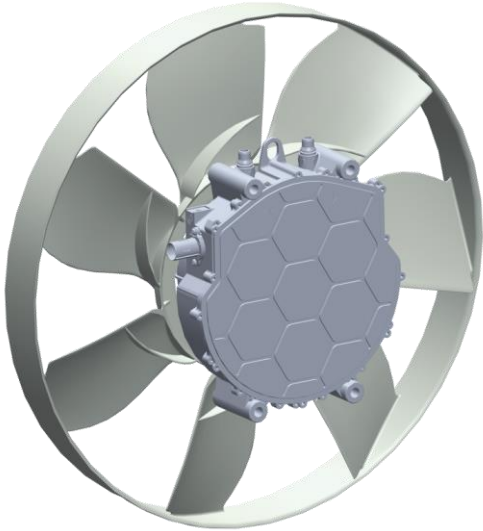


# 10kW AXIAL FAN

## HIGH VOLTAGE ELECTRIC FAN SYSTEM



- 10kW output
- Liquid cooled system
- High torque and efficiency
- Low noise
- Reliable in long-term operation
- Operating voltage range 550V to 850V
- Meets IPx6 and IP6k9k requirements
- Modular system solutions
- Integrated inverter
- Coolant mixture 50% Water / 50% Glycol
- Customer specific connectors can be used

Calatherm presents a fully integrated 10kW 800VDC system solution, combining a high-performance cooling fan, electric motor, and inverter into one compact package. This high voltage Fan system is designed for use in Battery Electric Vehicles (BEVs) and Fuel Cell Electric Vehicles (FCEVs), where advanced thermal management is critical.

The system delivers reliable airflow to radiators and condensers within cooling circuits, supporting key components such as fuel cell stacks, traction motors, high-power electric brake resistors, and battery packs. It is specifically engineered to handle peak thermal loads during intense operating conditions, including regenerative braking, sustained uphill driving under full load, and megawatt-level fast charging.

With a maximum output of 10kW, the system delivers approximately 70 Nm of torque at 2600 rpm, providing robust and efficient cooling performance across a range of demanding scenarios.

### BENEFITS

- Higher power fan allows for smaller fuel cell cooling pack.
- Particularly beneficial for large EV's that require considerable airflow for large radiators / cooling packs.
- Capable of delivering significantly higher airflow than typical low-voltage alternatives.
- Series proven fan portfolio with best-in-class performance, efficiency and low noise level.
- Compact and flexible design for installation in challenging installation spaces.
- Highly efficient and robust High Voltage E-Motors.

## TECHNICAL SPECIFICATION

Electrical Limits	Under voltage threshold	500 VDC	
	Min nominal operating voltage	550 VDC	
	Nominal operating voltage	800 VDC	
	Max nominal operating voltage	850 VDC	
	Overvoltage threshold	910 VDC	
	Absolute max static operating voltage	930 VDC	
	Max DC current	21 A	
	Passive discharge time 850V to <60V	<120 Sec	
LV Power Supply	LV supply min	9 VDC	
	LV supply max	32 VDC	
	LV min for CAN	6 VDC	
Ambient Conditions	Ambient temp min	-40 °C	
	Ambient temp max	80 °C	
	Coolant temp max	70 °C	
	Coolant flow min	6 l/min	
	Coolant pressure (rel.) max	3.5 Bar	
	Max. pressure drop at nom condition	20 mbar @ 2l/min	
		60 mbar @ 6l/min	
		130 mbar @ 10l/min	
	Heat rejection at nom operation point	<1.5 kW	
	Coolant mixture	Water 50 % / glycol 50 %	
Relative humidity max	100 %		
High altitude operation max	4,000 M		
General	Rotational direction	Clockwise (facing the front of fan)	
	IP Classification	IP6KX / IPX6K / IPX9K	
	Mass	19 kg	
	Dimensions (o/dia x length)	700 x 200 mm	

## OUTLINE DIMENSIONS

