Retrofit for Motion Control
Machine Tools and Production Machines
Solutions for Motion Control – What Motivates us!

Productivity in Motion

As a partner for machine constructors and their customers, we offer innovative systems, solutions and services over the complete lifecycle with the goal:

Long-term improvement of the productivity, competitiveness and profitability of our customers and end users!
Solutions and Support over the Complete Machine Life Cycle

From the machine simulation through to retrofit, from the motor through to the technology solution – Productivity in Motion!
Product Life Cycle

Product life
We understand the product life to be the period of time from delivery release through discontinuation of manufacture to total discontinuation. The products we offer between delivery release and product phase-out we designate to be current products. The product life contains the following periods:

Product release
The product has been released for delivery and can be purchased by you.

Product Phase-out
The product should no longer be included in your project plans. The product can however still be manufactured for the time being. Spare parts are still available for a period which we set.

Product discontinuation (Type discontinuation)
The product is only available as a replacement for defective parts or as a supplementation for spare parts stores.
Reference to replacement with obligation to return

Total discontinuation
The product can neither be delivered as a spare part nor can it be repaired. Consultation and service for these products will no longer be provided. Of course, even after total discontinuation, we will cooperate with you to find ways of getting your system or plant operating again.
Product Life Cycle: Drives

Recent total discontinuation for SIMODRIVE / SIMOVERT

- 6SC611
- 6SC610
- 6SC69
- 6SC66
- 6SC65
- 6SC60
- 6RB26
- 6RB21
- 6RB20
- 6RA40
- 6RA29
- 6RA27
- 6RA26
- 6RA25

*Discontinued products* are products whose central spare parts supply has been stopped and whose spare parts are no longer included in the spare parts list.

www siemens be / retrofit  retrofitcnc be @ siemens com
### Product Life Cycle: Drives

**Planned total discontinuation for SIMODRIVE & MASTERDRIVES**

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*Planned total discontinuations* are products for which a specific deadline has been given in order to discontinue the central supply of spare parts. The spare parts are maintained in the list up to this deadline.

www.siemens.be/retrofit  retrofitcnc.be@siemens.com
Product Life Cycle: CNC

Recent total discontinuation for SINUMERIK

- SIROTEC
- SINUMERIK 810/820
- SINUMERIK 805, 880
- SINUMERIK 3
- SINUMERIK 850
- SINUMERIK 8
- SINUMERIK System 840
- SINUMERIK PRIMO S / SG
- SINUMERIK 5, 6, 7, 10, 11, Mate
- SINUMERIK 27x, 320, 381, Mopos
- SINUMERIK 10, 20, 30, 50, 500
- SINUMERIK Sprint

*Planned total discontinuations* are products for which a specific deadline has been given in order to discontinue the central supply of spare parts. The spare parts are maintained in the list up to this deadline.

*Discontinued products* are products whose central spare parts supply has been stopped and whose spare parts are no longer included in the spare parts list.

www.siemens.be/retrofit  retrofitcnc.be@siemens.com
Retrofit: A Module of our Scope of Value-Added-Services or Manufacturing Excellence

If the automation equipment of your machine no longer meets today’s requirements, it’s **time to modernize** it.

Compared to the purchase of a new machine, this option ensures **cost efficiency**. It helps you to yield optimum return from your investment.

If mechanical components cause any problems, they are made fit and overhauled at the same time.

**Machine modernization or better known as RETROFIT is an attractive alternative for purchase of a new machine!**
Manufacturing Excellence

Develop

Consulting
Services, Production, Maintenance

Solutions

Machine Development
Simulation, construction and set up of machine tools
Reduction of machine development time

Manufacturing IT
Functions for planning and operation of production
Process optimization and transparency in the machine tool environment

Condition Monitoring
Functions for condition based maintenance
Reducing machine stand stills

Extended Machine Contracts
All-inclusive contracts for personnel and material with defined reaction time
Hedging availability of machine tools

Machine Retrofit
Modernization of automation and mechanics
Extending the machine lifespan

Productivity Increase
Acceleration and optimization of machine tool work flows
Reducing cycle time and improving quality

Support

- Online and Technical Support
- Field Service
- Spares and Repairs
- Training
Retrofit - Benefits & Advantages

- Secured service resources, with regard to material and staff
- Reduced downtimes and increased system availability
- More convenient operation and programming
- Increased productivity
- Interconnection options
- State-of-the-art system

With Retrofit, you can even exceed the former performance of your machine!
Retrofit - Benefits & Advantages

Manufacturing Excellence - Manufacturing IT

- Performance measurement / OEE
- Tooldata management
- NC-program management and transfer
- Job handling
- Preventive maintenance
- Part monitoring and tracking
- IT-Security and Data safety
- CAD/CAM-Chain
- Networking

Process optimalisation and transparency in the shopfloor
Retrofit - the “Classical Example“
Retrofit - the “Classical Example”
We have Knowledge, Experience, References in …

- Retrofit of big and small **MILLING** machines
- Retrofit of big and small **TURNING** machines
- Retrofit of **GRINDING** machines
- Retrofit of **ROBOTS**
- Retrofit of **OLD DRIVE** systems
- Retrofit of **SHEET METAL** machines
- Retrofit of **PRODUCTION** machines

Siemens keeps increasing its knowledge and experience for the total benefit of its customers!
Motion Control Systems
Our Worldwide Competency for Retrofitting

The automation solutions for machine tools

Turning  Milling  Grinding

Stamping  Laser Cutting  Handling/Assembly

Development, production, sales, engineering and service of high-quality automation and drive systems.

“Excellent customer benefits are our primary goal”
Motion Control Systems
Our Competence for Retrofitting

The automation solutions for production machines

Glass | Packaging | Metal forming | Plastics

Wood | Printing | Textile | Converting

Development, production, sales, engineering and service of high-quality automation and drive systems.

“Excellent customer benefits are our primary goal”
Why Choose for Siemens Brussels for your RETROFIT Projects?

Siemens Brussels is a **competent partner** to RETROFIT your machine tools and production machines.

Siemens Brussels is able to **manage large projects**, even with mechanical works included due to powerful project management.

Siemens Brussels has a large team of engineers with a high **knowledge of motion control technology**.

Siemens Brussels has a lot of positive **reference projects**.

**Siemens Belgium is your retrofit partner!**
What do we Offer in a Retrofit Project?

- Study & Engineering
- Cabinet & Wiring
- Project management
- Risk analysis
- Products & Applications
- Mechanical modifications
- Start-Up & Testing
- Training
Product Portfolio for Motion Control Retrofits

- Machine Tools
- Production Machines
- Drive Systems
- Handling Systems
Motion Control Systems

Product Portfolio

SINUMERIK

SIMUMOTION

Motors

SINAMICS

Industry Drive Technologies
Motion Control
SINUMERIK Systems at a Glance
SINUMERIK System always Means: Drives Inside!

**SINUMERIK 840D sl**
- The CNC-System for demanding applications
- Universal use in all technologies
- Modular, scalable, universal CNC controller with high performance drives SINAMICS
- Also available as PC-integrated controller 840Di sl
- Up to 31 axes / spindles / 10 channels

**SINUMERIK 810D**
- The CNC-System for compact machines
- Turning, milling and grinding
- Compact CNC-System based on well established drive system SIMODRIVE
- Up to 6 axes / 1 spindle / 2 channels

**SINUMERIK 802D sl**
- The CNC-System for standard machines
- Turning, milling and grinding
- Compact Panel-CNC
- Up to 4 axes + 1 spindle or 3 axes + 2 spindles additionally 1 PLC axes, 1 channel

Asynchronous-, Synchronous-, Torque-, Linear motors, Spindles and Motor spindles

Industry Drive Technologies
Motion Control
Which Possibilities?

**Complete replacement of CNC / PLC / DRIVES**
- with SINUMERIK 810D/840D/840Di + SIMODRIVE / SINAMICS

**Replacement CNC / PLC and keep DRIVES**
- with SINUMERIK 810D/840D/840Di + analog value to drives

**Keep CNC / PLC and replacement DRIVES**
- with SIMODRIVE / SINAMICS / DC Master

**Replacement CNC / PLC / DRIVES Axis - keep DRIVES spindle**
- with SINUMERIK 810D/840D/840Di + SIMODRIVE / SINAMICS for the axis drives + analog value to spindle drives
SIMOTION System Components

**SIMOTION P**
- PC-based
- For centralized motion control solutions
- Industrial Siemens PC
- Openness through the use of PC standards

**SIMOTION C**
- Controller-based
- For centralized motion control solutions
- Wide spectrum of process signals
- Use of SIMATIC standard modules

**SIMOTION D**
- Drive-based
- For distributed motion control solutions
- For complex axis chaining tasks and compact machines
- Intelligent drives

A common engineering for all motion control solutions
SIMOREG DC Master
The Solution for the DC Spindle Motors

- SIMOREG DC master for spindle drives with wide power spectrum.

- Existing DC motor can be kept

- Interface to SINUMERIK via ADI4 or HLA

- Interface to PLC via PROFIBUS (for alarms, messages, enable signals)
Retrofit of Robots: Two Solutions

SINUMERIK 840Di with the software of ROBOLAB (= Solution Provider), the programmation is compatible with RCM.

SIMOTION for simple robot kinematics
# References in Retrofit for Motion Control

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<thead>
<tr>
<th>Machine Type</th>
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<tbody>
<tr>
<td>Drilling machines</td>
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<tr>
<td>Milling machines</td>
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<tr>
<td>Turning machines</td>
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<tr>
<td>Grinding machines</td>
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<tr>
<td>Presses (mechanical and electrical)</td>
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<tr>
<td>Production machines in glass industry</td>
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<tr>
<td>Bending machines</td>
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<tr>
<td>Packaging machines</td>
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</tbody>
</table>

Industry Drive Technologies
Motion Control
Retrofit Reference Project: Drilling Machine (Vandewiele Michel)
Retrofit Reference Project: Forest Line (Henschel Engineering N.V)
Retrofit Reference Project: Caser (Haco Kingsland)
Retrofit Reference Project: Waldrich Coburg (Kihn Luxemburg)
Retrofit Reference Project: Jumbo Kolb (Vandewiele Michel)
Retrofit Reference Project: Forest Line (Vandewiele Michel)
Retrofit Reference Project: SNK (S.A.B.C.A)
Retrofit Reference Project: Pegard Preciram Milling Machine
(Werkhuizen Van Landuyt NV)
Retrofit Reference Project: Cincinatti Milling Machine (Darvan)
Retrofit Reference Project: Norte Milling Machine (CNH Zedelgem)

Replacement of main spindle drive
Retrofit Reference Project: Wotan Milling Machine (Haco Poland)
Retrofit Reference Project: Mandelli Milling Machine (Haco Poland)
Retrofit Reference Project: Heckert Milling Machine (Haco Poland)
Retrofit Reference Project: Padovani Teach-in Lathe (Robert Teblick)
Retrofit Reference Project: Waldrich Siegen Lathe (Arcelor Profil Arbed)
Retrofit Reference Project: Waldrich Coburg Lathe (Arcelor Profil Arbed)
Retrofit Reference Project: Geminis Lathe (IHC Netherlands)
Retrofit Reference Project: Froriep Lathe (IHC Netherlands)
Retrofit Reference Project: Böhringer Lathe (Werkhuizen Van Landuyt NV)
Retrofit Reference Project: Böhringer Lathe (CNH Zedelgem)
Retrofit Reference Project: Buderus Grinding Machine (CNH Antwerp)
Retrofit Reference Project: Weingarten Press Line 6200T (Ford Genk)
Retrofit Reference Project: High Speed Glass Tube Cutting Machine (Emgo)
Retrofit Reference Project: Bending and Welding Steel for Concrete (Armasteel)
Retrofit Reference Project: Cutting Biscuits (Vandemoortele)
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References

Press Releases

& Success Stories