Safe, reliable cooling for hydrogen fuel cell systems on commercial vehicles

FAUN is a member of the long-established KIRCHHOFF Group's Ecotec division, based in Germany. FAUN's 2000+ employees develop and manufacture dependable refuse collection vehicles (RCVs) and street sweepers. All FAUN vehicles harness innovation and modern technology to ensure they meet the latest technical standards.

BLUEPOWER: battery/hydrogen synergy
FAUN's BLUEPOWER solution is an excellent example. This innovative technology combines battery-electric power with a hydrogen fuel cell range extender. BLUEPOWER is a big step toward FAUN's target of producing only hydrogen vehicles by 2030.

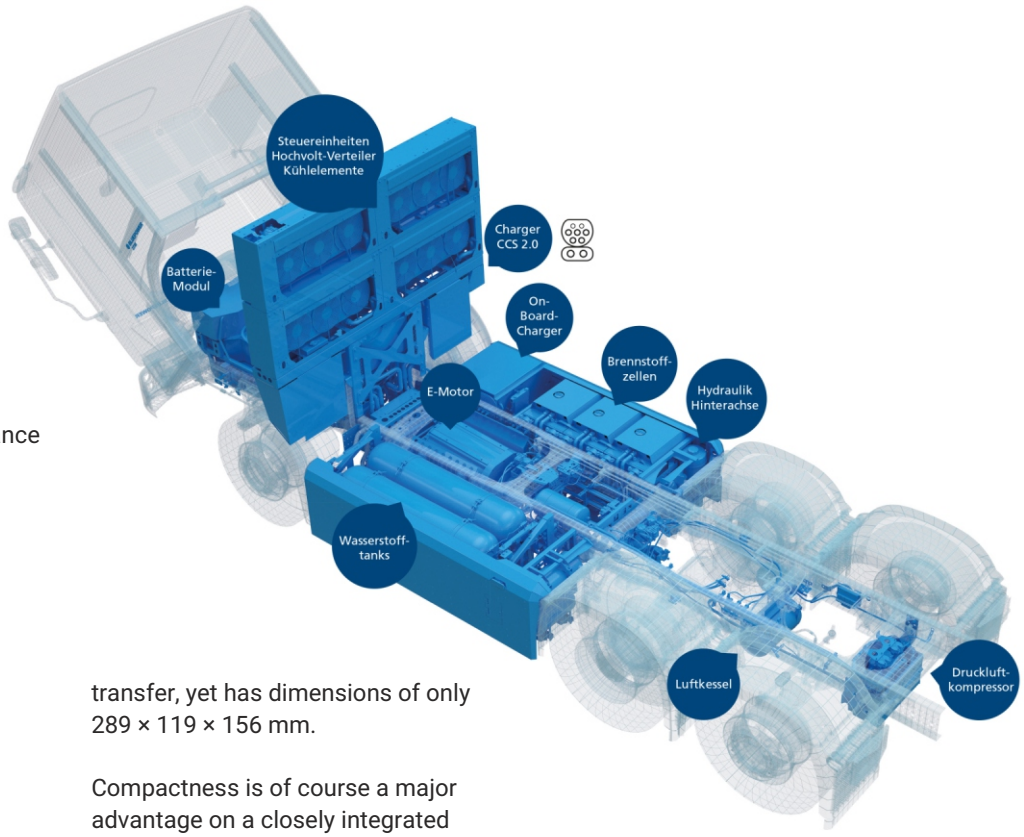
BLUEPOWER vehicles are suitable for a wide range of applications and have been operating with one prototype since 2019 and 20 trucks in operation in 2021. In hardworking RCV applications, they typically collect 20 tonnes of recyclables per day.

The heat exchange challenge
In developing BLUEPOWER, FAUN faced the challenge of achieving reliable separation between the two closed loops built into the hydrogen fuel cell skid. It was vital to avoid corrosion and cross-contamination between internal and external cooling loops. FAUN was also seeking a product offering efficiency, competitive pricing and reliably short lead times.

Based on their satisfaction with SWEP as a supplier, FAUN's partners recommended SWEP's BPHEs as the heat exchange solution for BLUEPOWER. SWEP BPHEs delivered the right technology, with fast support and impressive results from performance tests in the field.

SWEPs B10TSH model.

SWEP's ideal solution for BLUEPOWER
FAUN selected SWEP's B10TSHx60 model. This all-stainless steel BPHE is designed for use where there is a risk of corrosion, which makes it ideal for the BLUEPOWER application. The B10TSHx60 has a high flow rate and excellent heat transfer, yet has dimensions of only 289 × 119 × 156 mm.



Compactness is of course a major advantage on a closely integrated fuel cell skid designed for use in a commercial vehicle.

FAUN's BLUEPOWER RCVs have been operating efficiently and reliably for some time now, with their SWEP BPHEs performing entirely as expected.

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