

Electric High Voltage Heaters HVH 50/70 and HVH 100

Perfect Climate for Electric Vehicles



The electric High Voltage Heater (HVH) is the ideal heating system for plug-in hybrids and electric vehicles. It converts DC electric power into heat with practically no losses. Webasto's innovative technology works with an extremely thin heating layer that is firmly bonded onto the heat exchanger, and a large contact area for heating the coolant. The HVH therefore achieves extremely fast heat-up times, high precision and the highest efficiency.

Customers benefit from greater driving ranges with the same battery capacity and optimum climate comfort. In addition, gentle and optimum conditioning of the battery is possible.

Furthermore, the system requires only a small installation space and can therefore easily be integrated into vehicles. Webasto offers a wide range of accessories for integrating the HVH into vehicles, together with an international support and service network.

Good to know: The HVH 100 delivers up to 10 kW heating power and works with voltages up to 870 V, needed by many busses and trucks, as well as LCV and cars. Unique is the active discharge support function of the HVH 100, that reduce the discharge time to milliseconds.

- **Powerful 5/7/10 kW heating performance and wide voltage range up to 870 V independent of coolant temperature**
- **Layer technology for extremely fast heat-up**
- **Highest efficiency through quick and direct heat transfer**
- **Stepless and exact controllability with no inrush currents**
- **Reliable safety concept with redundant controls**
- **Certified for automotive requirements with ECE-R10 and ECE-R122 type approval**
- **CE certified for various segments and applications**



Car



Truck



Light Vehicles



Bus



Off-Highway



Special Vehicles

The innovative Water Heater for Hybrid and Electric Vehicles

Technical Specifications

	HVH 50 Gen 1.5 HVH 70 Gen 1.5	HVH 100
Heating performance (kW)	5 / 7	10
HV voltage range DC (V)	100 – 490	250 – 870
Efficiency (%)	> 95	
Controllability steps (W)	50	100
Dimensions (mm)	284 x 200 x 54	325 x 200 x 72
Weight (kg)	1.95	2.6
Temperature range for heating (°C)	-40 to 90	
Temperature range for ambient (°C)	-40 to 125	
Communication	LIN 2.1	
Passive discharge (V) according to ISO 6469-3.3.	< 60 in 4 Sec	< 60 in 40 Sec*
Dielectric strength (V DC)	2,500	
IP protection class	IP 6K9K IP 6K7	
HV connection	TYCO HVA280	
NV connection	LV FEP connector 8 PIN integrated de-aerating membrane	
Electrical safety	ISO 6469 Part 3/ECE R100	
Functional safety	According to ISO 26262	
EMC	ECE R10 Rev. 5	
Insulation resistance (MΩ)	50	30
Service life	15 years or 12,000 heating hours	

* with the active discharge support function, the discharge time can be reduced to milliseconds.

Advantages:

- **Powerful and reliable heat output:** all-time comfort for the driver
- **Efficient and quick performance:** longer driving experience without energy waste
- **Precise and stepless controllability:** better performance and highest driving range
- **Reliable and certified safety:** three mechanisms to handle faults and guarantee safety