Purchase Contract

(hereafter the "**Contract**")

1. CONTRACTUAL PARTIES

1.1 **Fyzikální ústav AV ČR, v. v. i.** (Institute of Physics of the Czech Academy of Sciences)**,**

with registered offices at: Na Slovance 1999/2, 182 00 Praha 8, Czech Republic,
represented by: RNDr. Michael Prouza, Ph.D., Director,
registered in the Register of public research institutions of the Ministry of Education, Youth and Sports of the Czech Republic.
ID No.: 68378271

Bank: [redacted]
Account No. IBAN: [redacted]; SWIFT (BIC): [redacted]

(hereinafter referred to as the "**Buyer**")

and

1.2 **Vigor gas Purification Technologies (Europe) GmbH,**

with registered offices at: Am Rod 2, 97737 Gemünden am Main, Germany,
represented by: Damian Mulligan, on the basis of power of attorney,
registered in the commercial register kept by Local Court Würzburg.
ID No.: HRB 15188
Tax ID No.: DE332287034

Bank: [redacted]
Account No. IBAN: [redacted]; SWIFT (BIC): [redacted]

(hereinafter referred to as the "**Seller**")

(the Buyer and the Seller are hereinafter jointly referred to as the "**Parties**" and each of them individually as a "**Party**").

2. FUNDAMENTAL PROVISIONS

2.1 The Buyer is *the Beneficiary* of the project "Sensors and Detectors for Future Information Society" under the *Operational Programme Jan Amos Komenský* within the framework of EU funds, project registration number CZ.02.01.01/00/22_008/0004596 (hereinafter referred to as the "**Project**"). The subject of performance under this Contract is intended for the Project and mainly financed from the support provided for its implementation.

2.2 The Seller has been selected as the winner of a public procurement for the public contract with the title **"Chemical glovebox for depositions – REISSUE"** (hereinafter the "**Procurement Procedure**").

2.3 The documentation necessary for the implementation of the subject of performance hereof consists of

2.3.1 **Technical specifications** of the subject of performance hereof attached as **Annex 1** hereto**.**

2.3.2 The Seller´s bid submitted within the Procurement Procedure in its parts which describe the subject of performance in technical detail (hereinafter the "**Seller's Bid**"); the Sellers's Bid forms **Annex 2** to this Contract and is an integral part hereof.

In the event of a conflict between the Contract and its Annex or between the Contract's Annexes, the technical specification / requirement of the higher level / quality shall prevail.

2.4 The Seller acknowledges that it is essential for the Buyer that the Seller delivers and handovers the subject of performance within the specified time and in the specified quality as stated in Annexes 1 and 2 of this Contract (including invoicing). If the Seller fails to comply with the contractual requirements, the Buyer may incur damages.

3. SUBJECT-MATTER OF THE CONTRACT

3.1 The subject of this Contract is the Seller's obligation to deliver and transfer into the Buyer's ownership:

a **chemical glovebox for depositions s**pecified in detail in Annexes 1 and 2 hereto

(hereinafter the **"Equipment"**)

and the Buyer's obligation to accept the Equipment and to pay the Seller the purchase price as defined below.

3.2 The following activities are an integral part of the performance to be provided by the Seller:

3.2.1 Transport of the Equipment incl. all accessories specified in Annexes 1 and 2 hereto to the place of performance, un-packaging and control thereof;

3.2.2 Installation of the Equipment and all components necessary to operate the Equipment including connection to installation infrastructure at the place of performance;

3.2.3 Verification of the functionality of the Equipment, performing acceptance tests, issuing reports on the outcome of these tests at the place of performance after installation of the Equipment;

3.2.4 Training of operators at the place of performance (at least 6 hours of training of 5 operators)

3.2.5 Delivery of detailed instructions and manuals for operation and maintenance in Czech or English language, in electronic or hardcopy (printed) versions;

3.2.6 Free-of-charge warranty service during the warranty period;

3.2.7 Provision of free technical support in the form of consultations, e.g. regarding fine tuning of the Equipment. The Seller shall provide the Buyer with this free support even after the warranty expires.

3.3 The Seller shall be liable for the Equipment and related services to be in full compliance with this Contract, its Annexes and all valid legal regulation, technical and quality standards and shall also be liable that the Buyer will be able to use the Equipment for the defined purpose. In case of any conflict between applicable standards, it is understood that the stricter standard or its part shall always apply.

4. PERFORMANCE PERIOD

4.1 The Seller undertakes to manufacture and deliver the Equipment to the Buyer within **6 months** of the conclusion of the Contract.

4.2 The Seller is obliged to notify the Buyer of the date of delivery and installation of the Equipment at least 15 days in advance. This term is subject to the consent of the Buyer.

5. PURCHASE PRICE, INVOICING, PAYMENTS

5.1 The purchase price is based on the Seller's submitted bid and amounts to **42 480.42 EUR** (in words: Forty-two thousand, four hundred and eighty Euros and forty-two cents) excluding VAT for the Equipment (hereinafter the **"Price"**) VAT shall be settled in accordance with the valid Czech regulation.

5.2 The Price includes any and all performance provided by the Seller in connection with meeting the Buyer's requirements for the proper and complete delivery of the Equipment hereunder, as well as all costs that the Seller may incur in connection with the delivery, installation and testing of the Equipment upon handover.

5.3 The Seller is entitled to invoice the Price after the Handover Protocol in accordance with Section 10.3 will have been signed. In case the Equipment will be delivered with minor defects, the Price shall be invoiced after removal of these minor defects.

5.4 All invoices issued by the Seller must contain all information required by the applicable laws of the Czech Republic and, in addition, they must

5.4.1 contain registration number of this Contract, which the Buyer shall communicate to the Seller based on Seller's request before the issuance of the first invoice,

5.4.2 state that the Equipment is supplied for the purposes of the project "Sensors and Detectors for Future Information Society" with the registration number CZ.02.01.01/00/22_008/0004596.

5.5 The Buyer requests electronic invoicing to the electronic address efaktury@fzu.cz.

5.6 Invoices shall be payable within thirty (30) days of the date of their delivery to the above address. Payment of the invoiced amount means the date of its remittance to the Seller's account.

5.7 If an invoice is not issued in conformity with the payment terms stipulated by the Contract or if it does not comply with the requirements stipulated by law, the Buyer shall be entitled to return the invoice to the Seller as incomplete, or incorrectly issued, for correction or issue of a new invoice, as appropriate, within five (5) business days of the date of its delivery to the Buyer. In such a case, the Buyer shall not be in delay with the payment of the Price or part thereof and the Seller shall issue a corrected invoice with a new and identical maturity period commencing on the date of delivery of the corrected or newly issued invoice to the Buyer.

5.8 The Buyer shall be entitled to unilaterally set off any of their payments against any receivables claimed by the Seller due to:

5.8.1 damages caused by the Seller,

5.8.2 contractual penalties.

5.9 The Seller shall not be entitled to set off any of his receivables against any part of the Buyer's receivable hereunder.

6. OWNERSHIP TITLE

The ownership right to the Equipment and at the same time the associated risk of damage shall pass to the Buyer upon proper handover and acceptance of the Equipment according to Section 10.3, i.e. by drawing up the Handover Protocol and its signature by an authorized representative of the Buyer.

7. PLACE OF PERFORMANCE

The place of performance, i.e. the place of delivery, installation and handover of the Equipment, shall be the seat of the Buyer at Cukrovarnická 112/10, 162 00 Praha 6, Czech Republic, Building C, Room No. 206/2 (ground level).

8. NOTIFICATION OF DELIVERY

The Seller shall notify the Buyer in writing of the exact date of delivery installation and handover of the Equipment in advance and in the manner according to Section 4.2, ensuring that the deadline for the performance hereunder is maintained.

9. INTERACTION OF THE PARTIES

9.1 The Seller undertakes to notify the Buyer of any obstacles on his part, which may negatively influence proper and timely delivery and/or handover of the Equipment.

9.2 The Seller undertakes to provide the Buyer with cooperation in the event of inspections by authorized entities in connection with the Project.

10. DELIVERY, INSTALLATION, HANDOVER AND ACCEPTANCE

10.1 The Seller shall transport the Equipment at his own cost to the place of performance. If the shipment is intact, the Buyer shall issue delivery note for the Seller.

10.2 The Seller shall perform and document the installation of the Equipment and launch experimental tests in order to verify whether the Equipment is functional and meets the technical requirements of Annexes No. 1 and 2 hereof.

10.3 The handover procedure shall be completed by handover of the Equipment confirmed by the Handover Protocol containing specifications of all performed tests. Handover Protocol shall contain the following mandatory information:

10.3.1 Identification of the Seller, the Buyer and any subcontractors;

10.3.2 Description of the Equipment including description of all components and their serial / production numbers;

10.3.3 Description of executed tests according to Section 3.2.3 of the Contract and their results;

10.3.4 List of technical documentation according to Section 3.2.5 of the Contract;

10.3.5 Confirmation of the training according to Section 3.2.4 of the Contract, including a list of participants and information on its extent;

10.3.6 Buyer's possible objections to minor defects of the Equipment including the manner of and deadline for their removal and

10.3.7 Signatures of authorized representatives of the Buyer and the Seller, with the date indicated.

10.4 Handover of the Equipment does not relieve the Seller from liability for damage caused by its defects.

10.5 The Buyer shall not be obliged to accept the Equipment or any part thereof which is defective (even if such defects - on their own or in connection with other defects – do not constitute an obstacle to the use of the Equipment). In such a case, the Buyer shall issue a report containing the reason for his refusal to accept the Equipment or its part. If the Equipment or its part upon handover does not meet the parameters defined in Annexes No. 1 and 2 to this Contract, such non-compliance is considered a defect of the Equipment.

10.6 Should the Buyer not exercise his right not to accept the Equipment or its part with a defect, the Seller and the Buyer shall list all defects detected in the Handover Protocol, including the manner of and deadline for their removal. Should the Parties not be able to agree in the Handover Protocol on the deadline for removal of the defects, it shall be understood that all above shall be removed / rectified within 10 days of handover.

11. REPRESENTATIVES, NOTICES

11.1 The Seller authorized the following representatives to communicate with the Buyer in all matters relating to the Equipment delivery, installation and handover:

[redacted]

11.2 The Buyer authorized the following representatives to communicate with the Seller in all matters relating to the Equipment delivery, installation and handover:

[redacted]

11.3 The representatives according to Sections 11.1 and 11.2 can be changed by a unilateral written declaration of the Buyer / Seller delivered to the Seller / Buyer.

11.4 All notifications to be made between the Parties hereunder must be made out in writing and delivered by hand (with confirmed receipt) or by post (to the address of the Seller's or Buyer's registered offices), or in the form of electronic delivery incorporating electronic signature (qualified certificate) to epodatelna@fzu.cz in the case of Buyer and to [redacted] in the case of the Seller.

11.5 In all technical and expert matters (discussions on the Equipment testing, notification of the need to provide warranty or post-warranty service, technical assistance etc.), electronic communication between technical representatives of the Parties will be acceptable using e-mail addresses specified in Sections 11.1 and 11.2.

12. TERMINATION

12.1 This Contract may be terminated early by agreement of the Parties or withdrawal from the Contract on the grounds stipulated by law or in the Contract.

12.2 The Buyer is entitled to withdraw from the Contract without any penalty from the Seller in any of the following events:

12.2.1 The Seller is in delay with the delivery of the Equipment longer than 1 month after the date pursuant to Section 4.1 hereof.

12.2.2 The technical parameters or other conditions set out in the technical specifications set out in Annexes 1 and 2 to this Contract and in the relevant applicable technical standards will not be met by the Equipment at handover.

12.2.3 Facts emerge bearing evidence that the Seller will not be able to deliver and/or handover the Equipment.

12.3 The Seller is entitled to withdraw from the Contract in the event of the Buyer being in default with the

payment for more than 2 months with the exception of the cases when the Buyer refused an invoice due to defect on the delivered Equipment or due to breach of the Contract by the Seller.

12.4 Withdrawal from the Contract becomes effective on the day the written notification to that effect is delivered to the other Party. The Party which had received performance from the other Party prior to such withdrawal shall duly return such performance.

13. INSURANCE

13.1 The Seller undertakes to insure the Equipment against all risks, in the amount of the Price for the entire period from the commencement of the transportation of the Equipment until duly handed over to the Buyer. In the event of a breach of this obligation, the Seller shall be liable to the Buyer for damages incurred in connection therewith.

13.2 The Seller is liable for the damages that he has caused. The Seller is also liable for damages caused by third parties which have undertaken to carry out performance or part thereof under this Contract.

14. WARRANTY TERMS

14.1 The Seller shall provide warranty for the quality of the Equipment for a period of **36 months**.

14.2 The warranty term shall commence on the day following the date of signing of the Handover Protocol pursuant to Section 10.3 hereof. The warranty does not cover consumable parts. Consumable parts for the purposes of the Contract are the items contained in the Equipment which are consumed at regular intervals during the normal use of the Equipment, i.e. parts which have a specified typical lifetime, that does not exceed the warranty period provided the Equipment is used with normal frequency.

14.3 Should the Buyer discover a defect, he shall notify the Seller to rectify such defect using the e-mail address: [redacted]. The Seller is obliged to notify the Buyer without delay about any change of this e-mail address. The Seller shall be obliged to review any warranty claim within 72 hours (within business days) from its receipt and to propose solution, unless agreed otherwise by the Parties.

14.4 During the warranty period, the Seller shall be obliged to rectify any claimed defects within 30 days from the date on which the Equipment was delivered to the Seller for repair or within 30 days from receipt of the Buyer's notification if the Seller sends a technician to perform the repair on-site. In cases of unusual defects, the Seller shall be obliged to rectify the defect in the period corresponding to the nature of the defect and to define the deadline for the completion of the repair or for shipping of the rectified Equipment.

14.5 During the warranty period, any and all costs associated with defect rectification / repair including transport and travel expenses of the Seller shall be always borne by the Seller.

14.6 The repaired Equipment shall be delivered by the Seller to the Buyer along with a protocol confirming removal of the defect (hereinafter the "**Repair Protocol**"). If the Equipment is delivered duly repaired and defect-free, the Buyer will confirm the Repair Protocol.

14.7 The repaired part (component) shall be subject to a new warranty term in accordance with Section 14.1 which commences to run on the day following the date when the repaired Equipment was delivered to the Buyer. However, the aggregate warranty period for any part of the Equipment shall not exceed 60 months.

14.8 The Seller undertakes to provide the Buyer with updates of the software controlling the Equipment for the entire term of warranty.

15. CONTRACTUAL PENALTIES

15.1 The Buyer shall be entitled to a contractual penalty in the amount of 0.1 % of the Price for each commenced day of delay with the performance pursuant to the relevant part of Section 4. hereof.

15.2 The Buyer shall be entitled to a contractual penalty in the amount of 0.05 % of the Price for each commenced day of delay with rectifying of defects claimed within the warranty period.

15.3 In the event of default in payment of any due receivables (monetary debt) under the Contract, the defaulting Party (the debtor) shall be obliged to pay a contractual penalty of 0.05 % of the amount due for each commenced day of delay in payment.

15.4 Contractual penalties are payable within 30 days of receipt of the demand for payment.

15.5 Payment of the contractual penalty shall be without prejudice to the rights of the Parties to claim compensation for damages incurred.

15.6 Payment of any contractual penalty cannot be demanded if the breach of the contractual obligation causes force majeure.

16. DISPUTES

In the event that any dispute arising out of this Contract cannot be resolved by negotiations, it shall be resolved by a court in the Czech Republic; the court having jurisdiction will be the court where the seat of the Buyer is located. Disputes shall be resolved exclusively by the law of the Czech Republic.

17. FINAL PROVISIONS

17.1 This Contract constitutes the entire agreement between the Parties. The relations between the Parties not regulated by this Contract shall be governed by Czech law, in particular by the Act No. 89/2012 Coll., the Civil Code, as amended (hereinafter the **"Civil Code"**).

17.2 This Contract may be amended or supplemented solely by written amendments. The Parties expressly refuse to amend the Contract in any other way.

17.3 The Parties expressly agree that the Contract will be published in accordance with Act No. 340/2015 Coll., on special conditions for the effectiveness of some contracts, publication of these contracts and Contract Register, as amended. The Parties hereby declare that all information contained in the Contract and its Annexes is not considered trade secrets under § 504 of the Civil Code and grant

permission for their use and disclosure without setting any additional conditions. The Buyer shall ensure the publication of the Contract in the Contract Register.

17.4 This Contract becomes effective as of the day of its publication in the Contract Register.

17.5 The following Annexes form an integral part of the Contract:

Annex 1: Technical specification of the subject of performance

Annex 2: Technical description of the Equipment as presented in Seller's bid

17.6 The Parties, manifesting their consent with the entire contents of this Contract, attach their signature hereunder.

In Prague 14 May 2025	In Cromadh
For the Buyer	For the Seller
_____	_____
RNDr. Michael Prouza, Ph.D. Director	Damian Mulligan On the basis of power of attorney

Annex 1 - Technical specification of the subject of performance

The Equipment must meet the technical conditions and include components listed in this table.

No.	Description and minimum specification of the Equipment as defined by the Buyer	Description and specification of the Equipment offered by the Seller	Complies YES/NO
1	Three-glove Glovebox, front view window: safety glass, O_2 < 1 ppm, H_2O < 1 ppm	See Line item 1 in Annex 2	**YES**
2	Regenerable solvent removal column with molecular Sieve filling	See Line item 8 in Annex 2	**YES**
3	Secondary loop for large organic solvents (based on activated Carbon regenerable) at point of source	See line item 9 in Annex 2	**YES**
4	N_2 gun integrated in Glovebox	See line item 16 in Annex 2	**YES**
5	Box cooling unit, Adjustable temperature range 22-25°C;	See line item 2 in Annex 2	**YES**
6	O_2 Analyzer (GE, fuel cell), 0-10, 100, 1000 ppm, accuracy 0.2 ppm or 1%; PLC integrated, enabling auto-circulation of the purifier; Continuously monitor O_2 inside the box, even when the purifier is turned off.	See line item 11 in Annex 2	**YES**
7	Moisture Analyzer (Michell), dew point -100 to 20 °C, +/-2 °C; 0-1000 ppm; PLC integrated, enabling auto-circulation of the purifier; Continuously monitor moisture inside the box, even when the purifier is turned off	See line item 11 in Annex 2	**YES**
8	BNC feedthrough 8 cores	See line item 14 in Annex 2	**YES**
9	2 USB feedthroughs	See line item 17 in Annex 2	**YES**
10	Mini Antechamber right side	See line item 6 in Annex 2	**YES**
11	Main Antechamber right side upgraded to Bolted	See line item 4 in Annex 2	**YES**
12	Power strips (minimum 12 outlets)	See line item 12 in Annex 2	**YES**
13	The transport size of the Equipment has to be such that all parts of the Equipment can be transported to the installation site (room) with a maximum entrance door width of 78,5 cm.	System will ship with window removed	**YES**

Annex 2

The Seller's bid in the extent it describes technical parameters of the Equipment

Vigor Gas Purification Technologies (Europe) GmbH
Am Rod 2 · 97737 Gemünden am Main (Germany)

FZU - Institute of Physics of the Czech
Academy of Sciences
Na Slovance 1999/2
182 21 Prague 8
Czech Republic

Document No.: AN2025-21726
Project No.: Chemical glovebox for depositions – REISSUE
Date: 16/04/2025
Processor: [redacted]
VAT no: CZ68378271

Proposal / Angebot

Dear Customer, thank you for your enquiry. Please find the attached proposal from Vigor Europe, we hope that this is to your requirments.

Pos	Qty	Description	U Price €	Price €
1	1 pc	*V_0000012_E* **SG1500/750E** [redacted] I. Extension Module 1) One stainless steel (SUS304/EU 1.4301) Box: 1500mm(L)X750mm(D)X900mm(H), Thickness, 3mm 2) For left or right modules: One side panel on left or right side of enclosure. 3) For center modules: Two box connection flange(s) with removable gasket patented no-leak seal for the interface between the two box bodies. 4) Detachable front view window: Safety glass, thickness 8 mm, patented no-leak seal for the interface with the box 5) Three aluminum alloy glove ports, patented no-leak seals for glove ports 6) Three butyl rubber gloves 7) Supporting frame: square steel tubing, height: 900mm, 4 castors for easy moving and 4 levelers for placing and leveling the box 8) Six spare KF40 fittings 9) Three height adjustable shelves 9) External LED lighting II. Technical Specification 1) Leak rate: < 0.001 %vol/hr 2) O2 < 1 ppm, H2O < 1 ppm	[redacted]	[redacted]
2	1 pc	*V_0001260* **Box cooling unit 1KW** [redacted] Box cooling unit, 1kW Model GYF-1000; Cooling capacity 1,050W; Input Power 640W; Adjustable temperature range 22-25°C; Accuracy ±2.5°C; Refrigerant R134a; Noise level < 60 dB(A)	[redacted]	[redacted]

Continuation on page 2 [redacted]

Vigor Gas Purification Technologies (Europe) GmbH • Am Rod 2 • D-97737 Gemünden am Main • Deutschland/Germany
Telefon: +49 (0)9351 603835 8 • Telefax: +49 (0)9351 603835 7 • Internet: www.vigoreurope.com
[redacted]
Geschäftsführer: Dr. Martin Eck und Dr. Thomas Bultmann • Eintragung Amtsgericht Würzburg: HRB 15188 • USt-IdNr.: DE 332287034

Pos	Qty	Description	U Price €	Price €
		Continuation of page 1		[redacted]
3	1 pc	*V_0001107* **End Panels for Extension boxes(750)** [redacted] End Panels for Extension boxes, 750mm, with purge valve and one power strip	[redacted]	[redacted]
4	1 pc	*V_0001201* **Main Antechamber right side** [redacted] I. Antechamber 1) One large antechamber: Welded on the right side panel of the box, leak free, size: Φ370X600mm, material SUS304/EU 1.4301, thickness 3mm, auto-evacuation. One readily removable sliding tray.	[redacted]	[redacted]
5	1 pc	*V_0001014* **Upgrade to Bolted on type main AC** [redacted] Change of large antechamber from welded to bolted on type for SG and LG workstations	[redacted]	[redacted]
6	1 pc	*V_0001204* **Mini Antechamber right side** [redacted] I. Antechamber 1) One mini-antechamber: Welded on the right side panel of the box, leak free, size Φ150X300mm, material SUS304/EU 1.4301, thickness 3mm.	[redacted]	[redacted]
7	1 pc	*V_0002001* **stand alone purifier (single column)** [redacted] I. Stand-alone Gas Purification System 1) One gas purification column, containing copper catalyst and molecular sieve. Oxygen and moisture capacities are 60 liter and 2 kg, respectively. The column is regenerable and the regeneration is automatically controlled by the PLC. 2) One gas tight circulation blower, flow rate 60 m³/h. 3) Valves are controlled by PLC, enabling automatic control of the circulation, regeneration, and box pressure control. 4) If attached to a VIGOR enclosure with patented “no leak” sealing technology, the regeneration interval typically averages 1 year. If attached to other enclosures the regeneration interval depends upon the leak rate of that enclosure. 5) One vacuum pump(Edwards RV12, with oil mist filter) 6) One power strip	[redacted]	[redacted]
8	1 pc	*V_0002006* **Upgrade regenerable solvent removal column (only valid for TS)** [redacted] Option for SG and LG work stations and for stand alone purifier 1) One regenerable organic solvent adsorber 2) **Filling with Molecular Sieve 13X** 3) **With Bypass** and automated regeneration cycle.	[redacted]	[redacted]
		Continuation on page 3		[redacted]

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Pos	Qty	Description	U Price €	Price €
		Continuation of page 2		[redacted]
9	1 pc	*V_9999903* **Customized Circulation Piping** Customized description Custom solvent removal system: Secondary loop, large organic solvent absorber (activated Carbon based regenerable) to minimize organic solvent vapor utilizing "at point of source" aspiration , via additional blower and absorber column, to be integrated to the glovebox stand or a separate moveable stand.	[redacted]	[redacted]
10	1 pc	*V_0001006_SC_SA* **System Control for SG, LG and FG Stand-alone Purifiers TS/TD** [redacted] V. System Control 1) Touch screen panel: color, 7”; Interface language: English or Chinese 2) One foot-switch, used to adjust box pressure 3) Power Supply, Single phase 220-230 VAC, 50 Hz, 230 VA max 4) Programmable Logic Controller 5) Automatic evacuation of the large antechamber, saving time and increasing productivity 6) Gas purification system works on demand, controlled by oxygen and/or moisture analyzer. It typically works 5 minutes every hour. Save energy and extend the blower life. 7) Automatic leak rate testing, promptly alerting users to damaged gloves or seals 8) Automatic box pressure control, user can set the work pressure range from +10 to -10 mbar, and the PLC will automatically control the box pressure within the set range.The work pressure range is 0 to +5 mbar. 9) Automatic purge 10) Display warning message and errors of the system 11) Automatic alarm system 12) Recording and displaying historical data 13) All operations are conditional, preventing hazardous actions from damaging the glovebox 14) Display messages for operation error and faulty components.	[redacted]	[redacted]
11	1 pc	*V_1000078* **Analyzers package O2/H2O (only for new system)** [redacted] 1. O2 Analyzer (GE, fuel cell), 0-10, 100, 1000 ppm, accuracy 0.2 ppm or 1%; PLC integrated, enabling auto-circulation of the purifier; Continuously monitor O2 inside the box, even when the purifier is turned off. 2. Moisture Analyzer(Michell), dew point -100 to 20 °C, +/-2 °C; 0-1000 ppm; PLC integrated, enabling auto-circulation of the purifier; Continuously monitor moisture inside the box,even when the purifier is turned off.	[redacted]	[redacted]
12	3 pc	*V_0001010_OP* **Other Parts (EU)** VI) Other parts 1) One power strip installed in glove box (EU)	[redacted]	[redacted]
13	1 pc	*V_100003* **Glove Changing System** [redacted] Leak-free glove changing system (O2 inside the box increases < 1 ppm during glove exchange). One internal glove port cover included.	[redacted]	[redacted]
		Continuation on page 4		[redacted]

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Sparkasse Mainfranken Würzburg • BIC/SWIFT-Adresse: BYLADEM1SWU • IBAN: DE70 7905 0000 0049 6035 17
Geschäftsführer: Dr. Martin Eck und Dr. Thomas Bultmann • Eintragung Amtsgericht Würzburg: HRB 15188 • USt-IdNr.: DE 332287034

Pos	Qty	Description	U Price €	Price €
		Continuation of page 3		[redacted]
14	2 pc	*V_1000051* **BNC feedthrough** [redacted] BNC feedthrough (4 cores, uninsulated, KF40)	[redacted]	[redacted]
15	2 pc	*V_1000231* **ISO-KF DN40 flange** [redacted] Welded, includes O-ring, blank plate and clamp.	[redacted]	[redacted]
16	1 pc	*V_9999907* **Customized Feedthrough** Customized description N2 gun integrated into KF40, requires a separate regulator and gas supply.	[redacted]	[redacted]
17	2 pc	*V_1000047* **USB feedthrough** [redacted] USB feedthrough (one male, one female, KF40)	[redacted]	[redacted]
18	1 pc	*V-S-01-1500* **Packaging SG/LG/FG1500** Packaging crate for SG/LG/FG1500	[redacted]	[redacted]
19	1 pc	*V-S-02* **Shipping** 1) Ship date approximate 14 weeks After Order and Drawing Approval (AODA) 2) DDP: Fyzikální ústav AV ČR, v. v. i., (FZU) Cukrovarnická 112/10, 162 00 Praha 6, Czech Republic Building C, Room No. 206/2 Incoterms 2020	[redacted]	[redacted]
20	1 pc	*V-S-04* **Travel expenses** Travel expenses (flights, accommodation, car rental, meals) for Installation and Service	[redacted]	[redacted]
21	16 h	*V-S-03* **Installation** On-site installation and training	[redacted]	[redacted]
22	1 pc	*V-S-05* **Warranty Glovebox** 3 Years manufacture warranty covering the original Vigor equipment only. Excludes consumable items such as gloves, adsorber material, catalyst, molecular sieve, pump oil and filters. Edwards vacuum pumps carries the original warranty direct from Edwards (12 months).	[redacted]	[redacted]

Net amount €	42,480.42
Total €	**42,480.42**

This is an intra-Community supply. Delivery according to §6a UStG, which is tax-exempt according to §4 No.1b.

Terms of payment: Payment is due 30 days after receipt of invoice.

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[redacted]
Geschäftsführer: Dr. Martin Eck und Dr. Thomas Bultmann • Eintragung Amtsgericht Würzburg: HRB 15188 • USt-IdNr.: DE 332287034

VIGOR GLOVEBOXES

Workstation SG1500/750TS

- Ultra-low leak rate by patented leak free gaskets
- Fully equipped workstations, plug and work
- Wide range of options to be selected from our "toolbox"
- Vigor Smart Box APP: Remote control of the glovebox

Workstation SG1500/750TS

Description	Material	Dimensions	Specification
I. Glove Box			
1) Box enclosure	Stainless steel (US 304; EU 1.4301)	1500mm(L)X750mm(D)X900mm(H) Thickness 3mm	Inside surface brushed; Outside surface white painted
2) 1 Detachable front window	Safety glass	Thickness 8mm	Patented vacuum gasket (no-leak seal) for the interface with the box body
3) 3 Glove ports	Anodised aluminium alloy	Φ 8" / 203mm	Patented vacuum gasket (no-leak seal) for the interface with the window and the glove
4) 3 Gloves	Butyl rubber	Φ200mm, length 810mm	Ambidextrous (both hand use) gloves
5) 1 Supporting frame (pedestal)	Square steel tubing, height: 900mm, 4 castors for easy moving and 4 leveling feet for placing and leveling the box		Complete frame painted in white
6) 6 Integrated flanges for feedthroughs	Stainless steel (US 304; EU 1.4301)	KF40, outside length 20mm	Welded on the box body, single sided to the outside, blind flanged (including flange and clamp)
7) 3 Height adjustable shelves	Stainless steel (US 304; EU 1.4301)	800mm(W)X170mm(D)	Adjustable or fix installed on demand
8) Pneumatic purge valve		DN25	Outside connection, open KF40 on the top of the valve (possibility to connect to exhaust)
II.Technical Specification			
1) Leak Rate			< 0.001 vol%/h
2) Purity Level of the Atmosphere			O_2 < 1 ppm, H_2O < 1 ppm
3) Working Gases			Nitrogen, Argon, Special gas on request
III. Antechambers			
1) 1 Large antechamber	Stainless steel (US 304; EU 1.4301),	Φ370X600mm	Welded on the side panel of the box enclosure, leak free, auto-evacuation function controlled by the PLC, 1 removable sliding tray
2) 1 Mini antechamber	Stainless steel (US 304; EU 1.4301),	Φ150X300mm	Welded on the side panel of the box body, leak free, manually operated by 3-way valve, 1 removable tray
IV. Gas Purification System			
1) 1 Gas purification column, containing copper catalyst and molecular sieve			Absorption capacity: O_2 = 60 L and H_2O = 2 kg The column is regenerable and the regeneration is automatically controlled by the PLC
2) 1 Organic solvent adsorber			Charcoal based
3) 1 Gas tight circulation blower			Flow rate 60 m^3/h, optional 90 m^3
4) Valves for circulation, regeneration and box pressure control			PLC controlled valves, enabling automatic control of the circulation, regeneration, and box pressure
5) 1 Vacuum Pump: RV 12 (Edwards)			Pumping speed 12 m^3/h (Including oil mist filter)
V. System Control			
1) Power supply			Single phase 220-230 VAC, 50 Hz, 230 VA max
2) 1 Foot-switch			For individual adjustment of the box pressure by the user
3) Touch screen panel, color, 7"			Interface language: English or Chinese
4) 1 Electrical feedthrough and power strip installed in one of the KF40 flanges of the enclosure			Inside / outside connection with country specific plugs
5) Programmable logic controller			Siemens SIMATIC S7-200 SMART
6) Automatic evacuation of the large antechamber			Unattended operation, number of cycles settable by the user
7) Gas purification system works on demand controlled by oxygen and/or moisture analyzer			It typically works 5 minutes every hour. Saves energy and extend the blower lifetime
8) Fully integrated control of heated antechamber, freezer and box cooling			User settable target values
9) Automatic leak rate testing			Alerting users of damaged gloves or gaskets
10) Automatic box pressure control, working pressure user settable, range -10 ~ +10mbar			The PLC will automatically control the box pressure within the set range
11) Automatic purge			Activates the purge valve
12) Display of warning messages, alarms and error messages			Active messages and message log available
13) Recording and displaying of historical data			On screen for visual inspection, data export possibility
14) All operations are conditional			Preventing hazardous actions and damages on the glovebox

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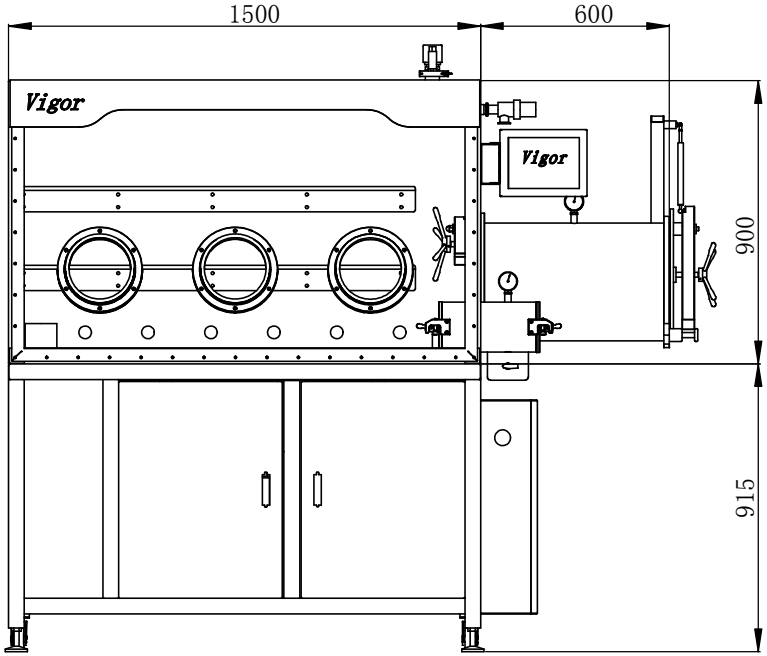

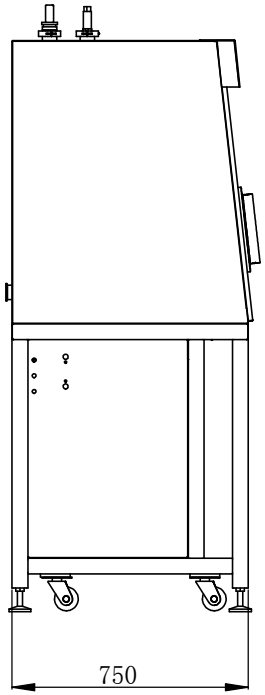

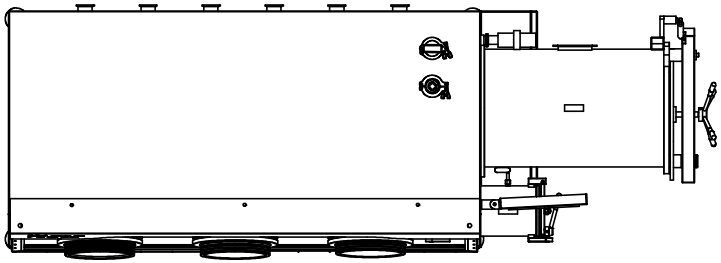

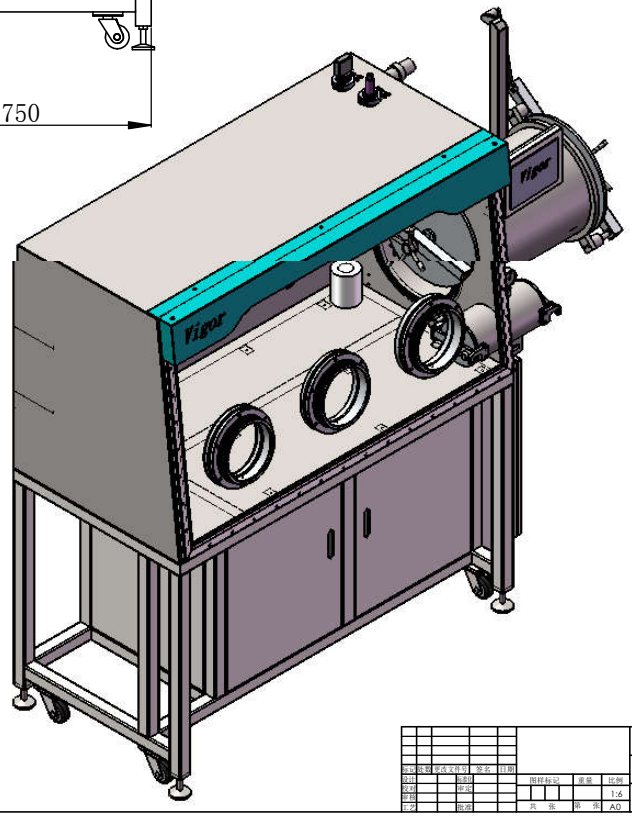

											威格气体纯化科技（苏州）股份有限公司
标记	处数	更改文件号	签名	日期							SSTX-单面三只手
设计		标准化					图样标记	重量	比例		
审核		审定							1:6		SSTX-单面三只手
工艺		批准					共 张	第 张	A0		

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