

PULSEspencer R

Technical Data



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General

The **PULSEspencer R** is engineered to deliver ultra-precise, contactless dispensing of reagents in volumes ranging from picoliters to microliters. Designed for life science researchers, it simplifies complex liquid handling tasks such as dose-response assays, qPCR setups, and compound screening. With its unmatched accuracy and speed, the **PULSEspencer R** supports miniaturized workflows, reduces reagent consumption, and accelerates assay development – all within a compact and intuitive platform.

PULSEspencer R (875-300010)

Weight	16.1 kg (35.4 lb)
Dimensions (L x W x H)	470 mm x 380 mm x 230 mm
Recommended footprint (incl. laptop)	850 mm x 380 mm x 230 mm
Dispensing technology	<u>Non-contact</u> by applying thermally generated pressure pulses
Volume range	8 pL – 200 µL* (approx. 7.4 orders of magnitude)
Precision	< 8%**
Dispensing speed	10 nL across 96 well format in 20 sec
Compatible labware	12 to 1536 well plates (6-47 mm height)***, glass slides and custom labware
Supported fluids	DMSO, aqueous solutions, protein solutions, PCR master mixes

* depending on type of fluid and dispensehead cassette

** for volumes >100 pL

*** plate limits due to evaporation: DMSO dispensing max. 32 plates, aqueous dispensing max. 8 plates or 1536 wells (means : 1x 1536 well plate or 4x 384 well plate or 8x 96 well plate)

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Physical data

Interface	USB port
Fuses	2 × 5 × 20 mm T 4 A 250 V AC
Line voltage	100 – 240 V AC
Line frequency	50/ 60 Hz
Power consumption	Max. 120 watts
Noise emission	< 75 db (A)
Operation conditions	<ul style="list-style-type: none">▪ Indoor use only▪ Permissible ambient temperature +20 °C to +30 °C▪ Permissible relative humidity 30% to 80%, non-condensing▪ Maximum altitude 3000 mNN▪ Pollution degree 2

Analytik Jena dispenser software

Specifications	Description
Operating system	<ul style="list-style-type: none">▪ Windows 11▪ Windows 10
Display resolution	Minimum screen resolution of 1280 x 720 pixels
Memory requirements	256 GB drive (minimum) recommended
Memory (RAM)	8 GB RAM recommended
Interfaces	USB
Software language	English

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Consumables

Dispensing cassettes for PULSEspencer R				
Product name	RR8	RR8s	RR4	RR4s
Usage type	Single-use	Single-use	Single-use	Single-use
Description	8 dispenseheads of 20 µL total volume each		4 dispenseheads of 200 µL total volume each	
Qualified fluid classes	Aqueous solutions, protein	DMSO, master mix, aqueous solutions <u>requiring</u> surfactant	Aqueous solutions, protein	DMSO, master mix, aqueous solutions <u>requiring</u> surfactant
Order number	875-300725	875-300720	875-300745	875-300740
Packaging unit(s)	20	20	20	20
Warranty	1 year	1 year	1 year	1 year
Shelf life	-	-	-	-
Dead volume	2.5 µL	0.5 µL	2.5 µL	0.5 µL
Dispense volume/ fill volume	all wells > 1 nL 4 – 20 µL all wells < 1 nL 4 – 10 µL	all wells > 1 nL 2 – 20 µL all wells < 1 nL 2 – 10 µL	all wells > 1 nL 50 – 200 µL	all wells > 1 nL 50 – 200 µL
CV	< 8%	< 8%	< 8%	< 8%
Dispensing volume range	8 pL – 20 µL	11 pL – 20 µL	1 nL – 200 µL	1 nL – 200 µL

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