High Volume Low Speed (HVLS) Fans

Models DC and DS

Direct Drive Overhead Fans

GREENHECK®

Building Value in Air.

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2024

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HVLS Overhead Fans

GREENHECK
Building Value in Air.

Engineered to elevate above the rest, Greenheck overhead fans have a lighter, sleeker, more dynamic design that quietly delivers comfort you can truly feel. Greenheck overhead fans' advanced air movement balances temperature and humidity, boosting occupant well-being and safety in any environment. Whether for comfort cooling, destratification, or aesthetics, we have you covered! Greenheck strives to provide you with the highest performing fans on the market through our extensive research, testing and product offering.

Model DC-5 is an aesthetically pleasing five-blade, direct drive fan designed for use in residential or commercial spaces with low to medium height ceilings. Its sleek design combines comfortable air movement with a variety of unique color options. These fans are effortless to install having a total weight less than one hundred pounds, the lightest among comparable overhead fans.

- Fan diameters between 4.3 and 14 feet
- Up to 55,800 cfm
- UL/cUL 507 Electrical, UL/cUL 507 Damp
- ENERGY STAR Certification (Dia. 4.3-7)
- AMCA Circulating Fan Performance (Dia. 8-14)

Applications

- Office spaces
- Restaurants and bars
- Education facilities
- Supermarkets and grocery stores
- Retail stores
- Fitness centers
- Multifamily residential

Model DS-3 is an efficient and economical three-blade, direct drive fan designed for commercial or industrial spaces with medium to high ceilings. These fans are the ideal balance of cost and performance, making the DS-3 a smart choice for budget-conscious building owners. Plus, with a lighter weight than comparable overhead fans, the DS-3 is a breeze to install in any building.

- Fan diameters between 8 and 24 feet
- Up to 176,900 cfm
- UL/cUL 507 Electrical, UL/cUL 507 Damp
- AMCA Circulating Fan Performance

Model DS-6 is a six-blade, direct drive fan designed for commercial or industrial spaces with medium to high ceilings. As the industry's best performing overhead fan, the DS-6 delivers unrivaled airflow at incredibly quiet sound levels. Along with reduced operating costs, the DS-6 is clearly the best value overhead fan on the market.

- Fan diameters between 8 and 24 feet
- Up to 243,000 cfm
- UL/cUL 507 Electrical, UL/cUL 507 Damp
- AMCA Circulating Fan Performance

Applications

- Airports
- Gymnasiums
- Agricultural facilities
- Manufacturing facilities
- Automotive facilities
- Distribution centers
- Stadiums and arenas

Construction Features

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	Model DC-5 	Model DS-3 	Model DS-6 
Building Types	Residential and Commercial	Commercial and Industrial	Commercial and Industrial
Max CFM Range	6,401 – 55,800	23,500 – 176,900	28,600 – 243,000
Max Coverage Area Range (ft^2)	1,000 – 12,500	9,100 – 18,700	11,300 – 23,700
Fan Diameter (ft)	4.3 – 14	8 – 24	8 – 24
Air Performance Certification	ENERGY STAR (Dia. 4.3 – 7) AMCA Circulating Fan Performance (Dia. 8 – 14)	AMCA Circulating Fan Performance	AMCA Circulating Fan Performance
UL/cUL 507 Listed for Electrical	●	●	●
UL/cUL 507 Listed for Damp	○	○	○
Universal Ceiling Mount	●	●	●
Weight (lbs)	23 – 91	104 – 144	129 – 222
Direct Drive Motor (HP)	1/10 – 1/4	3/4	3/4 – 1-1/2
Voltage and Phase	115-230/1	208-277/1, 208-460/3	208-277/1, 208-460/3
Forward and Reverse Operation	●	●	●
Drop Length (ft)	1 or 2	3-1/2	3-1/2
Airfoil Finish	Mill	Mill	Mill
Standard Accent Color	Black	Blue	Blue
100 ft of CAT-5e Control Cable	●	●	●
Fire Relay (For Fire Suppression System, Included with Dia. 8 – 24)	●	●	●
Mechanical Warranty	10 Years	10 Years	10 Years
Electrical Warranty	3 Years (Dia. 4.3 – 7) 1 Year (Dia. 8 – 14)	1 Year	1 Year

● Standard Construction Feature ○ Optional Construction Feature

Airfoils – Unique extruded aluminum airfoil shape is designed to maximize airflow and coverage area.

Intelligent VFD and Motor – Factory-mounted, wired and programmed variable frequency drive (VFD). Direct drive motor and VFD combination results in high efficiency, low sound and ultra-light installation. Smart features include over-speed and impact detection (dia. 8-24 only) along with temperature, voltage and current monitoring.

Fire Relay – Keep your buildings and products safe. Low voltage relay can be wired into a building's fire suppression system for automatic fan shutdown when sprinklers are activated. Included with fan diameters 8-24 only.

Guy Wire Kit – Braided steel guy wires prevent lateral fan movement for safe installations.

Model DC (dia. 8-14 only): 15-foot guy wires included for drop lengths greater than or equal to four feet.

Model DS: 20-foot guy wires included with all drop lengths.

amca WORLDWIDE CERTIFIED RATINGS CIRCULATING FAN PERFORMANCE AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC. www.amca.org

Greenheck Fan Corporation certifies that the models DC (Dia. 8 – 14) and DS 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 comply with the requirements of the AMCA Certified Ratings Program.

energy ENERGY STAR

ENERGY STAR Certified Model DC (Dia. 4.3–7)

c UL US LISTED

UL/cUL 507 Listed for Electrical (Models DC and DS)
UL/cUL 507 Listed for Damp (Models DC and DS)
File no. E504380

Advanced Safety Features

Mechanical Safety Systems

Multipoint, redundant mechanical safety systems are installed by the factory to ensure proper function and give you peace of mind. Mechanical safety systems include:

Safety Cable – Heavy-duty, braided galvanized steel safety cable rated for a minimum of 1.5 times the hanging weight of the fan. Safety cable is factory-installed through the motor and fan hub to suspend the entire fan assembly in the event of catastrophic damage to the fan mount or downtube.

Guy Wires – High tensile strength, braided galvanized steel guy wires attached to a fully welded guy wire connection ring on the fan's downtube prevent lateral movement of the fan caused by wind or other operating conditions.

Model DC (dia. 8-14): 15-foot guy wires included for drop lengths greater than or equal to four feet

Model DS: 20-foot guy wires included with all drop lengths

Airfoil Retaining Ring (Dia. 8-24) - Single-piece, solid-steel ring interlocks airfoil blades with one another and provides redundant connection between airfoils and fan hub. Airfoil retaining ring is factory-installed on the fan hub to ensure that airfoils remain attached to the fan assembly even if extreme impact damage occurs.

Internal Airfoil Reinforcement – Airfoil blades are internally reinforced to minimize blade deflection during fan operation and reduce blade sag when fan is stationary.

Hub Retaining Bracket – Rugged, high-strength steel bracket provides redundant connection between fan hub, downtube, and building structure. Hub retaining bracket is factory-installed and connected to the fan's safety cable to suspend the motor and hub assembly should they be disconnected from the downtube by unexpected damage to the fan.

Electrical Safety Systems

Cutting-edge electrical safety systems provide advanced protection for the people in your facility and the HVLS fans that keep them productive. Smart safety features that are standard on every Greenheck HVLS fan include:

Impact Detection (Dia. 8-24) – Unexpected contact with an obstruction will result in immediate fan shutdown to prevent further damage or unsafe operating conditions.

Fire Suppression System Integration (Dia. 8-24) – Fans include a low voltage fire alarm relay that can be wired into the building's fire suppression system for automatic fan shutdown when sprinklers are activated.

Over-Speed Detection (Dia. 8-24) – VFD measures fan speed to ensure that it does not exceed the maximum allowable RPM for safe operation.

Voltage and Current Monitoring – VFD continuously monitors the voltage and current across critical drive components to prevent damage caused by fluctuations in electrical supply power.

Over-Temperature Detection – Drive system monitors the internal temperatures of the motor and VFD to prevent premature failure due to extreme heat.

Optional Accessories and Controls

Mounting Kits – Mount to a variety of building structures. Kit options available for universal connection to fan-rated junction box (model DC dia. 4.3-7) or I-beam, steel truss, Unistrut®, wood beam, and Z-purlin construction (models DS and DC dia. 8-14).

LED Light – Light option is dimmable when used with optional fan controls. Requires separate 115V power (by others).

Model DC (dia. 8-14): 24W, 1,900 lumen output, 120° beam angle

Model DS: 150W, 19,500 lumen output, 120° beam angle

Extended Drop Lengths – By using extended drop lengths, the fan can accommodate every space, even sloped ceilings. Various drop lengths are available.

Model DC (dia. 4.3-7): 3 or 6 foot

Model DC (dia. 8-14): 3 to 10 foot

Model DS (dia. 8-24): 4 to 10 foot

Extended Length CAT-5e Control Cable – Allow flexibility with the installation and placement of control options by selecting pre-assembled 150 ft or 200 ft CAT-5e cables. Or, customize individual cable lengths with 1,000 ft bulk spools of CAT-5e cable and 20 RJ45 end connectors.

Disconnect Switch – Toggle type and heavy-duty disconnect switches; both with fused protection options are available for positive electrical shut-off and safety in servicing fans.

Extended Warranty – Protect your investment with extended mechanical warranties up to 15 years and extended electrical warranties up to 5 years.

Keypad Control – Keypad control with LCD can operate 1, 3, 5, or 10 fans of the same model and size as a group, with all fans running at the same speed and direction. The keypad control provides full status monitoring capability and fault-logging, making this an excellent stand-alone control solution. Available with surface-mounted or recessed enclosures.

Standard Touchscreen Control – Features a sleek design that fits in a standard 2x4 junction box and has an intuitive LCD screen. Allows the user to operate 1, 3, 5, or 10 fans with any combination of models and diameters. The touchscreen offers password protection along with advanced diagnostics for ease of troubleshooting.

Advanced Touchscreen Control with BACnet® – Touchscreen control with LCD screen. Group or independently control up to 10 or 20 fans with any combination of models and diameters, allowing maximum flexibility and convenience. Supports fan scheduling, password protection and advanced fan diagnostics for ease in troubleshooting. Building management system (BMS) integration through BACnet MS/TP allows a BMS to control or monitor the status of the entire HVLS fan system through a single access point, simplifying installation in the field. Available with surface-mounted or recessed enclosures.

Temperature and Humidity Sensors for Advanced Touchscreen Control – Package includes two sensors for mounting on the ceiling and at occupant height. Sensors modulate the fans for optimal speed to improve occupant comfort based on temperature and humidity inside the building.

Finish Options – Available for the winglets, downtube, hub plate, airfoils, and universal ceiling mount. Unlimited custom color match or select from 13 optional paint colors (Hi-Pro Polyester).

Airfoil finishes available include: anodized (not shown), Hi-Pro Polyester or woodgrain.

Safety Orange	Concrete Grey
Safety Yellow	Hampton Brown
Signal Violet	Medium Bronze
Utility Red	Flat Black
Signal Blue	Cinnamon Cherry
Equipment Green	Dark Oak
Bone White	Golden Knotty Pine
Ivory	Honey Knotty Pine
Telegray 4	Natural Cherry

**Color is for reference only and is not to be used for final color matching. Anodized finishes not shown. Additional finish charges may apply.*

Model DC-5

Fan Diameter (ft)	Fan RPM	CFM	Total Sound Pressure (dBA)	Max. Coverage Area (sq ft)	Max. Coverage Radius (ft)	Min. Fan Spacing (ft)	*Integrated Efficiency (CFM/W)	**CFEI at 40% Speed	**CFEI at 100% Speed	Base Fan Weight (lbs)
4.3	200	6,401	34	1,000	18	13	186	-	-	23
5	197	9,282	39	1,600	23	15	188	-	-	24
6	165	12,660	39	2,600	29	18	203	-	-	26
7	135	15,108	35	3,200	32	21	208	-	-	28
8	184	29,000	49	9,200	54	24	-	3.68	1.85	70
10	140	41,200	55	11,300	60	30	-	4.38	1.70	77
12	103	50,000	48	12,000	62	36	-	3.85	1.65	84
14	76	55,800	45	12,500	64	42	-	5.35	1.49	91

*Integrated efficiency (CFM/W) based on ENERGY STAR Program Requirements and 10 CFR 430
**Ceiling Fan Energy Index (CFEI) based on ANSI/AMCA Standard 208 and 10 CFR 430

Model DS-3

Fan Diameter (ft)	Fan RPM	CFM	Total Sound Pressure (dBA)	Max. Coverage Area (sq ft)	Max. Coverage Radius (ft)	Min. Fan Spacing (ft)	**CFEI at 40% Speed	**CFEI at 100% Speed	Base Fan Weight (lbs)
8	145	23,500	44	9,100	54	24	2.60	1.93	106
10	141	43,500	46	11,600	61	30	2.30	1.73	110
12	134	68,900	48	12,400	63	36	3.45	1.58	115
14	120	87,900	50	13,200	65	42	2.78	1.30	119
16	101	106,300	48	14,200	68	48	2.82	1.28	123
18	87	127,900	48	15,800	71	54	2.89	1.34	128
20	76	144,500	48	17,200	74	60	2.64	1.19	133
24	56	176,900	48	18,700	78	72	2.88	1.27	142

**Ceiling Fan Energy Index (CFEI) based on ANSI/AMCA Standard 208 and 10 CFR 430

Model DS-6

Fan Diameter (ft)	Fan RPM	CFM	Total Sound Pressure (dBA)	Max. Coverage Area (sq ft)	Max. Coverage Radius (ft)	Min. Fan Spacing (ft)	**CFEI at 40% Speed	**CFEI at 100% Speed	Base Fan Weight (lbs)
8	142	28,600	45	11,300	60	24	2.47	1.96	129
10	136	46,700	49	13,600	66	30	2.59	1.18	138
12	119	71,900	49	14,500	68	36	2.68	1.52	147
14	97	92,300	49	15,300	70	42	2.42	1.54	156
16	81	110,000	48	16,200	72	48	2.92	1.45	165
18	69	128,100	47	18,100	76	54	2.62	1.31	174
20	78	196,200	52	21,600	83	60	2.72	1.44	204
24	61	243,000	50	23,700	87	72	2.82	1.14	222

**Ceiling Fan Energy Index (CFEI) based on ANSI/AMCA Standard 208 and 10 CFR 430

Greenheck Fan Corporation certifies that the models DC (Dia. 8-14) and DS 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 comply with the requirements of the AMCA Certified Ratings Program.

The AMCA Certified Ratings Seals applies to air performance ratings only. The AMCA Certified Ratings Seal applies at free delivery only. Performance ratings do not include the effects of appurtenances (accessories).

Greenheck Fan Corporation certifies that the model DC (Dia. 4.3-7) shown herein is licensed to bear the ENERGY STAR Seal. The ratings shown are based on tests and procedures performed in accordance with ENERGY STAR Program Requirements.

Specifications

Model DC

Ceiling mounted circulation or destratification fans shall be of the low speed, small diameter (LSSD) or large diameter (high volume low speed) direct drive type.

Fan construction shall include a universal ceiling mount that is designed for a fast and secure connection to a variety of ceiling substrates via heavy-duty mounting hardware kits (specified upon order). Universal ceiling mount shall be constructed of heavy-gauge steel and shall include a single-axis or multi-axis pivot to accommodate any ceiling angle. Fans shall also include a heavy-gauge steel downtube to provide a structural connection between the universal ceiling mount and fan motor. Downtube shall include a factory-programmed variable frequency drive. All components of the universal ceiling mount and downtube shall be powder-coated for corrosion resistance and aesthetic appearance.

Motors shall be of the high torque, low-speed direct drive type, carefully matched to the fan load and furnished at the specified voltage and phase. Motors shall include plug-and-play connectors for power and control wiring to the variable frequency drive. Motors shall also be provided with a factory-installed, heavy gauge hub with precision-cut features for ease of airfoil installation.

Airfoils shall be constructed of 6005A-T6 extruded aluminum with a unique aerodynamic profile that has been optimized for maximum airflow and efficiency. Airfoils shall be provided with a mill finish as standard, with additional finishes available in a variety of types and colors (specified upon order). Airfoils shall also be provided with precision-cut, powder-coated aluminum winglets as standard.

Fan shall be provided with a multipoint, redundant safety system comprised of a heavy-duty safety retention cable, hub retention system, and airfoil retaining ring (dia. 8-14 only) as standard.

Fan shall bear a manufacturer's nameplate containing the model number and individual serial number for future identification.

Fan shall be Model DC as manufactured by Greenheck Fan Corporation of Schofield, Wisconsin, USA.

Model DS

Ceiling mounted circulation or destratification fans shall be of the large diameter direct drive (high volume low speed) type.

Fan construction shall include a universal ceiling mount that is designed for a fast and secure connection to a variety of ceiling substrates via heavy-duty mounting hardware kits (specified upon order). Universal ceiling mount shall be constructed of heavy-gauge steel and shall include a bidirectional pivot to accommodate any ceiling angle. Fans shall also include a heavy-gauge steel downtube to provide a structural connection between the universal ceiling mount and fan motor. Downtube shall include a factory-programmed variable frequency drive. Downtube shall also include a welded guy wire connection ring for fast and secure connection of the fan's guy wires. All components of the universal ceiling mount and downtube shall be powder-coated for corrosion resistance and aesthetic appearance.

Motors shall be of the high torque, low-speed direct drive type, carefully matched to the fan load and furnished at the specified voltage and phase. Motors shall include plug-and-play connectors for power and control wiring to the variable frequency drive. Motors shall also be provided with a factory-installed hub that consists of heavy-gauge, precision-cut aluminum plates and machined aluminum struts for ease of airfoil installation.

Airfoils shall be constructed of 6005A-T6 extruded aluminum with a unique aerodynamic profile that has been optimized for maximum airflow and efficiency. Airfoils shall be provided with a mill finish as standard, with additional finishes available in a variety of types and colors (specified upon order). Airfoils shall also be provided with precision-cut, powder-coated aluminum winglets as standard.

Fan shall be provided with a multipoint, redundant safety system comprised of a heavy-duty safety retention cable, guy wire kit, hub retention system, and airfoil retaining ring as standard.

Fan shall bear a manufacturer's nameplate containing the model number and individual serial number for future identification.

Fan shall be Model DS as manufactured by Greenheck Fan Corporation of Schofield, Wisconsin, USA.

Elevated Engineering.

Quick Delivery and Quick Build Program

Greenheck models DC and DS are available for shipment to your jobsite in less than 24 hours from our strategically located warehouses or available on our 10-day Quick Build program.

Model	Size	Best Available Program
DC-5	8, 12	In Stock
DS-3	16, 20, 24	
DS-6	16, 20, 24	
DC-5	8 through 14	10 Days
DS-3	8 through 24	
DS-6	8 through 24	

Computer Aided Product Selection

All Greenheck products are supported by the industry's best product literature, electronic media and two product selection tools – CAPS®, our computer aided product selection software program and eCAPS®, our online selection tool. These programs will guide you from initial design through detailed submittals.

And, of course, you can always count on the personal service and expertise of our national and international representative organization. To locate your nearest Greenheck representative call 715-359-6171 or visit our website at www.greenheck.com

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, either on the specific product page or in the literature section of the website at Greenheck.com/Resources/Library/Literature.

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