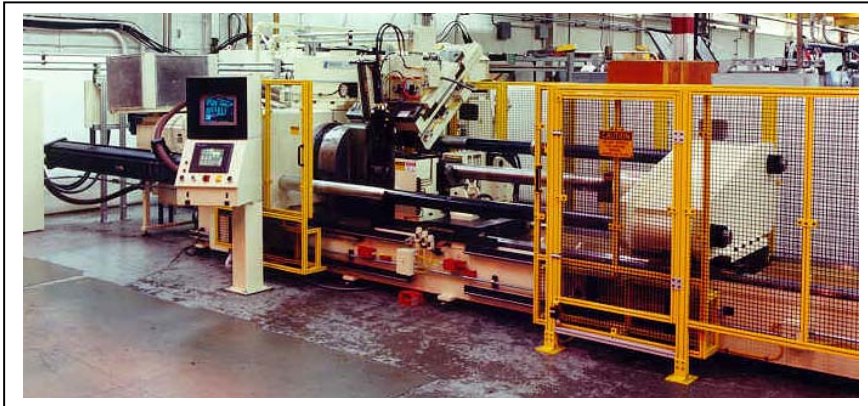


Manufacturing Technology, Inc.

Inertia and Direct Drive Friction Welders

**175 Ton
Direct Drive
Friction
Welder**



Welding Capacity - Welding capacities are based on optimum welding parameters for SAE 1018 steel. Parameters may be varied to accommodate a broader range of sizes, heat treatment and materials. Tubular capacities are dependent upon diameter and wall thickness.

Solid interface (bar to bar)
4.3 in. [110 mm]

Spindle - Controlled clearance hydrostatic thrust bearing provides long life and high efficiency throughout operation range.

Spindle Drawbar Force 15,000 lb [6800 kg]

Spindle Drawbar Travel 1.5 in [38.1 mm]

Spindle Drive - AC drive direct flange onto spindle. Allen Bradley AC controls with 200 HP variable speed AC motor.

Electrical

Spindle Drive Motor 200 hp [149 kw]

Main Pump Motor (Electric). 150 hp [112 kw]
(1800 rpm @480V)

Electrical Full Load Amps 665 amp @ 480V

Main Circuit Breaker 900 amp

KVA 553

Tailstock Slide - Slide table moves on roller bearings on hardened ways. Travel customized per application.

Slide Travel Distance 32 in. [81 cm]

Slide Travel Rate 300 in/min [762 cm/min]

Slide Table to Spindle Centerline 16 in [40.6 cm]

General Specifications

Maximum Thrust 350,000 lb [1557 kN]

Maximum Spindle Speed 1,000 rpm

Hydraulic

Main Pump Volume Maximum 75 gpm [284 lpm]

Clamp Pump Volume Maximum 32 gpm [120 lpm]

Maximum System Pressure 3200 psi [220 bar]

Maximum Thrust Pressure 3000 psi [207 bar]

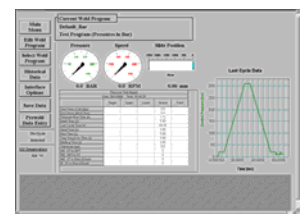
Thrust Cylinder Area 118 in² [761.3 cm²]

Hydraulic Reservoir Capacity 300 gal [1136 liter]

Parameter Input and Fault Display

MTI's high performance machine control package features:

- Windows NT architecture.
- MTI's proprietary control software.
- Allen Bradley ControlLogix 5000 series plc
- Closed-loop pressure and slide control system.



Model 175 Ton Direct Drive Friction Welder Specifications (Continued)

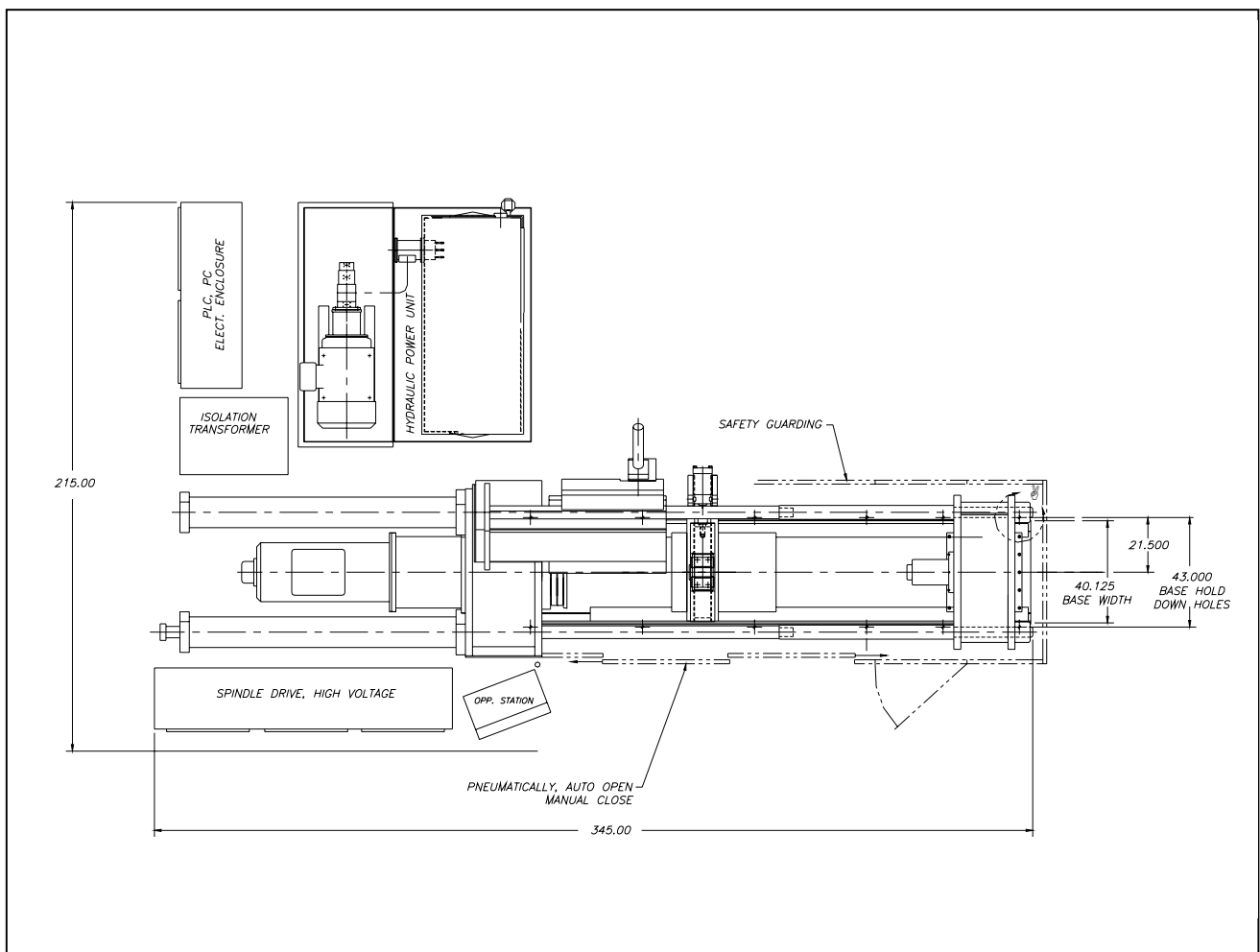
Oil Cooling - Water-cooled heat exchanger with thermostatic control.

Water Heat Exchanger (requires)	55 gpm [208 lpm]
Cooling Water Inlet Pipe Size	1.25 in [32 mm]
Maximum Inlet Temperature	85° F [29° C]

Machine Weights (Estimated)

Main Frame	45,000 lb [20410 kg]
Hydraulic Power Unit	8,200 lb [3720 kg]
Electrical Operator Station	1,800 lb [820 kg]
Tooling	10,000 lb [4540 kg]
Total Machine Weight	65,000 lb [29490 kg]

Additional base sizes available. Overall dimensions are estimated and will depend on the specific application.



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