



Guardian II™

Modular Gas Dryer for Graphics

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Shown with optional extended infeed and ambient cooling

Guardian II

Guardian II is M&R's full-featured gas-fired graphics dryer. Its burner provides maximum heat transfer efficiency, and its high performance blower and air distribution system assures even temperatures throughout the heat chamber. Guardian II's Heat Efficiency System improves drying and lowers operating costs by using a unique energy transfer system to warm cooler air from the intake system. Operators can either use ambient air or duct air from outside the building. Guardian II's versatile modular design and wide array of choices and configurations allow easy and economical customization. Guardian II is available with LP gas or natural gas burners. For convenience and safety, M&R includes System-Saver, which allows blowers and belt to continue to run in cooldown mode after burner shutdown, then shut off automatically upon reaching the cooldown target temperature.

Guardian II features include digital speed controller and display for fast and easy duplication of speed settings, and slide-out stainless steel filters for easy cleaning and long life. Guardian II also features a fuzzy logic temperature controller with the ability to narrow the temperature bandwidth automatically. This narrowing of the bandwidth prevents temperature fluctuations and promotes fuel economy. Guardian II options include the choice of ambient air or refrigerated air cooling units, high speed conveyors, split belt conveyors with independent variable speed drives and direction, and Switchback™ & Vitran II™ UV Curing Modules.

Guardian II Gas Dryers are available in belt widths of 48" (122 cm), 60" (152 cm), 72" (183 cm), and 84" (213 cm). Like all M&R equipment, they're built with M&R's unsurpassed commitment to quality, durability, and design excellence, and are backed by the best service and support in the industry.

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Standard Features

Air Handling

- Air Intake: approximately 1500 SCFM
- Exhaust Blower: approximately 1500 SCFM
- Heat Efficiency System reduces operating expenses by using hot exhausted air to heat incoming air
- Powerful blowers circulate heat while holding down even the lightest substrates
- Stainless steel filters slide out for easy cleaning

Certification

- AGA® & CGA® approved (design certified by the American and Canadian Gas Associations to meet or exceed national safety standards for design and performance)
- Gas controls meet standards set by Factory Mutual® and by the National Fire Protection Association® (NFPA)
- Panel meets Underwriter's Laboratories® (UL) standards and carries the UL label

Control Center

- Air-cooled cabinet assures long life for electrical components
- Control panel rotates for easy access
- Fuzzy logic temperature controller with the ability to learn narrows the temperature bandwidth until the optimal range is reached
- Process temperature and set temperature are displayed and controlled digitally
- Solid-state design
- System-Saver allows blowers and belt to continue to run in cooldown mode after burner shutdown, then shut off automatically upon reaching the cooldown target temperature

Conveyor Belt Width

- 48" (122 cm), 60" (152 cm), 72" (183 cm), and 84" (213 cm)
- Custom sizes available

Conveyor System

- Conveyor belt is made of heat resistant, Teflon®-coated fiberglass
- Driven by a reliable, heavy-duty, variable speed DC motor
- Large diameter crowned aluminum conveyor rollers promote positive belt tracking
- Solid-state belt speed controller
- Solid-state digital belt speed readout makes it easy to duplicate speed settings
- Standard belt speed: 6'-65' (183-1981 cm) per minute
- Standard infeed/outfeed lengths: 4' (122 cm)

Design & Construction

- Adjustable entry/exit openings
- Assembled and tested at M&R's factory to assure turnkey operation
- Bearings are designed for high speeds and high temperatures
- Constructed of rigid steel and premium components
- Designed for maximum thermal efficiency
- Modular design simplifies future expansion

Heat Chamber

- Burners are available in a choice of liquid propane (LP) or natural gas
- Direct-fired burner is maximum-rated at 400,000 BTU
- Double-wall construction
- Galvanized steel interior
- Interior air distribution system assures uniformity and consistency of temperature
- Pressurized vector air knives provide uniform temperatures throughout the drying chamber

Service

- 24-hour hotline

Training

- Access to M&R's Training Center

Warranty

- One-year limited

Options & Accessories

Certification

- CE Compliant (Built to specifications established by the European Committee for Standardization®)

Conveyor System

- Available with conveyor speeds faster than the standard rates listed
- Conveyor extension sections are available in 1' (30 cm) increments
- Split-belt model features independent variable speed drives and direction

Cooling Unit

- Ambient air
- Refrigerated air

Electrical

- Available in single-phase
- Other configurations available

Heat Chamber

- Additional 2' (61 cm) sections available

UV Curing Modules

- Switchback™
- Vitran II™



Shown with optional extended infeed and ambient cooling

SPECIFICATIONS

Model	Belt Width	Heat Chamber Length	Infeed/Outfeed Lengths	Intake Air Maximum	Exhaust Air Maximum	Electrical Requirements*	Burner Input Maximum BTU**	Shipping Weight
Guardian II-48	48" (122 cm)	10' (305 cm)	In: 4'/Out: 4' (122 cm/122 cm)	1,500 scfm	1,500 scfm	208/230/460v, 3 phase 20/18/9 amps, 60 Hz	400,000	3500 lbs (1588 kg)
Guardian II-60	60" (152 cm)	10' (305 cm)	In: 4'/Out: 4' (122 cm/122 cm)	1,500 scfm	1,500 scfm	208/230/460v, 3 phase 24/22/11 amps, 60 Hz	400,000	4,000 lbs (1814 kg)
Guardian II-72	72" (183 cm)	10' (305 cm)	In: 4'/Out: 4' (122 cm/122 cm)	1,500 scfm	1,500 scfm	208/230/460v, 3 phase 30/28/14 amps, 60 Hz	400,000	4500 lbs (2041 kg)
Guardian II-84	84" (213 cm)	10' (305 cm)	In: 4'/Out: 4' (122 cm/122 cm)	1,500 scfm	1,500 scfm	208/230/460v, 3 phase 30/28/14 amps, 60 Hz	400,000	5000 lbs (2268 kg)

* If incoming voltage differs from the voltage(s) listed in this brochure, calculate amperage accordingly

** Other burner sizes available

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