

ProHeat™ 35

Liquid-Cooled Induction System

Quick Specs

Applications

Process piping
Refinery
Petrochemical
Power piping
Pressure vessels
Structural

Maximum Temperature

1,450°F (788°C)

Input Power

460–575 V, 3-phase, 60 Hz
400–460 V, 3-phase, 50/60 Hz

Input Amperes at Rated Output

400 V: 60 amps
460 V: 50 amps
575 V: 40 amps

Rated Output

35 kW at 100% duty cycle

Power Source Dimensions

H: 27.5 in. (699 mm)
W: 21.75 in. (552 mm)
D: 36.75 in. (933 mm)

Power Source Weight

Net: 227 lb. (103 kg) Ship: 265 lb. (120 kg)

Powering a heating revolution – for applications up to 1,450 degrees Fahrenheit (788°C).

The ProHeat 35 liquid-cooled induction heating system provides a highly versatile tool for preheating, stress relieving, hydrogen bake out, post weld heat treat and shrink fit in a variety of pipe diameters and flat plate.

Designed with flexibility in mind, the ProHeat liquid-cooled induction heating cables can be wrapped into coils of various shapes and sizes to fit almost any induction heating application. Great for applications with geometries and temperatures that prevent the use of air-cooled blankets.



ProHeat 35 power source shown with heavy-duty induction cooler (951686) and optional running gear (195436).



ProHeat liquid-cooled induction heating cable.

Improved working environment is created during welding. Welders are not exposed to open flame, explosive gases and hot elements associated with fuel gas heating and resistance heating.

Easy setup is achieved using flexible heating cables combined with user-friendly insulation blankets.

On-board temperature control provides for manual or temperature based programming in a simple-to-learn operator interface.

Uniform heating is maintained along and through the heat zone by using induction heat within the material. The surface of the part is not marred by localized conducted heat at higher than specified temperatures.

Time-to-temperature is faster than conventional processes due to the method of applying heat, reducing cycle time.



Miller Electric Mfg. LLC
An ITW Welding Company
1635 West Spencer Street
P.O. Box 1079
Appleton, WI 54912-1079 USA

Equipment Sales US and Canada
Phone: 866-931-9730
FAX: 800-637-2315
International Phone: 920-735-4554
International FAX: 920-735-4125

MillerWelds.com



ProHeat™ 35 Liquid-Cooled System

ProHeat 35 Power Source

907689 460–575 V

907690 400–460 V, CE

The ProHeat 35 induction power source is equipped with a built-in temperature controller allowing for manual or temperature-based programming using up to four control thermocouples. At more than 90 percent efficiency, the ProHeat 35 power source transfers more energy to the part, reducing operating costs over different heating methods. One ProHeat 35 power source has two outputs and can run one or two heating cables at a time.

Note: Primary input cable not included.

Digital Recorder

195374 6 channel

300698 12 channel

The digital recorder is commonly used in stress relieving and critical preheat applications. The recorder stores temperature data based on time. It is not required to perform successful heating applications.

Heavy-Duty Induction Cooler

951686 Cooler with coolant (US and Canada only)

301298 Cooler only (not available in US and Canada)

Optimized for induction heating applications, cooler features a 2.5-gallon rustproof polyethylene tank, high-pressure pump and blower to yield a high cooling capacity.

Running Gear

195436

Running gear adds to the portability of the system. The four 5-inch swivel casters with brakes mount to the bottom of the power source or cooler.

Thermocouple Extension Cable

194968 50 ft. (15.2 m)

300998 75 ft. (22.9 m)

A simple means of providing thermocouple inputs from the heated part to the power source. The durable cable eliminates the cluttered stringing of individual wires to the work. The terminal connection enables six thermocouples to be used with the system.

Post Weld Heat Treatment Blanket

Fifty thermal cycles or more per blanket reduces consumable costs compared to other insulation methods. Blanket

efficiently insulates and optimizes coupling distance between the coil and the workpiece while protecting the liquid-cooled cable. Fully enclosed, sewn blanket reduces dust for a better work environment. See ordering information on the back page for available sizes.



Temperature Measurement

194999 Thermocouple wire, 500 ft. (152 m)

195098 Thermocouple connectors (10 pack)

194959 Thermocouple attachment unit (not shown)

Thermocouples welded directly on the part being heated are the most accurate way of monitoring part temperature for recording and controlling the heating process.



ProHeat™ 35 Liquid-Cooled Induction System (Continued)



Liquid-Cooled Heating Cable

- 300045** 30 ft. (9.1 m)
- 300046** 50 ft. (15.2 m)
- 300047** 80 ft. (24.4 m)
- 300049** 140 ft. (42.7 m)
- 300566** 160 ft. (48.8 m)

The heating cable couples the power to the part to be heated. The silicone hose encloses a special copper conductor specifically designed for carrying high-frequency current to maximize efficiency. The hose also carries the coolant which cools the conducting wire. The hose is reinforced for strength and durability.



Output Extension Cable

- 300180** 10 ft. (3 m)
- 195402** 25 ft. (7.6 m)
- 195403** 50 ft. (15.2 m)
- 300598** 75 ft. (22.9 m)

The output extension cable connects the liquid-cooled heating cable to the power source. Two quick connect coolant jumpers are included with each cable.

Additional Accessories



Contact Thermocouple Sensor (Probe) 200202

Contact thermocouple sensor installed between the

insulation and the part being heated. The contact thermocouple sensor can be used in preheat applications up to 500 degrees Fahrenheit (260°C).



Preheat Cable Cover

- 204611** 30 ft. (9.1 m)
- 204614** 50 ft. (15.2 m)
- 204620** 80 ft. (24.4 m)

Used in preheat applications to protect the heating cable from slag and molten metal created during welding. The 1/2-inch thick preheat insulation must be used with the preheat cable covers.



Preheat Insulation

For preheat applications up to 600 degrees Fahrenheit (316°C). Designed to protect the liquid-cooled cable from high temperatures and maintain the optimum coupling distance between the coil and the work. The preheat insulation is 1/2-inch thick and can be cut to length to fit your application. See ordering information on the back page for available sizes.



Preheat Insulation with Cable Harness 301334

Liquid-cooled heating cable coils of various sizes can be attached directly to this preheat insulation. Once a coil is set up it can easily be moved from part to part reducing setup times. The insulation is 10-foot (3 m) long and can be cut to length to fit your application. Heating cable not included.



Remote Contactor Control 043932

Remotely start and stop the heating process with this wired rocker switch remote. Includes a 25-foot (7.6 m) cable.




RHC-14 Remote Hand Control

- 242211020** 20 ft. (6 m)
- 242211100** 100 ft. (30.5 m)

Remotely adjust the heat output of the system in remote mode as well as start and stop the heating process.

Specifications (Subject to change without notice.)

Input Power	Ambient Temperature Range		Rated Output	Input Amperes at Rated Output	KVA/KW at Rated Output	Dimensions	Weight
	Storage	Usage					
460–575 V, 3-phase, 60 Hz 	-40 to 131°F (-40 to 55°C)	4 to 131°F (-15 to 55°C)	35 kW at 100% duty cycle	50 A, 460 V	39/37	H: 27.5 in. (699 mm) W: 21.75 in. (552 mm) D: 36.75 in. (933 mm)	Net: 227 lb. (103 kg) Ship: 265 lb. (120 kg)
400–460 V, 3-phase, 50/60 Hz, CE				60 A, 400 V 50 A, 460 V			

 Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

 Manufactured and certified in accordance with IEC-60974-1, -10.

Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
ProHeat™ 35	907689 907690	460–575 V, 3-phase, 60 Hz, 35 kW power source 400–460 V, 3-phase, 50/60 Hz, 35 kW power source, CE		
Heavy-Duty Induction Cooler	951686 301298	Cooler with coolant (US and Canada only) Cooler only (not available in US and Canada)		
Coolant	043810	One gallon of low-conductivity coolant. Must be ordered in multiples of four (one case)		
Running Gear	195436	Attaches to bottom of power source or cooler		
Digital Recorder with Protective Enclosure and Extension Cable	195374 300698 194968 300998	6 channel, includes temperature output cable 12 channel, includes temperature output cable Cable, extension, 6 pair type K, 50 ft. (15.2 m) Cable, extension, 6 pair type K, 75 ft. (22.9 m)		
Interconnect Cable	300168	Temperature output, 5 ft. (1.5 m), used with customer-supplied recorder		
Thermocouple Wire	194999	Type K thermocouple wire, 500 ft. (152 m)		
Thermocouple Connectors	195098	Type K, 2-pin male (package of 10)		
Thermocouple Attachment Unit	194959	Used for welding thermocouples to part being heated		
Contact Thermocouple Sensor (Probe)	200202 200201	Contact thermocouple sensor. 500°F (260°C) max Cable, extension, 1 TC type K, 25 ft. (7.6 m) armored		
Output Extension Cable	300180 195402 195403 300598	10 ft. (3 m) 25 ft. (7.6 m) 50 ft. (15.2 m) 75 ft. (22.9 m)		
Coolant Jumper (Spare)	204877	Extension cable to heating cable coolant jumper (package of 1)		
Liquid-Cooled Heating Cable	300045 300046 300047 300049 300566	30 ft. (9.1 m) 50 ft. (15.2 m) 80 ft. (24.4 m) 140 ft. (42.7 m) 160 ft. (48.8 m)		
Preheat Cable Cover	204611 204614 204620	30 ft. (9.1 m) 50 ft. (15.2 m) 80 ft. (24.4 m)		
Preheat Insulation	204669 195376 211474 301334	1/2 x 6 x 120 in. (1.3 x 15 x 305 cm) 1/2 x 6 x 240 in. (1.3 x 15 x 305 cm) 1/2 x 12 x 120 in. (1.3 x 31 x 305 cm) Preheat insulation with cable harness, 1/2 x 16 x 120 in. (1.3 x 41 x 305 cm)		
High-Temperature Rope	194965	1 in. (2.5 cm) wide, 50 ft. (15.2 m) roll		
Post Weld Heat Treatment Blanket	194947 194948 195477 194949 195476 194950 194951 194952 194953 194954 194955 194956 300449 194957 194958 195502 194998 207817 222228 300155 300156	For 2.5 in. (6.4 cm) pipe, 12 x 15 in. (31 cm x 38 cm) For 4 in. (10 cm) pipe, 12 x 21 in. (31 cm x 53 cm) For 5 in. (13 cm) pipe, 12 x 26 in. (31 cm x 66 cm) For 6 in. (15 cm) pipe, 12 x 30 in. (31 cm x 76 cm) For 7 in. (18 cm) pipe, 18 x 34 in. (46 cm x 86 cm) For 8 in. (20 cm) pipe, 18 x 38 in. (46 cm x 97 cm) For 10 in. (25 cm) pipe, 18 x 43 in. (46 cm x 109 cm) For 12 in. (31 cm) pipe, 18 x 49 in. (46 cm x 125 cm) For 14 in. (36 cm) pipe, 18 x 54 in. (46 cm x 137 cm) For 16 in. (41 cm) pipe, 18 x 58 in. (46 cm x 147 cm) For 18 in. (46 cm) pipe, 24 x 67 in. (61 cm x 170 cm) For 20 in. (51 cm) pipe, 24 x 73 in. (61 cm x 185 cm) For 21 in. (56 cm) pipe, 24 x 76 in. (61 cm x 193 cm) For 22 in. (56 cm) pipe, 24 x 79 in. (61 cm x 201 cm) For 24 in. (61 cm) pipe, 24 x 85 in. (61 cm x 216 cm) For 26 in. (66 cm) pipe, 24 x 91 in. (61 cm x 231 cm) For 28 in. (71 cm) pipe, 24 x 98 in. (61 cm x 249 cm) For 30 in. (76 cm) pipe, 24 x 105 in. (61 cm x 267 cm) For 32 in. (81 cm) pipe, 24 x 112 in. (61 cm x 285 cm) For 36 in. (91 cm) pipe, 24 x 126 in. (61 cm x 320 cm) For 40 in. (102 cm) pipe, 24 x 140 in. (61 cm x 356 cm)		
Remote Contactor Control	043932	25 ft. (7.6 m) wired remote on/off for power source		
RHC-14 Remote Hand Control	242211020 242211100	20 ft. (6 m) wired remote for heat and on/off for power source 100 ft. (30.5 m) wired remote for heat and on/off for power source		

Date:

Total Quoted Price:

Distributed by:

