Norstar T200-ACDC

Norstar T200-ACDC Dual Voltage TIG Welder Instruction Manual

Model: T200-ACDC

Introduction

This manual provides comprehensive instructions for the safe and effective setup, operation, maintenance, and troubleshooting of your Norstar T200-ACDC Dual Voltage Input TIG Welder. Please read this manual thoroughly before operating the equipment to ensure proper use and to prevent injury or damage.

The Norstar T200-ACDC is a versatile TIG and Stick welder designed for various welding applications, featuring dual voltage input capability and precise control for optimal welding performance.

Important Safety Information

Always prioritize safety when operating welding equipment. Failure to follow safety guidelines can result in serious injury or death.

- **Electric Shock:** Welding current can kill. Do not touch live electrical parts. Wear dry insulating gloves and protective clothing.
- **Fumes and Gases:** Welding fumes and gases can be hazardous to your health. Keep your head out of the fumes. Use ventilation or exhaust to remove fumes and gases from the breathing zone.
- **Arc Rays:** Arc rays can burn eyes and skin. Wear a welding helmet with a proper shade of filter lens to protect your eyes and face. Wear protective clothing to protect your skin.
- **Fire and Explosion:** Welding sparks can cause fire or explosion. Keep flammable materials away from the welding area. Have a fire extinguisher readily available.
- **Hot Parts:** Welded parts and equipment can be hot. Allow them to cool before handling.

Refer to relevant safety standards and regulations in your region for complete safety information.

Package Contents

The Norstar T200-ACDC TIG Welder package includes the following components:

- Norstar T200-ACDC Welder Unit
- TIG Torch
- Ground Clamp
- Electrode Holder (for Stick welding)
- Power Cable
- Other necessary accessories (e.g., consumables, hoses)

Note: A flow meter and shielding gas are required and must be purchased separately to begin TIG welding.

Figure 1: Norstar T200-ACDC TIG Welder unit with TIG torch, ground clamp, electrode holder, and cables. The main unit is black with red control knobs and a digital display. The accessories are neatly coiled beside it.

Setup Instructions

1. Power Connection

The T200-ACDC welder supports dual voltage input (115V/220V). Ensure the correct power cord and plug are used for your power supply. Connect the power cable securely to the welder and a suitable power outlet.

- For 115V operation, use a dedicated 20A circuit.
- For 220V operation, use a dedicated 30A circuit.

2. Gas Connection (TIG Welding)

For TIG welding, connect your shielding gas cylinder (e.g., Argon) to a flow meter, and then connect the flow meter's output hose to the gas inlet on the rear of the welder. Ensure all connections are tight to prevent gas leaks.

3. Torch and Ground Clamp Connection

- **TIG Torch:** Connect the TIG torch cable to the appropriate receptacle on the front panel of the welder. Ensure the gas line from the torch is also connected.
- **Ground Clamp:** Connect the ground clamp cable to the designated ground terminal on the welder. Securely

attach the ground clamp to the workpiece or welding table, ensuring good electrical contact.

- **Electrode Holder (for Stick Welding):** If performing Stick welding, connect the electrode holder cable to the positive (+) terminal and the ground clamp to the negative (-) terminal.

Operating Instructions

1. Powering On

Turn on the main power switch located on the front or rear panel of the welder. The LED display will illuminate, indicating the machine is ready for operation.

2. Mode Selection

Select the desired welding mode (TIG AC, TIG DC, or Stick) using the mode selector switch on the control panel.

- **TIG DC:** For welding stainless steel, mild steel, and copper.
- **TIG AC:** For welding aluminum and magnesium, utilizing the Squarewave AC balance control.
- **Stick:** For general-purpose stick electrode welding.

3. Amperage Control

Adjust the welding amperage using the main amperage control knob. The LED meter provides infinite amperage control, allowing precise setting of the output current. The output range is DC: 5-200 amps, AC: 12-200 amps.

A remote amp receptacle is available for connecting a foot pedal or hand control for remote amperage adjustment during welding (remote control sold separately).

4. AC Balance Control (TIG AC Mode)

When in TIG AC mode for aluminum welding, use the AC balance control knob to adjust the cleaning action and penetration. A higher balance setting increases cleaning action, while a lower setting increases penetration.

5. Welding Procedure

1. Ensure proper personal protective equipment is worn.
2. Prepare the workpiece by cleaning it thoroughly.
3. Set the appropriate amperage and other parameters for your material and thickness.
4. Initiate the arc (HF start for TIG).
5. Maintain a consistent arc length and travel speed.
6. After welding, allow the post-flow gas to protect the weld puddle as it cools.

Maintenance

Regular maintenance ensures the longevity and optimal performance of your welder.

- **Cleaning:** Periodically clean the welder's exterior with a dry, soft cloth. Use compressed air to blow out dust and debris from the internal components, ensuring the power is disconnected first.
- **Cable Inspection:** Inspect all cables (power, torch, ground) for cuts, fraying, or damaged insulation. Replace damaged cables immediately.
- **Consumables:** Regularly check and replace TIG torch consumables (collets, collet bodies, tungsten electrodes, nozzles) as they wear out.
- **Gas Lines:** Check gas lines and connections for leaks.

Always disconnect the welder from the power supply before performing any maintenance.

Troubleshooting

Common Issues and Solutions

Problem	Possible Cause	Solution
Welder does not power on	No power supply; tripped circuit breaker; faulty power cable	Check power connection; reset circuit breaker; inspect/replace power cable
No arc or weak arc	Poor ground connection; incorrect amperage setting; worn tungsten/electrode; gas flow issue (TIG)	Ensure good ground contact; adjust amperage; replace consumables; check gas supply/flow
Overheat indicator active	Exceeded duty cycle; insufficient ventilation	Allow welder to cool down; ensure adequate airflow around the unit
Poor weld quality (TIG)	Incorrect gas flow; contaminated tungsten; improper AC balance (aluminum)	Adjust gas flow; clean/re-grind tungsten; adjust AC balance control

If problems persist after attempting these solutions, contact customer support.

Technical Specifications

Feature	Detail
Model Number	T200-ACDC
Manufacturer	Coplay Norstar
Input Voltage	115V / 220V AC (Dual Voltage)
Output Range (DC)	5 - 200 Amps
Output Range (AC)	12 - 200 Amps
Open Circuit Voltage (OCV)	59V DC Max. / 74V AC
Welding Modes	TIG (AC/DC), Stick
AC Balance Control	Squarewave Form
Item Weight	17.2 kg (37.9 lbs)
Dimensions (L x W x H)	45.72 x 43.18 x 22.86 cm (18 x 17 x 9 inches)

Warranty and Support

All Coplay Norstar machines are tested in the USA and come with a full **3-Year Warranty**.

For technical assistance, warranty claims, or to order replacement parts, please contact Coplay Norstar customer support. Refer to your purchase documentation for specific contact details or visit the official Norstar website.

When contacting support, please have your model number (T200-ACDC) and purchase date available.