



## Purchase Contract

### 1. PARTIES

**Vysoká škola chemicko-technologická v Praze**

**(University of Chemistry and Technology Prague)**

with the registered office at: Technická 5, Prague 6 – Dejvice, post code 160 00, Czech Republic

represented by: xxxxxxxxxxxxxxxx, rector

IN: 60461373

TIN: CZ60461373

Bank: xxxx; account number: xxxxxxxxxxxxxx

(hereinafter **"Purchaser"**)

and

**microdrop Technologies GmbH**

with the registered office at: Tycho-Brahe-Kehre 1, 22844 Norderstedt, Germany

incorporated in the Commercial Register kept by the Amtsgericht Kiel Court in Kiel

represented by xxxxxxxxxxxx, Managing Director

ID: HRB 7194 KI

TIN: 112 900 9373

Bank: xxxxxxxxxxxxxxxx; account number kept with tax administrator:

xxxxxxxxxxxxxxxxxxxxxx

(hereinafter **"Seller"**)

The Purchaser and the Seller hereinafter collectively as **"Parties"** or individually as **"Party"**)

conclude this Purchase Contract (hereinafter **"Contract"**) on this day, month and year

### 2. RECITALS

- 2.1. The Seller acknowledges that the Purchaser considers Seller's participation in a public contract and the fact it has fulfilled qualification requirements as a confirmation that, the Seller is able to act with knowledge and care within the performance of this Contract, which is associated with its occupation or profession. Should the Seller fail to act with professional care, it shall bear the resulting consequences. The Seller may not abuse its professional quality, nor its economic position to create or exploit the dependance of the weaker party and to achieve a clear and unjustified imbalance between mutual rights and obligations of the Parties.
- 2.2. The Seller acknowledges that the Purchaser is not an entrepreneur in relation to this Contract and that the subject-matter hereof is not part of Purchaser's business activity.
- 2.3. The Seller has been awarded a contract in the procurement procedure announced by the Purchaser under Act No. 134/2016 Coll., on Public procurement, for the small scale public contract named **"Amulet\_Material printer with two micro dispensing heads"** (hereinafter **"Procurement Procedure"**).
- 2.4. The following documents also serve as basic materials for delivery of the subject-matter of the performance hereunder:  
Conditions for participation in the Procurement Procedure;



Spolufinancováno  
Evropskou unií



OPJAK.cz  
MSMT.cz

Technical Specification of Performance according to the Procurement documentation and Seller's tender which is attached as Annex No. 1 hereto (hereinafter "**Technical Specification of Performance**") and is an integral part hereof;

The Seller's tender submitted within the Procurement Procedure providing technical information on the subject-matter of performance (hereinafter "**Tender**").

- 2.5. The Seller declares it meets all the professional prerequisites necessary for the delivery of the subject-matter of performance under the Contract, is entitled to execute / deliver the performance and there are no impediments on the Seller's part preventing it from delivering the subject-matter of this Contract to the Purchaser.
- 2.6. The Parties declare they shall maintain in confidentiality all facts learned in connection with this Contract and its performance, the disclosure of which could result in harm incurred by the Parties. This provision is without prejudice to the Purchaser's obligations arising from legal regulations.
- 2.7. The Seller acknowledges that the subject-matter of performance hereunder is a part of the project "Pokročilé víceškálové materiály pro nosné klíčové technologie", CZ.02.01.01/00/22\_008/0004558 co-financed from the resources of the EU within Johannes Amos Comenius Operational Programme.

### **3. Subject-Matter of Contract**

- 3.1. The subject-matter hereof is the Seller's obligation to deliver and transfer the ownership right to the device specified in the Technical Specification of Performance, attached as Annex No. 1 hereto, to the Purchaser.  
(the device mentioned in paragraph 3.1 hereinafter as "**device**" or "**goods**").
- 3.2. Within the performance the Seller shall also:
  - (i) transport the device to the place of performance,
  - (ii) process and hand over instructions and manuals to the Purchaser for the operation, unpacking, installation, and maintenance of devices in the Czech or English language, electronically or in printed form,
  - (iii) Provide remote (off-site) training and support (both in English) and additional help during unpacking and installation,
  - (iv) submit a declaration of conformity of the delivered device with the approved standards,
  - (v) grant authorization to exercise the right to use software (license) where it is necessary for the proper use of the subject-matter of performance, or if the Seller requires so under this Contract,
  - (vi) prepare a list of items delivered for inspection purposes,
  - (vii) provide cooperation to the Purchaser during delivery, consisting, *inter alia*, in verifying whether the premises are prepared for the installation of the device,  
(The device under paragraph 3.1 and the performance under paragraph 3.2 of this Article hereof hereinafter also as "**delivery**").
- 3.3. The Purchaser undertakes to take over the duly and timely delivered device, and to pay the Seller the purchase price specified in Article 5 of this Contract for them.
- 3.4. In the event that proper performance and operation of the device requires further deliveries and works not expressly listed herein in order to meet the Purchaser's requirements arising from this Contract including its Annexes, the Seller agrees and commits to secure or make these deliveries

and secure or perform the required works at its expense and include them in the performance without adjusting the purchase price hereunder.

- 3.5. Under the conditions set out in this Contract, the Seller undertakes to deliver the device to the Purchaser to the place of performance at its own expense and responsibility and to hand it over and to perform the services and works specified in paragraphs 3.1 and 3.2 of this Article hereof. The Seller shall ensure that the device and services comply with this Contract, including the Annexes, Tender, applicable legal, technical and quality standards, and that the device has a CE certification.

#### **4. Ownership Right**

- 4.1. Ownership right passes to the Purchaser upon takeover of the device. Takeover means the signing of a protocol on the handover and takeover of the device by both Parties. The risk of damage to the device passes onto the Purchaser upon signature of the mentioned protocol.

#### **5. Purchase Price and Terms of Payment**

- 5.1. The purchase price for the subject-matter of the Contract referred to in Article 3 paragraph 3.1. and 3.2. was determined on the basis of the Tender as a maximum and not-to-exceed price, in the amount of net EUR 65,817.50 without VAT (hereinafter referred to as the “**purchase price**”), plus 21 % VAT, **if applicable**, in the amount of EUR 0, i.e. a total of EUR 65,817.50 incl. VAT.
- 5.2. The purchase price includes all costs associated with the performance of the subject-matter of this Contract, including the cost of insurance of the device until its delivery. The purchase price is not affected by price developments and exchange rate changes.
- 5.3. The purchase price is the highest permissible price for the subject-matter of performance. The purchase price may be changed only by a written amendment hereto, and solely when: VAT rate changes after the conclusion of the Contract and before the handover and takeover date (only change of VAT is permitted).
- 5.4. The Purchaser commits to pay the purchase price to the Seller as follows:
- 50 % of the purchase price shall be paid based on the invoice issued following the effective date of the Contract;
  - 50 % of the purchase price shall be paid based on the invoice issued following handover and takeover of the device, which shall be confirmed between the Parties by a delivery note.

The maturity period of invoices, except for the pro forma invoice, shall always be 30 days from the date of delivery thereof to the Purchaser. The charged amount is deemed paid when the relevant sum is sent to the Seller's account. Tax documents - invoices issued by the Seller under this Contract shall, in accordance with the relevant legal regulations of the Czech Republic, contain in particular the following data:

- (i) company/business name and registered office of the Purchaser
- (ii) tax identification number of the Purchaser
- (iii) company/business name and registered office of the Seller
- (iv) tax identification number of the Seller
- (v) tax document registration number
- (vi) scope and subject-matter of performance,
- (vii) date of issue of tax document,

- (viii) date of taxable supply or date of receipt of payment, whichever is earlier, if these dates do not correspond with the date of issue of tax document
  - (ix) project number **CZ.02.01.01/00/22\_008/0004558**,
  - (x) price of the goods.
- 5.5. If the tax document - invoice is not issued in accordance with the terms of payment set out in the Contract or fails to meet the required legal requirements or is not delivered to the Purchaser by the deadline specified above, the Purchaser is entitled to return the tax document - invoice to the Seller as incomplete, or incorrectly issued, to correct it or issue a new tax document - invoice within 5 working days from the date of its delivery to the Purchaser. In such a case, the Purchaser is not in delay with the payment of the purchase price or a part thereof and the Seller shall issue a corrected invoice with a new, identical maturity period, beginning on the day of delivery of the corrected or newly issued tax document - invoice to the Purchaser.
- 5.6. Purchaser's invoicing data are listed in Article 1 hereof.
- 5.7. The Seller is obliged to send the electronic version of the invoice to the Purchaser to email [XXXXXXXXXXXXXXXXXX](#) in .pdf format.
- 5.8. If applicable, the Seller declares it specified its bank account in Article 1, which is published in the Register of Payers. This provision shall not apply to persons who are not obliged to submit an application for registration under the VAT Act.

## **6. Performance Dates**

- 6.1. The Seller undertakes to duly produce, procure, deliver and hand over to the Purchaser the device referred to in Article 3, paragraph 3.1 of this Contract within **6 months** from the date the Contract enters into effect.
- 6.2. The Purchaser undertakes to take over the duly delivered, device on the agreed date. The Parties shall draft a handover and takeover protocol, as stated below.

## **7. Place of Performance**

- 7.1. The Department of Inorganic Chemistry, University of Chemistry and Technology, Technická 5, Prague 6 – Dejvice, post code 160 00, Czech Republic, is the place of performance (hereinafter "**place of performance**").

## **8. Deliberately omitted**

## **9. Further Terms of Delivery**

- 9.1. When making the delivery, the Seller proceeds independently, but undertakes to respect the Purchaser's instructions regarding the implementation of the subject-matter of performance hereunder.
- 9.2. The Seller is obliged to notify the Purchaser without undue delay if items taken over from the Purchaser or the instructions given to the Seller by the Purchaser concerning the delivery are unsuitable, if the Seller was able to detect such unsuitability when exercising professional care.
- 9.3. Unless otherwise stipulated in the Contract, the Seller is obliged to provide all items necessary for the performance under this Contract.

- 9.4. The Seller is obliged to deliver completely new, fully functional goods (including any SW) to the Purchaser, in quality and technical design corresponding to valid European Union regulations and corresponding requirements set by EU legislation, applicable to the goods.
- 9.5. The Seller declares that the goods delivered by virtue of this Contract fully comply with the conditions set out in the procurement documents used in the procurement procedure where Seller's tender was selected as the most suitable.
- 9.6. The Seller undertakes to ensure that the goods shall not be encumbered by any third-party rights, in particular no pre-emption right, pledge or right of lease, as of the moment the ownership right to the goods is transferred.
- 9.7. With regard to the Purchaser's obligations arising in particular from Act No. 134/2016 Coll., on public procurement, the Seller agrees to the publication of all information concerning the contractual relationship established between the Seller and the Purchaser herein, in particular the content of this Contract.

## **10. Deliberately omitted**

## **11. Warranty and Claims from Defective Delivery**

- 11.1. The warranty period for delivery is **12 months**. Dispersion printing head and pipets are excluded from guarantee.
- 11.2. The warranty period begins on the day the Purchaser signs the Handover Protocol. If the device is taken over, even with one defect or unfinished part, the warranty period begins from the date when the last defect was removed by the Seller.
- 11.3. The Purchaser shall request the removal of a defect of the delivery from the Seller without undue delay after its discovery, but no later than the last day of the warranty period, unless expressly stated elsewhere in this Contract, by a written notice to the Seller's responsible technical representative specified in this Contract. A complaint sent by the Purchaser on the last day of the warranty period is deemed to have been lodged in time.
- 11.4. In a written warranty claim, the Purchaser shall describe a defect and method required for removal.
- 11.5. The Purchaser is entitled to withdraw from the Contract if the delivery of defective goods materially violates the Contract. Noncompliance of the delivery (or part thereof) with minimum parameters required by the Purchaser and specified in the Seller's Tender in the Technical Specification of Performance and in this Contract shall always be deemed a material breach of the Contract.
- 11.6. The Seller commits to remove claimed defects free of charge.
- 11.7. The Seller undertakes to **initiate procedures for removing defects within 5 working days** from the date of receipt of a claim from the Purchaser, and subsequently and without undue delay inspect the claim, diagnose the defect, notify the Purchaser whether the complaint is acknowledged and inform the Purchaser in writing if a specialized spare part is needed to remove the defect.
- 11.8. The Seller is obliged to **remove the defect within 30 working days** after the expiration of the period specified in the previous paragraph in the place of performance, unless Parties agree otherwise. If it is demonstrably necessary to provide specialized spare parts to remove a defect of the device, the Seller is **obliged to remove the defect within 30 working days** after the expiry of the period specified in the previous paragraph, unless the Parties agree otherwise. Specialized

spare parts are considered custom-made spare parts or spare parts that are not commonly available in the European Economic Area.

- 11.9. Whether or not the Seller acknowledges the claimed defect, it is obliged to remove it within the deadlines specified in paragraph 11.8 of this Article of the Contract, unless the Parties subsequently agree otherwise. In such a case, the Seller is entitled to demand from the Purchaser the payment of costs incurred. If the Seller rejects a claimed defect, the claim may be assessed by an expert's report, which shall be ordered by the Purchaser. If a claim is deemed justified by an expert, the Seller shall also bear the costs of such expert report. If the Purchaser provably claimed the defect without justification, it shall be obliged to reimburse the Seller for the costs expediently and demonstrably incurred in its removal.
- 11.10. The Parties shall draw up a defect removal report, wherein they shall confirm the removal of the defect. The warranty period is extended by the time elapsed from the date of the claim until removal of the defect.
- 11.11. If the Seller fails to remove the defect within the deadlines specified in paragraph 11.8 of this Article, or within the period agreed by the Parties, or if the Seller refuses to remove the defects, the Purchaser is entitled to have the defect removed at its own expense and the Seller is obliged to reimburse the Purchaser for such costs incurred, within 10 days after the Purchaser's request or to demand the replacement of the device by a non-defective device, in case that the defect deprives the Purchaser from the benefit of this contract. However, this right of the Purchaser shall not release the Seller from liability for defects and the warranty shall have the agreed scope.
- 11.12. The warranty shall not cover defects caused by improper handling, incorrect or inappropriate maintenance, non-compliance with manufacturer's regulations for operation and maintenance of the device, which the Purchaser took over from the Seller upon delivery or which were notified by the Seller to the Purchaser in writing. The warranty shall also not cover defects caused by gross negligence or willful misconduct and wear and tear parts.
- 11.13. The parties agree that, in the event of a potential defect, the Seller will first perform an online diagnostic to determine the cause and assess whether it qualifies as a warranty case. Following this, the next steps for efficient and timely resolution will be agreed upon in coordination with the Purchaser.

## **12. Contractual Penalties**

- 12.1. In the event the Seller fails to observe the deadline for handover and takeover of the delivery specified in Article 6 paragraph 6.1 of this Contract, the Purchaser is entitled to charge the Seller a contractual penalty of 0.1 % of the purchase price for each commenced day of delay, **maximally up to 5 % of the purchase price.**
- 12.2. If the Purchaser fails to pay the purchase price within the deadlines specified in this Contract, it shall pay the Seller statutory default interest, unless the Purchaser proves that the default in payment of the purchase price was caused by delayed release of funds by the subsidy provider.
- 12.3. The obliged party shall pay the penalties to the entitled party at the latest within 15 calendar days after receipt of the relevant account of the other Party.
- 12.4. The Purchaser's claim for damages shall always be maintained, however, it shall not be applicable vis-à-vis third parties.

### **13. Termination**

- 13.1. This Contract may be terminated by its fulfillment, by agreement of the Parties or withdrawal from the Contract due to reasons stipulated by laws or herein.
- 13.2. The Purchaser is further entitled to withdraw from the Contract without any sanctions if any of the below circumstances occurs:
- (i) the Seller materially breaches its obligations hereunder,
  - (ii) insolvency proceedings are held over Seller's assets,
- 13.3. The Seller is entitled to withdraw from the Contract in the event of a material breach of the Contract by the Purchaser. Purchaser's failure to pay the Price of Performance within the deadline specified in this Contract, despite being notified of this breach by the Seller in writing and provided with a sufficient additional period for remedy shall be considered a material breach of the Contract.

### **14. FORCE MAJEURE**

- 14.1 If either Party is prevented from, or delayed in performing any obligation under this Agreement by any event of Force Majeure, this Party shall not be considered in default or breach of this Agreement and no remedy shall be available to the other Party, unless otherwise provided for in this Agreement. The time for performance of that obligation shall be extended accordingly. However, Force Majeure shall not be applied for payment obligations under this Agreement.
- 14.2 Force Majeure" means any event beyond the reasonable control of a Party, including but not limited to (i) war (whether declared or not), armed conflict or serious threat of same (including but not limited to hostile attack, blockade, military embargo), hostilities, invasion, act of foreign enemy, extensive, military mobilization; (ii) civil war, riot rebellion and revolution, military or usurped power, insurrection, civil commotion or disorder, mob violence; (iii) act of terrorism, sabotage or piracy; (iv) act of authority whether lawful or unlawful, compliance with any law or governmental order, rule, regulation or direction; (v) act of god, plague, epidemic, pandemic (including but not limited to limited operational capacity, in particular with regard to production and administration, travel restrictions, limited travel opportunities and shipping difficulties), natural disaster, such as, but not limited to violent storm, cyclone, hurricane, earthquake, flood, tsunami; (vi) explosion, fire, destruction of machines, equipment, factories or any kind of installation, prolonged break-down of transport, telecommunication or electric current; or (vii) general labour disturbance, such as but not limited to boycott, strike and lock out; and (viii) any similar event, whether or not similar to the causes specified above and regardless of whether the cause effects the Party hereunder or its sub-suppliers or sub-contractors. Force Majeure shall also include any Force Majeure events, even, if these could reasonably have been expected due to political or other developments or reasons at the effective date of the Agreement and even if the Force Majeure event has already occurred at the effective date of the Agreement.
- 14.3 The Party affected by Force Majeure shall without undue delay inform the other Party of the existence of Force Majeure, the expected duration and the estimated effect on the ability to perform the obligations under this Agreement.
- 14.4 If Force Majeure has lasted more than 90 (ninety) days and the failure to perform the prevented or delayed obligation would constitute a material breach of this Agreement in the absence of such Force Majeure, then either Party may terminate this Agreement by written notice to the other Party.

- 14.5 If Force Majeure prevent Seller and/ or the Purchaser from fulfilling of its obligations, Purchaser shall compensate Seller for expenses incurred in securing, protecting and storing the Equipment.

## **15. Representatives of Parties, Notices**

- 15.1. The Seller has appointed the following responsible representative for communication with the Purchaser in connection with the subject-matter of performance hereunder:

In technical matters:

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

In contractual matters:

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

- 15.2. The Purchaser has appointed the following representatives responsible for communication with the Seller in connection with the subject-matter of performance hereunder:

In technical matters:

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

E-mail: XXXXXXXXXXXXXXXXXXXXXXXX

In contractual matters:

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

E-mail: XXXXXXXXXXXXXXXXXXXXXXXX

- 15.3. Unless otherwise agreed herein, all notices that are to be given or may be given between the Parties hereunder shall be made in writing and delivered to the other Party by an authorized courier service, in person (with written confirmation of receipt) or by registered mail sent using a postal service provider; such notification shall be deemed to have been delivered on the third business day after dispatch, unless it was sent to a foreign address, whereby it shall be deemed delivered on the fifteenth business day after dispatch. In the event of a warranty claim, a written notice may also be sent via e-mail.

## **16. Governing Law**

- 16.1. This Contract and all legal relations arising from it are governed by the laws of Czech Republic without giving effect to the principles of conflict of laws thereof. The application of the UN Convention on contract for the international sales of goods (CISG) shall be expressly excluded.

## **17. Intellectual Property Rights**

- 17.1. This Article applies only if the supplied goods include software necessary for the proper use of the goods, or if the Purchaser required delivery of software within the specification of the subject-matter of performance.
- 17.2. The Parties declare they have agreed that the Seller's fee for the provision of a software license is already included in the price of the goods.
- 17.3. The Seller declares that licenses granted to the Purchaser shall not infringe intellectual property rights of third parties and that it is entitled to transfer the license to the Purchaser. If the Seller fails to comply with this provision, it shall pay all claims of third parties due to infringement of

intellectual property rights of third parties and compensation for damage incurred by the Purchaser.

- 17.4. By virtue of this Contract, the Seller grants the Purchaser a user license for a software part of the subject-matter of performance, listed in Annex No. 1 hereto as a non-exclusive, non-transferable and perpetual right to use this part of the subject-matter of performance.
- 17.5. The Seller declares that it is the copyright holder of the SW and has not previously granted an exclusive license to SW to a third party (unless such licensee has given written approval of this Contract), or it at least has a right to the SW permitting it to provide a license to the Purchaser in the scope under this Contract.

## **18. Final Provisions**

- 18.1. This Contract, including the Annexes, constitutes a complete and comprehensive agreement between the Purchaser and the Seller.
- 18.2. The Parties have agreed that the Seller is not entitled to set off its receivable, nor a receivable of its garnishee, from the Purchaser against the Purchaser's receivable from the Seller.
- 18.3. The Seller is not entitled to assign a receivable arising from this Contract or in connection with it to a third party. The Seller is not entitled to assign the rights and obligations under this Contract or any part thereof to a third party.
- 18.4. The Seller undertakes to maintain liability insurance for damage caused in connection with the performance of business activities for the entire term of this Contract, with a limit of indemnity at least in the amount of the purchase price for the subject-matter of this Contract.
- 18.5. If any provision of this Contract later becomes or is found invalid, ineffective, apparent or unenforceable, such a defective provision shall not render the Contract invalid, ineffective, apparent or unenforceable as a whole. In such a case, the Parties undertake to further clarify such defective provision without undue delay or to replace it upon mutual agreement with a new provision which, in the scope permitted by legal regulations, corresponds to the largest possible degree to the intent of the Parties manifested as of the moment this Contract was concluded.
- 18.6. The Purchaser is the obliged entity pursuant to Act No. 340/2015 Coll., on special conditions for the effectiveness of certain contracts, on the publication of these contracts and on the register of contracts, as amended (hereinafter the "Act on the Register of Contracts"). The Seller acknowledges and expressly agrees to the publishing of the Contract in accordance with the Act on the Register of Contracts. The Parties agree that the Contract shall be published in the register of contracts in accordance with the Act on the Register of Contracts by the Purchaser.
- 18.7. This Contract shall enter into force on the day of its signing by the authorized persons of both Parties and shall take effect on the day of publishing of the Contract in the register of contracts pursuant to the Act on the Register of Contracts.
- 18.8. This Contract may be amended or supplemented only in the form of written numbered amendments, including a specification of time and place of signature, signed by authorized representatives of the Parties.
- 18.9. If a Party breaches an obligation under this Contract or if it is able to detect or should be aware of such a breach, it shall notify the other Party which may incur damage without undue delay, and warn it of the possible consequences; in such a case, the injured Party shall not be entitled to compensation for damage which was avoidable in light of the notification.

18.10. Under the conditions set forth in this Agreement, the Licensor undertakes:

- (i) to archive all documents required by applicable law that have been prepared for the performance of the subject under this Agreement and to enable the persons authorized to perform control of the project from which the performance under this Agreement is paid for, to perform a control of the documents related to the performance of this Agreement, for the entire period of archiving of the project, but at least until the end of year 2035. The Licensee is entitled to receive the above-mentioned documents from the Licensor free of charge after 10 years from the end of performance under this Agreement;
- (ii) as a person obliged under the provisions of § 2 letter e) Act No. 320/2001 Coll., on financial control in public administration, as amended, cooperate in the performance of financial control. The Licensor will also ensure this obligation for any subcontractors of the Licensor.

18.11. This Contract is drafted in English language. The following Annexes are an integral part hereof:

Annex No. 1: Technical Specification of Performance According to Award Criteria and Seller's Tender

In witness of their approval of the content of the Contract, the Parties attach their signatures below.

In Prague dated \_\_\_\_\_

In Norderstedt on the day of \_\_\_\_\_

For **UCT Prague**

For **microdrop Technologies GmbH**

\_\_\_\_\_  
Name: xxxxxxxxxxxxxxxxxxxx.

Position: rector

\_\_\_\_\_  
Name: xxxxxxxxxxxxxxxxxxxx

Position: Managing Director

*Annex No. 1: Shall be added upon signature of the Contract*

microdrop Technologies GmbH - Tycho-Brahe-Kehre 1 - D-22844 Norderstedt  
University of Chemistry and Technology Prague  
Vysoká škola chemicko-technologická v Praze  
XXXXXXXXXXXXXXXXXXXX  
Technická 1905/5  
16628 PRAGUE 6 – DEJVICE  
TSCHECHISCHE REPUBLIK

Quotation	
Document No.	2024-30510
Date	10.12.2024
Customer No.	D11963
Contact	xxxxxxx
Please mention in all correspondence!	

Mode of Shipment	Forwarder	Our VAT No.	DE814345010
Terms of Delivery	EXW	Our Tax No.	1129009373
Reference		Foreign Tax No.	
Your Ref.	---	Your VAT No.	CZ60461373
Your Request/Order			

Dear xxxxxxxxxxxxxxxx

According to our delivery and payment terms we offer as follows:

Item	Part No.	Description	Delivery week	Quantity	Unit	Unit Price	Total
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**Amulet Material printer with two micro dispensing heads**

Micro dispenser head with heated nozzle:

1	MD-K-140-0216	Micro dispenser head with nozzle heater for liquids with a viscosity <1,000 mPas, e.g. oils, higher viscosity UV adhesives or liquids with particle size up to 4 µm; for use with AD-P systems	2024/00	1 pcs.		3.529,00	3.529,00
				Discount		10,00 %	-352,90

Specifications:

Micro dispenser head: MD-K-140  
Inner nozzle diameter: 70 µm  
Type: 900  
Sealing material: Silicone  
Tubing material: ETFE; OD 1.56 mm  
Tubing length: 115 mm  
Cable length: 220 mm  
Connector: Lemo 6-pin  
Storage bin: MD-V-604; 4 ml; UNF ¼-28  
Test liquid: Ethylene glycol at 30°C

2	ST-MD-10604	Service pack for MD-K-1... (N, Sili, 604)	2024/00	1 pcs.		38,00	38,00
				Discount		100,00 %	-38,00
3	MD-H-712-S	Quick-change holder for AD-H-710-xS to include MD-K-1... with MD-V-3.../-6...	2024/00	1 pcs.		295,00	295,00
				Discount		10,00 %	-29,50
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Carryover						3.441,60
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Telefax: +49 (40) 535383-24  
Internet: www.microdrop.de  
E-Mail: info@microdrop.de

Address:  
Tycho-Brahe-Kehre 1  
22844 Norderstedt

Banking Account:  
xxxxxxxxxxxxxxxxxxxx  
IBAN: xxxxxxxxxxxxxxxxxxxxxxxx  
BIC: xxxxxxxxxxxxxxxxxxxxxx

Managing Director  
xxxxxxxxxxxxxxxxxxxx  
xxxxxxxxxxxxxxxxxxxx  
Norderstedt: HRB 7194 KI

Item	Part No.	Description	Delivery week	Quantity	Unit	Unit Price	Total
<u>Pipette with storage volume of 25 µl:</u>							
4	AD-KH-501-0204	Autopipette for liquids with a viscosity <10 mPas, e.g. aqueous solutions, selected solvents or cell suspensions, for use with AD-P systems	2024/00	1 pcs.		1.345,00	1.345,00
				Discount		50,00 %	-672,50
<u>Specifications:</u> Pipette: AD-KH-501 Inner nozzle diameter: 70 µm Type: 050 Storage volume: approx. 25 µl Dead volume: approx. 12 µl Tube connection: UNF 1/4-28 Cable length: 220 mm Connector: Lemo 6-pin Test liquid: Water							
5	ST-AD-N	Service pack for pipette (N)	2024/00	1 pcs.		21,00	21,00
				Discount		100,00 %	-21,00
6	AD-H-612-2S	Quick-change holder for 2x AD-K-501 or AD-KH-501	2024/00	1 pcs.		303,00	303,00
				Discount		10,00 %	-30,30

Overview camera (parallel arranged to the dispenser head/ pipette):

7	MD-O-540-COAX	Fiducial camera, USB-b/w-camera, coaxial LED illumination, 3 MPix, 1/1.8" CMOS, 56 fps, Working distance approx. 40 mm, Field of view: approx. 1.3 mm x 1 mm	2024/00	1 pcs.		2.928,00	2.928,00
				Discount		10,00 %	-292,80

Printing System with underframe:

(can be upgraded with a hood AD-B-9010 at a later stage)

8	AD-P-9140	Autodrop Gantry II Printing System for up to 4x dispenser heads or 4x pipettes	2024/00	1 pcs.		53.361,00	53.361,00
				Discount		10,00 %	-5.336,10

**EQUIPMENT FEATURES**

of the tabletop Autodrop Gantry II Printing System with 2x drivers:

- Dispenser driver for 2x Microdrop dispenser heads (MD-K-...) or 2x Autopipettes (AD-K-...)
- Integrated quick-change holder (AD-H-710-4S) on the z-axis
- *Optional upgrade up to 4x Microdrop dispenser heads (MD-K-...) or 4x Pipettes (AD-K-...)*
- Individual control parameters result from the liquid to be dispensed and the selected dispensing head design.
- Quick-change holder with holder for overhead camera (AD-H-710-4S).

Application fields e.g. production, development and research

**Positioning Unit:**

- Travel range: x-axis 300mm, y-axis 300mm, z-axis 100mm
- Positioning accuracy: ± 20µm each axis
- Repetition accuracy: ± 5µm each axis
- Acceleration: maximum 1000mm/s²
- Velocity: maximum 125mm/s
- Axis resolution: 0.1µm
- Electronic control unit: 3-axes system with BLDC motors, ball screws
- Additional maximum load of positioning unit 2.5kg

**Software:**

- Operation via Notebook with Windows 11

						Carryover	55.046,90
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Item	Part No.	Description	Delivery week	Quantity	Unit	Unit Price	Total
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- All control electronics are operating via user interface of the Autodrop Software 9.xx
- Specification of Autodrop Software 9.xx:
  - \* Setting and storing the dispenser head/pipette parameters
  - \* Macro Script for programming automatic processes
  - \* Printing types: Array printing, vector-oriented graphics, Bitmap Matrix printing
  - \* Import and edit of dxf-files, to print curves and other structures (path control)
  - \* Observation of dispensed droplets in flight and determining droplet speed and volume
  - \* Image recognition for substrate position and/or fiducial marks (*optional Overhead Camera*)

#### Camera Systems:

- Observation Camera:  
Observation unit for individual adjustment and control of the drop formation process. The control parameters of the dispenser head/pipette (voltage, pulse width, optional: temperature of nozzle heating coil) can be set, depending on the selected fluid.
- Optional, Overhead Camera with coaxial illumination (article no. MD-O-540-COAX):  
The overhead camera is arranged parallel to the dispensing heads or pipettes and is used, for example, for alignment with the substrate (fiducial mark detection) and viewing of the dosing result.

#### Control Electronics:

- Pressure control for holding pressure and for filling/emptying the dispenser heads/pipettes.
- Pressure distribution for up to 4x dispensing heads or 4x pipettes.
- Control for 2x dispensing heads or 2x pipettes:
  - \* Selection of the dispensing of single droplets, series of droplets or continuous dispensing of droplets
  - \* Control modes for dispensing head/pipette:
    - a) Single rectangular pulse (voltage, pulse width)
    - b) Pulse modulation: Up to three pulses can be set individually to generate a single droplet (3x rectangular pulse, 3x delay)
  - \* *Optional: expansion up to 4x controls is possible (Part No. AD-E-5110)*

#### Other integrated components:

- Manual adjustment of the integrated vacuum pump for *optional vacuum substrate table*
- Adjustable coaxial illumination for *optional overhead camera*

#### General data:

- 1x power supply: Mains voltage 100V-240V, mains frequency AC 50-60Hz, 500W
- External dimensions without hood and underframe, approx.
  - \* Tabletop positioning system: width 800mm, depth 800mm, height 800mm
  - \* Tabletop control electronics: width 450mm, depth 315mm, height 270mm
- Weight of the tabletop Autodrop Gantry II Printing System max. 50kg (excluding packaging).
- *Optional on request e.g. cover hood with doors, base frame, HEPA filter*

9	AD-E-5110	Extension module: 2x dispenser driver for integration into Printing System AD-P; Note: To extend the printer later with the AD-E-5110 it is necessary to send the plug-in electronic-rack to microdrop Technologies.	2024/00	1 pcs.		6.229,00	6.229,00
				Discount		10,00 %	-622,90
10	AD-B-9020	Underframe for Autodrop Gantry II (AD-P-91...)	2024/00	1 pcs.		2.130,00	2.130,00
		Dimensions approx.: depth 780mm width 760mm height incl. AD-P-91... 1500mm		Discount		100,00 %	-2.130,00

						Carryover	60.653,00
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Item	Part No.	Description	Delivery week	Quantity	Unit	Unit Price	Total
11	AD-I-5010-H	Vacuum clamping table, heatable dimension: 200 mm x 200 mm <u>Spezifikationen:</u> Vacuum table for full-surface flexible fixation of flat substrates Up to 16 glass sides Setup: Aluminium sintering plate Heatable up to 100 °C Connection: Heater 250 W 48 V, PT 100 Vacuum: Hose OD 6 mm	2024/00	1 pcs.		2.035,00	2.035,00
				Discount		10,00 %	-203,50
12	AD-E-7100-2	Modular heating controller for integration into Autodrop positioning systems for one heated vacuum table and one fully heated dispensing head MD-K-801 maximum heating power 250 W Operation via Autodrop Software	2024/00	1 pcs.		2.420,00	2.420,00
				Discount		10,00 %	-242,00
13	SL-T-204	Online training for an introduction to microdrop dispensing technology (2x 4 hours)	2024/00	1 pcs.		1.481,00	1.481,00
				Discount		100,00 %	-1.481,00

\*\*\*\*\*

#### Special Arrangement

Under the terms of the following agreement, microdrop Technologies will grant a one-time special discount of 10% on the Autodrop Gantry II Printing System listed here (Articles 1 - 32). In return, microdrop Technologies will receive documents for marketing purposes:

- The University of Chemistry and Technology Prague provides microdrop Technologies with pictures and videos, which not compromising the confidentiality or the details of their research before publication; generated in connection with the above Autodrop Gantry II Printing System.
- The University of Chemistry and Technology Prague will state in their published research (peer-reviewed journals) that they have used the above Autodrop Gantry II Printing System from microdrop Technologies.
- microdrop Technologies may mention the University of Chemistry and Technology Prague as a reference in their promotional materials.

\*\*\*\*\*

					Subtotal	EUR	64.662,50
		plus Shipping					575,00
		plus Packaging + Handling					580,00
		Subtotal					65.817,50
		plus VAT with VAT-Code	0,00	% of	65.817,50		0,00
					Total	EUR	65.817,50

Inneregemeinschaftliche steuerfreie Lieferungen erfolgen nach § 4 Nr. 1 b in Verbindung mit § 6 a UStG.

Delivery time: 8-12 weeks. Delivery time stated refers to date of order.

Validity of this offer is 1 month - subject to prior sale.

Warranty is 12 months on production and material failures.

Delivery according to "General Conditions for the supply of products and services"

(Download from [www.microdrop.de/aqb.html](http://www.microdrop.de/aqb.html))

#### Payment Terms:

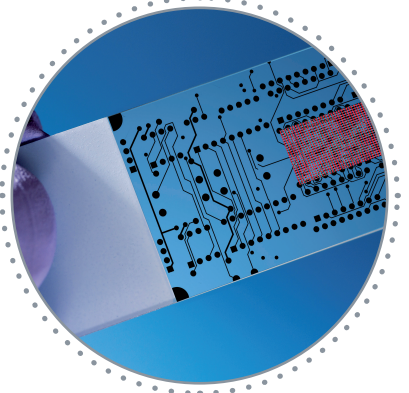
Payment through: 50% prepayment / 50% after receipt of goods

# TECHNICAL SPECIFICATIONS

## Autodrop Gantry II Printing System

for the public contract titled:

**Amulet\_Material printer with two micro dispensing heads**



microdrop Technologies GmbH  
Tycho-Brahe-Kehre 1  
22844 Norderstedt  
Germany



Advancing the Art of **Microdispensing**

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## 1. Company Profile

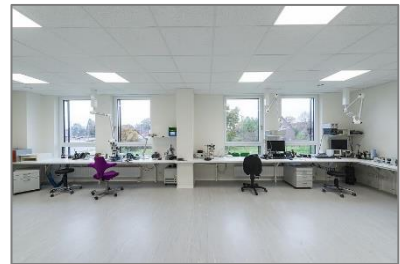
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microdrop Technologies is one of the leading companies in the field of microdispensing. Our technology enables the handling and dosing of technical liquids in the pico- to microliter range in various applications in microtechnology, polymer electronics and in the life science sector.

Our focus is on covering the functional as well as economic feasibility. Our engineering team works in close cooperation with our customers on technically demanding challenges and application-oriented solutions. Our highly automated products are used by well-known industrial companies, high-tech companies, and numerous R&D institutions worldwide. Our customers can select of a wide range of liquids where in the end single drop volumes starting in the picoliter range or multiple drops for higher volume throughput is requested. Whether the liquid needs to be dispensed as a single drop or printed on-the-fly with high speed, a high precision is always given.

Our customers can count on our passion for precision and accuracy.

At our location in Norderstedt (near Hamburg) we develop and create future-oriented products and sell them worldwide. The company can look back on many years of experience in the development of innovative solutions, including joint BMBF and EU projects. The products and services are distributed worldwide. microdrop Technologies has sales partners in China, USA, Japan, South Korea and India.



*Figure 1: Company building and rooms*

## 2. Autodrop Gantry II Printing System

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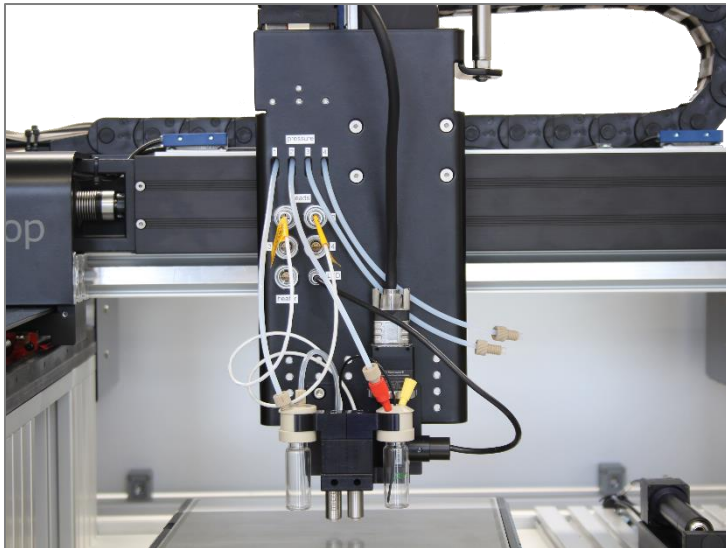


*Figure 2: Autodrop Gantry II Printing System, here with underframe and hood*

The offered Autodrop Gantry II Printing System AD-P-9140 is a flexible positioning system that can work with up to 4x dispensing heads or pipettes.

Its typical fields of application are e.g. in the production, research and development.

The system is characterized above all by its flexible and thus application-oriented setup. By using different components, this system can be adapted to the requirements. A variety of components are available, such as different vacuum tables, holder options e.g. for well plates, or environmental components such as HEPA filter or humidifier.



*Figure 3: 2x Micro dispenser heads integrated into Autodrop Gantry II Printing System, here with 2x Micro dispenser heads*

In standard, the Autodrop Gantry II Printing System is equipped with a travel range of 300mm x 300mm x 100 mm with a positioning accuracy of 20µm each axis and a repeatability of 5µm each axis. The size can also build to customer's request as in this case. It will have a travel range of 400 mm x 500 mm x 100 mm.

The acceleration of the system is max. 1000 mm/s<sup>2</sup> and the velocity is max. 125 mm/s by having an axis resolution of 0.1 µm.

The Autodrop Gantry II Printing System is equipped with two cameras:

An **observation camera** to adjust and control the droplet formation process with the possibility to control the micro dispenser head parameters depending on the liquid used.

The process can be observed in the Autodrop Software. At the same time, the software is measuring the drop diameter and its volume, the size or drop velocity.

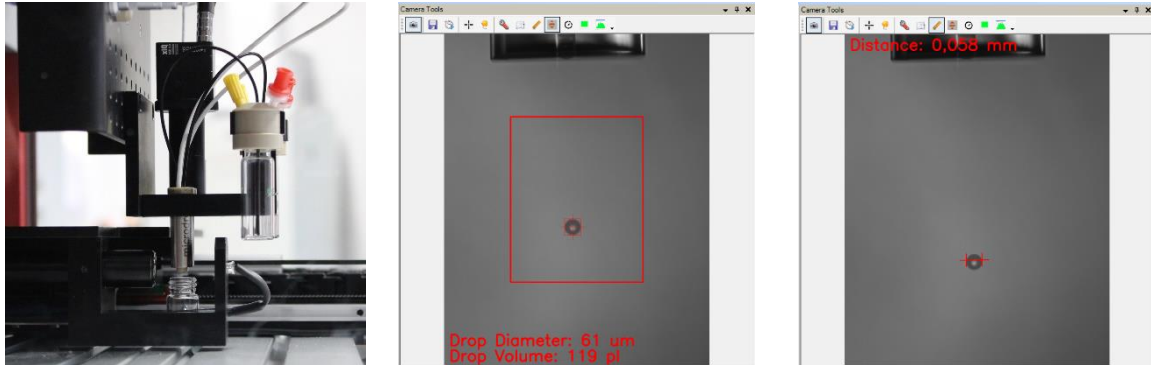


Figure 4: Observation camera

A **second camera with coaxial illumination** is located next to the Micro dispenser head/ Autopipette and is for the alignment with the substrate (fiducial mark detection) and visualization of the result.



Figure 5: Overhead camera

### 3. Autodrop Software

The system is controlled by the included Autodrop software, which is already installed on the supplied notebook (Windows 11). The Autodrop software is simple and easy to use for the operator.

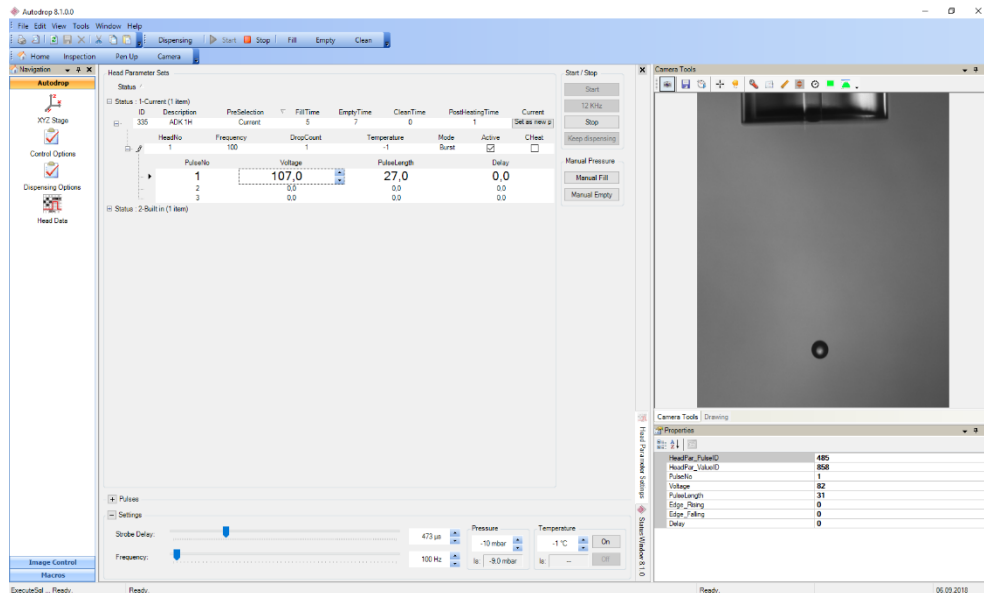


Figure 6: Autodrop Software overview

The operation of all the control electronics is done through the user interface of the Autodrop software with the following details:

- Setting and saving of the dispensing head/pipette parameters.
- Macro script for programming automatic sequences.
- Printing modes: matrix printing, vector-oriented graphics, bitmap matrix printing
- Importing and editing dxf files, for printing curves and other structures (path control)
- Observation of droplets in flight and determination of droplet velocity and volume
- Image recognition for substrate position and/or registration marks

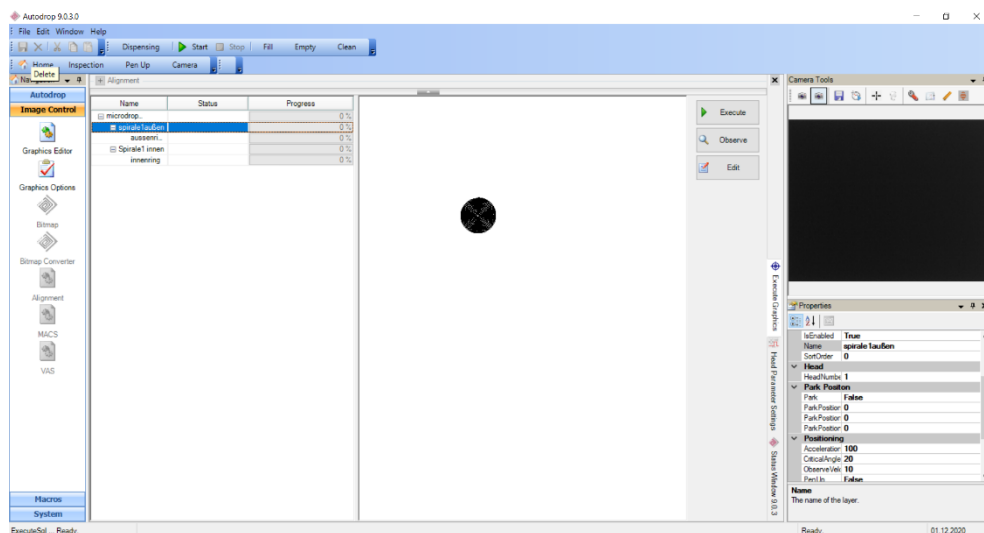


Figure 7: Autodrop Software, Graphics Editor

## 4. Micro dispenser heads and Autopipettes

The Autodrop Gantry II Printing System can drive up to 4x Micro dispenser heads or Autopipettes.

The product portfolio of microdrop Technologies GmbH offers a wide selection of Micro dispenser heads and Autopipettes. For liquids with low viscosity of  $<20$  mPas, the dispenser head type MD-K-130 or the Autopipettes AD-KH-501-L6 or AD-K-901 is the right choice. It can be produced with inner nozzle diameter of  $50\text{ }\mu\text{m}$  or  $70\text{ }\mu\text{m}$  or on special request anything in between or with an inner nozzle diameter of  $30\text{ }\mu\text{m}$ .



Figure 8: AD-KH-501-L6



Figure 9: AD-K-901

The Micro dispenser head type MD-K-140 is designed for liquids with viscosities  $>20$  mPas. In addition to the other inner geometry, it has an additional heatable nozzle tip. As standard inner nozzle diameter we offer  $50\text{ }\mu\text{m}$ ,  $70\text{ }\mu\text{m}$  or  $100\text{ }\mu\text{m}$ . For materials which are solid at room temperature (viscosity up to  $10,000$  mPas), we offer a High temperature dispenser head MD-K-801 which can be heated up to  $150^{\circ}\text{C}$ . This one is available with inner nozzle diameter of  $70\text{ }\mu\text{m}$  or  $100\text{ }\mu\text{m}$ .



Figure 10: MD-K-130/140

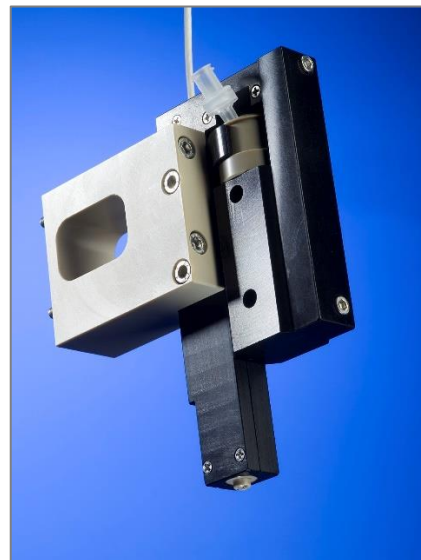


Figure 11: MD-K-801

## 5. Dispensable liquids

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Next to aqueous and solvent-based liquids with or without particles, our systems can work with several other liquids (which contains) like:

- Cells
- Antibodies
- Hydrogel
- Proteins

Next to this, we have a wealth of experience in dispensing adhesives, conductive inks and lubricants. Here is a selection.

### **Conductive inks manufacturer and product (selection):**

- ANP:
  - Silverjet
  - DGP-30LT-15C
- Cabot:
  - AG-IJ-G-100-S1
  - CCI-300
- Genes'Ink:
  - Smart'Ink S-CS01130
- Harima:
  - NPS-J
  - NPS-JL
  - NPS-J-HTB
- InkTec:
  - TEC-IJ-010
- UT Dots:
  - UTD
  - AG40 + solvent F2
- Xerox:
  - Silver Bullet
- XTPL:
  - AG Nanoink IJ36

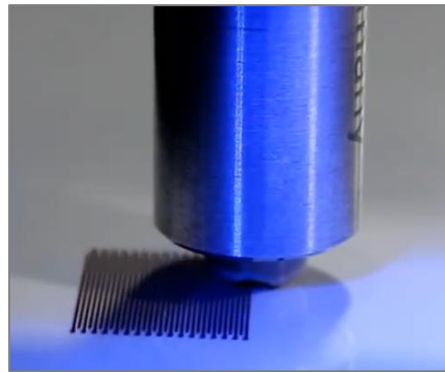


Figure 12: Pattern printing with copper ink

➔ [Click to see the movie at our YouTube channel](#)

### **Adhesives manufacturer and product (selection):**

- Norland Optical Adhesive by Gentec:
  - NOA 61
  - NOA 73
  - NOA 74
  - NOA 81
  - NOA 88
- Epo-Tek by J.P. Kummer:
  - Epo-Tek OG 198-54
  - Epo-Tek UVO 114
- Vitralit by Panacol-Elosol:
  - Vitralit 6127
  - Vitralit 6164
- Araldit by Bodo Möller Chemie:
  - Araldit DBF (Resin)
  - Araldit Hardener HY 956

**Lubricants manufacturer and product (selection):**

- Moebius oil by Moebius & Fils:
  - Moebius 9415
  - Moebius Synt-HP 1300C
  - Moebius Synt-HP 500
  - Moebius 9010/10
  - Moebius 9014
  - Moebius 9027
  - Moebius 9030/5
  - Moebius D5MD-546
- Cassida by Rivolta:
  - Cassida HF 15
  - Cassida DC 32
  - Cassida HF 68
  - Cassida GL 150
  - Cassida GL 220

## 6. Service

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In everything we do, the customer's satisfaction and an optimal solution of the dispensing task are in the foreground.

With the knowledge we have built up over the years, it is clear to us that the apparently small dispensing task - after all, we are talking about volumes in the pico- to microliter range that are not even visible to the naked eye - is often not so small at all. Precision and reliability are probably the most important factors here to ensure the success of the entire process.

We will be pleased to provide our customers with advice, answering questions and explain many background facts.

We offer a wide range of service, whether before purchasing decision, during or, of course, after the purchase.

Let's save your time and money.

### Dispensing test:

At the beginning of every application there is the question of the liquid to be used. If there are no empirical values regarding dispensability, e.g. because the liquid is new on the market or has been specially formulated for the task, a simple dispensing test can be performed.

In our laboratory, in addition to the basic dispensability, we also consider points that are important for the actual application, such as the drop diameter, the volume or pause times.

We find the best possible characteristics of the Micro dispenser head or Autopipette that perfectly fits the liquid and the task.

### Application test (feasibility study):

If more factors than just dispensability need to be considered, we offer application tests in our laboratory. Here we reproduce the complete task under consideration of the given environmental conditions at your site. We set up our system, create or load the sample to be dispensed into our Autodrop software and always keep an eye on the given schedule. After the first trials, we turn possible screws to guarantee the success of the application in the end.

### Customized solutions:

If our customers haven't found the system they were hoping for in their project in our standard products so far, we offer a wide range of combination and expansion options to make the final product perfect. Whether integration of a HEPA filter, vacuum tables (also with cooling and/or heating option) in different sizes or simply the option to hold microplates or glass slides... each of our positioning systems can be customized or retrofitted at a later stage.

### Training:

It is important to us that our customers are also satisfied with our products after the purchase decision. We will be pleased to provide them with assistance in fulfilling the dispensing task, be it fluid-related or software issues.

Our customers can contact us at any time.