SECTION 1: ITEM IDENTIFICATION

- Nomenclature: Vertical Tilt-Frame Band Saw, Hydraulic, Fully-Featured

SECTION 2: GENERAL DESCRIPTION

A heavy-duty, hydraulically powered metal cutting band saw for high-capacity, precision cutting. The system must be fully configured with all manufacturer-specified salient characteristics and optional features for maximum versatility, automation, and safety. The machine's design must feature a tilting frame to perform complex miter cuts.

SECTION 3: REQUIRED SALIENT CHARACTERISTICS

A. Core Capabilities & Frame Design

1. Miter Cutting Frame: Saw frame must be capable of tilting up to 60° left and right of vertical, with positioning controlled electronically via a touch screen.
2. Canted Saw Head: Saw head must be fixed at a 3° forward approach angle to optimize cutting efficiency on structural materials.
3. Advanced Blade Guidance System: Must feature rotating easy-load combination carbide and ball bearing roller guides with a self-tensioning design.
4. 10-Horsepower Blade Drive: For tough-to-cut applications.

B. Material Handling, Clamping & Automation

1. Work Load Capacity: Machine bed and structure must support a minimum workload of 8,000 lbs.
2. Primary Vise System: Must be equipped with a full-stroking hydraulic main vise (9.5" high x 15" wide) with 60° faceplates and a second machine vise.
3. Variable Vise Pressure Control: The hydraulic system must allow for the adjustment of clamping pressure.
4. Powered Chip Conveyor: Must be equipped with a powered conveyor system to automatically remove cutting chips.
5. Work Entry: The machine must be configured for opposite hand (right-to-left) work entry.
6. Laser Alignment Light: Must be equipped with a laser projected for quick spotting of the cut to be made.
7. Flushing Hose: Must include a hose to wash away chips from hard-to-reach places.

C. Control System & Lubrication

1. Programmable Logic Controller (PLC): Must have a programmable control with a 12" color touch-screen.
2. Automated Guide Arm: The upper blade guide arm must be hydraulically positioned and locked via controls at the operator's station.
3. Dual Lubrication System: The machine must be equipped with both a standard flood coolant system and a selectable mist lubrication system.

SECTION 4: TECHNICAL SPECIFICATIONS

Parameter	Specification
Max. Cutting Capacity (90°)	20.0" Round | 20.0" H x 25.0" W Rectangle
Max. Cutting Capacity (45°)	17.0" Round | 20.0" H x 17.0" W Rectangle
Max. Cutting Capacity (60°)	11.25" Round | 20.0" H x 11.25" W Rectangle
Blade Size	18' 2" L x 1-1/2" W x 0.050" T
Blade Speed (Variable)	30 - 650 feet per minute
Feed Force	0 - 350 lbs
Blade Tension	45,000 psi max.
Blade Drive Motor	10 HP
Hydraulic Drive Motor	5 HP
Hydraulic Oil Capacity	10 gallons
Cutting Fluid Capacity	2 gallons