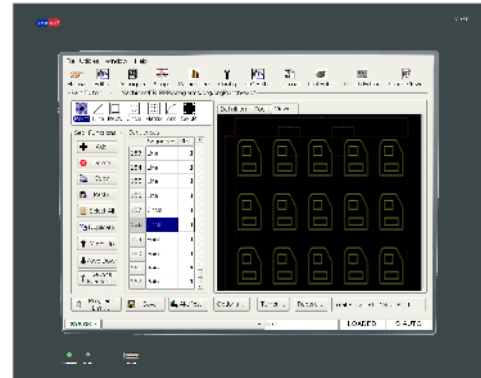


## ADVANCED CNC CONTROL SOLUTIONS FOR STANDARD, ROTATIONAL AND TURRET TYPE PUNCH PRESSES WITH INTEGRATED PART & TOOL EDITORS

### PP15T CNC UNIT

- 15" industrial grade LED TFT colour (1024 x 768 pixels)
- Resistive Touch screen
- Industrial grade motherboard with
- Intel Pentium® 1.6GHz or higher CPU
- 160 GB HDD, (SSD or CF optional)
- 1GB RAM
- 1 x Front USB connector
- 2 x RJ45 Ethernet 10/100/1000MHz
- 2 x PCI CAN bus port
- 4 x rear USB port
- External mouse and keyboard connection (USB or PS2)
- Industrial grade 220V 150W power supply



### TT80 Membrane Switch Keyboard

#### Membrane switch panel with 80 keys & 36 leds including :

- Manual Automatic Programming mode keys
- Single-Bloc mode key
- Initialisation key
- 5 Favourite programs keys
- Program List key
- Goto loading position key
- Program Reset-Start-Stop Keys
- Program Test Mode key
- Tool selection keys
- Light curtain security key
- Manual jog/step modes
- Manual + / - Motion keys
- Manual Step Keys (1,10,100...)



#### Free function keys and leds :

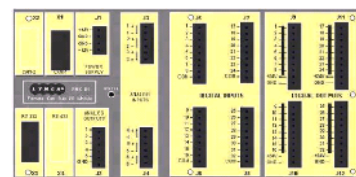
- 20 x free function keys with led

#### Physical I/Os on the back plane :

- 8 x local 24VDC digital input
- 8 x local 24VDC digital output

### BP10 Button board

- Speed % switch node
- Emergency Stop button (optional)
- 8 x external light/buttons and labels (optional)



### RMC - Remote I/O unit for electrical cabinet

- 1 x 1MHz CAN-bus,
- 32 x 24VDC opto-isolated digital input
- 32 x 24VDC opto-isolated digital relay output (60mA)
- Digital outputs sink/source selection
- 6 x 10 bits Analogue Input (2 x 0-5V, 2 x 0-10V, 2 x 4-20mA)
- 5 x Analogue Output (3 x 16 bit + 2 x 8 bits PWM)
- 1 x 1MHz additional CAN-bus (optional),
- 1 x RS232, 1 x RS485 (Modbus optional),

## Supported axis types

- Electrical AC servo,
- Hydraulic axis (analogue or digital)
- Pneumatic axis (analogue or digital)

## Axis interfaces

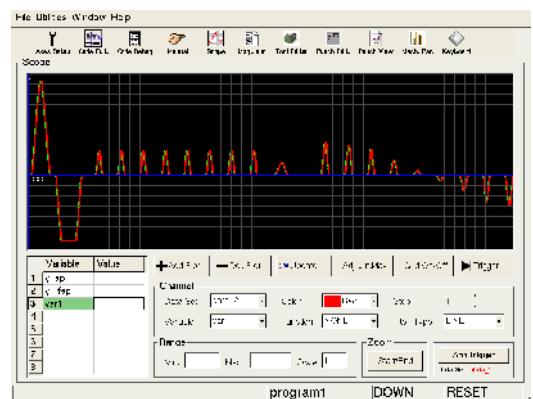
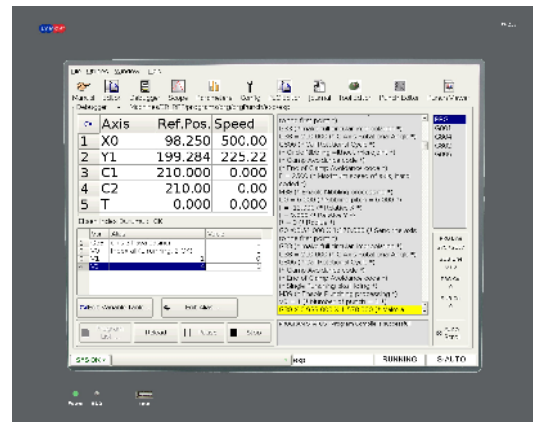
- X/Y table axis drive interface with CanOpen,
- C1 / C2 tool change axis with CanOpen protocol
- External feeder/loader/unloader axis control (CanBus or digital with encoder or analogue type)

## Hydraulic punch axis control interfaces

- Full range support for Voith Turbo HL<sup>®</sup> Hydraulic punch units over CanBus,
- Bosch-Rexroth<sup>®</sup> Hydraulic direct control
- Schneider<sup>®</sup> Hydraulic interface,
- Any other new interfaces on request.

## Interpolation (CAD/CAM supported)

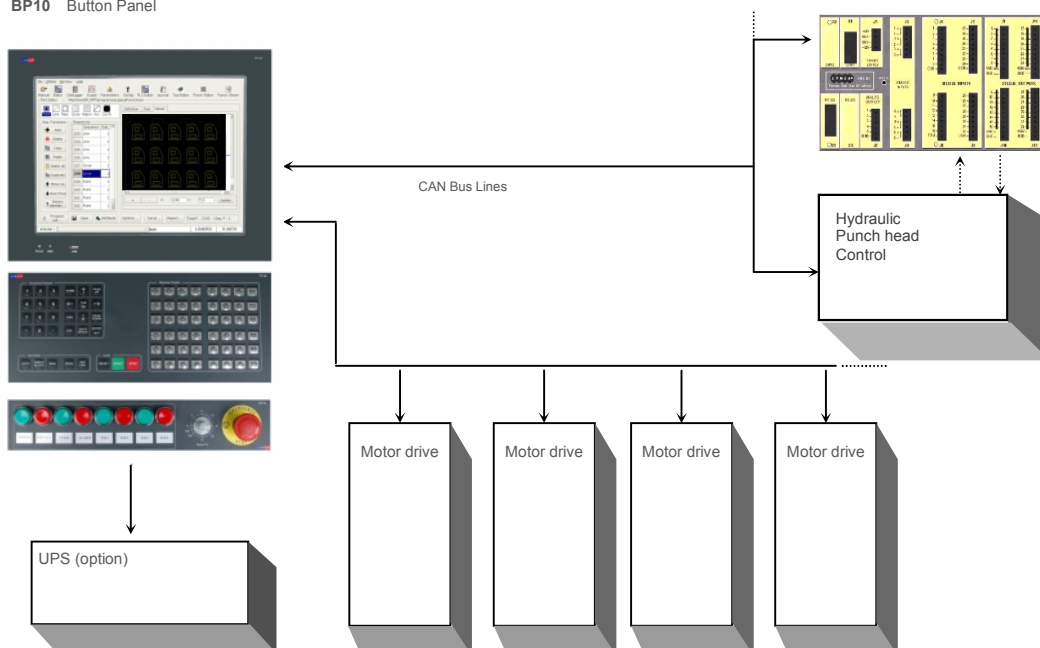
- Linear
- 2D circular
- Wheel tool interpolation
- Marking tool interpolation



PP15T CNC unit  
TT80 Membrane Keys  
BP10 Button Panel

### LYNCA PCS Typical Block Diagram

PCS – RMC  
Cabinet I/O interface module



## Software features

### • Tool Management

Tool programming using the built-in "Tool Editor",  
 Multi-tool holder definitions with various tools and stations,  
 Unlimited "Toolset" and "Tool" configurations,  
 Tool parameters (forms, offset, type, forming/cutting, compensations, ..),  
 Upper and Lower Dead Points, speed, dwell times definitions,  
 Management of the active toolset mounted on the machine for each part,  
 Security check between the mounted and requested tools,  
 Wheel tool support,  
 Marking tools support,

### • Part Editor

Part programming using the pattern-based Part Editor,  
 New part creation "Wizard".  
 Pattern based sequence and part programming,  
 Pattern library including : Point, Line, Rectangle, Matrix, Circular,  
 Arc punching patterns and Special "Corner Punching" Pattern for cabinet manufacturing.  
 Pattern copy paste functions,  
 Graphical pattern translation, rotation, mirroring, ...  
 2D Graphical cursor, pattern coordinates, pattern zoom in/out,  
 "Pattern Viewer" 2D graphical viewing support for pattern programming.  
 Punching or nibbling modes,  
 Various Micro-joint supports,  
 Automatic nibbling step calculation for each tool and pattern,  
 Panelising,  
 "Common Cut" support,  
 Writing support trough DXF,  
 Multi-clamp definitions,  
 Automatic clamp positioning and management,  
 Post Processor file support for editing code generation process,  
 Manual or automatic pattern execution order management,  
 Automatic NC code generation,

### • Safe and Intelligent Punching

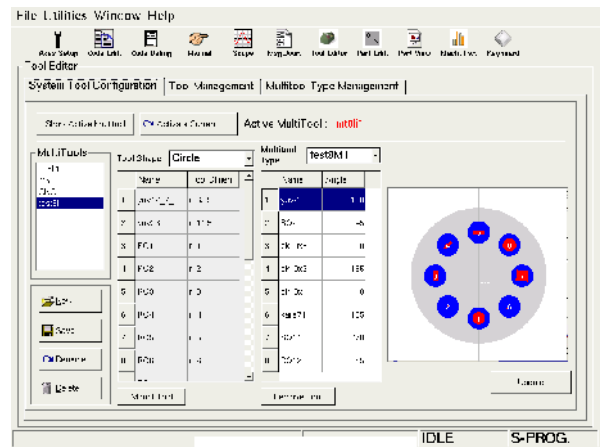
Management of the punching head to work inside limited safety area,  
 Optimal Punching heads rotation when tool changes,  
 Scrap removal management.

### • Punch Viewer

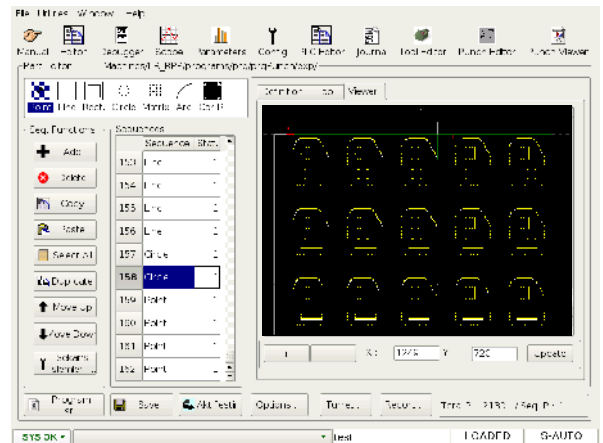
Real time 2D graphical supervision when execution with "Punch Viewer".

### • CAD/CAM Import interface

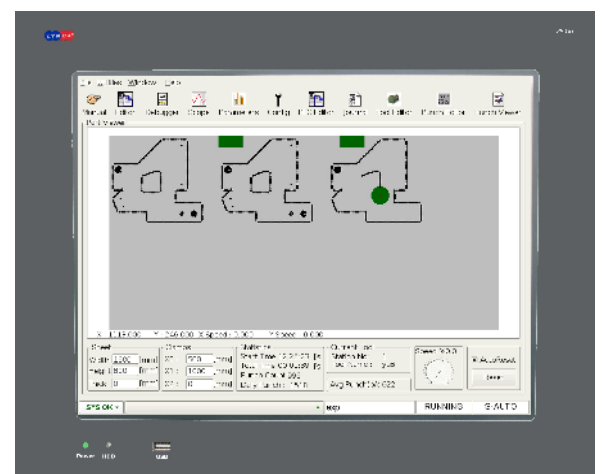
CAD CAM interface with Metalix<sup>®</sup> and Lantek<sup>®</sup>,  
 DXF part import from any CAD software,  
 Ethernet and USB support for part and tool transfer,  
 Program and part execution context import / export.



Tool Editor



Part Editor



Punch Viewer



## • Optimization and Nesting

Optimal trajectory generation,  
Optimal punch head selection,  
Panelising and Mirroring,  
Repositioning with multi-clamps,  
Automatic clamp position management,  
Common cut support (optional),  
Manual Nesting.  
Punch Analyser for motion control fine tuning.

## • Simulation and Reporting

Part simulation with 2D viewer,  
Production reporting based on timings, weights and tool usage,  
Tool usage tracking (part based tool counting, daily tool counting etc.),  
Step mode and no-punch modes support,  
Detailed machine usage data logger.

## • Intelligent UPS and power failure support

Direct interface with UPS, automatic shutdown (option),  
Automatic resume from last punch after stop or power failure.

## • General Properties

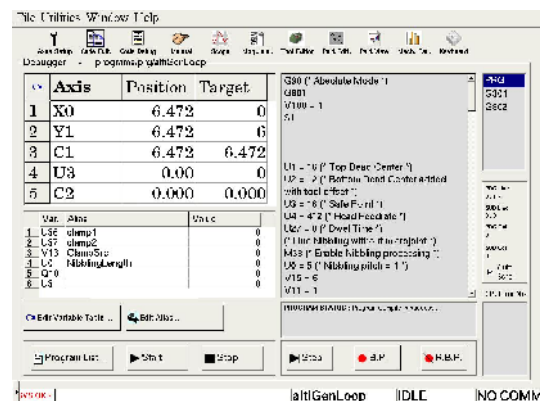
Unlimited program size,  
ISO G codes editor with parallel cycles support,  
Built-in Code debugger with break-points and variables displays features,

Built-in PLC editor in C language (optional),  
HMI library for customization (optional),

Secure login and user management with user levels,  
Message journal,

Multilanguage support,  
Folder management for parts and tools,  
Advanced search facilities,  
Favourite program lists.

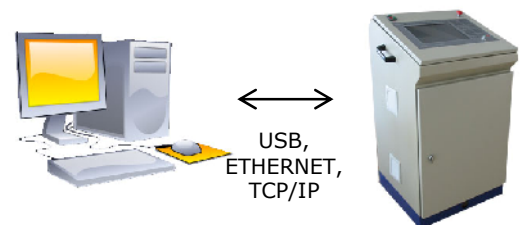
Integrated scope,  
Flexible I/O signal configuration,  
Advanced online help.



## “LYNCA-WIN-PE<sup>®</sup>” Offline programming software

LYNCA-WIN-PE is the optional offline tool and part programming software package of LYNCA PCS running on any PC under Windows<sup>®</sup> or Linux. It provides the same functionality as on a LYNCA-PCS CNC, including punch and tool editors, 2D Graphical part simulation, DXF 2D part import, Interface with third party CAD/CAM solutions like Metalix<sup>®</sup> and Lantek<sup>®</sup>, Remote transfer to the machine using Ethernet TCP/IP or a USB memory,

Production simulation,  
Reporting.



“LYNCA-WIN-PE”  
offline part  
programming and  
simulation  
software

LYNCA-PCS  
CNC  
controlling the  
punch press