

ARCREACH® HEATER

Quick Setup Guide

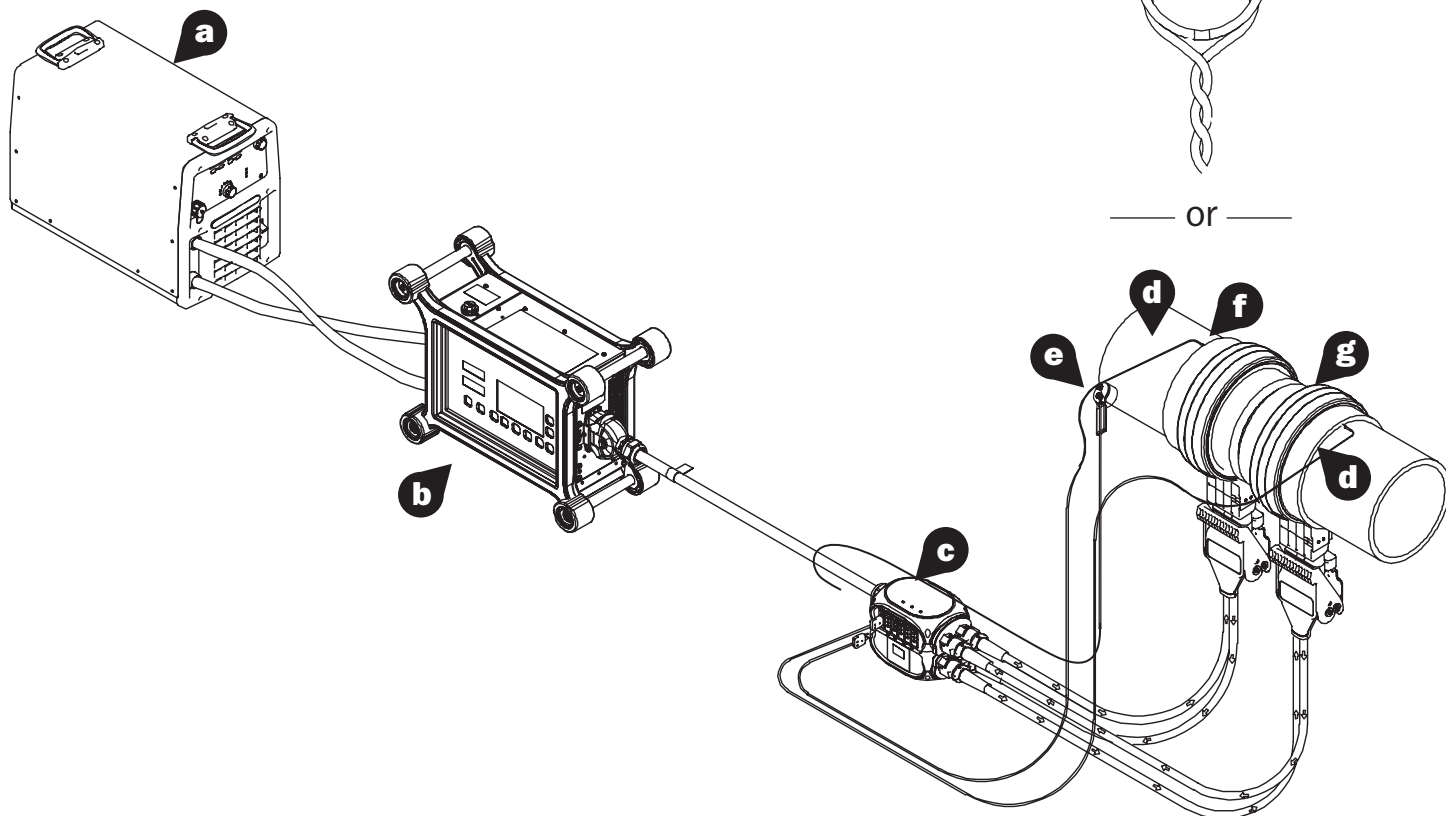




READ INSTRUCTIONS.

- **Read and follow all labels and the Owner's Manual carefully before installing, operating or servicing unit. Read the safety information at the beginning of the manual and in each section.**

The Complete ArcReach® Heater System

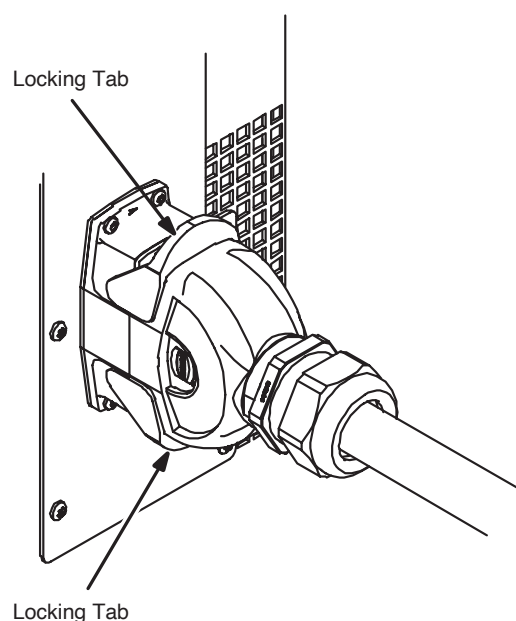


- | | |
|--|----------------------------------|
| a. Power Source | f. Preheat Insulation |
| b. ArcReach Heater | g. Air-Cooled Quick Wraps |
| c. Extension Cable and Series Adapter | h. Air-Cooled Cables |
| d. Thermocouples (TCs) | i. Preheat Cover |
| e. Insulation Fault Detection Magnet | |

Step 01.

Connect the ArcReach® Heater extension cable with series adapter to the ArcReach Heater.

Make sure all pins are aligned, then press the end of the cable firmly into the ArcReach Heater and lock the tabs.

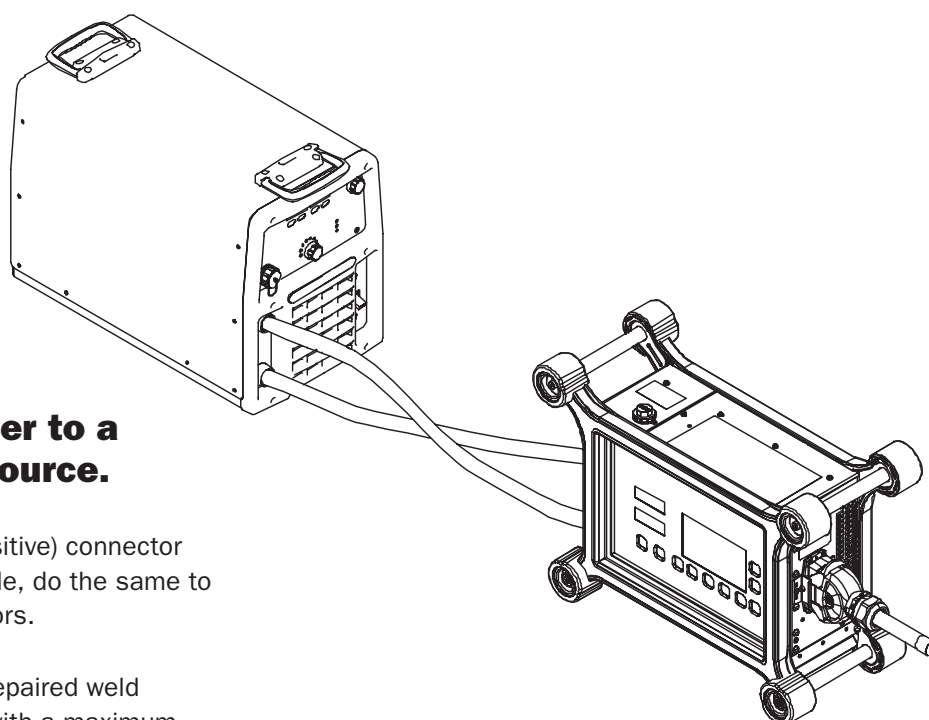


Step 02.

Connect the ArcReach® Heater to a compatible welding power source.

Attach a weld cable to the “Electrode” (positive) connector on both machines. Using another weld cable, do the same to both machines’ “Work” (negative) connectors.

WARNING: Do not use worn, damaged or repaired weld cables. Only use 70 mm sq. (2/0) cables with a maximum length of 61 m (200 feet).

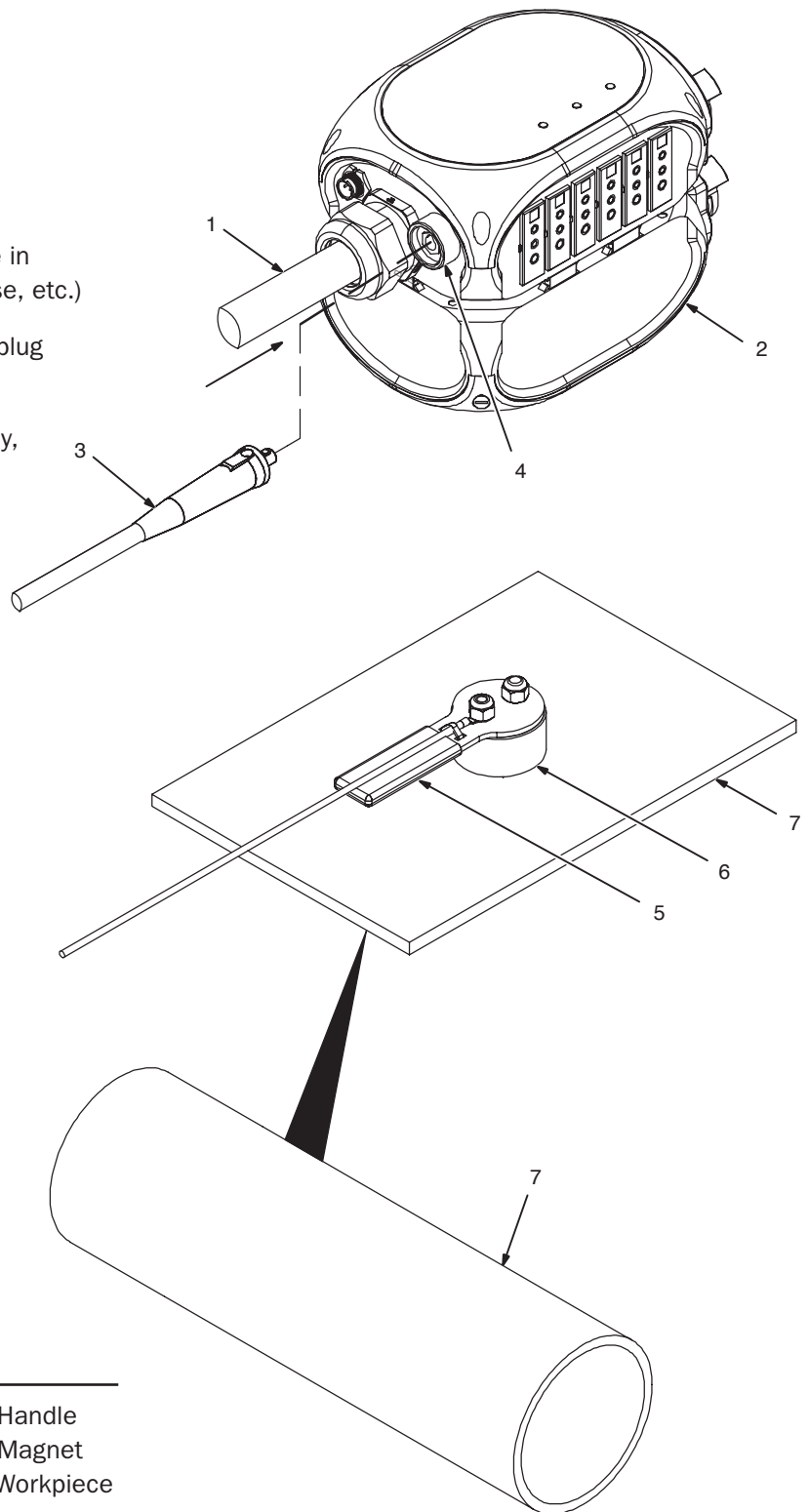


Step 03.

Attach the Insulation Fault Detection magnet.

NOTE: To operate properly, the magnet **MUST** be in contact with bare metal (free of rust, paint, grease, etc.)

- a. Connect the work cable to the “Work” cable plug on the ArcReach Heater extension cable.
- b. To connect plug, align the key with the keyway, insert its end into the receptacle and rotate the plug until tight.
- c. Use handle to place the magnet on the workpiece.



1. ArcReach Heater extension cable
2. ArcReach Heater series adapter
3. Work cable plug
4. Work receptacle

5. Handle
6. Magnet
7. Workpiece

Step 04.

Apply welded thermocouples if they are being used.

If using contact TC probes, skip to step 05.

Step 05.

Apply preheat insulation (if required).

Reference the chart below. Apply insulation on the workpiece anywhere a heating tool will be placed.

Part Temp	1.3 cm (1/2") Preheat Insulation Required	
°C	Quick Wrap	Air-Cooled Cable
50–150	—	—
150–200	—	1 Layer
200–250	1 Layer	1 Layer
250–315	1 Layer	2 Layers

Step 06.

Apply the appropriate heating tool — either air-cooled cables or air-cooled quick wrap.

- If insulation is being used, apply the heating tool **over** the insulation.
- To decrease heating time, place the heating tool closer to the weld joint.
- Insulation can be secured in place with a non-conductive strap or tape such as fiberglass reinforced tape. **Do not use metal straps or wire.**


DANGER

Do Not Remove, Destroy, Or Cover This Label.









HAZARDOUS VOLTAGE; ELECTRIC SHOCK can kill.

- Do not use wire or metal straps to secure cable. Instead, use plastic cable ties, tape, or non-conductive straps to secure cable.
- Do not hang cable on metal brackets, hangers, or other mechanisms.
- Stop using equipment if plug, receptacle, or cable is damaged.
- Replace cable if braid, red jacket, or bare wire is visible.
- Read and follow all labels and the Owner's Manual carefully.

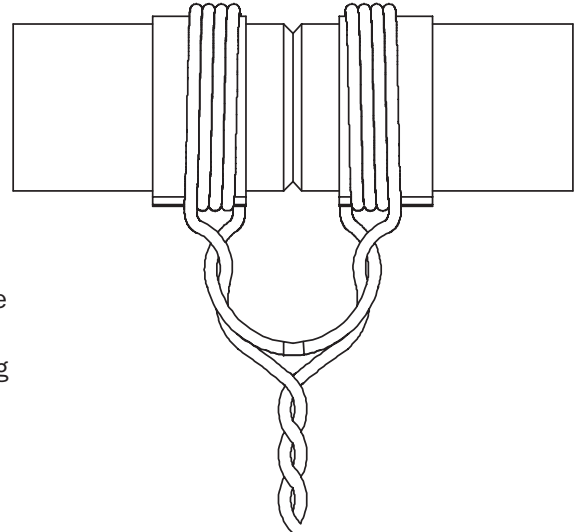
Steps for proper ***air-cooled cable*** application:

This is an example of a typical air-cooled coil on small-diameter pipe using a single heating cable.

- Secure preheat cover wrap around the air-cooled cable.

NOTE:

 This does NOT act as a layer of insulation but protects from jobsite abrasion and weld spatter.
- Put a piece of fiberglass tape or clearly identify the middle of the cable with the wrap on to make the cable wrap process more efficient.
- Locate the center of the heating cable.
- Route the center of the cable over the top of the pipe, and pull it through underneath to start the first turn. Route the cable over the top of the pipe again, working toward the joint to start the second turn. If there is enough cable, a third wrap can be added by routing the center of the cable over the top of the pipe again.
- Once the desired number of turns are applied, route the outer loose ends of the cable through the center loop a few times each (depending on the loop length) to bring the leads together.
- Twist the remainder of the leads together from the coil to the TC Extension Cable to cancel the magnetic field between them and minimize incidental heating of nearby metal objects.

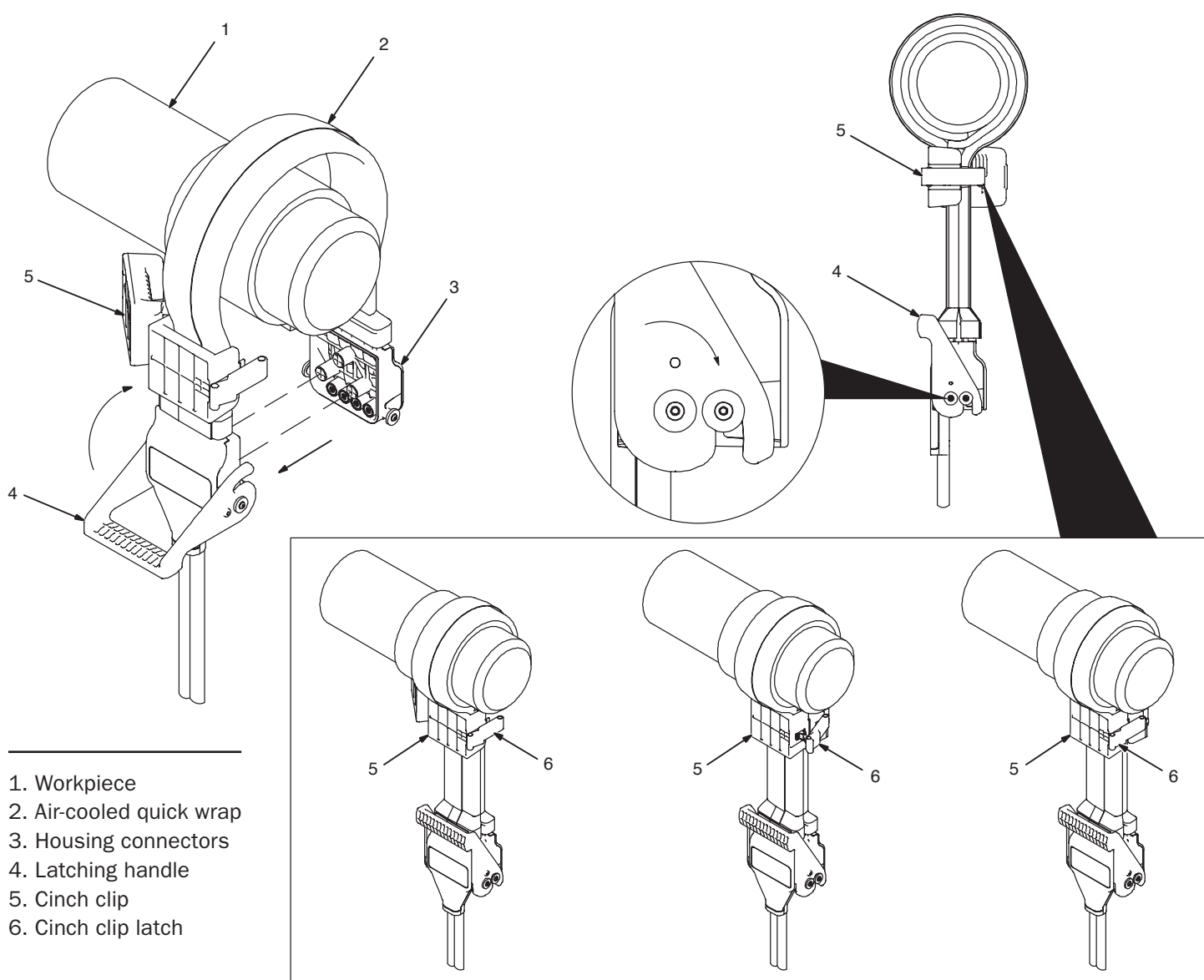


If using TC probes, position them under the insulation (under the heating cable) in direct contact with the workpiece.

A typical air-cooled cable induction coil will have 2 – 3 turns on each side of the joint. Pipe diameters larger than 60 cm (24") will usually require two separate heaters depending on target temperature and time-to-temp requirements.

Steps for proper ***air-cooled quick wrap*** cable application:

- a.** Place the air-cooled quick wrap on the workpiece around the insulation.
- b.** Align the connector housings and fully engage the connector pins.
- c.** Turn the latching handle to hold the connectors together.
- d.** Hold the unused portion of the air-cooled quick wrap together and position the cinch clip as close to the workpiece as possible. To prevent damage to the Quick Wrap, do not pull on housing connectors (item 3) or cable leads (item 7) during or after installation of cinch clip (item 5).
- e.** Close the cinch clip to hold the leads together. Use the latch to secure the cinch clip in place.



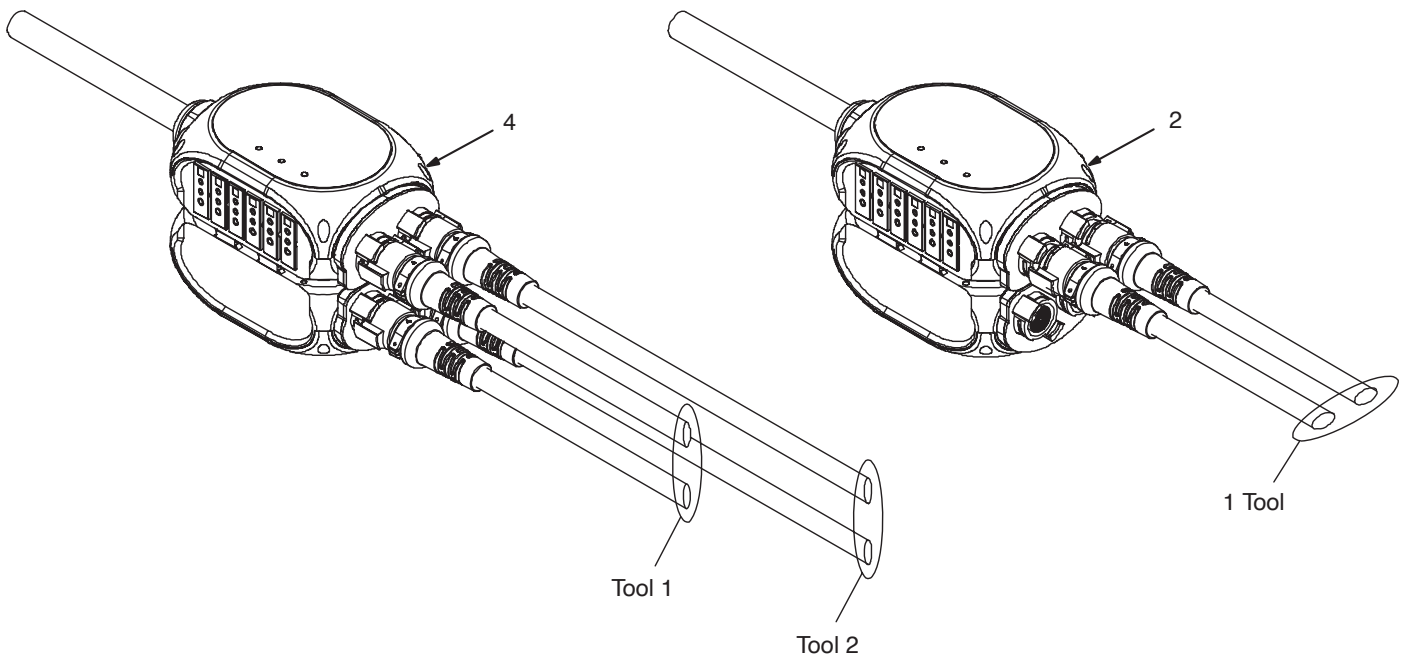
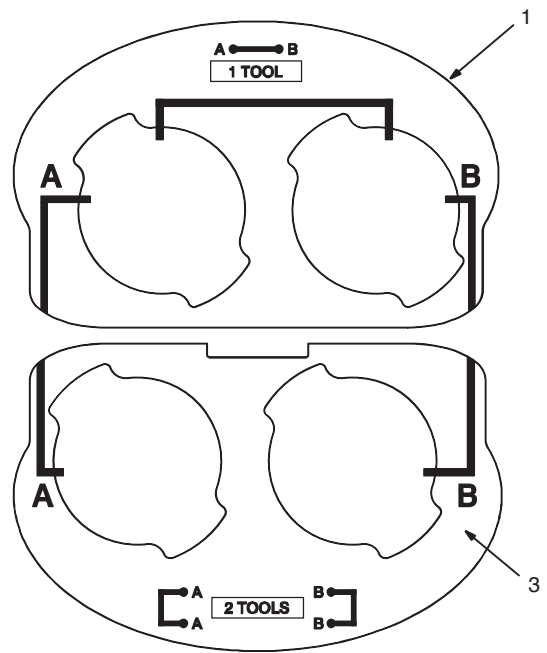
If using TC probes, position them under the insulation (under the heating wrap) in direct contact with the workpiece.

Step 07.

Connect heating tool cables to the extension cable and series adapter.

NOTE: Do not hang the leads on iron or steel material.

- a. **Single tool:** Connect from A to B on the upper box.
- b. **Two tools:** Connect one tool from A to A and the second tool from B to B.



1. ArcReach Heater extension cable nameplate
2. Single tool with horizontal connections

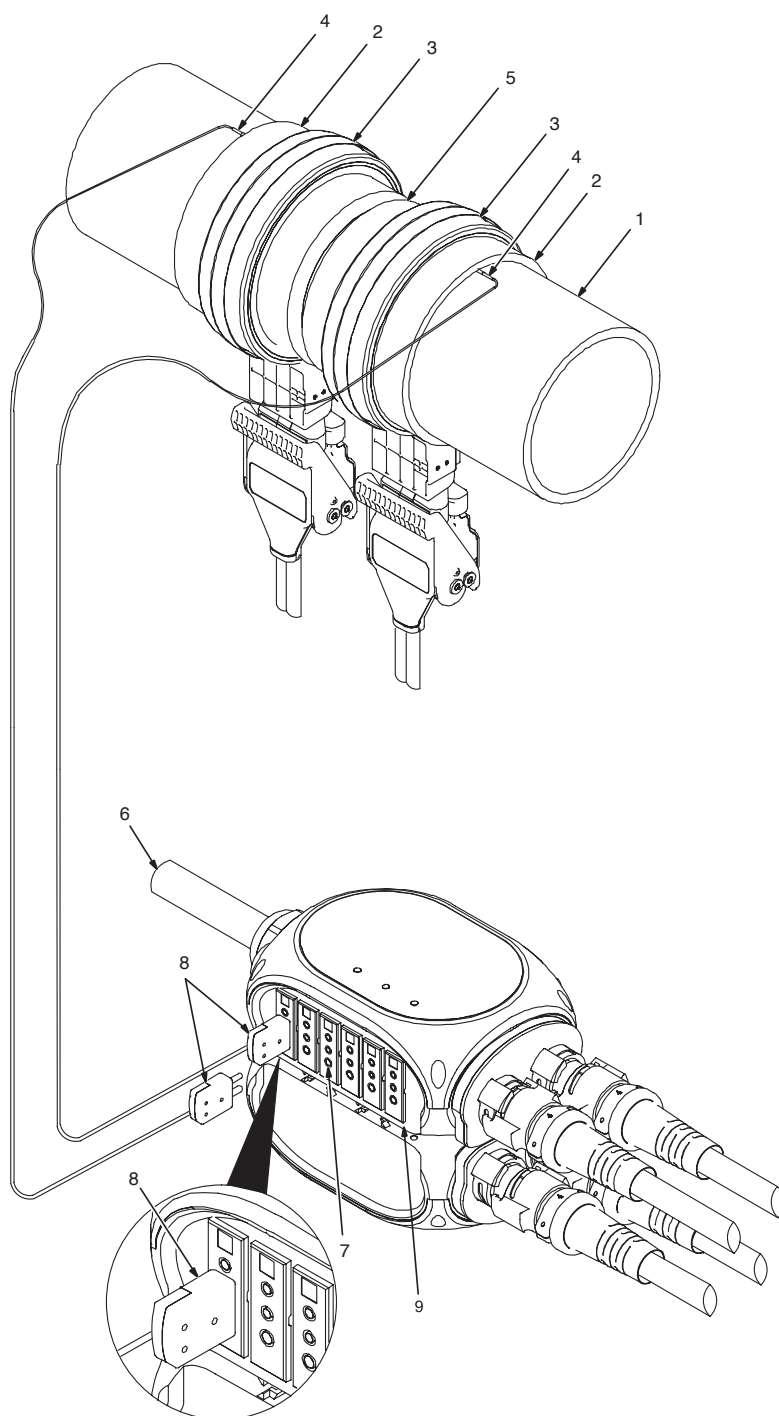
3. ArcReach Heater series adapter nameplate
4. Dual tool with vertical connections

Step 08.

Connect the thermocouple temperature sensor(s).

NOTE: Sensors MUST be placed properly to prevent heating tool damage. One sensor is required for EACH heating tool. Sensor can be contact or welded on.

- a. If insulation IS being used, place a sensor **under the insulation** in direct contact with the workpiece in the **center of the tool**.
- b. If insulation IS NOT being used, place a sensor **under the center area of the heating tool** in direct contact with the workpiece.
- c. Place additional sensors on the workpiece in accordance with project requirements.
- d. Connect all thermocouple temperature sensor connector plugs to the thermocouple receptacle on the side of the ArcReach Heater extension cable.
- e. Minimum number of thermocouple temperature sensors is one — maximum is six.

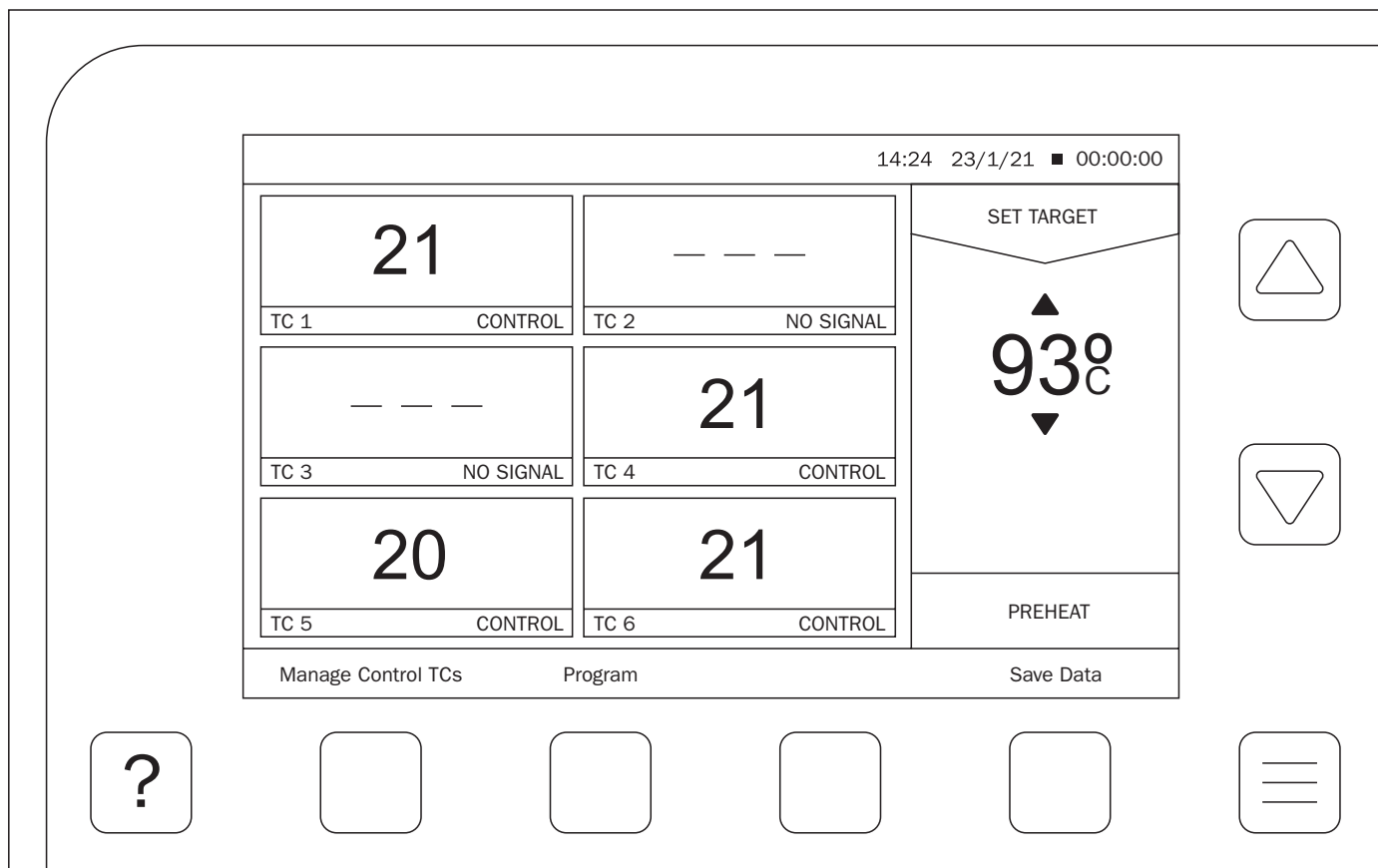


Step 09.

Power on the XMT® 350 FieldPro™ with ArcReach welding power source or ArcReach compatible engine drive.

- | | |
|--|--|
| 1. Workpiece | 5. Weld joint |
| 2. Preheat insulation | 6. ArcReach Heater extension cable |
| 3. Air-cooled quick wrap | 7. Thermocouple receptacle |
| 4. Thermocouple temperature sensor: | 8. Thermocouple temperature sensor connector plugs |
| Route armored TC cables separate from induction cables/leads to prevent interaction. | 9. Thermocouple connection panel |

Quick Program Guide



The **temperature screen** is the main screen for all heating processes and is the **default screen** that appears when the unit is turned on.

If a preconfigured heating program has been loaded from the ArcReach Heater data app, the Weld ID is shown at the top of the screen. The current time, date and recording timer also display at the top. The time format can either be 12-hour or 24-hour.

NOTE: You can change the time format on the User Settings screen in the System Menu.

A **recording indicator flashes** while data is being recorded. The main section shows readings for all connected thermocouples (TCs). If a control TC is not sending a reading, the background of that TC turns red.

The information in the right panel depends on the current heating process — preheat or bakeout.

By default, preheat information is displayed, including a target temperature. You can adjust the target temperature using the up/down arrow buttons. If a loaded preheat program includes range limits, the range displays below the target temperature.

Step 01. Manage Control TCs.

- a. **At least one TC must be set as Control.**
- b. When a TC is set as Control, an open TC will display (NO SIGNAL). The display will change to (---) when a valid TC signal is plugged into the channel.
- c. All connected TCs show a reading, but only Control TCs affect the heating process.

Step 02. Set joint heating profile.

Option 1: Manual instructions

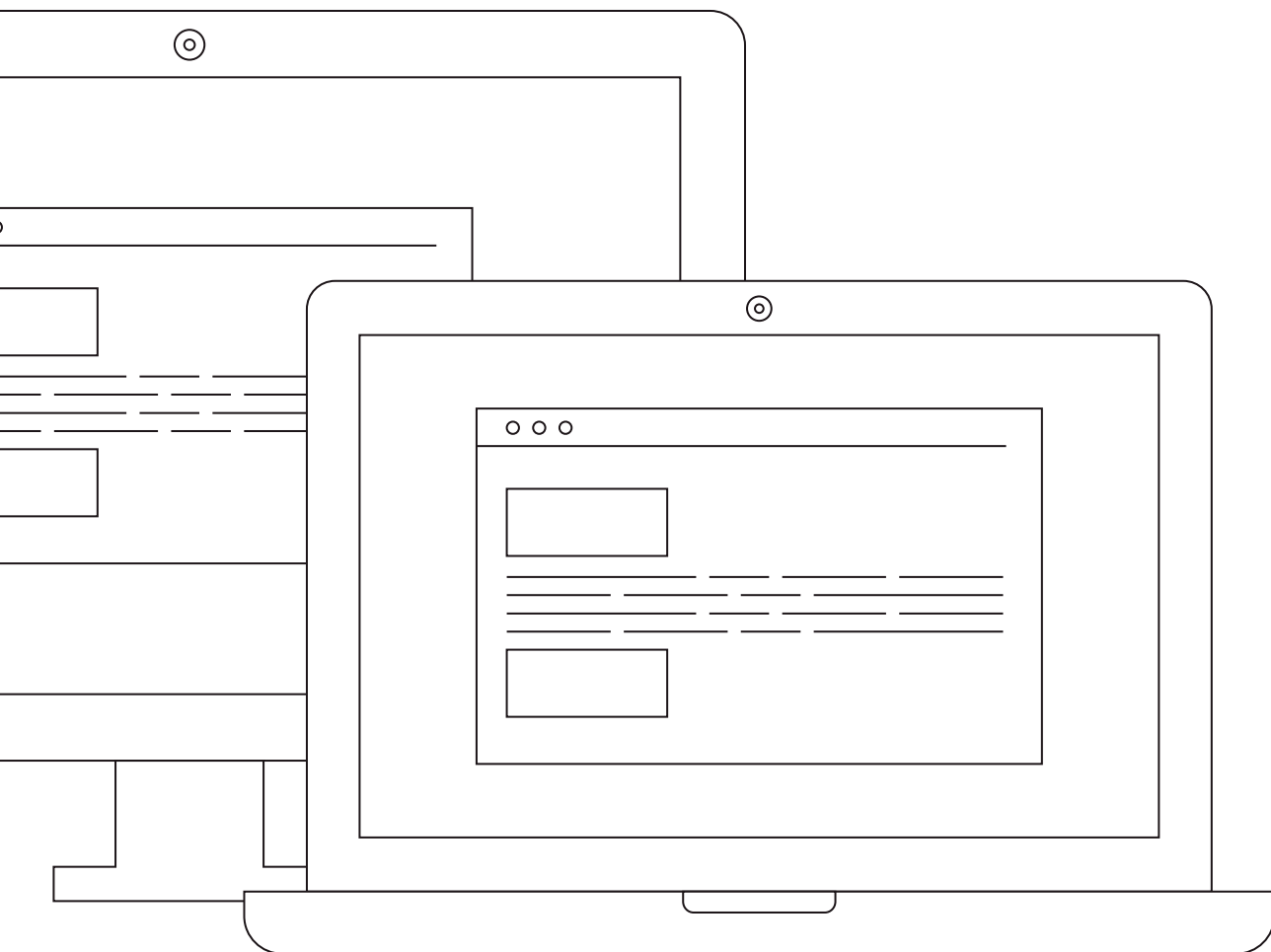
- a. Use **(+)** or **(-)** buttons to select the desired value for heating cycle.
- b. Press the **Run** button to activate.

Option 2: Heat from a file on a USB flash drive using preloaded data from ArcReach Heater data app.

- a. Select the desired file from the **View/Load Program** screen. Program types are Preheat, Bakeout and Combined. Combined programs include both preheat and bakeout parameters. When a combined program is highlighted, use the **Show Bake/Show Preheat** button to switch between preheat and bakeout details.
- b. Use the **Load Selected** button to load the highlighted program.
- c. Press the **Run** button to activate.

Step 03. Save temperature data file.

- a. Insert USB into side USB port.
- b. Select Save Temperature Data on the display.
- c. To view details of a Temperature Data file, highlight it using the **arrow buttons**. This will display detailed information about that file on the right-side panel.
- d. Select individual data files that you want to save using the **Select** button.
- e. Use the **Save** button to save the selected data files to USB.



ArcReach[®] Heater Software

To download the ArcReach Heater Data Software for loading heat temperature files and chart recording, visit millerwelds.com/support/software/arcreach-heater-software.

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