Data Sheet

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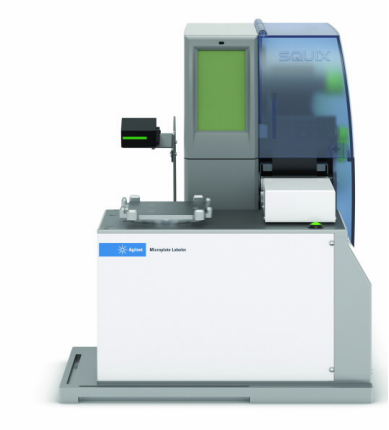
Agilent Microplate Labeler



Easy-to-use CAB SQUIX printer touchscreen on Agilent Microplate Labeler G5581A/G

Introduction

When introduced in 2000, the original Agilent Microplate Labeler quickly became a widely-used platform for on-demand, barcode print-and-apply applications in the life sciences. The Agilent Microplate Labeler G5581A/G retains the easy-to-integrate form factor, speed, and proven label applicator, and combines it with the next generation in thermal label printers, featuring a design optimized for:

- Small labels
- Repeatable label presentation position
- Automated label applicators
- Extended MTBA (Mean Time Between Assists)

Applications

1. Print barcodes, 2D barcodes, and human-readable content on adhesive labels
2. Apply adhesive labels with printed content on microplates
3. Verify barcodes when used with a barcode reader
4. Create data clones and log microplate activities when used with a barcode reader

Repeatable and reliable

The Microplate Labeler offers repeatable and reliable labeling, with:

- Improved registration—ideal imaging and picking positions
- Custom small label peeling mechanism
- Tensioned peeling system—ensures label backing stays taut
- Buckling-resistant die-cast aluminum chassis
- Agilent-certified, designed-for-automation, clear-backed, adhesive labels

Additional product features include:

- 600 dpi high resolution, crisp images, and more flexibility in sizing codes
- Reduced particulate generation—via cleaner label backing
- Bright, easy-view transparent printer cover
- 100-240 volt auto switching power supply
- The printer touchscreen displays information about the printer and how-to videos

Modes of operation

Standalone

The Microplate Labeler can be operated in a standalone (manual) mode in which the user loads and unloads microplates from the microplate stage. This mode requires the use of a host PC running the VWorks Automation Control Software.

Although used in a manual mode, the Microplate Labeler coupled with the VWorks software allows the user to leverage these benefits of automation:

- Print and apply up to four labels per plate on any size batch of plates
- Use databases, files, or counters to define unique data to be automatically printed on each successive label
- Use constants to put the same data on multiple labels without needing to type that data multiple times
- Use the optional barcode reader to clone data from existing labels onto new labels
- Use the optional 1D barcode reader to verify data on each label after application to the plate

Automated in Agilent workstations

When integrated in an Agilent lab automation workstation such as the BenchCel Workstation, the Microplate Labeler is controlled by the same flagship software application, VWorks. Providing the widest range of instrument and applications support, VWorks allows complete automation of the labeling function when used with a compatible microplate handler such as the Agilent BenchCel.

Integrated into a 3rd Party automation system

ActiveX control software is provided with each Microplate Labeler, allowing the instrument to be incorporated into an integrator's own host automation software. The instrument features both Ethernet and serial ports to enable communication with the host PC.

Barcodes, data sources

With the optional integrated barcode scanner option, you can instantly create data clones or log microplate activity. Bundled software can access a variety of data sources, including comma- or tab delimited files and spreadsheets, and can be integrated with an ODBC-compliant LIMS.

Labware compatability

The Agilent Microplate Labeler accommodates a wide range of microplates that meet the ANSI Standards ANSI/SBS 1-2004 through ANSI/SBS 4-2004. Compatible labware range includes many deep-well microplates, full-skirt PCR microplates, certain low-profile microplates and tube racks. A two-position microplate stage allows for two vertical label application positions that automatically adjust for labware with special requirements such as tall microplate skirts or tall deep-well microplates.

Compact size and speed

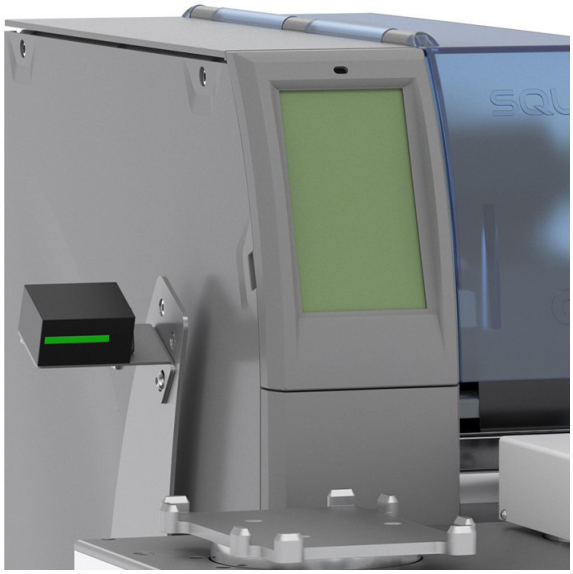
The Microplate Labeler's compact size fits easily on a benchtop, while its speed allows you to achieve aggressive throughput goals. The 600-dpi thermal transfer printer allows the Microplate Labeler to print up to six fields (of machine- or human-readable content) per label.

High quality consumables

Labels and ribbons designed and tested for laboratory use, withstand exposure to wide temperature ranges (-80°C to 100°C) and various reagents including DMSO—important features in many biotech applications.

Walkaway Time =	Printer Reliability	+ Applicator Reliability	+ Consumables Reliability

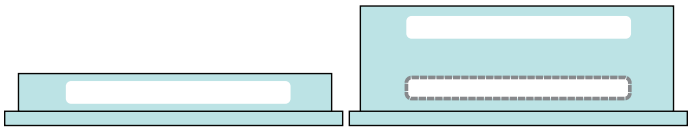
Laboratory automation is our business. We're listening and understand the goal: speed-to-opportunity. Agilent helps your lab get there with fast, dependable products and services of high value.



Optional barcode reader/arm assembly.

Automated labeling print-and-apply solution

For high-throughput labeling needs, the Microplate Labeler can be integrated with the Agilent BenchCel Microplate Handler. The BenchCel allows up to 360 plates to be labeled at one time, at a rate of three microplates per minute, making quick work of even the tallest stack of microplates.

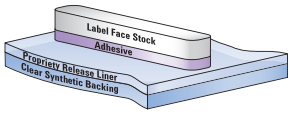
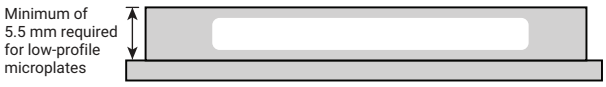


Choice of two convenient automated placement positions. Left microplate features centered label placement, right microplate could have label in the same relative position (label with dotted line), centered relative to this microplate's height or placed higher towards the top of the microplate.

Features and benefits

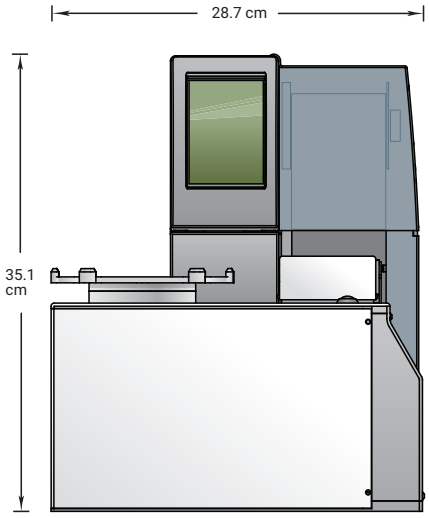
- Flexible label formats: The Microplate Labeler offers a wide range of fonts, linear barcodes, 2D matrix codes and magnifications for maximum flexibility; you can label up to four sides of most compatible labware using a variety of data input sources.
- Easy to integrate: With a small footprint, an easy-to-access plate stage, and straightforward device drivers, the Microplate Labeler is an excellent choice for integration projects.
- High speed: The Microplate Labeler can repeatedly print and apply labels at speeds of up to one label every 4 seconds.
- Machine code verification: With the optional barcode reader, the Microplate Labeler can verify and reapply barcode labels. The barcode reader can also be used to clone existing labels or for systematic microplate tracking.

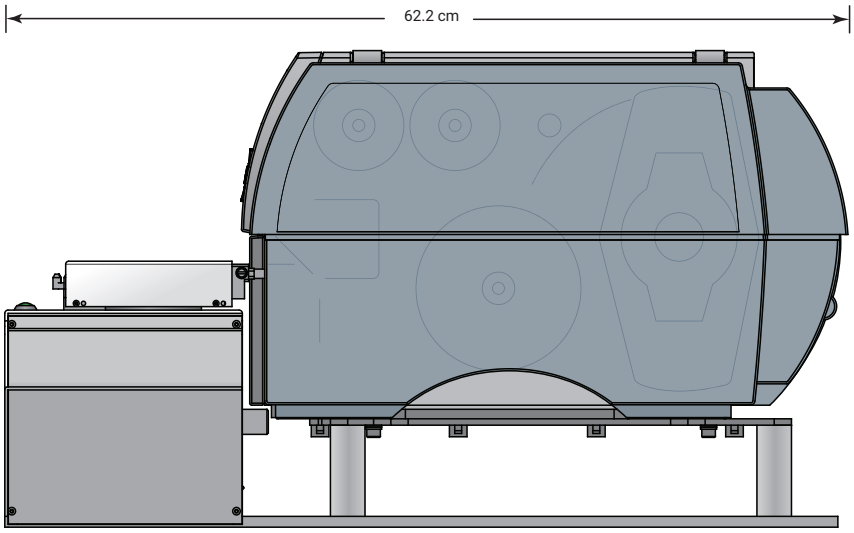
Specifications

Cycle Time	Less than 4 seconds per label excluding plate exchange
Printer Resolution	600 dpi
Label Application	± 1.0 mm horizontally and ± 0.5 mm vertically
Symbologies	Code 128 Code 39 (full ASCII) Interleaved 2 of 5 Codabar Code 93 HIBC Data Matrix (2D) PDF 417 (2D) Micro PDF 417 (2D)
Labware Compatibility Microplates	Microplates that meet the ANSI Standards ANSI/SBS 1-2004 through ANSI/SBS 4-2004
Operating Requirements	
Electrical Rating	100–240 VAC, 50–60 Hz, 2.75A fuse
Power Consumption	120V 60Hz: 38 W 230V 50Hz: 38 W
Heat Generation	1.3 BTU/hr
Air	70 Lpm at 6.9 bar [2.5 cfm at 100 psi]
Software	Use Agilent VWorks software to process plates with the Microplate Labeler in a stand-alone mode and as part of an Agilent lab automation workstation. Utilize ActiveX commands when using third-party software to control the Microplate Labeler. Microplate Labeler as a stand-alone instrument requires VWorks software. Contact Technical Support or your Agilent Automation Product Specialist for details.
Controller	PC running compatible software per above
Interface	10 BaseT Ethernet Port (Recommended), or RS-232/Serial Port
Certification	CE certified
Label Media	Agilent Microplate Labeler certified, designed-for-automation, adhesive labels plus high performance, application-matched ribbon for biotech applications. For complete media specifications, please refer to: Microplate Labeler Consumables Selection Guide  Agilent Microplate Labeler automation-certified labels with application-matched ribbon guarantee the highest level of system performance and superior instrument and applications support
Label Dimensions	50.8 mm W x 6.35 mm H (2 in x 0.25 in)* 50.8 mm W x 4.32 mm H (2 in x 0.17 in)** 
Roll Length	6,500 or 13,000 labels per roll for 6.35 mm (0.25") labels 6,500 labels per roll for 4.32 mm (0.17") labels. Labels are sold with enough ribbon to print the corresponding amount of labels in Agilent G5581A/G Microplate Labeler "Media Kits."
Temperature Range	–80°C to 100°C
Durability	DMSO and acetone resistant

** The instrument design has been optimized for the use of this Agilent standard label size. For non-standard labels, contact the Agilent Automation Solutions Technical Support Team or an Agilent Technical Sales Professional for additional information or to discuss your requirements.*

*** For use with low-profile microplates with a minimum of 5.5 mm unobstructed vertical space from the top of the skirt to the top edge of the plate. Special 4 mm vacuum pads has to be installed for use with 0.17" labels and cannot be used interchangeably to print 0.25" labels. Specify 0.17" labeleler media kit and vacuum pad kit when ordering. Field service installation is required.*





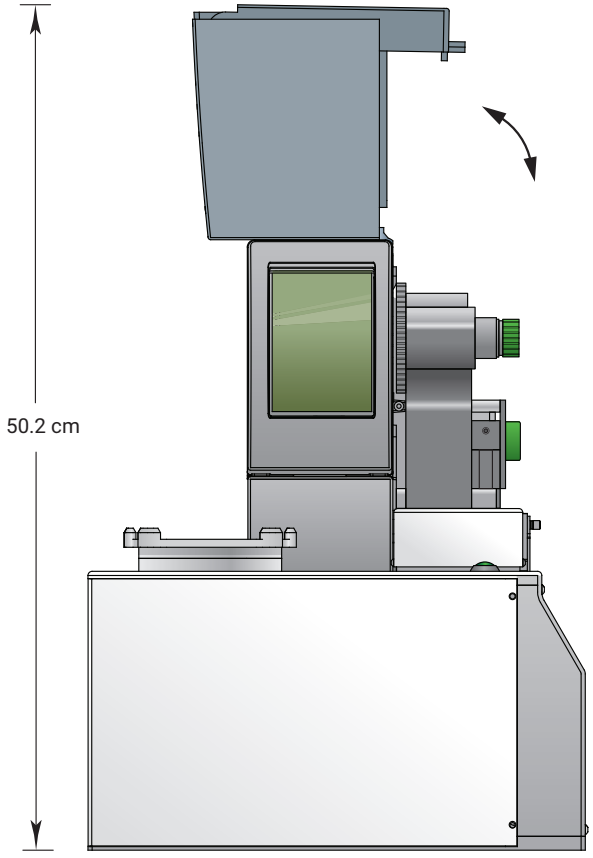
Dimensions:

Width: 28.7 cm [11.3 in]

Depth: 62.2 cm [24.5 in]

Height: 35.1 cm [13.8 in]

Weight: 21 kg [46.7 lbs]



Labeler with hinged cover open for consumables replacement. If you have height constraints, the instrument can operate with snap-off see-through cover removed if within a safety enclosure, free from aggressive chemicals or vapors.

Part Number (Instrument Order/ Configuration)	Description	Part Number. (Standalone purchase of component only)
G5581A/G	**Microplate Labeler.** High speed, microplate label printer/applicator, for robotic integration or stand-alone operation. Variety of symbologies, fonts, and magnifications. (Includes 1 ea. 6.5K Media Kit)	Not Applicable
G5581A/G standard	**Labeler Barcode Reader (1D).** Verify or clone linear (1D) barcodes. Includes mounting arm and cable. Included as standard. To remove, select option 010.	08332-101
G5581A/G standard	**Labeler Media Kit 0.25" 6.5K.** Ribbon & labels for 6,500 labels. DMSO resistant, -80 to +100°C. 6.35 mm H x 50.8 mm W (0.25" H x 2" W). Compatible w/ 06397-001, 0.25" (6.35 mm) Vac Pads. (Includes 6,500 labels and ribbon to print 6,500 labels)	G5404-60005
G5581A/G Option 015	**Install 0.17" Labeler Media Kit and Vacuum Pads.** Includes labeler media kit 0.17" (4.32 mm) for 6,500 labels and 0.17" vacuum pad kit.	G5404-60030 G5507-60003
Misc. Related Components		
	Labeler Media Kit 0.25" 13K. Ribbon & labels for 13,000 labels. DMSO resistant, -80 to +100°C. 6.35 mm H x 50.8 mm W (0.25" H x 2" W). Compatible w/06397-001, 0.25" (6.35 mm) Vac Pads.	G5404-60013
	Labeler Media Kit 0.17" 6.5K. Ribbons & labels for 6,500 labels. DMSO resistant, -80 to +100°C. 4.32 mm H x 50.8 mm W (0.17" H x 2" W). Compatible w/ G5507-60003, 0.17" (4.32 mm) Vac Pads.	G5404-60030
	Labeler Vac Pad Kit 0.25". Vacuum pads for 0.25" (6.35 mm) high labels. Maintenance spare, replace when stiff/ cracked. Set of six. End-user replaceable. (Suction cups used to pull label off backing.)	06397-001
	Labeler Vac Pad Kit 0.17". Vacuum pads for 0.17" (4.32 mm) high labels. Maintenance spare, replace when stiff/ cracked. Set of six. End-user replaceable. (Suction cups used to pull label off backing.)	G5507-60003

Notes

1. Labware compatibility. The use of this instrument platform requires the use of microplates that meet the ANSI Standards ANSI/SBS 1-2004 through ANSI/SBS 4-2004. Since customer application requirements can vary, customers should make an effort to confirm the suitability of this product for their needs as Agilent does not warrant or make claims as to the suitability of an instrument for customer applications. Product Specialists and Application Scientists are available to assist the customer in determining if the instrument is suitable for the workflow under consideration.
2. 3rd party media: Labels and ribbons. The performance of the Agilent Microplate Labeler has been optimized using Agilent media. If you choose to try third-party labels or ribbons and experience poor performance/ instrument problems and contact Agilent for support, it is your responsibility to immediately notify the Agilent support representative that you are using third-party media. Use of third-party labels and ribbons may be outside the scope of the terms of the Microplate Labeler instrument warranty and may result in the user paying for any necessary repairs and applications support, as a result of using these materials. If you are considering the use of third-party consumables because the Agilent consumables do not meet your requirements, please give Agilent the opportunity to try to help.
3. Labeler printer upgrade. G5404B CAB a2+ printer upgrade to G5581A CAB Squix printer is available through Service.
4. Instrument warranty: One year. Details are available on the Agilent website.

www.agilent.com/mass-spec/micro

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