

Your Personal Pipetting Assistant

CyBio SELMA



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Inspiring technology making pipetting so much easier

CyBio SELMA is a semi-automatic pipettor with minimal required space for fast and precise processing of 96- and 384-well microplates without the need for programming. This allows an easy and reproducible transfer of 96 or 384 samples in only one step. All movements and processes that are crucial for high precision and reproducibility are performed by reliable drives. This guarantees excellent and consistent results every time.

The CyBio SELMA family comprises six different pipetting heads with both 96- and 384 channels which are covering a volume range from 0.5 μL up to 1000 μL . Thus, it is easy for the customer to choose the CyBio SELMA version optimally matching the volume range for the applications to be performed.

CyBio SELMA features:

- **Save your valuable lab space**
CyBio SELMA has a compact footprint and fits on any lab bench as well as into most laminar flow hoods
- **Simplify your pipetting tasks**
Easy and intuitive operation via touch screen, comfortable selection of pipetting parameters (e.g. volumes), and saving of methods without programming
- **Workplace convenience redefined**
CyBio SELMA is equipped with an automatic tip tightening function to reduce time. Pre-loaded tip magazines ensure immediate use. Within seconds, the tips are changed and the CyBio SELMA is ready for the next application.
- **Comfortable and Precise in every detail**
No more strenuous and monotonous pipetting by hand, no more empty or inaccurate filling of wells and no more repetition of tests because of pipetting inaccuracies – CyBio SELMA enables a safe and error free transfer of 96 or 384 samples in a single step
- **Become more flexible and be prepared for the future**
Optional integration of various accessories like vacuum or shaker for a range of applications

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CyBio SELMA Offers More Comfort, Higher Performance and More Flexibility ...

CyBio SELMA is extremely easy to operate without the need for a separate computer control system. Pipetting, dispensing, mixing and many other pipetting modes as well as the desired language are easy selectable via touch screen. The touch screen also displays the required parameters, for example volume and pipetting speed, the process can then be started. All manual tasks, such as changing the microplates, are shown on the display screen. Thus, guaranteeing a fast and precise processing of the microplates.



... Thus You Will Be Faster, More Efficient and More Competitive

With CyBio SELMA you are not restricted to processing only whole microplates. There is an option both in 96-well microplates as well as in 384-well microplates to work column by column. The addition of controls or samples in individual columns, as well as serial dilution is possible at any time.



For CyBio SELMA, using various types of microplates is simple and intuitive. In order to reach the optimum depth of tip immersion in each microplate well, the pipetting head can be brought into the right position thanks to an easy-to-use adjustment dial. For recurring processes, all adjustments such as dispense height, volume and pipetting speed are memorized, retrievable and changeable for regular use at any time.



In addition to the different pipetting heads for different volume ranges, there are various accessories available to support additional laboratory tasks. Multiple clean-up methods can be automated very easily through the use of a vacuum chamber. Also an orbital shaker can be used in addition to the 2-positions for microplates and reservoirs. Through the use of heating or cooling solutions, temperature dependent applications are easily realizable.

Liquid Handling



Flexibility that inspires

With different reservoirs and trays for reagents CyBio SELMA enables a large selection of applications. Thus, the 96- and 384-well microplates are replicated and reformatted or filled with buffer in a fast and reliable manner. Thanks to special tip magazines, CyBio SELMA is also able to process individual columns and serial dilution series can be created easily and accurately.

CyBio SELMA offers the possibility to react to different liquids and to adjust the pipetting speeds to the appropriate conditions without compromising intuitive operation.

Precision with sophisticated technology

CyBio SELMA consists of 96 or 384 pipetting channels which enable a safe and error-free transfer of 96 or 384 samples in a single step. Sample mix-ups or the neglect of individual wells are now a thing of the past.

The high quality tips and the proven tip sealing principle have been successfully applied for more than 25 years in the high-throughput area and have provided extremely accurate and reliable results.

Your Competent Partner in Services

Our service staff ensures preventive maintenance and calibration visits according to our strict service requirements. We prepare operator trainings including application support onsite or at our facilities.



We set the standard in **Product Innovation**.

We care about **your success**.

Our **highly skilled service staff** is committed to excellence.

Our **philosophy** is simple.

Your benefits

- Software upgrades with installation and training
- Unlimited phone support
- Worldwide service network
- Factory trained field service engineers
- 24-48 hour on-site service response

Just call our service contact

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Worldwide partners

CyBio's contact partners are available worldwide on-site.



Technical Data

Pipetting channels	96 or 384
Processing column by column	yes
Tip types 96 ^{*1}	25 µL, 60 µL, 250 µL or 1000 µL
Tip types 384 ^{*1}	25 µL or 60 µL
Working range ^{*2}	0.5 µL – 25 µL, 1 µL – 60 µL 5 µL – 250 µL, 10 µL – 1000 µL
Precision 25 µL pipetting head (96 or 384 channels)	2 – 5 µL ≤ 2 % CV ^{*3} > 5 – 25 µL ≤ 1 % CV ^{*3}
Precision 60 µL pipetting head (96 or 384 channels)	3 – 5 µL ≤ 2 % CV ^{*3} > 5 – 60 µL ≤ 1 % CV ^{*3}
Precision 250 µL pipetting head ^{*3}	10 – 25 µL ≤ 2 % CV ^{*3} > 25 – 250 µL ≤ 1 % CV ^{*3}
Precision 1000 µL pipetting head ^{*3}	25 – 100 µL ≤ 2 % CV ^{*3} > 100 – 1000 µL ≤ 1 % CV ^{*3}
Microplate formats	96, 384, shallow and deep well
Work positions	2
Dimensions (Wx H xD)	307 x 480 x 325 mm ^{*4}
Weight	approx. 18 kg ^{*5}
Working conditions	15 °C to 37 °C
Humidity	< 85 % at 30 °C

*1 For further information please see the brochure "Consumables for Liquid Handling Instruments" – Consumables for CyBio SELMA

*2 Working range for the corresponding head type of the CyBio SELMA family

*3 Specified volume range based on our in-house Quality Control - standard absorbance measurement procedure using p-Nitrophenol as described in (1).

*4 CyBio SELMA 96/1000 µL H= 520 mm

*5 CyBio SELMA 96/1000 µL approx. 20 kg

(1) Photometric and Gravimetric Liquid Handling Check Procedure to determine the Random Error (Precision) and the Systematic Error (Accuracy) of automated liquid Handling Systems (ALHS), Analytik Jena Application Note www.analytik-jena.de/lab-automation/liquid-handling/cybio-felix/applications.
See also: www.iwa15.org

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