

Preliminary report for the SPS/IPC/DRIVES in Nuremberg Powerful and efficient solutions for automation systems

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At the international SPS/IPC/DRIVES trade fair held in Nuremberg, Germany from 24 to 26 November 2009, motor and fan specialist ebm-papst (www.ebmpapst.com) is presenting its latest products in Hall 1, Stand 1-310.

The VarioDrive C drive motors from ebm-papst are an intelligent alternative to IEC standard motors with frequency inverter. The three different sizes all feature an enclosed and compact design with integrated electronics. The motors with a torque range of 1.0 – 20.0 Nm are ideally suited for applications such as those in fans, blowers, pumps and compressors. The mounting options are based on the familiar B14 / B5 flange variant. The compact housing, which features type of protection IP 55 and insulation class F, guarantees a long service life despite tough requirements.

Thanks to internal rotor technology, special impellers and a sophisticated overall aerodynamic design, the new motor forced air ventilation series for controllable drive motors provides significantly lower noise values than comparable products – even with higher air volumes. They meet the requirements of the IP66 type of protection (dust-proof and water jet-proof) as standard. Currently, eight sizes are available, which are suitable for motors with axis heights AH63 to AH200.

The new AC, DC and EC compact centrifugal modules for applications including refrigerated counters, home ventilation and control cabinet cooling are offered as a complete plug & play unit that ensures easy and hassle-free installation, as the fan is supplied as a module with all necessary connecting elements. The centring of the inlet nozzle to the impeller is pre-set, guaranteeing aerodynamically and acoustically flawless operation.

The new ECI 63 series of electronically commutated internal rotor motors represents the launch of new modular drive engineering line. Powerful motors with up to 100% higher torque are the basis on which a wide variety of drive solutions can be built piece by piece, with gearboxes, brakes, absolute encoders and other encoders. With torque of up to 1000 mNm, outstanding dynamics, a rated output of up to 400 W and IP54 type of protection even in the standard version, a wide power range can be covered for industrial applications. The electronics concept, which is likewise modular, is particularly clever. From the simple rotor position encoder to the powerful control with CANopen interface, this also allows a variety of sizes and function classes to be integrated.

With the new VARIODRIVE Compact VDC-3-49.15 electronically commutated external rotor motors, entirely new drive solutions are available to users in the

field of industrial automation. High power density, very compact dimensions and unexpectedly good dynamic characteristics are the outstanding features of these motors. With the completely integrated electronics, extensive function and a rated torque of 0.25 Nm at 4,000 rpm, a wide range of specific applications can be covered. A robust mechanical design and IP54 protection complete the outstanding motor characteristics. Supplemented by the familiar series of DC and EC motors and the combination options with gearboxes, brakes and sensor systems, optimally matched drive systems can be put together for a wide range of applications.

Of course, because the component density of the compact devices is increasing constantly, the waste heat load is also increasing. The S-Force fans from ebmpapst have been designed with this fact in mind. With pressure increase up to 600 Pa, they are currently the most powerful axial compact fans in their class worldwide. Even in this version, they provide high air flow at a high pressure level. The new S-Force generation in a centrifugal fan design with impeller diameters from 97mm to 225mm improves this top performance even further, to up to 1400 Pa. This makes it easy to fulfil even the most stringent requirements for delivery pressure.

Image1: ECI 63.40 K5 from the new modular drive line of electronically commutated internal rotor motors

Image 2: New VARIODRIVE Compact VDC-3-49.15 electronically commutated external rotor motor

Image 3: The new VarioDrive C drive motors from ebm-papst are an intelligent alternative to IEC standard motors with frequency inverter.