



HF-251 and HF-20

High-Frequency Arc Starters and Stabilizers



HF-20

HF-251



Process



Gas Tungsten Arc
(TIG) Welding

Description



Ordering Information

HF-251D-1

115 V 50/60/100 Hz #042 388

HF-251-2

230 V 50/60 Hz #042 387

HF-20-1WG

115 V 50/60 Hz #900 356

HF-20-2WG

230 V 50/60 Hz #900 359

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Increase the flexibility and performance of most AC, DC or AC/DC constant current welding machines with these portable high-frequency arc starters and stabilizers. The unit impresses high frequency on the welding circuit and provides the arc control needed for TIG welding. With the addition of an HF unit, your constant current power source can handle welds on aluminum, magnesium, thin stainless steel, brass, copper and a wide variety of both ferrous and non-ferrous alloys.

The HF unit expands the capability of existing equipment and offers the stamina to handle tough industrial usage. An excellent performer in general manufacturing, tool and die, repair shops and for all-purpose maintenance. Four versions meet most single-phase power configurations, and all are rated at 60% duty cycle.

HF-251 Features

The HF-251 is compatible with power sources made by other manufacturers.

- 250 A output at 60% duty cycle
- For use with power source with 14-socket receptacle (5-socket adapter available)
- Power on/off switch with pilot light

- Start, off and continuous control
- Gas solenoid valve
- High frequency intensity control
- Built-in postflow eliminates contamination
- Protected secondary terminal
- Convenient, portable design
- 14-pin receptacle on front panel for remote controls

HF-20 Features

The HF-20 is for use with welding power sources having 50 to 100 Volts OCV (open-circuit voltage).

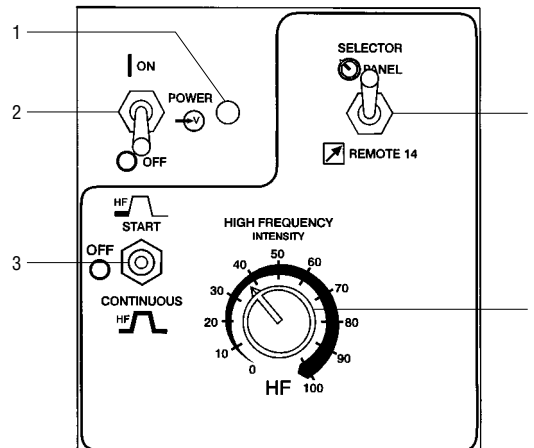
- 1000 A output at 60% duty cycle
- Power on/off switch
- AC/DC process selector switch
- High frequency intensity control
- Start selector switch—in **Touch** position, gas flow, water flow and high frequency are initiated when the electrode makes contact with the workpiece. In **High Frequency** position, initiation takes place via a remote switch
- Adjustable time delay—when the arc is broken, the gas, water and high frequency are shut off after an adjustable time delay.
- Gas and water valves
- RHS-11A remote hand switch with 20 ft (6 m) cord

Specifications (Subject to change without notice.)

Lt. Industrial, Industrial **1 Phase**

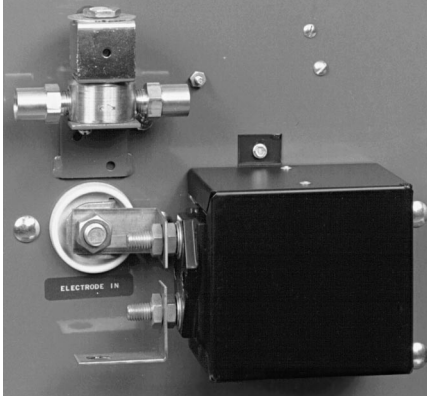
Model	Input Volts	Rated Output at 60% Duty Cycle	Dimensions	Net Weight
HF-251D-1	115 VAC, 50/60/100 Hz	250 A	H: 13 in (330 mm) W: 9-1/4 in (235 mm) D: 16 in (406 mm)	34 lb (15 kg)
HF-251-2	230 VAC, 50/60 Hz	250 A	H: 13 in (330 mm) W: 9-1/4 in (235 mm) D: 16 in (406 mm)	36 lb (16 kg)
HF-20-1WG	115 VAC, 50/60 Hz	1000 A	H: 13-1/2 in (343 mm) W: 19-3/4 in (502 mm) D: 16-1/2 in (419 mm)	92 lb (42 kg)
HF-20-2WG	230 VAC, 50/60 Hz	1000 A	H: 13-1/2 in (343 mm) W: 19-3/4 in (502 mm) D: 16-1/2 in (419 mm)	98 lb (44 kg)

HF-251 Control Panel



1. Pilot Light
2. Power Switch
3. High Frequency Switch
4. High Frequency Selector Switch
5. High Frequency Intensity Control

Options and Accessories



Secondary Contactor Kit

For HF-251D-1 model

#041 969 Field only

For HF-251-2 model

#041 906 Field only

Mounts inside HF-251 cabinet. For use with a power source that does not have its own contactor.

Remote Controls and Switches

Controls listed below are for use with Miller constant current power sources with solid-state output control. The controls are used when remote current control is desired. The HF-251 is equipped with a 14-pin plug on a 6 ft (1.8 m) cord for direct connection to new Miller CC power sources. An adapter cord will be required for older Miller equipment with 5-socket receptacles.

RMLS-14 #129 337

Momentary- and maintained-contact rocker switch. 20 ft (6 m) cord with 14-pin plug.

RCC-14 #151 086

Attaches to the TIG torch handle to provide contactor and current control. Includes 28 ft (8.5 m) cord and 14-pin plug prewired.

RHC-14 #129 340

Miniature remote hand current and contactor control. Includes 20 ft (6 m) cord and 14-pin plug.

RFC-14 #129 339

Remote foot current and contactor control. Includes 20 ft (6 m) cord and 14-pin plug.

Extension Cords

#122 973 25 ft (7.6 m)

#122 974 50 ft (15 m)

#122 975 75 ft (23 m)

Extends HF-251 farther from power source or extends remote control farther from HF-251.

Adapter Cord #129 341

1 ft (305 mm) cord with 5-pin and 14-pin plugs for use between 5-socket receptacle power source and HF-251.

Adapter Cord #041 947

1 ft (305 mm) cord with 14-pin plug and 5-socket receptacle for use between HF-251 and 5-pin remote controls.

Water Coolant Systems



Coolmate™ 3 #043 007 115 VAC

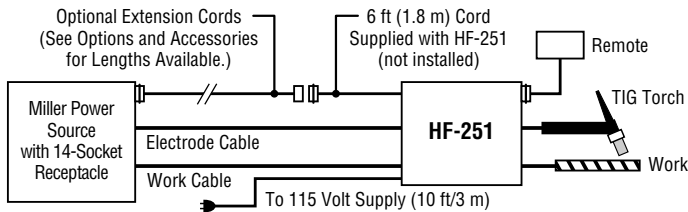
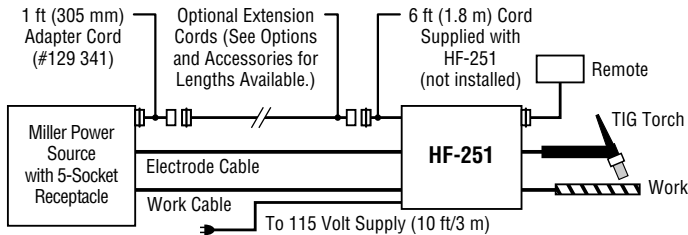
Coolmate™ 3 #043 008 230 VAC

Watermate™ 1A #042 495 115 VAC

Coolmate™ 4 #042 288 115 VAC

For use with water-cooled guns. Refer to Literature Index No. AY/7.2 for additional coolant system information.

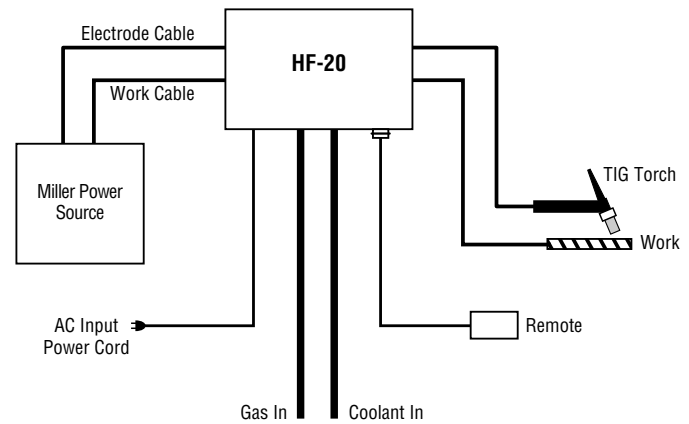
Typical Connections



⏏ Denotes Plug (Threaded Collar)

⏏ Denotes Receptacle (External Threads)

HF-251



HF-20

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