Bilko®

CNC Control & CAD / CAM Solutions

General Purpose CNC Control Units
CNC Control Units for Sheet Metal Working
CAD/CAM Softwares
RTU’s and I/O Modules
Hydraulic Valve Drives
Linear Scales
Our Original Products

- **LYNCA® – CNC**: Open Architecture CNC Controller for Special Machines
- **LYNCA® – LCS**: CNC Control Units for Laser Cutting Machines
- **LYNCA® – PCS**: CNC Control Units for Punch Presses with Integrated Design Tools
- **LYNCA® – RMC B1**: Analog and Digital I/O Module with CANopen & Modbus Interface
- **LYNCA® – RMC B2**: Digital I/O Module with CANopen & Modbus Interface
- **LYNCA® – RMC B5**: Modular RTU
- **LYNCA® – VA6 F**: 6-channels, Proportional Valve Drive with DC LVDT Feedback
- **LYNCA® – VA6 R**: 6-channels, Proportional Valve Drive with AC & DC LVDT Feedback
- **LYNCA® – VA 2**: 2-channels, Open Loop Programmable Proportional Valve Drive
- **LynCAD® – 3D**: 3D CAD / CAM Software for Press Brakes, Laser Cutting and Punching Machines
- **LynCAD® – 2D**: 2D CAD / CAM Software for Laser Cutting and Punching Machines
- **LyNEST®**: Regular Nesting & Optimization Software for CNC Shears and Cutting Machines

Our Business Partners

- **CYBELEC®**: Numerical Control Units for Press Brakes and CNC Shears
- **GIVI MISURE®**: Linear Scales
- **BRICSYS®**: 3D CAD Software for Sheet Metal Working
Do you develop special machine and need a specific CNC unit?

LYNCA – CNC provides you a flexible powerful and robust solution.

LYNCA – CNC represents an ideal solution for machines that require customized solutions. LYNCA – CNC has all the necessary interfaces to create very quickly specific user interface pages and machine.

LYNCA – CNC platform has been entirely developed by Bilko R&D team. Running under Linux®, on a powerful, robust and high quality Industrial PC, LYNCA – CNC has a 15” or 19” TFT LED touch screen version.

LYNCA – CNC is able to control complex machines demanding high speed trajectory generation with special interpolation, including hydraulic and electrical drives.

LYNCA – CNC control kernel supports parallel cycle executions that makes it possible to control simultaneously multi-station machines including part loading, parallel machining and unloading cycles.

Thanks to enhanced ISO G-codes editor and built-in PLC (that is programmed with C language), LYNCA – CNC represents an ideal solution to control machines requiring rapid and precise synchronization mechanisms.

LYNCA – CNC has an optional DXF part import feature in a specific format.
RMC B1 is a general purpose analog and digital I/O module with CANopen & Modbus interface. RMC B1 has 32 digital inputs, 32 digital outputs (with LED), 6 analog inputs and 5 analog outputs, 2 separated CAN bus and 1 RS232/485 ports. RMC B1 is not only used in machine control cabinets as an external I/O interface of a CNC controller, but also in various industrial automation projects as a remote signal module.

RMC B2 is a digital I/O module with CANopen & Modbus interface for Laser Cutting Machines and Punch Presses. RMC B2 has 48 digital inputs and 32 short-circuit protected digital outputs both with LED indicators.

RMC B5 is a modular RTU. It consists of various electronic boards plugged in a backplane with 5, 8 or 10 slots. Function boards can be selected among digital and analog input, output boards, various communication and supported bus interface boards.
LYNCA® – VA6 F

VA6 F is a 6 channels, Voltage (input) / Current (output) amplifier module designed to drive proportional hydraulic valves up to 4A. VA6 F has 4 output channels used for two (-10..+10V) DC type proportional valves with or without feedback. The LVDT feedback mechanism supports (3..12V) DC feedback signals. In addition VA6 drives also two 0..10V type proportional valves without feedback. VA6 F is widely used on press brakes, providing an integrated drive solution for directional Y1, Y2, pressure and crowning valves.

LYNCA® – VA6 R

VA6 R is also a 6 channels, Voltage (input) / Current (output) amplifier module designed to drive proportional hydraulic valves (up to 4A). In addition to a standard VA6 F, VA6 R supports not only a wider DC LVDT signal range but AC type LVDT feedback signals as well. This makes of a VA6 R a very flexible solution driving a large majority of proportional valves of the market. LVDT DC signal of a VA6 R can be selected in (+3V...+12V) or (-10V...+10V) range. VA6 R can also be used on proportional valves without feedback.

LYNCA® – VA 2

VA 2 is a Voltage/Current valve amplifier designed to drive bi-directional proportional hydraulic valves. For a standard usage, VA 2 has one -10..+10V differential analog voltage inputs. In addition, VA2 may receive 4 digital input signals corresponding each to a certain programmable output current level. This allows to design simple hydraulic motion control loops based on low and high speed motion signals in positive and negative direction, just like an inverter for a two speeds electrical motor.
LYNCA – LCS, is the particular version of the LYNCA – CNC dedicated to laser cutting machines. LYNCA – LCS has very clear and user friendly interfaces that makes it easy to operate the machine. LYNCA – LCS has many technologic advantages with kerf calculation, technology database management and override options or automatic resume from last position after power failures. Besides the laser cutting control, LYNCA – LCS can control other production processes including sheet loading and unloading. Together with the LynCAD 2D/3D CAD/CAM software, LYNCA – LCS provides a complete and very flexible system solution from design to production.

- 15” industrial grade LED TFT color display
- Resistive touch screen
- 2 x RJ45 Ethernet 10/100/1000MHz
- 2 x PCI CAN bus port (optional)
- 24V DC power supply (Industrial grade 220V optional)
- 40W power consumption (with full load)
- 0°C - +50°C operation temperature range
- Membrane switch panel with 80 keys & 48 LEDs including

Software Features

- Sheet recognition (Auto/Manual)
- Automatic sheet loading
- Kerf calculation
- Automatic resume from last position after power failures
- Manual cut of remnant parts
- Technology database override options
LYNCA – PCS is the version of the LYNCA – CNC applied to the punch presses. LYNCA-PCS controls punch presses having fixed, rotational or turret type tool heads.

Thanks to the integrated turret editor, it is possible to define on a LYNCA – PCS, special turrets with various stations and multi-tool structures on them.

In addition, LYNCA – PCS control unit offers a built-in pattern based part editor with 2D display. Edited parts may be nested using the manual or automatic nesting function.

LYNCA – PCS produces optimized code taking into consideration current tools and trajectory calculations. Generated codes can be simulated and viewed during the production in a 2D graphic display. LYNCA – PCS has been the ultimate commercial numerical control unit providing for punch presses the CAD/CAM functions mentioned above since more than 10 years.

- Turret and multi-station editor
- Multi-tool definition, tool parameters
- Wheel & Marking tool support
- Pattern-based built-in 2D graphic part editor
- DXF part import from CAD softwares
- Auto-tooling
- Various Micro-joint supports
- Automatic NC code generation
- Management of the punching head to work inside limited safety area
- Optimal Punching heads rotation when tool changes
- Optimal trajectory generation
- Automatic clamp position management
- Common cut support
- Production reporting
- Ethernet and USB support for part and tool transfer
- Part simulation with 2D viewer before production
- 2D part viewer during production
LynCAD® – 2D

2D CAD / CAM Software for Laser Cutting & Punching Machines

User Friendly Graphical Interface

- 2D CAD Drawing Functionality
- Command line support
- DXF import and export

Advanced & Automated Nesting

- Highly optimized nesting
- Arbitrary angle nesting
- Multiple sheet support
- Intelligent common cut handling
- Automatic part rotation
- Multiple parts nesting
- Edit nested parts

Production and Nesting

- Part library preview
- Insert part manually with angle and scale factor (drag-and-drop)
- Dynamic shape library
- Save and load productions
- Undo, redo support

NC Code Generation

- NC code generation for any kind of CNC machine thanks to powerful post-processor
- Intelligent way-optimisation
- Reposition handling
- Multi-clamps support
- Production statistics
2D CAD / CAM Software
for Laser Cutting & Punching Machines

Simulator
- Offline step-by-step simulator
- Slider bound time control
- Animation mode
- Head view mode

Contour Editor For Laser Cutting
- Automated contour analysis
- Visual lead-in lead-out design
- Pierce and cut specification
- Fly Cut

Tool Library for Punch Presses
- Working with special tool
- List of previously used and active tools
- Editable tool parameters
- Support for interpolated continuous tool

Auto Tooling Properties for Punch Presses
- Shape and tool matching
- Auto crunch
- Hole detection
- Auto micro joints option

Turret Structure for Punch Presses
- Adjustment of mounting angle
- Save and load tool sets
- Support for different turret types
- Multi-tool support
LynCAD® – 3D

LynCAD – 3D is an integrated CAD/CAM package designed for press brakes, laser cutting machines and punch presses. It includes BRICSY®'s excellent BRICSCAD® 3D CAD solution with sheet metal unfolding libraries as well as Bilko’s 2D CAD/CAM, nesting and post processing package for laser cutting and punching.

LynCAD – 3D allows realizing intricate 3D designs, import 3D solid parts from various CAD software, modify them when necessary, then unfold (including assemblies) to produce them from a sheet metal and export in DXF or ISO code formats.

LynCAD – 3D is proposed in different configurations:

**LynCAD – 3D – PB**
As the BRICSCAD® 3D CAD package with sheet metal library exporting parts in DXFs format suitable for various press brakes controllers or other sheet metal working machines controllers or CAM software.

**LynCAD – 3D – PBC**
This special package particularly adapted for press brakes includes 3D BRICSCAD® and PC ModEva 3D licenses. The integration allows a 3D designed and flattened part to be directly imported to Cybelec® ModEva 3D CYCAD environment by pressing a button.

**LynCAD – 3D – Premium**
In addition to press brakes, LynCAD – 3D – Premium package provides extended CAM functionality for laser cutting and punch press machines, including nesting, production management, simulation and ISO code generation.

LynCAD – 3D – Premium together with LYNCA – CNC represents a very efficient, flexible and competitive solution for machine OEMs.
CYBELEC SA, founded in 1970, is a Swiss manufacturer of Computer Numerical Controllers (CNC’s), having installed more than 100,000 units on the global market. Its customers are global and Cybelec’s footprint is remarkable.

Market leader in metal forming technology, Cybelec offers a complete range of high-performance numerical controls commonly used with press brakes and shears.

Since 1997, Bilko Inc. has been developing numerous mutual projects with CYBELEC® for Turkish press brake and shearing machines manufacturers. Over the years Bilko has been profiled as a technology and solution center for cutting and bending machines. Currently, Bilko represents CYBELEC® company for Turkey, Balkans and Middle East region and provides, engineering, sales, after sales, technical and retrofitting services.

**ModEva RA Premium**
- Full 3D numerical control unit
- Full 3D video-like simulation
- Importing 3D models
- 15” or 19” (*) color Touch Screen
- Can control up to 18 axes

**ModEva 19T (*)**
- 3D graphic display
- 19” color Touch Screen
- Can control up to 18 axes

**ModEva 15T**
- 3D graphic display
- 15” color Touch Screen
- Can control up to 18 axes

(*) available from January 2017
Based both on touch screen technology, the new generation CybTouch and ModEva Pac series controllers represent a user friendly and cost effective solution for entry and middle range 2D numerical control needs from standard 3 axis upto 7 axis (ModEva Pac 7) machines.

**CybTouch Series**

Starting with the objective to satisfy better the end-users, the new CybTouch controller and interface design project involved re-thinking the whole press-brake numerical control's philosophy. CybTouch was designed to be simpler. It was designed to be immediately accepted for its easy approach.

Cybelec has optimized the beam management, making it even more straightforward. The improved setup “Wizard” makes the commissioning of synchronized Y1-Y2 press-brakes, conventional single-cylinder press brakes or even electric press brakes, a matter of just a few simple steps.

Same intuitive approach applies also to part design interface. The operator finds in a single page all necessary action keys in visual format.

**ModEva Pac**

ModEva Pac distinguishes from the other ModEva controllers with its all-in-one compact numerical control hardware.

Delivered in standard for 4 axis, ModEva Pac has also a 7 axis model that can control press-brakes with Y1,Y2, X1,X2,Z1,Z2,R or for other configuration. ModEva Pac provides extended functionalities such as bending aids, management of 12 fingers back gauges or the ability to communicate with external systems like bar code readers or robots, making of it the optimal solution for the control of standard to more sophisticated press brakes. ModEva Pac is equipped with the latest evolution of the ModEva 2D graphical programming software.
Since 1979, GIVI MISURE has been developing and producing measuring and control systems, appreciated by major OEMs for their high quality and reliability. High-performance optical and magnetic linear scales of GIVI MISURE have been used successfully for many years in the sheet metalworking.

GIVI MISURE has created standard worldwide with its self aligned (patented), accurate optical and magnetic scales designed for synchronized press brakes.

Before delivery, the accuracy of each GIVI linear scale is tested along the measurement length, each scale is delivered then with a measurement certificate. This guarantees that deviation from the exact value is within the tolerance. Benchmark tests shows clearly that GIVI’s linear scales measure with more accuracy than other scales in the market.

**GVS 200 Self-aligned, Incremental Optical Scale**
- Measuring Support: Glass
- Accuracy Grade: ± 2,5 μm (standard)
  ± 1 μm (high)
- Resolution: 10, 5, 1, 0.5, 0.1 μm
- Protection Class: IP 54 (standard)
  IP 64 (pressurized)

**GVS 204 Self-aligned, Absolute Optical Scale**
- Measuring Support: Glass
- Accuracy Grade: ± 2,5 μm (standard)
  ± 1 μm (high)
- Resolution: 1, 0.1 μm
- Protection Class: IP 54 (standard)
  IP 64 (pressurized)

**GVS 215 Self-aligned, Incremental Magnetic Scale**
- Measuring Support: Plastoferrite on stainless steel tape
- Accuracy Grade: ± 15 μm
- Resolution: 50, 25, 10, 5, 1 μm
- Protection class: IP 64 (standard)
  IP 67 (on request)

**GVS 219 Self-aligned, Absolute Magnetic Scale**
- Measuring Support: Plastoferrite on stainless steel tape
- Accuracy Grade: ± 15 μm
- Resolution: 100, 50, 10, 5, 1 μm
- Protection class: IP 64 (standard)
  IP 67 (on request)
LyNEST 2D-R is an optimization CAM software that nests rectangular parts of different number and sizes on rectangular plates like sheet metal, glass, wood. In a few seconds, parts are placed automatically in such a way that the waste is reduced to its minimum and a cutting sequence table is produced to realize the necessary cutting operations.

With the CNC option, LyNEST communicates with guillotine shears having Cybelec CNC controllers (DNC61). Provided a serial connection, LyNEST sends to the controller, the cutting information with back gauge positions step by step.

From the screen of the PC computer, the user can follow in real-time all the necessary part manipulations with a 2D graphical sequence display.

On demand, also depending on the application, LyNEST may be adapted to communicate with other control units.
CybTouch 6

CybTouch 6 is a high performance numerical controller specifically designed for sheet-metal cutting.

CybTouch 6 has interactive touch screen interface with large keys, on-line help, and many other automatic functions to constantly guide the operator. It has an intuitive and vivid color screen with highly integrated functions.

CybTouch 6 for shears is available in two versions: one for swing shears and one for adjustable rack angle shears. Both are delivered as a robust panel ready to be integrated, or can optionally also be delivered mounted into a sleek and modern housing specially designed to be attached to a swiveling arm.

CybTouch 8G (*)

CybTouch 8G is the new member of the CybTouch family for swinging or adjustable rack angle type shears. It offers a larger screen for user interface. CybTouch 8G exists in panel or box version.

(*) available from January 2017
About Bilko Automation

Founded in 1986, as an R&D company, Bilko has been specialised over the years in CNC control systems development, manufacturing and distributing related equipment for a variety of machines. Bilko is well known worldwide in CNC control systems of sheet metalworking machines and related CAD/CAM software and has become an expert company with its exclusive products over the years.

Thanks to its open architecture designed LYNCA – CNC product family, LYNCA – VA hydraulic valve drive series and LYNCA – RMC I/O unit series, Bilko is the preferred supplier of the many domestic and foreign machine manufacturers. Bilko’s products comply with CE standards.

Bilko has also developed specific CAD/CAM software for sheet metalworking machines under LynCAD and LyNEST brands. On the other hand, Bilko cooperates with Bricsys NV about 3D CAD. This collaboration, LynCAD in CAM and BricsCAD in 3D design, represents a vertical and customized solution. Using this vertical solution, machine manufacturers realize significant saving on time and costs.

On the other hand, since 1998, Bilko has been the representative for Turkey and the Middle East region, of CYBELEC Company that is the leading numerical controller manufacturer for press brakes and guillotine shears machines, as well the representative of GIVI Misure Company that provides linear scales for various machines. Bilko services to machine manufacturers and end users in the field of products and spare parts supply, engineering and technical service.

Bilko’s another activity area concerns the long-distance wireless data communication networks. Bilko offers in this domain UHF/VHF radio modems and accessories, engineering and radio network solutions. Bilko realizes also turnkey radio communication and SCADA projects. In this area Bilko has been representing SATEL OY and COMPLETECH Companies products since 2000. Bilko has carried out a large number of successful projects in this field and has been providing support to many contracting companies.

Bilko is a dynamic company that is steadily growing, worldwide competitive and opened to international markets with its expert R&D team, engineering staff and successful projects realized.

Our Business Concept

Bilko’s understanding of business and project consists of providing customized, competitive and sustainable solutions bringing an added value to its customers.

Activity Area

Machine Control Systems
Manufacturing CNC Control Units, CAD / CAM Software Development, Machine Automation

Industrial Automation
R&D, Engineering and Software Development about Wireless Data Communication Networks and SCADA Solutions, RTU Manufacturing and Sale, Turnkey Projects Realization and Contracting

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