



# Ventilation Fan

Perfectly Green, Perfectly Quiet

[www.deltaelectronicsindia.com](http://www.deltaelectronicsindia.com)



## About Delta India

Delta Electronics India / Delta Power Solutions is a 100% subsidiary of Delta Electronics (Thailand) PLC, operating in India since 1992, Delta Electronics India is the provider of Telecom Power Solutions and a major source of Industrial Automation, Display Solutions, UPS, DC Fans & Blowers, Components, Bio-medical, LED Lighting, Automotive electronics and Renewable Energy Products.

With over 8 Regional Offices, 2 manufacturing facilities at Rudrapur and Gurgaon and 2 R & D centers in Gurgaon and Bangalore, Delta has a strong presence across India with more than 100 channel Partners. The company has been awarded ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:2007 certifications by Underwriters' Laboratories, USA for Quality, Procedures, and Environment management.

As the "Centre for Technical Excellence" for SAARC Region, we have an impressive installation base with regional support centers all over India and the SAARC region. Besides catering to the Indian market, we export to several countries including Nepal, Bangladesh and Sri Lanka.

Today, we provide end to end comprehensive, innovative and customized solutions for Telecom, IT, Solar, Power and Industrial sectors offering our 12 product lines.

## Honors and Awards

2016 - 2019

Delta Products Corporation  
Named 2018 ENERGY STAR®  
Partner of the Year by EPS



2017

Leadership in Environment  
and Design (LEED) Gold  
Award for Delta Thailand's  
HQ



2011-2019

Taiwan Top 20 Global Brand



2015

Channel NewsAsia Green  
Luminary Award



2014-2015

Climate Performance Leadership  
Index, CPLI

2012

Thailand Prime Minister's Best



2016 & 2017

Excellence in Corporate Governance  
Score and Top Quartile Companies

2019

Thailand's TOP Corporate Brand  
Hall of Fame 2019 Award



2019

Stock Exchange of  
Thailand's (SET) Best  
Sustainability Award



MEMBER OF

**Dow Jones  
Sustainability Indices**

In Collaboration with RobecoSAM ●●

2019

Dow Jones Sustainability  
Indices - World Index

2011, 2013

ASEAN Business Award  
in the Innovation Category  
for Large Companies



# About Delta Group



## Corporate Mission

To provide innovative, clean, and energy-efficient solutions for a better tomorrow.

## About Delta Group

Delta was founded in 1971 and has been the global leader in switching power supply solutions since 2002 and DC brushless fans since 2006.

Delta offers the most energy efficient power products in the industry, including switching power supplies with efficiency over 90%, telecom power with up to 97.5%, and PV inverters with up to 98.8% efficiency. We have also developed the world's first server power supply certified as 80 Plus Titanium with over 96% efficiency. We commonly invest 6% to 7% of our annual sales revenues in R&D and have worldwide R&D facilities in Taiwan, China, Europe, India, Japan, Singapore, Thailand, and the U.S.

Delta is a frequent recipient of international awards and related recognition for innovation, design, and corporate social responsibility. Since 2011, Delta has been selected each year for the prestigious Dow Jones Sustainability™ World Index (DJSI World). In 2015 we were also included in the DJSI Emerging Markets Index and ranked first among 45 leading companies in the Electronic Equipment, Instrument and Component sector.

Delta was also included in to the Climate Disclosure Leadership Index (CDLI) of the 2015 CDP (formerly the Carbon Disclosure Project). Delta continues its dedication to developing technologies and solutions global warming and ensures a sustainable future for mankind.



## Wall-mount Type Ventilation Fan DC Motor Technology

### ■ Reliability

Delta's brushless DC motor fans are engineered to outlast popular AC motor models by as much as 70%, reducing the need for replacement.

### ■ Less noise

Delta's brushless DC motor fans are precision engineered for low sound.



### ■ Efficiency

Delta brushless DC motor fans are among the most efficient ventilation fans available.

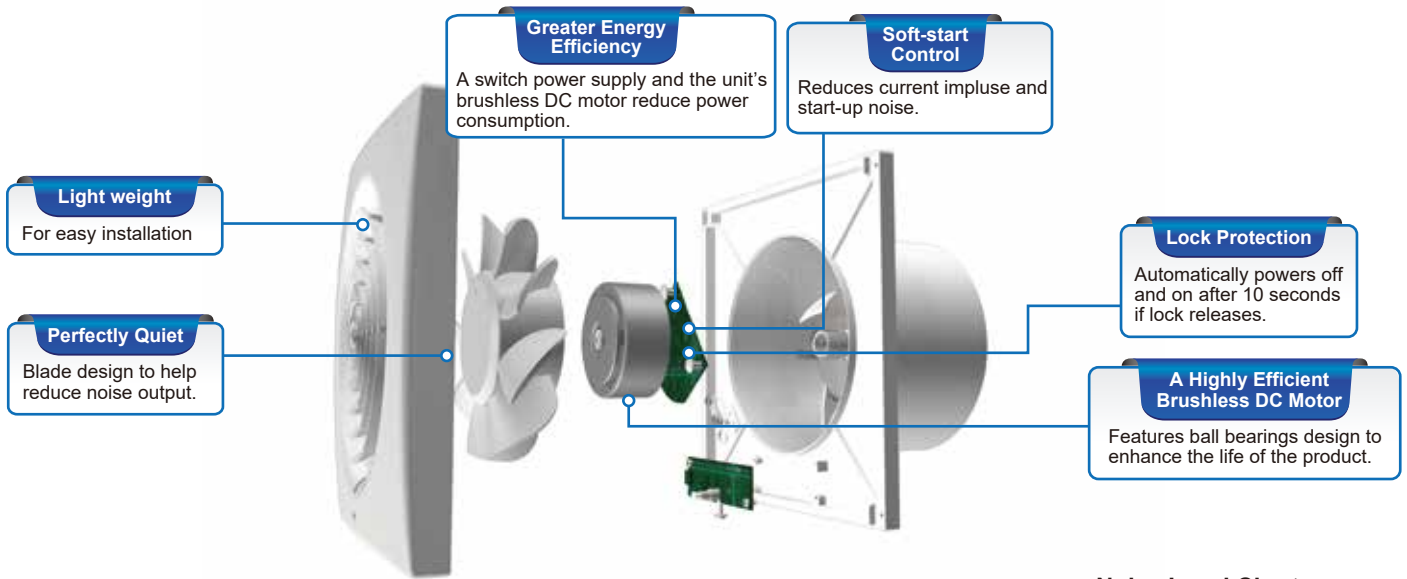
All Delta ventilation fans are precision engineered to run continuously for a minimum 70,000 hours.

### ■ Less power consumption

Delta's brushless DC motor fans use up to 74% less power than popular AC motor exhaust fans.

The world's leading provider of SWITCHING POWER SUPPLIES

The world's leading provider of BRUSHLESS DC MOTOR FANS

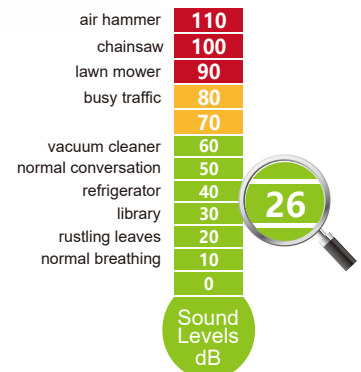


## Low Noise Design

Delta fans use low noise impeller and scroll design that move a large amount of air at reduced RPMs, they are so quiet that user might not even know they are on. In low speed, the wall-mount series only has 26 dB as library background.



### Noise Level Chart

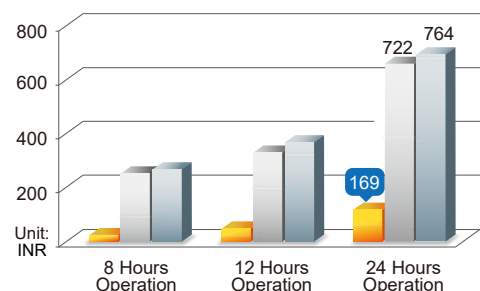


## Saving Energy and Saving Money

Delta's ventilation fan can help you saving energy for our earth and at same time also saving your money. Even operate 24 hours every day, the annual electricity cost will be only **169** INR

Cost Comparison		Delta DC Motor	Leading Brand AC Motor	Other Brand AC Motor
Air flow	CMH	200	210	180
Power Consumption	Watts	4	18	17
Operating Hours/Day	Hours	24	24	24
Annual Power Consumption	kWh	35	158	149
Annual Electricity Cost	INR	169	764	722

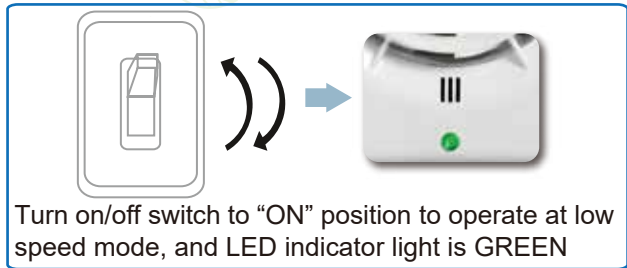
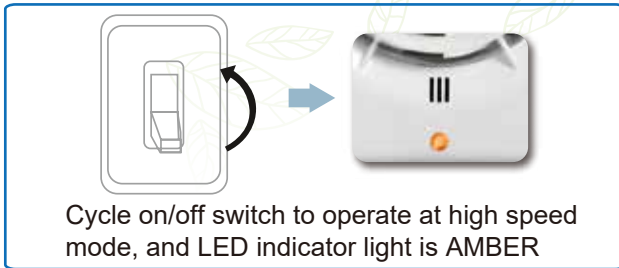
### Annual Electricity Cost Comparison



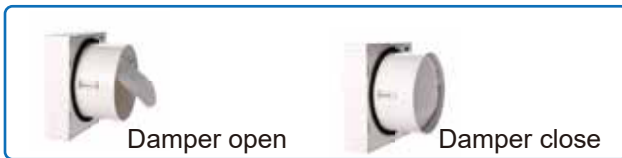
#### Remark:

1. Refer to Delta dual speed control model VFA15AXTH2 and operate in high speed mode
2. Electricity cost based on residential rate INR 4.85 per KWH

## Dual Speed Cycling Switching Design (※VFA10AXTH/VFA15AXTH2/VFA15AXTH-V)



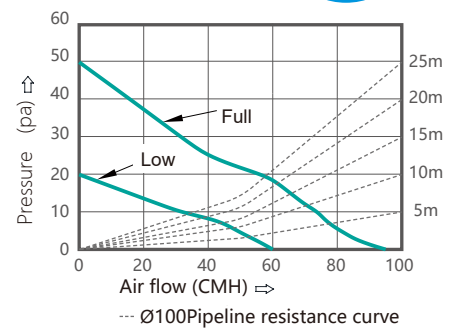
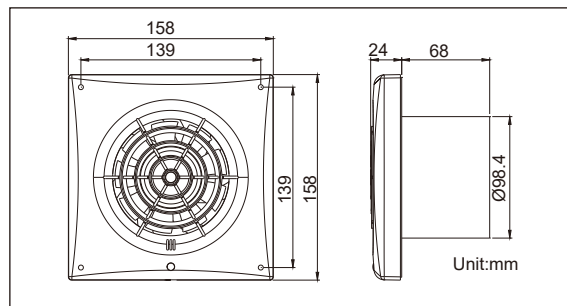
## Damper Design



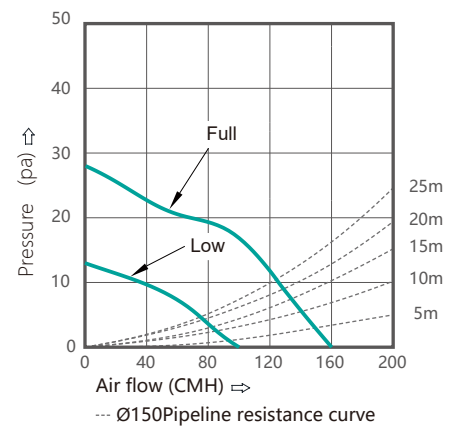
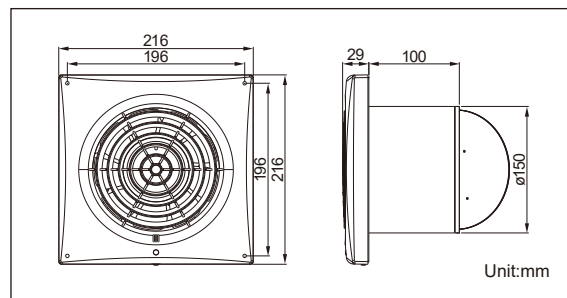
Damper is placed in the back, it can help wind and rain resistance performance (※VFA15AXTH2/VFA15ADTH2)



### VFA10AXTH



### VFA15AXTH-V



### Characteristic Table

MODEL	Grille Size	Mounting Opening	Install Glass Thickness	Weight	Power Rating	Power Consumption	Maximum Air Flow		Maximum Air Pressure		Noise	Remark
PART NO.	mm	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A	
VFA10AXTH	158 × 158	Ø100	3~25	0.33	220/50	1.9	60	35	20	0.08	30	Low Speed
						4.7	95	56	50	0.20	46	Full Speed
VFA15AXTH-V	216 × 216	Ø160	3~25	0.9	220/50	2.3	100	59	13	0.05	24	Low Speed
						3.7	160	94	28	0.11	35	Full Speed

\* The max. air flow is measured in free air; max air pressure is measured at zero air flow.

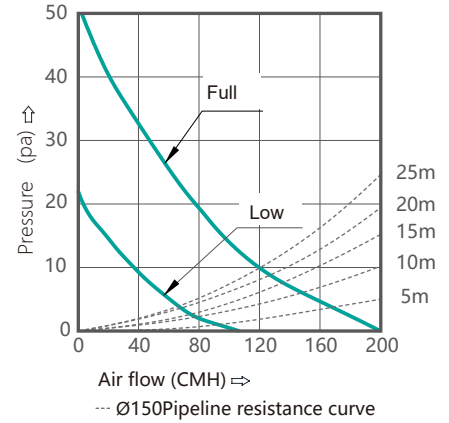
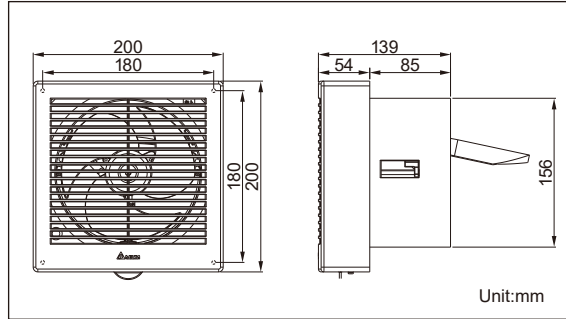
\* Noise is measured in semi-anechoic chamber in free air, one meter from intake, right and left side. 3 microphones to average.

\* All readings are typical values at rated voltage.

\* VFA10AXTH/VFA15AXTH-V operates in low speed mode (green LED) or high speed mode (amber LED) by cycling ON/OFF switch. Default is high speed.

\* Specifications are subject to change without notice.

## VFA15AXTH2

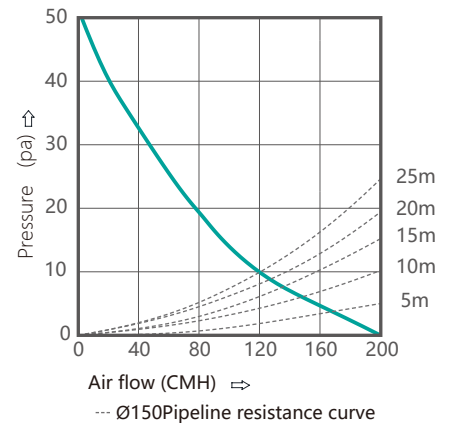
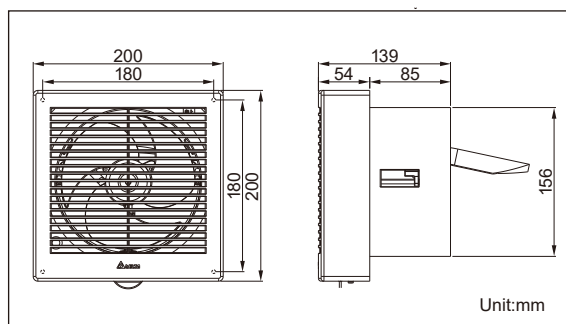


### Characteristic Table

MODEL	Grille Size	Mounting Opening	Install Glass Thickness	Weight	Power Rating	Power Consumption	Maximum Air Flow		Maximum Air Pressure		Noise	Remark
PART NO.	mm	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A	
VFA15AXTH2	200 × 200	Ø160	3~25	0.7	220/50	2.0	100	59	23	0.09	27	Low Speed
						4.0	200	118	50	0.20	38	Full Speed

- \* The max. air flow is measured in free air; max air pressure is measured at zero air flow.
- \* Noise is measured in semi-anechoic chamber in free air, one meter from intake, right and left side. 3 microphones to average.
- \* All readings are typical values at rated voltage.
- \* VFA15AXTH2 operates in low speed mode (green LED) or high speed mode (amber LED) by cycling ON/OFF switch. Default is high speed.
- \* Specifications are subject to change without notice.

## VFA15ADTH2



### Characteristic Table

MODEL	Grille Size	Mounting Opening	Install Glass Thickness	Weight	Power Rating	Power Consumption	Maximum Air Flow		Maximum Air Pressure		Noise	Remark
PART NO.	mm	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A	
VFA15ADTH2	200 × 200	Ø160	3~25	0.7	220/50	4.0	200	118	50	0.20	38	

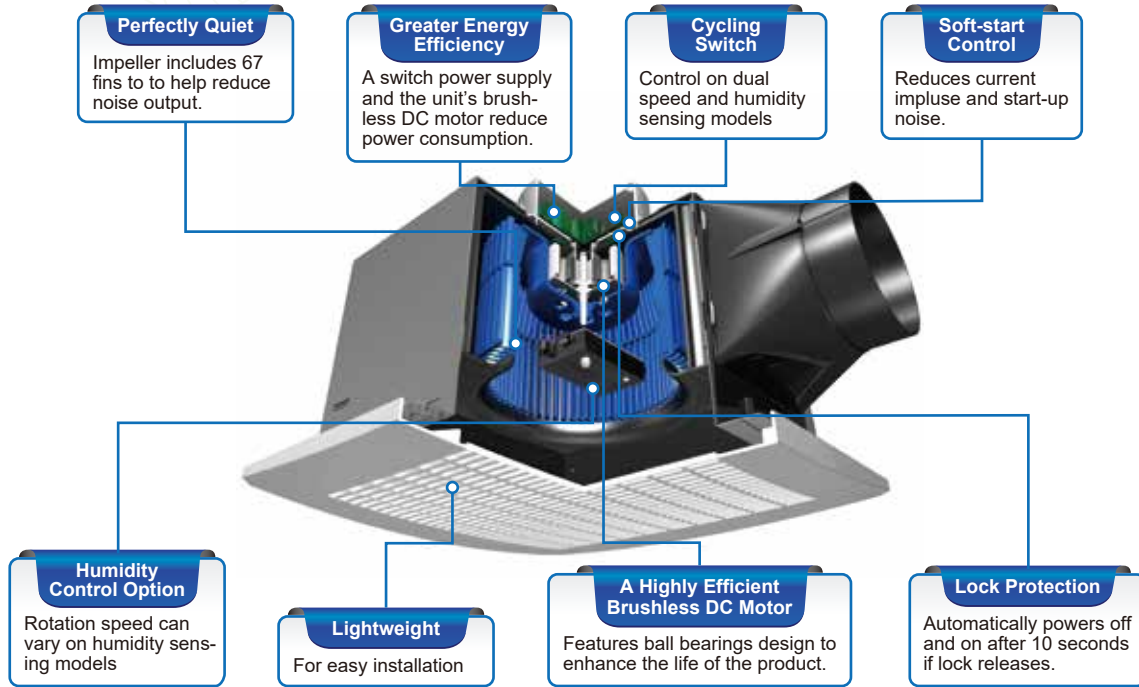
- \* The max. air flow is measured in free air; max air pressure is measured at zero air flow.
- \* Noise is measured in semi-anechoic chamber in free air, one meter from intake, right and left side. 3 microphones to average.
- \* All readings are typical values at rated voltage.
- \* Specifications are subject to change without notice.



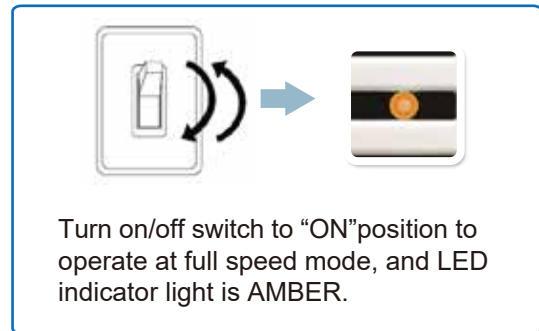
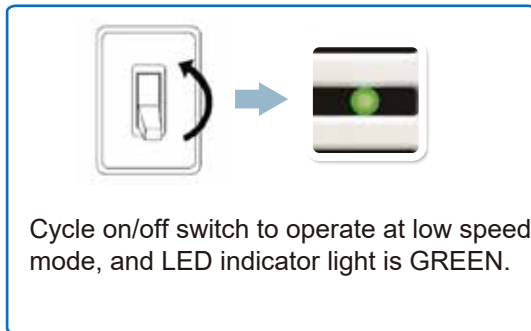
## Ceiling Type Ventilation Fan DC Motor Technology



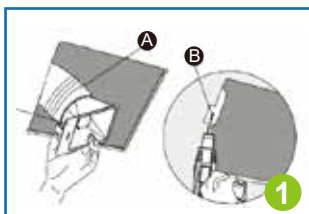
- Reliability
- Less power consumption
- Less noise
- Efficiency



## Dual Speed Cycling Switching Design



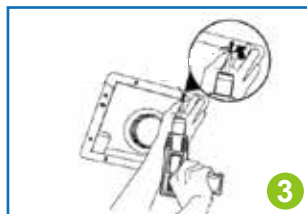
## Easy Installation (Ceiling Type Fan)



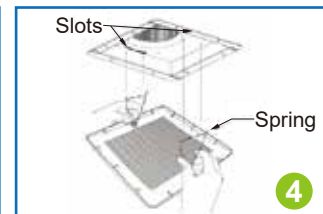
1. **A:** Secure duct with wind pipe  
**B:** Fix on ceiling with 1 screw



2. Assemble main unit with duct and put into ceiling



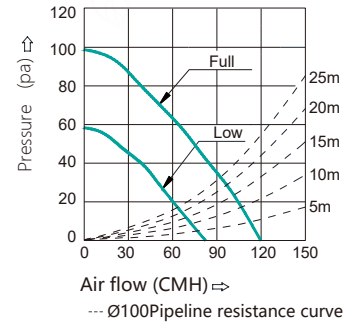
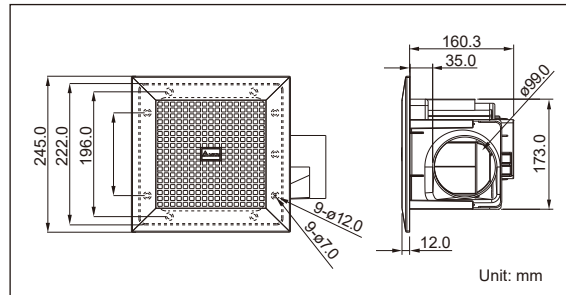
3. Fix to ceiling with four screws



4. Assemble grille with fan body

## Ceiling Mount Type with Duct VFB080XTH

Dual Speed



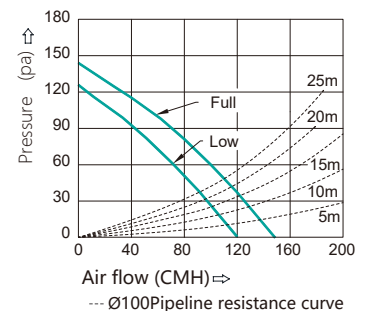
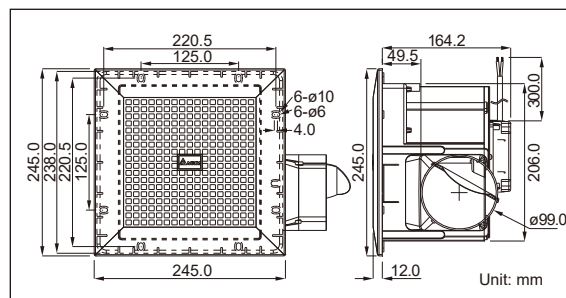
### Characteristic Table

MODEL	Grille Size	Mounting Opening	Duct Size	Weight	Power Rating	Power Consumption	Maximum Air Flow		Maximum Air Pressure		Noise	Remark
PART NO.	mm	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A	
VFB080XTH	245 × 245	175 × 175	100	1.35	220/50	2.8	80	47	56	0.22	28	Low Speed
						7.5	120	70	96	0.38	37	Full Speed

- \* The max. air flow is measured in free air; max air pressure is measured at zero air flow.
- \* Noise is measured in semi-anechoic chamber in free air, one meter from intake, right and left side. 3 microphones to average.
- \* All readings are typical values at rated voltage.
- \* VFB080XTH operates in low speed mode (green LED) or full speed mode (amber LED) by cycling ON/OFF switch. Default is low speed.
- \* Specifications are subject to change without notice.

## Ceiling Mount Type with Duct VFB120XTH

Dual Speed



### Characteristic Table

MODEL	Grille Size	Mounting Opening	Duct Size	Weight	Power Rating	Power Consumption	Maximum Air Flow		Maximum Air Pressure		Noise	Remark
PART NO.	mm	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A	
VFB120XTH	245 × 245	210 × 210	100	1.2	220/50	6.0	120	70	130	0.52	35	Low Speed
						10.6	150	88	140	0.56	40	Full Speed

- \* The max. air flow is measured in free air; max air pressure is measured at zero air flow.
- \* Noise is measured in semi-anechoic chamber in free air, one meter from intake, right and left side. 3 microphones to average.
- \* All readings are typical values at rated voltage.
- \* VFB120XTH operates in low speed mode (green LED) or full speed mode (amber LED) by cycling ON/OFF switch. Default is low speed.
- \* Specifications are subject to change without notice.

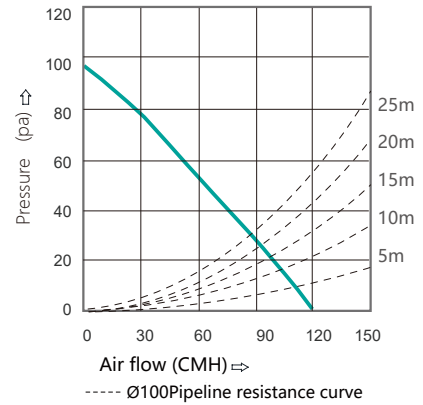
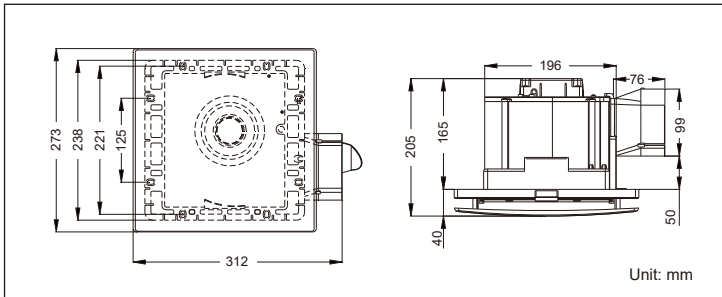
# Ceiling Mount Type with washable filter VFB150CTH-F

Washable Filter

WARRANTY  
5 YEAR



VFB150 filter series adopt removable long-life high-efficiency filters for the design. Filters can be easily pulled out and washed, tackling the hassle of ventilation fan cleaning. Certified by the EN779: 2012 standard, the filters can block dusts in the air to go into the fan.



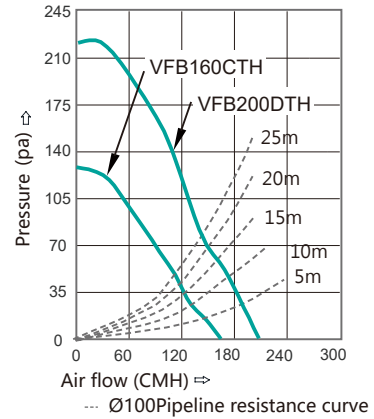
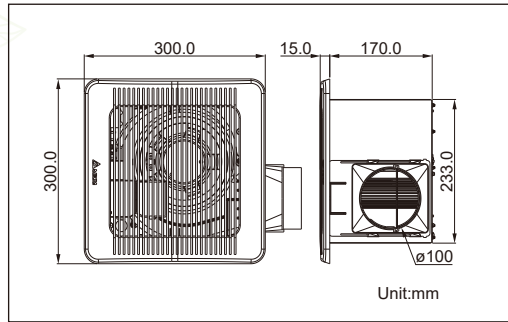
## Characteristic Table

MODEL	Grille Size	Mounting Opening	Duct Size	Weight	Power Rating	Power Consumption	Maximum Air Flow	Maximum Air Pressure	Noise	Remark	
PART NO.	mm	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A
VFB150CTH-F	273 X 273	210 X 210	Ø100	1.4	220/50	10.6	150	88.3	116	0.47	40

- \*\* The max. air flow is measured in free air; the max. air pressure is measured at zero air flow.
- \* Noise is measured in semi-anechoic chamber in free air, one meter from intake, right and left side, 3 microphones to average.
- \* The performance values aren't included backdraft damper.
- \* All readings are typical values at rated voltage.
- \* Specifications are subject to change without notice.

# VFB160CTH VFB200DTH

Single Speed **WARRANTY 5 YEAR**



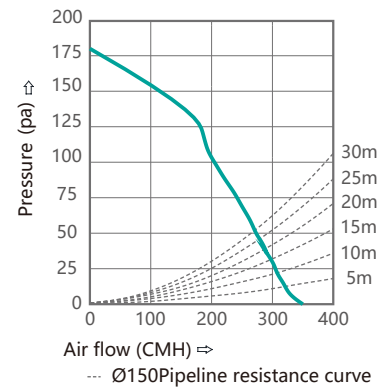
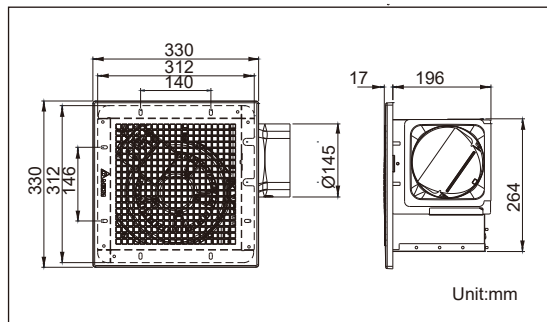
## Characteristic Table

MODEL	Grille Size	Mounting Opening	Duct Size	Weight	Power Rating	Power Consumption	Maximum Air Flow		Maximum Air Pressure		Noise	Remark
PART NO.	mm	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A	
VFB160CTH	300 × 300	240 × 240	Ø100	3.4	220/50	7.0	160	94	127	0.50	33	
VFB200DTH	300 × 300	240 × 240	Ø100	3.4	220/50	11.0	200	117	215	0.86	38	

- \* The max. air flow is measured in free air; max air pressure is measured at zero air flow.
- \* Noise is measured in semi-anechoic chamber in free air, one meter from intake, right and left side. 3 microphones to average.
- \* All readings are typical values at rated voltage.
- \* Specifications are subject to change without notice.

# VFB350FTH

Single Speed **WARRANTY 5 YEAR**

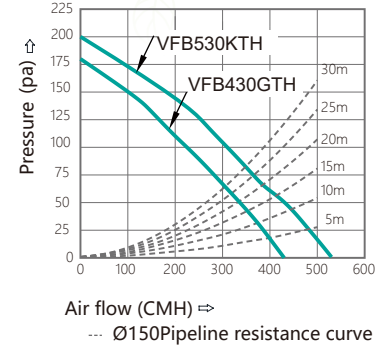
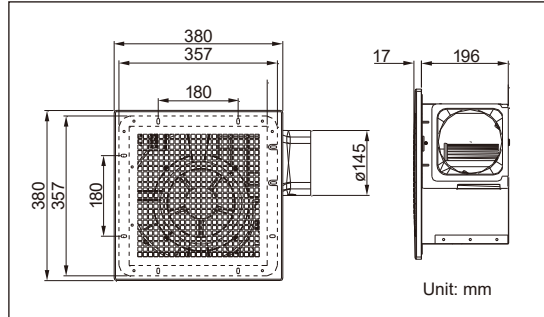


## Characteristic Table

MODEL	Grille Size	Mounting Opening	Duct Size	Weight	Power Rating	Power Consumption	Maximum Air Flow		Maximum Air Pressure		Noise	Remark
PART NO.	mm	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A	
VFB350FTH	330 × 330	270 × 270	Ø150	3.8	220/50	20.0	350	206	180	0.72	35	

- \* The max. air flow is measured in free air; max air pressure is measured at zero air flow.
- \* Noise is measured in semi-anechoic chamber in free air, one meter from intake, right and left side. 3 microphones to average.
- \* All readings are typical values at rated voltage.
- \* Specifications are subject to change without notice.

## VFB430GTH VFB530KTH

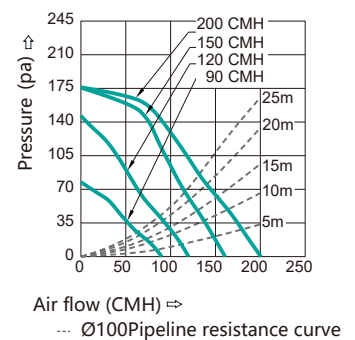
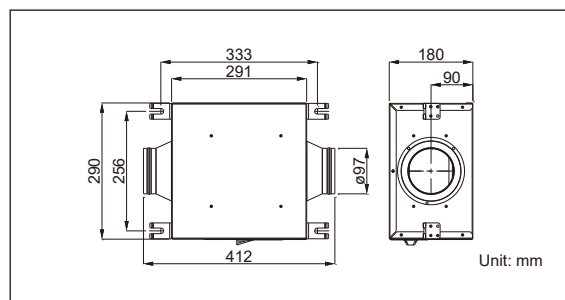


### Characteristic Table

MODEL	Grille Size	Mounting Opening	Duct Size	Weight	Power Rating	Power Consumption	Maximum Air Flow		Maximum Air Pressure		Noise	Remark
PART NO.	mm	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A	
VFB430GTH	380 × 380	320 × 320	Ø150	5.7	220/50	17.5	430	253	180	0.72	36	
VFB530KTH	380 × 380	320 × 320	Ø150	5.7	220/50	37.0	530	312	200	0.80	41	

- \* The max. air flow is measured in free air; max air pressure is measured at zero air flow.
- \* Noise is measured in semi-anechoic chamber in free air, one meter from intake, right and left side. 3 microphones to average.
- \* All readings are typical values at rated voltage.
- \* Specifications are subject to change without notice.

## In-line exhaust fan VDB120BXTH VDB200DXTH



### Characteristic Table

MODEL	Mounting Opening	Duct Size	Weight	Power Rating	Power Consumption	Maximum Air Flow		Maximum Air Pressure		Noise	Remark
PART NO.	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A	
VDB120BXTH	Refer to Dimension Drawing	100	5.5	220/50	3.2	90	53	75	0.30	16	Low Speed
6					120	71	140	0.56	17	Full Speed	
VDB200DXTH					9	150	88	175	0.70	17	Low Speed
17					200	118	175	0.70	21	Full Speed	

- \* The max. air flow is measured in free air; max air pressure is measured at zero air flow.
- \* The noise is measured in semi-anechoic chamber, at 1.5meter under ceiling to simulate real installation (mounting fan on the ceiling, ducted inlet and outlet).
- \* All readings are typical values at rated voltage.
- \* VDB120BXTH / VDB200DXTH operates in low speed mode or full speed mode by 2 switches.
- \* Specifications are subject to change without notice.

# In-line Supply Fan With HEPA Filter DC Motor Technology

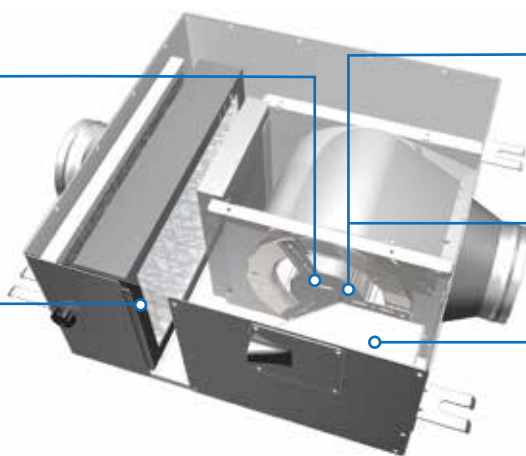
**DC MOTOR  
TECHNOLOGY**



- High Efficiency DC Motor
- Double High Efficiency Filters
- Easy Installation
- Constant Airflow Technology
- Energy-saving and Quiet
- Three Years Warranty

**A Highly Efficient Brushless DC Motor**  
Features ball bearings design to enhance the life of the product.

**Double High Efficiency Filter**  
Filter air for double protection PM 2.5 purification efficiency of HEPA filter is over 99.6% (\*In-line Supply Fan With HEPA Filter)

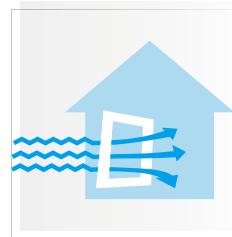
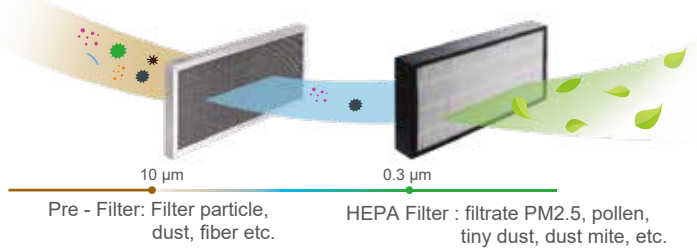


**Greater Energy Efficiency**  
A switch power supply and the unit's brushless DC motor reduce power consumption.

**Soft-start Control**  
Reduces current impulse and start-up noise.

**Lock Protection**  
Automatically powers off and on after 10 seconds if lock releases.

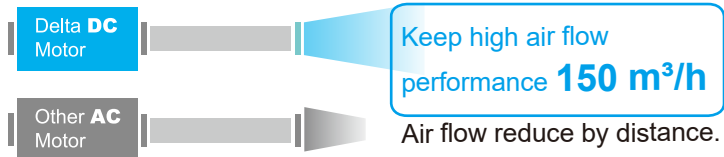
Filter air for double protection  
Purification efficiency :PM2.5 purification of HEPA filter is over 99.6%



Constant Airflow Technology



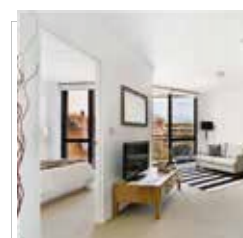
High efficiency DC Brushless Motor:  
Permanent magnet motor



※ It compares with the same 150m³/h AC motor fan product.



Compact size  
It only needs a small space and easy installation



Good for interior design  
It only needs small air grills and keeps your home clean.

# In-line Supply Fan With HEPA Filter

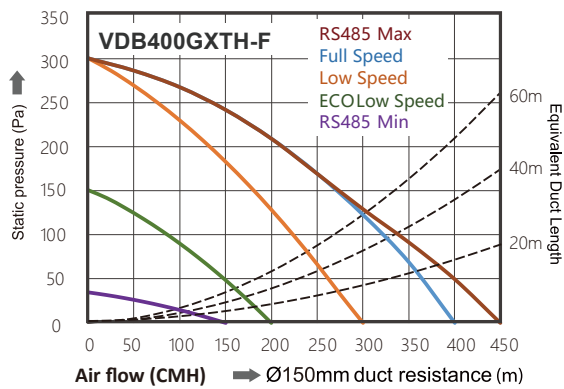
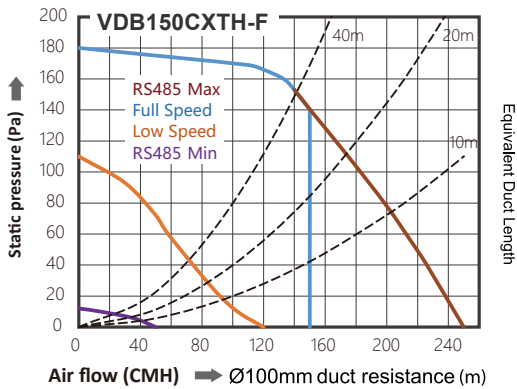
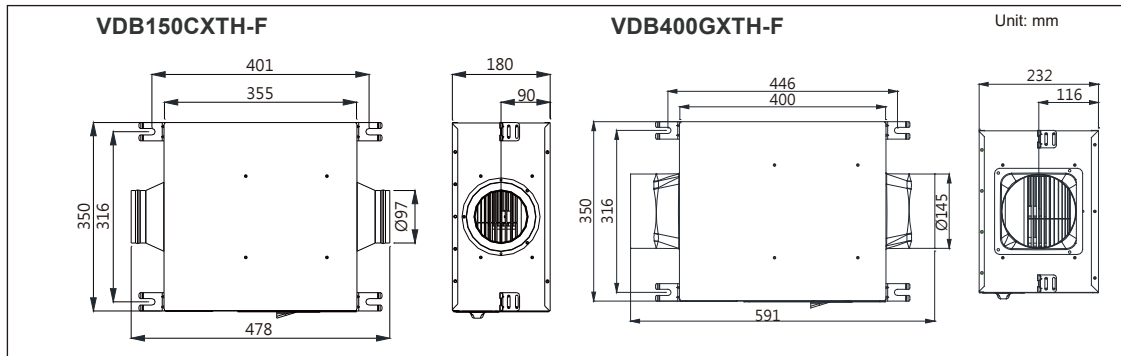
**VDB150CXTH-F**  
**VDB400GXTH-F**



Filter

Super Quiet

Dual Speed



## Characteristic Table

MODEL	Mounting Opening	Duct Size	Weight	Power Rating	Power Consumption	Maximum Air Flow	Maximum Air Pressure	Noise	PM2.5 Filtration Efficiency	Remark		
PART NO.	mm	mm	kg	VAC/Hz	Watts	CMH	CFM	Pa	inAq	dB-A	%	
VDB150CXTH-F	Refer to Dimension Drawing	100	8	220/50	Max. 40	50-250	29-147	180	0.44	30 Max.	≥97	RS485
8					120	71	110	0.72	21	Low Speed		
14					150	88	180	0.72	23	Full Speed		
Max. 62					88-265	150-450	35-300	0.14-1.2	Max.45	RS485		
VDB400GXTH-F	Refer to Dimension Drawing	150	10	220/50	12	118	200	150	0.6	23	≥95	ECO
25					176	300	300	1.2	28	Low Speed		
55					235	400	300	1.2	32	Low Speed		
												Full Speed

- \* The max. air flow is measured in free air; max air pressure is measured at zero air flow.
- \* Noise is measured in semi-anechoic chamber in free air, one meter from intake, right and left side. 3 microphones to average.
- \* All readings are typical values at rated voltage.
- \* Specifications are subject to change without notice.

## Accessory List

MODEL	Name	Part No.	Qty
VDB150CXTH-F	Pre-filter	VFRU-36-01PF	1
	HEPA Filter	VFRU-36-02HF	1

MODEL	Name	Part No.	Qty
VDB400GXTH-F	Pre-filter	VFRU-40-01PF	1
	HEPA Filter	VFRU-40-02HF	1

## Comprehensive Testing Process Ensures Reliability



Wind Tunnel Lab.



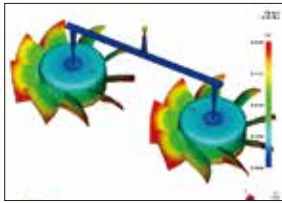
Anechoic Chamber



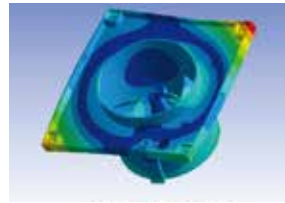
Water Spray Test



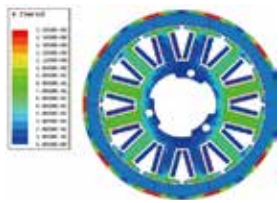
Mechanical Shock



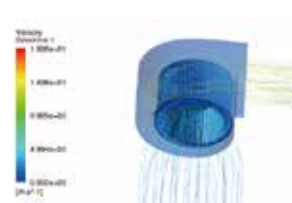
Molding Analysis



Structure Analysis



Flow Analysis



CFD

## Physical Testing for Ventilation Fan Reliability

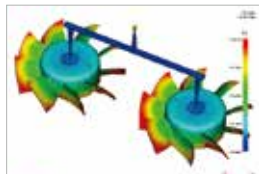
Laboratory testing of Delta products analyzes functionality, durability under harsh conditions, and construction for long life. The Basic Function Test checks current, speed and noise, while the Safety Test includes leakage current, Hipot (high potential), ground bond and insulation testing. Comprehensive reliability testing continues with:

- Low Temperature and High Temp/Rating Voltage on/off Test
- Temperature Cycling & Power Switching
- Impeller Locked Test
- Random Vibration and Drop (packing)
- Operational and Non-operation Vibration
- Mechanical Shock
- Thermal Shock
- Humidity Exposure
- Water Spray
- Life Test

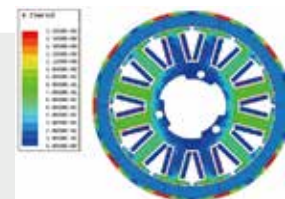
## Design & Analysis Technology

Delta's design and analysis technology utilizes 3D and 2D tools to conduct thorough examination during the design and production phases. Software simulations to enable the highest standards of performance include:

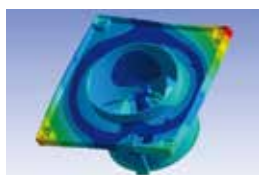
**Moldflow Analysis Software**  
Plastic mold Flow Analysis



**Aerodynamic Simulation Software**  
Air flow analysis



**Structure Simulation Software**  
Structure analysis for stress and vibration



**Computational fluid dynamics**  
Fan blade curve design



## Certified Management System



ISO 9001:2008  
Quality Management  
System



ISO 14001:2004  
Environmental  
Management System



ISO QC08000  
Hazardous Substance  
Management System



ISO 14064  
Greenhouse Gas  
Accounting and  
Verification

## Product Certification



U.S. ENERGY STAR



North America UL



Thailand TISI



China 3C



Japan PSE



Taiwan BSMI

## How to Choose Ventilation Fan

When install ventilation fan, please refer to this formula:

$$\text{Air flow (CMH)} = \text{Room Space (m}^3\text{)} * \text{Air Exchange per Hour (n)}$$

Installed Area		Air Exchange per Hour (n)	Installed Area		Air Exchange per Hour (n)	Installed Area		Air Exchange per Hour (n)
Hotel	Restaurant	8	Hospital	Waiting room	10	Cinema	Projection Room	10
	Kitchen	15		Clinic, Ward	6			
	Lobby	5		Operating Room	5			
	Restroom	5	School	Laboratory, Hall, Classroom	8	Factory	Office	6
	Laundry	15		Gymnasium	8		Copy Room	20
Residence	Apartment	15	Office	Toilet	12	Pub & Restaurant	Restaurant	6
	Bathroom, Toilet	10		Office	6		Kitchen	20
	Living room, Bedroom	6		Meeting Room	12			



Delta Group is the world's largest manufacturer of brushless DC fans and a leading provider of switching power supplies.

Our company mission is **“To provide innovative, clean and energy efficient solutions for a better tomorrow”**

## India

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