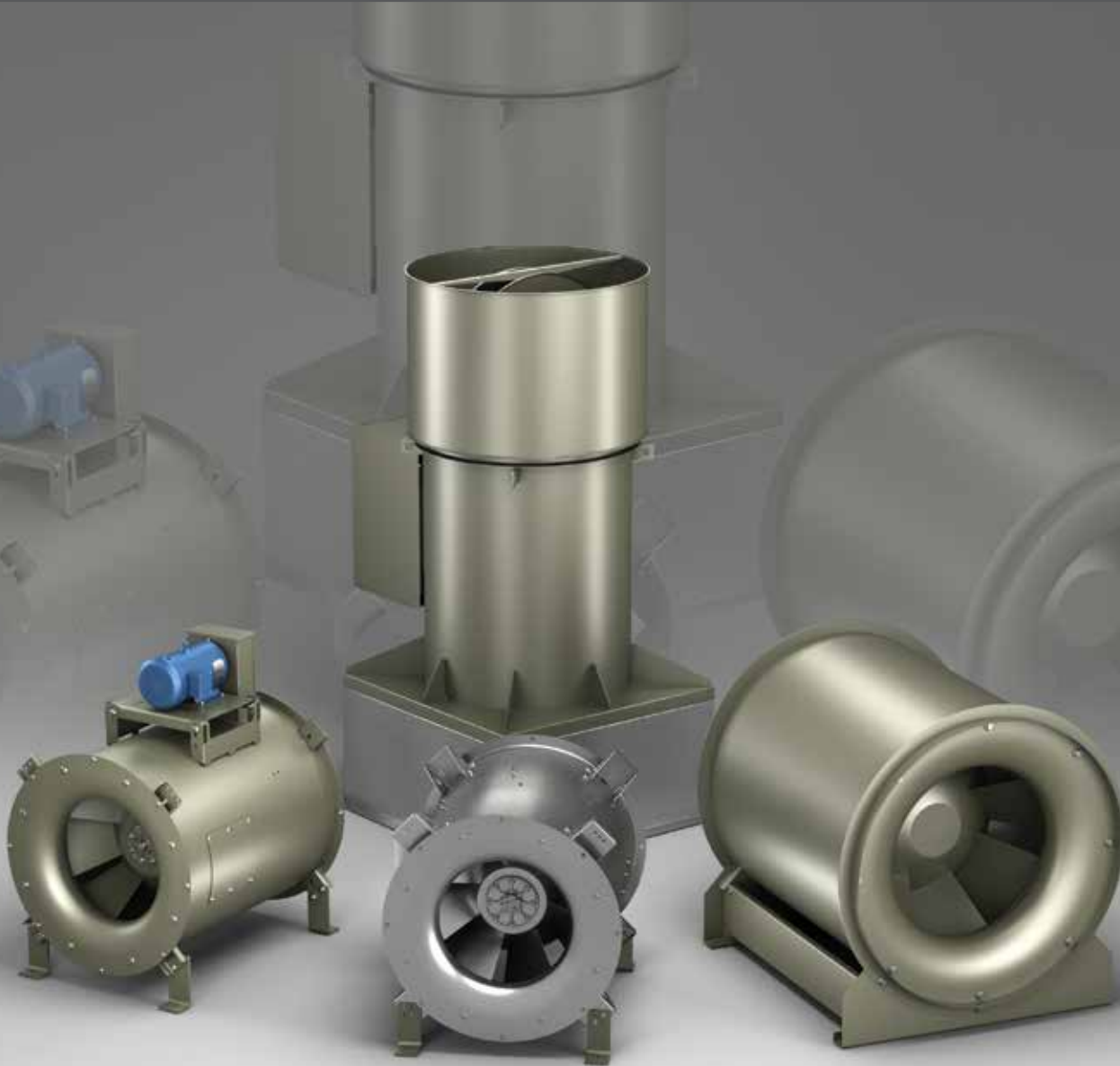


# Mixed Flow Fans Models QEI, QEID

Quiet, Efficient Inline



BUILDING VALUE IN AIR.



December  
2020

# Quiet & Efficient, Inline

## Mixed Flow Fans

Mixed flow inline fans can be used for a wide variety of commercial, institutional and industrial applications handling everything from clean, grease laden or high-temperature air for supply, exhaust, or return air. Greenheck's unique wheel design excels in applications where low sound is critical. In addition, Greenheck's mixed flow fans are more efficient than comparably sized tubular centrifugal and vane axial fans, thus reducing the required motor horsepower and lowering operating costs.

*Greenheck's mixed flow fans are the quietest tubular inline fans in the industry!*



### High Efficiency

Operating peak total efficiencies of 76% and FEI levels exceeding 1.0, providing exceptional value.

### Low Operating Cost

High efficiency operation lowers operational costs.



### Low Sound

Blade design lowers overall sound levels and removes pure tones.



### Low Maintenance

Belt drive models have air handling quality bearings for superior operation and long life, while direct drive models remove service needs for belts and fan shaft bearings.



### All Weather

Good for indoor and outdoor applications.



### Variety of Configurations

Available as inline ducted, roof mounted upblast, horizontal or vertical and in multiple levels of construction, fitting fan to application.



## Certifications



Certified data may be found in Greenheck's Computer Aided Product Selection program (CAPS®).

FEI - Fan Energy Index



UL/cUL Listed Power Ventilator

UL/cUL File E40001

UL/cUL 762 Power Ventilators for Restaurant Exhaust Appliances

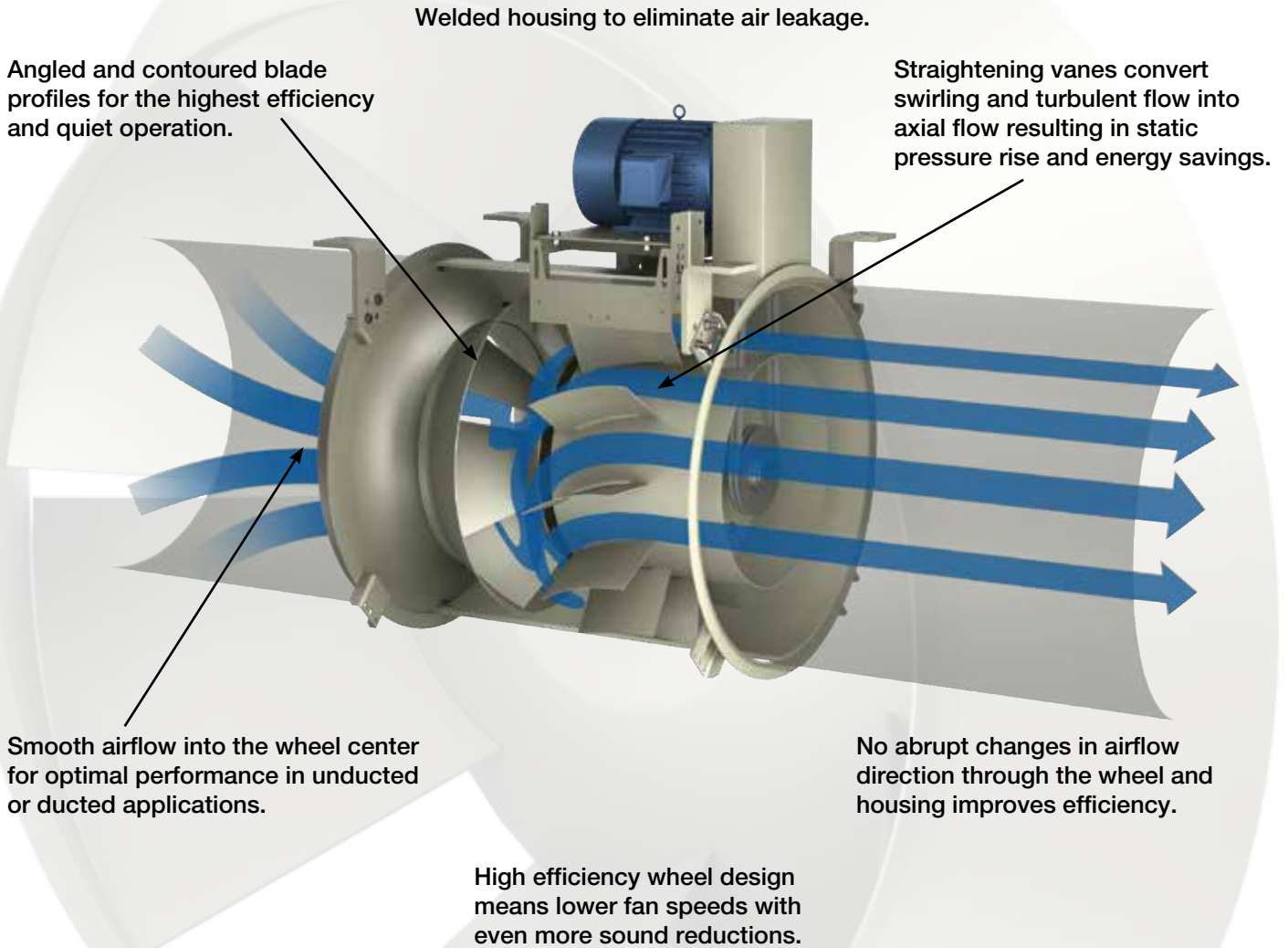
UL/cUL File MH11745

UL/cUL Power Ventilators for Smoke Control Systems

UL/cUL File MH17511

## Advantages:

- High efficiency for lower operating costs
- Low sound levels
- Easy installation due to universal mounting brackets
- Extended lubrication lines for quick service
- Indoor and outdoor suitable



## Typical Mixed Flow Applications



*Concert Halls*



*Educational Facilities*



*Libraries*



*Office Buildings*



*Parking Garages*

# Model Comparison

	<b>QEI – Belt Drive</b>			<b>QEID – Direct Drive</b>	
	<b>Series 100</b>	<b>Series 200</b>	<b>Series 300</b>	<b>Series 100</b>	<b>Series 300</b>
<b>Volume Range</b>	1,100 - 26,000 cfm (1,870 - 44,170 m <sup>3</sup> /hr)	1,100 - 115,000 cfm (1,870 - 195,390 m <sup>3</sup> /hr)	1,100 - 115,000 cfm (1,870 - 195,390 m <sup>3</sup> /hr)	1,200 - 18,000 cfm (2,040 - 30,600 m <sup>3</sup> /hr)	700 - 83,000 cfm (1,190 - 141,000 m <sup>3</sup> /hr)
<b>Static Pressure</b>	Up to 3 in. wg (750 Pa)	Up to 5 in. wg (1,245 Pa)	Up to 8.5 in. wg (2,120 Pa)	Up to 3.25 in. wg (810 Pa)	Up to 10.5 in. wg (2,370 Pa)
<b>Roof Upblast</b>		✓	✓		
<b>Spark B or C</b>	✓	✓	✓		
<b>Seismic Certification</b>			✓		
<b>UL 705 - Electrical</b>	✓	✓	✓	✓	✓
<b>UL Emergency Smoke Evacuation</b>		✓	✓		✓
<b>UL 762 Restaurant Exhaust</b>		✓	✓		

## Software Selection Tools

- CAPS®
- eCAPS®



## Quality Assurance Testing

- Wheel balance
- Motor amps
- Assembly vibration



## Electrostatic Powder Coatings



## AutoCAD and 3D Revit® Models



## Sure-Aire™

The Sure-Aire™ flow monitoring system offers unparalleled field airflow readings and verification. Measuring pressure differential between a piezometer ring and inlet pressure, it provides flow accuracy within 3%. Unlike flow probes, Sure-Aire™ does not interfere with airflow and will not impact the fan's air or sound performance.

A display monitor with pressure transmitter and digital read out provides either a 4-20 mA or 2-10 VCD output that can be tied into the building's automation system.





## UL 762 Restaurant Exhaust

Inline grease exhaust fans are an excellent alternative for kitchen applications when roof or wall mounted ventilators are not practical.

Designed to withstand the demands of high temperature kitchen grease exhaust and high-pressure duct washers up to 400°F.

**QEI-200, 300**

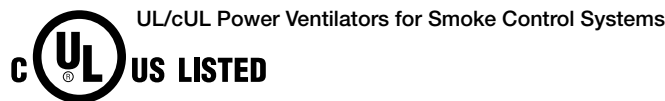


- UL/cUL Power Ventilators for Restaurant Exhaust Appliances
- Meets requirements of NFPA 96 Ventilation Control and Fire Protection of Commercial Cooking Operations

## UL Emergency Smoke Evacuation

QEI and QEID models were tested and rated for design time and temperature used in emergency heat and smoke exhaust applications.

**QEI-200, 300, QEID-300**



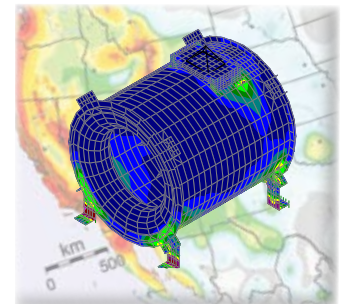
Model	Operating Temperature		Time Duration	Comments
	°C	°F	Hours	
QEID	300	572	1	Per British Spec 7346
QEI	300	572	2	
QEI	260	500	4	Per Industrial Risk Insurers (North America)
QEID	260	500	4	

## Seismic

The International Building Code (IBC) has been adopted at the state and local level throughout the United States. With the adoption of this code, comes the introduction of standards intended to improve the performance and design of non-structural systems subject to seismic events.

**QEI- 300**

- Meet the IBC seismic requirements
- California OSHPD pre-approved (horizontal mount only)
- Shake table tested at an independent test facility
- All equipment certified to worst case scenario seismic conditions



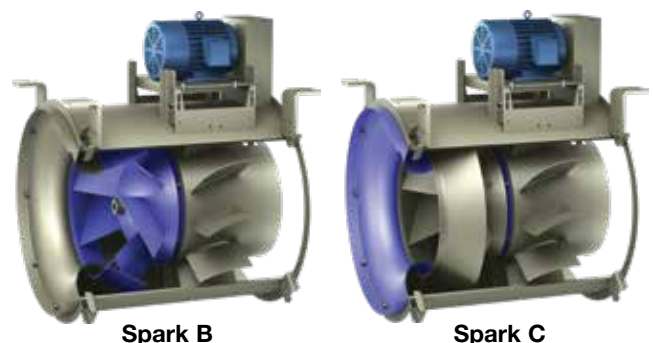
**Structural Finite Element Analysis  
 Seismic Design Category F**

## Spark Resistant Construction

Spark resistant designs suitable for applications that involve flammable particles, fumes or vapors. Spark resistant construction options adhere to guidelines defined within AMCA Standard 99-0401-10.

**QEI-100, 200, 300**

<b>Spark B</b>	The fan wheel is constructed of a nonferrous material (aluminum). A non-ferrous (aluminum) bearing cover surrounds the driven bearing, shielding it from the airstream.
<b>Spark C</b>	The inlet cone is constructed of nonferrous material (aluminum). A nonferrous (aluminum) bearing cover surrounds the driven bearing shielding it from the airstream.



# Standard Construction & Accessories

## Adjustable Motor Bases (QEI)

Motor bases are welded to the fan housing and include adjustment screws for belt tensioning.

## Bolted Access Door

Access door for cleaning or visual inspection of the wheel.

## Belt Guard (QEI)

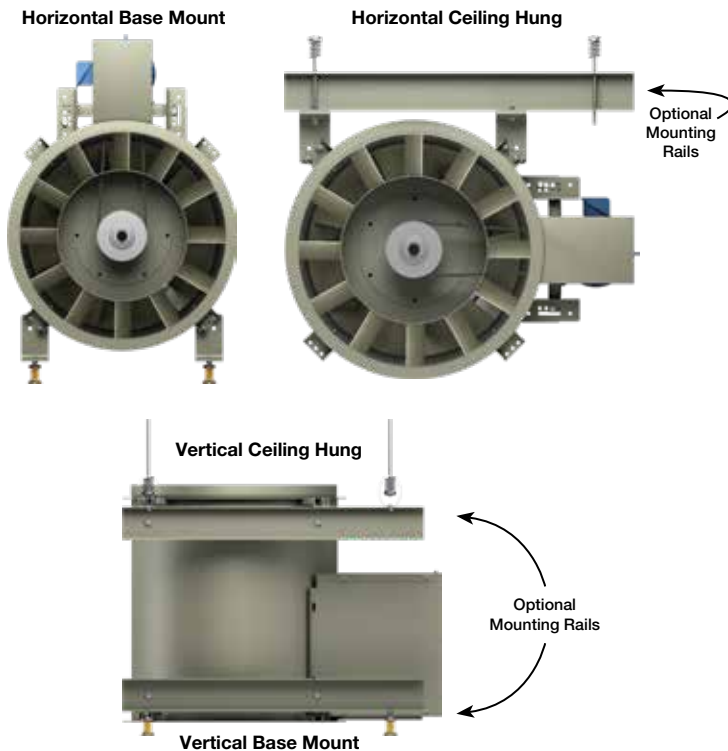
A totally enclosed belt guard, per OSHA standards, provides protection from rotating pulleys and belts.

## Extended Wiring (QEID)

Electric wiring leads from the motor is brought to the outside of the unit's exterior for easy wiring connection. Option for no extended wiring.



		QEI 100	QEI 200	QEI 300	QEID 100	QEID 300
Housing Finish	Greenheck's Permator coating is an electrostatically applied thermosetting polyester urethane. Permator coatings provide excellent corrosion characteristics for general indoor and outdoor applications.	Std.	Std.	Std.	Galvanized Standard ✓	Std.
Extended Lube Lines	Nylon lubrication lines with grease fittings mounted to the fan exterior that allow bearings (QEI) or motor (QEID), if required, lubrication without accessing internal drive components.	Std.	Std.	Std.	✓	Std.
Motor Cover	Shields the motor components from dust, dirt and moisture for indoor or outdoor installations. Also serve as a personnel guards and meet OSHA standards.	✓	✓	✓		
Hinged Access Door	Replaces bolted access door with hinged design.		✓	✓		✓
Extended Life Bearings	Air handling quality bearings meet a basic rating fatigue life L <sub>10</sub> per ABMA standards, in excess of 200,000 hours (L <sub>50</sub> at 1,000,000) at maximum operating speed.		✓	✓		
Copper Lube Lines (Belt Drive)	Copper lube lines can be used as a replacement for standard nylon lube lines.	✓	✓	✓		
Flanges	Inlet and outlet flanges with prepunched holes, welded to the housing, provide an easy means for bolted connection to ductwork. Bolt-on companion flanges also available.	Std.	✓	✓	Std.	✓
Disconnect Switches	Toggle-type and heavy-duty disconnect switches for positive electrical shut-off and safety when servicing fans.	✓	✓	✓	✓	✓
Inlet and Outlet Guards	Removable inlet and outlet guards provide protection for personnel and equipment in ducted or non-ducted installations.	✓	✓	✓	✓	✓
Belt Tube	A totally enclosed belt tube isolates the belts and drives from the airstream.	✓	✓	✓		
Mounting Rails	Mounting rails are recommended for vertically mounted fans or horizontal mounting when the motor is to be located in the C or G (3 or 9 o'clock) position.	✓	✓	✓		
Isolators	Base mount and hanging isolators are available in either neoprene or spring mounts.	✓	✓	✓	✓	✓
Special Coatings	Special coatings are available for protective purposes.	✓	✓	✓	✓	✓



## QEI-100 (all), 200 & 300 Sizes 9-27

### Universal Mounting

Brackets on belt or direct drive models are used for either horizontal or vertical mounting. For ease of installation, motor or junction box positions can be changed in the field for better access to components, solve fit issues, or avoid electrical trays and piping.

Mounting rails are suggested for any vertical installation and horizontal installations with motor positions C or G (3 or 9 o'clock). Motor positions as viewed from the discharge end.



## QEI-200/300 Sizes 30-60

### Horizontal Mounting

Horizontal mounting configurations, base mount or ceiling hung, are provided with an identical support. The mounting configuration can be changed between base mount or ceiling hung in the field.

Mounting rails are recommended for installations C or G (3 or 9 o'clock) positions. Motor positions as viewed from the discharge end.

### Vertical Mounting

Vertical mounting configurations, upblast or downblast, are provided with heavy duty steel brackets welded to both ends. These brackets permit either floor or ceiling mounting on the same unit.

### Roof Upblast

Ideal for exhausting contaminants away from a building to prevent roof damage and re-entrainment of exhaust air. Available with high temperature UL rating and can be used for emergency smoke exhaust applications.

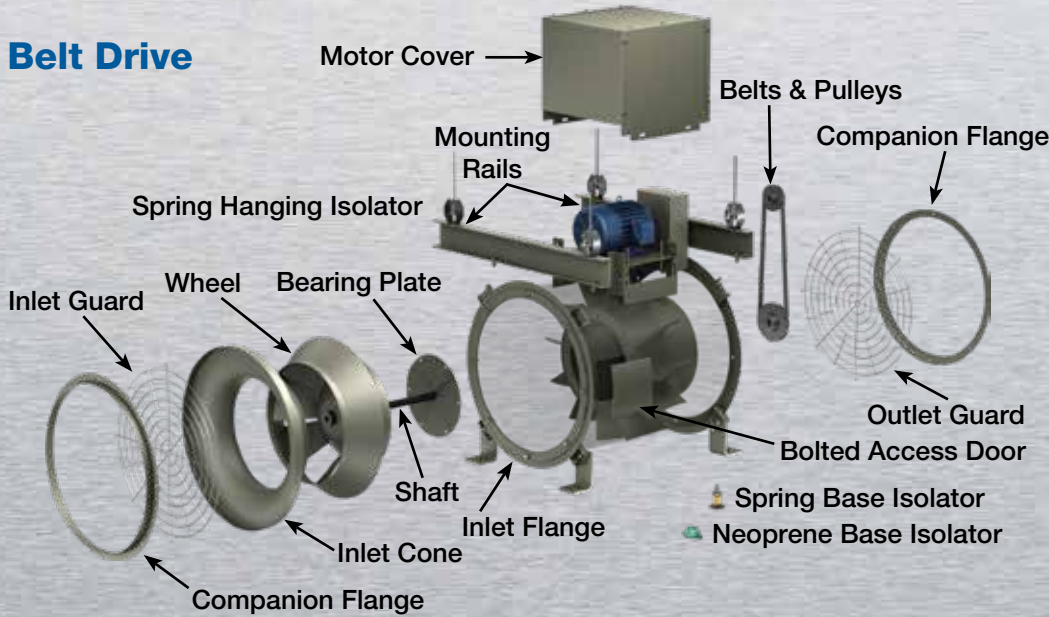
- Fully-welded heavy-gauge curb cap to eliminate leaks
- Butterfly damper section included for backflow prevention
- Windband section to protect the butterfly dampers from debris



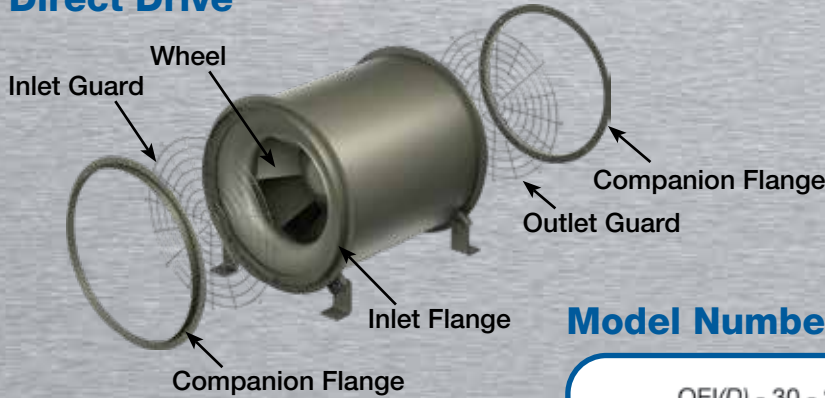


# Exploded View

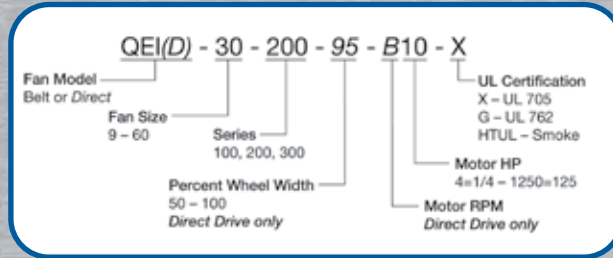
## Belt Drive



## Direct Drive



## Model Number Nomenclature



## Our Commitment

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

Product warranties can be found online at [Greenheck.com](http://Greenheck.com), either on the specific product page or in the literature section of the website at [Greenheck.com/Resources/Library/Literature](http://Greenheck.com/Resources/Library/Literature).

