



HARNESS THE HEAT

ArcReach[®] HEATING SYSTEMS

FAQs

MillerWelds.com/europe

WHY AN ARCREACH® HEATING SYSTEM?

Q. I have a shortage of welders. Why should I give them a preheating task to complete when they're busy enough already?

A. By insourcing weld preheating with ArcReach Heaters, you'll actually help your welders be more productive. They won't have to wait for a heating contractor's work to be complete — your welders can quickly and easily heat their own joints, completing welds faster and helping you meet project deadlines.

It takes less than 20 minutes to set up an ArcReach Heater on a weld joint — and in many cases, only another 20 minutes to bring that joint to temperature (times will vary depending on the type of material being heated, its overall mass, the type of insulation being used, ambient temperature, etc.). Compare that to the three hours it can take to set up resistance preheating equipment, then another three hours to bring the joint to temperature with either resistance or flame methods. Additionally, flame preheating is inconsistent, which can negatively impact weld quality.

Q. I already have a ProHeat™ 35 heating system. Why can't I use that unit in the field?

A. You can. Relative to an ArcReach Heater, a ProHeat 35 system has a large footprint and is more difficult to position at a jobsite. Additionally, the ProHeat 35 system requires the 460V, three-phase electrical power typically found in a shop environment, but not always easily available at a jobsite. ArcReach Heaters, however, operate on the open-circuit voltage delivered by onsite welding power sources.

ARCREACH® HEATING SYSTEM CAPABILITIES

Q. Can I use an ArcReach® Heater for post-weld heat treatment?

A. No. ArcReach Heaters are designed for preheating and bake out up to 315°C in field applications only. For post-weld heat treatment, the ProHeat 35 system is recommended. For help selecting the induction heating system that's right for you, contact your local Miller/ITW Welding sales representative (www.MillerWelds.com/europe).

Q. What kinds of metal can I preheat with an ArcReach® Heater?

A. Any metal containing enough iron or steel to make it magnetic can be preheated with an ArcReach Heater. Because heat is induced in the metal by placing it in a high-frequency magnetic field, non-magnetic metals such as aluminum cannot be preheated using an ArcReach Heater.

Q. What's the thickest metal that ArcReach® Heaters can be used on?

A. It depends on the type of material being heated, its overall mass, the amount of insulation being used, ambient temperature, etc. Thicker materials will require a longer time to achieve the target temperature.

Q. Do ArcReach® Heaters provide consistent heat?

A. Yes. ArcReach Heaters use induction, which induces heat from within the part and is one of the most consistent and penetrating heating methods available. In comparison, flame heating displaces heat into a much wider and uncontrollable zone, while resistance heating can result in hot and cold spots if ceramic pads break or wear out.

Q. On what size of pipe can I use the air-cooled quick wrap?

A. The air-cooled quick wrap can be used on pipes up to 25.4 cm (10 in.) in diameter and down to 3.8 cm (1½ in.) in diameter using standard Miller 1.3 cm (½-in.) pre-heat insulation.

Q. How many temperature-reading thermocouples can you attach? Do you need to use them all?

A. You can attach up to six temperature-reading thermocouples, but you don't need to use them all. Any of them can be selected as a control thermocouple, but at least one must be identified as a control. Specific thermocouple requirements for a given welding procedure should be outlined in your welding procedure specifications (WPS).

ARCREACH® HEATING SYSTEM OPERATING REQUIREMENTS

Q. What primary power do I need to run an ArcReach® Heater?

A. The ArcReach Heater is powered by compatible welding power sources — it doesn't run on primary power. The power to operate the ArcReach Heater comes from converting the DC power from the welding power source or engine-driven welder/generator into AC current.

Q. What type of weld cables do I need to connect a power source to an ArcReach® Heater?

A. Standard 70 mm sq. (2/0) weld cables are used to connect a compatible power source to an ArcReach Heater.

Q. What's the maximum distance I can locate an ArcReach® Heater away from a power source?

A. The maximum distance is 60 m (200 ft.) one way or 120 m (400 ft.) in a loop.

Q. Why can an ArcReach® Heater be 60 m (200 ft.) from the power source, but an ArcReach® Smart Feeder is limited to 45 m (150 ft.)?

A. ArcReach Smart Feeder power requirements fluctuate rapidly during the weld process; 45 m (150 ft.) is the maximum weld cable length that can support the Smart Feeder's power requirements. An ArcReach Heater draws more consistent power, with any power fluctuations being gradual increases or decreases during the heating process. The lower fluctuation is less susceptible to the inductance and voltage losses of the cables, allowing the heater to be farther away from the power source.

Q. My existing fleet of Miller® power sources doesn't have ArcReach® technology — or I'm using non-Miller welding equipment. Can use them to power ArcReach® Heaters?

A. No, only select models of ArcReach welding power sources are compatible with ArcReach Heaters. See below for a list of compatible Miller welding power sources. For more information, see the ArcReach Heater Spec Sheet or Owner's Manual.

Q. Which Miller welding power sources are compatible with ArcReach® Heaters?

A. If your Miller power source can run a Smart Feeder, it's compatible. These machines can run ArcReach Heaters:

- XMT® 350 FieldPro™
 - XMT® 350 FieldPro™ with Polarity Reversing
 - Big Blue® 400X Pro
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Q. Is there any Miller® ArcReach® welding equipment that's not compatible with ArcReach® Heaters?

A. This Miller ArcReach equipment is not compatible with ArcReach Heaters (however they have never been sold in Europe):

- XMT® 350 VS power sources with ArcReach technology
- XMT® 350 CC/CV power sources with ArcReach technology
- Dimension™ 650 power sources with ArcReach technology
- XMT® 450 VS power sources with ArcReach technology
- XMT® 450 CC/CV power sources with ArcReach technology

ARCREACH® HEATING TOOL CAPABILITIES

Q. Can I use my ArcReach® Heater tools on my ProHeat™ 35 heating system?

A. Only the air-cooled cables can be used with the ProHeat 35 heating system. The air-cooled quick wrap is not compatible with the ProHeat 35 heating system.

Q. Can I use my ProHeat™ 35 heating system's air-cooled blankets or liquid-cooled cables with an ArcReach® Heater?

A. No, they're not compatible.

Q. Can ArcReach® Heater tools be used on flat surfaces?

A. Yes. ArcReach Heater air-cooled cables and preheat insulation with a cable harness or 1.3 cm (½ in.) pre-heat insulation can heat flat surfaces and can also provide great heating benefits for parts with non-uniform thicknesses.

OPERATING PROCEDURES

Q. Will my welding process allow me to use an ArcReach® Heater/induction heating?

A. Check your welding procedure specifications (WPS). Typically, a WPS will specify a minimum or maximum temperature, but not a heating process.

Q. Can I connect more than one air-cooled quick wrap or air-cooled cable to an ArcReach® Heater at the same time?

A. Yes. You can connect either two air-cooled cables or two air-cooled quick wraps at the same time on both sides of the joint — but you can't combine an air-cooled cable with an air-cooled quick wrap. There's a label on the side of the ArcReach Heater extension cable box to help ensure that you make the proper connections.

Q. Can I immediately remove the air-cooled quick wrap, air-cooled cables and insulation once the heating cycle is complete?

A. Yes. Once the heating cycle is complete, the heating tools can be removed from the heat zone and moved to the next joint without delay. Although heating tools do not heat up from the induction process, the hot workpiece may transfer its heat to them — so always wear proper personal protective equipment when handling heating tools and insulation.

Q. Can I disconnect the air-cooled quick wrap or air-cooled cables before powering down the ArcReach® Heater?

A. No. Always stop the heating cycle and then power down the welding power source to stop output before disconnecting the air-cooled quick wrap or air-cooled cables. Doing so will prevent damaging the equipment.

Q. How do I know if I have the heating cables connected correctly to the series adapter box?

A. Labeling on the end of the ArcReach Heater Extension Cable box helps ensure proper connections. They demonstrate the proper connection for setting up one heating tool (A to B on the upper box) or two heating tools (one tool from A to A, and the second tool from B to B).

ARCREACH® EQUIPMENT SPECIFICATIONS

Q. Do the air-cooled cables come in different lengths?

A. Yes. Air-cooled cables are available in lengths of 9, 15 and 24 m (30, 50 and 80 ft.).

Q. What's the typical kW output of an ArcReach® Heating System?

A. The typical output is 8 kW, but note that output is dependent on configuration and applications. Each application will most likely result in a different kW output level. You can check the kW output for your application on the menu parameters screen and adjust your wrap accordingly to achieve more kW output.

Q. What is the IP rating?

A. The IP rating for the heater will be listed as IP23S in the owner's manual. This IP23S rating is defined as "This equipment is designed for outdoor use. It may be stored but is not intended to be used for induction heating outside during precipitation unless sheltered."

Q. At what temperature do I need insulation for the air-cooled quick wrap or air-cooled cables?

A. Reference the chart below. When required, apply insulation on the workpiece anywhere a heating tool will be placed.

Part Temperature	1.3 cm (½") Preheat Insulation Required	
	Quick Wrap	Air-Cooled Cable
°C		
50–150	–	–
150–200	–	1 Layer
200–250	1 Layer	1 Layer
250–315	1 Layer	2 Layers

REPAIRS AND WARRANTY

Q. Can my air-cooled quick wrap sleeve be repaired or replaced?

A. Yes, it can be replaced with a new sleeve cover — be sure to check sleeves for damage every time before use. Please refer to your parts list for replaceable items.

Q. What warranty comes with the ArcReach® Heater and heating tools?

A. ArcReach Heaters are covered by a one-year warranty and the heating tools (air-cooled quick wrap and air-cooled cables) are covered by a 90-day warranty. Warranties only cover manufacturing defects; they do not cover customer damage/abuse.

WHERE TO PURCHASE/RENT

Q. Where can I rent an ArcReach® Heater?

A. Check with your local distributor or rental partner.

Q. Where can I purchase a ProHeat™ 35?

A. To learn more about the ProHeat 35 and for questions related to purchases, contact your local Miller/ITW Welding sales representative (www.MillerWelds.com/europe).

REACHING, MAINTAINING AND RECORDING TEMPERATURES

Q. How does a welder know when an ArcReach® Heater has brought a joint to the proper welding temperature?

A. The ArcReach Heater prominently shows the temperature on its control panel. Control thermocouples control the heating temperature, and non-control thermocouples simply monitor temperatures.

Q. Can an ArcReach® Heater hold a weld joint at a certain temperature?

A. Yes. Welders can set temperature setpoint and the ArcReach Heater will maintain that temperature. It is always recommended that you verify the correct temperature according to your weld procedures prior to welding.

Q. I need to record joint heating data for compliance reasons. Can ArcReach® Heaters help?

A. Yes. ArcReach Heaters can save a preheating and bakeout job's temperature profile onto a USB drive inserted into the heater's USB port. The ArcReach Heater Data application can provide heat profile charts that can be printed, saved as PDFs or converted to CVS files for Microsoft® Excel® reporting.

Q. How do I program a heating profile on my ArcReach® Heater?

A. There are two methods of programming a heating profile. You can either manually input the program on the ArcReach Heater's screen or use USB data transfer from the ArcReach Heater Data application. For other questions on setup, refer to the help screens on the ArcReach Heater.