DNC 15
Synchronized Press Brakes

The Intuitive Programming

DNC 15 is the natural evolution of Cybelec's famous workhorse, the DNC 880S. Its large 15” Touch Screen offers the operator a quicker and more efficient interaction with his machine.

Depending on the software installed, DNC 15 will drive synchronized or conventional press brakes with mechanical depth stops.

Its Touch Screen, its simplified keyboard with large keys and the 2D graphic software make the use of this control very efficient and convenient.

Integrated in a sleek design housing, this compact numerical control unit is available in 2 versions: 4 or 7 axes. It can optionally also be delivered as a robust panel.
### Easy Operating
- Intuitive and interactive programming with clear and visible field functions associated with color codes thanks to the exceptionally clear 15” Touch Screen.
- Complete programming of parts on a single page.
- Quick set-up of the machine thanks to direct access to set-up parameters by means of clearly and logically designed menus and to basic functions by means of 5 object-oriented keys.
- Rapid data input due to the Touch Screen and slightly inclined ergonomic keyboard with large keys.
- Main machine commands (push buttons, switches) ideally located under the keyboard.

### Better Bending
- The numerical control comes with off-line 2D software to prepare the production programs and check the feasibility of the parts on a desktop computer.
- Higher productivity through easy and rapid modifications of existing products.
- Extensive machine parameters allow very fine machine tuning.
- Display of error and warning messages on the console screen.

### Powerful
- Graphic 2D display and simulation capability. It displays the optimal bending sequences, the tools and the position of the sheet between the tools as well as collision detection according to criteria defined by the operator:
  - Minimum length against the operator.
  - Minimum return.
  - Maximum accuracy between two defined faces.
  - Minimum operator manipulation.
- Windows XPe for multitasking and file management.
- EC safety-cycle management.
- Easy communication:
  - Windows networking through Ethernet (RJ45).
  - Connection to external devices through USB port for software updating and data backup.
  - Remote maintenance.
- Almost unlimited quantity of programs and very high number of sequences.
- Over 20 languages available.
- In addition, DNC 15 is fully compatible with Cybelec’s DNC 880S, DNC 880 and DNC 80, making it an ideal control when retrofitting old machines.

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**Easy operating, better bending and powerful features all characterize DNC 15**
The DNC 15 is the natural evolution of the world known DNC 880S. With a large 15-inch touch screen this DNC 15 gives the operator more power and easiness to control his machine.

Depending on the choice of software, DNC 15 can control synchronized press brakes or mechanical / hydraulic stops, as well as up-stroking or down-stroking press brakes (see the list of available versions next page).

This compact numerical control unit is available in 2 versions: 4 or 7 axes either in panel or box design.

Its Touch Screen 2D graphic software, its simple keyboard with large keys makes the use of this control very efficient and comfortable.

The basic functions are accessible by 6 subject-oriented keys giving access to clearly and logically designed menu pages. The bending solutions are displayed graphically in 2D and indicate possible collisions with the tools or the machine frame. The system also shows the position of the sheet within the tools.

The software enables the machine manufacturers to configure the axes, inputs/outputs and auxiliary functions according to their needs.

The DNC 15 is also fully compatible with our DNC 880S and 880 or DNC 80, making it an ideal control for retrofitting old machines.

### Ordering information

- **DNC_15 PS 4 axes**
  - In box version, white color: S-DNC-154PS/BW
  - In panel version: S-DNC-154PS/P

- **DNC_15 PS 7 axes**
  - In box version, white color: S-DNC-157PS/BW
  - In panel version: S-DNC-157PS/P
Versions

The NC always comes with a PS version, PC, P, PL mode are created by the OEM in the machine parameters.

DNC 15 PS  
For synchronized press brakes. 4 or 7 axes, 2 of them synchronized axes for the beam.

DNC 15 PC  
Like DNC 15 PS, but for press brakes with mechanical (or hydraulic) stops and beam control by means of a linear encoder.

DNC 15 P  
Same as DNC 15 PC, but without beam control by a linear encoder.)

DNC 15 PL  
The PL version has been specifically developed for non-synchronized press brakes with hydraulic/electrical stops, but whose beam cycle is entirely controlled by the DNC by means of a linear encoder.

Standard software (axes and auxiliary functions)

The elements listed hereafter are available and can be configured in all numerical controls supplied with standard software (within the number of axes and inputs/outputs available).

Y1 - Y2  
Synchronized axes for the beam (servo-valves, proportional valves). Should a current output be wanted, the MSV 402 accessory would be necessary.

X, X1, X2, X5, X6  
Main rear backgauge axes.

X1 ABS, X2 REL  
Secondary backgauge axes in absolute or relative mode.

R, R2, R5, R6  
Backgauge height-adjustment axes.

Z, Z2, Z5, Z6  
Axes for left/right movement of the backgauge.

Conical folds  
Comfortable programming for conical folds (requires X, X2 and adapted stop fingers).

Free 1, 2, 3, 4  
Independent axes without any particular control.

Pressure  
Voltage output 0-10 VDC for pressure valve control. If current control is wanted, the MVP 100 voltage->current is the solution.

Crowning  
Voltage output 0-10 VDC for adjusting the hydraulic crowning. If current control is wanted, the MVP 100 voltage->current is the solution.

F1 to F10  
Configurable auxiliary functions (possibly, the number of AFs may be limited according to the type of function and management). 24 VDC voltage or logical order outputs, with or without position control by means of a potentiometer transducer. Special controls for gauge fingers, bending aids, die movements.

Languages  
French, German, English, Italian, Spanish, Portuguese, Swedish, Danish, Finnish, Dutch, Hungarian, Polish, Czech, Slovene, Russian, Turkish, Chinese, Taiwanese. Other languages on request.

Particularities  
Conversion Inch/mm, TON/TONS etc. Measurement of speed, stopping time and leakage of the beam. Management of CE safety cycles. Interactive display of safety utilities and customized messages.

Software options (special axes, auxiliary functions, at extra cost)

M1, M2  
Axes for the adjustment / movement of the die.

X3, X4, X7, X8, Z3, Z4  
Front gauge axes.

H, H2  
Rear sheet support axes (not calculated).

H3, H4  
Calculated front sheet support axes.

Accessories

CybVA_6  
Interface card for Hörbiger proportional valves.

MVP 100  
Voltage / current conversion module (0-10V → 0-0.5 / 0-2 A) for pressure and crowning valves, to be fitted in the electric cabinet.

MSV 402  
Voltage / current conversion module (±10V → ±50 mA, ±300 mA) for servo-valves.
**Technical characteristics**

Multiprocessor design using ASIC and SMD components. This allows high integration and ensures great reliability.

<table>
<thead>
<tr>
<th><strong>Keyboard</strong></th>
<th>Large keys easy to use with working gloves.</th>
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</thead>
<tbody>
<tr>
<td><strong>Screen</strong></td>
<td>15 inch colour Touch Screen.</td>
</tr>
<tr>
<td><strong>System</strong></td>
<td>Windows XP Embedded</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>LX 800</td>
</tr>
<tr>
<td><strong>RAM</strong></td>
<td>256 MB (standard version).</td>
</tr>
<tr>
<td><strong>Mass memory</strong></td>
<td>Compact Flash (1 GB).</td>
</tr>
<tr>
<td><strong>Port</strong></td>
<td>4 USB 1.1 (2x external, 2x internal).</td>
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<tr>
<td></td>
<td>1 parallel (printer).</td>
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<tr>
<td></td>
<td>1 RS232.</td>
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<tr>
<td></td>
<td>1 RJ45 Ethernet</td>
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<tr>
<td></td>
<td>1 VGA</td>
</tr>
<tr>
<td><strong>Axes</strong></td>
<td>High counting speed axes (250 KHz), with PID regulator and programmable resolution.</td>
</tr>
<tr>
<td><strong>Power supplies NC</strong></td>
<td>+ 24 VDC ±10 %, 2A (~ 50W).</td>
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<tr>
<td><strong>Power supplies for digital inputs/outputs</strong></td>
<td>+ 24 VDC ±10 %</td>
</tr>
<tr>
<td><strong>Incremental encoder inputs</strong></td>
<td>5 VDC line drivers.</td>
</tr>
<tr>
<td><strong>Digital inputs</strong></td>
<td>16 optocoupled inputs. 24 VDC stabilized ±10 %.</td>
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<tr>
<td><strong>Analogic inputs</strong></td>
<td>8 inputs 0-10 VDC.</td>
</tr>
<tr>
<td><strong>Digital outputs</strong></td>
<td>16 optocoupled outputs. 24 VDC, max. 0.3 A / output.</td>
</tr>
<tr>
<td><strong>Voltage outputs (axes)</strong></td>
<td>4 or 7 outputs ± 10 VDC, output impedance Zout = 100 Ω, load Zl ≥ 10 kΩ.</td>
</tr>
<tr>
<td><strong>Analog voltage outputs (functions pressure, crowning or auxiliary functions)</strong></td>
<td>2 outputs 0-10 VDC, output impedance Zout = 100 Ω, load Zl ≥ 10 kΩ.</td>
</tr>
<tr>
<td><strong>Temperature, pollution level, relative humidity and height during work</strong></td>
<td>Min. 5° Celsius, max. 40° Celsius. * Pollutant level 2, Relative humidity (10 to 85% non condensing). Max. height 2000 m. * if the temperature exceeds 40° C, forced cooling (ventilation, air-conditioning) must be provided.</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Approx. 5 kg (panel version), approx 15 kg (box version)</td>
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<tr>
<td><strong>EC Directives</strong></td>
<td>IEC61131-2</td>
</tr>
</tbody>
</table>
Box version

Cybelec Europe Fitting

Compatible DNC 80, 800, 880S

Panel version

www.sm-tech.ro