

CHALLENGER® III D



Automatic Textile Press



FEATURES

- 10-18 colors
- Job Recall™ storage & retrieval system
- Digital control allows operators to electronically manage all print parameters

M&R's revolutionary Challenger III D, with groundbreaking Dynamic PrintStroke™, brings a new dimension to automatic textile printing. Dynamic PrintStroke™ provides programmable control over squeegee pressure, print/flood speed, print-stroke length, and print-carriage position and other settings. The squeegee pressure setting can be varied between print strokes, offering unparalleled control over ink deposit. These programmable print parameters—along with Ink Dip™, Ink Dam™, flash-cure, and other print settings—can be named, saved, and stored as a unique print program in M&R's Job Recall™ storage & retrieval system. Operators can later recall that job for subsequent print runs. For similar but not identical jobs, the operator can save a copy of the job under another name and tweak those settings rather than starting from scratch. Stored jobs can even be sent electronically to other Challenger III D machines, providing large operations and contract printers with unprecedented convenience and control over production.

Challenger III D's huge standard feature set includes a super-fast, ultra-quiet servo-driven indexer; servo-driven printheads; tool-free calibrated angle adjustments; a large and highly-sophisticated touch-screen controller; and quick-set printhead off-contact

(invaluable when printing thick inks or specialty inks like gels and high-density). Squeegee pressure can also be adjusted mechanically should the need arise. M&R's Automatic Pallet Preheat Mode™ with built-in pallet temperature sensor allows operators to preheat pallets to the desired temperature and track those temperatures throughout the production run. Each printhead includes a touchscreen that provides digital control over squeegee print pressure and squeegee and floodbar speeds. A socket on each printhead makes it easy to position a flash cure unit in any station and make on-the-fly adjustments from the main control panel.

Other features include Printhead Teach Mode™; front and rear micro-registration; tool-free adjustable rear screen holders; print-start/print-finish mode; and M&R's exclusive patented Revolver Print Program™, which automatically operates individual printheads in programmed sequence and allows multiple flashing without losing a printing position. Challenger III is also compatible with pre-press registration systems like M&R's Tri-Loc and Double Tri-Loc. With so many features and an unmatched level of flexibility, convenience, and control, Challenger III D is simply the finest automatic carousel textile press ever made.

www.mrprint.com
store.mrprint.com

CHALLENGER® III D

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

- Automatic pallet pre-heat mode with pallet temperature history
- Countdown program indicates when operator-set index count has been reached



- 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
- Stopwatch feature enables users to capture elapsed time for setup, runtime, shift time, or any other operation
- Teach Mode allows operators to apply one printhead's front and rear print-carriage stop settings to all other active printheads
- Test print setting turns individual printheads on/off during test print cycle
- Touch-Screen Print-Mode Display includes features like Stopwatch, Ink Dip™, Ink Dam™, Multi-Print Reset, and All Heads Off



OPTIONS

CUT-PIECE PALLET ARMS

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

DESIGN & CONSTRUCTION

- Built of heavy-duty steel and premium components
- Printheads and pallet arms provide the stability necessary for exceptional print quality
- Scanner-based safety system won't allow the press to index when it senses people or objects in its field of view

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

INK DAM SYSTEM

- Positions squeegee at the end of the print stroke so that it prevents ink from flowing in front of the blade or back into the image area

INK DIP SYSTEM

- Electronically adjustable ink retrieval system keeps ink in the print area (U.S. Patent No. 5,649,479)
- Includes control over distance and interval
- Individual settings can also be accessed at each printhead

JOB RECALL

- Controls all print parameters, including print and flood lengths and speeds; front or rear carriage-stop positions; Ink Dip™ and Ink Dam™ settings; flash programming; and M&R's new digitally-variable squeegee pressure control system
- Stored jobs can be electronically sent to other machines, including those in remote locations

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
- DynamicPrintstroke™ control gives users the ability to adjust print pressure stroke by stroke
- Independent print and reset buttons on each printhead
- Park Position feature lifts both squeegee and floodbar for easy change out
- Teach Mode allows operators to set a print carriage's front and rear stop positions via the printhead's touch-screen HMI

REGISTRATION

- Compatible with M&R's Tri-Loc® & Double Tri-Loc® Rapid Registration Systems
- Enhanced front and rear micro-registration adjustment with visual guides

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)

SCREEN CLAMPS & HOLDERS

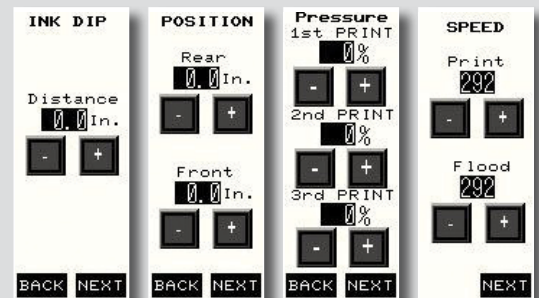
- Adjustable rear screen holders accommodate a wide variety of screen sizes
- Clamping system holds roller frames without special adapters
- Flip-up front screen holders speed setup
- Pneumatic clamps hold frames tight and allow rapid screen loading

SQUEEGEE/FLOODBAR

- Angle and calibrated pressure adjustments are independently set
- Digital control over squeegee/floodbar speeds and squeegee/floodbar stroke lengths
- Digitally-variable squeegee pressure control system
- Front or rear print carriage stop position allows operator to leave screens clear or flooded (great for water-based inks)
- Visual reference marks every 5 degrees simplify squeegee/floodbar angle adjustments

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



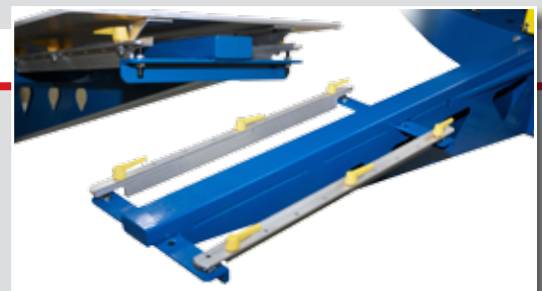
Touch-screens at the end of each printhead provide convenient control over numerous functions

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

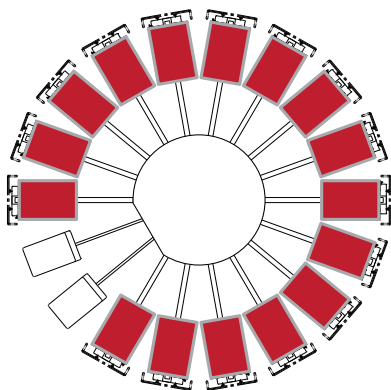


Optional Cut Piece Pallet Arms provide extra stability for printing cut pieces or oversize prints

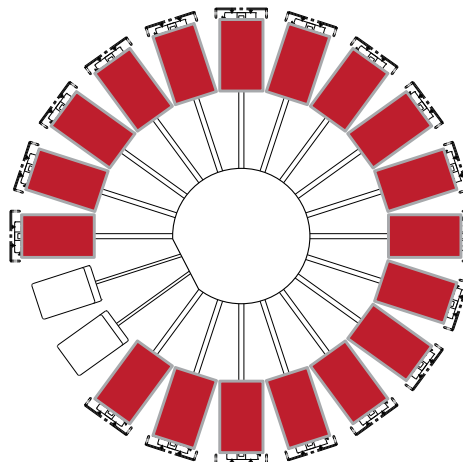


DIMENSIONS

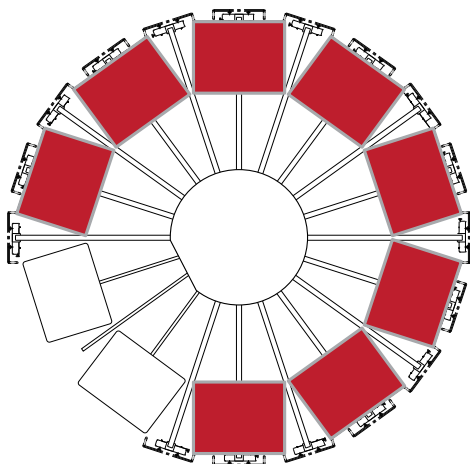
55 STANDARD



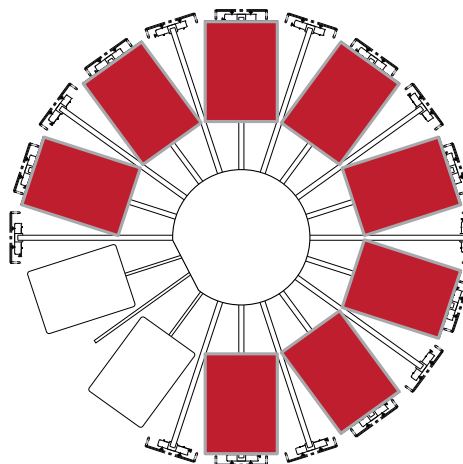
70/110 STANDARD

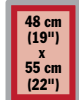
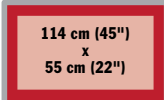

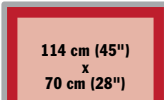
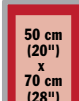
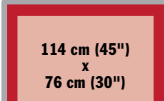
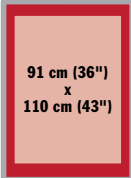


70/110 MAXIMUM SCREEN WIDTH



110 MAXIMUM SCREEN LENGTH



| MODEL | COLORS | STANDARD (Every Printhead) | MAXIMUM WIDTH (Alternating Printheads) | MAXIMUM LENGTH (Alternating Printheads) |
|----------------------|------------------------|--|---|--|
| Challenger III D 55 | 10 Colors |  91 cm (36") 63.5 cm (25") |  91 cm (36") 132 cm (52") | N/A |
| | 12 Colors | | | |
| | 14 Colors | | | |
| | 16 Colors ¹ | | | |
| Challenger III D 70 | 12 Colors |  110 cm (43") 66 cm (26") |  110 cm (43") 132 cm (52") | N/A |
| | 14 Colors | | | |
| | 16 Colors | | | |
| | 18 Colors | | | |
| Challenger III D 110 | 14 Colors ¹ |  110 cm (43") 66 cm (26") |  114 cm (45") 132 cm (52") |  152 cm (60") 110 cm (43") |
| | 16 Colors | | | |
| | 18 Colors | | | |
| | | | | |

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

 Maximum Frame Size

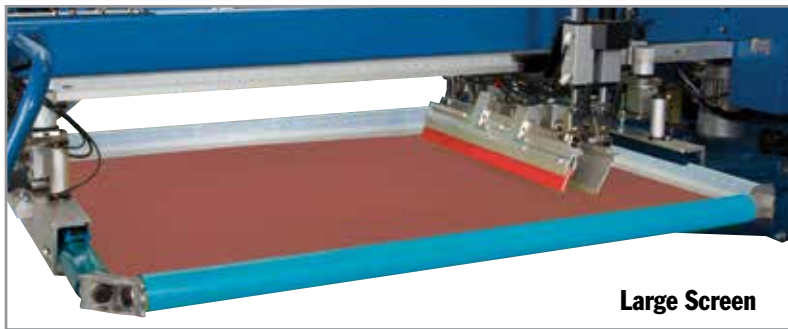
 Maximum Image Size

CHALLENGER® III D

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 D 55 12/10 | Challenger III D 55 14/12 | Challenger III D 55 16/14 | Challenger III D 55 18/16 | Challenger III D 70 14/12 | Challenger III D 70 16/14 | Challenger III D 70 18/16 | Challenger III D 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 | 475 cm (187") | 511 cm (201") | 554 cm (218") | 597 cm (235") | 561 cm (221") | 605 cm (238") | 650 cm (256") | 691 cm (272") |
| 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, 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 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 D 110 16/14 | Challenger III D 110 18/16 | Challenger III D 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
M&R • NUARC • AMSCOMATIC

The M&R Companies 1N372 Main Street, Glen Ellyn, Illinois 60137-3576 USA

USA: 800-736-6431 / 630-858-6101 / Fax: 630-858-6134 • Outside USA: +1-847-967-4461 / Fax: +1-847-967-0417

M&R Printing Equipment, Inc. and its subsidiaries (hereinafter M&R), believe the information in this advertisement to be accurate at publication, though it does not purport to list all manufacturing and specification variations, nor does it assume liability resulting from incompleteness or inaccuracy. M&R reserves the right to change specifications without notice. M&R expressly disclaims any liability for damages, consequential or incidental, from purchase, installation, servicing, and/or use of any product/service based upon information herein. No warranties of merchantability or fitness for a particular purpose are made or are to be implied from the information herein. No information herein may be reproduced or used in any manner without the prior, express written consent of M&R in each case. Copyright 2013 M&R Printing Equipment, Inc. All rights reserved. 061913