Hamilton Microlab Services

HAMILTON®
Microlab® Partner

Repair, maintenance, calibration and more

DURATEC
Analysentechnik GmbH

Hamilton Microlab Services

For analytical applications, your measurement results must be reliable and traceable. Especially in sample preparation, your Microlab has a significant part. For this reason, the Microlab should be checked and maintained at regular intervals in order to replace any defective or wearing parts. We can support you with our services.

Check-Up:
Evaluation of the condition of electronic, mechanical and fluidic components

Repair:
Our Hamilton-trained technicians will repair your Hamilton Microlab.
Common spare parts are in stock, so you will usually get back the repaired Microlab within 1 - 2 weeks.

Maintenance:
Regular preventive maintenance of your Microlab equipment will bring you the following advantages:

- increase the lifetime
- reduce the risk of spontaneous failure
- ensure reliable results

Qualification & Calibration:
Checking the dosing accuracy of the Microlab based on DIN ISO EN 8655-4.

Installation & Instruction:

- Installation and nitial startup-procedure
- IQ/OQ/PQ (incl. documentation)
- Instrument training for users

Trainings & Workshops:
Local workshops & trainings with the following contents:

- correct handling of the Microlab
- Recognizing and avoiding errors
- Maintenance & care
- Checking dosing accuracy
- Error propagation during dilution

Procurement:

- New equipment (2-3 weeks delivery time)
- Wearing parts (90% in stock - otherwise 1-2 weeks delivery time)
- Spare parts (80% in stock - otherwise 1-2 weeks delivery time)

Performance overview by model

Modell	Checkup	Maintenance	Calibration	Repair	Spare parts	Valves	Syringes	Tubings
 **ML600/700**	✓	✓	✓	✓	✓	✓	✓	✓
 **ML500**	✓	✓	✓	partially still possible	Partial remai-ning stock	Partial remai-ning stock	✓	✓
 **ML1000**	✓	✓	✓	no longer possible	obsolete	obsolete	✓	✓

- authorized sales & service partner since 1996 -

Service description

Part no.	Description
Check-Up 000032-C	• Visual inspection of the mechanical, fluidic and electronic components • Short test of dosing accuracy (without certificate) • Checkup protocol for present state of your device • Recommendation for further activities
Maintenance 000032-WA	• Visual inspection of mechanical, fluidic and electronic components • Cleaning internal space • Checking supply voltages • Functional test of the mechanical components • Retightening the toothed belt & oiling the moving parts • Exchange of wearing parts (syringes, valves, tubes) on request • Function test of the whole system (without certificate) • Maintenance protocol
Calibration 000032	• Based on DIN ISO EN 8655-4 • Gravimetric check of the dosing volume • Use of tested measuring equipment • Testing of 3 different volumes • 10 measuring points per volume • Statistical evaluation of the results • Calibration protocol
Input calibration 00003-EK	• Scope of services check „Calibration“ • Detects actual condition of the dosing accuracy before any further action is taken (e.g. repair, maintenance, syringe or valve exchange) • Only possible in combination with repair, maintenance or maintenance & calibration
Calibration ≤ 100µl 000032-KV	• Extra charge for calibration of small syringes (≤100µl)
Maintenance & Calibration 000032-WK	• Check „Maintenance“ and „Calibration“
Local Service	• Repair • Maintenance • Qualification / Calibration • Installation & Instruction • Trainings

Additional option

Part no.	Description
Transport Box HML500006	• Robust aluminum transport box for easy and safe shipping of your instrument. • The special interior design allows the transport with connected tubings to maintain the validity of the calibration

Ordering process:

1. Send us a request for the required service by phone or e-mail.
2. After detailed consultation, we will provide you with an individual offer.
3. Send us the device rinsed and properly packed incl. the completed consignment bill and your order in one package.
4. After a detailed inspection, the ordered service will be carried out. If there are additional costs for the execution of the service, you will receive a cost estimate for approval.
5. After the service is completed (duration: approx. 1-2 weeks), you will receive the device including the corresponding documentation (e.g. service or repair report) back.

Calibration certificate

Kalibrierschein

Protokoll-Nummer:

Qualification based on DIN ISO EN 8655-4

Identifikation des Kolbenhubgerätes

Hersteller	Hamilton
Modell	ML625-DIL
Seriennummer	ML600BH2129

Waage

Hersteller	Denver Instruments
Modell	TB-215D
Seriennummer	23303672
kalibriert am	10. August 2020
Kalibrierschein	528A794 D-K-19398-01-00 2020-0

Prüfbedingungen

Temperatur vor Messungen	24,4 °C
Temperatur nach Messungen	24,5 °C
mittlere Temperatur	24,5 °C
Luftdruck	100,84 kPa
relative Luftfeuchte	78 %
Korrekturfaktor Z	1,0039 µl/mg
berücksichtigte Verdunstung	0,00 mg

THERMOMETER

Hersteller	Greisinger
Modell	GFTB100
Seriennummer	498512006
kalibriert am	10. Dezember 2020
Kalibrierschein	362324 D-K-15099-01-00 2020-12

	Verdünnungsvolumen (Ablauf, Ex)			Probenvolumen (Einguss, In)			
Nennvolumen (Vo)	10000			1000			µl
	100%	50%	10%	100%	50%	10%	
Prüfvolumen (Vs)	10000	5000	1000	1000	500	100	µl

Wägewerte

Messung 1	9969,00	4983,10	996,30	-999,46	-499,45	-99,75	mg
Messung 2	9968,30	4982,90	996,40	-999,35	-499,40	-99,79	mg
Messung 3	9968,40	4982,70	996,20	-999,35	-499,39	-99,73	mg
Messung 4	9968,40	4983,00	996,30	-999,37	-499,39	-99,81	mg
Messung 5	9967,90	4983,10	996,40	-999,35	-499,43	-99,78	mg
Messung 6	9968,60	4982,80	996,20	-999,32	-499,39	-99,78	mg
Messung 7	9968,30	4982,90	996,40	-999,36	-499,42	-99,78	mg
Messung 8	9968,70	4982,60	996,60	-999,32	-499,41	-99,81	mg
Messung 9	9968,20	4983,20	996,60	-999,30	-499,38	-99,81	mg
Messung 10	9968,40	4983,00	996,40	-999,26	-499,37	-99,73	mg

Auswertung

korrigierte mittlere Masse	9968,42	4982,93	996,38	999,34	499,40	99,78	mg
mittleres Volumen	10007,30	5002,36	1000,27	1003,24	501,35	100,17	µl
systematische Messabweichung	7,30	2,36	0,27	3,24	1,35	0,17	µl
zulässige Fehlergrenze	60,00	60,00	60,00	6,00	6,00	6,00	µl
Bewertung	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	
zufällige Messabweichung	0,30	0,19	0,14	0,05	0,02	0,03	µl
zulässige Fehlergrenze	15,00	15,00	15,00	1,50	1,50	1,50	µl
Bewertung	**OK**	**OK**	**OK**	**OK**	**OK**	**OK**	

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