

MULTIGRIP™

Multi-Color Gripper Print/Cure System



MULTI-COLOR INLINE EVOLUTION

MultiGrip merges patented innovations, premium construction, and the industry's largest network of service and support into the finest high-speed multi-color gripper system available.



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MULTIGRIP™

Designed for Today —and Tomorrow

MultiGrip's compact modular design delivers unrivaled performance today and an upgrade path to more colors tomorrow. And MultiGrips are fast, flexible, reliable, and simple to operate. The separation of print/cure functions allows simultaneous printing and curing to maximize press speed.





Control Panel



Infeed Automatic Sheet Registration



Squeegee/Floodbar Assembly

Putting You in Control

Everything about MultiGrip is designed to boost productivity with fast setups, easy adjustments, and high-speed operation. And that starts with MultiGrip's Intelligent Press Control System™ (IPCS), an open interface that speeds and simplifies press operation.

IPCS provides intuitive touch-screen controls that are logically arranged and conveniently located. All key printhead parameters—including print/flood strokes, angles, speeds, and dwell timing—are programmable from the master control panel and from touch-screens at each print station.

Symbols, text and color coding guide the operator through press operations, and the user manual can be quickly accessed on-screen. IPCS provides the operator with continuous press status and job progress information on the easily-adjustable swing-arm-mounted master control panel.

Operational Modes

Operators can choose automatic mode; manual mode; sequential auto start/stop mode; or a sampling mode that delivers one finished print for adjustments of color and registration and for customer approval prior to the production run.

Print Capability

MultiGrip easily handles substrate thickness from 0.1 to 7 mm (0.004" to 0.276") within the range 120-3000 g/m².

Stock-Pile Capacity

Standard feed height of 128 cm (50") extends continuous run times. It's also a significant asset when printing thick substrates.

Automatic Sheet Feeders

Fully-integrated high-speed HTB sheet feeders with the Tornado™ sheet separation system keep pace with press speed. They excel at off-center loading and can be controlled from the main station.

Patented Automatic Infeed Registration

Computer-interfaced photoelectric sensors help ensure perfect substrate positioning for superb color-to-color registration. If the edge of the stock is not read by the photoelectric sensor, the gripper will not advance.

MultiGrip's Registration Control System™ (RCS) ensures fast, easy, accurate registration adjustments. All registration settings and adjustments are performed independently for each printhead from the touch screen located at the end of the line near the stacker area. RCS allows adjustments along the X-Y1-Y2 axis in 0.1 mm (0.004") increments within a range of ±8 mm (±0.3").

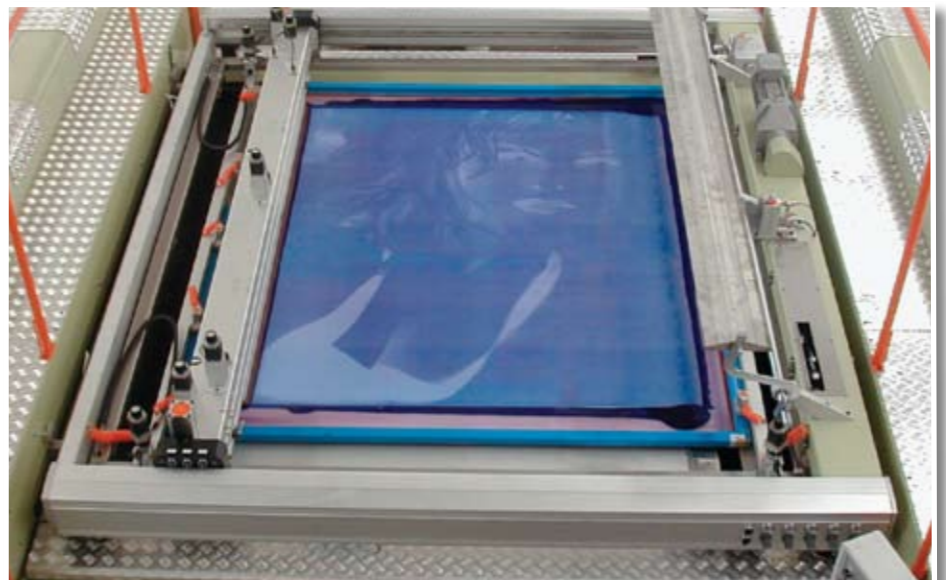
Getting a Grip

M&R's patented gripper bar assembly allows more accurate positioning. It precisely secures the substrate throughout the print/cure process for superb print quality. Its oversized extruded-aluminum profile provides fluid movement and the rigidity needed for high-speed traverse. The gripper bar is mechanically registered at each print station, and substrates are secured to spring-loaded plates that automatically adjust to provide uniform pressure to varying substrate thickness. Acceleration and deceleration are self adjusting and speed is electronically adjustable.

Vacuum Tables

MultiGrip's pre-vacuum system allows vacuum adjustments and settings during substrate positioning on the vacuum table prior to the print stroke. Vacuum timing and flow rate can be performed independently for each print table from the master control panel.

MultiGrip's Zoned Vacuum Table increases productivity and reduces setup time by allowing master-panel control of vacuum bed mask-out, which also eliminates the need to manually position the infeed photoelectric sensors according to substrate size.





INNOVATION

Substrate Loading & Transport

Conveyor speed, infinitely adjustable from the main control panel, ensures precise positioning for every substrate thickness.

MultiGrip's Anti-Static Bar neutralizes electrostatic charges through a wide range of ionizing systems that can be fitted between each color and/or at the infeed section.

CleanBrush™ absorbs particles from the substrate surface and disposes of them through the suction socket. A micro-moistening system applies a thin film of an antistatic cleaning fluid onto the tips of the brushes to bind fine particles to the brush while leaving the substrate surface clean and dry.

Printhead Design

MultiGrip printheads are exceptionally precise. Four-post printhead design, heavy-duty lifting columns, and a self-balancing system provide more accurate control.

Printhead high-lift mode simplifies screen loading, unloading, inspection and cleaning. Rapid screen change is enhanced by the ability of the press to rotate the squeegee/floodbar assembly 90° over the drip tray.

MultiGrip's park position rotates the squeegee/floodbar assembly nearly 180° to allow fast and easy squeegee/floodbar/screen insertion and removal, dramatically reducing setup time. The squeegee, floodbar and screen can be loaded and unloaded from both sides of the press.

The rear of the screen frame can be pneumatically moved from side to side to ensure accurate positioning. This also contributes to exceptionally fast setup times.

ScanRoto™ 70



Squeegee/Floodbar Assembly

The assembly features self-adjusting acceleration/deceleration speed; smooth, fluid carriage movement; and low operation noise. The pneumatically-controlled pressure equalizer ensures uniform pressure along the blade. Squeegee/floodbar angle is fully adjustable within a range of $\pm 7^\circ$. AutoLev maintains squeegee/screen contact during angle changes programmed to substrate thickness.

The Off-Contact Control System (OCS) provides fast, precise setup of off-contact height for each printhead in 0.1 mm (0.004") increments.

ScreenSet™ allows precise automatic positioning of the rear screen holder according to dimensions programmed into the master control panel. MultiGrip accommodates a wide range of screen sizes.

Auto-peel distance is infinitely adjustable from the master control panel within the peeling height and rate, from 0 to 40 mm (0"-1.6").

Customized Curing

MultiGrip's versatile UV cure stations support high press speeds by scanning simultaneously with the print stroke. The dual-lamp station allows the use of one or two lamps, and scan speeds and wattage settings from 60 to 120 watts/cm (23 to 47 watts/inch) can be universally applied or independently set for each station to provide the optimal cure for even the most difficult ink/substrate combinations. Premium-quality quartz glass plates ensure minimal shrinkage on heat-sensitive substrates.

Shuttling reflectors on MultiGrip's ScanRoto™ 70 rotate eccentrically to 70° at the end of the scanning stroke to avoid heat buildup on substrates. ScanRoto™ 70 automatically sets the scanning stroke based on the substrate's size to promote overall production speed, power-consumption savings, and cool UV-curing operation. When the UV system reaches the end of the set scanning stroke, it automatically reverts to standby. Cooling and exhaust systems are fully integrated to reduce press footprint.

Automatic Takeoff

The gripper bar releases the printed substrate onto an integrated conveyor system for final transportation to the stacker. MultiGrip's integrated blowback aids in the rapid removal of hard-to-handle substrates. Blowback settings can be performed independently from the master control console for each vacuum table.

Stackers

State-of-the-art automatic sheet stackers are designed to handle the high volume of substrates produced by fully-automatic screen printing presses. A photoelectric sensor in the infeed conveyor detects the incoming substrate and automatically sequences the joggers. Pneumatically-operated side-stacking jaws feature easily adjustable positioning and timing based on substrate size, and the hoist can be raised and lowered from the control panel. During automatic stacking, a photoelectric sensor system controls stock pile height.

RELIABILITY

SPECIFICATIONS

	MG1216	MG1218	MG1518	MG1522	MG1526	MG1722	MG1726	MG1730
Print Size	1220 x 1650 mm (48" x 65")	1220 x 1820 mm (48" x 72")	1580 x 1820 mm (62" x 72")	1580 x 2210 mm (62" x 87")	1580 x 2600 mm (62" x 102")	1700 x 2210 mm (67" x 87")	1700 x 2600 mm (67" x 102")	1700 x 3050 mm (67" x 120")
Print/UV Cure Stations	2-6	2-6	2-6	2-6	2-6	2-6	2-6	2-6
Substrate size max.	1270 x 1700 mm (50" x 67")	1270 x 1870 mm (50" x 74")	1630 x 1870 mm (64" x 74")	1630 x 2260 mm (64" x 89")	1630 x 2650 mm (64" x 104")	1750 x 2260 mm (69" x 89")	1750 x 2650 mm (69" x 104")	1750 x 3100 mm (69" x 122")
Substrate thickness range	0,1-7 mm (0.004"-0.276")	0,1-7 mm (0.004"-0.276")	0,1-7 mm (0.004"-0.276")	0,1-7 mm (0.004"-0.276")	0,1-7 mm (0.004"-0.276")	0,1-7 mm (0.004"-0.276")	0,1-7 mm (0.004"-0.276")	0,1-7 mm (0.004"-0.276")
Substrate weight range	120-3000 g/m ²	120-3000 g/m ²	120-3000 g/m ²	120-3000 g/m ²	120-3000 g/m ²	120-3000 g/m ²	120-3000 g/m ²	120-3000 g/m ²
Screen OD size max. ¹	1880 x 2040 mm (74" x 80")	1880 x 2210 mm (74" x 87")	2300 x 2210 mm (91" x 87")	2200 x 2650 mm (87" x 104")	2200 x 3050 mm (87" x 120")	2450 x 2600 mm (96" x 102")	2450 x 3000 mm (96" x 118")	2450 x 3600 mm (96" x 142")
Cycling speed ²	1100 cph	1000 cph	950 cph	900 cph	800 cph	750 cph	700 cph	600 cph
RCS: screen fine-tuning Y1-Y2-X	± 8 mm (± 0.315")	± 8 mm (± 0.315")	± 8 mm (± 0.315")	± 8 mm (± 0.315")	± 8 mm (± 0.315")	± 8 mm (± 0.315")	± 8 mm (± 0.315")	± 8 mm (± 0.315")
Rear screen locator adjustment	± 10 mm (± 0.394")	± 10 mm (± 0.394")	± 10 mm (± 0.394")	± 10 mm (± 0.394")	± 10 mm (± 0.394")	± 10 mm (± 0.394")	± 10 mm (± 0.394")	± 10 mm (± 0.394")
Gripper margin approx. ³	5 mm (0.197")	5 mm (0.197")	5 mm (0.197")	5 mm (0.197")	5 mm (0.197")	5 mm (0.197")	5 mm (0.197")	5 mm (0.197")
Squeegee angle adjustment	± 7°	± 7°	± 7°	± 7°	± 7°	± 7°	± 7°	± 7°
Squeegee vertical adjustment	50 mm (1.97")	50 mm (1.97")	50 mm (1.97")	50 mm (1.97")	50 mm (1.97")	50 mm (1.97")	50 mm (1.97")	50 mm (1.97")
Floodbar vertical adjustment	40 mm (1.57")	40 mm (1.57")	40 mm (1.57")	40 mm (1.57")	40 mm (1.57")	40 mm (1.57")	40 mm (1.57")	40 mm (1.57")
Squeegee speed range	0,3-1,5 m/sec (1 - 5 ft/sec)	0,3-1,5 m/sec (1 - 5 ft/sec)	0,3-1,5 m/sec (1 - 5 ft/sec)	0,3-1,5 m/sec (1 - 5 ft/sec)	0,3-1,5 m/sec (1 - 5 ft/sec)	0,3-1,5 m/sec (1 - 5 ft/sec)	0,3-1,5 m/sec (1 - 5 ft/sec)	0,3-1,5 m/sec (1 - 5 ft/sec)
OCS: off-contact adjustment	3-20 mm (0.118"-0.787")	3-20 mm (0.118"-0.787")	3-20 mm (0.118"-0.787")	3-20 mm (0.118"-0.787")	3-20 mm (0.118"-0.787")	3-20 mm (0.118"-0.787")	3-20 mm (0.118"-0.787")	3-20 mm (0.118"-0.787")
Peel adjustment	0-40 mm (0-1.575")	0-40 mm (0-1.575")	0-40 mm (0-1.575")	0-40 mm (0-1.575")	0-40 mm (0-1.575")	0-40 mm (0-1.575")	0-40 mm (0-1.575")	0-40 mm (0-1.575")
UV system	ScanRoto™70 dual-lamp							
UV Lamps	medium-pressure mercury-arc							
UV lamp power output ⁴	60-120 W/cm (152-305 W/in)							
Electrical Requirements ⁵	230/400V-50Hz							
Compressed air pressure	7 bar (102 psi)							

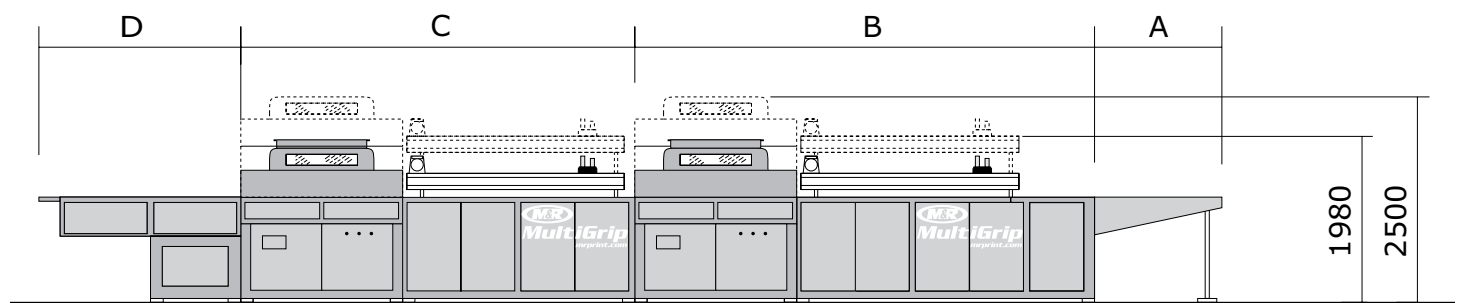
¹ Max screen outside dimensions

² Cycles per hour calculated at max printing-flooding strokes without feeding time

³ Adjustable to substrate's thickness and weight

⁴ Fully variable wattage setting

⁵ Other voltage-frequency available to meet customer's specification



DIMENSIONS

	MG1216	MG1218	MG1518	MG1522	MG1526	MG1722	MG1726	MG1730
Infeed height from ground	1280 ± 30 mm (50.4" ± 1.18")	1280 ± 30 mm (50.4" ± 1.18")	1280 ± 30 mm (50.4" ± 1.18")	1280 ± 30 mm (50.4" ± 1.18")	1280 ± 30 mm (50.4" ± 1.18")	1280 ± 30 mm (50.4" ± 1.18")	1280 ± 30 mm (50.4" ± 1.18")	1280 ± 30 mm (50.4" ± 1.18")
Infeed section – A	1250 mm (49.2")	1250 mm (49.2")	1600 mm (63")	1600 mm (63")	1600 mm (63")	1800 mm (71")	1800 mm (71")	1800 mm (71")
1st Print/UV Cure Station – B	5100 mm (201")	5100 mm (201")	5600 mm (220")	5600 mm (220")	5600 mm (220")	6100 mm (240")	6100 mm (240")	6100 mm (240")
Additional Print/UV Cure Station(s) – C	4250 mm (167")	4250 mm (167")	4800 mm (189")	4800 mm (189")	4800 mm (189")	5350 mm (211")	5350 mm (211")	5350 mm (211")
Delivery Section – D	2100 mm (83")	2100 mm (83")	2460 mm (97")	2460 mm (97")	2460 mm (97")	2770 mm (109")	2770 mm (109")	2770 mm (109")
Overall width	3900 mm (154")	4100 mm (161")	4100 mm (161")	4500 mm (177")	4900 mm (193")	4500 mm (177")	4900 mm (193")	5300 mm (209")

WORLDWIDE LOCATIONS



M&R Service & Support

The finest multi-color inline gripper press also comes with the industry's finest service and support. M&R is the world's largest manufacturer of screen printing equipment, with distributors and support operations across the United States and in over 40 countries on six continents.



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