

# QL-BendPro 250T4000 CNC Precision Press Brake

The **QL-BendPro 250T4000** is an industrial-grade CNC electro-hydraulic precision press brake engineered to fully comply with all mandatory requirements of **ITB S-29100-00015579 – Precision Metal Brake**.



## 250-Ton Capacity

Industrial-grade forming power for demanding applications



## 4000 mm Length

Extended bending capacity for large workpieces



## CNC Control

Precision electro-hydraulic synchronized system



## Safety First

Comprehensive industrial safety architecture

# Core Technical Specifications

## Forming Capacity

The QL-BendPro 250T4000 delivers exceptional forming power with a rated capacity of **250 tons**, specifically engineered to handle demanding industrial metal fabrication tasks. The system provides an effective bending length of **4000 mm**, enabling processing of large-scale workpieces with consistent precision across the entire working envelope.

This capacity specification ensures compliance with the most rigorous production requirements while maintaining structural integrity and operational reliability throughout continuous manufacturing cycles. The extended bending length accommodates wide-format sheet metal operations, eliminating the need for multiple setups and reducing production time.

## Drive & Control Architecture

The machine employs an advanced electro-hydraulic synchronized drive system that delivers precise, repeatable motion control. This dual-cylinder configuration ensures balanced force distribution across the ram, preventing angular deviation and maintaining consistent bend quality.

Closed-loop ram positioning technology provides real-time feedback and correction, ensuring parallelism between the upper and lower beams throughout the entire stroke cycle. This precision control mechanism is essential for achieving uniform bend angles and meeting tight dimensional tolerances required in critical fabrication applications.

## Machine Structure

The foundation of the QL-BendPro 250T4000 is a heavy-duty welded steel frame constructed from high-grade structural steel. This robust architecture provides the necessary rigidity to withstand the substantial forces generated during high-tonnage bending operations without deflection or deformation.

All structural components undergo comprehensive stress-relief heat treatment processes after welding. This critical manufacturing step eliminates internal stresses that could compromise long-term accuracy, ensuring dimensional stability and geometric precision over the machine's operational lifetime.

The stress-relieved construction methodology guarantees that the machine maintains its calibrated specifications even after years of continuous industrial operation, delivering consistent performance in demanding fabrication environments. This engineering approach directly addresses the solicitation requirement for long-term accuracy and reliability in precision metal forming applications.

# CNC Control, Back-Gauge & Accuracy



## Advanced CNC Control

Delem DA58Tx CNC Control (English interface)



## Precision Ram Control

Closed-loop Y1-Y2 axis positioning



## Intelligent Crowning

CNC-controlled compensation for uniform bends



## Automated Back-Gauge

Multi-axis CNC positioning, high repeatability

## CNC Control System

The **Delem DA58Tx CNC Control** provides comprehensive process control via an intuitive English interface. It enables complex bending sequence programming, part profile storage, and precise operations with repeatable accuracy. Supporting manual and automatic modes, it offers flexibility for all production volumes, with integrated diagnostics for minimal downtime.

## Ram & Crowning Control

The closed-loop **Y1-Y2 axis control system** continuously monitors and adjusts ram position, ensuring perfect parallelism and consistent tonnage across the 4000 mm working length. The integrated **\*\*CNC-controlled crowning system\*\*** compensates for natural beam deflection under load, automatically adjusting the ram profile for uniform bend angles across the workpiece.

## Back-Gauge System

The CNC multi-axis back-gauge system provides precise material positioning with exceptional repeatability. Full integration with the CNC control allows synchronized movement for complex multi-bend operations without manual repositioning. High-precision linear encoders and servo drive technology ensure positioning accuracy measured in hundredths of millimeters, meeting strict tolerance requirements. Its programmable nature allows rapid setup changes and consistent reproduction of complex bend sequences.



# Safety, Installation & Training



## Safety Features

The QL-BendPro 250T4000 incorporates a comprehensive **integrated operator safety system** designed to protect personnel throughout all phases of machine operation. Multi-stage safety interlocks prevent unauthorized access to hazardous areas during operation, while emergency stop functionality provides immediate machine shutdown capability from multiple locations around the equipment.

The control system implements **controlled operating modes** that comply with applicable OSHA requirements for machine guarding and operator protection. Light curtains, safety mats, and dual-palm controls work in concert to create multiple layers of protection, ensuring safe operation even in high-production environments with multiple operators.



## Installation & Commissioning

Complete turnkey installation services are included, encompassing **delivery, placement, leveling, and precision alignment** at the destination facility in Oregon. Experienced factory-trained technicians perform comprehensive verification of mechanical, electrical, and hydraulic systems to ensure all components meet design specifications.

The commissioning process includes **functional testing and calibration** of all CNC axes, verification of ram parallelism across the full stroke range, validation of crowning compensation accuracy, and testing of all safety interlocks. Hydraulic pressure calibration, electrical system verification, and complete system integration testing ensure the machine is production-ready upon acceptance.



## Operator Training

**On-site operator training** is provided by factory-certified instructors following successful installation and commissioning. The comprehensive training program covers safe operation procedures, CNC control programming basics, standard operating procedures, routine maintenance requirements, and basic troubleshooting techniques.

Training sessions are conducted in English and tailored to the specific operational requirements of the facility. Operators receive hands-on instruction using actual production scenarios, ensuring they are fully competent to safely and efficiently operate the equipment before the training team departs. Training documentation and reference materials are provided for ongoing operator development.

# Warranty

## Warranty Coverage

**Two-year parts and labor warranty** is provided on all components and systems of the QL-BendPro 250T4000. The warranty period commences from the date of final commissioning and formal acceptance by the purchasing organization.

This comprehensive warranty covers manufacturing defects, component failures, and workmanship issues that may arise during normal operation. Factory-trained service technicians provide responsive support to minimize downtime and maintain production continuity throughout the warranty period.

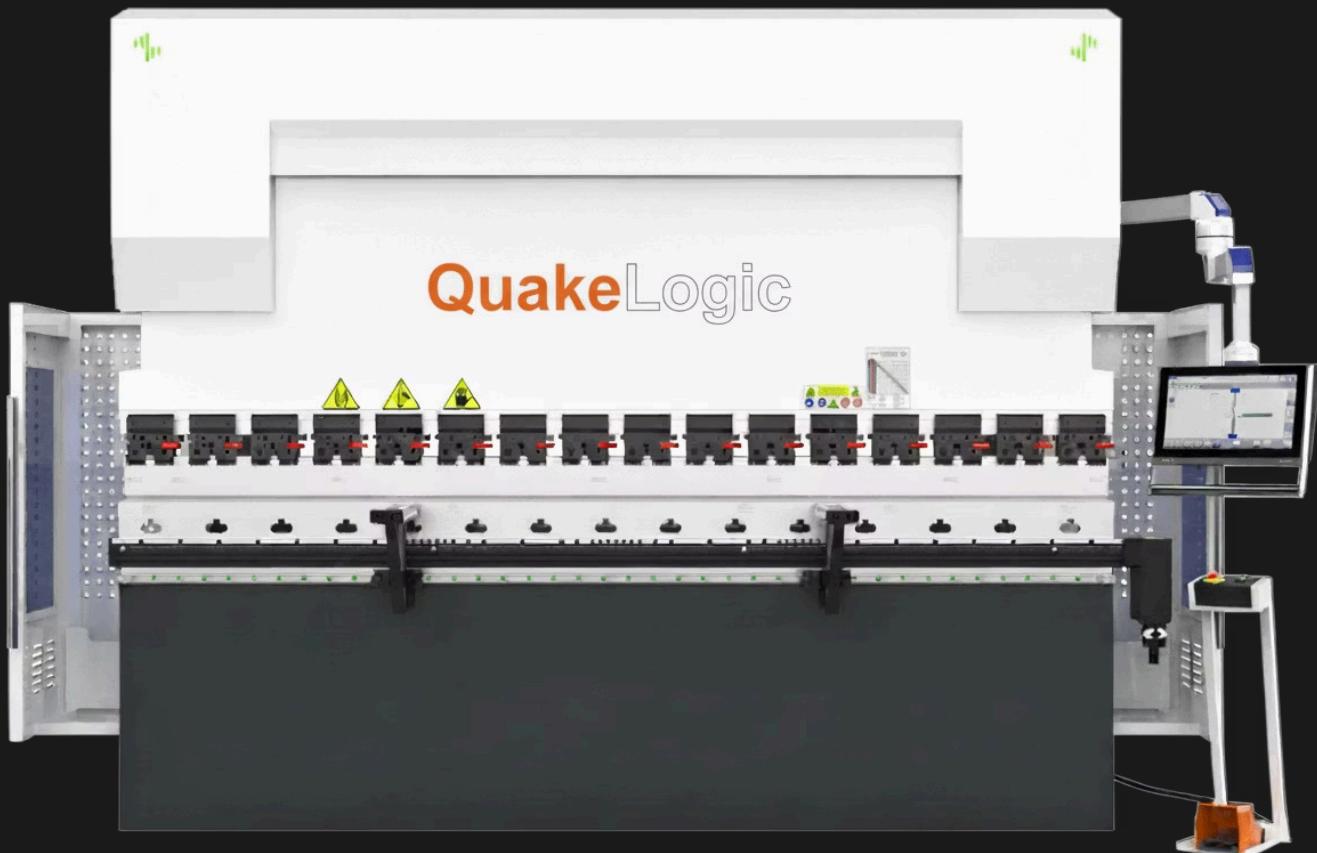
## Technical Documentation

### Complete Operation & Maintenance

**Manuals** are provided in English, covering all aspects of machine operation, routine maintenance procedures, and preventive maintenance schedules to maximize equipment lifespan and reliability.

### Electrical and Hydraulic Documentation

includes comprehensive schematics, wiring diagrams, hydraulic circuit diagrams, and component specifications. **Safety and Operating Instructions** provide detailed guidance on safe operation procedures, emergency protocols, and OSHA compliance requirements.



# Advancing Forming Precision with QuakeLogic Excellence

Designed to support reliable, accurate, and repeatable metal forming operations, the **QuakeLogic QL-BendPro 250T4000** delivers CNC-controlled electro-hydraulic precision in full alignment with the requirements of **ITB S-29100-00015579 – Precision Metal Brake**.

## Connect with QuakeLogic: Your Partner in Precision Forming Technology

### Corporate Headquarters

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### Executive Support Line

+1 (916) 899-0391

Direct access for advanced technical consultations and priority instrument support.

Available Monday - Friday, 9 AM - 5 PM PST

### Strategic Inquiries

[sales@quakelogic.net](mailto:sales@quakelogic.net)

For strategic collaborations, enterprise-level instrumentation solutions, and comprehensive technical inquiries.

## Our Unwavering Commitment to Operational Excellence



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Complying with international standards for product reliability, performance, and safety.



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### Dedicated Client Success

Providing responsive technical support, calibration guidance, and complete after-sales assistance for every system delivered.

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### Scan to Access Cutting-Edge Solutions

Discover how QuakeLogic's advanced forming technologies can enhance your training programs, modernize your fabrication workflows, and elevate precision bending performance to new levels of accuracy and consistency.

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