Liquid Handling Station

Simply automate!

+ PCR, qPCR, DNA quantification – simply automate
+ Simple method creation within minutes.
+ Efficient: 8 workplaces in the smallest space

PIPETTING ROBOT

Automatic pipetting made easy

Applications for the Liquid Handling Station pipetting robot

Bridge the gap between manual single- and multi-channel pipettes and complex large devices. The Liquid Handling Station pipetting robot handles all your pipetting routines, leaving you more time for other work. Automation is worth it, even for small and mid-sized sample volumes.

From simple routine tasks to complex pipetting patterns: with the Liquid Handling Station, you will discover a new level of pipetting efficiency. Especially with monotonous and error-prone work steps, the robot really demonstrates its strengths. Once defined, the method can be reproduced over and over again with exact precision.

PCR and qPCR

Accurately pipette even the small volumes for reproducible results.

ELISA

No more manual dilution series: Conveniently change and save fluid classes.

Typical applications

- Preparation of 'assay ready' plates
- 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
- Sample preparation for following analysis

Enzyme assays

Quickly and accurately pipette, mix and define incubation times.

Cherry-picking

Flexibility is the top priority: Quick positioning of individual wells.

- **Intuitive:** Simplest possible method creation in minutes – intuitive software, no programming knowledge needed. Simulation, e-mail and sound notification ensure easy workflow.

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

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

- **Quick:** You save up to 70% time compared with manual pipettes.

Shaking and heating samples with the Teleshake 95

The Teleshake 95 heated shaker can be heated up to 90 °C, depending on the labware material, shake samples with rotation speeds from 100 rpm to 1,900 rpm.
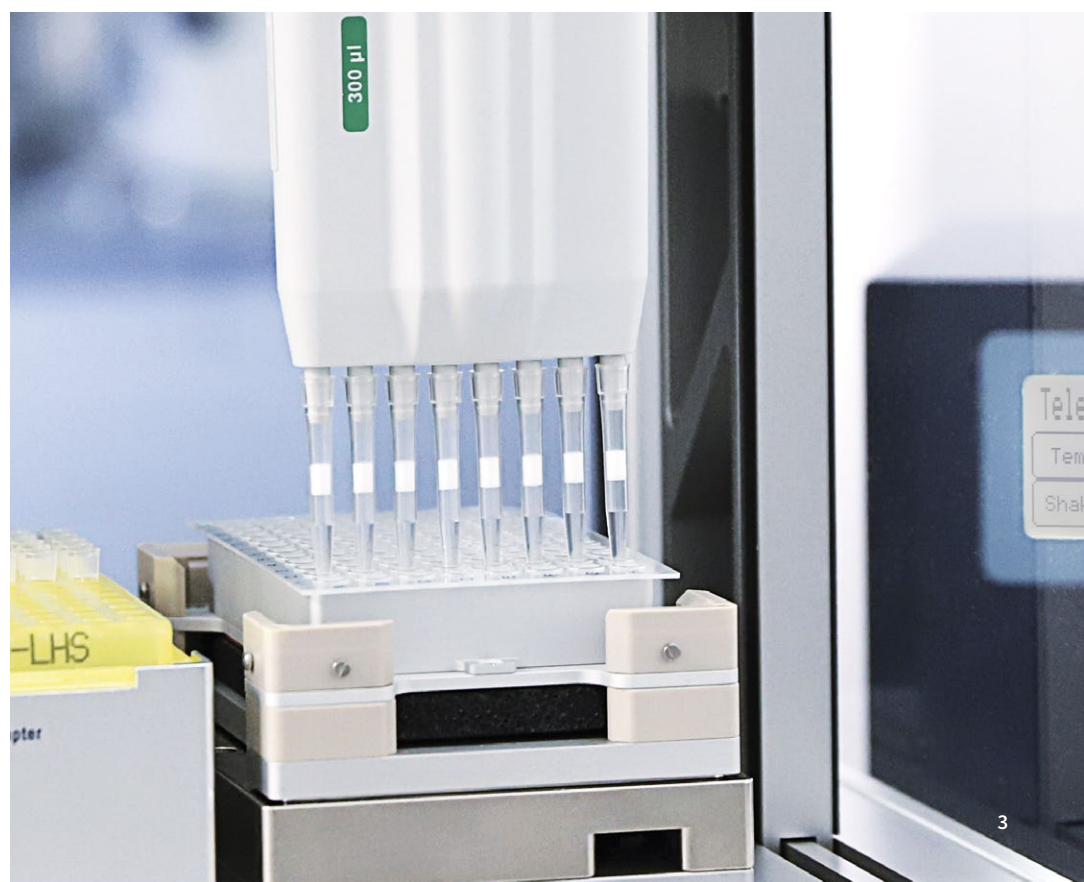
Simple, easy and efficient

In detail: pipetting with the Liquid Handling Station

While the robot processes your pipetting jobs, you have time for other tasks. The Liquid Handling Station works quietly and can be easily adjusted to handle all applicable work steps. Using the intuitive software, you can define your methods quickly, with no programming knowledge required. If the data is already available in a spread-sheet, creating methods is even easier with the import function. Particularly for small and midsized sample volumes, the robot, which operates on the proven air-interface principle, is a cost effective introduction to laboratory automation.

1 Front door

The space-saving design of the front door allows it to be swung up easily and it is mechanically braked when closing.

2 Pipette modules (Liquid Ends)

The basis for the pipette modules are components from the familiar Transferpette® *S*. Three single-channel Liquid Ends (SC) and three 8-channel Liquid Ends (MC) are available. Manual changes are so easy a child can do them, and they take only a few seconds. No tools are needed.

3 Work table

The work table has eight work positions, seven of which use the ANSI/SLAS format and can be freely assigned.

4 Adapters

Different height adapters, tip adapters and racks ensure reliable aspiration and the same working height as the plates and vessels in use. This saves time while pipetting.

Your compact clean room in the lab
Liquid Handling Station *flow*

Do your samples have to be protected against exposure to particles and microorganisms? Then the Liquid Handling Station flow is the right pipetting robot for you. The FlowBox directs filtered air in a horizontal, laminar air stream through the work area, which prevents contamination.

Primary applications are those in which the liquids must be free of particles and microorganisms [1]. The ambient air of the Liquid Handling Station flow is exchanged more than four times per minute. The exhaust air escapes through openings in the front door. This technology conforms with the requirements of ISO 14644-1 (Class 5) and GMP Annex 1 (Class A). The inner compartment is free of particles in less than 5 minutes.

[1] 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).
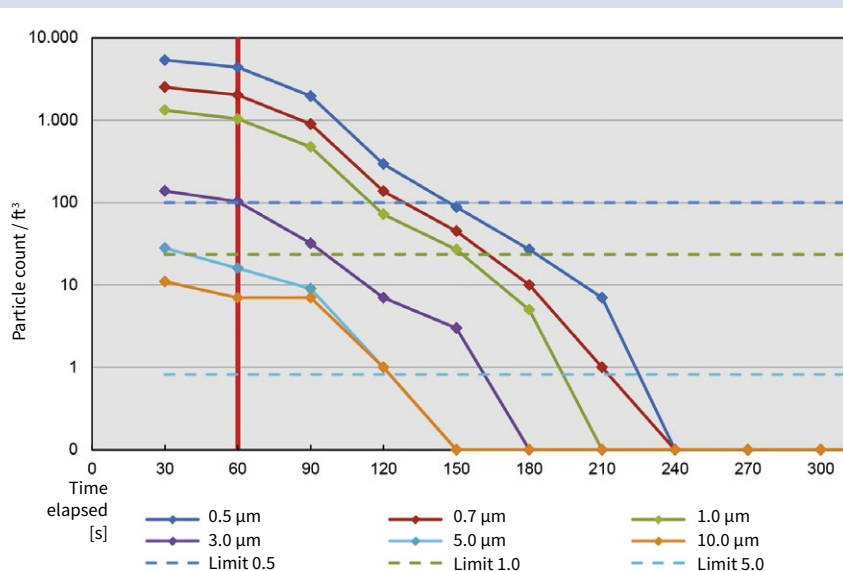
## Particle-free conditions in a matter of minutes

Four minutes after switching on the FlowBox, no particles of 0.5 µm, 0.7 µm, 1 µm, 3 µm and 5 µm are detectable inside [2].

[2] Detection method: LIGHTHOUSE Handheld 5016 laser-type airborne particle counter, sample volume: 0.1 cf/min (2.83 l/min)
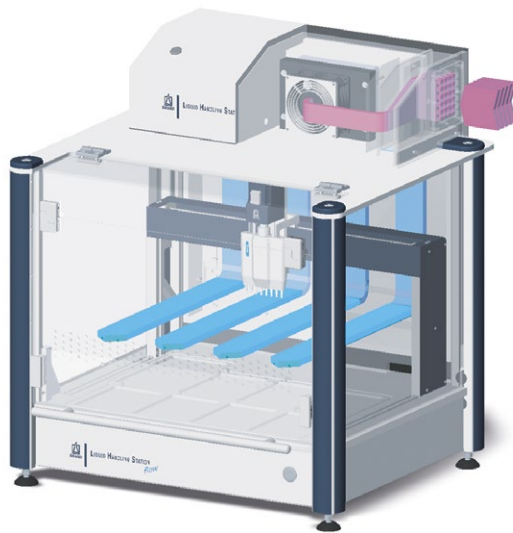
Protect your samples

A microprocessor-controlled air stream cleans the entire work area of the Liquid Handling Station flow. The incoming air is filtered by an H14 HEPA filter with an efficiency rate of 99.995 %. This reliably protects your valuable samples against contamination.
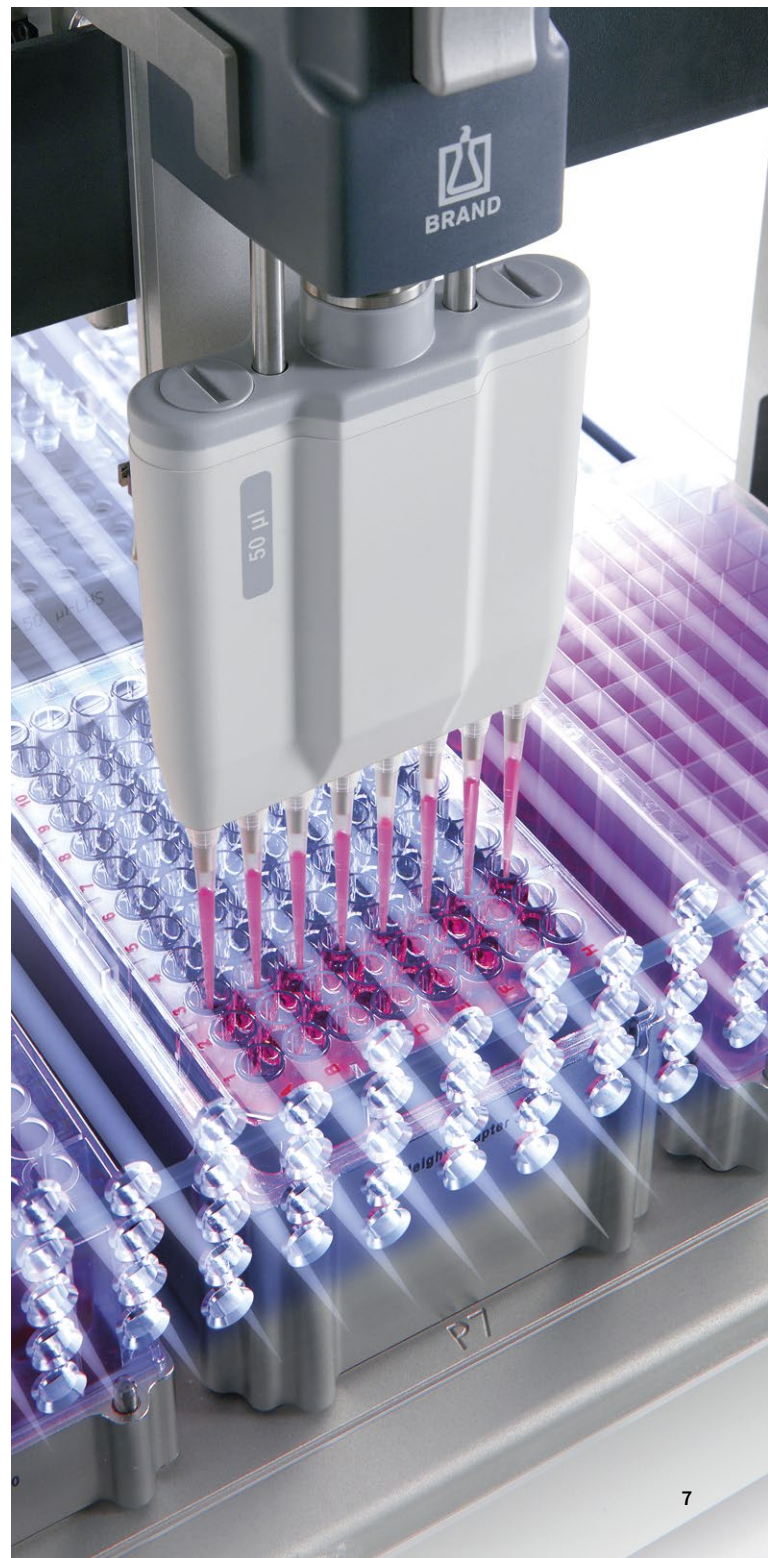
Pipetting, not programming

The software of the Liquid Handling Station

With the Liquid Handling Station's intuitive software, defining your methods becomes easy and efficient. The graphical interface shows the work area of the pipetting robot, so you can quickly find your way around. Integrated instructions efficiently guide you through the creation of even the most complex methods.

This way the Liquid Handling Station can do what it was made for: quickly and conveniently automating repetitive pipetting tasks, so that you can concentrate on more important things.

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 and sound notifications
- Timeline
- Simulation of the programmed methods

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!

Everything responds to your commands

Four main commands for your success:

Transfer:
Specifies nearly all pipetting tasks; e.g. multidispensing, creating dilution series, pooling, etc.

Wait:
Defines wait times, e.g. for incubation.

Mix:
In order to efficiently mix samples.

Break:
Interrupts the program sequence; e.g. in order to incubate samples externally.

Auxiliary Device Commands:
A clear design allows you to easily start and control the FlowBox as well as the heating and shaking module.

Ordering Data

Liquid Handling Station
Included: motor control unit, control software, operating manual, power cable, USB cable, documentation and on-site training for putting into operation.

Pack of	Cat. No.
1	709400

Liquid Handling Station flow
Included: motor control unit, FlowBox filtration unit, control software, operating manual, power cable, USB cable, USB hub, documentation and on-site training for putting into operation.

Pack of	Cat. No.
1	709402

Specifications

	Liquid Handling Station	Liquid Handling Station flow
Liquid Ends	1-channel Liquid Ends (SC), 8-channel Liquid Ends (MC)	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, 40 – 1000 µl	1-channel Liquid Ends: 1 – 50 µl, 10 – 200 µl, 40 – 1000 µl 8-channel Liquid Ends: 1 – 50 µl, 20 – 300 µl, 40 – 1000 µl
Working positions	8 working positions: P2 – P8, P1 for waste box	8 working positions: P2 – P8, P1 for waste box
Weight	approx. 25 kg	approx. 35 kg (pipetting robot incl. FlowBox)
Dimensions	B 595 x T 485 x H 530 mm (closed) B 595 x T 485 x H 690 mm (open)	B 595 x T 515 x H 662 mm (closed) B 595 x T 515 x H 690 mm (open)
Operating temperature	+15 °C to +35 °C	+15 °C to +35 °C
Transport temperature	-20 °C to +65 °C	-20 °C to +65 °C
Supply voltage	100 – 240 V, 50/60 Hz	100 – 240 V, 50/60 Hz
Fuse	2 x T 2.5A H 250V	2 x T 2.5A H 250V
Interfaces	1 USB	2 USB
Power consumption	max. 150 W	max. 150 W
Protection class	Protection class I	Protection class I
Housing	Protection class IP20	Protection class IP20
Safety standards	IEC 61010-1	IEC 61010-1
EMC compatibility	Radio interference and interference resistance compliant with DIN EN 61 326-1	Radio interference and interference resistance compliant with DIN EN 61 326-1
Noise level	46 dB	46 dB

Specifications FlowBox

	Door closed	Door open
Noise level	60 dBA	67 dBA
Speed of air	0.4 m/s	0.5 m/s
Volumetric flow	22 m³/h	29 m³/h
Air exchange	260-way	330-way
Filter	HEPA 14 acc. to DIN EN 1822	

Accessories

SC 1 – 50 µl

MC 1 – 50 µl

SC 10 – 200 µl

MC 20 – 300 µl

SC 40 – 1000 µl

MC 40 – 1000 µl

Liquid Ends (Liquid Ends)

The basis for the pipette modules are components from the familiar Transferpette® S. Three single-channel Liquid Ends (SC) and three 8-channel Liquid Ends (MC) are available for contact-free liquid delivery. The volume testing of the pipette modules is carried out according to ISO 8655 part 6. Autoclavable at 121 °C, 20 minutes. Pack of 1.

Liquid End	Volume range µl	Volume step µl	A* ≤ ± %	CV* ≤ %	Cat. No.
1-channel	1 – 50	50	1.5	0.5	**709410**
		25	2.0	0.8	
		5	6.0	3.0	
	10 – 200	200	1.0	0.3	**709413**
		100	1.5	0.4	
		20	4.0	1.5	
	40 – 1000	1000	1.0	0.2	**709416**
		500	1.5	0.3	
		100	3.0	1.0	
8-channel	1 – 50	50	1.5	0.6	**709420**
		25	2.0	1.0	
		5	8.0	4.0	
	20 – 300	300	1.2	0.4	**709423**
		150	1.6	0.6	
		30	5.0	2.5	
	40 – 1000	1000	1.2	0.3	**709426**
		500	1.6	0.5	
		100	4.0	2.0	

* 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

Microtube Rack 1.5

96-well PCR

Microtube Rack 0.5

384-well PCR

Microtube Rack 5.0

12 x 75 mm TubeRack

Racks for single tubes, plates and cuvettes

Different tip adapters and racks ensure stable support and an even working height for the plates and vessels used.
Pack of 1.

Description	Position	Cat. No.
Microtube Rack 1.5	24	**709450**
Microtube Rack 0.5	24	**709452**
Microtube Rack 5.0	9	**709453**
96-well PCR	–	**709446**
384-well PCR**	–	**709448**
384-well PCR universal adapter		**709449**
12 x 75 mm TubeRack	24	**709455**
Cuvettes	16	**709436**
Reservoir rack for Liquid Handling Station for four 40 ml reservoirs (701460, 701462), aluminum		**709443**

** optimized for BRAND PCR plates

Additional adapters on request.

Adapter
for plates and tips

Description	Pack of	Cat. No.
Height adapter 60 mm	1	709430
Height adapter 30 mm	1	709432
Tip adapter	1	709434

Height adapter 60

Height adapter 30

Tip adapter

Holder for Liquid Ends
Without Liquid Ends.
Pack of 1.

Description	Cat. No.
for 3 Liquid Ends	709463
for 5 Liquid Ends	709465

Waste box
for Liquid Handling Station

Pack of	Cat. No.
5	709458

Shaking and heating samples

The Teleshake 95 thermoblock can be used for incubation from 20 °C up to 90 °C, and it can also be used to shake samples with rotation speeds from 100 rpm to 1,900 rpm.
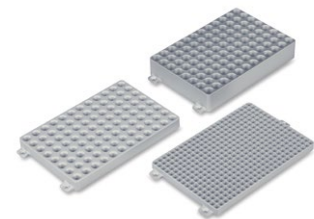
Teleshake 95
Heating/shaking module with centering plate, incl. universal flat-bottom adapter plate.

Pack of	Cat. No.
1	709470

Adapter plate for the Teleshake 95
For optimum heat transfer and secure hold in the Teleshake 95. Pack of 1.

Description	Cat. No.
Universal adapter for 96-well PCR plates low profile	709477
Universal adapter for 96-well PCR plates standard	709478
Universal adapter for 384-well PCR plates standard	709479
Adapter for 96-well BRANDplates F- and C-bottom	709480
Adapter for 96-well BRANDplates V-bottom	709481
Adapter for 96-well BRANDplates U-bottom	709482

Universal flat-bottom adapter plate (7094 76), included with the Teleshake 95.
Additional adapters on request.

Controller for power supply of the Teleshake 95
Pack of 1.

Description	Cat. No.
Single TEC Control (1 black slot module)	709472
Multi TEC Control (2 black slot modules)	709474

PCR cooler
96-well, indirect cooling.

Pack of	Cat. No.
2	709456

Accessories

Reagent reservoirs
PP.

Description	Working volume per column*	Bottom style	Pack of	Cat. No.
1-column	220 ml	pyramid bottom, 96-well	10	701450
12-column, low profile	6 ml	pyramid bottom	10	701452
4-column	60 ml	pyramid bottom	10	701454
6-column	40 ml	pyramid bottom	10	701456
1-column, low profile	50 ml	flat bottom	10	701458
Reservoir, non-sterile, with cover**	40 ml	V-bottom, low dead volume	24	701460
Reservoir, sterile, with cover**	40 ml	V-bottom, low dead volume	24	701462

* The indicated volume applies to the use with automated systems.
** graduated, 4 reservoirs per blister

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

Volume µl		Pack of	non-sterile Cat. No.	sterile Cat. No.
1 – 50		10 TipRacks, 96 each	732146	732166
10 – 200		10 TipRacks, 96 each	732148	732168
10 – 300		10 TipRacks, 96 each	732150	732170
40 – 1000		10 TipRacks, 96 each	732152	732172

TipRack robotic filter tips

Volume µl		Pack of	non-sterile Cat. No.	sterile Cat. No.
1 – 20		10 TipRacks, 96 each	732646	732666
10 – 100		10 TipRacks, 96 each	732650	732670
10 – 200		10 TipRacks, 96 each	732652	732672
40 – 1000		10 TipRacks, 96 each	732654	732674

All information about the product on **shop.brand.de**

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