SINUMERIK 802D sl
The control for the most important applications

SINUMERIK 802D sl at a glance
- Easy to operate and to program
  Graphical contour programming:
  Fundamental contour elements enabling a contour to be created quickly and easily
- Easy entry and migration for all users
- Easy setup of tools and workpieces:
  - Manually by scratching
  - With touch trigger probe
  - With dynamometer
  - Graphical support
- Fast precise and reliable
- Cycle and contour support
- Ethernet onboard
- Execution of large programs by network or CF card maximum speed
- Suitable for telediagnostics – simple teleservice by RCS802
- Processing part programs according to ISO standard

Design
The SINUMERIK 802D sl combines CNC, HMI, PLC and the closed-loop control of the SINAMICS S120 system within one panel device, the PCU210.3. This design offers a highest level of easiness and robustness, without fan, battery or hard disk absolutely maintenance free.

The CNC keyboard (vertical or horizontal format) can be connected directly. The I/Os are operated via the PROFIBUS DP system. The motors can be easily connected to the digital drives via DRIVE-CLiQ. In combination with the modular structure of the SINAMICS S120 drive system, this design is conceived to ensure very simple and rugged installation with minimum wiring overhead.

The performance range of the control is ideally suited for applications on standardized machine tools – from one-off production runs to industrial scale manufacture.

Benefits
- 18 languages included as a standard and switchable online
- Onboard help
- PLC program template for fast commissioning
- Graphical PLC status indication
- Tool life and operation monitoring
- Program operating time counter
- Part counter
- Integrated pocket calculator
- Customized HMI screens via XML language

Technical specifications
- 10,4" TFT flat screen
- Frame technology
- Rotary axis
- Look ahead
- Handwheel function
- CF card as memory medium, accessible via operator panel
- USB stick as memory medium
## Area of application

The system will be offered in two technology versions and 3 performance variants:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Variant 1</th>
<th>Variant 2</th>
<th>Variant 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axis / Spindles</td>
<td>3 axis / 1 spindle</td>
<td>4 axis / 1 spindle (or 3 axis / 2 spindles) + 1 PLC Axis</td>
<td>4 axis / 1 spindle (or 3 axis / 2 spindles) + 1 PLC Axis</td>
</tr>
<tr>
<td>CNC user memory</td>
<td>512 KB</td>
<td>1 MB</td>
<td>3 MB</td>
</tr>
<tr>
<td>Look Ahead</td>
<td>20 blocks look ahead</td>
<td>50 blocks look ahead</td>
<td>100 blocks look ahead</td>
</tr>
<tr>
<td>Tools</td>
<td>32 Tools</td>
<td>64 Tools with tool life and units monitoring</td>
<td>128 Tools with tool life and units monitoring</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Ethernet via &quot;peer to peer&quot;</td>
<td>Ethernet via &quot;peer to peer&quot;</td>
<td>Ethernet via &quot;peer to peer&quot; and via TCP/IP</td>
</tr>
</tbody>
</table>

1) T/M: Turning and milling model  
2) G/N: Grinding and nibbling model
SINUMERIK 802D sl

Suitable for different technological applications:

Turning

Turning –
SINUMERIK 802D sl T/M

Graphical support for technology cycles:
• Grooving, undercut
• Stock-removal
• Thread cutting
• Drilling, counter sinking
• Deep hole drilling
• Tapping with/without compensation chuck
• Boring

Functions for Manual Machines:
MM+ The additional operator interface Manual Machine plus provides new turning options:
A second programming type is conveniently activated by toggling. This allows to manually create a program using simple cycles. This program can then be used as usual for further parts.

MM+ Customer benefits:
• Working without ISO knowledge
• Each cycle can be preassigned nine times with technological and geometrical data
• Thread can be repaired at any time
• Workstep programming for program creation
• Cycles and teach commands can be combined into one program
• Contour calculator for free contour input onboard
• Contour input supported via external program (CAD Reader)
• Graphic programming reduces the programming time
• Short familiarization, no ISO knowledge required
• Ideally suited for small batch sizes (flexible programming)
SINUMERIK 802D sl

Suitable for different technological applications: Milling, Grinding and Nibbling

Milling – SINUMERIK 802D sl T/M

Graphical support for technology cycles:
- Face milling
- Deep hole drilling
- Thread cutting with/without compensation chuck
- Row of holes – circle/enline
- Drilling, sinking
- Milling of pockets, grooves and circular pockets

Grinding/Nibbling – SINUMERIK 802D sl G/N

Graphical support for technology cycles:
- Plunge-cut grinding
- Multiple plunge-cutting
- Dressing and profiling
- Shoulder plunge-cutting
- Oblique plunge-cutting
- Radius grinding
- Longitudinal grinding
- Reciprocation

...for grinding:
- Simple dressing
- Multiple dressing
- Various grinding wheel shapes
- Tool and workpiece measurement

...for nibbling:
- Graphically supported tool input by shape and angle
- Full range of nibbling functions
- Clamp input
- Simulation with tool shape
- Creation of graphical cycles

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Further information

SINUMERIK automation systems for machine tools:
www.siemens.com/sinumerik

SINAMICS drive family:
www.siemens.com/sinamics

Motion Control Systems and Solutions
for production machine and tool equipments:
www.siemens.com/motioncontrol

Contacts worldwide:
www.siemens.com/automation/partner

Siemens AG
Industry Sector
Drive Technologies Division
Motion Control Systems
Postfach 3180
91050 ERLANGEN
GERMANY

www.siemens.com/automation

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