L-force *Engineer*

Easy, efficient configuration

Lenze

L-force | your future is our drive

Demands are increasing all the time. In future, key challenges will lie in the areas of cost efficiency, time-saving and quality improvements. Faster project planning and commissioning, improved performance and increased flexibility in production are expected. New ideas are therefore needed for the machines of the future.

Lenze has risen to this challenge and, with L-force, we can now not only offer you an innovative family of drive and automation products, but also a new, comprehensive portfolio of solutions.

Driven by innovation – New ideas for new possibilities
Always on the lookout: Our idea of innovation is working on even better solutions for our customers, every day.

Driven by flexibility – High degree of scalability for individual solutions
Scalability is an important aspect of the **L-force** philosophy. Performance, scope of functions, software, service provisions and aftersales care – Lenze will provide you with exactly the combination you require.

**Driven by usability – Simple solutions, even for complex applications**
We always focus on the user. Therefore, when we developed **L-force,** we made sure that people with plenty of practical experience were involved, right from the start.

Driven by compatibility – Universal products and solutions
Don't waste any more time searching for suitable components and the right interfaces. With **L-force,** everything is compatible.

Efficiency is our drive
From the very beginning, **L-force** Engineering will support you effectively during the design, project planning and commissioning of your machine.

www.L-force.de

L-force

Solutions

Engineering

| Logic | Motion | Visualisation |

Runtime Software

Drive-based — PC-based

Drives | Controls

Geared Motors | Decentralised Drives & Controls

Services

Communication
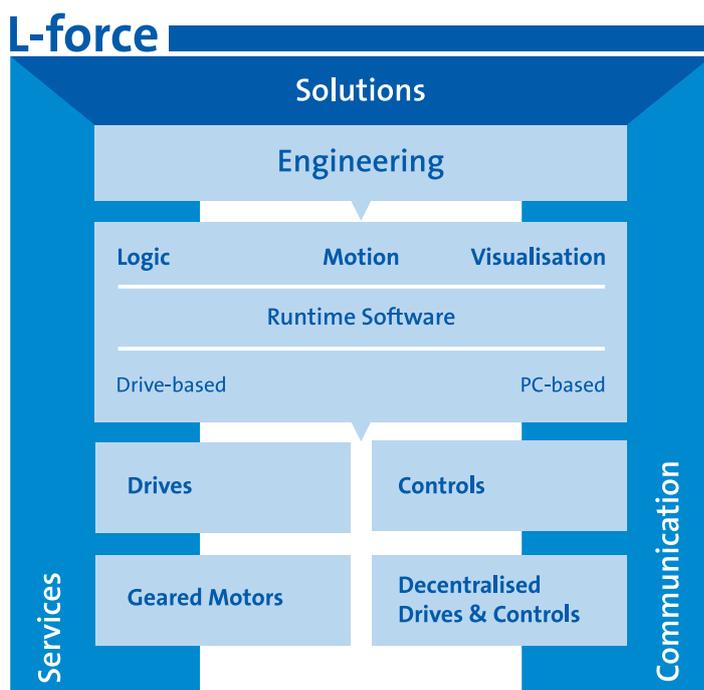
L-force Engineering | From the initial idea through to approval

L-force Engineering

Lenze offers a whole host of tools that are designed to facilitate the process of engineering your machine. Together, our printed catalogues, Drive Solution Designer (DSD) dimensioning software, electronic catalogue (DSC) and other documentation form a practical and complete package for optimum engineering support.

L-force Engineer

The new L-force Engineer software is a key component of this package and can be used to parameterise and configure the entire L-force device series. The user interface is intuitive and easy to get to grips with.

Basic navigation is achieved by means of different views in which important functions are categorised and clearly displayed. Numerous graphics-based views and screens also make it easier to configure and set the parameters of the drives. Instead of having to carry out programming, you only have to create simple configurations.

Comprehensive

That you can engineer multiple drives using the L-force Engineer goes without saying. But did you know that it offers all kinds of functions that will enable you to configure, commission and diagnose your machine perfectly with the aid of Lenze drive and automation technology?

Project phases

Planning	Project planning	Commissioning	Operation	Service

DSC*   *DSD***

Documentation

Engineer
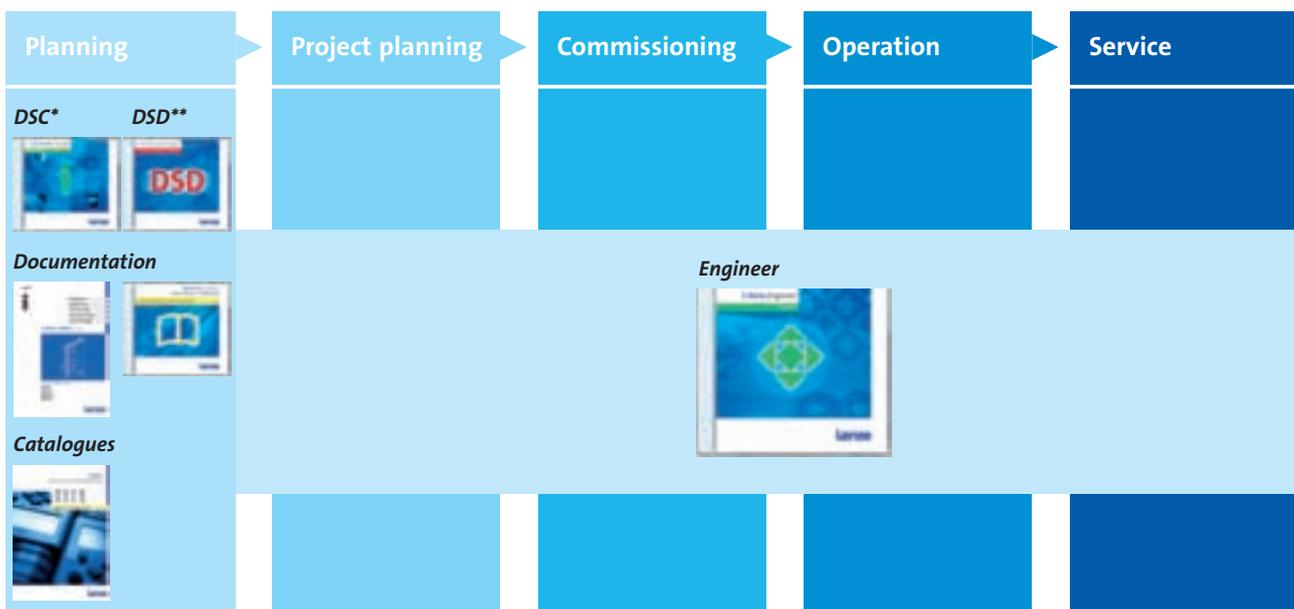
Catalogues

* Drive Solution Catalogue
** Drive Solution Designer

Engineer | Applications

The L-force Engineer helps you solve your automation-problems by providing ready-to-use standard applications for various tasks.

To commission the device, all you need to do is select and set a few parameters in specific application dialogs.

First things first
The technology applications available for an L-force programmable controller are displayed for you in a selection list, on a device and version-specific basis.

For each application, there is a specific application dialog containing the most important setting parameters.

A range of optional lower-level dialogs can be added for specific adaptation and optimisation work. Engineer will guide you through the configuration process in a purposeful manner.

Positioning

Electronic gearbox

Cam profiler

Torque
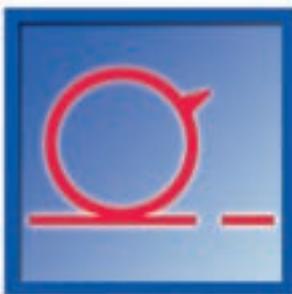
Cross-cutting
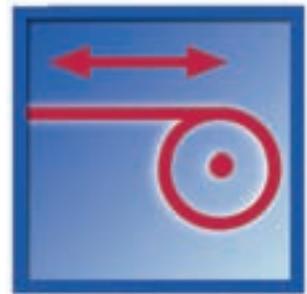
Winding

Engineer | tailor-made selection
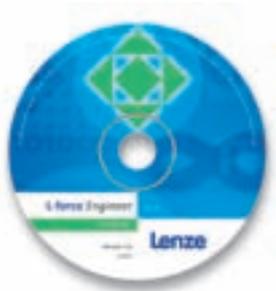
The **parameterisation** function provides an extremely user-friendly way of creating and modifying applications. With just a few parameter settings you will have achieved your objective before you know it.

Where the frequent **configuration** of complex applications is concerned, powerful editors provide a transparent view of complex scenarios.

Programming options offer particular freedom. Thanks to free programming, future versions will offer even more flexibility (although this method of application creation does require the most background knowledge). Advocating as it does configuration rather than programming, the Engineer can make life much easier for you.

StateLevel Engineer

Parameterisation
► Projects with up to five devices
► Languages: English, German, French

Featuring all the necessary diagnostic functions, this product is ideal for service engineers and system commissioners. Smaller projects involving up to five devices can be realised using this free version of the software.

HighLevel Engineer

Configuration
► Projects without device restrictions
► Languages: English, German, French

Plus
► GDC: For configuring Global Drive device series

In addition to the functions of the Engineer StateLevel, HighLevel also features essential functions for large projects. These include network set-up, communication interconnection and function block creation. You can even transfer your own documentation to an Engineer project. Time-consuming searches will be a thing of the past, as you will have everything you need in one place.

StateLevel Engineer │ for beginners

Simply plug and play – it couldn't be easier with the Engineer StateLevel, the only product you will need to operate and commission all major functions within the L-force series. As the software has been designed for only the most essential of functions, it is particularly easy to use. Best of all, it's free of charge!

Optimised
Small projects featuring up to 5 drives can be created quickly and easily with the hardware configuration. The complete drive train, comprising the controller, motor and gearbox, can be configured quickly using the optimised views and screens provided. As all requisite views, screens and program elements can be found in the Engineer, you will not have to switch between different programs.
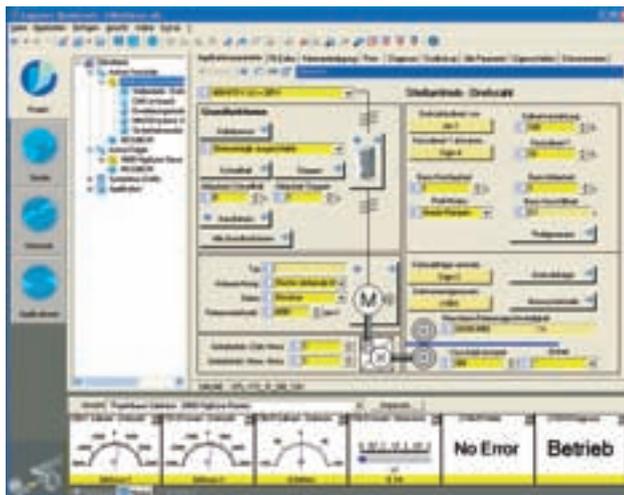
Graphics-based parameterisation
▶ Retain an overview in terms of signal flow
▶ Set parameters
▶ Configure inputs and outputs
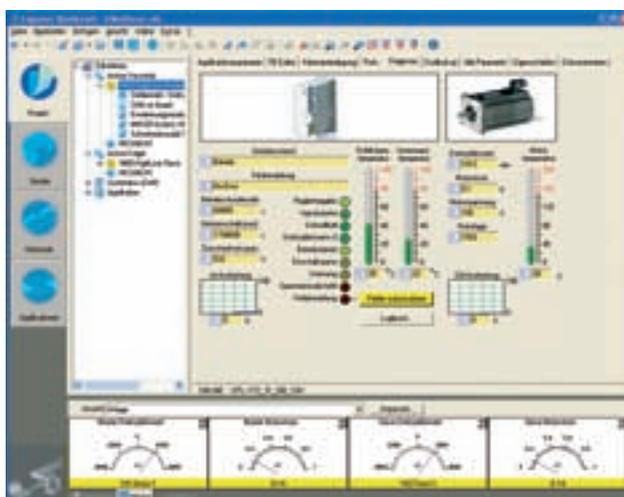
Diagnostics
▶ Transparent diagnostics screen for each device
▶ Monitor window with actual values
▶ 2-channel oscilloscope

Go online straight away

How often do you find that you need to carry out a service on a machine but are unable to locate the original project? In such cases, you can make a direct online connection to the machine and generate a project automatically on the basis of the devices and parameters detected online. You can of course also configure the hardware offline.

Transparent diagnostics

In addition to transparent views of online states and error messages relating to the connected drives, the product also features an oscilloscope function for diagnostics, which you can use to record high-speed processes in the controller without having to install measuring devices in the system.

Parameterisation that couldn't be simpler

The new graphics-based parameterisation screen makes changing the function of a drive particularly easy. The application provides you with the requisite information in graphics-based format – all you need to do is modify the major parameters directly. You can call up more details from this central point if you are a specialist requiring access to additional parameters.

At your side

Experts in every project phase: whether planning, . . .

. . . commissioning

... or operation with L-force Engineer

# HighLevel Engineer | for increased productivity

The Engineer HighLevel features all the functions you could possibly need. It can even provide a solution for large projects. Other advanced components include network configuration and function block editor functions, and even an innovative wiring/interconnections editor.
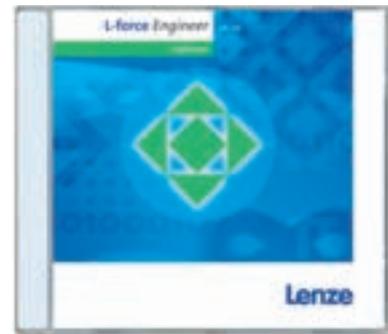
Function block editor

Do you want to make minor changes to the technology applications already available? No problem - the function block editor provides you with a convenient tool for adapting the block interconnections to your task or adding additional blocks from the extensive Lenze library. All the interconnections are displayed on an interface, which offers a high level of convenience and even allows you to copy partial interconnections that have already been tested from another axis. When you are finished, simply print out the function block overview.
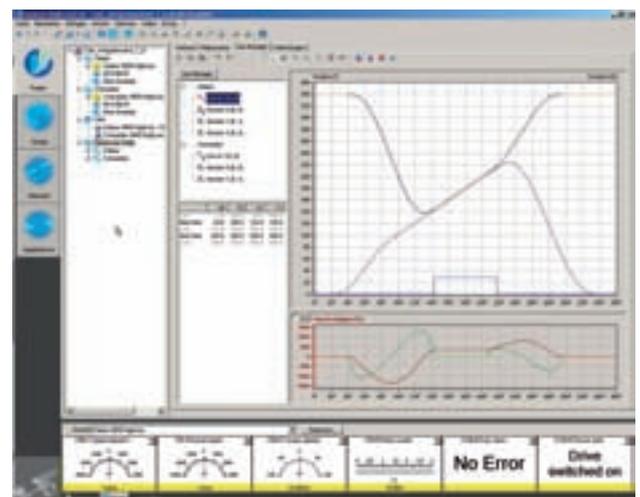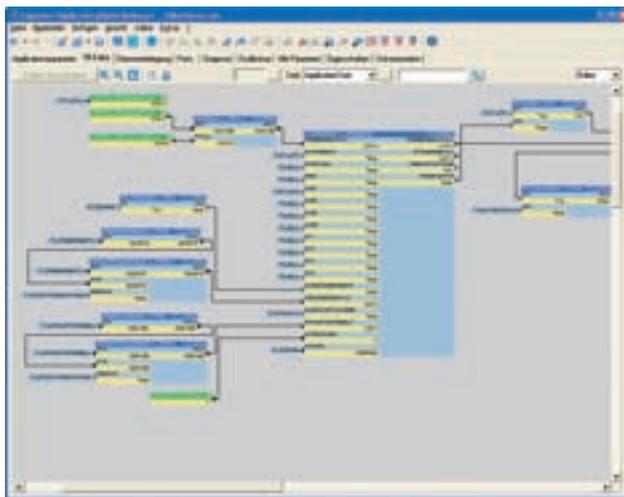
Configuration

▶ Function block editor
▶ Network configurator
▶ Hardware structure

▶ Cam editor
▶ Wiring/interconnections editor

Parameterisation screen

The graphics-based parameterisation views and screens are new and make it easy to locate the major parameters for your application.

Network configurator

This enables you to make network configuration settings further down the line. Creating the complete network configuration for CAN and ETHERNET Powerlink is quick and easy.

Wiring/interconnections editor

The wiring/interconnections editor is a graphics-based tool in which you define the inputs and outputs (known as "ports" or more usually "PDO" in the case of CAN) for CAN bus transmission. The Engineer is able to assign identifiers automatically.

Cam editor

The graphics-based cam editor allows you to define motion profiles, characteristics, cams and cursors. Straight lines, 5th order polynomials and sloped sine lines are all available as objects. With the Cam Designer (available separately), you can add motion profiles with minimal vibrations via an integrated expert system.

Diagnostics

In the event of an error, the easy-to-use diagnostics views and screens and the monitor window will enable you to find what you are looking for straight away. The availability of an oscilloscope means that you do not have to connect external measuring devices.

Documentation

Additional documents relating to your project created in other formats, such as Word, PDF, etc., can also be stored in the Engineer Project. This ensures that nothing falls by the wayside and that you will have a complete overview of the information at all times.
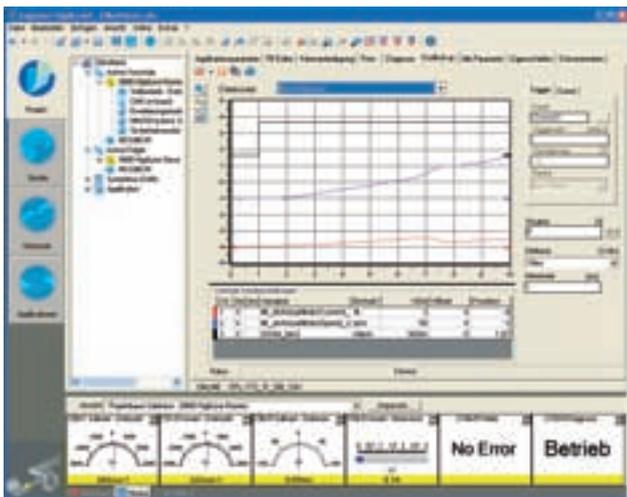
Diagnostics
► Diagnostic interfaces
► Oscilloscope
► Monitor window
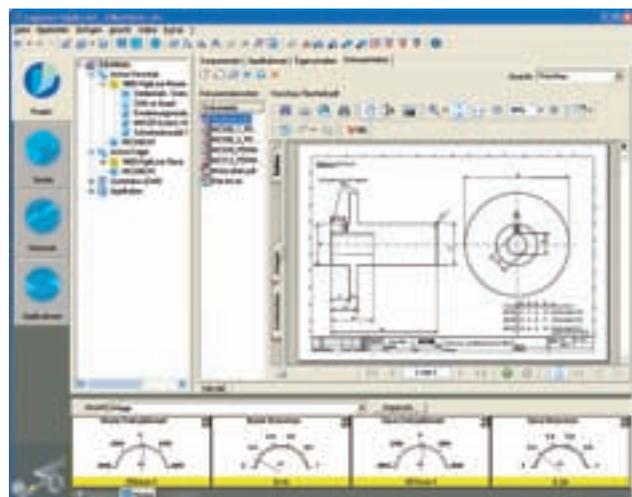
Document archive
► Store any project-related documents
► Distribute and view documents
► Print documents

The benefits for you | at a glance

Flexible

Select a software package to suit your individual requirements.

▶ The **Engineer StateLevel** is the ideal software for commissioning individual controllers quickly and easily. It can also be used for small projects – and is available free of charge.

▶ The **Engineer HighLevel**, on the other hand, has been optimised for larger projects. Its advanced functional range provides everything you need.

All software packages are of course compatible with one another.

Efficient

▶ Overview of all development phases of a project

▶ A single software package for parameterisation and configuration

▶ No duplication of entries across several tools

▶ No need to switch programs between multiple axes

A clear information structure ensures that projects are completed on time.

Simple

▶ Self-explanatory user interface

▶ Graphics-based interfaces facilitate parameterisation and configuration

▶ Simple configuration processes speed up programming

As the entire process is less complex, you save time and money.

Complete

▶ Overview of entire project in the Engineer

▶ Storage of project documentation in the Engineer

▶ All relevant personnel have access to the latest data

As you can access all project data at any time, commissioning is particularly easy.

Engineer | an overview

	Single user licence* CD + 1 installation	Multiple user licence* 1 additional installation	Corporate licence* Unlimited number of installations within a company	Buyout licence* Issue of sublicences
Engineer StateLevel	Free download from www.Lenze.de or available as a free CD from your Lenze sales staff			
Engineer HighLevel	ESPEVEHXA0EC1	ESPEVEHNNNML1	ESPEVEHNNNFL1	ESPEVEHNNNBL1
GDC upgrade to Engineer HighLevel	ESPEGEHXA0EC1	ESPEGEHNNNML1	ESPEGEHNNNFL1	ESPEGEHNNNBL1
Cam Designer	ESP-CAM1-P			
Cam Designer upgrade from V2.x to V3.x			ESP-CAM1-PU2	

* Subject to Lenze's licensing and contractual conditions
 (valid at the time of ordering) for software that is provided
 exclusively for commercial use.

Single user licence

A single user licence is always supplied with a software product on CD-ROM. It licenses the purchaser to install the software product on his/her PC. Multiple installations on different PCs are not permitted.

Multiple user licence

Some software packages are supplied with multiple user licences. With the purchase of a multiple user licence you get the right to install a particular software product (CD-ROM with single user licence) up to the purchased quantity. You must be in possession of a valid single user licence before you can purchase a multiple user licence.

Licence certificate

A licence certificate is supplied with every software product. The licence certificate is the central component of the product and certifies the use of the software. Only those persons owning and possessing a licence certificate may use the software.

Corporate licence

Software products with corporate licences only have to be purchased once. Multiple installations of such products within a company on a single site is permitted. In these cases, additional multiple user licences are not required.

Buyout licence

A buyout licence permits multiple installations of the software within a company on a single site. Purchasers of buyout licences are also entitled to issue sublicences for machines in which Lenze drives are installed.

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."

Vitamin L:
Ideas and added value for your drive and automation solutions.

"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."

"We identify with your targets and strive towards a long-term partnership which benefits both sides. Our competent support and consultation process means that we can provide you with tailor-made solutions. We are there for you and can offer assistance in all of the key processes."

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).

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