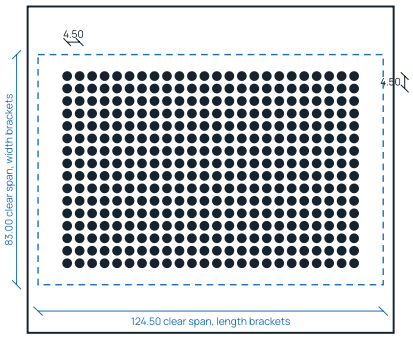
LABTIE 384-WELL BEAD DISPENSER CONVERTER MEASUREMENTS – ACCURATE MODULAR BEAD DISPENSER

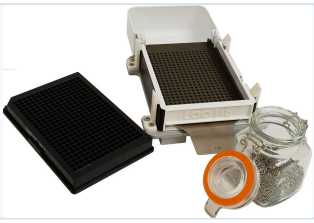
CS-384W-P-3.1mm.STEP SolidWorks 2021 · Millimetre 384-Well Converter

The LabTIE 384-Well Bead Dispenser is an accurate modular bead dispenser for 384-well microplates. This datasheet covers the 384-well Converter, the metal unit that attaches the Dispenser on top of the Meshplate or the plate: the outlet grid pitch, the clear span between brackets, and the plates the brackets close around. All figures are taken from the released STEP solid, and the views are generated from that same geometry.

FIG. 01 · TOP VIEW FROM THE STEP MODEL



THE LABTIE 384-WELL BEAD DISPENSER



The modular bead dispenser as supplied, dropping straight into a 384-well microplate through the 384-well Converter.

Outlets	**384, 16 × 24**
Grid pitch	**4.50 × 4.50 mm**
Clear span	**124.50 × 83.00 mm**
Outlet bore	**Ø3.50 mm, straight**
Body outline	**132.02 × 117.70 mm**

MEASUREMENT 1

Distance between the holes

4.50 mm across 4.50 mm along

Centre to centre, the standard 384-well grid. 384 positions in a 16 × 24 grid on exact 4.500 mm steps both ways, so the grid measures 67.50 × 103.50 mm from first to last centre. Each position is a straight Ø3.50 mm bore through the 7.00 mm outlet plate; the file name states 3.1 mm, and the solid measures 3.50.

MEASUREMENT 2

The Dispenser (converter) dimensions clear span between brackets

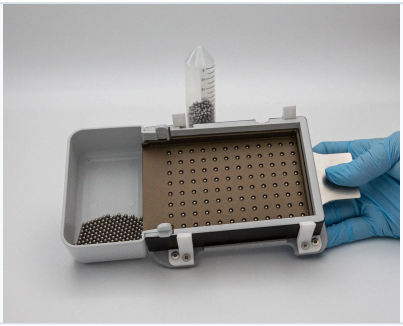
124.50 mm length 83.00 mm width

Inner face to inner face across the four corner brackets on the underside. Across the width the bracket outer faces measure 92.44 mm, so each bracket wall is 4.72 mm thick, and the brackets stand 7.00 mm deep below the outlet plate. The body itself is a 132.02 × 117.70 × 4.00 mm base with a 116.58 × 78.16 × 3.00 mm raised outlet section on top.

MEASUREMENT 3

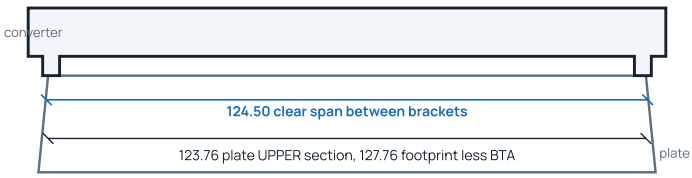
FIT ON THE PLATES

FIG. 02 · THE DISPENSER (CONVERTER) IN USE



The Dispenser in use, as shown on the product page. The flat top part carries the 384 outlets on the 4.50 × 4.50 mm grid; the brackets sit on the underside and close around the plate's upper section, shown in section opposite.

FIG. 03 · SECTION: HOW THE BRACKETS ENGAGE THE PLATE



The brackets close around the microplate's upper section, not around the ANSI base footprint. A plate published at the 127.76 × 85.48 mm footprint measures 123.76 × 81.48 mm across that upper section once the Bracket Taper Allowance is counted, and that is the dimension the fit is judged on.

The standard ANSI/SLAS microplate fits, with the brackets closed on both axes

AXIS	CLEAR SPAN	PLATE UPPER SECTION	SOURCE	MARGIN	PER SIDE
Length	124.50	123.76	BTA	**+0.74**	0.37
Width	83.00	81.48	BTA	**+1.52**	0.76

VERIFIED FIT both axes within +2.00 mm

The clear span is measured from the converter solid. The plate upper section is derived from the manufacturer's published 127.76 × 85.48 mm footprint less the Bracket Taper Allowance (BTA) of 4.00 mm on each axis, per LabTIE, and is marked as derived in its own source column. Page 3 applies the same derivation per plate.

* Bracket Taper Allowance (BTA) = 4.00 mm per axis, counted ON TOP OF the inner bracket size. It is added to the clear span (124.50 / 83.00), never subtracted from it.

MEASUREMENT 4

THE 384-WELL MICROPLATES THAT FIT THE CLEAR SPAN

Every plate below is a 384-well microplate on the ANSI/SLAS footprint. The upper section is derived from the published footprint less the BTA of 4.00 mm per axis, and the margin is the clear span less that upper section. Fit is Verified within +2.00 mm on both axes.

BRAND AND CATALOGUE NO.	TYPE	FOOTPRINT	SOURCE	UPPER SECTION	MARGIN L / W	FIT
Greiner Bio-One 781101	384 well PS, F-bottom, clear	127.76 × 85.48	Vendor	123.76 × 81.48	+0.74 / +1.52	Verified fit
Corning 3701	384 well PS, clear flat bottom, TC-treated	127.76 × 85.48	Vendor	123.76 × 81.48	+0.74 / +1.52	Verified fit
Corning 3573	384 well PS, low flange flat bottom	127.80 × 85.50	Vendor	123.80 × 81.50	+0.70 / +1.50	Verified fit
Corning 3820	384 well PS, low volume flat bottom	127.80 × 85.50	Vendor	123.80 × 81.50	+0.70 / +1.50	Verified fit
Thermo Scientific Nunc 242757	384 well PS, flat bottom, non-treated	127.76 × 85.48	Format	123.76 × 81.48	+0.74 / +1.52	Verified fit
Eppendorf 0030128508 · twin.tec 384	384 well PCR plate, skirted	127.76 × 85.47	Vendor	123.76 × 81.47	+0.74 / +1.53	Verified fit
Bio-Rad HSP3805 · Hard-Shell	384 well PCR plate, thin wall, skirted	127.76 × 85.48	Format	123.76 × 81.48	+0.74 / +1.52	Verified fit

Vendor · footprint published by the manufacturer. **Format** · the de-facto ANSI/SLAS footprint shared by the 384-well format, where the manufacturer states conformance rather than the figure. **BTA** · derived, footprint less 4.00 mm per axis. **LabTIE** · our own measurement from the solid. Deep-well and low-volume 384 plates on the same footprint fit the same way; plate height is not part of the fit. Brand names are given so you can recognise your own labware; LabTIE is not affiliated with these manufacturers.

RESULT

The 384-well Converter measures 124.50 × 83.00 mm clear span between brackets and carries 384 Ø3.50 mm outlets on the standard 4.50 × 4.50 mm grid, 67.50 × 103.50 mm from first to last centre. Closed on a plate on the ANSI/SLAS 127.76 × 85.48 mm footprint it leaves 0.37 mm per side along the length and 0.76 mm per side across the width, so every outlet lands over the matching well.

THE ONE FIGURE TO CONFIRM

The plate's upper section is the figure to confirm: plates that carry a raised lip, a barcode rail or a moulded collar above the skirt can exceed the 123.76 × 81.48 mm derived here. Plate not listed? Send the name or part number with your quote request.