



Delta Axial EC Fans: Ensuring Safety and Efficiency in Heat Pumps with New-Generation Refrigerants

The adoption of new-generation Heat Pump employing refrigerants with low global warming potential (GWP) like **R290 (Propane)**, has set a new standard for developing sustainable and eco-friendly heating systems. **Delta's fans are a cornerstone of this new generation heat pumps** striving to achieve true green technology, aligning with the EU's sustainable objectives.

Refrigerants play a pivotal role in the transition to **mitigate greenhouse gas emissions**, replacing high "Global Warming Potential" like (HFC) Hydrofluorocarbons with low GWP natural alternatives such as propane and CO₂, in line with the **EU's F-Gas regulation** and the Paris agreement.

While heat pumps using **natural refrigerants** have reached a mature stage and are considered safe technology, they present unique challenges due to their high flammability. **Manufacturers of heat pumps using flammable refrigerants must adhere to rigorous considerations regarding system design, safety, installation and operation.**

Delta fans are safe and tailor-made for the primary and secondary fan applications within the heat pump modules.

Our cutting-edge EC Axial Fans, for both residential and industrial application, ranging from 120mm to 800mm, are designed to meet the rigorous demands of these applications. Delta EC Fans largely meet the safety standards for A2L and A3 refrigerants, have very low power consumption, with >90% high energy efficiency motor, and a state-of-the-art blade design ensuring maximum airflow and minimal noise levels while at the same time excel in performance and reliability.



Refrigerant Safety Level

A2L & A3

Lower Noise Level

Flow grill

For symmetrical and fluid inflow of air, minimizing the noise caused by vortex.

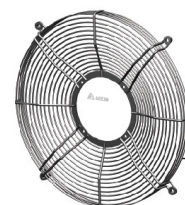
Higher Efficiency

+90%

Energy efficient EC motor for low power consumption.

Accessories

Wall Ring
Fan grid



In industrial applications, the heat pump often includes a second level of ventilation (secondary fans) to extract gas in the event of leaks. **Delta offers a complete range of ATEX certified EC fans specific for "gas extraction"**. In fact, for those systems with a high quantity of flammable refrigerant, the F-gas regulation defines the need for frequent checks for possible leaks; therefore, often a leak detection system is included. The secondary fan is activated when this system detects an irregular level. **Due to the direct contact with the refrigerant, this fan must necessarily be ATEX certified, for safe operation in potentially hazardous environments.**

EC axial fans with A2L and A3 safety level:

Diameter Size (mm)	Max. Air Flow (CFM)	Air Pressure (Pa/inH ₂ O)	Power Range	Volts Alternating Current	Series Number
Ø450	3045	74 / 0.29	163W	1~230Vac 50/60 Hz	GTW045
Ø500	5321	187 / 0.75	800W	1~230Vac 50/60 Hz	GTW050
Ø630	5940	85 / 0.34	400W	1~230Vac 50/60 Hz	GTW063
Ø800	17839	265 / 1.06	3100W	3~ 400Vac 50/60 Hz	GTW080

EC axial fans with ATEX certification for air extraction:



Blade Size (mm)	Max. Air Flow (CFM)	Max. Speed (RPM)	Voltage (VAC)	Series Number
113	129	4000	100 - 240	AFL12AUHE
140	214	3200	100 - 240	AFL15AUHS
172	323.9	2500	100 - 240	AFL22AUHW
172	281.6	2500	100 - 240	AFL22AUHW-R (Suction)
200	445	2200	100 - 240	AFL25AUHW
172	310.9	2400	115 / 230	AFL22A1HW / AFL22A2HW
200	400	2000	115 / 230	AFL25A1HW / AFL25A2HW
230	510	1600	230	AFL28A2LU

Contact us
to discover how Delta fans can elevate your Heat Pump system
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