

# CD-2100 Series

Congratulations on the purchase of your new Magnaflux CD-2100 Magnetic Particle Inspection Machine! This guide will help you install and set-up your new Magnaflux machine.

If you have any questions, please contact your local Magnaflux Authorized Service Center or call Magnaflux Customer Service at 847-657-5300.



## Getting Started

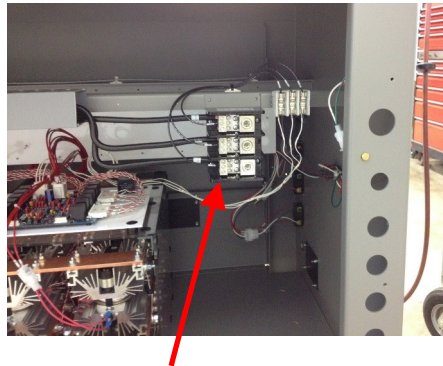
The manual is shipped with the unit in electronic format wrapped in a green bubble wrap mailer within the Accessories Box. In the manual is an extensive step by step process of how to assemble the enclosure and attach it to the unit.



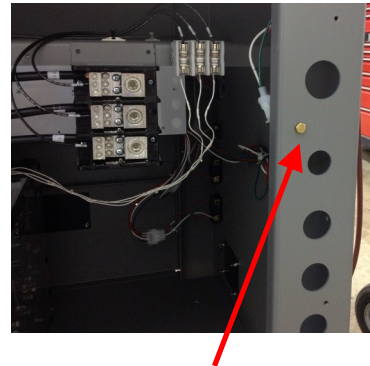
Operating Manual and Drawings

## Set-Up

### Back of Unit:



Incoming Power Connection



Chassis Ground Connection

1. A minimum of two feet is required at both ends and the rear of the inspection unit to ensure adequate space for servicing (removing machine panels and accessing the circulating pump) and ventilation.
2. A firm, reasonably level floor capable of supporting the inspection unit and the materials awaiting inspection.
3. A power source of the proper voltage, frequency and phase (as designated on the **Magnaflux Data Plate** located on headstock end of inspection unit) capable of providing current per the nameplate. Connect the incoming power to the Incoming Power Connection located inside the unit on the back side. Attach the Chassis Ground wire to the inside of the unit to the Chassis Ground Connection Screw. Follow all local electrical codes for wiring. It is highly recommended that an electrical fused disconnect be installed on the headstock side of the unit—Either on the wall behind the unit or on a pedestal near the unit. See page 3 for correct fuse sizes.

## Electrical Input:

Input Volts AC	Phase	Full Load (Amps)	Recommended Line Fuse (Amps)	Recommended Wire Size (AWG)
208	3	400	300	#0
230	3	400	300	#0
380	3	245	200	#2
415	3	220	175	#2
460	3	200	150	#4
575	3	160	125	#4

## Duty Cycle:

At full output: 0.5 seconds “ON” – 20 seconds “OFF”

At 1000 amps: 0.5 seconds “ON” – 5 seconds “OFF”

The equipment can be fused based on less than the maximum amperage draw due to the duty cycle. Refer to NEC Code Section 630.31 Ampacity of Supply Conductors and Table 630.31 (A) (2) Duty Cycle Multiplication Factors for Resistance Welders (NPFPA National Electric Code 2011). Some areas refer to 2 phase instead of 1 phase. The incoming power goes directly to an isolation transformer so the unit will operate identically on 1 or 2 phase power.

## Note: To obtain full rated output the following conditions must be met:

1. Thirty feet (30') of 1000 MCM cable or four 30' 4/0 cables (in parallel) attached to the Output Lugs on the front of the unit.
2. A power source of the proper voltage, frequency and phase (as designated on the **Magnaflex Data Plate**) capable of providing current per the nameplate for the power pack. It is highly recommended that an electrical fused disconnect be installed either on the wall behind the unit or on a pedestal near the unit.