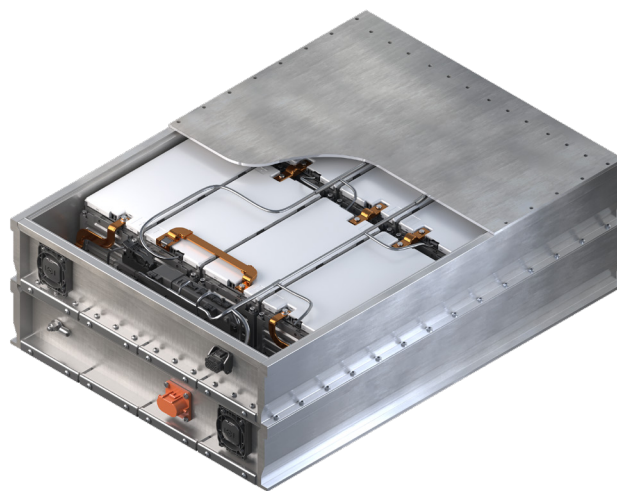


CV Standard Battery System

A perfect fit for any type of commercial vehicles



The Webasto CV standard battery system is designed for the commercial vehicle market and offers robust packaging, automotive standard design, zero compromise quality and an efficient cooling interface. Coupled with Samsung SDI state-of-the-art cell technology, Webasto CV standard battery system is a perfect fit for commercial vehicles. Designed for light, medium and heavy duty on- and off-road requirements, the Webasto CV standard battery system brings a plug-and-play solution to reality. Modularity is our core design principle, with which we fit in your commercial vehicle application.

System requirements and the environment

- Optimized for vehicle classes M1, M2, M3, N1, N2 & N3 (EC Directive 2007/46)
- Developed for EU28 as well as Switzerland, Turkey and Norway
- Designed for an operation temperature of -30°C to +60°C, 3,500 meters above sea level and 0 – 100 % humidity

Safety features

- Physical separation between high voltage and cooling connectors
- Desiccant cartridges to avoid condensation over lifetime
- Integrated thermal runaway detection in each system
- State-of-the-art pressure equalization
- Insulation measurement, high voltage interlock and contactor monitoring included in every battery pack
- Temperature, voltage and current of different sub-components are monitored
- Maintenance-free design

Standards & Norms

- **Homologation:** ECE R100, ECE R10
- **Safety:** ISO 6469, ISO 26262 (ASIL C)
- **Environment:** ISO 20653 (IP67/IP6K9K)
- **Vehicle Communication:** CAN-Bus conform to ISO 11898.
- **Company Standards:** LV 123, LV 124
- **EMC:** ISO 11452, ISO 7637, CISPR 25
- **Transport:** UN T38.3

Additional Standards & Norms*

- UN GTR No. 20, ISO 16750, ISO 12405, ISO 19453, CE upon request.

* Tests & Requirements partially fulfilled.



Car



Truck



Light Vehicles



Bus



Rail



Off-Highway

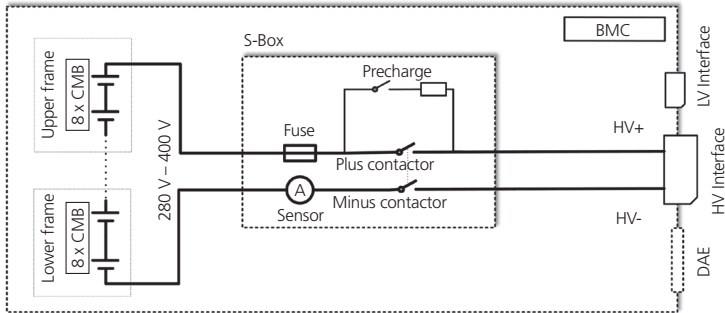


Defense



Special Vehicles

Battery pack circuit



Technical specifications

	Battery pack
Dimensions (L x W x H) (mm)	960 x 686 x 302
Weight (kg)	295** per pack
Installed energy (kWh)	35
Voltage range (V)	280 – 400 (~350 nominal)
Energy density	~203 Wh/l, >118 Wh/kg
Continuous use (CH/DCH) (kW) (@25 °C, SoC dependent)	50/56
Maximum performance (CH/DCH) (kW) (30s, @25 °C, SoC dependent)	116/112
Lifetime (@80 % DoD, 25 °C, 1C/1C)	>3,000 cycles*
Calendric lifetime (Years)	8
Volume flow per battery pack (l/min.)	10
Pressure loss per battery pack (mbar)	<50
Cell type	prismatic NMC

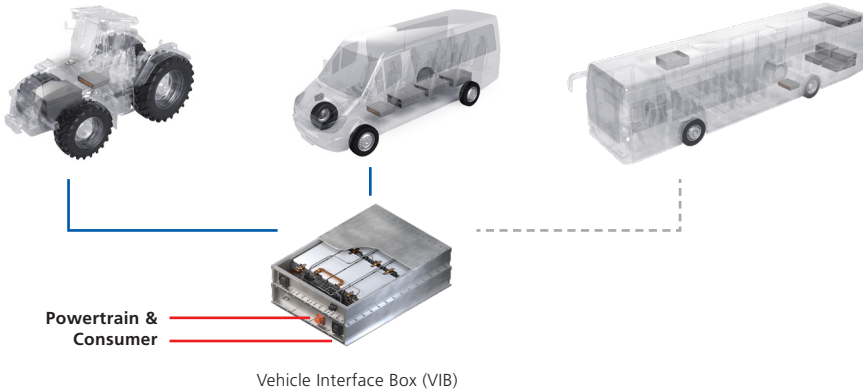
* SoC, voltage, temperature, & DoD dependent ** Dry weight

CV standard battery system, comprising battery packs and Webasto Vehicle Interface Box

CV standard battery system with 2 battery packs

CV standard battery system with 3 battery packs

Expandable up to 10 battery packs* (350 kWh)



Key features

Automotive standards

Master BMS

EMC protection

DC charging enabled

Modular

System specifications	400 V Max. 5 battery packs	800 V Max.** 10 battery packs
Energy (entire system) (kWh)	n*35	
Pack topology in 400/800 V system	1snp	2snp
Continuous use* (CH/DCH) (kW)	up to 150	up to 300
Maximum use 30 sec* (CH/DCH) (kW)	up to 230	up to 460

* @25 °C & SoC dependant. ** power figures with VIB & min. 3 parallel battery packs.