

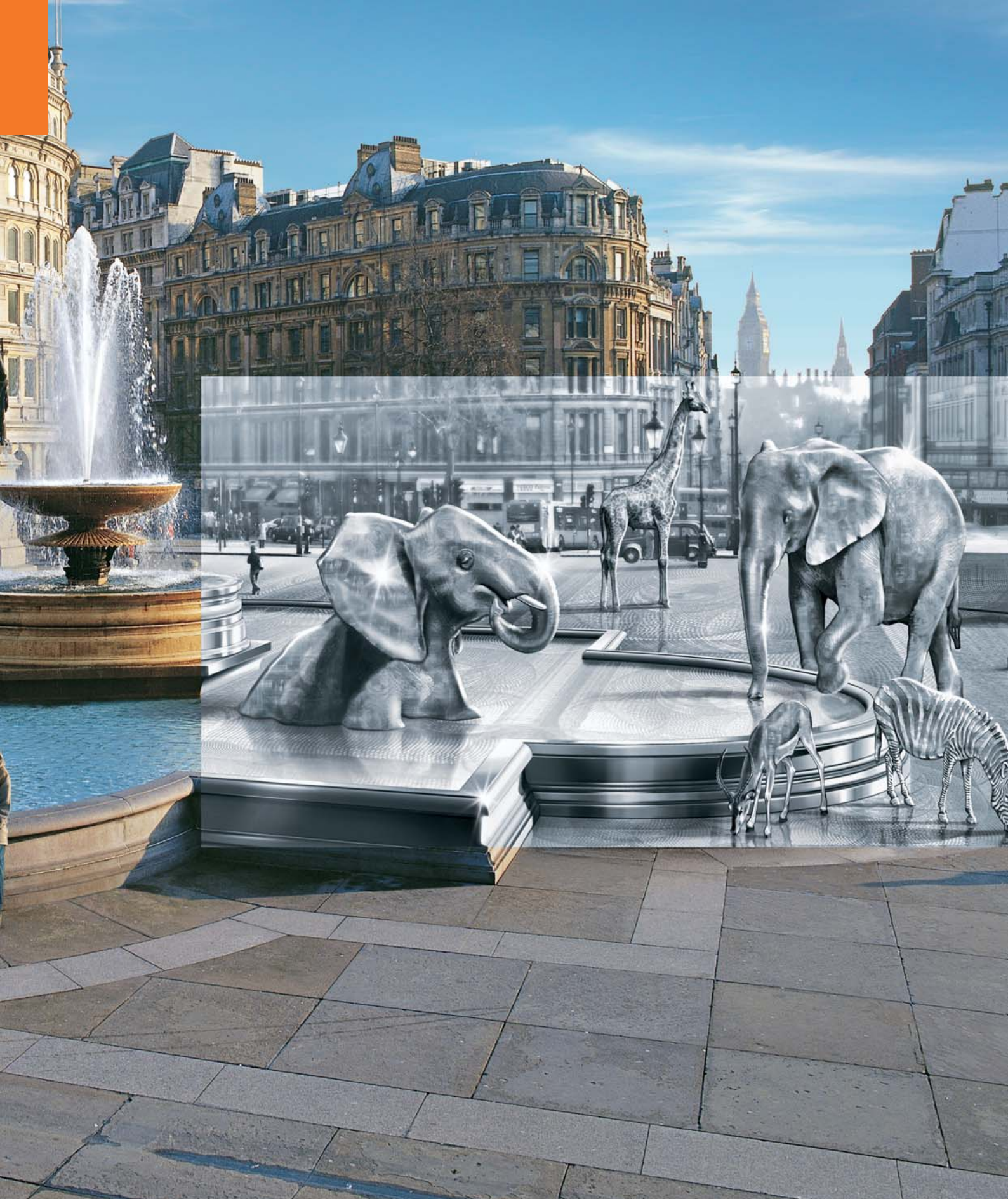
No matter how high you
want to take your ideas



sinumerik

SOLUTION LINE

SIEMENS



The source for your company's success: SINUMERIK solution line

Creativity needs space to thrive – space that allows creative ideas to become reality. Those who want to implement big ideas from their own imagination need the necessary potential. In mechanical engineering, creativity is a pre-requisite for the creation of extraordinary machine tools: solutions that fulfil all complex requirements, that are innovative, that rise above the competition and, therefore, open up new markets.

We want to set your imagination free with a machine concept that offers all the potential: SINUMERIK® solution line. Whether it is for simple turning and milling applications or for complex tasks, together, SINUMERIK solution line and SINAMICS® form a new system platform – the perfect solution for a multitude of tasks. Subsequently, the advancements that SINUMERIK offers you are the highest degree of flexibility and functionality – and this with minimal transition. SINUMERIK solution line.



Bridging the way to a brighter future

Sometimes one small step is enough to open up a whole world of opportunities. Changing over to SINUMERIK is one of those small steps, but with big results. SINUMERIK solution line is our response to increasingly complex demands and the perfect basis to implement creative ideas.

Unsurpassed flexibility – with a system

The new SINUMERIK solution line offers open system architecture, advanced communication protocols, space-saving modular design and the scalability of hardware and software options. This flexible approach allows the design of control and operating concepts to be tailored to the requirements of individual technologies and applications.

Distributed structure

An essential feature of SINUMERIK solution line is its distributed and simplified system structure. It is fully integrated into the packaging system and communication structure of SINAMICS – our innovative drives family. In addition, you will benefit from a new and highly flexible operating concept with thin client units. This standardized modular concept enables you to achieve innovative and individually perfect tailored machine concepts.

Scalable hardware and software

With SINUMERIK solution line, hardware and software can be scaled separately. All components distinguish themselves universally and can, therefore, be combined with one another to a high degree of flexibility, creating excellent conditions for a variety of potential applications.

Optimized networking

SINUMERIK solution line uses Ethernet for its standard communication protocol. Machines can be easily networked through the corresponding interfaces on the operator panel and the CNC system.

Openness of the user interface and the CNC

SINUMERIK solution line is very distinctive thanks to the openness in the HMI and NCK. This means that you can incorporate your expertise so that you can design machines and user interfaces in a specific way where you can adapt them in perfectly to your customers' requirements.

Future-proof standards

SINUMERIK solution line uses tried and tested standards such as PC technology, Windows operating systems, SIMATIC® Step 7, Ethernet, USB and PROFIBUS. These will all assure you a secure, future-proof and innovative investment.

Simple transition

We make the transition to SINUMERIK solution line very simple. Whether in the realm of the user interface, CNC or PLC, you can transfer the application software of the previous system. PLC user programs, part programs, user interfaces, operating components, peripherals, motors, tools and CNC functionality all remain the same.



Attention to even the smallest detail

Thanks to the integrated user interface of SINUMERIK solution line, you will benefit from a standardized look and feel and an identical concept for commissioning, service and diagnostics.

New to SINUMERIK solution line: thin client technology. These operator panels are largely maintenance-free as they work without a hard disk, fans or batteries.

And yet another advantage: simple engineering thanks to drive recognition by means of an electronic rating plate.

Even more advantages thanks to SINAMICS

With SINAMICS, you will benefit from using significantly less wiring. Integrated drive functions such as safe standstill, safe braking and braking by armature short-circuiting are already incorporated.

Together with the space-saving design, you have a flexibly constructed and streamlined control cabinet.

In addition, users of SINUMERIK solution line also benefit from improved diagnostics. Error identification can take place down to the component level using DRIVE-CliQ.



SINUMERIK 840D sl: The high-performance system platform for complex tasks

A lot is expected of a numerical control system: it should be modular as well as open and flexible. In addition, it is important to have a standardized structure for operation, programming and visualization. SINUMERIK 840D sl, the highlight of SINUMERIK solution line, offers you all of this. With it, you gain an innovative system platform that fulfills all of your requirements and it has the necessary functions for almost all technologies.

Unlimited flexibility

Together with the SINAMICS S120 converter system and supplemented by the SIMATIC S7-300 automation system, the SINUMERIK 840D sl forms a new complete, digital system. As the perfect solution for complex tasks, the SINUMERIK 840D sl forms a standard with regard to dynamics, precision and ease of network integration. With the SINUMERIK 840D sl, people and machines are protected in an efficient and practical manner thanks to the certified safety functions of SINUMERIK Safety Integrated.

Applications

Whether turning, drilling, milling, grinding, laser machining, nibbling or punching, the SINUMERIK 840D sl is well-suited to use with a multitude of technologies. These capabilities include tool making, mold making, high-speed applications, wood and glass processing, handling, transfer lines and rotary indexing machines for both small-scale and large-scale production.

In addition, we offer our system solution as an export version for use in countries that are subject to licensing—the SINUMERIK 840DE sl.





Integrated openness

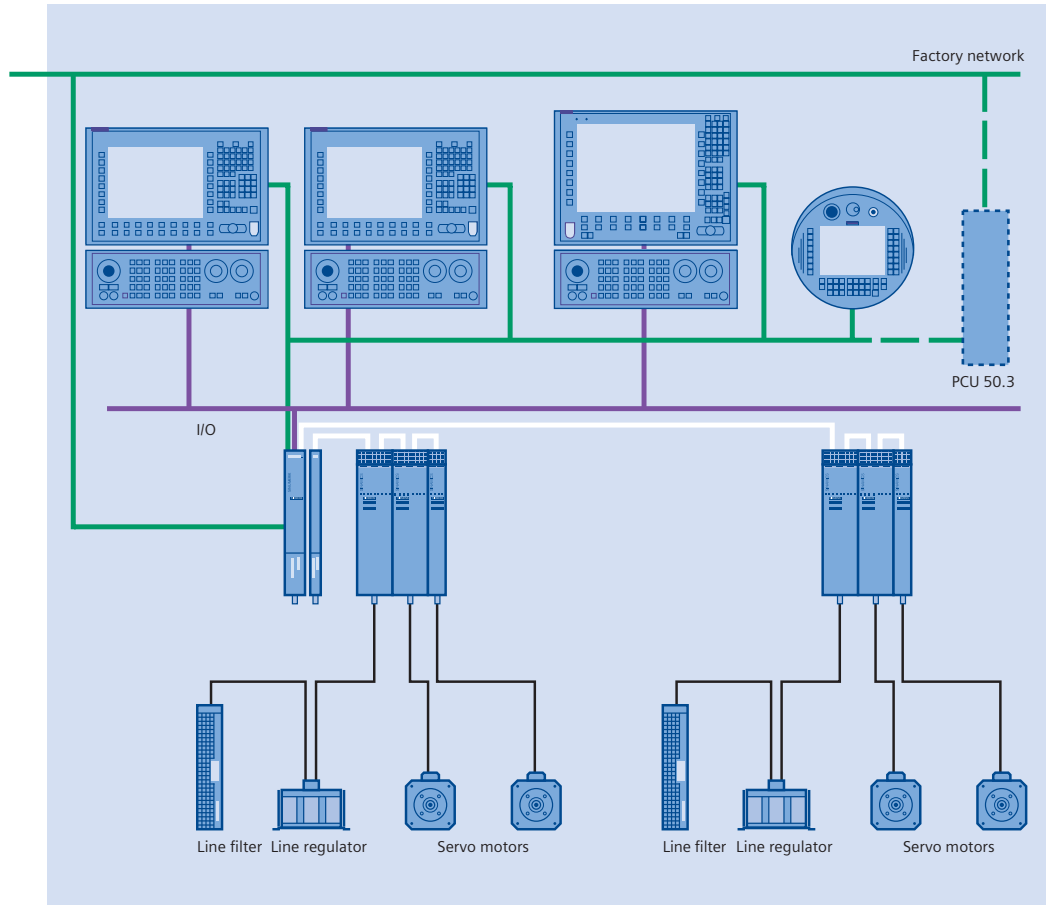
The integrated openness of the user interface, CNC and PLC make the SINUMERIK 840D sl distinctive. This means that users can implement their expertise to achieve perfectly tailored control solutions. The open architecture and high computing power allows the CNC functions to be adapted to various innovative machine kinematics in a flexible, rapid and cost-effective way. In the event that you require additional functions relating to specific technologies, these can be downloaded as compile cycles.

At a glance: Integration possibilities

The following components can be connected to the SINUMERIK 840D sl:

- SINUMERIK operator panel with thin client unit (TCU), PCU 50.3 and machine control panel, push-button panel and hand-held terminals
- SIMATIC CE panel
- Distributed PLC I/O via PROFIBUS DP connection
- SINAMICS S120 converter system
- Motors: feeder, spindle and built-in motors





Performance and functionality

As a result of the CNC's scalable hardware and software, the SINUMERIK 840D sl opens up nearly unlimited application possibilities.

We also offer you NCU types with various performance ratings for your specific machining needs.

Five-axis machining tasks can be achieved easily. Multi-axis interpolation, spline interpolation and 3-D tool radius compensation fulfil the highest requirements.



SINUMERIK 840Di sl: The fully PC-integrated alternative

Are you looking for a distributed PLC or drives automation solution? Or do you prefer a fully PC-integrated numerical control system? In both cases, we recommend the SINUMERIK 840Di sl. Open, solid and simple—these are system advantages that pay off because the hardware of the SINUMERIK 840Di sl is based upon an industrial PC with an integrated PLC and drives interface.



Applications

Applications of the SINUMERIK 840Di sl range from machine tools and special machines to handling devices and retrofitting. Because of the openness of the HMI and PLC, you can use your expertise to implement individual technology solutions.

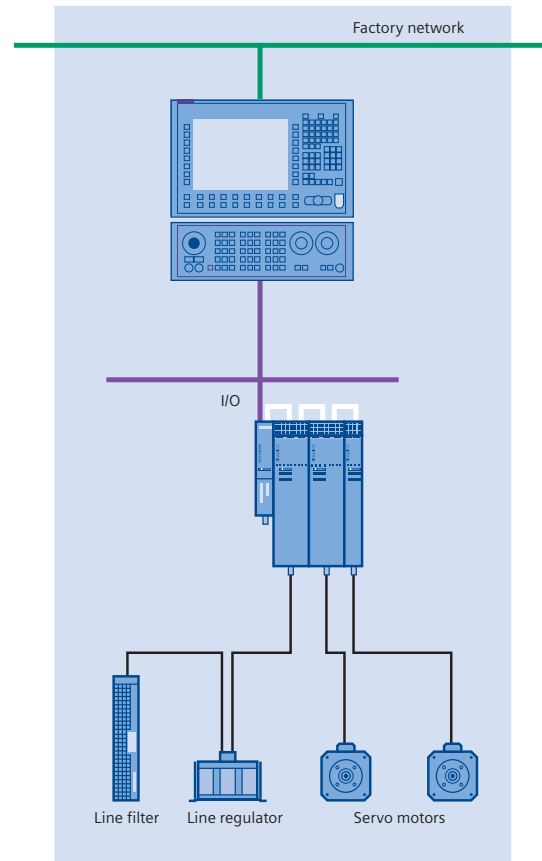
Performance and functionality

The performance of the 840Di sl enables control of up to 20 axes. The NC software runs in real-time. The solution we developed guarantees noticeably reliable machining of real-time tasks without impairing Windows applications.



New processor technology – everything you need for communication

High-performance Intel Pentium M processors are used in the SINUMERIK 840Di sl, therefore, there is an extremely high level of computing power available for your automation tasks. Four high-speed USB interfaces for the connection of I/O devices and two Ethernet interfaces for networking guarantee a high degree of communications flexibility.



At a glance: Integration possibilities

The following components can be connected to the SINUMERIK 840Di sl:

- SINUMERIK operator panel, machine control panel, push-button panel and hand-held terminals
- Distributed I/O via PROFIBUS DP connection
- SINAMICS S120 converter system
- Motors: feeder, spindle and built-in motors
- Analog drives interface for four axes (ADI4)



SINUMERIK 802D sl: The panel-based CNC for standardized turning and milling machines

How should a control system prove itself to be capable of simple turning and milling applications? It must be simple, compact and efficient—just like the SINUMERIK 802D sl. Our new panel-based control integrates all the components of a CNC system into a single unit. With it, you can benefit from the most simple integration possibilities with minimum wiring requirements. Up to six digital axes can be linked via a DRIVE-CLiQ interface and the I/O via PROFIBUS DP.

Applications

The features of SINUMERIK 802D sl make it optimal for standardized turning and milling machines. This means that the drives' modular construction offers you the highest flexibility.

Performance and functionality

The SINUMERIK 802D sl offers four axes / one spindle, and respectively, three axes / two spindles, in addition to a PLC axis – all connected in a consistent and fail-safe manner via the DRIVE-CLiQ interface.

The drive functions' modular construction and the separation of performance and intelligence provide a high level of flexibility. Operation without batteries or fans make maintenance a thing of the past.



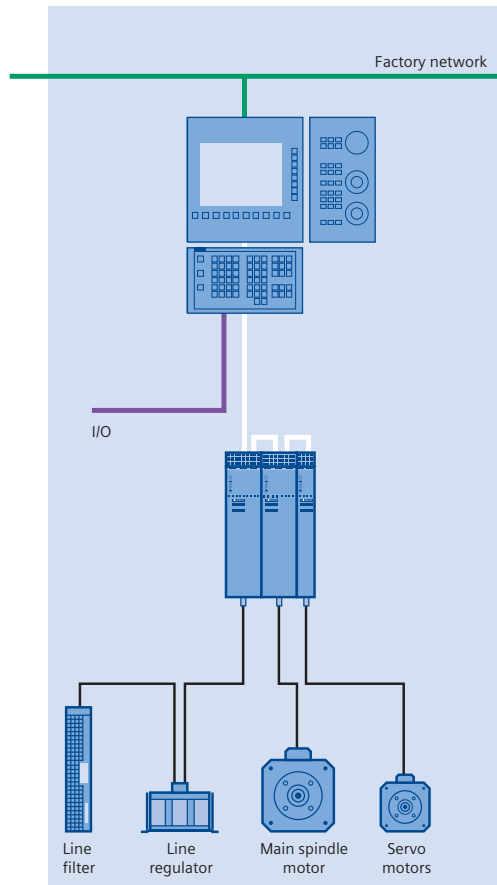
Further advantages:

DIN programming and ISO code make operation extremely simple; cycle and contour definitions help with programming. In addition, a standard Compact Flash (CF) card can be used with the SINUMERIK 802D sl. This is accessible from the front and can be used for backing up complete series and commissioning files as well as part programs. The effective aspect is that machining can be performed quickly and directly from the CF card.

At a glance: Integration possibilities

The following components can be connected to the SINUMERIK 802D sl PCU:

- SINAMICS S120 converter system
- Mini hand-held terminal
- Keyboard (horizontal/vertical)
- Machine control panel
- Distributed PLC I/O via PROFIBUS DP connection
- Motors: feeder and spindle motors
- MCPA module connection for analog spindles and machine control panel





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Automation and Drives
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P.O. Box 3180
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Germany

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