

From the control system *to the drive shaft*



Our product portfolio – an overview



Lenze



About Lenz | Your partner for drive solutions and automation systems

With more than 60 years of experience in the field of drive technology, we are one of the most innovative companies of our industry.

Building on these years of experience and vast expertise in various applications, Lenz has undergone continuous development to become a provider of customer-orientated products, drive solutions and automation systems.

Our know-how is our greatest strength and enables our qualified employees to develop customer-orientated solutions throughout the world.

Apart from our headquarters in Hamelin, we have 60 other sites all over the world.



The basis of the drive solution or automation system tailored to your needs is scalable products that complement one another perfectly. Paired with our application expertise and supporting services, you'll always get exactly what you need. The experiences we have gained based on the needs of our customers can be categorised into three success factors:

The project partner you need

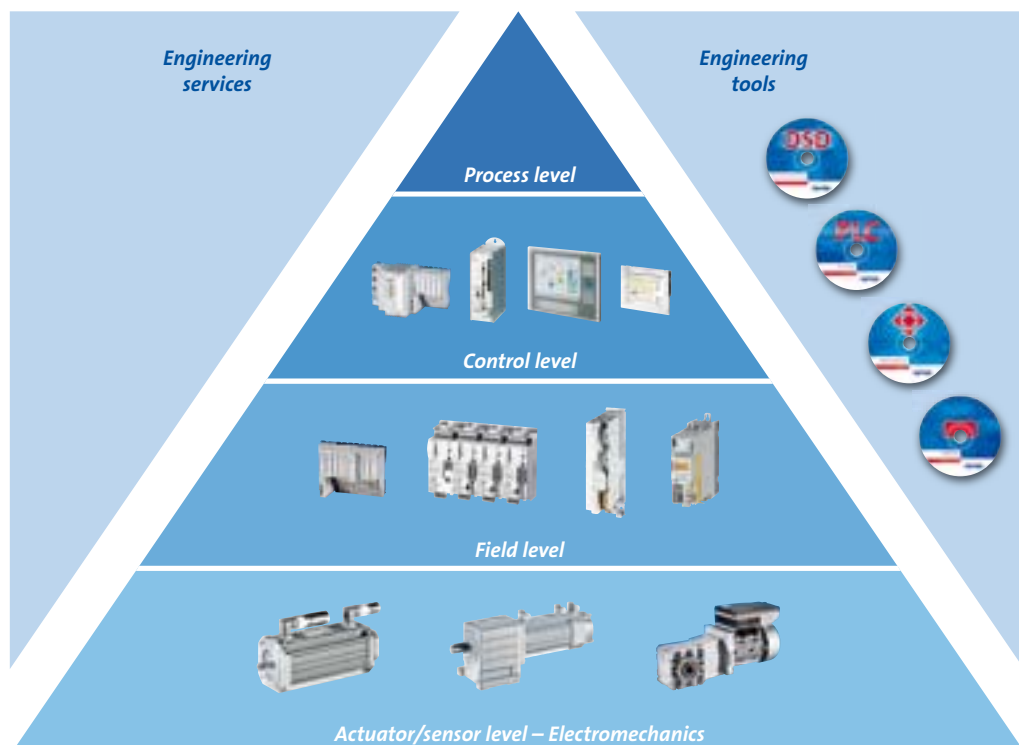
Is your drive and automation concept state-of-the-art? Would your drive and automation concept stand ahead of the competition? Our engineers will work with you to perform a thorough analysis with the aim of developing a technically and economically optimised solution.

The flexibility you need

Do your customers have very different requirements that you want to meet? We can offer support here with maximum flexibility at minimum expense. Our electronic products are extremely scalable and each of our mechanical products is part of a modular system.

The individuality you need

Does a standard product or service fail to meet your requirements? Lenze takes a detailed look at the overall picture and offers products and services that are tailored to your needs. This means that we can provide you with the entire spectrum of individual product combinations, right up to fully assembled and tested component systems. The risk of problems is thereby reduced, as are your procurement costs.



Controls | Control and visualisation

Our controls provide you with an extensive range of automation products. From modern motion controllers for use in the control cabinet to a compact decentralised I/O system and efficient visualisation systems, right up to powerful industrial PCs.

▶ **Controller 3200 C**

Control and visualisation combined in a compact design:

The Controller 3200 C is the ideal platform for machines/modules with central motion control. EtherCAT is one of the best performing bus systems on the market – directly “on board”. Simple use and future reliability are guaranteed by the application of modern industry standards such as IEC61131-3, PLCopen or CoDeSys 3. The architecture eliminates the need for forced cooling and batteries and makes the controller completely maintenance-free. Integrated web servers allow you to perform diagnostics without special tools. The I/O system 1000 can be mounted directly alongside – without having to connect fieldbuses.

▶ **I/O system 1000**

Compact and with a clear labelling and diagnostics concept: The I/O modules, which provide space for eight connection points, take up just 12.5 mm on a conventional DIN rail. For synchronised movements in cyclic production processes, input and output modules are highly deterministically controlled and touch probe inputs are read in.

A minimal internal cycle time, in combination with a time stamp, also enables realtime-based architectures, which means that even the highest speed requirements can be fulfilled.

▶ **Visualisation**

– **VisiWinNET®**

For open visualisation systems: With innovative technologies and tried-and-tested standards at the operating system and program level, VisiWinNET® represents a uniform, integrated visualisation software platform for machine and systems engineering. The possibilities range from all types of machine-oriented HMI applications to complex SCADA systems with client/server technology.

– **Human Machine Interface EL 100**

Functionality in tune with the operator: Even in their basic design, the HMIs form powerful complete systems for operation and monitoring. With Windows® CE, the compact touch panels have a flexible graphic user interface. Display sizes range from 8.9 cm (3.5") to 26.4 cm (10.4") for numerous applications.

▶ **Industrial PC**

For the widest range of applications: A broad and scalable portfolio – from the “All-In-One” panel PC to the control cabinet PC to the external monitor panel.



Servo inverters | Drive-based intelligence

Servo inverters are perfect for applications in which either positioning or speed need to be controlled precisely and dynamically.

▶ Servo Drives 9400 (0.37 – 370 kW)

The Servo Drives 9400 incorporate all of the elements of modern servo technology. Thanks to the special mechanical concept, installation and commissioning of the drives is quick and easy – even in the event of service. In addition to the classic fieldbus systems, we can also provide communication via Ethernet. Optional safety modules enable drive-based safety functions.

▶ 9300 servo inverters (0.37 – 75 kW)

Tried-and-tested servo inverters including Positioner, Cam Profiler, Register Controller, and Servo PLC versions with preconfigured standard applications. Freely interconnectable function blocks can be used for individual extensions.

▶ ECS servo system (0.37 – 11 kW)

Optimised for highly dynamic multi-axis applications. Preconfigured standard applications for positioning tasks, coordinated multi-axis motions, or general speed and torque control simplify commissioning.



Servo motors | Dynamic and reliable

Servo motors are optimised for precise and dynamic applications and are designed to be combined with Lenze servo inverters. They can also be directly combined with our gearboxes.

▶ Synchronous MCS servo motor (0.25 – 10 kW)

This servo motor is all about dynamics. The design uses innovative Single Element Pole Technology and high-quality magnetic materials which in addition increase power density and ensure optimum smooth running.

▶ MCA asynchronous servo motor (9.1 – 53.8 kW)

This dynamic motor is characterised by its versatile and robust design, low moment of inertia, excellent power density, and high degree of operational reliability.

▶ MQA asynchronous servo motors (22.6 – 95 kW)

With their generously dimensioned bearings, these through-ventilated motors are designed for continuous operation at high torques.



Frequency inverters | for all power requirements

Frequency inverters serve to precisely control the speed of three-phase AC motors or geared motors.

- ▶ **Inverter Drives 8400 (0.25 – 45 kW)**
Lenze's new product range of scalable frequency inverters. Four different versions are tailored to simple applications, more demanding automation tasks, positioning applications or servo applications.
- ▶ **9300 vector frequency inverter (0.37 – 90 kW)**
The inverter for operation with or without feedback for demanding applications. Using freely interconnectable function

blocks, the inverter can be adapted to special control tasks.

- ▶ **smd frequency inverters (0.25 – 22 kW)**
Compact and ideally suited for simple applications. Commissioning could not be easier – all you need are three integrated pushbuttons and a couple of parameters.
- ▶ **SMVector frequency inverters (0.25 – 45 kW)**
These simple vector inverters come with a high degree of protection to allow for operation outside a control cabinet. The SMV has a built-in keypad and a pluggable memory module for the parameters as well as a selection of optional fieldbus couplers.



Geared motors | the right drive, every time

The gearboxes are characterised by their sophisticated, modular system for adapting the gearbox or the geared motor to a variety of requirements and machine structures. Optimised teeth profiles and ground gears ensure smooth running and a low backlash. The gearboxes are used primarily as integrated geared motors with three-phase AC motors.

- ▶ **GST helical gearboxes and geared motors (0.06 – 45 kW)**
- ▶ **GFL shaft-mounted helical gearboxes and geared motors (0.12 – 45 kW)**
- ▶ **GKR bevel gearboxes and geared motors (0.06 – 7.5 kW)**
- ▶ **GKS helical-bevel gearboxes and geared motors (0.12 – 45 kW)**
- ▶ **GSS helical-worm gearboxes and geared motors (0.06 – 15 kW)**



Decentralised drive | machine-oriented switching and controlling

In many plants and machines, the space available for control cabinets is restricted. In addition, it is often an advantage to have the drive installed on the machine and tested before the machine is shipped. This is where decentralised drive technology comes in.

▶ Inverter Drives 8400 motec (0.37 – 7.5 kW)

The new decentralised motor inverter is characterised by its compact size and simple commissioning. The “VFC eco” control increases efficiency during partial load operation and reduces the energy required by up to 30 %. Together with our geared motors, the 8400 motec represents a complete and efficient “Drive Package”.

▶ Inverter Drives 8400 protec (0.75 – 4 kW)

The new decentralised, wall-mounted unit with high IP65 protection includes a large display and keypad. The 8400 protec is ideally suited for simple applications such as conveyors, but can also be used for rather demanding positioning applications.

▶ Servo Drives 930K fluxxtorque (0.12 – 0.44 kW)

This very precise decentralised servo drive can be mounted directly on the machine. Installation and cleaning are easy. It stores up to 64 position data sets.



Three-phase AC motors | simple, robust and reliable

We offer a comprehensive range of motors for a variety of applications: Compact construction, robust design, options for the addition of brakes, feedback systems and blowers.

▶ Standard three-phase AC motors (0.06 – 45 kW)

The range of three-phase AC motors comprises three series: the MD standard motors, the efficiency-optimised MH IE2 motors and the inverter-optimised MF motors.

combination of 8400 motec with the MF motors is especially energy-efficient.

▶ SDSGA and SDSGS servo motors (0.075 – 0.7 kW)

The asynchronous SDSGA motors have excellent smooth running characteristics. The SDSGS is a compact synchronous motor with natural ventilation and has a smooth surface which is easy to clean. Both motor types are provided with plug connections which enable quick mounting and easy maintenance.

All three series are designed for operation on an inverter. The inverter-operated MF motors are particularly efficient thanks to their working point of 120 Hz. The space-saving direct mounting on the gearbox results in a compact drive solution. The



It's good to know | why we are there for you



"Our customers come first. Customer satisfaction is what motivates us. By thinking in terms of how we can add value for our customers we can increase productivity through reliability."



"We will provide you with exactly what you need – perfectly co-ordinated products and solutions with the right functions for your machines and installations. That is what we mean by 'quality'."



"Take advantage of our wealth of expertise. For more than 60 years now we have been gathering experience in various fields and implementing it consistently and rigorously in our products, motion functions and pre-configured solutions for industry."



"The world is our marketplace. Wherever you are in the world, we are nearby, providing you with our drive and automation solutions."

Algeria · Argentina · Australia · Austria · Belarus · Belgium · Bosnia-Herzegovina · Brazil · Bulgaria · Canada · Central America · Chile · China · Colombia · Croatia · Czech Republic · Denmark · Egypt · Estonia · Finland · France · Germany · Greece · Hungary · Iceland · India · Indonesia · Iran · Israel · Italy · Japan · Latvia · Lebanon · Lithuania · Luxembourg · Macedonia · Malaysia · Mauritius · Mexico · Montenegro · Morocco · Netherlands · New Zealand · Norway · Philippines · Poland · Portugal · Romania · Russia · Serbia · Singapore · Slovak Republic · Slovenia · South Africa · South Korea · Spain · Sweden · Switzerland · Syria · Taiwan · Thailand · Tunisia · Turkey · Ukraine · United Arab Emirates · United Kingdom/Eire · USA · Vietnam

You can rely on our service. Expert advice is available 24 hours a day, 365 days a year, in more than 30 countries via our international helpline: 008000 24 Hours (008000 2446877).