



Miller
The Power of Blue.

**GROUND
FAULT
PROTECTED**



Shown with optional running gear.

Intellifire™ 204 Power Source

Induction Heating System

Index No. IN/6.0 Issued May 2000

The Miller Intellifire™ 204 is an inverter-based, solid-state, high-frequency induction heating power source that provides infinite control over a range of 0 to 20 kW. It combines flexibility, precision and reliability into a compact lightweight package that provides all the features required for reliable, consistent and efficient heating using the induction process. The 20 kW, 100%-duty-cycle, air-cooled unit is perfect for heating operations — especially large diameter pipe, heavy wall steel plate and critical time-to-temperature applications.

Features and Benefits

Infinitely Variable Power Control: The Intellifire 204 power source allows operators to preset exact power values over a range from 0 to 20 kW. A patented self-regulating circuit ensures that the power delivered to the part precisely matches the preset value. The power source automatically compensates for variations in the part/coil coupling.

Completely Air-Cooled: All critical components of the Intellifire 204 power source are heat sink mounted and air-cooled. By eliminating the need for water-cooling, like that used in conventional induction power sources, the unit provides greater flexibility and reduced installation costs. For safety, the power source is thermostatically protected against over-heating and thermal failure.

Ground Fault Protection®: This patent pending feature provides automatic system shutdown should power source output short to ground. A 15.2 m (50-ft.) sense cable provides direct feedback to the power source of a fault condition. Fault indication is via a front-panel-mounted LED.

Compact Design: With a footprint of .30 m² (3.3 sq. ft.) and a total weight of 74.9 kg (165 lb.), the Intellifire 204 power source occupies minimal space. The open base allows for easy lift truck access for portability. The power source can be conveniently mounted in almost any location.

Automatic Protection: When the Intellifire 204 power source senses a limit or fault condition, such as out-of-range frequency, low input voltage or an over current condition, it automatically ceases operation. A series of front panel indicator lights identifies the limit or fault condition. In addition, the unit incorporates voltage, current and power control that automatically adjusts output power in response to out-of-range or changing impedances.

Remote Control and Monitoring: The Intellifire 204 power source includes remote control provisions for system control and metering. A 14-contact connector on the front of the power source provides access for output control and monitoring system operating parameters such as output power and frequency, tank voltage and current and fault signals. If desired, the unit can easily be integrated with a Programmable Logic Controller (PLC) or external controller.

High Operating Efficiency: With an operating efficiency of approximately 92%, the Intellifire power source is cost efficient to operate. The 100% duty cycle allows continuous operation, further enhancing its value.

True Blue® One-Year Warranty: The Intellifire 204 power source is built to the highest standards of quality and durability, ensuring cycle after cycle of trouble-free operation.



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Specifications

Type of Input Power	Output Frequency	Rated Output	Required Reflective Inductance	Input Amperes at Rated Output	kVA/kW Used at Rated Output	Dimensions	Net Weight
3-Phase, 400 VAC, 50/60 Hz	10 – 50 kHz	20 kW at 100% Duty Cycle; Max 750 Amps (RMS), 700 V (RMS)	2.5 – 50 µh	35 A at 400 V (0.29 A while idling);	24.5 kVA/22.17 kW (0.24 kVA/0.15 kW while idling)	H: 692 mm (27-1/4 in) W: 381 mm (15 in) L: 800 mm (31-1/2 in)	74.9 kg (165 lb) Ship: 84.9 kg (187 lb)

Control Panel

1. Power Switch with indicator light
2. Remote Power Control Switch
3. Power Adjust Control



Accessories

Running Gear #043 924

For mobility, the Intellifire™ power source running gear is easily installed to the base of the unit. Running gear includes rear main wheels, front casters and front and rear handles.

IH/PC™ Induction Pendant Control #043 109

Single-station controller capable of remotely controlling output power and output contactor. Unit features a LCD display that shows system operating parameters. Includes a 4.6 m (15-ft.) interconnect cable.

Remote Contactor Control #043 932

A simple remote pendant allowing operator to energize system using a simple rocker-style contact switch. Comes complete with 7.6 m (25-ft.) cable and 14-contact connector.

IH/TC Temperature Control #194 672

Single-station controller capable of process temperature feedback from a thermocouple sensor and automatically adjusting power source output to regulate and maintain part temperature. Includes a 762 mm (30 in.) interconnect cable, 7.6 m (25 ft.) thermocouple extension cable and thermocouple temperature sensor.

Intellifire Capacitor Tuning Kits

(Consult the factory.)

Ordering Information

Intellifire™ 204 Power Source #903 761



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