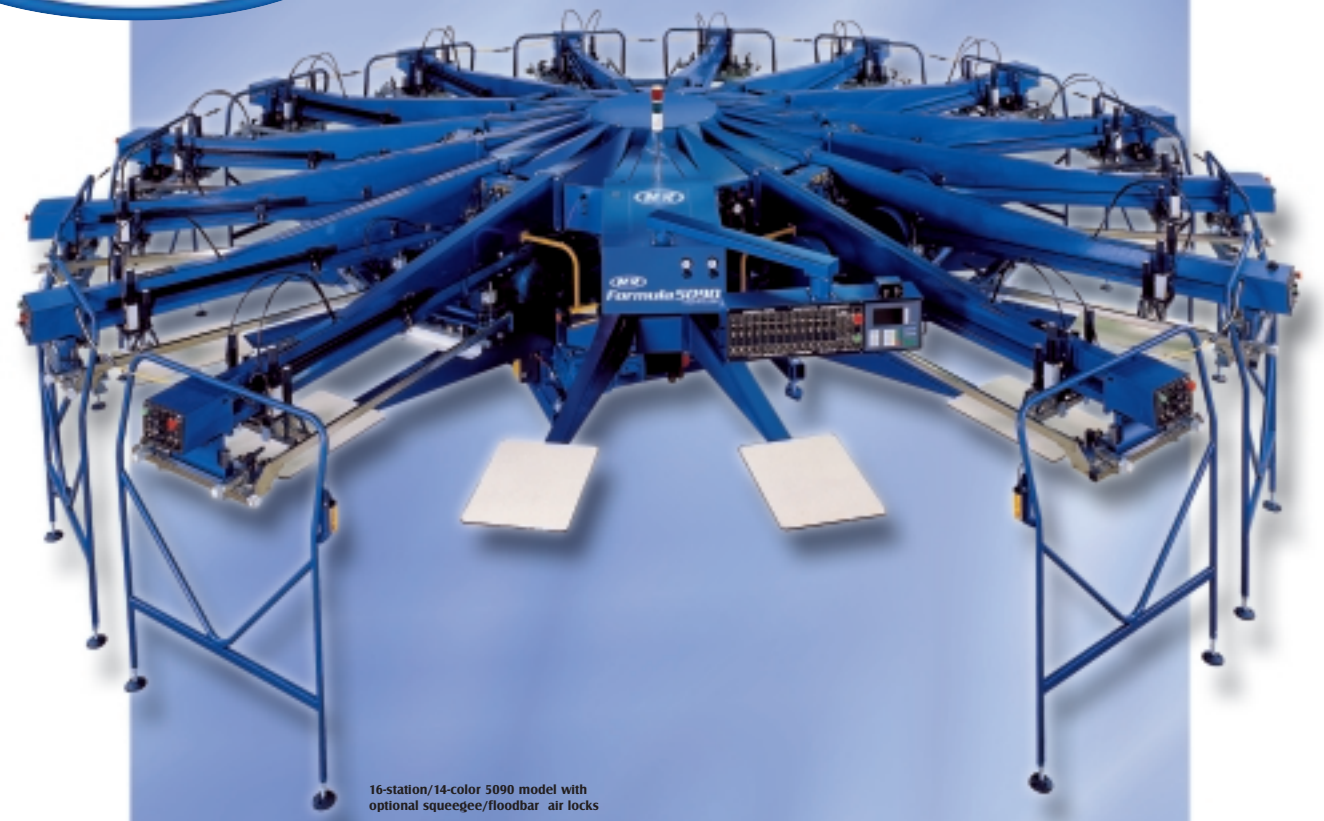
Formula 5070/5090

Automatic Textile Presses Eng



16-station/14-color 5090 model with optional squeegee/floodbar air locks

Formula® 5070/5090

This is the press that dominates the ultra-high performance textile market. Formula is the overwhelming choice of the industry's largest, highest production print shops. That's because these presses excel in every way, from simple one-color designs on light fabrics to intricate prints on dark garments. But there's more to Formula than exceptional quality; it's also exceptionally fast. Formula's AC heads with fully adjustable screen peel system permit higher speeds and deliver clean, sharp images while reducing under-screen ink buildup. Formulas are among the most rugged, reliable presses ever made. High production shops demand more than outstanding speed and unmatched quality. They insist on presses that they can depend on. They insist on Formula.

Printing can be further simplified with M&R's easy-to-use Tri-Loc® and Double Tri-Loc® Rapid Registration Systems, which allow operators to precisely match registration on the exposure unit with registration on the press. Tri-Loc systems, which work on all of M&R's manual and automatic carousel textile presses, can reduce setup time by as much as 95%.

Formula 5070 is available in 12, 14, and 18-color models with a 20" x 28" (51 x 71 cm) print area. Formula 5090 is available in 12 and 14-color models with a 20" x 36" (51 x 91 cm) print area. Both offer double-index print capability. Formulas are loaded with standard features, including a servo-driven index system, independent test print/print start/print finish settings, patented Optic Shirt Detector, production speed monitor, patented Ink Dip System, 4-point off-contact adjustment on all print heads, adjustable index speed, pneumatic screen clamps, bi-directional rotation, pallet locator, locking rear micro-registration, independent pressure and angle adjustments, jog left/jog right controls, and single/double print stroke capability. Like all M&R equipment, Formula Series presses are 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. If you need high-speed production and exceptional print quality on virtually every textile substrate, there's only one choice: M&R's Formula.

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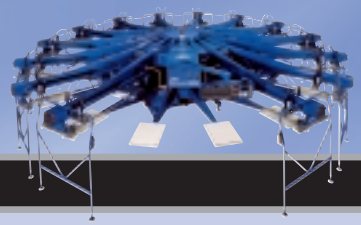

Standard Features

Carousel/Indexer
- Clockwise or counterclockwise rotation
- Freewheel capability

Certification
- Panel meets Underwriters Laboratories® (UL) standards and carries the UL label

Color Capacity (Stations/Colors)
- Formula 5070: 14/12, 16/14, & 20/18
- Formula 5090: 14/12 & 16/14

Control Center
- Control panel offers easy navigation, with programming and prompts in plain language
- Digital keypad with alphanumeric display
- Digital microprocessor with self-diagnostics
- Independent print start/print finish setting automatically activates and stops print heads at the beginning and end of production runs for operator convenience
- Jog left/jog right controls
- Production speed monitor ensures more accurate job costing
- Single/Double print stroke capability
- Test print setting turns individual print heads on/off during test print cycle

Design & Construction
- Constructed of rigid steel & aluminum and premium components
- Pre-registration performed at the factory
- Print heads and pallet arms provide the stability necessary for exceptional print quality

Index System (Servo Drive)
- Allows quick adjustment of indexing parameters tailored to various pallet sizes
- Offers single and double-index capability
- Sophisticated servo-drive system combines high press speeds with exceptional smoothness, consistency, and longevity

Ink Dip System
- Retrieval system keeps ink in the print area (U.S. Patent No. 5,649,479)

Master Frame
- Completely adjustable master frame system

Maximum Image Area
- Formula 5070: 20" x 28" (51 x 71 cm)
- Formula 5090: 20" x 36" (51 x 91 cm)
- Double-index print area: Contact M&R for dimensions

Optic Shirt Detector
- Minimizes misprints, facilitates operator training, and allows increased production speed (U.S. Patent No. 5,383,400)

Pallet System
- Three-point pallet leveling system allows easy adjustment
- Tool-free pallet locator synchronizes the position of all pallets to speed up pallet changeover
- Tool-free quick release locking system for rapid adjustment, installation, and removal

Pallets
- Solid-aluminum, low-profile, rubber-coated pallets

Peel System
- AC heads with fully adjustable screen peel system for consistently sharp prints and minimal ink buildup

Print Carriage
- True close-tolerance linear bearing carriage system for uniform ink deposit

Print Heads
- AC variable-frequency drive motors are brushless, maintenance-free, and offer the ultimate in print control
- Four-point off-contact adjustment on all print heads
- Independent print button on each head facilitates test printing
- Independent print/flood speed controls on each head simplify press setup and job proofing
- Independent reset button on each head enables freewheeling of carousel during setup

Registration
- Enhanced front micro-registration adjustments with visual guides
- Locking rear micro-registration provides additional control

Screen Clamps & Holders
- Adjustable rear screen holders accommodate a wide range of screen sizes
- Clamping system holds roller frames without clamp adapters
- Compatible with numerous registration systems, including M&R's Tri-Loc® and Newman Pin-Lock®

Options & Accessories

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

Control Center
- MPR (Management Production Reporting) Software System™ provides press status and production data in real time, giving facility managers the information they need to maximize efficiency

Flash Curing
- M&R offers a full range of flash cure units

Pallets
- M&R offers a wide range of sizes and styles

Squeegee/Floodbar
- Pneumatic squeegee/floodbar locks with tool-free angle adjustment
- Squeegee air regulator with pressure gauge on each print head delivers exacting pressure control

Tri-Loc® and Double Tri-Loc® Rapid Registration Systems
- Dramatically speed setup
- High-Lift mode on front screen holder makes setup fast and mid-run screen changes easy
- Pneumatic screen clamps facilitate rapid screen loading and deliver excellent stability on a wide variety of screens

Squeegee/Floodbar
- Angle and calibrated pressure adjustments are independently set for superior print quality
- Front or rear print carriage stop position allows operator to leave screen clear or flooded (great for water-based inks)
- Independent squeegee & floodbar speed adjustments
- Park position allows easier squeegee/floodbar installation and removal

Stroke Length
- Calibrated front and rear stroke length with tool-free adjustment maximize print speed and efficiency, and reduce the working of ink

Service
- 24-hour hotline

Training
- Access to M&R's Training Center

Warranty
- Five-year limited

SPECIFICATIONS

Model (Stations/Colors)	Maximum Image Area	Maximum Frame Size	Standard Pallet Size	Diameter	Height	Air @ 100 PSI	Electrical Requirements*	Shipping Weight
Formula 5090 14/12	20" x 36" (51 x 91 cm)	28" x 52" x 2" (71 x 132 x 5 cm)	16" X 22" (41 X 56 cm)	21' 2" (645 cm)	68" (173 cm)	13 cfm	208/230v, 3 phase, 56 amps, 50/60 Hz	12,500 lbs (5670 kg)
Formula 5090 16/14	20" x 36" (51 x 91 cm)	28" x 52" x 2" (71 x 132 x 5 cm)	16" X 22" (41 X 56 cm)	22' (671 cm)	68" (173 cm)	15 cfm	208/230v, 3 phase, 57 amps, 50/60 Hz	13,000 lbs (5897 kg)
Formula 5070 14/12	20" x 28" (51 x 71 cm)	28" x 44" x 2" (71 x 112 x 5 cm)	16" X 22" (41 X 56 cm)	20' (610 cm)	68" (173 cm)	13 cfm	208/230v, 3 phase, 56 amps, 50/60 Hz	11,500 lbs (5216 kg)
Formula 5070 16/14	20" x 28" (51 x 71 cm)	28" x 44" x 2" (71 x 112 x 5 cm)	16" X 22" (41 X 56 cm)	21' (640 cm)	68" (173 cm)	15 cfm	208/230v, 3 phase, 57 amps, 50/60 Hz	13,000 lbs (5897 kg)
Formula 5070 20/18	20" x 28" (51 x 71 cm)	28" x 44" x 2" (71 x 112 x 5 cm)	16" X 22" (41 X 56 cm)	24' (732 cm)	68" (173 cm)	20 cfm	208/230v, 3 phase, 68 amps, 50/60 Hz	16,000 lbs (7258 kg)

* If incoming voltage differs from the voltage(s) listed in this brochure, calculate amperage accordingly
* Other electrical configurations are available: Contact M&R for details

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