CHALLENGER® III

Automatic Textile Press

FEATURES

- 10-18 colors, 12-20 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. Now, M&R's all-new Challenger III expands on that tradition by combining innovative patented and patent-pending features—like M&R's Revolver Print Program—with exceptional speed and the best ideas from over 20 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. Like Alpha 8, Challenger III's printheads also feature calibrated tool-free click-stop four-corner off-contact settings for fast and accurate screen leveling. Built from the ground up to optimize speed, performance, flexibility, print quality, and durability, Challenger III is ready to dominate the next decade of carousel textile printing.

All three versions of Challenger III feature Alpha 8-style electric printheads. Models 55, 70, and 110 offer respective maximum image lengths of 55 cm (22"), 70 cm (28"), and 110 cm (43"). Printheads are driven by fast, reliable electric-drive motors, and include no-tools 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. 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 size and maximum image area, front and rear screen holders allow easy placement of extra-wide screens for oversize and all-over 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 station. Challenger III 110 models include a wider print carriage for enhanced print quality.

Challenger III's large new touch-screen control panel with icon-based labeling can display information and commands in numerous languages, simplifying press operation and training anywhere in the world. Challenger III—with its extensive variety of configurations; unrivaled set of standard features and patented timesaving, output-enhancing exclusives; efficient design; and high production speed—is simply the most versatile carousel press on the market today.

CHALLENGER® III

STANDARD FEATURES

CAROUSEL/INDEXER
- Clockwise or counterclockwise rotation

CERTIFICATION
- CE & UL compliant: Built to specifications established by the European Committee for Standardization® (CE) and Underwriters Laboratories® (UL)

CONTROL CENTER

- Digital touch-screen control panel with icon-based labeling can display information and commands in numerous languages, simplifying press operation and training anywhere in the world
- Independent print-start/print-finish setting automatically activates and stops printheads at the beginning and end of production runs
- Jog-left/jog-right controls
- Multiple (1-9) print stroke capability
- Onboard self-diagnostics
- Production speed monitor ensures more accurate job costing
- Real-time production data
- Test print setting turns individual printheads on/off during test print cycle
- Users have the option to switch the touch-screen between the new Challenger III display and the classic M&R textile press display

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

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

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
- Solid-aluminum, low-profile, rubber-coated pallets
- Tool-free pallet locator speeds pallet changeover
- Tool-free quick release pallet locks

PRINT CARRIAGE
- Wider print carriage enhances print quality on 110 models

PRINTHEADS
- Brushless and maintenance-free electric-drive motors deliver smooth print strokes and exceptional control
- Independent print and reset buttons on each printhead
- Independent print/flood speed controls on each printhead simplify press setup

REGISTRATION
- Compatible with M&R's Tri-Loc® & Double Tri-Loc® Rapid Registration Systems
- 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 printing position (U.S. Patent No. 5,595,113)
- Touch-screen display with simplified programming provides easy setup of the Revolver Sequencing Program

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/FLOODBAR
- 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
- 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 print 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

OPTIONS

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 printing empty pallets

OPTICAL NO-SHIRT DETECTOR
- Automatically prevents the press from printing on empty pallets (U.S. Patent No. 5,383,400)
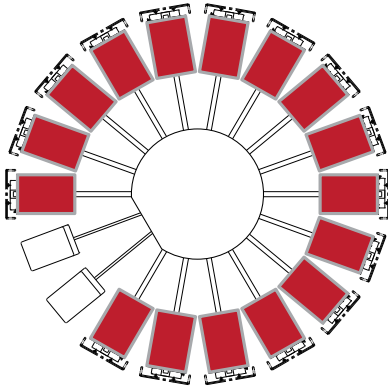- Reduces misprints and minimizes press stoppage because of improperly loaded shirts

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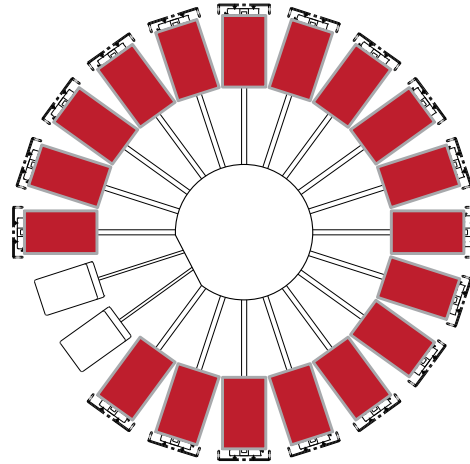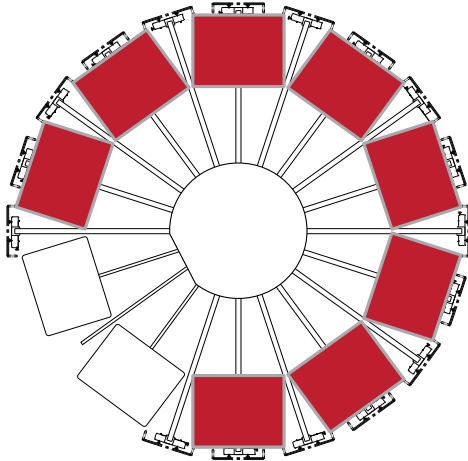- Pneumatic squeegee/floodbar locks with tool-free angle adjustment

55 STANDARD

70/110 STANDARD
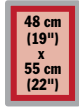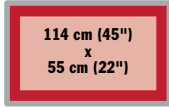
70/110 MAXIMUM SCREEN WIDTH

110 MAXIMUM SCREEN LENGTH
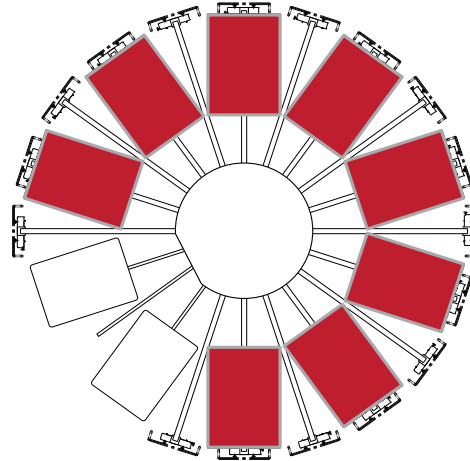
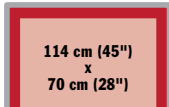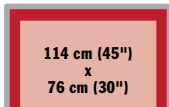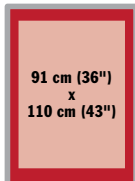| MODEL	COLORS	STANDARD (Every Printhead)		MAXIMUM WIDTH (Alternating Printheads)		MAXIMUM LENGTH (Alternating Printheads)	
Challenger III 55	**10 Colors** **12 Colors** **14 Colors** **16 Colors**[1]	48 cm (19") x 55 cm (22")	91 cm (36")	114 cm (45") x 55 cm (22")	91 cm (36")	N/A	
		63.5 cm (25")		132 cm (52")			
Challenger III 70	**12 Colors** **14 Colors** **16 Colors** **18 Colors**	50 cm (20") x 70 cm (28")	110 cm (43")	114 cm (45") x 70 cm (28")	110 cm (43")	N/A	
		66 cm (26")		132 cm (52")			
Challenger III 110	**14 Colors**[1] **16 Colors** **18 Colors**	50 cm (20") x 70 cm (28")	110 cm (43")	114 cm (45") x 76 cm (30")	114 cm (45")	91 cm (36") x 110 cm (43")	152 cm (60")
		66 cm (26")		132 cm (52")		110 cm (43")	

Custom configurations offer a wide range of maximum image areas. Please contact M&R for details. ■ Maximum Frame Size ■ Maximum Image Size
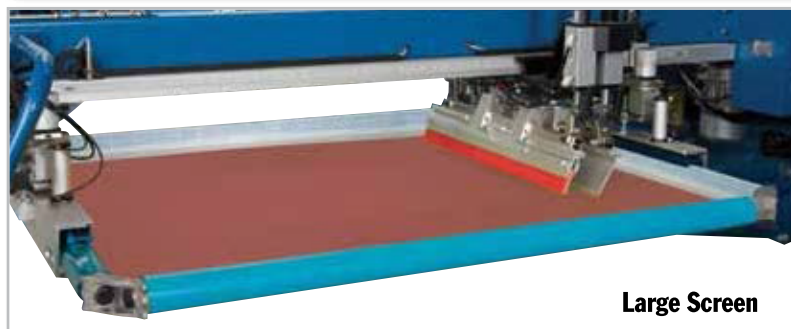
[1] Specifications may vary within models. See the back page for complete specifications.

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 55 12/10	Challenger III 55 14/12	Challenger III 55 16/14	Challenger III 55 18/16	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)	481 l/min (17.5 cfm)	609 l/min (21.5 cfm)	680 l/min (24 cfm)	779 l/min (27.5 cfm)	609 l/min (21.5 cfm)	680 l/min (24 cfm)	779 l/min (27.5 cfm)	877 l/min (31 cfm)
Diameter	457 cm (180")	500 cm (197")	549 cm (216")	592 cm (233")	550 cm (216")	594 cm (234")	640 cm (252")	686 cm (270")
Electrical Requirements[1]	208/230 V, 3 ph, 47 A, 50/60 Hz, 9 kW 380/415 V, 3 ph, 27 A, 50/60 Hz, 9 kW	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, 62 A, 50/60 Hz, 12 kW 380/415 V, 3 ph, 36 A, 50/60 Hz, 12 kW	208/230 V, 3 ph, 50 A, 50/60 Hz, 29 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 91 cm (52" x 36")	132 x 91 cm (52" x 36")	132 x 91 cm (52" x 36")	127 x 91 cm (50" x 36")	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 55 cm (45" x 22")	114 x 55 cm (45" x 22")	114 x 55 cm (45" x 22")	110 x 55 cm (43" x 22")	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	63.5 x 91 cm (25" x 36")	63.5 x 91 cm (25" x 36")	63.5 x 91 cm (25" x 36")	63.5 x 91 cm (25" x 36")	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]	48 x 55 cm (19" x 22")	48 x 55 cm (19" x 22")	48 x 55 cm (19" x 22")	48 x 55 cm (19" x 22")	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	3470 kg (7650 lb)	3860 kg (8510 lb)	4014 kg (8850 lb)	4273 kg (9400 lb)	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")	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	12/10	14/12	16/14	18/16	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	594 cm (234")	640 cm (252")	686 cm (270")
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.