

Simple, intuitive, and compact.



Liquid Handling Station

F I R S T C L A S S · B R A N D



The name BRAND is synonymous with high-precision volumetrics and high-performance life science products.

Our many years of experience in both areas have gone into the latest development from BRAND – the Liquid Handling Station. This pipetting system handles daily routine tasks with the highest possible precision, leaving time for other work.

Versatile

Seven freely configurable work positions accommodate anything from individual vessels up to 384-well plates, solving nearly any pipetting need.

Intuitive

Simplest possible method creation in minutes – intuitive software, no programming knowledge needed.

Compact

Just 60 x 49 cm, full power in eight stations – at a height of just 53 cm!

Made in Germany.



Automated Liquid Handling

Simply uncomplicated!

The Liquid Handling Station from BRAND combines 45 years of experience in the area of manual Liquid Handling with over 30 years in the manufacture of high-precision disposable items.

The pipette system works on the same air-interface principle as the piston-operated pipettes widely used in laboratories, and is designed for medium sample throughput.

The Liquid Handling Station takes care of simple, monotonous (and frequently error-prone) routine tasks as well as complex pipetting tasks, such as PCR, qPCR or cherry picking, working through them efficiently.

Typical applications

- Preparation of 'assay ready' plates
- PCR-, qPCR- and ELISA Set-up
- Serial dilutions
- Replication of microtiter plates (96/96 and 384/384)
- Reformatting of plates (96/384 and 384/96)
- Cell cultures
- General liquid transfers in single vessels, strips, and plates in the ANSI/SLAS format
- Preparation and execution of enzyme assay
- Sample preparation for following analysis
- Cherry-picking



Variety for every application...



3 Pipette modules (Liquid Ends)

The basis for the pipette modules are components from the familiar Transferpette® S.

Three single-channel Liquid Ends (SC) and two 8-channel Liquid Ends (MC) are available for contact-free liquid delivery.

Manual changes are so easy a child can do them, and they take only a few seconds. No tools are needed: Just press the ejection button, pull out the Liquid End, and insert a new one – and you're done!

The volume testing of the pipette modules is carried out according to ISO 8655 part 6.

The Liquid Handling Station and BRAND robotic tips and filter tips are designed to be used together. This is the only way to obtain the best possible results.



SC 1 - 50 µl



SC 10 - 200 µl



SC 40 - 1000 µl



MC 1 - 50 µl



MC 20 - 300 µl

4 Adapters

Different height adapters, tip adapters, and racks ensure stable support and an even working height for the plates and vessels used.



Microtube rack 1.5



Microtube rack 0.5



Microtube rack 5.0



96-well PCR



384-well PCR



Height adapter 60



Height adapter 30



Tip adapter



A Closer Look

The Liquid Handling Station from BRAND: fast, quiet, and reliable.

The pipette system handles routine tasks at high speed and with the highest precision – quietly and reliably.

The Liquid Handling Station closes the gap between electronic pipettes and highly complex, expensive pipetting robots. It primarily consists of a 3-axis system, five different pipette modules (Liquid Ends) and seven different adapters.

The speeds and the particularly dynamic movements of the axis system are designed to permit rapid, exact pipetting while simultaneously minimizing the risk of contamination due to loss of liquid drops during movement. Adapters bring the plates/racks used to a single height, reducing unnecessary vertical movements. That saves time during pipetting!

1 Front door*

Thanks to its compact design and the front door, the Liquid Handling Station needs very little space! An area of just 595 mm x 485 mm and 690 mm in height with the door open allows it to be set up in close quarters in the lab or under the safety hood. The space-saving design of the front door allows it to be swung up easily and it is mechanically braked when closing.

* Patent pending

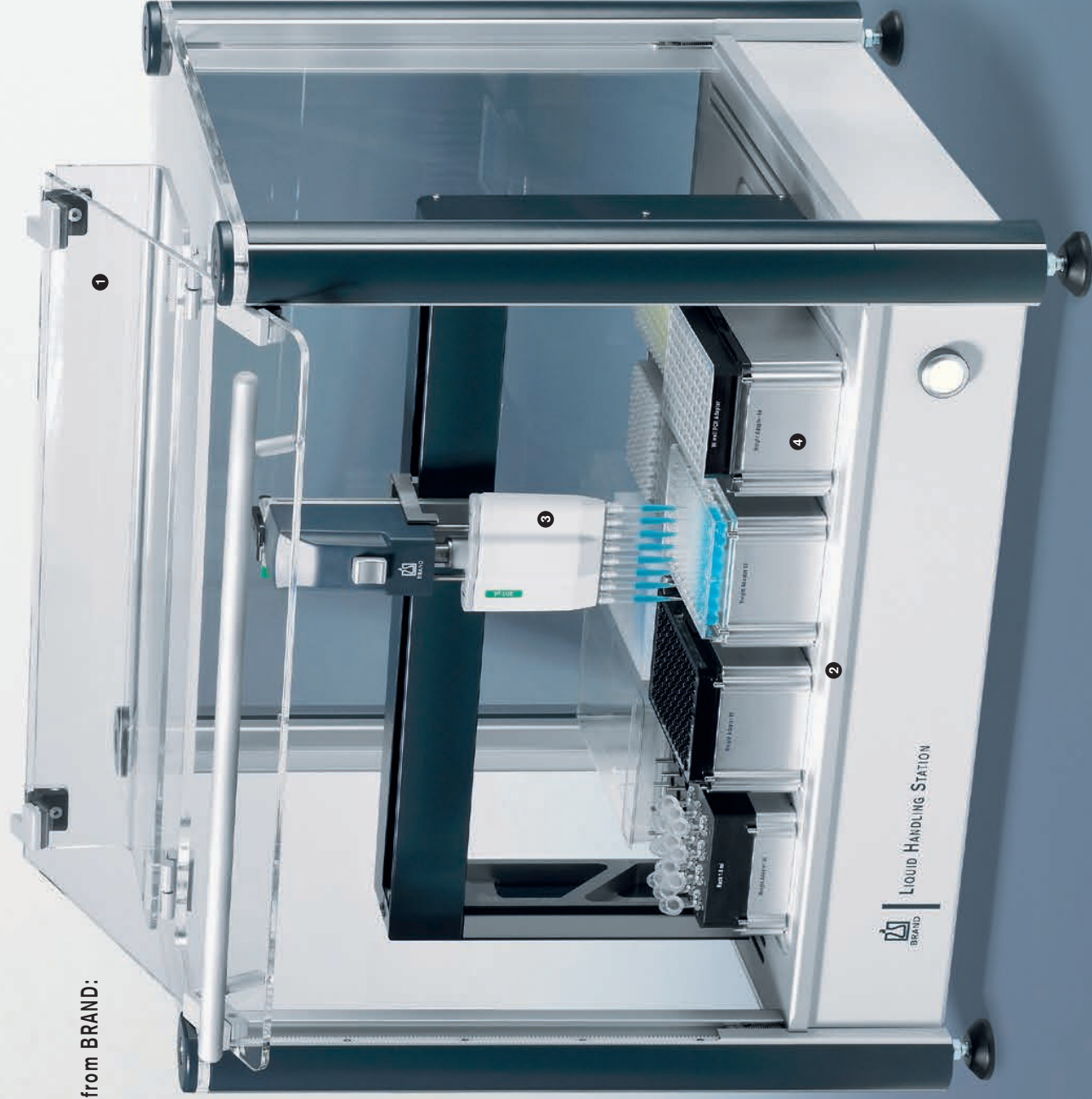
2 Work table

The work table has eight work positions, seven of which use the ANSI/SLAS format and can be freely assigned. The waste box in position 1 can hold up to three hundred 300 µl tips or one hundred fifty 1000 µl tips.

The Liquid Handling Station works with single vessels, PCR 8-strips, reservoirs, 96-well and 384-well plates.

The BRAND Liquid Handling Station is an open system. That means that disposable items (e.g., microplates, deep-well plates, single vessels, etc.) from other manufacturers can also be used. Special adapter, e.g., for cryogenic tubes, are available upon request.

To obtain optimum results, the system works exclusively with the new robotic tips from BRAND.



Software

New workflow? No – as always!

All pipetting tasks that can be done with conventional pipettes can quickly be defined as a method in the software to save time. Simplest method creation in minutes – the intuitive software needs no programming skills.

Pipetting, dispensing, mixing – no problem!

Standard workflow:

1. Define the name for the pipetting method
2. Set up the work table
3. Define the transfer commands
4. Start executing
5. Done!



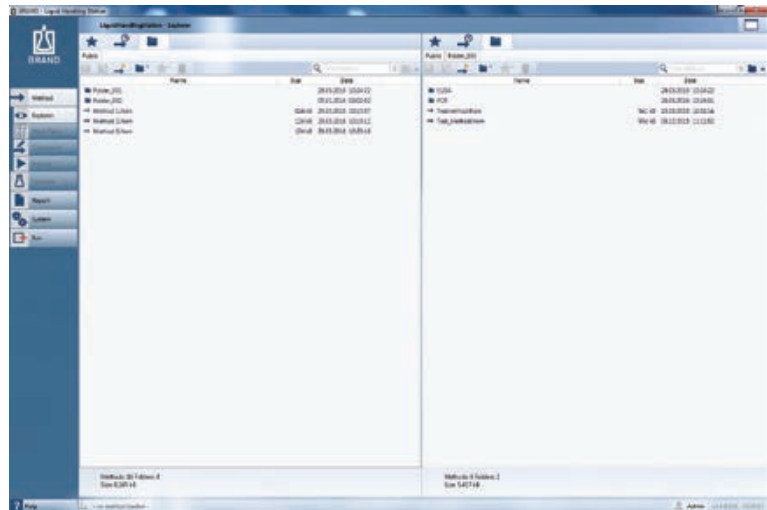
Functions:

- Professional user management
- Predefined liquid properties (liquid types) that can be changed or added at any time
- Disposable item (labware) database can be added to on a customer-specific basis
- Testing of inconsistencies by the software
- Automatic logging of procedures (customizable reports)
- Context-sensitive help function
- Data import/export
- E-Mail report
- Timeline

Application example

1. Defining the name for a method

Existing methods can be retrieved or modified.



2. Setting up the work table

① Equipping list:

Selecting the work position to be used

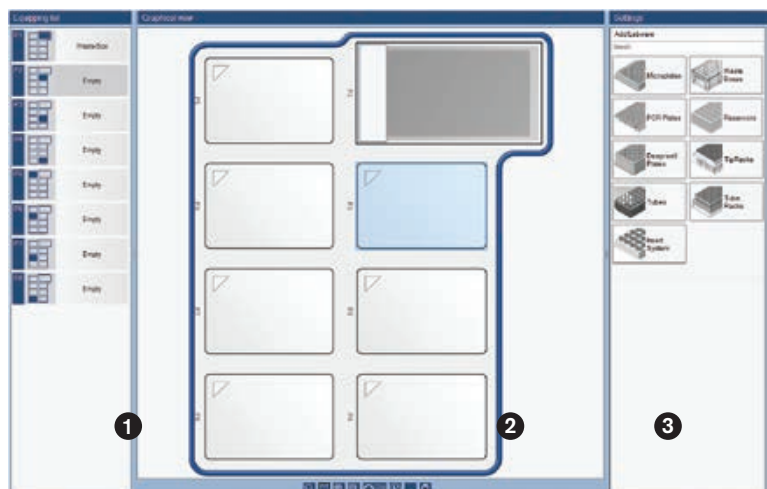
② Graphical view (work table):

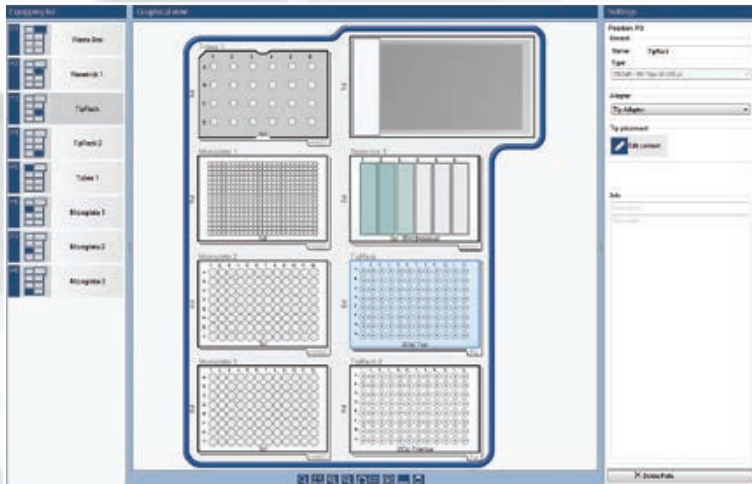
7 freely assignable work positions and 1 waste box

③ Settings:

Here is where the disposable items (labware) available are stored that should be used to set up the predefined work positions.

This three-part screen layout is the same throughout the software, making data entry easier.

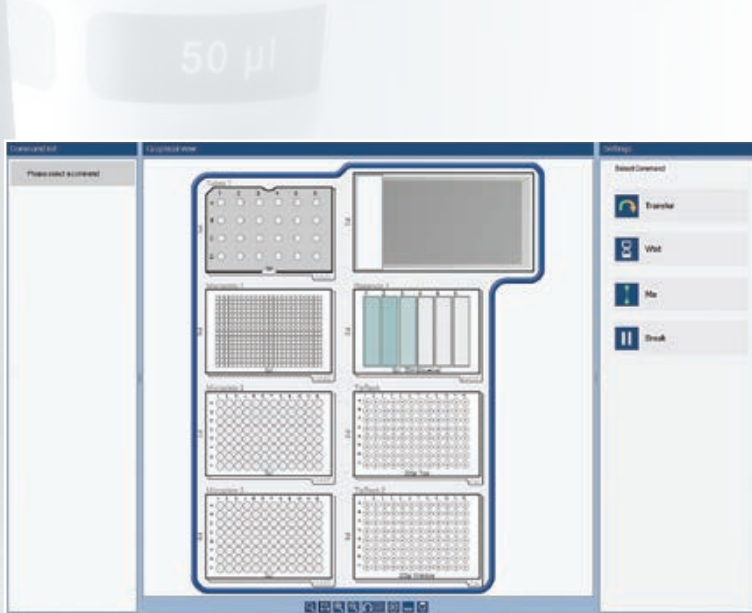




2. Setting up the work table (cont.)

The system works with robotic pipettes and filter tips from BRAND to guarantee the highest possible precision.

If the PC is connected to the Internet, BRANDplates® microplates can quickly be found and selected using the selection guide on the BRAND homepage.



3. Commands

Four commands are available:

Transfer:

This higher-level main command can be used to define nearly any pipetting task, such as multi-dispensing, serial dilution setup, pooling, etc.

Wait:

For example, setting up incubation periods

Mix:

Mixing of samples

Break:

Interrupting the program sequence, for example to incubate or shake samples externally.



In the settings, a variety of predefined parameters can be changed as needed – from liquid types to prewetting of tips, even the determination of the immersion depth of the tips during liquid pickup and delivery.

The source and destination plates can easily be distinguished on the screen by color.

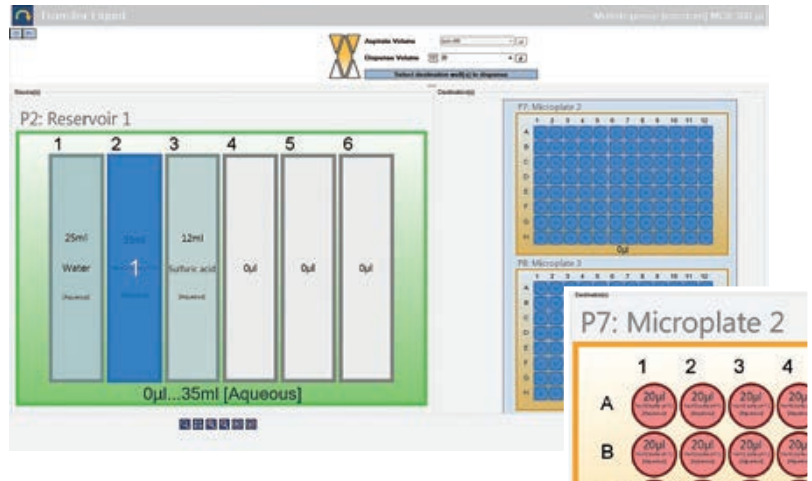
3. Commands (cont.)

Single plates or multiple plates can easily be designated for liquid transfer by selecting them with the mouse.

Even complex pipetting patterns can easily be set up in a very short time.

An import function permits effortless insertion of pipetting tasks, for example from spreadsheet calculation programs (normalization, cherry-picking, etc.).

To track the content of wells in detail at any time just scroll the mouse over any well/location.

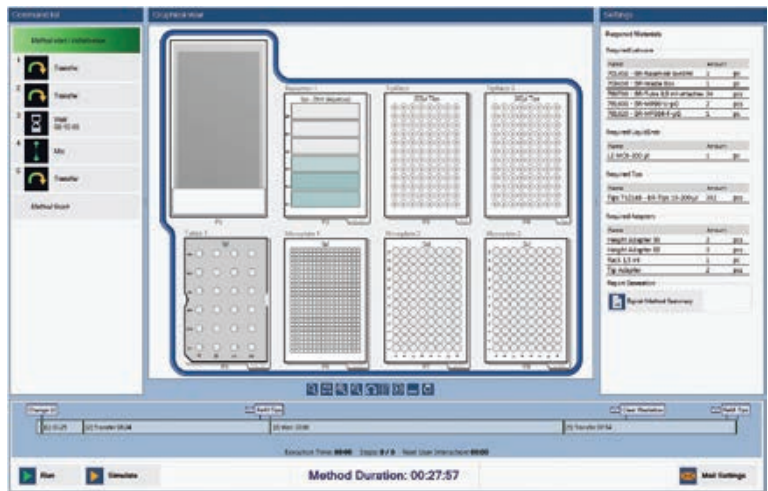


4. Execute

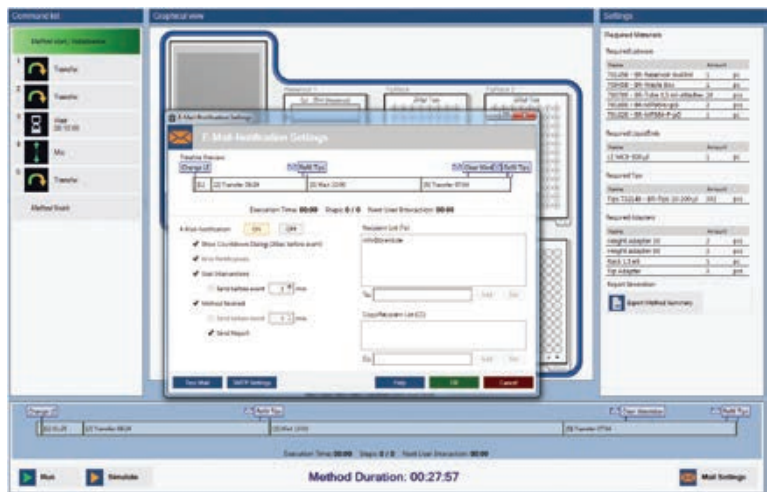
The Execute command starts the method.

First there is a confirmation of the layout of the work table to be sure that the labware has been correctly placed and the required Liquid End has been inserted.

The progress of the work sequence can be followed at any time.



The user will be informed among others about intervention points and the end of the method by e-mail.



A timeline shows the duration of the overall method, the individual steps, and even the points in time when interventions are required (e.g., changing the 200 LE).



5. Done!

Service Agreements

Standard – Plus – Premium

The warranty period for the Liquid Handling Station is one year. With BRAND Plus or Premium service agreements, this warranty can be extended by an additional 12 months.

	Standard	Plus	Premium
Service of mechanical components	✓	✓	✓
Cleaning and greasing the system	✓	✓	✓
Adjusting the Liquid Handling Station	✓	✓	✓
Software-Update	✓	✓	✓
Free replacement of wear parts*		✓	✓
Free replacement of damaged components			✓
Collect + Return		✓	✓
12-month warranty extension		✓	✓
Reminder service			✓
Leased equipment			✓

* even outside the warranty period

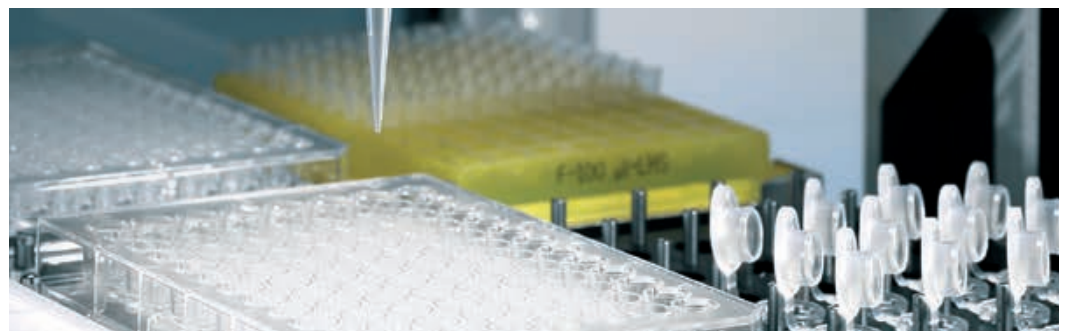
BRAND also offers users an optional equipment qualification as part of our quality management.

■ Installation Qualification (IQ)

Based on IQ test plans and a subsequent report, we document that the Liquid Handling Station and its software meet the requirements of the product specification. Among other things, the scope of delivery is compared with the order data, the correct installation of the motor controller is checked, the system configuration is tested for correctness, compliance with legal safety regulations is examined, and the training of users documented.

■ Operational Qualification (OQ)

The correct functioning of the Liquid Handling Station and its components is tested against standards and true samples are tested against end user and BRAND specifications. Here, too, a test plan is executed and a report issued and approved by the user.



Technical Data

Specifications

Liquid Ends	1-channel Liquid Ends (SC), 8-channel Liquid Ends (MC)
Volume ranges	1-channel Liquid Ends: 1 - 50 µl, 10 - 200 µl, 40 - 1000 µl 8-channel Liquid Ends: 1 - 50 µl, 20 - 300 µl
Working positions	8 working positions: P2 - P8, P1 for waste box
Weight	approx. 25 kg
Dimensions	W 595 x D 485 x H 530 mm (closed) W 595 x D 485 x H 690 mm (open)
Operating temperature	+15 °C - +35 °C
Transport temperature	-20 °C - +65 °C
Supply voltage	100 - 240 V, 50/60 Hz
Fuse	2 x T 2.5A H 250V
Interfaces	1 USB
Power consumption	max. 150 W
Protection class	Protection class I
Housing	Protection class IP20
Safety standards	IEC 61 010-1
EMC compatibility	Radio interference and interference resistance compliant with DIN EN 61 326-1
Noise level	46 dB

Accuracy table

Liquid End	Volume range µl	Volume step µl	A* ≤ ± %	CV* ≤ %
1-channel	1 - 50	50	1.5	0.5
		25	2.0	0.8
		5	6.0	3.0
	10 - 200	200	1.0	0.3
		100	1.5	0.4
		20	4.0	1.5
	40 - 1000	1000	1.0	0.2
		500	1.5	0.3
		100	3.0	1.0
8-channel	1 - 50	50	1.5	0.6
		25	2.0	1.0
		5	8.0	4.0
	20 - 300	300	1.2	0.4
		150	1.6	0.6
		30	5.0	2.5

* Final test values related to the nominal capacity (maximum volume) or the indicated volume steps indicated on the Liquid End, obtained when Liquid End and distilled water are equilibrated at ambient temperature within the Liquid Handling Station (20 °C/68 °F), according to DIN EN ISO 8655. A = Accuracy, CV = Coefficient of variation



Ordering Data

Liquid Handling Station

Including motor control unit, operating software, user manual, power cable, USB cable, documentation, and on-site training.

Cat. No. 7094 00



Accessories

Pipette modules (Liquid Ends)

For use with the Liquid Handling Station, autoclavable at 121 °C, 20 min. DE-M marking, quality certificate included. Pack of 1.

Description	Cat. No.
SC 1 - 50 µl	7094 10
SC 10 - 200 µl	7094 13
SC 40 - 1000 µl	7094 16
MC 1 - 50 µl	7094 20
MC 20 - 300 µl	7094 23



Adapters

Pack of 1.

Description	Cat. No.
Height adapter 60 mm	7094 30
Height adapter 30 mm	7094 32
Tip adapter	7094 34



Waste box

Pack of 5.

Cat. No. 7094 58



PCR cooler

96-well, indirect cooling. Pack of 2.

Cat. No. 7094 56



Adapter racks for single vessels and plates

Pack of 1.

Description	Positions	Cat. No.
Microtube rack 1.5	24	7094 50
Microtube rack 0.5	24	7094 52
Microtube rack 5.0	9	7094 53
96-well PCR	-	7094 46
384-well PCR	-	7094 48



Holder for Liquid Ends

Without Liquid Ends. Pack of 1.

Description	Cat. No.
for 3 Liquid Ends	7094 63
for 5 Liquid Ends	7094 65



Accessories (cont.)

Reagent reservoirs



PP. Pack of 10.

Description	Working volume per column*	Bottom style	Cat. No.
1-column	220 ml	pyramid bottom, 96-well	7014 50
12-column, low profile	6 ml	pyramid bottom	7014 52
4-column	60 ml	pyramid bottom	7014 54
6-column	40 ml	pyramid bottom	7014 56
1-column, low profile	50 ml	flat bottom	7014 58

* The indicated volume applies to the use with automated systems

Robotic tips and robotic filter tips for the Liquid Handling Station

All tips and filter tips up to 1000 µl for the Liquid Handling Station are free of DNA (< 40 fg), RNase (< 8.6 fg), endotoxins (< 1 pg), and ATP (< 1 fg). Sterile tips and packaging are manufactured exclusively under BIO-CERT®-quality certification.

TipRack robotic tips, DE-M marking



Volume µl	Pack of	non-sterile Cat. No.	sterile Cat. No.
1 - 50	10 TipRacks, 96 each	7321 46	7321 66
10 - 200	10 TipRacks, 96 each	7321 48	7321 68
10 - 300	10 TipRacks, 96 each	7321 50	7321 70
40 - 1000	10 TipRacks, 96 each	7321 52	7321 72

TipRack robotic filter tips, DE-M marking

Volume µl	Pack of	non-sterile Cat. No.	sterile Cat. No.
1 - 20	10 TipRacks, 96 each	7326 46	7326 66
10 - 100	10 TipRacks, 96 each	7326 50	7326 70
10 - 200	10 TipRacks, 96 each	7326 52	7326 72
40 - 1000	10 TipRacks, 96 each	7326 54	7326 74



Further information about the Liquid Handling Station can be found at www.brand.de or can be requested from info-ALH@brand.de.

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California Residents: For more information concerning California Proposition 65, please refer to www.brand.de/calprop65

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Liquid Handling Station

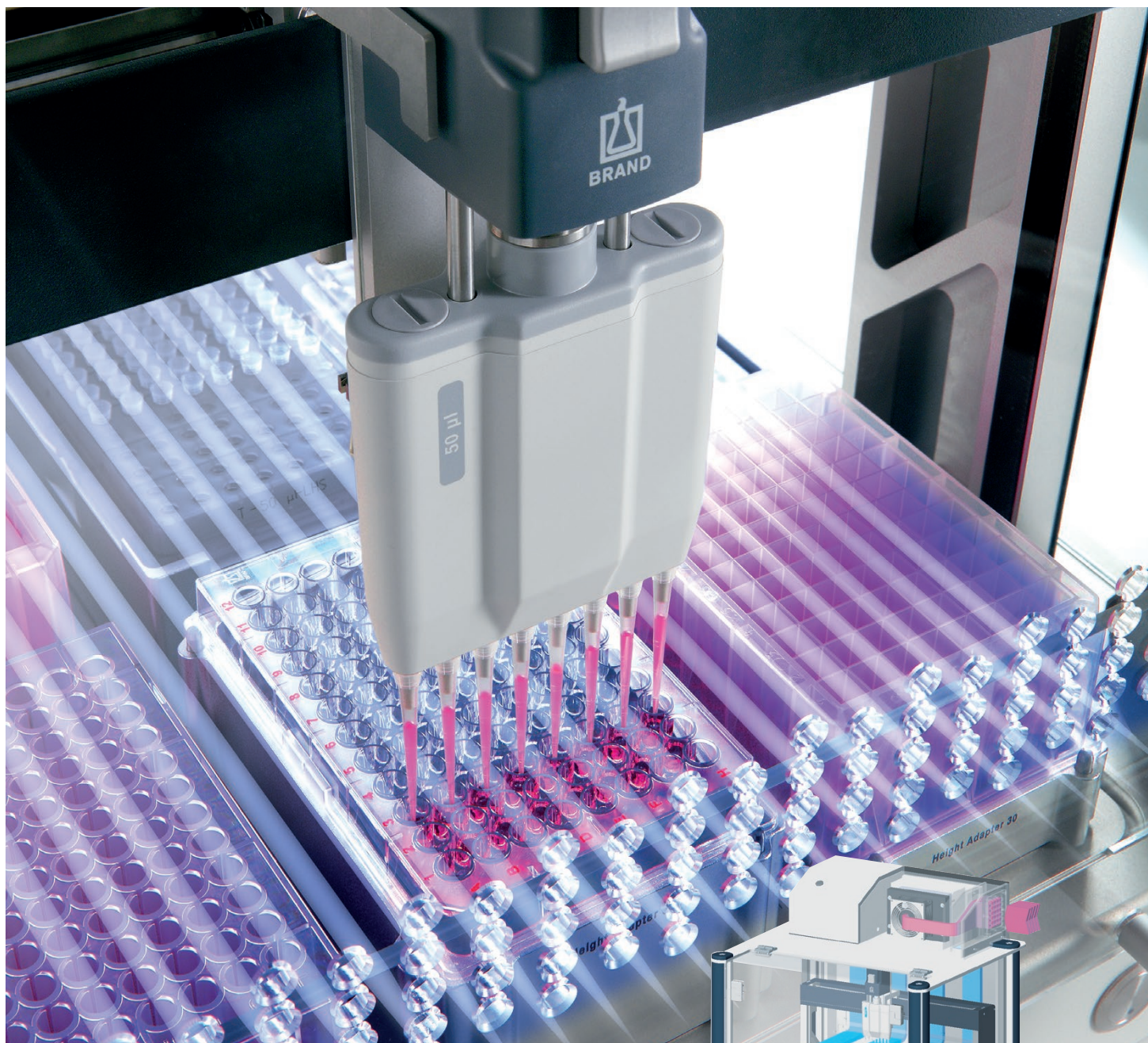
Pipetting Robot with Laminar FlowBox



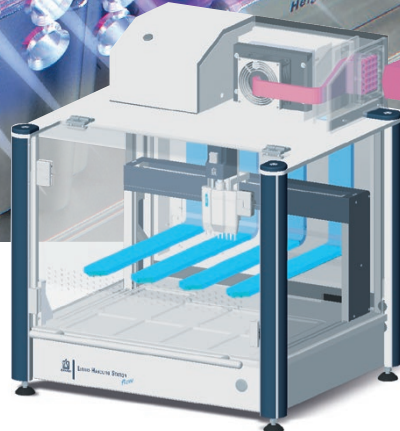
The benchtop clean-room for your samples.

Laminar air flow protects samples in your work area against particles and microorganisms.

Meets requirements of ISO 14644-1 (Class 5) and GMP Annex 1 (Class A).



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Liquid Handling Station

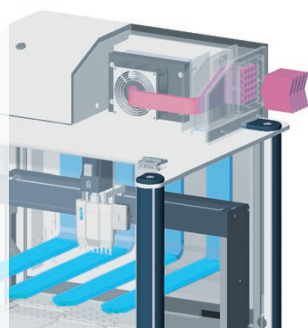
flow

The Liquid Handling Station flow is BRAND®'s pipetting robot for applications where samples must be protected from particles and microorganisms. Its brand new FlowBox directs the filtered air flow in laminar, horizontal layers across the consumables, such as plates¹⁾. With the door closed, the air volume inside the cabinet is replaced 260 times per hour, and exits through openings in the front door.



Maximize product protection

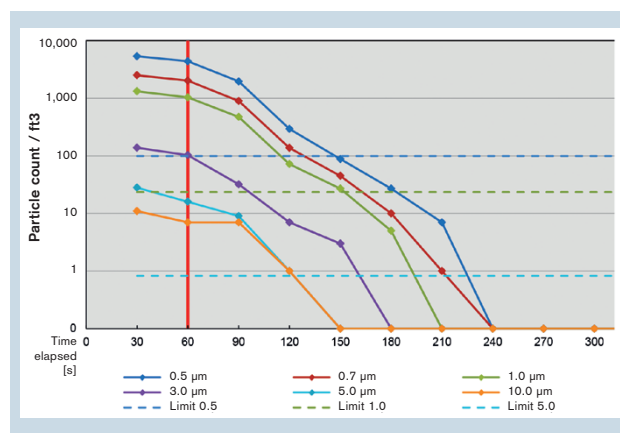
A microprocessor-controlled horizontal, laminar air flow safely covers the entire working area. The air drawn in from the environment passes through an H14 HEPA filter (99.995% efficiency). The filtered air is then directed across the working area in a laminar flow pattern.



Key applications include pipetting of liquids³⁾ in a particle and microorganism-free environment, such as PCR, qPCR, sample preparation, packaging of media and buffers, microbiological analyses in the presence of non-pathogenic microorganisms in food analytics QA applications, etc.

Particle-free conditions in a matter of minutes

Four minutes after switching on the FlowBox, no particles²⁾ are detectable inside.



	Door closed	Door open
Noise level	60 dBA	67 dBA
Speed of air	0.4 m/s	0.5 m/s
Volumetric flow	22 m ³ /h	29 m ³ /h
Air exchange	260 times	330 times
Filter	HEPA 14 acc. to DIN EN 1822	



Liquid Handling Station flow

Included: FlowBox filtration unit, motor control unit, control software, USB cable, power cable, and operating manual. On-site training for putting into operation.

Cat. No. 7094 02

¹⁾ Patent pending

²⁾ Particle sizes: 0.5 µm, 0.7 µm, 1 µm, 3 µm and 5 µm

Detection method: LIGHTHOUSE Handheld 5016 laser-type airborne particle counter, sample volume: 0.1 cf/min (2.83 l/min)

³⁾ Operation with FlowBox function not suitable for samples harboring a health risk when spread by the laminar air flow (e.g. Risk Group 2 (RG2) and higher biological substances).

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