Inspection Door

Bolted or hinged doors provide access for cleaning or inspection.

## Inspection Section (TCB only)

Inspection sections serve as a length of duct that can be easily removed to provide for complete access to the fan for servicing. Each section includes a bolted inspection door.

## Isolators (TCB only)

Both base mount or hanging isolators are available in either neoprene or spring mounts. The isolators are furnished in sets of four and are sized to match the weight of each fan.

## Mounting Rails (TCB only)

Mounting rails are required for horizontal mounting of TCB fans when the motor is to be located in the 3 or 9 o'clock position. Mounting rails are also recommended for all vertically mounted inline fans. See page 5 for additional details.

## Protective Coatings

Greenheck has a wide offering of protective coatings. Consult Greenheck's Product Application Guide FA/110-04R4, Performance Coatings for Ventilation Products for a complete listing of coatings and a relative resistance chart.

## Inlet Vane Dampers (TCB only)

Nested inlet vane dampers for controlling air volume are available on model TCB inline fans with Level 2 steel construction in fan sizes 12 through 36.

## Birdscreen / Insect Screen (TCBRS only)

TCBRS fans are available with either aluminum insect screen or birdscreen at the hood intake (Birdscreen is standard).

## Roof Curbs (TCBRU, TCBRS)

Prefabricated roof curbs are available to reduce installation time and costs by ensuring compatibility between the fan, the curb and the roof opening. All curbs are lined with fiberglass insulation to prevent condensation and reduce sound levels. See Greenheck's Roof Curb, Extensions and Equipment Supports catalog for complete details.

## Washable Aluminum Filters (TCBRS only)

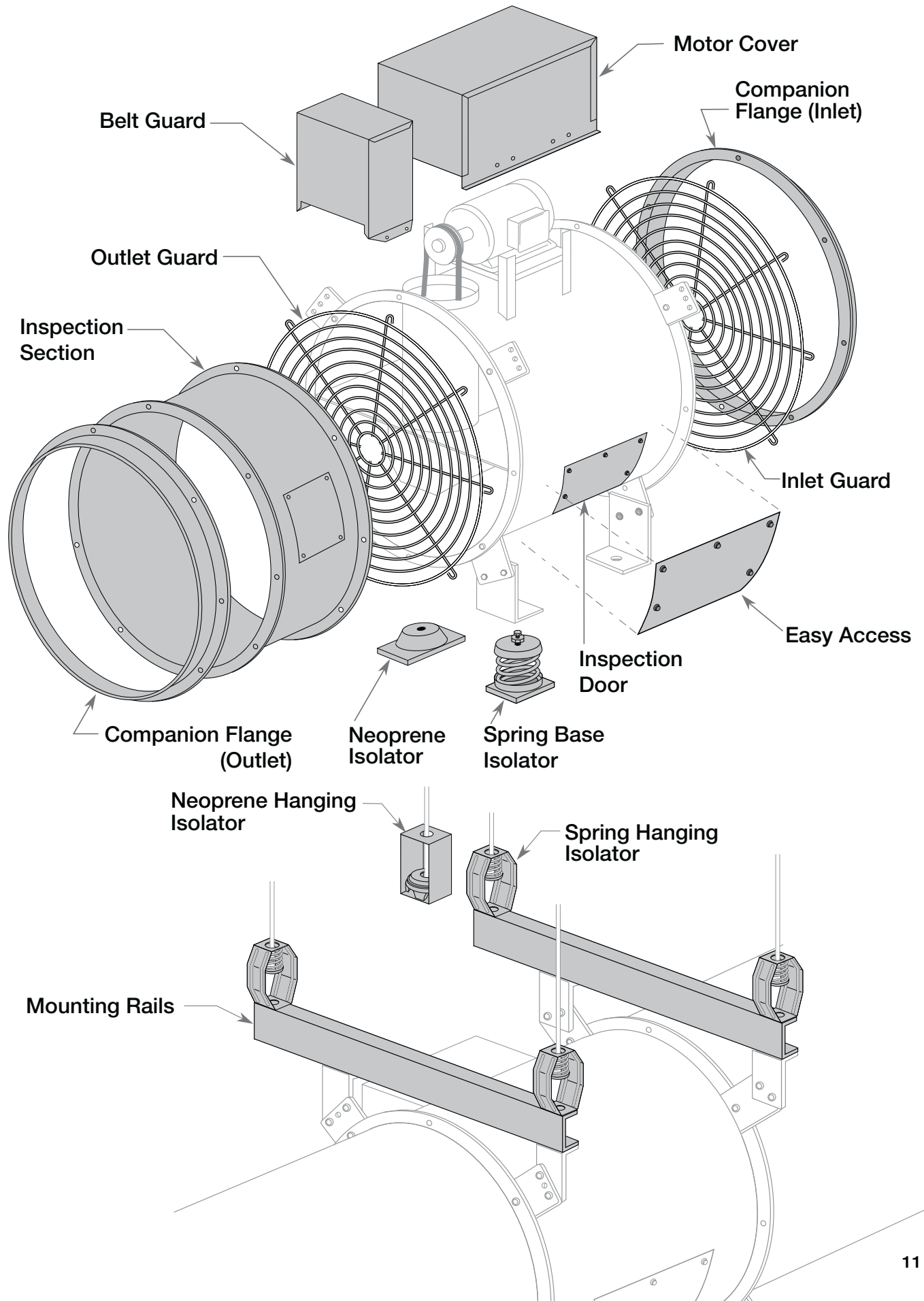
Helps trap dust and dirt before it enters the fan. Filters can be removed for cleaning.

## Electrical Accessories

Enclosure	Application	Toggle	Heavy Duty
NEMA-1	Indoor, General Purpose	Yes	Yes
NEMA-12	Indoor, Dust/Drip Tight	Yes	Yes
NEMA-3R	Indoor/Outdoor, Rainproof	Yes	Yes
NEMA-4	Indoor/Outdoor, Watertight	Yes	Yes
NEMA-4X	Indoor/Outdoor, Watertight (Corrosion Resistant)	Yes	Yes
NEMA-7 & 9	Indoor, Hazardous Locations	Yes	No

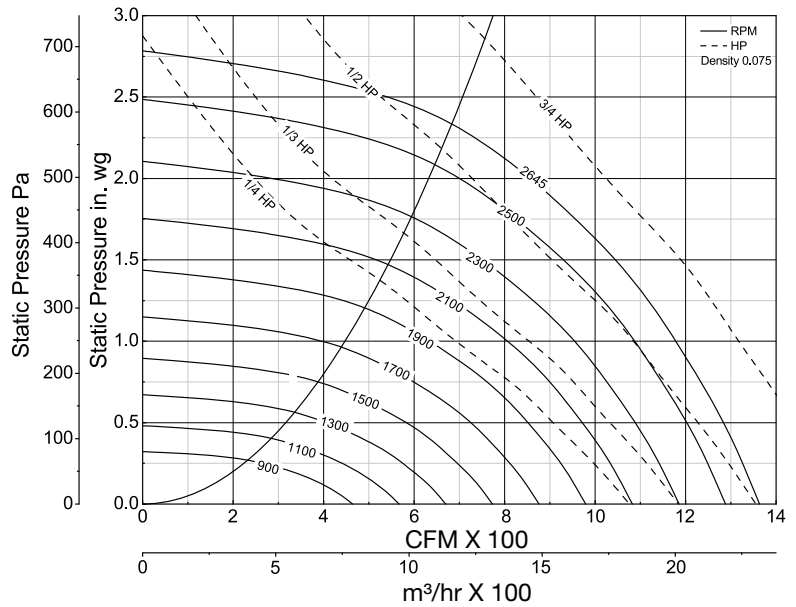
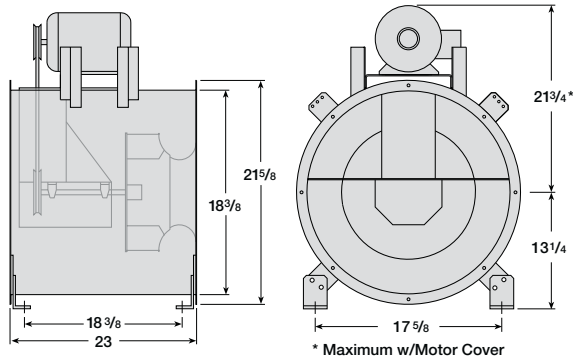
Toggle type and heavy duty disconnect switches are available for positive electrical shut-off and safety in servicing fans. The following switches are available to meet individual electrical requirements.





# TCB-1-09

## Level 1 Construction



Dimensions shown in inches

Maximum rpm — 2645

Outlet Velocity = cfm X 0.543

Tip Speed = rpm X 2.928

Maximum bhp at a given rpm —  $(\text{rpm}/3114)^3$

Max Motor Frame Size - 56

CFM	OV	Static Pressure in Inches wg																	
		0.125		0.25		0.5		0.75		1		1.25		1.5		1.75		2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
360	195	846	0.02	999	0.03	1260	0.06												
		5.3		6.0		7.5													
420	228	941	0.03	1071	0.04	1314	0.07	1526	0.11										
		5.7		6.3		7.7		9.2											
480	260	1040	0.04	1155	0.05	1380	0.09	1576	0.12	1758	0.17								
		6.3		6.8		8.0		9.3		10.6									
540	293	1144	0.05	1245	0.06	1449	0.10	1635	0.14	1807	0.19	1968	0.23	2115	0.28				
		7.1		7.4		8.4		9.5		10.7		12.0		13.3					
600	326	1250	0.06	1341	0.08	1523	0.12	1704	0.16	1865	0.21	2017	0.26	2163	0.31	2298	0.36		
		7.8		8.1		8.8		9.9		11.0		12.2		13.5		14.7			
660	358	1357	0.07	1439	0.09	1606	0.14	1774	0.18	1930	0.23	2074	0.29	2212	0.34	2346	0.40	2472	0.46
		8.6		8.8		9.3		10.4		11.4		12.6		13.7		14.9		16.2	
720	391	1465	0.09	1542	0.11	1692	0.16	1845	0.21	1999	0.26	2137	0.32	2270	0.38	2395	0.43	2520	0.50
		9.4		9.6		10.0		10.9		12.0		13.1		14.0		15.0		16.3	
780	423	1576	0.12	1647	0.14	1786	0.18	1928	0.24	2069	0.29	2206	0.35	2331	0.41	2454	0.47	2570	0.54
		10.2		10.4		10.8		11.5		12.7		13.6		14.5		15.4		16.5	
840	456	1688	0.14	1752	0.16	1882	0.21	2012	0.27	2142	0.33	2276	0.39	2400	0.45	2515	0.52	2629	0.59
		11.0		11.2		11.7		12.3		13.3		14.2		15.0		16.0		17.0	
900	489	1801	0.17	1859	0.19	1980	0.25	2100	0.30	2225	0.36	2347	0.43	2469	0.50	2584	0.56		
		12.0		12.2		12.7		13.3		13.9		14.8		15.7		16.6			
960	521	1914	0.20	1966	0.23	2081	0.28	2195	0.34	2310	0.40	2424	0.47	2540	0.54				
		13.0		13.2		14.0		14.2		14.7		15.4		16.4					
1020	554	2028	0.24	2075	0.26	2184	0.32	2292	0.38	2395	0.44	2507	0.52	2612	0.59				
		14.4		14.9		15.0		15.1		15.5		16.3		17.2					
1080	586	2141	0.28	2186	0.31	2288	0.37	2389	0.43	2490	0.50	2592	0.57						
		15.9		15.9		16.0		16.2		16.6		17.2							
1140	619	2255	0.33	2298	0.36	2394	0.42	2487	0.49	2585	0.55								
		16.9		16.9		17.1		17.4		17.8									
1200	652	2370	0.38	2410	0.41	2500	0.47	2590	0.54										
		17.9		18.0		18.3		18.6											

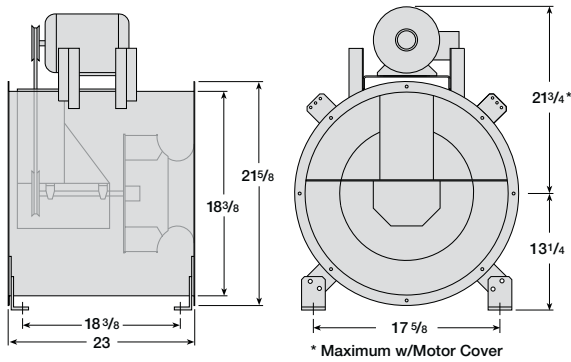
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-2-09

## Level 2 Construction



Dimensions shown in inches

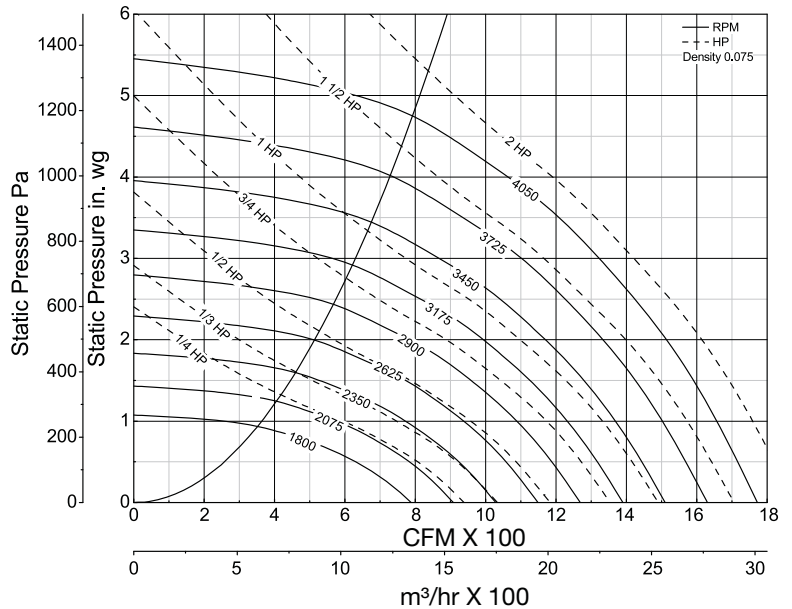
Maximum rpm — 4050

Outlet Velocity = cfm X 0.543

Tip Speed = rpm X 2.75

Maximum bhp at a given rpm — (rpm/3330)<sup>3</sup>

Max Motor Frame Size - 145T



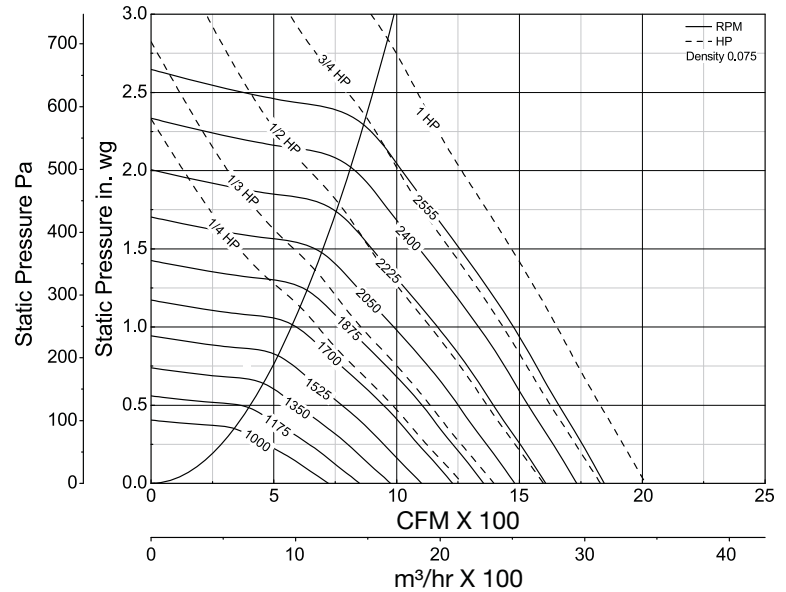
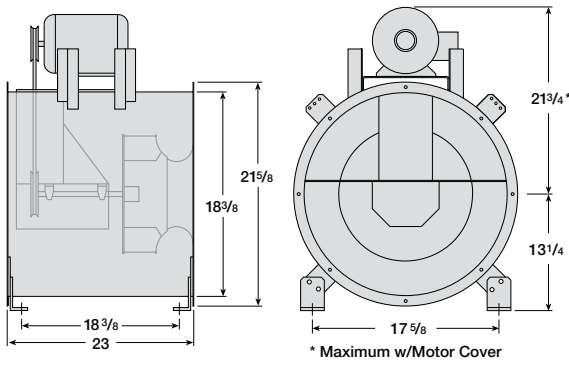
CFM	OV	Static Pressure in Inches wg																	
		0.25		0.5		1		1.5		2		2.5		3		3.5		4	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
400	217	1198	0.05	1460	0.08	1893	0.18												
		7.3		8.7		11.9													
480	260	1332	0.06	1566	0.10	1971	0.20	2309	0.32										
		8.2		9.6		12.7		15.7											
560	304	1480	0.09	1686	0.13	2059	0.24	2386	0.36	2671	0.49								
		9.2		10.6		13.5		16.5		19.1									
640	347	1635	0.11	1818	0.16	2158	0.27	2469	0.41	2749	0.55	3000	0.70	3228	0.86				
		10.6		11.7		14.6		17.4		20		23		25					
720	391	1799	0.15	1958	0.20	2275	0.32	2562	0.45	2830	0.61	3078	0.77	3305	0.94	3514	1.12		
		12.0		13.0		15.8		18.3		21		23		25		28			
800	434	1966	0.20	2108	0.25	2397	0.37	2666	0.51	2921	0.67	3158	0.85	3383	1.03	3591	1.21	3786	1.41
		13.4		14.5		16.9		18.3		22		24		26		28		31	
880	478	2135	0.25	2262	0.30	2528	0.43	2784	0.58	3015	0.74	3250	0.93	3464	1.12	3669	1.32	3863	1.52
		15.1		16.2		18.2		21		23		25		27		29		32	
960	521	2308	0.32	2425	0.37	2665	0.50	2905	0.66	3132	0.83	3343	1.01	3555	1.21	3752	1.42	3942	1.64
		16.8		17.6		19.6		22		24		26		28		31		33	
1040	565	2482	0.39	2590	0.45	2810	0.59	3033	0.75	3251	0.93	3453	1.11	3648	1.31	3844	1.53	4027	1.76
		18.4		19.3		21		23		25		27		29		32		34	
1120	608	2658	0.48	2757	0.54	2960	0.68	3168	0.85	3372	1.03	3571	1.23	3754	1.43	3937	1.65		
		20		21		23		25		27		29		31		33			
1200	652	2835	0.58	2925	0.65	3113	0.79	3306	0.96	3501	1.15	3691	1.35	3872	1.57	4041	1.79		
		22		23		24		26		28		30		32		35			
1280	695	3012	0.70	3095	0.76	3271	0.91	3453	1.09	3636	1.28	3813	1.49	3991	1.71				
		24		25		26		28		29		32		34					
1360	739	3190	0.83	3269	0.90	3434	1.05	3603	1.23	3773	1.43	3945	1.64						
		26		26		28		29		31		34							
1440	782	3368	0.97	3444	1.05	3599	1.21	3756	1.39	3917	1.59								
		28		28		30		31		33									
1520	826	3547	1.14	3619	1.21	3765	1.38	3909	1.56										
		30		30		32		34											

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories) in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-1-10

## Level 1 Construction



Dimensions shown in inches

Maximum rpm — 2555

Outlet Velocity = cfm X 0.543

Tip Speed = rpm X 2.928

Maximum bhp at a given rpm — (rpm/2760)<sup>3</sup>

Max Motor Frame Size - 143T

CFM	OV	Static Pressure in Inches wg																	
		0.125		0.25		0.5		0.75		1		1.25		1.5		1.75		2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
480	260	858	0.03	1011	0.05	1253	0.09												
		4.9		5.7		7.3													
560	304	947	0.04	1089	0.06	1321	0.11	1511	0.15										
		5.5		6.3		7.7		9.3											
640	347	1042	0.05	1171	0.08	1394	0.13	1578	0.18	1740	0.23	1892	0.29						
		6.3		7.0		8.2		9.6		11.2		13.3							
720	391	1141	0.07	1259	0.09	1470	0.15	1649	0.21	1806	0.27	1949	0.33	2079	0.39				
		7.2		7.6		8.9		10.0		11.5		13.2		15.0					
800	434	1239	0.09	1349	0.12	1548	0.18	1723	0.24	1876	0.31	2015	0.37	2144	0.44	2263	0.51		
		8.0		8.4		9.6		10.7		11.9		13.5		14.8		16.1			
880	478	1340	0.11	1444	0.14	1630	0.21	1798	0.27	1949	0.34	2084	0.42	2211	0.49	2329	0.57	2440	0.64
		8.8		9.2		10.2		11.3		12.5		13.7		15.0		16.2		17.6	
960	521	1441	0.14	1541	0.17	1716	0.24	1876	0.31	2023	0.39	2157	0.47	2280	0.55	2396	0.63	2506	0.71
		9.7		10.1		10.9		12.1		13.3		14.1		15.2		16.5		17.9	
1040	565	1544	0.17	1640	0.21	1805	0.28	1957	0.35	2099	0.44	2231	0.52	2352	0.60	2465	0.69		
		10.5		10.9		11.7		12.9		13.9		14.8		15.7		16.9			
1120	608	1648	0.21	1739	0.25	1895	0.32	2042	0.40	2178	0.49	2306	0.58	2426	0.67	2538	0.76		
		11.3		11.7		12.7		13.8		14.6		15.5		16.5		17.7			
1200	652	1752	0.25	1839	0.29	1989	0.37	2129	0.46	2259	0.55	2383	0.64	2501	0.73				
		12.2		12.6		13.7		14.5		15.3		16.3		17.5					
1280	695	1858	0.30	1940	0.34	2085	0.43	2218	0.52	2343	0.61	2464	0.71						
		13.2		13.7		14.5		15.2		16.2		17.3							
1360	739	1964	0.35	2041	0.40	2183	0.49	2308	0.58	2430	0.68	2545	0.78						
		14.5		14.9		15.4		16.2		17.2		18.3							
1440	782	2071	0.41	2144	0.46	2282	0.56	2401	0.66	2519	0.76								
		15.6		15.8		16.4		17.3		18.3									
1520	826	2177	0.48	2247	0.53	2380	0.64	2497	0.74										
		16.4		16.7		17.5		18.4											
1600	869	2285	0.56	2351	0.61	2479	0.72												
		17.3		17.7		18.5													

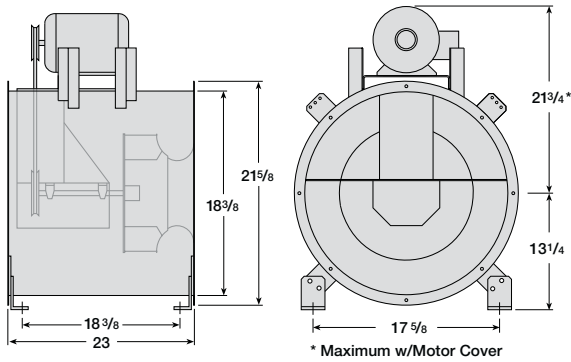
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-2-10

## Level 2 Construction



Dimensions shown in inches

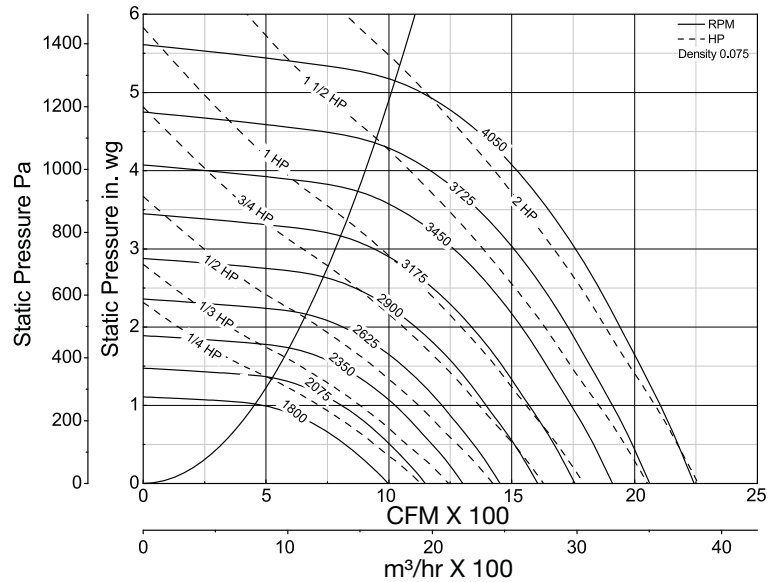
Maximum rpm — 4050

Outlet Velocity = cfm X 0.543

Tip Speed = rpm X 2.75

Maximum bhp at a given rpm —  $(\text{rpm}/3120)^3$

Max Motor Frame Size - 145T



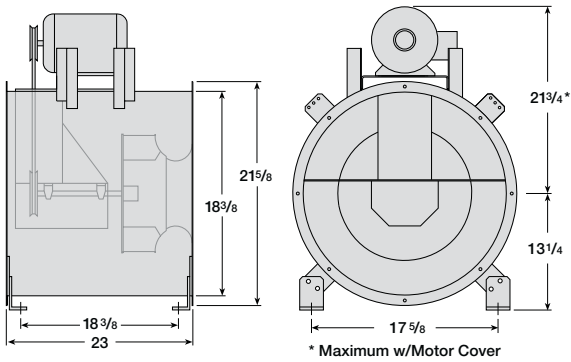
CFM	OV	Static Pressure in Inches wg																	
		0.25		0.5		1		1.5		2		2.5		3		3.5		4	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
600	326	1300	0.07	1504	0.11	1875	0.21	2213	0.32										
		7.3		8.2		10.5		13.2											
700	380	1453	0.10	1630	0.14	1966	0.24	2273	0.36	2560	0.49								
		8.4		9.1		11.0		13.3		15.6									
800	434	1611	0.13	1768	0.18	2070	0.29	2355	0.42	2619	0.55	2872	0.70	3102	0.86				
		10.0		10.1		11.8		13.7		15.8		18.2		20					
900	489	1773	0.17	1917	0.23	2188	0.34	2448	0.48	2698	0.62	2932	0.78	3160	0.94	3371	1.11	3568	1.29
		11.2		11.3		12.7		14.3		16.2		18.5		20		22		25	
1000	543	1937	0.23	2071	0.29	2319	0.41	2559	0.55	2790	0.70	3011	0.86	3220	1.03	3430	1.22	3626	1.40
		12.4		12.7		13.6		15.2		17.0		19.0		21		23		25	
1100	597	2104	0.29	2228	0.35	2457	0.48	2677	0.63	2892	0.79	3103	0.96	3303	1.14	3490	1.32	3685	1.52
		13.8		14.3		14.6		16.1		17.9		19.5		21		23		25	
1200	652	2276	0.36	2389	0.43	2601	0.57	2807	0.73	3009	0.89	3199	1.07	3394	1.25	3578	1.45	3751	1.65
		15.4		15.4		15.9		17.2		18.9		20		21		23		25	
1300	706	2449	0.45	2552	0.52	2753	0.67	2944	0.83	3128	1.01	3315	1.19	3488	1.38	3670	1.59	3841	1.80
		16.4		16.6		17.2		18.3		19.5		21		22		24		25	
1400	760	2623	0.55	2717	0.62	2907	0.79	3083	0.95	3261	1.14	3433	1.33	3603	1.53	3763	1.73	3933	1.96
		17.5		17.7		18.5		19.3		20		21		23		24		26	
1500	815	2797	0.66	2883	0.74	3063	0.92	3231	1.09	3398	1.28	3557	1.48	3721	1.69	3878	1.91	4026	2.12
		18.6		18.9		19.7		20		21		22		23		25		26	
1600	869	2973	0.79	3052	0.87	3223	1.06	3384	1.25	3537	1.44	3693	1.65	3840	1.86	3995	2.09		
		19.8		20		21		21		22		23		24		25			
1700	923	3149	0.94	3224	1.03	3384	1.22	3538	1.42	3683	1.62	3831	1.84	3974	2.06				
		21		21		22		22		23		23		25					
1800	978	3325	1.10	3396	1.19	3546	1.40	3693	1.61	3834	1.82	3970	2.04						
		22		22		23		23		24		24							
1900	1032	3502	1.29	3570	1.38	3710	1.59	3852	1.82	3988	2.04								
		23		24		24		25		25									
2000	1086	3679	1.49	3744	1.59	3875	1.81	4012	2.04										
		25		25		25		26											

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories) in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-1-12

## Level 1 Construction



Dimensions shown in inches

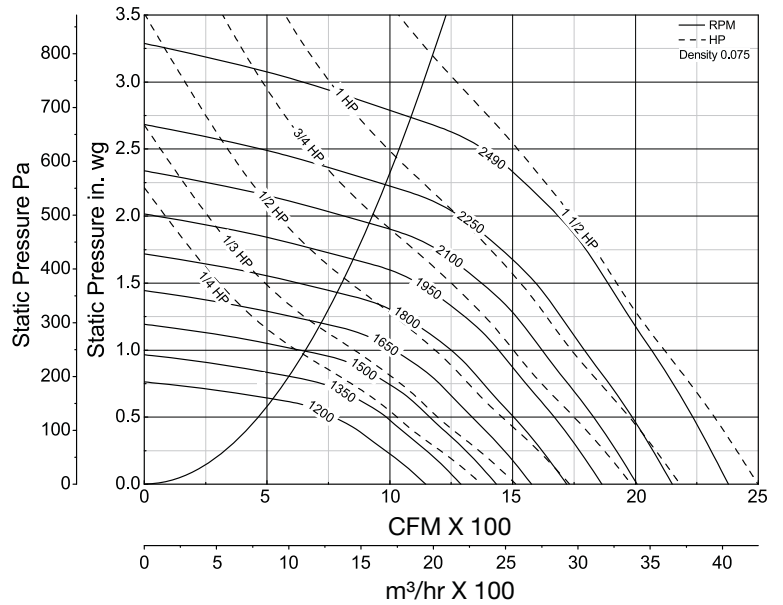
Maximum rpm — 2490

Outlet Velocity = cfm X 0.543

Tip Speed = rpm X 3.436

Maximum bhp at a given rpm —  $(\text{rpm}/2202)^3$

Max Motor Frame Size - 145T



CFM	OV	Static Pressure in Inches wg																	
		0.125		0.25		0.5		00.75		1		1.25		1.5		1.75		2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
700	380	853	0.06	958	0.08	1158	0.14	1345	0.21	1518	0.28								
		6.2		6.6		7.9		9.4		11.0									
800	434	943	0.08	1042	0.11	1218	0.17	1386	0.24	1551	0.31	1703	0.40						
		6.6		7.0		8.3		9.6		11.1		12.5							
900	489	1037	0.10	1128	0.13	1287	0.20	1442	0.27	1587	0.35	1736	0.44	1873	0.53	2000	0.63		
		7.1		7.6		8.7		9.9		11.2		12.6		14.2		15.5			
1000	543	1132	0.13	1216	0.17	1363	0.24	1506	0.31	1643	0.40	1771	0.49	1906	0.59	2033	0.69	2151	0.79
		7.8		8.3		9.1		10.3		11.5		12.8		14.3		15.6		17.0	
1100	597	1229	0.16	1305	0.20	1447	0.28	1574	0.36	1702	0.45	1827	0.55	1943	0.65	2066	0.75	2183	0.86
		8.6		8.9		9.6		10.8		12.0		13.3		14.4		15.7		17.1	
1200	652	1326	0.20	1398	0.25	1532	0.34	1649	0.42	1769	0.51	1884	0.61	1999	0.71	2105	0.82	2216	0.94
		9.2		9.5		10.3		11.3		12.6		13.9		14.9		15.9		17.3	
1300	706	1426	0.25	1492	0.30	1619	0.39	1732	0.49	1839	0.58	1950	0.68	2055	0.79	2161	0.90	2260	1.02
		9.8		10.2		11.2		12.1		13.4		14.5		15.4		16.4		17.6	
1400	760	1526	0.31	1588	0.36	1707	0.46	1817	0.56	1916	0.66	2019	0.76	2120	0.88	2217	0.99	2316	1.11
		10.6		11.2		12.2		13.2		14.2		15.1		16.0		17.0		18.1	
1500	815	1627	0.37	1684	0.42	1796	0.53	1903	0.64	1999	0.75	2089	0.85	2188	0.97	2281	1.09	2372	1.21
		11.9		12.5		13.5		14.4		14.9		15.7		16.7		17.6		18.7	
1600	869	1729	0.44	1781	0.50	1886	0.61	1990	0.73	2084	0.85	2170	0.96	2258	1.07	2350	1.20	2436	1.33
		13.4		13.9		15.0		15.3		15.7		16.5		17.4		18.3		19.4	
1700	923	1830	0.53	1879	0.58	1980	0.70	2077	0.83	2170	0.95	2254	1.07	2334	1.19	2419	1.32		
		15.1		15.7		15.9		16.2		16.7		17.3		18.1		19.1			
1800	978	1932	0.62	1978	0.68	2074	0.80	2166	0.93	2256	1.07	2339	1.20	2417	1.32				
		16.6		16.6		16.8		17.1		17.6		18.2		19.0					
1900	1032	2034	0.72	2078	0.78	2169	0.91	2256	1.05	2343	1.19	2425	1.33						
		17.3		17.3		17.6		18.0		18.5		19.2							
2000	1086	2137	0.83	2179	0.90	2265	1.03	2348	1.18	2432	1.33								
		18.0		18.1		18.4		18.9		19.5									
2100	1141	2240	0.96	2280	1.02	2361	1.17	2442	1.32										
		18.7		18.8		19.2		19.8											

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

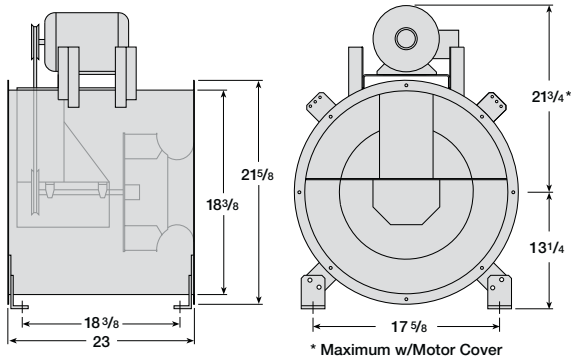
The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.





# TCB-2-12

## Level 2 Construction



Dimensions shown in inches

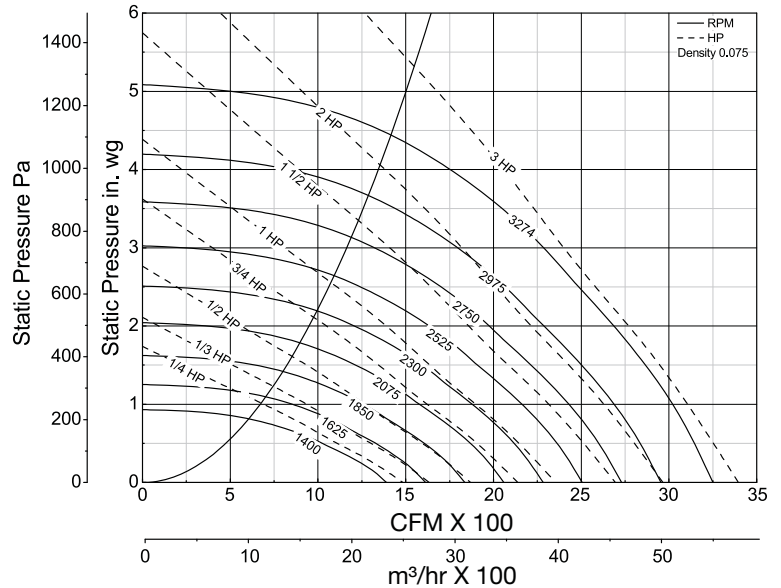
Maximum rpm — 3274

Outlet Velocity = cfm X 0.543

Tip Speed = rpm X 3.21

Maximum bhp at a given rpm — (rpm/2315)<sup>3</sup>

Max Motor Frame Size - 182T



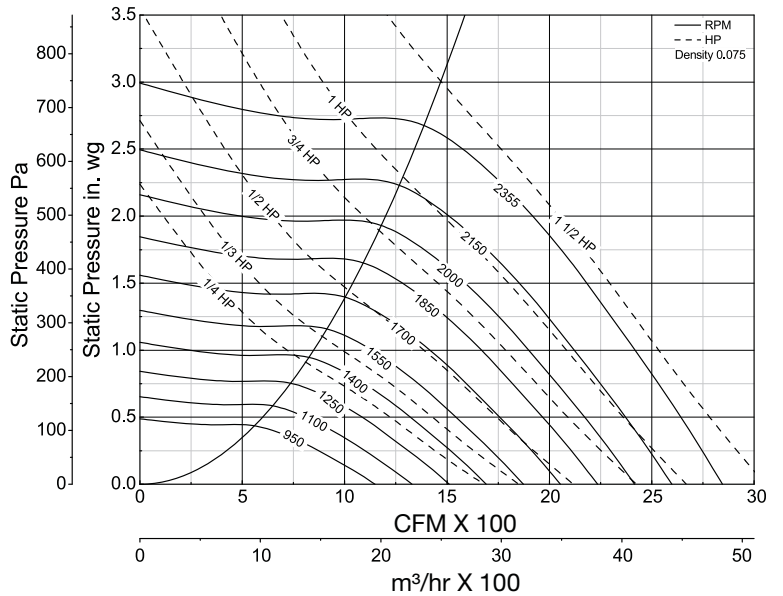
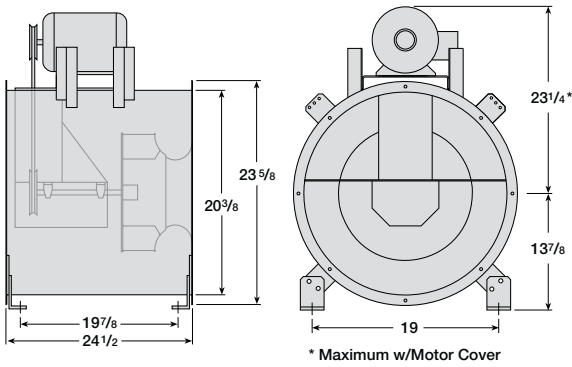
CFM	OV	Static Pressure in Inches wg																	
		0.25		0.5		1		1.5		2		2.5		3		3.5		4	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
750	407	1009	0.08	1226	0.14	1587	0.27												
		5.5		6.7		9.8													
900	489	1119	0.11	1315	0.18	1648	0.32	1936	0.49	2182	0.67								
		6.3		7.6		10.2		13.1		15.9									
1050	570	1238	0.15	1419	0.23	1728	0.39	1995	0.56	2240	0.76	2456	0.96						
		7.5		8.5		11.0		13.6		16.4		19.0							
1200	652	1363	0.20	1529	0.29	1813	0.46	2070	0.65	2299	0.85	2514	1.08	2710	1.31	2890	1.55		
		8.9		9.6		12.0		14.2		16.9		19.5		22		24			
1350	733	1495	0.27	1643	0.36	1911	0.55	2151	0.76	2372	0.97	2574	1.20	2768	1.45	2948	1.71	3115	1.97
		10.4		11.1		13.2		15.2		17.6		20		22		25		28	
1500	815	1630	0.34	1764	0.44	2018	0.66	2240	0.88	2452	1.11	2647	1.35	2828	1.60	3007	1.87	3174	2.16
		12.0		12.9		14.5		16.6		18.6		21		23		26		29	
1650	896	1767	0.44	1887	0.54	2127	0.77	2338	1.01	2534	1.26	2727	1.51	2903	1.78	3067	2.05	3233	2.35
		13.9		14.4		15.9		18.4		19.9		22		24		27		30	
1800	978	1908	0.55	2018	0.66	2239	0.90	2445	1.17	2630	1.43	2808	1.70	2983	1.98	3145	2.27		
		15.9		16.5		18.0		19.9		22		23		25		28			
1950	1059	2053	0.68	2151	0.79	2356	1.05	2554	1.34	2731	1.62	2900	1.90	3064	2.20	3225	2.50		
		18.2		18.8		20		22		23		25		27		29			
2100	1141	2198	0.83	2286	0.95	2477	1.22	2664	1.52	2839	1.83	2997	2.13	3154	2.44				
		21		22		22		23		25		27		29					
2250	1222	2344	1.00	2423	1.13	2599	1.41	2777	1.73	2948	2.05	3104	2.38	3250	2.71				
		24		24		25		26		27		29		32					
2400	1304	2490	1.19	2560	1.33	2726	1.63	2896	1.96	3058	2.30	3212	2.65						
		26		26		27		28		30		32							
2550	1385	2637	1.41	2703	1.56	2858	1.87	3016	2.21	3169	2.57								
		28		29		29		31		32									
2700	1467	2785	1.66	2847	1.81	2991	2.14	3138	2.48										
		31		31		32		34											
2850	1548	2933	1.93	2992	2.09	3126	2.43	3262	2.79										
		34		34		35		37											

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories) in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-1-13

## Level 1 Construction



Dimensions shown in inches

Maximum rpm — 2355

Outlet Velocity = cfm X 0.442

Tip Speed = rpm X 3.435

Maximum bhp at a given rpm —  $(\text{rpm}/2119)^3$

Max Motor Frame Size - 145T

CFM	OV	Static Pressure in Inches wg																	
		0.125		0.25		0.5		0.75		1		1.25		1.5		1.75		2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
600	265	660	0.03	792	0.05	1019	0.10												
		4.1		5.1		6.9													
750	331	760	0.05	874	0.07	1073	0.13	1254	0.19										
		4.8		5.8		7.1		8.4											
900	398	864	0.07	967	0.10	1146	0.16	1305	0.23	1459	0.30								
		5.8		6.4		7.5		8.6		10.2									
1050	464	973	0.09	1067	0.13	1230	0.20	1378	0.27	1512	0.36	1646	0.44	1770	0.53				
		6.6		7.0		8.0		9.1		10.3		12.0		14.0					
1200	530	1085	0.13	1171	0.17	1321	0.24	1457	0.32	1585	0.41	1703	0.51	1820	0.61	1933	0.71	2039	0.81
		7.2		7.7		8.6		9.6		10.8		12.0		13.6		15.3		17.2	
1350	597	1199	0.17	1277	0.22	1419	0.30	1545	0.39	1662	0.48	1777	0.58	1883	0.69	1984	0.80	2089	0.91
		8.1		8.5		9.4		10.3		11.4		12.5		13.6		15.1		16.7	
1500	663	1316	0.23	1387	0.27	1520	0.37	1637	0.46	1749	0.59	1853	0.67	1957	0.78	2054	0.90	2146	1.02
		9.0		9.4		10.2		11.2		12.2		13.2		14.3		15.5		16.9	
1650	730	1434	0.29	1499	0.34	1623	0.44	1736	0.55	1839	0.65	1940	0.77	2034	0.88	2128	1.00	2219	1.13
		10.0		10.4		11.3		12.3		13.2		14.3		15.3		16.5		17.8	
1800	796	1552	0.37	1613	0.42	1729	0.54	1836	0.65	1935	0.76	2029	0.88	2121	1.00	2207	1.13	2293	1.26
		11.2		11.5		12.5		13.4		14.4		15.4		16.5		17.7		19.0	
1950	862	1672	0.45	1728	0.52	1836	0.64	1939	0.76	2034	0.88	2123	1.00	2209	1.13	2294	1.27		
		12.4		12.9		13.8		14.7		15.6		16.7		17.8		19.0			
2100	929	1792	0.56	1844	0.62	1947	0.76	2044	0.89	2135	1.02	2221	1.15	2302	1.28				
		13.8		14.2		15.1		16.1		17.0		18.1		19.2					
2250	995	1913	0.67	1962	0.75	2058	0.89	2150	1.03	2238	1.17	2321	1.31						
		15.2		15.7		16.7		17.7		18.6		19.6							
2400	1061	2034	0.81	2080	0.88	2171	1.04	2258	1.19	2342	1.33								
		16.9		17.4		18.4		19.4		20									
2550	1128	2155	0.95	2199	1.04	2285	1.20												
		18.7		19.2		20													
2700	1194	2277	1.12	2319	1.21														
		21		21															

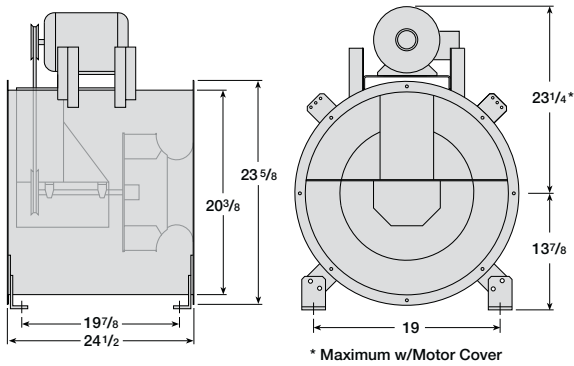
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-2-13

## Level 2 Construction



Dimensions shown in inches

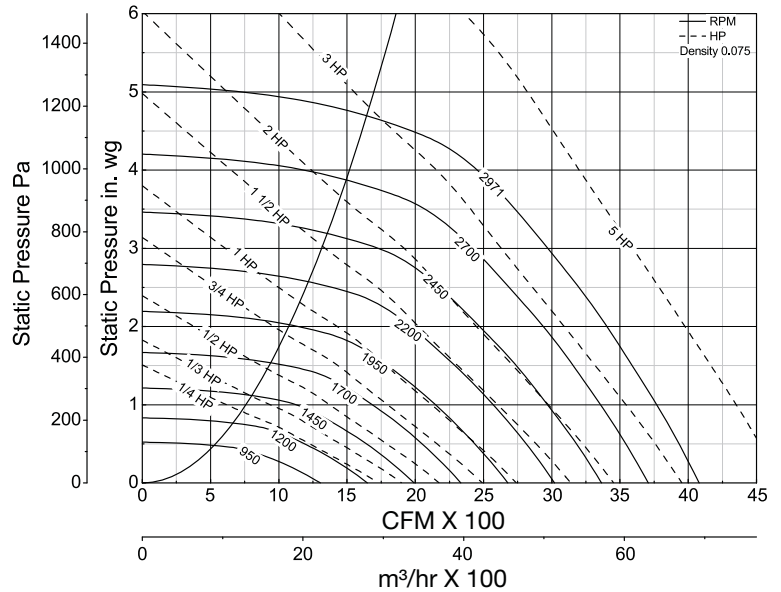
Maximum rpm — 2971

Outlet Velocity = cfm X 0.442

Tip Speed = rpm X 3.53

Maximum bhp at a given rpm —  $(\text{rpm}/1933)^3$

Max Motor Frame Size - 182T



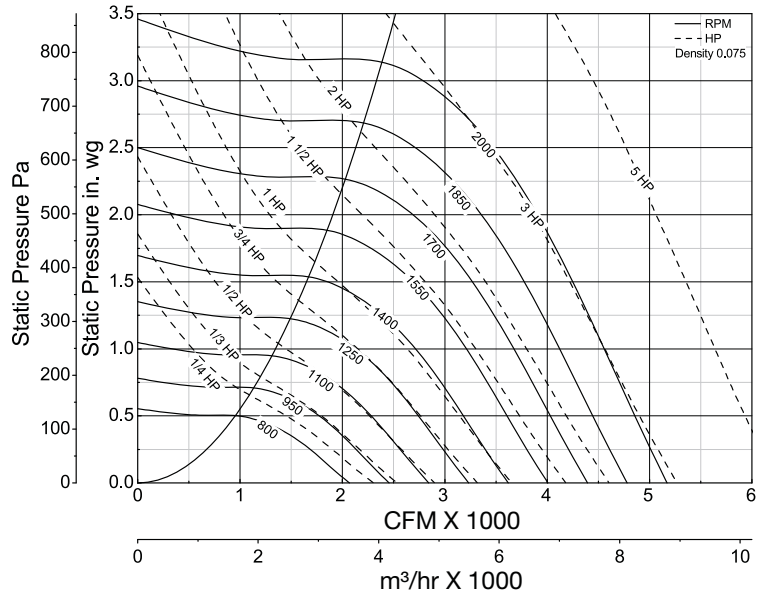
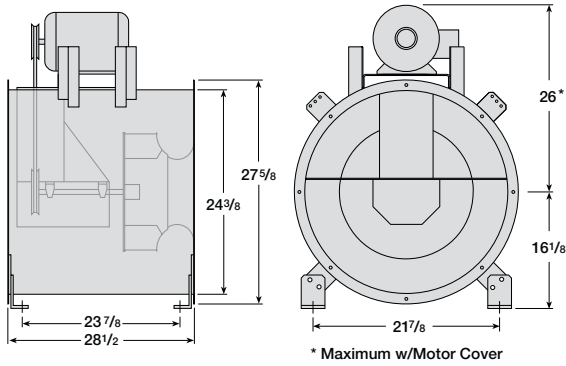
CFM	OV	Static Pressure in Inches wg																	
		0.25		0.5		1		1.5		2		2.5		3		3.5		4	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
800	353	828	0.08	1026	0.14	1379	0.30												
		3.8		5.6		10.4													
1000	442	934	0.11	1108	0.18	1418	0.35	1692	0.55										
		4.4		6.0		10.1		13.5											
1200	530	1048	0.16	1206	0.24	1479	0.42	1731	0.64	1961	0.87								
		5.8		7.2		10.1		13.0		16.5									
1400	619	1171	0.22	1313	0.31	1562	0.51	1784	0.73	2002	0.99	2201	1.26	2391	1.55				
		7.5		8.7		10.6		12.8		16.0		18.9		22					
1600	707	1300	0.30	1424	0.40	1657	0.62	1865	0.86	2053	1.12	2247	1.41	2425	1.71	2596	2.03	2759	2.37
		9.7		10.0		11.5		13.3		15.6		18.4		21		24		27	
1800	796	1431	0.39	1545	0.51	1759	0.75	1950	1.01	2134	1.29	2300	1.57	2472	1.89	2636	2.23	2790	2.58
		11.4		11.3		12.5		14.4		16.0		18.1		21		24		26	
2000	884	1565	0.51	1669	0.63	1868	0.90	2050	1.18	2217	1.48	2381	1.78	2531	2.10	2683	2.44	2836	2.82
		12.7		12.7		13.7		15.7		17.0		18.6		21		23		26	
2200	973	1700	0.64	1797	0.78	1979	1.07	2152	1.38	2312	1.69	2464	2.02	2612	2.36	2750	2.70	2883	3.06
		14.2		14.5		15.6		16.9		18.3		19.8		21		23		26	
2400	1061	1836	0.81	1928	0.96	2097	1.27	2260	1.60	2413	1.94	2556	2.28	2695	2.64	2831	3.01	2959	3.38
		16.4		16.9		17.4		18.2		19.7		21		23		24		26	
2600	1150	1975	1.00	2060	1.16	2219	1.50	2371	1.85	2517	2.21	2656	2.57	2785	2.95	2914	3.34		
		19.0		19.2		19.3		19.6		21		23		24		26			
2800	1238	2115	1.22	2194	1.40	2343	1.75	2484	2.12	2626	2.51	2758	2.90	2885	3.30				
		21		21		21		22		23		24		26					
3000	1327	2256	1.48	2329	1.66	2470	2.04	2605	2.43	2737	2.84	2864	3.25						
		24		24		24		24		25		26							
3200	1415	2397	1.77	2464	1.96	2600	2.36	2728	2.78	2849	3.20								
		26		26		26		27		27									
3400	1504	2539	2.10	2601	2.30	2731	2.72	2852	3.16	2969	3.61								
		29		29		30		30		30									
3600	1592	2681	2.47	2739	2.67	2863	3.12												
		33		33		33													

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories) in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-1-16

## Level 1 Construction



Dimensions shown in inches

Maximum rpm — 2000

Outlet Velocity = cfm X 0.309

Tip Speed = rpm X 4.384

Maximum bhp at a given rpm — (rpm/1378)<sup>3</sup>

Max Motor Frame Size - 182T

CFM	OV	Static Pressure in Inches wg																	
		0.125		0.25		0.5		0.75		1		1.25		1.5		1.75		2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
1000	308	507	0.05	612	0.09	802	0.17												
		3.7		4.3		5.9													
1250	385	584	0.08	671	0.12	833	0.21	985	0.32										
		4.5		4.9		6.2		8.1											
1500	462	668	0.11	743	0.16	884	0.26	1016	0.38	1145	0.52								
		5.4		5.8		6.9		8.4		10.3									
1750	540	755	0.16	821	0.21	944	0.32	1065	0.45	1176	0.59	1289	0.75	1392	0.91				
		6.4		6.8		7.9		9.3		10.5		12.0		13.6					
2000	617	844	0.22	904	0.28	1014	0.40	1119	0.54	1225	0.69	1322	0.85	1422	1.02	1517	1.20	1605	1.39
		7.6		8.1		9.2		10.4		11.3		12.4		14.0		15.7		17.5	
2250	694	934	0.30	989	0.36	1090	0.49	1185	0.64	1278	0.80	1373	0.97	1460	1.15	1547	1.34	1635	1.54
		8.9		9.4		10.7		11.4		12.3		13.3		14.6		16.1		17.9	
2500	771	1026	0.39	1077	0.47	1169	0.61	1257	0.76	1342	0.92	1425	1.10	1511	1.30	1591	1.49	1666	1.70
		10.4		11.0		11.9		12.6		13.4		14.4		15.6		16.9		18.4	
2750	848	1118	0.51	1166	0.59	1252	0.74	1334	0.91	1411	1.07	1489	1.26	1564	1.46	1643	1.67	1717	1.88
		12.1		12.4		13.1		13.8		14.7		15.7		16.8		18.1		19.4	
3000	925	1210	0.64	1256	0.73	1337	0.90	1412	1.07	1486	1.25	1556	1.44	1627	1.65	1695	1.86	1769	2.09
		13.4		13.8		14.5		15.2		16.1		17.1		18.3		19.4		21	
3250	1003	1303	0.80	1347	0.90	1423	1.08	1494	1.27	1563	1.46	1630	1.66	1695	1.86	1760	2.09	1823	2.32
		14.9		15.3		16.1		16.9		17.7		18.7		19.9		21		22	
3500	1080	1397	0.98	1438	1.09	1511	1.28	1578	1.48	1642	1.69	1706	1.90	1768	2.11	1828	2.33	1889	2.58
		16.6		17.0		17.9		18.7		19.5		21		22		23		24	
3750	1157	1491	1.19	1530	1.30	1599	1.52	1663	1.73	1725	1.94	1784	2.16	1844	2.39	1900	2.62	1956	2.86
		18.5		18.9		19.7		21		22		23		24		25		27	
4000	1234	1585	1.43	1622	1.55	1689	1.78	1750	2.00	1809	2.23	1865	2.46	1921	2.70	1976	2.95		
		20		21		22		23		24		25		26		28			
4250	1311	1680	1.70	1714	1.83	1779	2.07	1838	2.31	1893	2.55	1948	2.80	1999	3.04				
		23		23		24		25		26		28		29					
4500	1388	1775	2.00	1807	2.14	1869	2.40	1926	2.65	1979	2.91								
		25		26		27		28		30									

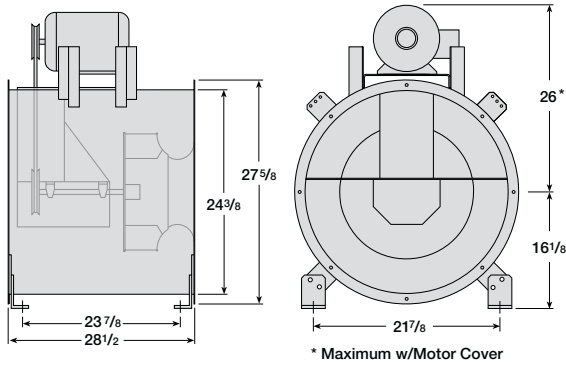
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-2-16

## Level 2 Construction



Dimensions shown in inches

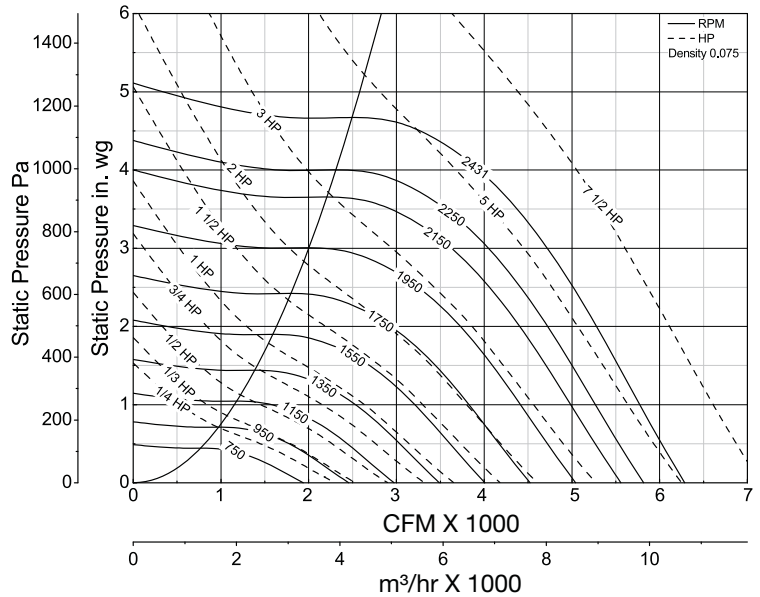
Maximum rpm — 2431

Outlet Velocity = cfm X 0.309

Tip Speed = rpm X 4.32

Maximum bhp at a given rpm —  $(\text{rpm}/1406)^3$

Max Motor Frame Size - 184T



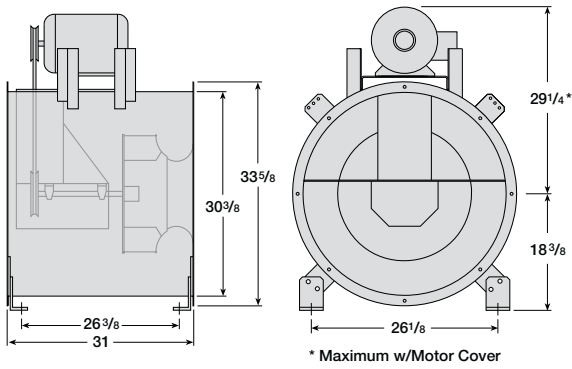
CFM	OV	Static Pressure in Inches wg																	
		0.25		0.5		1		1.5		2		2.5		3		3.5		4	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
1200	370	668	0.11	842	0.20	1137	0.41												
		4.6		6.1		10.4													
1500	462	749	0.15	899	0.25	1166	0.49	1395	0.77										
		5.5		6.8		10.2		13.8											
1800	555	843	0.21	969	0.33	1208	0.59	1424	0.89	1616	1.21								
		7.1		7.7		10.4		13.5		16.8									
2100	648	944	0.30	1053	0.42	1268	0.71	1461	1.03	1647	1.38	1813	1.75	1972	2.15				
		8.3		8.8		11.1		13.4		16.6		19.6		22					
2400	740	1047	0.40	1144	0.54	1336	0.85	1518	1.20	1684	1.57	1847	1.97	1996	2.38	2140	2.83	2275	3.29
		9.9		10.5		12.0		14.0		16.6		19.5		22		25		27	
2700	833	1152	0.53	1243	0.68	1412	1.01	1579	1.39	1739	1.79	1885	2.21	2033	2.66	2169	3.12	2297	3.59
		11.6		12.2		13.2		15.0		17.1		19.5		22		25		28	
3000	925	1260	0.69	1345	0.86	1498	1.21	1651	1.61	1799	2.04	1941	2.48	2070	2.95	2206	3.44	2333	3.94
		13.2		13.6		14.4		16.2		18.2		20		23		25		28	
3300	1018	1373	0.89	1448	1.07	1588	1.44	1727	1.86	1866	2.31	2001	2.79	2129	3.28	2247	3.79	2370	4.32
		14.7		15.1		16.1		17.7		19.5		22		24		26		29	
3600	1111	1486	1.12	1553	1.31	1686	1.71	1813	2.15	1939	2.62	2065	3.12	2188	3.65	2306	4.18	2416	4.73
		16.6		17.1		18.2		19.3		21		23		25		28		30	
3900	1203	1600	1.40	1658	1.59	1786	2.02	1900	2.47	2020	2.97	2138	3.49	2252	4.04	2366	4.61		
		18.9		19.4		20		21		23		25		27		29			
4200	1296	1715	1.72	1766	1.91	1888	2.38	1996	2.85	2106	3.36	2213	3.90	2324	4.48	2430	5.08		
		21		21		22		23		24		26		29		31			
4500	1388	1831	2.08	1878	2.28	1990	2.77	2095	3.28	2193	3.80	2298	4.37	2398	4.96				
		23		23		24		25		27		28		31					
4800	1481	1946	2.50	1992	2.71	2094	3.22	2196	3.76	2289	4.30	2385	4.88						
		25		26		27		28		29		31							
5100	1574	2062	2.96	2105	3.19	2199	3.71	2297	4.29	2388	4.86								
		28		28		29		30		32									
5400	1666	2179	3.49	2219	3.73	2305	4.26	2399	4.87										
		30		31		32		33											

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories) in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-1-18

## Level 1 Construction



Dimensions shown in inches

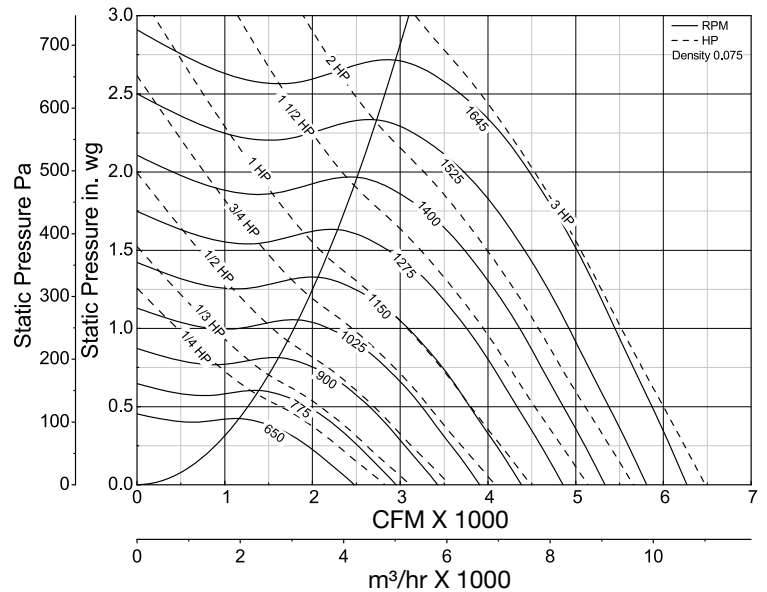
Maximum rpm — 1645

Outlet Velocity = cfm X 0.199

Tip Speed = rpm X 4.843

Maximum bhp at a given rpm — (rpm/1147)<sup>3</sup>

Max Motor Frame Size - 182T



CFM	OV	Static Pressure in Inches wg																	
		0.125		0.25		0.5		0.75		1		1.25		1.5		1.75		2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
1500	298	486	0.08	568	0.12	724	0.23												
		4.3		4.9		6.2													
1800	357	552	0.11	623	0.16	755	0.28	883	0.42										
		5.4		5.7		6.7		8.1											
2100	417	622	0.16	683	0.21	799	0.34	911	0.48	1022	0.65	1123	0.82						
		6.7		6.8		7.7		8.5		9.9		11.6							
2400	477	693	0.21	749	0.28	852	0.41	950	0.56	1048	0.73	1147	0.92	1238	1.12	1322	1.33		
		8.0		8.1		9.0		9.5		10.3		12.0		13.5		14.8			
2700	536	765	0.29	817	0.36	911	0.50	1001	0.66	1088	0.84	1174	1.03	1262	1.24	1346	1.46	1424	1.69
		9.1		9.4		10.3		10.5		11.3		12.5		13.8		15.0		16.4	
3000	596	838	0.37	887	0.45	972	0.61	1056	0.78	1136	0.97	1214	1.17	1292	1.38	1369	1.61	1448	1.85
		10.2		10.6		11.1		11.5		12.2		13.3		14.2		15.3		16.6	
3300	656	912	0.48	957	0.57	1038	0.74	1115	0.92	1187	1.11	1261	1.32	1331	1.54	1403	1.77	1472	2.02
		11.2		11.4		12.0		12.6		13.3		14.1		14.9		15.8		16.8	
3600	715	987	0.61	1029	0.70	1105	0.89	1176	1.08	1246	1.28	1312	1.49	1379	1.72	1443	1.96	1510	2.22
		12.1		12.5		13.1		13.8		14.5		15.2		16.0		16.8		17.8	
3900	775	1063	0.75	1102	0.85	1174	1.06	1239	1.26	1305	1.47	1368	1.70	1430	1.93	1491	2.18	1549	2.44
		13.3		13.7		14.3		14.9		15.7		16.5		17.3		18.1		18.9	
4200	834	1139	0.92	1175	1.03	1244	1.25	1307	1.47	1366	1.69	1428	1.93	1485	2.17	1542	2.43	1599	2.69
		14.6		14.9		15.5		16.3		17.1		17.9		18.7		19.5		20	
4500	894	1215	1.12	1249	1.24	1315	1.47	1375	1.70	1430	1.93	1488	2.18	1544	2.44	1597	2.70		
		16.0		16.2		16.9		17.6		18.5		19.4		20		21			
4800	954	1292	1.34	1323	1.47	1386	1.72	1444	1.97	1498	2.21	1549	2.46	1604	2.73				
		17.1		17.4		18.1		19.0		19.9		21		22					
5100	1013	1369	1.59	1399	1.72	1458	1.99	1513	2.26	1565	2.52	1615	2.78						
		18.4		18.7		19.5		20		21		23							
5400	1073	1446	1.88	1474	2.01	1530	2.29	1584	2.58	1634	2.85								
		19.7		20		21		22		23									
5700	1133	1523	2.19	1550	2.33	1603	2.63												
		21		22		22													

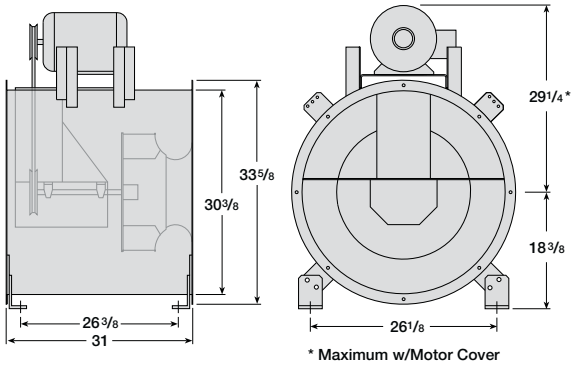
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-2-18

## Level 2 Construction



Dimensions shown in inches

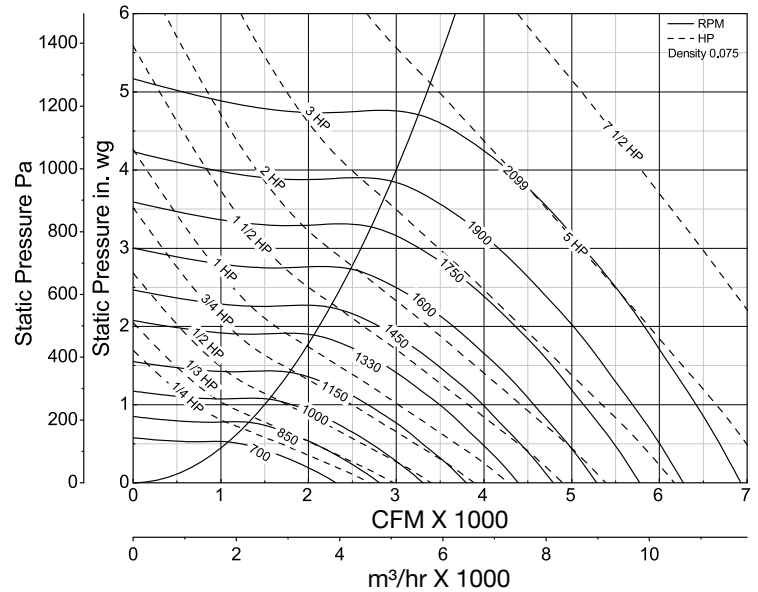
Maximum rpm — 2099

Outlet Velocity = cfm X 0.199

Tip Speed = rpm X 4.78

Maximum bhp at a given rpm —  $(\text{rpm}/1224)^3$

Max Motor Frame Size - 184T



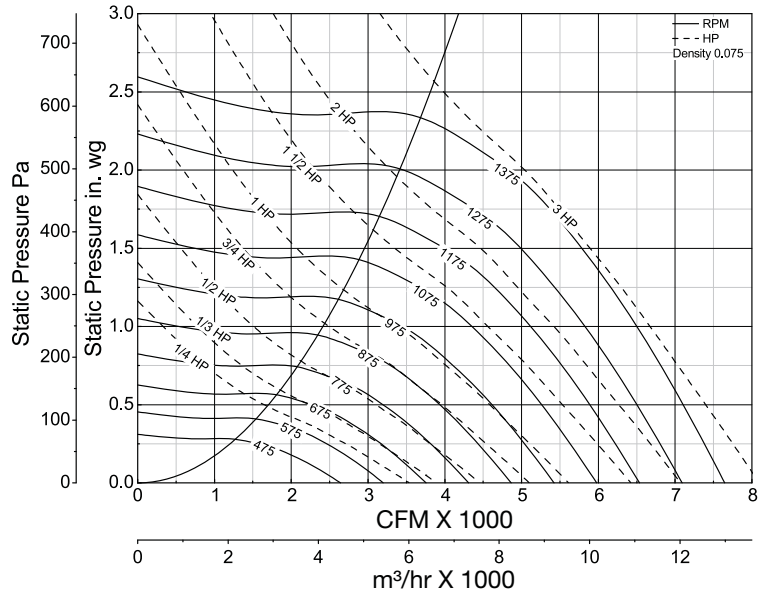
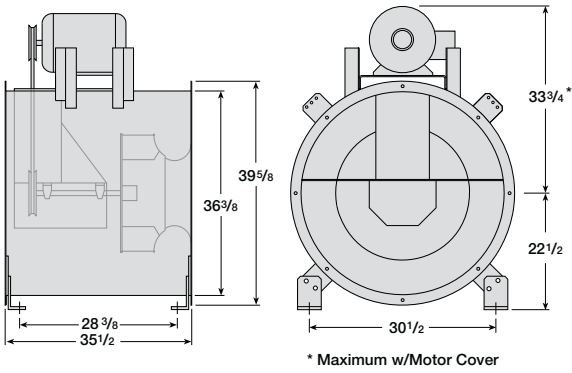
CFM	OV	Static Pressure in Inches wg																	
		0.25		0.5		1		1.5		2		2.5		3		3.5		4	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
1400	278	588	0.11	725	0.20														
		5.2		6.2															
1750	347	666	0.16	785	0.26	995	0.50												
		6.8		7.5		9.4													
2100	417	752	0.23	857	0.34	1045	0.61	1214	0.90	1369	1.22								
		9.6		8.9		10.1		12.5		15.2									
2450	487	843	0.31	936	0.44	1105	0.73	1259	1.05	1404	1.40	1536	1.76						
		11.2		10.4		11.3		13.1		15.7		17.9							
2800	556	937	0.42	1021	0.57	1177	0.89	1318	1.23	1450	1.61	1577	2.00	1697	2.41	1812	2.83		
		12.6		12.1		12.9		14.5		16.7		18.4		20		23			
3150	626	1033	0.55	1110	0.72	1253	1.07	1384	1.44	1508	1.84	1624	2.26	1738	2.70	1847	3.15	1949	3.62
		13.9		13.9		14.6		16.3		17.8		19.1		21		23		25	
3500	695	1131	0.71	1202	0.90	1333	1.28	1457	1.69	1571	2.11	1682	2.55	1787	3.02	1889	3.50	1991	4.00
		15.7		15.8		16.6		18.5		19.3		20		21		23		26	
3850	765	1230	0.91	1296	1.11	1416	1.52	1532	1.96	1642	2.41	1743	2.88	1845	3.37	1942	3.88	2032	4.40
		17.7		18.0		19.1		20		21		22		23		24		26	
4200	834	1331	1.14	1391	1.35	1505	1.80	1612	2.27	1715	2.75	1815	3.25	1906	3.76	2000	4.30	2090	4.85
		20		21		21		22		23		24		25		26		28	
4550	904	1433	1.41	1488	1.64	1595	2.12	1694	2.62	1793	3.14	1887	3.67	1977	4.21	2062	4.76		
		23		23		23		24		24		25		27		28			
4900	974	1535	1.73	1585	1.96	1687	2.48	1781	3.01	1873	3.56	1963	4.12	2050	4.69				
		25		25		25		26		26		27		29					
5250	1043	1638	2.09	1683	2.33	1781	2.89	1871	3.45	1955	4.03	2042	4.62						
		27		27		27		28		28		30							
5600	1113	1741	2.50	1784	2.76	1875	3.34	1961	3.94	2042	4.54								
		29		29		29		30		31									
5950	1182	1844	2.96	1885	3.24	1971	3.84	2053	4.48										
		31		31		31		33											
6300	1252	1948	3.48	1987	3.77	2067	4.40												
		33		33		34													

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories) in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-1-22

## Level 1 Construction



Dimensions shown in inches

Maximum rpm — 1375

Outlet Velocity = cfm X 0.139

Tip Speed = rpm X 5.595

Maximum bhp at a given rpm — (rpm/962)<sup>3</sup>

Max Motor Frame Size - 182T

CFM	OV	Static Pressure in Inches wg																	
		0.125		0.25		0.5		0.75		1		1.25		1.5		1.75		2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
1600	221	388	0.07	477	0.12														
		3.2		4.5															
2000	277	442	0.10	516	0.15	656	0.30												
		3.9		5.0		6.7													
2400	332	502	0.14	566	0.20	687	0.36	800	0.54	900	0.73								
		4.9		5.6		6.9		8.6		10.4									
2800	387	564	0.19	621	0.27	727	0.43	829	0.62	926	0.83	1013	1.05						
		6.0		6.4		7.6		8.6		10.3		12.1							
3200	443	629	0.26	680	0.34	776	0.52	865	0.72	955	0.95	1039	1.19	1119	1.44	1192	1.69		
		7.1		7.5		8.3		9.3		10.5		12.3		14.2		16.3			
3600	498	695	0.35	741	0.44	829	0.63	911	0.85	991	1.08	1070	1.34	1145	1.60	1218	1.88	1286	2.16
		8.5		8.7		9.2		10.2		11.4		12.7		14.5		16.5		19.0	
4000	554	762	0.46	804	0.56	884	0.76	960	0.99	1033	1.23	1105	1.49	1177	1.78	1244	2.08	1312	2.38
		9.7		9.8		10.3		11.4		12.6		14.0		15.1		16.6		18.9	
4400	609	831	0.59	869	0.70	943	0.92	1014	1.16	1082	1.42	1147	1.68	1213	1.97	1278	2.29	1340	2.61
		10.9		11.1		11.8		12.9		14.2		15.3		16.3		17.4		18.9	
4800	664	900	0.74	935	0.86	1004	1.10	1068	1.35	1133	1.63	1195	1.91	1254	2.20	1314	2.51		
		12.4		12.6		13.5		14.6		15.9		16.8		17.7		18.8			
5200	720	969	0.92	1002	1.05	1065	1.31	1127	1.58	1187	1.86	1244	2.16	1302	2.47	1356	2.78		
		14.0		14.3		15.2		16.6		17.4		18.3		19.3		20			
5600	775	1038	1.13	1069	1.26	1129	1.54	1187	1.83	1242	2.12	1298	2.44	1351	2.77				
		15.8		16.3		17.3		18.1		19		20		21					
6000	831	1108	1.36	1137	1.51	1193	1.81	1248	2.11	1301	2.42	1352	2.75						
		17.9		18.2		18.9		19.8		21		22							
6400	886	1178	1.63	1206	1.79	1259	2.10	1309	2.43	1361	2.76								
		19.3		19.7		21		22		23									
6800	941	1249	1.94	1274	2.10	1325	2.43	1373	2.78										
		21		21		22		24											
7200	997	1319	2.28	1344	2.45														
		23		23															

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

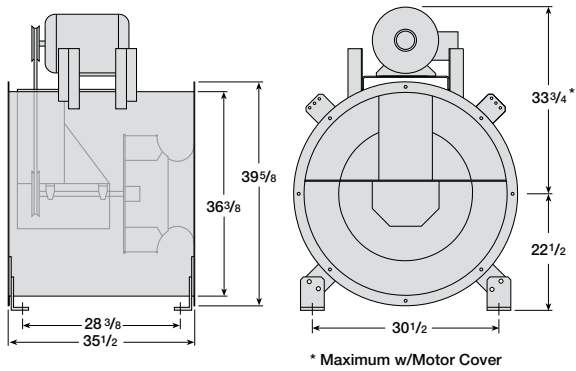
The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.





# TCB-2-22

## Level 2 Construction



Dimensions shown in inches

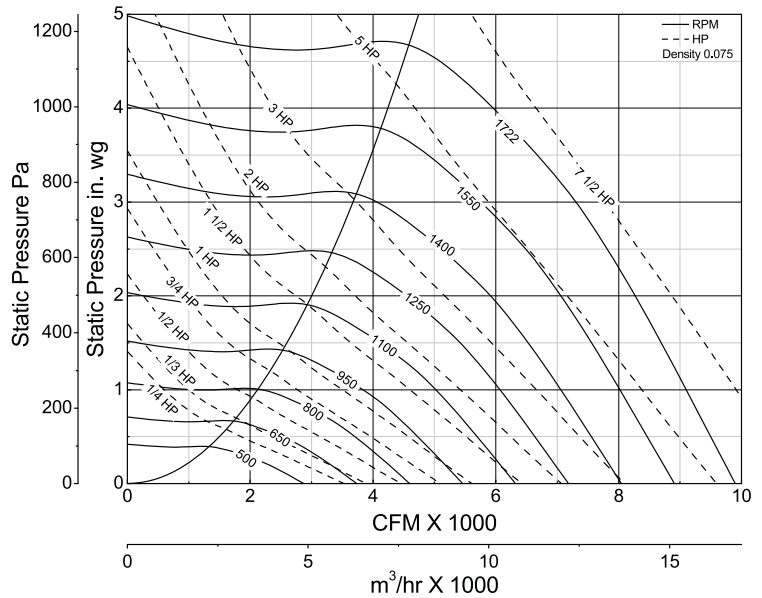
Maximum rpm — 1722

Outlet Velocity = cfm X 0.139

Tip Speed = rpm X 5.83

Maximum bhp at a given rpm —  $(\text{rpm}/910)^3$

Max Motor Frame Size - 213T



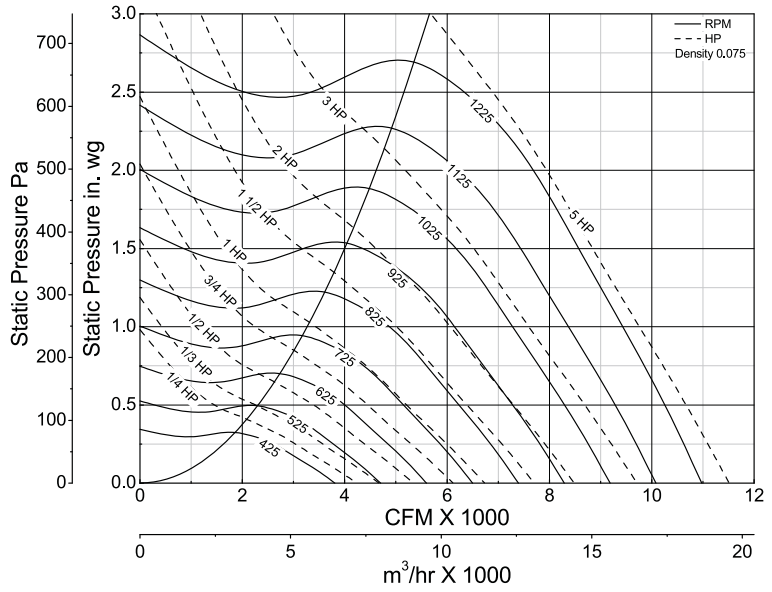
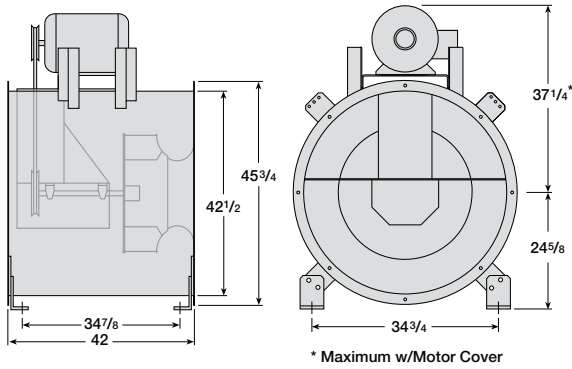
CFM	OV	Static Pressure in Inches wg																	
		0.25		0.5		1		1.5		2		2.5		3		3.5		4	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
2000	277	484	0.15	598	0.27														
		4.7		5.5															
2500	346	549	0.22	648	0.36	823	0.67												
		6.4		6.5		9.4													
3000	415	620	0.30	705	0.47	863	0.82	1004	1.21	1127	1.61								
		7.6		7.8		10.0		12.2		14.6									
3500	484	695	0.42	771	0.60	913	1.00	1040	1.43	1162	1.88	1270	2.35						
		9.0		9.3		11.0		12.9		15.3		17.1							
4000	554	773	0.56	841	0.77	969	1.21	1089	1.68	1197	2.18	1305	2.69	1403	3.22	1493	3.76		
		10.8		11.0		12.4		14.2		16.0		17.7		19.7		22			
4500	623	853	0.74	915	0.97	1030	1.45	1141	1.96	1246	2.50	1341	3.07	1438	3.64	1528	4.23	1612	4.83
		12.8		12.9		14.0		15.8		17.1		18.4		20		22		25	
5000	692	933	0.96	991	1.21	1098	1.73	1199	2.28	1297	2.87	1390	3.47	1476	4.10	1563	4.73	1646	5.38
		14.6		14.8		16.0		17.5		18.4		19.5		21		23		25	
5500	761	1015	1.22	1069	1.49	1167	2.05	1261	2.65	1353	3.27	1440	3.92	1525	4.59	1604	5.27	1682	5.97
		16.6		17.0		18.4		19.0		19.7		21		22		24		26	
6000	831	1098	1.52	1148	1.82	1241	2.43	1328	3.06	1411	3.73	1495	4.42	1575	5.13	1653	5.85		
		18.7		19.3		20		20		21		22		24		25			
6500	900	1181	1.88	1228	2.20	1315	2.85	1396	3.53	1476	4.24	1553	4.97	1630	5.72	1704	6.49		
		21		21		22		22		23		24		25		27			
7000	969	1265	2.29	1309	2.64	1391	3.34	1468	4.06	1543	4.80	1614	5.57	1687	6.36				
		23		23		24		24		25		26		27					
7500	1038	1349	2.76	1390	3.14	1468	3.88	1542	4.64	1611	5.43	1681	6.24						
		25		25		26		26		27		28							
8000	1108	1433	3.30	1472	3.70	1546	4.49	1617	5.30	1683	6.13								
		27		28		28		29		29									
8500	1177	1518	3.90	1555	4.33	1626	5.17	1692	6.02										
		30		30		31		32											
9000	1246	1603	4.57	1638	5.03	1706	5.92												
		33		34		34													

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories) in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-1-24

## Level 1 Construction



Dimensions shown in inches

Maximum rpm — 1225

Outlet Velocity = cfm X 0.102

Tip Speed = rpm X 6.414

Maximum bhp at a given rpm — (rpm/729)<sup>3</sup>

Max Motor Frame Size - 184T

CFM	OV	Static Pressure in Inches wg																	
		0.125		0.25		0.5		0.75		1		1.25		1.5		1.75		2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
2500	253	355	0.12	416	0.19	536	0.36												
		3.3		4.0		6.1													
3000	304	401	0.16	456	0.25	557	0.44	655	0.66										
		4.3		5.1		6.5		9.1											
3500	355	448	0.23	500	0.32	587	0.52	672	0.76	757	1.02								
		5.7		6.2		7.9		9.5		10.8									
4000	406	497	0.31	545	0.41	626	0.63	701	0.88	775	1.16	850	1.46						
		7.0		7.7		9.8		10.3		11.1		13.1							
4500	456	548	0.41	591	0.53	667	0.77	735	1.03	803	1.32	867	1.63	935	1.96	998	2.31		
		8.4		9.4		10.9		11.5		12.1		13.5		15.2		17.0			
5000	507	599	0.53	639	0.66	711	0.92	774	1.20	833	1.50	896	1.83	953	2.17	1015	2.54	1073	2.92
		10.3		11.3		12.2		12.8		13.6		14.5		15.6		17.3		19.0	
5500	558	651	0.68	688	0.82	757	1.11	816	1.40	872	1.72	926	2.05	983	2.41	1035	2.79	1091	3.18
		12.1		12.6		13.7		14.4		15.5		16.1		16.8		17.9		19.5	
6000	609	704	0.85	738	1.00	803	1.32	860	1.64	913	1.97	964	2.31	1013	2.68	1065	3.07	1114	3.48
		13.6		14.1		15.2		16.6		17.1		17.7		18.3		19.2		20	
6500	659	757	1.05	789	1.22	850	1.55	905	1.90	955	2.25	1004	2.61	1050	2.99	1095	3.39	1144	3.82
		15.1		15.7		17.2		18.4		18.8		19.3		20		21		22	
7000	710	811	1.29	840	1.46	897	1.82	951	2.20	1000	2.57	1045	2.95	1090	3.35	1132	3.75	1174	4.18
		16.9		17.7		19.0		19.8		20		21		22		23		24	
7500	761	865	1.56	892	1.74	946	2.13	997	2.52	1045	2.92	1089	3.32	1130	3.73	1172	4.16	1212	4.60
		19.1		19.7		20		21		22		23		24		25		26	
8000	812	919	1.87	944	2.06	995	2.47	1044	2.88	1091	3.31	1133	3.74	1173	4.17	1213	4.61		
		21		21		22		23		24		25		25		26			
8500	862	973	2.21	997	2.42	1046	2.85	1092	3.29	1137	3.74	1179	4.19	1218	4.64				
		22		23		23		24		25		27		28					
9000	913	1028	2.60	1051	2.82	1096	3.27	1140	3.73	1183	4.20	1224	4.69						
		24		24		25		26		27		29							
9500	964	1082	3.03	1104	3.26	1147	3.73	1189	4.22										
		25		26		27		28											

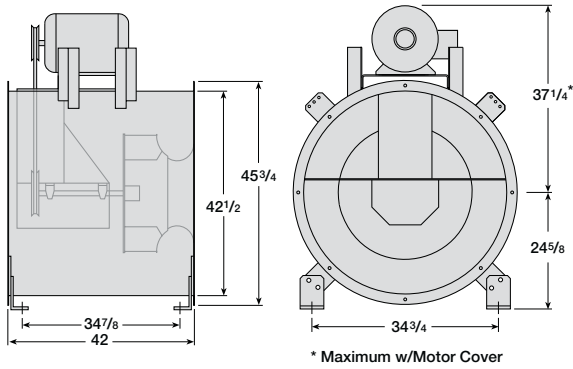
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-2-24

## Level 2 Construction



Dimensions shown in inches

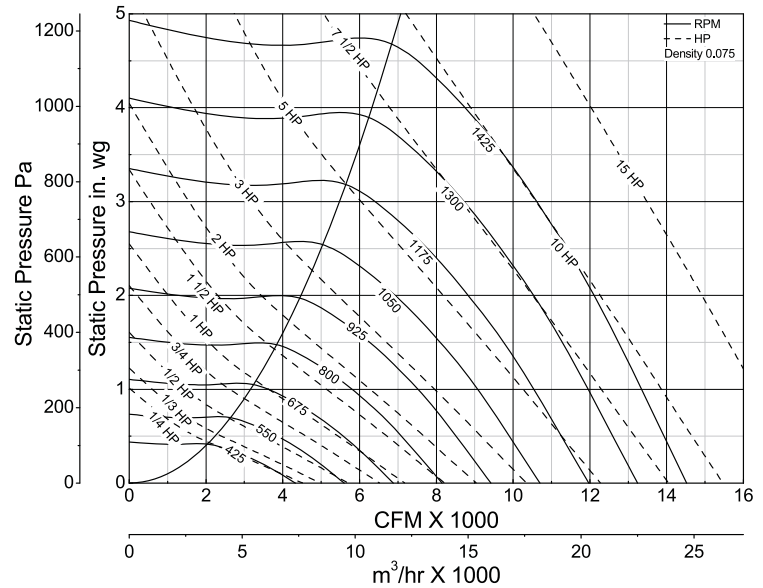
Maximum rpm — 1425

Outlet Velocity = cfm X 0.102

Tip Speed = rpm X 6.41

Maximum bhp at a given rpm — (rpm/661)<sup>3</sup>

Max Motor Frame Size - 215T



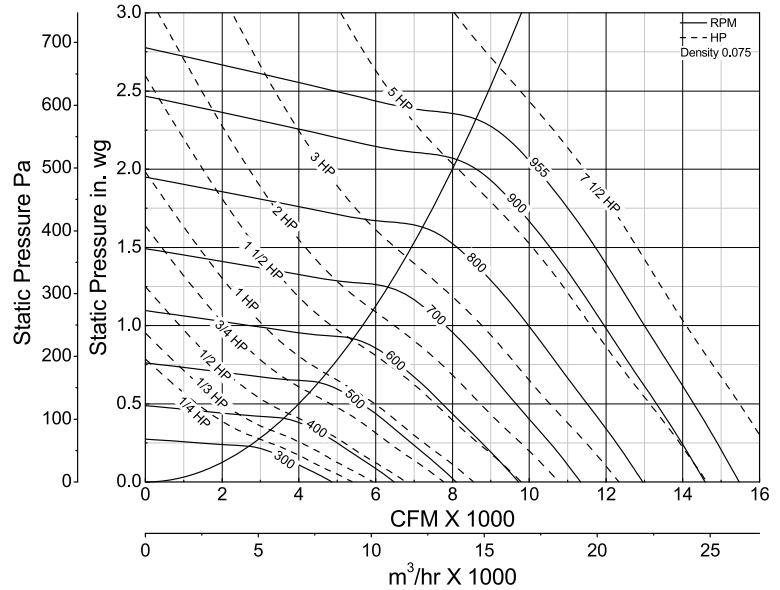
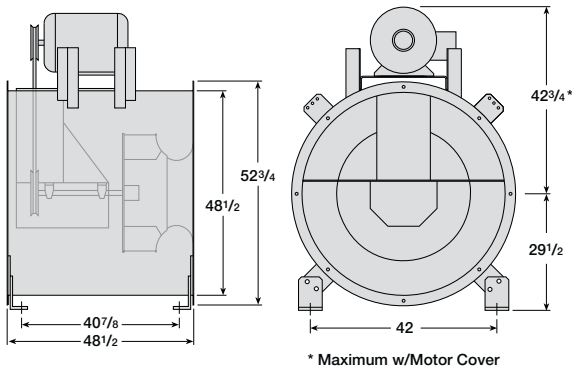
CFM	OV	Static Pressure in Inches wg																	
		0.25		0.5		1		1.5		2		2.5		3		3.5		4	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
2800	284	393	0.21	489	0.39														
		5.4		6.7															
3500	355	443	0.30	528	0.50	672	0.97												
		7.0		7.9		10.2													
4200	426	497	0.42	572	0.65	703	1.17	820	1.74										
		8.5		9.3		11.0		13.8											
4900	497	555	0.57	623	0.83	743	1.41	849	2.04	949	2.71								
		10.5		11.2		12.5		14.7		17.9									
5600	568	616	0.76	676	1.05	786	1.69	887	2.37	978	3.10	1066	3.87	1146	4.66				
		12.7		12.9		14.1		16.2		18.5		21		23					
6300	639	679	0.99	733	1.32	834	2.01	928	2.76	1015	3.54	1095	4.36	1175	5.22	1248	6.10		
		14.7		14.9		16.1		18.2		19.5		21		23		26			
7000	710	742	1.28	792	1.64	886	2.39	973	3.19	1056	4.04	1133	4.92	1204	5.82	1277	6.77	1345	7.73
		16.5		16.8		18.2		20		21		22		24		26		29	
7700	781	806	1.62	852	2.01	939	2.83	1021	3.69	1098	4.58	1173	5.52	1243	6.49	1308	7.49	1374	8.52
		18.4		18.9		21		22		23		24		25		27		29	
8400	852	871	2.03	914	2.45	994	3.33	1072	4.25	1145	5.20	1214	6.19	1283	7.22	1347	8.28	1407	9.36
		21		21		23		23		24		25		27		28		30	
9100	923	937	2.50	977	2.95	1052	3.89	1125	4.87	1194	5.89	1260	6.94	1324	8.02	1387	9.14		
		23		24		24		25		26		27		29		30			
9800	994	1002	3.04	1040	3.53	1111	4.53	1179	5.57	1246	6.65	1308	7.76	1369	8.90				
		25		26		27		28		29		30		31					
10500	1065	1069	3.66	1105	4.19	1171	5.25	1235	6.35	1298	7.49	1359	8.66	1417	9.86				
		27		28		29		30		32		33		34					
11200	1137	1135	4.36	1169	4.93	1233	6.05	1293	7.22	1352	8.42	1411	9.65						
		30		31		32		33		35		36							
11900	1208	1202	5.15	1234	5.76	1295	6.95	1352	8.18	1408	9.44								
		33		34		35		36		38									
12600	1279	1269	6.04	1299	6.68	1358	7.94	1412	9.23										
		36		37		38		40											

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories) in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-1-30

## Level 1 Construction



Dimensions shown in inches

Maximum rpm — 955

Outlet Velocity = cfm X 0.078

Tip Speed = rpm X 7.984

Maximum bhp at a given rpm —  $(rpm/514)^3$

Max Motor Frame Size - 213T

CFM	OV	Static Pressure in Inches wg																	
		0.125		0.25		0.5		.75		1		1.25		1.5		1.75		2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
3750	292	293	0.19	343	0.30														
		4.4		4.9															
4500	350	332	0.27	376	0.39	456	0.69												
		5.1		5.5		6.6													
5250	409	372	0.37	413	0.51	483	0.83	550	1.21										
		6.0		6.3		7.6		9.2											
6000	467	413	0.50	451	0.67	516	1.01	576	1.41	634	1.84								
		7.1		7.6		9.0		10.1		11.3									
6750	526	455	0.67	490	0.85	550	1.22	606	1.64	659	2.10	709	2.59						
		8.4		9.0		10.5		11.3		12.2		13.6							
7500	584	497	0.87	530	1.08	587	1.48	639	1.92	687	2.39	735	2.91	781	3.46	833	4.03		
		9.9		11.0		12.0		12.7		13.6		14.6		16.0		18.2			
8250	643	540	1.11	571	1.34	626	1.79	673	2.24	719	2.74	762	3.27	807	3.85	849	4.44	894	5.06
		12.3		12.6		13.5		14.3		15.3		16.2		17.6		19.1		21	
9000	701	584	1.39	613	1.64	665	2.13	710	2.62	753	3.13	795	3.70	833	4.27	875	4.90	913	5.55
		13.6		14.0		15.0		16.1		16.9		18.1		19.4		21		23	
9750	759	629	1.73	655	1.99	704	2.53	748	3.06	788	3.59	828	4.17	866	4.78	901	5.41	940	6.09
		15.0		15.5		16.6		17.7		18.8		20		22		23		25	
10500	818	673	2.11	698	2.39	745	2.97	787	3.55	826	4.12	862	4.70	899	5.34	934	6.00		
		16.5		17.0		18.1		19.5		21		22		24		26			
11250	876	718	2.56	740	2.85	785	3.48	826	4.09	864	4.70	899	5.31	932	5.95				
		18.1		18.5		20		22		23		25		27					
12000	935	763	3.06	784	3.37	827	4.03	866	4.69	902	5.35	936	6.00						
		19.7		20		22		24		26		28							
12750	993	808	3.63	828	3.95	868	4.65	906	5.36	941	6.05								
		22		23		25		27		29									
13500	1052	853	4.27	872	4.61	910	5.34	947	6.10										
		25		25		28		30											
14250	1110	898	4.98	916	5.34	953	6.10												
		28		29		31													

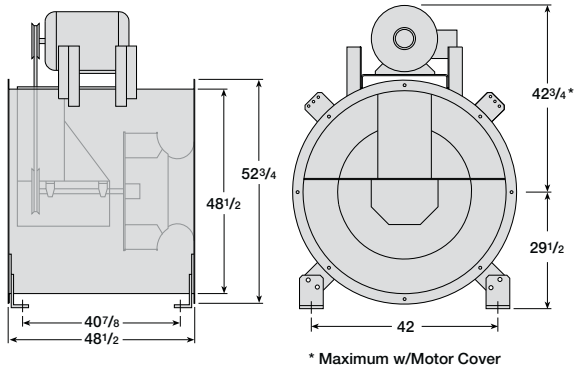
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-2-30

## Level 2 Construction



Dimensions shown in inches

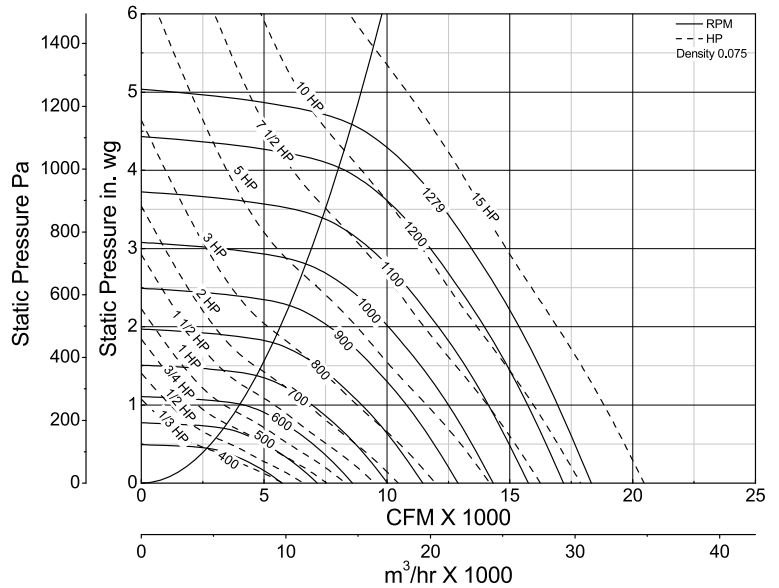
Maximum rpm — 1279

Outlet Velocity = cfm X 0.078

Tip Speed = rpm X 7.85

Maximum bhp at a given rpm — (rpm/548)<sup>3</sup>

Max Motor Frame Size - 254T



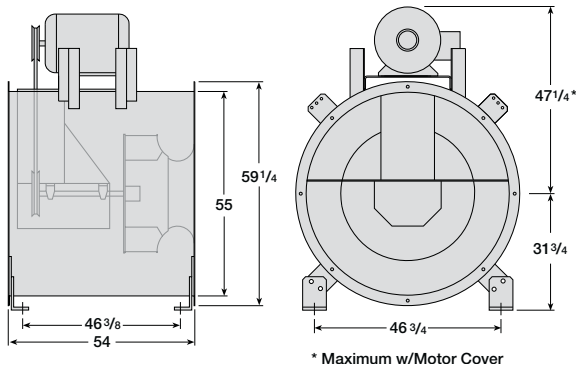
CFM	OV	Static Pressure in Inches wg																	
		0.25		0.5		1		1.5		2		2.5		3		3.5		4	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
4000	311	375	0.32	456	0.56	597	1.14												
		5.9		6.3		9.5													
4800	374	417	0.44	489	0.71	618	1.33												
		6.8		7.3		9.8													
5600	436	461	0.58	527	0.90	644	1.57	749	2.35	844	3.19								
		8.0		8.4		10.5		13.6		17.2									
6400	498	509	0.76	569	1.11	675	1.85	772	2.66	863	3.58	945	4.54						
		9.5		9.8		11.6		13.8		17.6		21							
7200	561	558	0.99	611	1.37	712	2.19	802	3.05	886	3.99	967	5.03	1040	6.10				
		11.2		11.5		13.0		14.6		17.7		21		23					
8000	623	609	1.26	658	1.68	750	2.57	834	3.48	913	4.48	989	5.55	1062	6.69	1130	7.88	1195	9.11
		13.0		13.3		14.4		16.2		18.1		21		23		26		29	
8800	685	660	1.59	705	2.03	792	3.00	871	4.00	945	5.03	1016	6.14	1084	7.32	1152	8.58	1214	9.87
		15.1		15.2		16.2		18.0		19.5		21		23		26		29	
9600	748	712	1.97	753	2.45	834	3.49	909	4.58	979	5.66	1047	6.82	1111	8.04	1174	9.32	1237	10.7
		16.8		17.0		18.1		19.8		21		22		24		27		29	
10400	810	765	2.42	803	2.93	877	4.04	950	5.20	1017	6.38	1080	7.57	1142	8.85	1201	10.2	1259	11.5
		18.6		19.0		20		21		23		24		26		27		30	
11200	872	818	2.95	854	3.48	923	4.65	992	5.89	1055	7.17	1117	8.43	1174	9.72	1233	11.1		
		21		21		22		23		25		26		28		29			
12000	935	872	3.55	905	4.11	970	5.33	1034	6.67	1096	8.00	1155	9.37	1211	10.7	1265	12.1		
		23		23		24		25		26		28		30		32			
12800	997	926	4.23	957	4.81	1018	6.09	1078	7.49	1138	8.91	1194	10.4	1248	11.8				
		25		26		26		27		29		30		32					
13600	1060	980	4.99	1009	5.60	1067	6.94	1124	8.40	1181	9.91	1235	11.4						
		27		28		29		30		31		33							
14400	1122	1034	5.85	1062	6.49	1117	7.89	1171	9.40	1223	11.0	1277	12.6						
		30		31		32		33		34		36							
15200	1184	1089	6.80	1115	7.47	1168	8.94	1218	10.5	1269	12.2								
		33		34		35		36		38									

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories) in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-1-36

## Level 1 Construction



Dimensions shown in inches

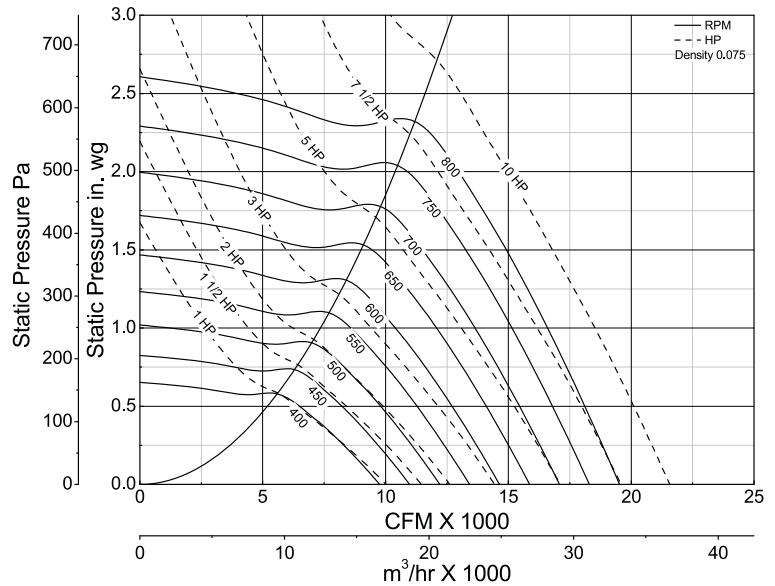
Maximum rpm — 800

Outlet Velocity = cfm X 0.061

Tip Speed = rpm X 9.424

Maximum bhp at a given rpm —  $(\text{rpm}/397)^3$

Max Motor Frame Size - 215T



CFM	OV	Static Pressure in Inches wg																	
		0.125		0.25		0.5		0.75		1		1.25		1.5		1.75		2	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
5600	339	273	0.32	311	0.48	379	0.86												
		5.4		6.5		8.1													
6400	387	301	0.42	336	0.60	398	1.01												
		6.5		7.7		8.7													
7200	436	330	0.55	362	0.75	420	1.18	473	1.67										
		8.0		8.5		9.5		10.6											
8000	484	360	0.70	389	0.92	443	1.39	491	1.90	539	2.46								
		9.2		9.5		10.4		11.6		12.9									
8800	533	390	0.89	417	1.12	468	1.62	514	2.17	557	2.75	599	3.37						
		10.5		10.8		11.6		12.9		14.4		16.1							
9600	581	420	1.11	446	1.35	493	1.89	537	2.47	577	3.08	617	3.73	655	4.41				
		12.0		12.3		13.0		14.5		16.1		17.3		17.8					
10400	630	451	1.37	475	1.63	519	2.20	561	2.80	600	3.45	636	4.12	673	4.84	708	5.57		
		13.8		13.9		14.7		16.4		18.1		18.5		19.0		19.6			
11200	678	482	1.66	505	1.94	547	2.54	586	3.18	623	3.86	659	4.57	692	5.30	727	6.07	759	6.87
		15.4		15.7		16.8		18.5		19.3		19.7		20		21		22	
12000	727	513	2.00	535	2.30	575	2.93	612	3.61	647	4.31	681	5.05	714	5.82	745	6.61	777	7.44
		17.2		17.5		19		20		21		21		21		22		23	
12800	775	545	2.39	565	2.70	603	3.36	638	4.07	673	4.81	705	5.58	737	6.38	766	7.21	796	8.06
		19.1		19.6		21		22		22		22		23		24		25	
13600	824	577	2.83	595	3.15	632	3.84	666	4.59	698	5.36	730	6.16	760	7.00	789	7.85		
		21		22		23		23		23		24		25		26			
14400	872	608	3.31	626	3.66	661	4.38	694	5.16	725	5.96	755	6.80	784	7.66				
		24		24		24		25		25		26		27					
15200	921	640	3.86	657	4.22	690	4.98	722	5.78	752	6.62	781	7.49						
		26		26		26		27		27		28							
16000	969	672	4.46	688	4.84	720	5.63	750	6.46	779	7.34								
		28		28		28		29		30									
16800	1018	704	5.12	720	5.52	750	6.34	779	7.20										
		30		30		31		32											

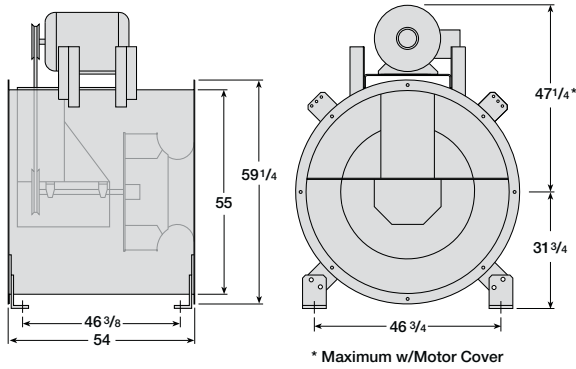
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# TCB-2-36

## Level 2 Construction



Dimensions shown in inches

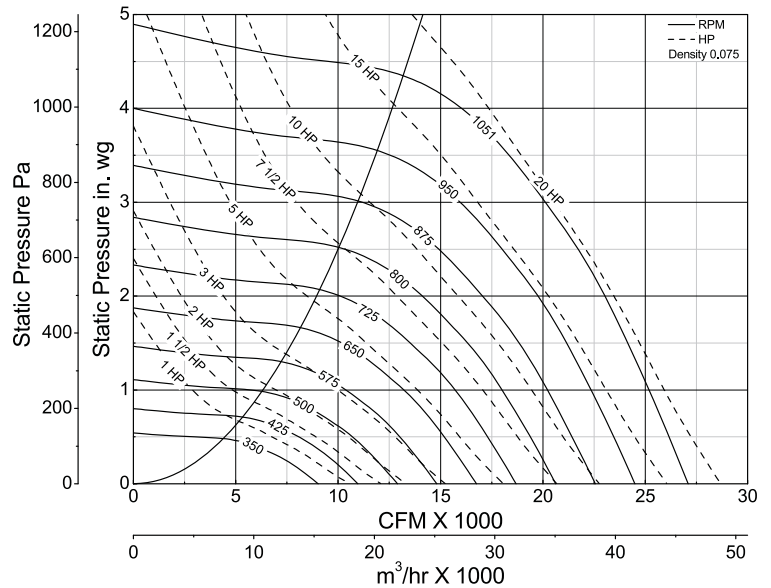
Maximum rpm — 1051

Outlet Velocity = cfm X 0.061

Tip Speed = rpm X 9.56

Maximum bhp at a given rpm — (rpm/391)<sup>3</sup>

Max Motor Frame Size - 256T



CFM	OV	Static Pressure in Inches wg																	
		0.25		0.5		1		1.5		2		2.5		3		3.5		4	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones		Sones	
7200	436	342	0.67	403	1.09	515	2.06												
		7.3		11.4		11.3													
8400	509	380	0.91	434	1.36	532	2.41	625	3.63										
		10.8		13		11.7		14.6											
9600	581	420	1.21	467	1.70	556	2.84	640	4.11	721	5.54								
		14.3		13.7		12.5		14.7		18.3									
10800	654	461	1.59	503	2.12	586	3.34	662	4.69	736	6.17	807	7.79						
		14.6		14.1		13.5		15.5		18.2		22							
12000	727	504	2.06	542	2.63	617	3.92	688	5.37	756	6.90	822	8.57	886	10.4	945	12.2		
		15.2		14.7		14.8		16.7		18.7		21		24		28			
13200	800	547	2.61	581	3.23	650	4.59	717	6.13	779	7.75	841	9.46	901	11.3	960	13.3	1015	15.3
		16.0		15.6		16.3		18.2		20		22		24		27		31	
14400	872	591	3.26	622	3.93	684	5.35	747	6.97	807	8.70	864	10.5	920	12.4	975	14.4	1030	16.5
		17.2		17.4		18.0		19.8		21		23		25		27		31	
15600	945	635	4.02	664	4.74	722	6.25	780	7.94	837	9.76	890	11.7	943	13.6	994	15.6	1045	17.8
		19.1		19.4		20		22		23		25		26		28		30	
16800	1018	679	4.88	707	5.67	761	7.28	814	9.02	868	10.9	920	12.9	968	15.0	1018	17.1		
		21		22		23		24		25		27		28		30			
18000	1090	724	5.87	750	6.73	800	8.43	849	10.2	901	12.2	950	14.3	998	16.5	1042	18.7		
		24		24		25		26		27		29		31		32			
19200	1163	769	6.98	793	7.93	840	9.72	887	11.6	935	13.6	982	15.8	1028	18.1				
		26		27		27		29		30		32		33					
20400	1236	814	8.24	837	9.27	881	11.2	926	13.1	969	15.2	1015	17.5						
		29		29		30		32		33		34							
21600	1309	859	9.65	881	10.8	923	12.8	965	14.8	1006	16.9	1049	19.3						
		32		32		33		35		36		38							
22800	1381	905	11.2	925	12.4	966	14.5	1005	16.7	1045	18.9								
		35		36		37		38		40									
24000	1454	950	12.9	970	14.2	1008	16.5	1046	18.7										
		39		39		41		42											

Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories) in the airstream. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet fan sone levels.



# Centrifugal Inline Guide



Models SQ and BSQ centrifugal backward inclined belt or direct drive fans are designed for clean air applications (intake, exhaust, return, or make-up air systems) where space is a prime consideration. Capacities range from 62 cfm (105 m<sup>3</sup>/hr) to 26,600 cfm (45,000 m<sup>3</sup>/hr) and up to 3.5 in. wg (869 Pa) of static pressure. Maximum operating temperature is 180°F (82°C).



Model TCB centrifugal backward inclined belt drive fans for higher pressures. Capacities range from 360 cfm (612 m<sup>3</sup>/hr) to 24,000 cfm (40,800 m<sup>3</sup>/hr) and up to 4.5 in. wg (1118 Pa) of static pressure. Maximum operating temperature is 200°F (93°C). Model TCB is available with UL 762 for restaurant exhaust.



Mixed flow models QEI (belt drive) or QEID (direct drive) are designed for a wide range of applications including clean air (intake, exhaust, return, or make-up air systems) and specialized UL Listed applications such as emergency smoke exhaust or restaurant grease exhaust. Capacities range from 1,000 cfm (1,700 m<sup>3</sup>/hr) to 96,000 cfm (163,000 m<sup>3</sup>/hr) and up to 9.5 in. wg (2370 Pa) of static pressure. Maximum continuous operating temperature for standard construction is 200°F (93°C).



## Building Value in Air

Greenheck delivers value to mechanical engineers by helping them solve virtually any air quality challenges their clients face with a comprehensive selection of

top quality, innovative air-related equipment. We offer extra value to contractors by providing easy-to-install, competitively priced, reliable products that arrive on time.

And building owners and occupants value the energy efficiency, low maintenance and quiet dependable operation they experience long after the construction project ends.

## Our Commitment

*As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.*

Specific Greenheck product warranties are located on [greenheck.com](http://greenheck.com) within the product area tabs and in the Library under Warranties.



Prepared to Support Green Building Efforts

