

Three-Phase Brushless DC Motor Fans

Designed for data center and storage servers, Delta's three-phase brushless DC motor fans represent the next stage in advancement of server cooling fans. Three-phase motors provide a stable transition between slots, which allow fans to run smoothly while maintaining low vibration, high air pressure, and high energy efficiency, resulting in energy and cost savings.

Delta's three-phase fans deliver a variety of advantages:

- High Efficiency
- Lower Rotating Vibration
- Optimized Blade Design
- Advanced FET's /Drivers for lower start up voltage and ripple current

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Three-Phase Brushless DC Motor Fans

Data center and server cooling fans demand high energy efficiency and low rotating vibration to achieve thermal requirements and operating performance. Delta three-phase motor brushless DC fans integrate optimized blade design and advanced electrical drives to achieve high operating efficiency (up to 40%) and low vibration.

Powered by three-phase motors and advanced electrical drives

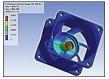
Advance electrical drive technology to lower start-up noise and ripple current.

Optimized blade design for high efficiency

New series fans can reach up to 40% efficiency.

The core technologies of Delta's three-phase brushless DC fans are:

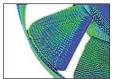
Enhanced Structure

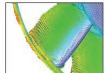




Advanced CAE Analysis in structure design

High Efficiency Blade

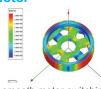




Aerodynamic simulation to smooth airflow

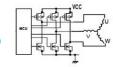
Three-phase Motor

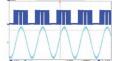




New motor shape to smooth motor switching

Advanced Electrical Drive





Lower start-up noise and smoothly driving

Available Models

Part Number	Dimension (mm)	Voltage VDC)	Power (W)	Speed (RPM)	Noise (dB-A)	Bearing Type	Air Flow (CFM)	Air Pressure (in H2O)
GFC0412DS-TP01	40x40x56	12 VDC	12	15,300	61.0 dB(A)	Ball	30.50CFM (0.864 m3/min)	1.726inchH2O (43.83mmH2O)
GFC0412DS-DF00	40x40x56	12 VDC	15.6	16,000	64.5 dB(A)	Ball	32.179CFM (0.911 m3/min)	2.631inchH2O (66.824mmH2O)
GFM0412SS-DE1PB7Q	40x40x56	12 VDC	12.6	19,000	68.5 dB(A)	Ball	21.56CFM (0.610 m3/min)	3.416inchH2O (86.78mmH2O)
GFC0412DS-DV17	40x40x56	12 VDC	18	20,500	66.0 dB(A)	Ball	33.22CFM (0.941 m3/min)	3.330inchH2O (84.58mmH2O)
GFC0412DS-SM06B0G	40x40x56	12 VDC	27.24	23,000	69.0 dB(A)	Ball	37.61CFM (1.065 m3/min)	4.110inchH2O (104.39mmH2O)
PFM0612XHEB7T	60x60x38	12 VDC	13.8	18,500	65.1 dB(A)	Ball	64.44CFM (1.825 m3/min)	2.343inchH2O (59.52mmH2O)
GFC0612DS-AQ14	60x60x56	12 VDC	19.2	10,400	66.0 dB(A)	Ball	65.03CFM (1.842 m3/min)	2.007inchH2O (50.98mmH2O)
GFC0624DW-DT48	60x60x76	24 VDC	31.2	11,300	71.5 dB(A)	Ball	69.44CFM (1.996 m3/min)	3.025inchH2O (76.83mmH2O)
PFM0812HE-01BFY	80x80x38	12 VDC	51.6	16,300	77.0 dB(A)	Ball	129.42CFM (3.665 m3/min)	4.969inchH2O (126.22mmH2O)
GFC0812DS-CMA8	80x80x56	12 VDC	26.04	12,000	72.6 dB(A)	Ball	90.12CFM (2.552 m3/min)	3.827inchH2O (97.21mmH2O)
GFM0812DS-SMB7R	80x80x56	12 VDC	28.8	12,500	73.3 dB(A)	Ball	93.23CFM (2.640 m3/min)	4.485inchH2O (113.91mmH2O)
GFC0812DW-TD2G	80x80x76	12 VDC	99.24	13,500	80.0 dB(A)	Ball	177.10CFM (5.015 m3/min)	4.502inchH2O (114.35mmH2O)
GFC0812DW-SM00B7P	80x80x80	12 VDC	62.4	12,000	74.5 dB(A)	Ball	90.12CFM (2.552 m3/min)	4.170inchH2O (105.94mmH2O)
GFM0812DUB7S	80x80x86	12 VDC	18	13,800	82.5 dB(A)	Ball	190.63CFM (5.398 m3/min)	5.749inchH2O (146.04mmH2O)
PFM1412DEB7V	139.7x139.7x38	12 VDC	46.8	6,500	70.0 dB(A)	Ball	282.31CFM (7.994 m3/min)	2.033inchH2O (51.65mmH2O)