

Numerical Control

DNC 880S

The Windows XP Embedded numerical control DNC 880S is specifically designed for sheet-metal working. Depending on the choice of software, it can control synchronized press brakes or mechanical / hydraulic stops, as well as upstroking or downstroking press brakes (see the list of available versions below).

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

Its 10-inch TFT colour screen, its simplified keyboard with large keys, and the 2D graphic software make 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 880S is also fully compatible with our DNC 80 and 880*, making it an ideal control for retrofitting old machines.



Panel design

Box design

Versions

DNC 880S PS	For synchronized press brakes. 4 or 7 axes, 2 of them synchronized axes for the beam. DNC 884S PS or DNC 887S PS
DNC 880S PC	Like DNC 880S PS, but for press brakes with mechanical (or hydraulic) stops and beam control by means of a linear encoder. DNC 884S PC (4 axes) or DNC 887S PC (7 axes)
DNC 880S P	Same as DNC 880S PC, but without beam control by a linear encoder. DNC 883S P (3 axes) or DNC 886S P (6 axes)
DNC 880S 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. DNC 883S PL (3 axes) or DNC 886S PL (6 axes)

* Except some special functions like bending aids.

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 for pressure valve control. Should current control be wanted, the MVP 100 accessory, which is an external amplifier module to be fitted in the electric cabinet, would be necessary.
Crowning	Voltage output for adjusting the hydraulic crowning. Should current control be wanted, the MVP 100 accessory, which is an external amplifier module to be fitted in the electric cabinet, would be necessary.
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

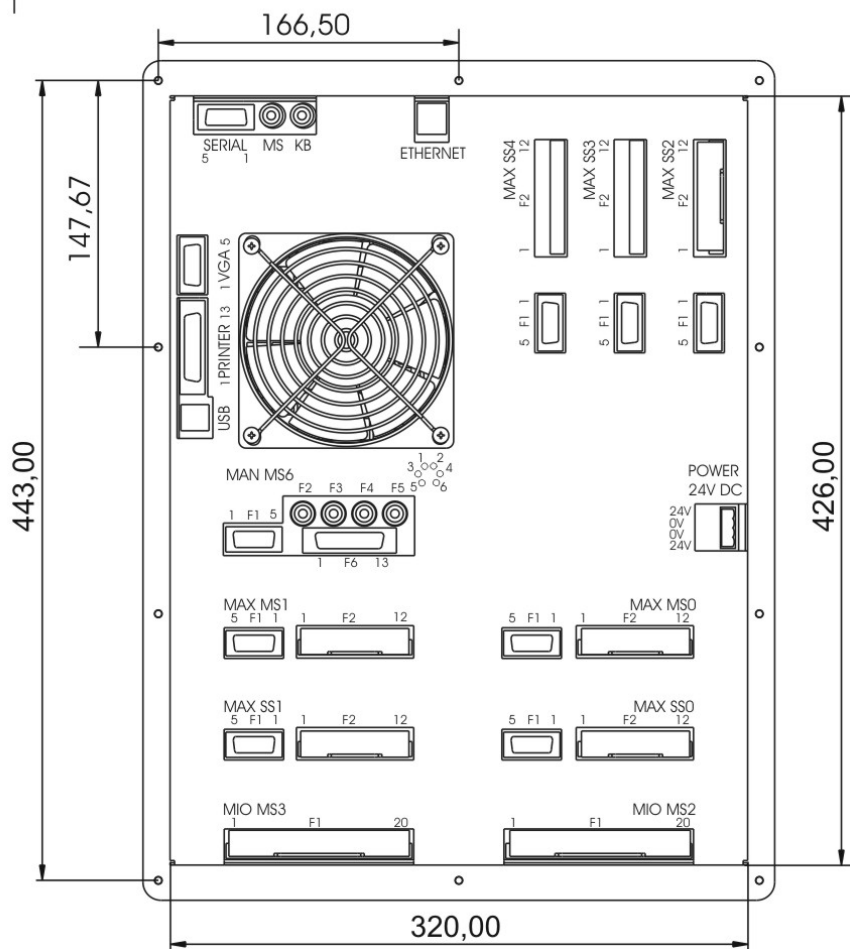
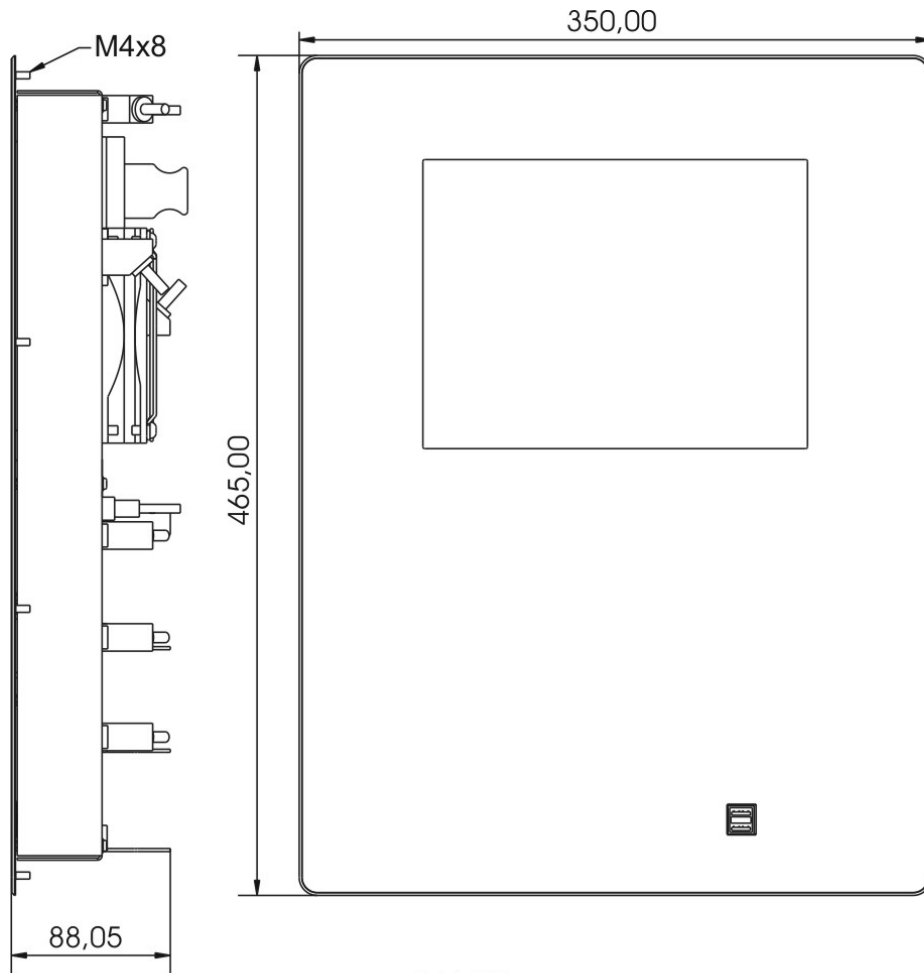
CAH, CAB	Interface card for proportional Hörbiger, Bosch valves.
MVP 100	Voltage / current conversion module (0-10V → 0-0.5 / 0-2 A) for pressure and crowning valves, to be fitted in the electric cabinet.
MSV 402	Voltage / current conversion module ($\pm 10V \rightarrow \pm 50 \text{ mA}, \pm 300 \text{ mA}$) for servo-valves.
BTAUX	Auxiliary box for the push buttons
Other	There exist numerous options specific to each constructor. Other options can be developed according to needs.

Technical characteristics

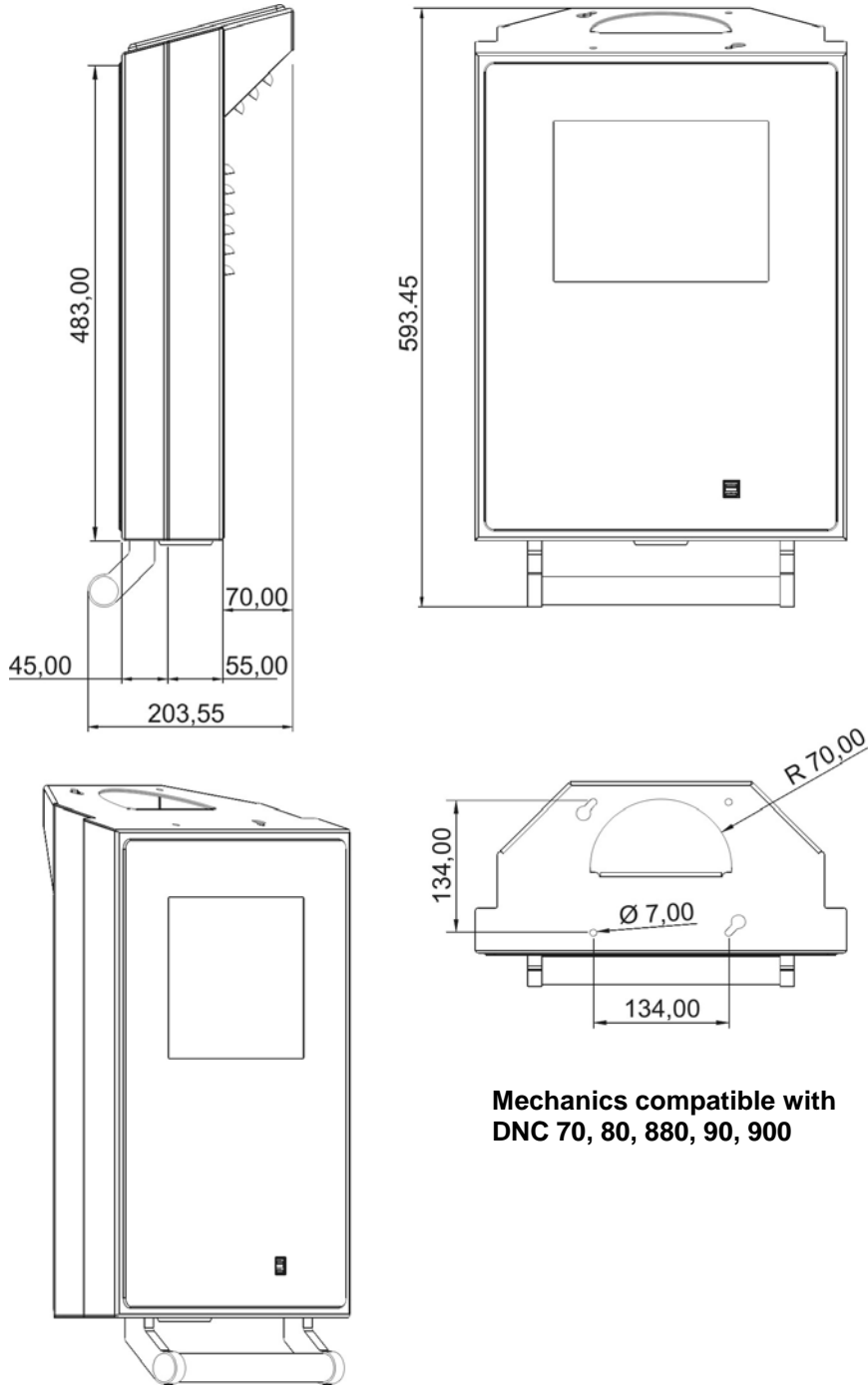
Multiprocessor design using ASIC and SMD components. This allows high integration and ensures great reliability.

Keyboard	Large keys easy to use with working gloves.
Screen	10-inch TFT colour screen.
System	Windows XP Embedded
CPU	Via Eden 400MHz
RAM	256 MB (standard version).
Mass memory	Compact Flash (1 GB).
Port	4 USB 1.1 (2x external, 2x internal). 1 parallel (printer). 1 RS232. 1 RJ45 Ethernet 1 VGA
Axes	High counting speed axes (250 KHz), with PID regulator and programmable resolution.
Power supplies DNC	+ 24 VDC $\pm 10\%$, 2A (~ 50W).
Power supplies for digital inputs/outputs	+ 24 VDC $\pm 10\%$
Incremental encoder inputs	5 VDC line driver, complementary signals obligatory.
Digital inputs	16 optocoupled inputs. 24 VDC stabilized $\pm 10\%$.
Analogic inputs	8 inputs 0-10 VDC.
Digital outputs	16 optocoupled outputs. 24 VDC, max. 0.3 A / output.
Voltage outputs (axes)	4 or 7 outputs ± 10 VDC, output impedance $Z_{out} = 100 \Omega$, load $Z_I \geq 10 \text{ k}\Omega$.
Analog voltage outputs (functions pressure, crowning or auxiliary functions)	2 outputs 0-10 VDC, output impedance $Z_{out} = 100 \Omega$, load $Z_I \geq 10 \text{ k}\Omega$.
Temperature, pollution level, relative humidity and height during work	Min. 5° Celsius, max. 40° Celsius. * Pollution 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.
Weight	Approx. 5 kg (panel version), approx 9 kg (box version)
EC Directives	Our numerical controls comply with EC Directives 89/336/EEC and 73/23/EEC.

Panel design



Box design



Auxiliary box (Option)

