

Scania is adding more solutions to its electric truck range

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Scania continues to expand its offer regarding battery-electric vehicle (BEV) trucks by introducing more electric machines, axle configurations and cab alternatives, plus a number of power take-off solutions.

Scania's range is now far beyond the initial levels where only the most common trucks could be specified. Today Scania's offer covers a broad palette of applications and operations; customers with different needs can expect to find their own tailormade solutions.

"We are steadily adding more and more customer value and specification choices with our continuous introductions," says Fredrik Allard, Senior Vice President, and Head of E-mobility at Scania. "And the customers reward us with increased interest since it is now obvious how well these trucks serve and behave in actual operations and how truly appreciated they are among drivers. We constantly hear stories about drivers that were sceptical at first, but then fell in love with their electric trucks."

The components and solutions that Scania is introducing in this particular round should make haulers and transporters within distribution or construction-related operations sit up and pay extra attention. Offering a tandem bogie axle for BEVs means that tippers, hook lifts, concrete mixers and a number of other rigid-based applications can be specified without having to sacrifice traction or load-carrying capacity. This goes hand-in-hand with Scania also introducing a number of different power take off-solutions for powering hydraulics or other bodybuilder equipment.

In addition, the two versions –210 kW and 240 kW– of the electric machine EM C1-2 that are now being introduced have a perfect fit with certain construction-oriented operations, since the power levels are right on spot (285 hp or 326 hp) with the typical specification for trucks used by municipalities. The EM C1-2 is physically shorter than its more powerful siblings, which opens up space for batteries and/or equipment such as supporting legs.

It is the perfect all-rounder for many lighter operations, combining low weight with high power output, lots of torque and smooth power delivery with two gears. It is ideal for operations in urban environments within distribution but it is equally suited for many other applications such as the diverse kinds of vehicles that municipalities use for maintenance. At a typical distribution truck, the designation would be Scania 24 P (if it is the 240 kW version, that is).

"It is the 9-litre engine equivalent if I were to do a diesel comparison," says Allard.

"It's the kind of electric machine that fits in an endless number of operations by being light and flexible, yet also powerful. It has one single permanent magnet, two gears and is really 'torquey' for its size. It offers driveability and the smoothness that drivers have come to expect from electric powertrains."

The market for electric vehicles is maturing faster in some areas than others. Most of this is related to the availability of a charging infrastructure (and access to power supply). Finding the right charging solution does not have to be complicated though: Scania can guide the customer through the whole process and help set up the right charging solution.

"It's a common misconception that charging is more complicated than it actually is," says Allard. "Many customers will do fine with a standard depot charging solution that we can guide them in designing and building."

Another area that initially has offered certain challenges when going electric is the power take-out (PTO). Efficient and robust PTOs are essential for so many applications and that is why Scania is now adding a number of different PTO solutions.

Green and efficient batteries

Scania's battery-electric trucks come with impressive numbers on the battery side, too. The batteries will last for 1.3 million kilometres, the lifetime of the truck. And their carbon footprint is approximately one-third of a comparative industry reference, due to the fact that they are produced with fossil-free electricity in northern Sweden. Scania has chosen lithium-ion batteries in prismatic shapes that are assembled in Södertälje into battery packs of 416 or 624 kWh, with state-of-charge windows of approximately 83% usable energy.

"The transition towards electrification is imminent," says Allard. "The reasons not to transform are rapidly being ironed out while more reasons for switching to electric trucks appear before our eyes every day. Add to that the demands from legislators, transport buyers and the fact that BEVs are loved by the drivers and it becomes obvious why electric trucks is about to dominate our industry."

(Scania)