

CHALLENGER® III



Automatic Screen Printing Press



FEATURES

- 12-18 colors, 14-20 stations
- Maximum image areas from 48 x 55 cm (19" x 22") to 91 x 110 cm (36" x 43")
- Ultra-high-speed indexing system

Challenger revolutionized screen printing in the 1980s, and Challengers have dominated the industry ever since. M&R's Challenger III automatic screen printing press expands on that tradition by combining innovative features—like M&R's electronically adjustable Ink Dip™ ink retrieval system—with exceptional speed and the best ideas from over 25 years of M&R automatics. Challenger III's indexer enables double indexing in one uninterrupted motion, increasing production speed for oversize work by eliminating the pause between indexes. Challenger III automatic screen printing machines feature printheads driven by fast, reliable electric-drive motors. The printheads include calibrated tool-free click-stop four-corner off-contact settings for fast and accurate screen leveling.

All Challenger III automatic screen printing presses include tool-free front and rear print-stroke adjustment for versatility and exceptionally high production rates. Pneumatic screen clamps facilitate rapid screen loading and deliver excellent stability on a wide variety of screens. M&R's Laser Locator System speeds pallet positioning and changeover, and it assists operators in the precise positioning of garments and cut-piece goods. The squeegee/floodbar park feature facilitates setup and tear-down by simultaneously retracting the squeegee and floodbar and then moving them to the outside edge of the press for easy access. Other standard features include squeegee pressure regulators; independent squeegee &

floodbar speed adjustments; independently-set angle and calibrated squeegee and floodbar pressure adjustments; and adjustable rear screen holders. Unlike side screen holders, which severely limit the maximum screen-frame width and maximum image area, front and rear screen holders allow easy placement of extra-wide screens for oversize and all-over screen printing. Print, reset, and print/flood speed controls on each printhead further simplify setup. Each printhead also features a socket that makes it easy to position a flash cure unit in any screen printing station. Challenger III 110 models include a wider print carriage for enhanced print quality. M&R's Automatic Pallet Preheat Mode™ with built-in pallet temperature sensor allows operators to preheat pallets to the desired temperature with any compatible flash cure unit and track those temperatures throughout the print run.

Challenger III was built from the ground up to optimize speed, performance, flexibility, print quality, and durability. With a large touchscreen control panel featuring icon-based labeling that can display information and commands in multiple languages; an extensive variety of configurations; an unrivaled set of standard features and timesaving, output-enhancing exclusives; efficient design; and high production speed, Challenger III is poised to dominate the next decade of automatic screen printing.

www.mrprint.com
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CHALLENGER® III

STANDARD FEATURES

CAROUSEL/INDEXER

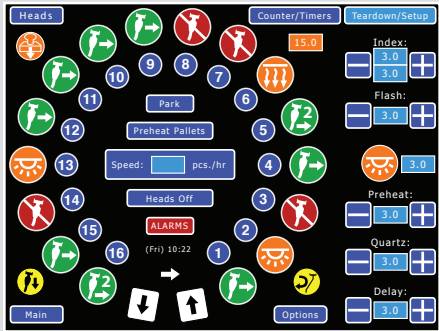
- Clockwise or counterclockwise rotation

CERTIFICATION

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

CONTROL CENTER

- Automatic Pallet Preheat Mode™ with built-in pallet temperature sensor allows operators to preheat pallets to the desired temperature using any compatible flash cure unit
- Digital touchscreen control panel with icon-based labeling can display information and commands in multiple languages



- Independent print-start/print-finish setting automatically activates and stops printheads at the beginning and end of screen printing runs
- Jog-left/jog-right controls
- Maintenance Minder™ System alerts operators when scheduled maintenance is due
- Multiple (1-9) print stroke capability
- Onboard self-diagnostics
- Provides control of multi-print functionality
- Production speed monitor ensures more accurate job costing
- Real-time production data
- Stopwatch feature enables users to capture elapsed time for setup, runtime, shift time, or any other screen printing operation
- Test print setting turns individual printheads on/off during test print cycle

DESIGN & CONSTRUCTION

- Built of heavy-duty steel and premium components
- Printheads and pallet arms provide the stability necessary for exceptional screen print quality

OPTIONS

CUT-PIECE PALLET ARMS

- Heavy-duty reinforced pallet arms with wider pallet mounting brackets for oversize and cut-piece screen printing

FOLD-DOWN PRINthead SUPPORTS

- Enable easy loading of screens more than 71 cm (28") wide

FOOT PEDAL CONTROL

- Allows indexing of the press using a foot pedal
- Skip-Shirt foot pedal feature allows operators to avoid screen printing on empty pallets

INDEX SYSTEM

- Allows quick adjustment of indexing parameters tailored to various pallet sizes
- Servo drives combine higher screen printing press speeds with exceptional smoothness, consistency, and longevity

INK DIP SYSTEM

- Electronically adjustable ink retrieval system keeps ink in the print area

LASER LOCATOR SYSTEM

- Assists operators in the precise positioning of garments and cut pieces
- Speeds pallet positioning and changeover

OFF-CONTACT

- Calibrated tool-free click-stop four-corner off-contact settings allow fast and accurate screen leveling

PALLET SYSTEM

- Precise three-point pallet leveling system
- Tool-free quick release pallet locks

PALLETS

- Solid-aluminum, low-profile, rubber-coated screen printing pallets

PRINT CARRIAGE

- Wider print carriage enhances screen print quality on 110 models

PRINtheADS

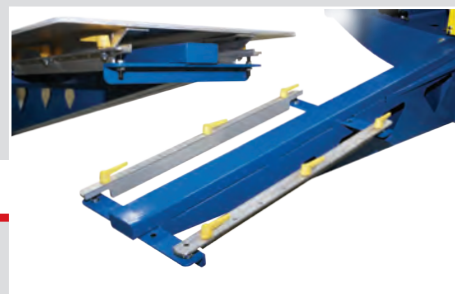
- Brushless and maintenance-free electric-drive motors deliver smooth screen print strokes and exceptional control
- Independent print and reset buttons on each printhead
- Independent print/flood speed controls on each printhead simplify press setup
- Multi-print without lowering the indexer

REGISTRATION

- Compatible with M&R's Tri-Loc® Rapid Registration System
- Enhanced front micro-registration adjustments with visual guides
- Rear micro-registration

REVOLVER PRINT PROGRAM

- Automatically operates individual printheads in programmed sequence and allows multiple flashing without losing a screen printing position
- Touchscreen display with simplified programming provides easy setup of the Revolver Sequencing Program



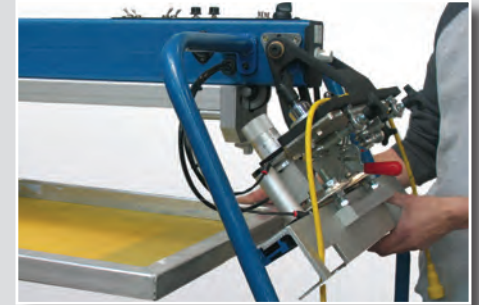
Optional Cut Piece Pallet Arms provide extra stability for printing cut pieces or oversize prints

OPTICAL NO-SHIRT DETECTOR

- Automatically prevents the press from screen printing on empty pallets
- Reduces misprints and minimizes press stoppage because of improperly loaded shirts

SCREEN CLAMPS & HOLDERS

- Adjustable rear screen holders accommodate a wide variety of screen sizes
- Clamping system holds roller frames without special adapters
- Flip-up front screen holders speed setup



- Pneumatic clamps hold frames tight and allow rapid screen loading

SQUEEGEE DAM

- Gently lowers the squeegee blade onto the screen mesh when the press is idle
- Helps prevent thinner water-based and discharge inks from flowing into the image area

SQUEEGEE/FLOOBBAR

- Angle and calibrated pressure adjustments are independently set
- Digital squeegee/floodbar speed display
- Front or rear print carriage stop position allows operator to leave screens clear or flooded (great for water-based inks)
- Independent squeegee & floodbar speed adjustments
- Park feature facilitates setup and tear-down by simultaneously retracting the squeegee and floodbar and then moving them to the outside edge of the press for easy access
- Squeegee pressure regulator on each printhead offers exceptional control of print pressure
- Visual reference marks every 5 degrees simplify squeegee/floodbar angle adjustments

STROKE LENGTH ADJUSTMENT

- Calibrated front & rear stroke length with tool-free adjustment maximizes screen printing speed

WARRANTY, SERVICE AND SUPPORT

- 24-hour hotline is staffed 365 days a year
- Access to M&R's Training Center
- Parts & supplies are available online at store.mrprint.com
- Two-year limited warranty

PALLETS

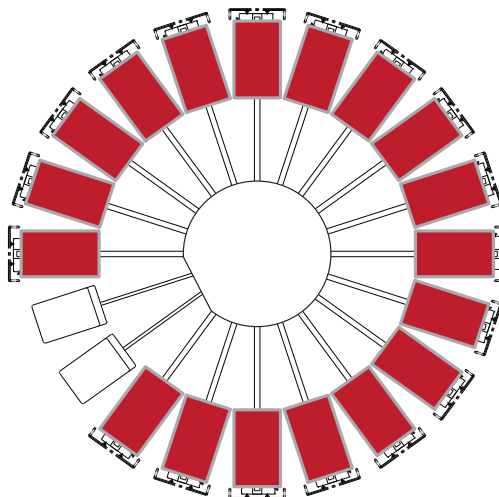
- M&R aluminum pallets and platens come in a wide range of sizes and styles

SQUEEGEE/FLOOBBAR

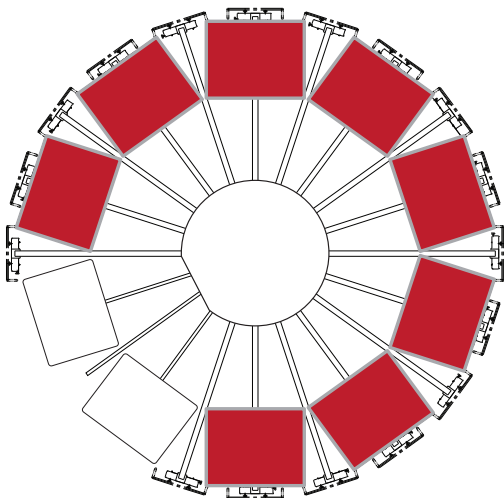
- Pneumatic squeegee/floodbar locks with tool-free angle adjustment

DIMENSIONS

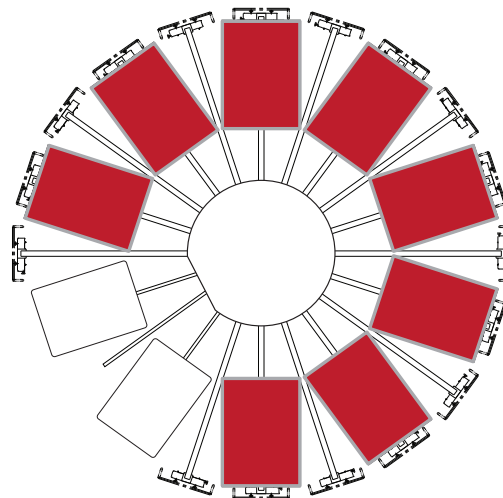
70/110 STANDARD

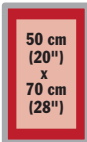
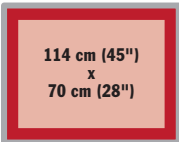
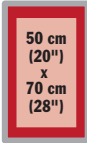
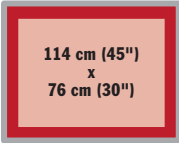
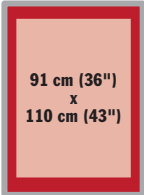


70/110 MAXIMUM SCREEN WIDTH



110 MAXIMUM SCREEN LENGTH



MODEL	COLORS	STANDARD (Every Printhead)	MAXIMUM WIDTH (Alternating Printheads)	MAXIMUM LENGTH (Alternating Printheads)
Challenger III 70	12 Colors	 50 cm (20") x 70 cm (28") 66 cm (26")	110 cm (43")	 114 cm (45") x 70 cm (28") 132 cm (52")
	14 Colors			
16 Colors	 50 cm (20") x 70 cm (28") 66 cm (26")	110 cm (43")	 114 cm (45") x 76 cm (30") 132 cm (52")	
18 Colors				 91 cm (36") x 110 cm (43") 110 cm (43")

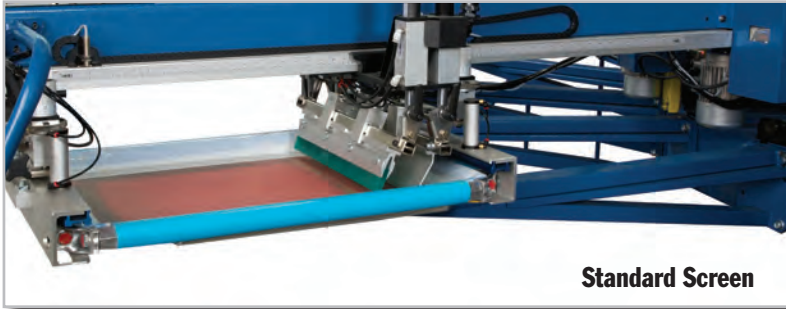
¹ Specifications may vary within models. See the back page for complete specifications.

 Maximum Frame Size

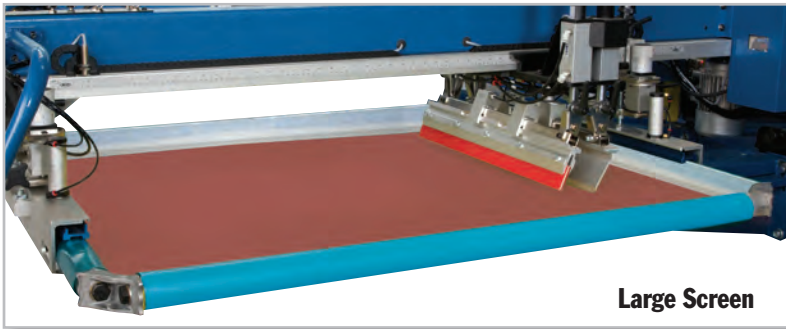
 Maximum Image Size

CHALLENGER® III

PRODUCT DETAILS



Standard Screen



Large Screen

Adjustable rear screen holders accommodate a wide variety of screen sizes



Independent controls on each printhead simplify press setup

SPECIFICATIONS

	Challenger III 70 14/12	Challenger III 70 16/14	Challenger III 70 18/16	Challenger III 70 20/18
Air @ 6,9 bar (100 psi)	609 l/min (21.5 cfm)	680 l/min (24 cfm)	779 l/min (27.5 cfm)	877 l/min (31 cfm)
Diameter	561 cm (221")	605 cm (238")	650 cm (256")	691 cm (272")
Electrical Requirements ¹	208-230 V, 3 ph, 50 A, 50/60 Hz, 10 kW 380-415 V, 3 ph, 29 A, 50/60 Hz, 10 kW	208-230 V, 3 ph, 53 A, 50/60 Hz, 10.5 kW 380-415 V, 3 ph, 31 A, 50/60 Hz, 10.5 kW	208-230 V, 3 ph, 59 A, 50/60 Hz, 11 kW 380-415 V, 3 ph, 34 A, 50/60 Hz, 11 kW	208-230 V, 3 ph, 62 A, 50/60 Hz, 12 kW 380-415 V, 3 ph, 36 A, 50/60 Hz, 12 kW
Maximum Frame Size (Alternating Printheads)	132 x 110 cm (52" x 43")	132 x 110 cm (52" x 43")	132 x 110 cm (52" x 43")	132 x 110 cm (52" x 43")
Maximum Image Area (Alternating Printheads) ²	114 x 70 cm (45" x 28")	114 x 70 cm (45" x 28")	114 x 70 cm (45" x 28")	114 x 70 cm (45" x 28")
Maximum Standard Frame Size	66 x 110 cm (26" x 43")	66 x 110 cm (26" x 43")	66 x 110 cm (26" x 43")	66 x 110 cm (26" x 43")
Maximum Standard Image Area ²	50 x 70 cm (20" x 28")	50 x 70 cm (20" x 28")	50 x 70 cm (20" x 28")	50 x 70 cm (20" x 28")
Shipping Weight	3892 kg (8580 lb)	4178 kg (9210 lb)	4491 kg (9900 lb)	5130 kg (11 310 lb)
Standard Pallet Size	41 x 56 cm (16" x 22")	41 x 56 cm (16" x 22")	41 x 56 cm (16" x 22")	41 x 56 cm (16" x 22")
Stations/Colors	14/12	16/14	18/16	20/18

	Challenger III 110 16/14	Challenger III 110 18/16	Challenger III 110 20/18
Air @ 6,9 bar (100 psi)	680 l/min (24 cfm)	779 l/min (27.5 cfm)	877 l/min (31.5 cfm)
Diameter	605 cm (238")	650 cm (256")	691 cm (272")
Electrical Requirements ¹	208-230 V, 3 ph, 53 A, 50/60 Hz, 10.5 kW 380-415 V, 3 ph, 31 A, 50/60 Hz, 10.5 kW	208-230 V, 3 ph, 59 A, 50/60 Hz, 11 kW 380-415 V, 3 ph, 34 A, 50/60 Hz, 11 kW	208-230 V, 3 ph, 62 A, 50/60 Hz, 12 kW 380-415 V, 3 ph, 36 A, 50/60 Hz, 12 kW
Maximum Print Length Frame Size (Alternating Printheads)	104 x 152 cm (41" x 60")	110 x 152 cm (43" x 60")	110 x 152 cm (43" x 60")
Maximum Print Length Image Area (Alternating Printheads) ²	86 x 110 cm (34" x 43")	91 x 110 cm (36" x 43")	91 x 110 cm (36" x 43")
Maximum Print Width Frame Size (Alternating Printheads)	132 x 114 cm (52" x 45")	132 x 114 cm (52" x 45")	132 x 114 cm (52" x 45")
Maximum Print Width Image Area (Alternating Printheads) ²	114 x 76 cm (45" x 30")	114 x 76 cm (45" x 30")	114 x 76 cm (45" x 30")
Maximum Standard Frame Size	66 x 110 cm (26" x 43")	66 x 110 cm (26" x 43")	66 x 110 cm (26" x 43")
Maximum Standard Image Area ²	50 x 70 cm (20" x 28")	50 x 70 cm (20" x 28")	50 x 70 cm (20" x 28")
Shipping Weight	4178 kg (9210 lb)	4491 kg (9900 lb)	5130 kg (11 310 lb)
Standard Pallet Size	41 x 56 cm (16" x 22")	41 x 56 cm (16" x 22")	41 x 56 cm (16" x 22")
Stations/Colors	16/14	18/16	20/18

¹ If incoming voltage differs from the voltage(s) listed in this brochure, calculate amperage accordingly. Other electrical configurations are available. Contact The M&R Companies for details.

² Custom configurations offer a wide range of maximum image areas. Please contact M&R for details.



The M&R Companies
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