HOW TO SELECT PRESS BRAKE CONTROLLER

INTRODUCTION

In the world of metal fabrication, selecting the appropriate press brake controller is crucial for precision and efficiency. This infographic highlights the key differences between NC and CNC control systems, and compares leading CNC control system brands: Delem, ESA, and Cybelec.

KEY DIFFERENCES BETWEEN NC AND CNC CONTROL SYSTEMS

NC (Numerical Control)

Input Method: Punch tapes and punch cards
Program Modification: Difficult, requires re-punching cards
Memory Storage: No memory storage for programs
Cost: Less expensive
Maintenance Cost: Lower
Operator Skill Requirement: Requires highly skilled operators
Flexibility: Less flexible
Accuracy: Lower accuracy
Execution Time: More time-consuming
Continuous Operation: Cannot run continuously
Automation Level: Lower automation
Applicable Scenarios: Simple operations like drilling, boring, and milling

CNC (Computer Numerical Control)

Input Method: Keyboards and digital input
Program Modification: Easy, can be modified directly on the computer
Memory Storage: Memory available to store and reuse programs
Cost: More expensive
Maintenance Cost: Higher
Operator Skill Requirement: Requires less skilled operators
Flexibility: More flexible
Accuracy: Higher accuracy
Execution Time: Less time-consuming
Continuous Operation: Can run continuously for 24 hours
Automation Level: Higher automation
Applicable Scenarios: Complex operations like milling, turning, grinding, and drilling

COMPARISON OF LEADING CNC CONTROL SYSTEM BRANDS

Delem CNC Control Systems

Models: DA-66T, 69T, 53T, 58T, 41T, 42T (touchscreen); DA-66W, 65R (button)

Features:
- 2D and 3D graphical programming
- Automatic bend sequence calculation and collision detection
- High-resolution color TFT touch screen
- Up to 8+1 axes supported
- Embedded real-time Windows OS
- High ease of use and intuitive interface
- High cost

ESA CNC Control Systems

Models: S600 and S800 series

Features:
- Touch screen controls
- Manage configurations from 3 to 128 axes
- PLC and HMI reprogrammable for custom requirements
- Suitable for various press brakes (hydraulic, synchronized hydraulic, electric, tandem)
- Advanced graphic programming and sophisticated algorithms
- Medium ease of use
- Low cost

Cybelec CNC Control Systems

Models: CT8P, CT8PS, CT15P (button); VisiTouch series (touchscreen)

Features:
- 2D and 3D graphical programming
- Automatic bend sequence calculation and collision detection
- Modern streamlined glass surface touch screen
- Multiple axes support, including complex bending aids and slave axes
- Windows 10 OS
- High ease of use and user-friendly interface
- Medium cost

RECOMMENDATIONS

Limited Budget and Quick Onboarding

Delem control systems for their ease of use, though they are more expensive.

High Quality and Precision

Cybelec for superior quality and reliability, despite more complex operation.

Multifunctionality and Customization

ESA control systems for scenarios requiring multi-axis control and customization.

CONCLUSION

Selecting the right press brake controller involves considering functionality, stability, ease of use, and safety. Delem, ESA, and Cybelec offer advanced options tailored to different needs and budgets. Upgrading to a modern CNC controller can significantly enhance performance and reduce costs.

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