

## Purchase Contract

(hereafter the "**Contract**")

### 1. CONTRACTUAL PARTIES

#### 1.1 Fyzikální ústav AV ČR, v. v. i.,

with seat: Na Slovance 1999/2, 182 21 Praha 8,  
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

Tax ID No.: CZ68378271

Bank: [REDACTED]

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

(hereinafter the "**Buyer**")

and

#### 1.2 Cryo Industries of America, Inc.,

with seat: 11124 S. Willow Street, Manchester, New Hampshire 03103, USA,  
represented by: [REDACTED], on the basis of authorization by the President of the Company,  
registered at the Secretary of State of New Hampshire, USA.

ID No. (Business ID): 78182

Tax ID No.: 02-0380586

Bank: [REDACTED]

Account No.: [REDACTED]; ABA Routing No.: [REDACTED]; SWIFT (BIC): [REDACTED]

(hereinafter the "**Seller**"),

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



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## 2. **FUNDAMENTAL PROVISIONS**

- 2.1 The Buyer is a public research institution whose primary activity is excellent scientific research in the area of physics, especially elementary particles physics, condensed systems, plasma and optics.
- 2.2 The Buyer wishes to acquire the subject of performance hereof in order to cool X-ray samples with a stream of He gas supplied from a cylinder, i.e. without need of liquid helium.
- 2.3 The Buyer is the beneficiary of the subsidy for the project "**Solid state physics for the 21st century (SOLID 21)**", Reg. No CZ.02.1.01/0.0/0.0/16\_019/0000760 (hereinafter the "**Project**"), within the Operational Program Research, Development and Education (hereinafter the "**OP RDE**") of the provider Ministry of Education, Youth and Sports of the Czech Republic. The subject of public procurement will be co-financed by the EU Structural Funds.
- 2.4 The Seller was selected as the winner of a public procurement procedure announced by the Buyer in accordance with Act No. 134/2016 Coll., on Public Procurement, as amended (hereinafter the "**Act**"), for the public contract called "**Dual flow nitrogen and helium gas cooler for single-crystal X-ray structure analysis**" (hereinafter the "**Procurement Procedure**"). In addition to the Act, both the Procurement Procedure and the Contract shall be governed by the Rules for applicants and beneficiaries of OP RDE, which are publicly accessible and are binding on the Parties.
- 2.5 The documentation necessary for the execution of the subject of performance hereof consist of
- 2.5.1 Technical specifications of the subject of performance hereof attached as **Annex No. 1** hereto.
- 2.5.2 The Seller's bid submitted within the Procurement Procedure in its parts which describe the subject of performance in technical detail (hereinafter the "**Sellers's Bid**"); the Sellers's Bid forms **Annex No. 2** to this Contract and is an integral part hereof.

In the event of a conflict between the Contract and / or its Annexes the technical specification / requirement of the higher level / quality or a provision more advantageous for the Buyer shall prevail.

- 2.6 The Seller declares that he has all the professional prerequisites required for the supply of the subject of performance under this Contract, is authorised to supply the subject of performance and there exist no obstacles on the part of the Seller that would prevent him from supplying the subject of this Contract to the Buyer.
- 2.7 The Seller acknowledges that the Buyer considers him capable of providing performance under the Contract with such knowledge, diligence and care that is associated and expected of the Seller's



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profession, and that the Seller's potential performance lacking such professional care would give rise to corresponding liability on the Seller's part. The Seller is prohibited from misusing his qualities as the expert or his economic position in order to create or exploit dependency of the weaker Party or to establish an unjustified imbalance in the mutual rights and obligation of the Parties.

- 2.8 The Seller acknowledges that the Buyer is not in connection to the subject of this Contract an entrepreneur and also that the subject of this Contract is not related to any business activities of the Buyer.
- 2.9 The Seller acknowledges that the production and delivery of the subject of performance within the specified time and of the specified quality, as shown in Annexes No. 1 and 2 of this Contract (including invoicing), is essential for the Buyer.
- 2.10 The Parties declare that they shall maintain confidentiality with respect to all facts and information, which they learn in connection herewith and / or during performance hereunder, and whose disclosure could cause damage to either Party. Confidentiality provisions do not prejudice obligations arising from valid legislation.

### **3. SUBJECT-MATTER OF THE CONTRACT**

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

**the Dual flow nitrogen and helium gas cooler for single-crystal X-ray structure analysis**

(hereafter the "**Equipment**")

and the Buyer undertakes to take delivery of the Equipment and to pay to the Seller the agreed upon price.

- 3.2 The following activities form 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 of the Contract to the place of delivery;
  - 3.2.2 Telephone or e-mail assistance with the installation of the Equipment;
  - 3.2.3 Delivery of detailed instructions and manuals for operation, maintenance and repairs - all in Czech or English language, in electronic or hardcopy (printed) versions;
  - 3.2.4 Free-of-charge warranty service;



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3.2.5 Provision of technical support in the form of consultations.

3.3 The subject of performance (Equipment) is specified in detail in Annexes No. 1 and No. 2 hereto.

3.4 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 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 stricter standard or its part shall always apply.

3.5 The delivered Equipment and all its parts and accessories must be brand new and unused.

#### **4. PERFORMANCE PERIOD**

4.1 The Seller undertakes to manufacture and deliver the Equipment to the Buyer within **5 months** from the receipt of the payment according to Section 5.3.1.

4.2 The performance period shall be extended for a period during which the Seller could not perform due to obstacles on the part of the Buyer.

4.3 The performance period shall be extended by the relevant period in the event that the payment under Section 5.3.2 is credited later than 7 days after delivery of the relevant advance invoice.

#### **5. PURCHASE PRICE, INVOICING, PAYMENTS**

5.1 The purchase price is based on the Seller's submitted bid and amounts to **94,330.00 USD** (in words: Ninety-four thousand three hundred and thirty US Dollars) excluding VAT (hereinafter the "**Price**"). VAT shall be paid by the Buyer and settled in accordance with the valid Czech regulation.

5.2 The Price represents the maximum binding offer by the Seller and 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, and including all other costs of expenses that may arise in connection with creation of an intellectual property and its protection.

5.3 The Parties agreed that the Seller shall be entitled to invoice the Price as follows:

5.3.1 The Seller shall issue an advance invoice corresponding to 50 % of the Price excluding VAT after the conclusion of the Contract.

5.3.2 The Seller shall issue a second advance invoice corresponding to 40 % of the Price excluding VAT when the Equipment is ready to be shipped. Attached to the invoice will be a proof of readiness of the complete Equipment for shipment.





- 5.3.3 The Seller is entitled to invoice the Price after the acceptance protocol in accordance with Section 9.5 will have been signed or 45 days after delivery of the Equipment, whichever comes first. 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. Invoices issued by the Seller in accordance with this Contract shall contain in particular following information:
- 5.4.1 name and registered office of the Buyer,
  - 5.4.2 tax identification number of the Buyer,
  - 5.4.3 name and registered office of the Seller,
  - 5.4.4 tax identification number of the Seller,
  - 5.4.5 registration number of the tax document (invoice),
  - 5.4.6 scope of the performance (including the reference to this Contract),
  - 5.4.7 the date of the issue of the tax document (invoice),
  - 5.4.8 the date of the fulfilment of the Contract,
  - 5.4.9 purchase Price,
  - 5.4.10 registration number of this Contract, which the Buyer shall communicate to the Seller based on Seller's request before the issuance of the invoice,
  - 5.4.11 declaration that the performance of the Contract is for the purposes of the project "Solid state physics for the 21st century (Solid 21)", Reg. No. CZ.02.1.01/0.0/0.0/16\_019/0000760
- and must comply with the double taxation agreements, if applicable.
- 5.5 The Buyer prefers electronic invoicing, with the invoices being delivered to [efaktery@fzu.cz](mailto:efaktery@fzu.cz).
- 5.6 Invoices shall be payable within thirty (30) days of the date of their delivery to the Buyer. 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. 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 his 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**

6.1 The ownership right to the Equipment shall pass to the Buyer by delivery.

## **7. PLACE OF DELIVERY OF THE EQUIPMENT**

7.1 The place of delivery of the Equipment shall be the premises of Fyzikální ústav AV ČR, v. v. i., at Cukrovarnická 112/10, 162 00 Praha 6, Czech Republic.

## **8. COOPERATION OF THE PARTIES**

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

8.2 The Seller is obliged to notify the Buyer of the unsuitable condition of the place of installation of the Equipment, if possible.

## **9. DELIVERY AND ACCEPTANCE**

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

9.2 The Buyer shall verify whether the Equipment is functional and meets the technical requirements of Annexes No. 1 and 2 hereof.

9.3 The Buyer undertakes to perform the verification whether the Equipment is functional and meets the technical requirements within 2 weeks of the delivery of the Equipment. The acceptance tests





to be executed are as follows:

- 9.3.1 The lowest temperature test,
  - 9.3.2 The highest temperature test,
  - 9.3.3 Switching between helium and nitrogen gas supply,
  - 9.3.4 Temperature stability and icing test: the lowest reachable temperature, 100 K, 150 K, 200 K, and the highest reachable temperature.
- 9.4 The delivery shall include all technical documentation pertaining to the Equipment, user manuals and certificate of compliance of the Equipment and all its parts and accessories with approved standards.
- 9.5 The procedure shall be completed by acceptance of the Equipment confirmed by the acceptance protocol. The protocol shall contain the following information:
- 9.5.1 Information about the Seller, the Buyer and any subcontractors;
  - 9.5.2 Description of the Equipment including description of all components and their serial numbers;
  - 9.5.3 Description of executed acceptance tests: type of test, duration and achieved parameters;
  - 9.5.4 List of technical documentation including the manuals;
  - 9.5.5 Eventually reservation of the Buyer regarding minor defects including the manner and deadline for their removal and
  - 9.5.6 Date and signature of the representative of the Buyer specified in Section 11.2 hereof.
- 9.6 Acceptance of the Equipment does not release the Seller from liability for defects that were not detected during the acceptance procedure.
- 9.7 The Buyer shall not be obliged to accept Equipment, which would show defects that would otherwise not form a barrier, on their own or in connection with other defects, to using the Equipment. In this case, the Buyer shall issue a record containing the reason for his refusal to accept the Equipment.





## 10. **TECHNICAL ASSISTANCE - CONSULTATIONS**

10.1 The Seller shall be obliged to provide to the Buyer free-of-charge technical assistance by phone or e-mail relating to the subject-matter hereof during the entire term of the warranty period. The Seller undertakes to provide to the Buyer paid consultations and technical assistance relating to the subject-matter hereof also after the warranty period expires.

## 11. **REPRESENTATIVES, NOTICES**

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

[REDACTED]

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

[REDACTED]

11.3 The above-mentioned representatives may be changed by unilateral written declaration of one Party delivered to the other Party.

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

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



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- 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 shall not deliver the Equipment till March 31, 2021.
  - 12.2.2 Technical parameters or other conditions required in the technical specification defined in Annexes No. 1 and 2 hereto and in the relevant valid technical standards will not be achieved by the Equipment at acceptance.
  - 12.2.3 Facts emerge bearing evidence that the Seller will not be able to deliver 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 of the Equipment for the entire period commencing when transport of the Equipment starts until duly delivered to the Buyer. In case of breach of this obligation, the Seller shall be liable to the Buyer for any damage that may arise.
- 13.2 The Seller is liable for the damage that he has caused. The Seller is also liable for damage caused by third parties undertaken to carry out performance or its part under this Contract.

### **14. WARRANTY TERMS**

- 14.1 The Seller shall provide warranty for the quality of the Equipment for a period of **12 months**. The warranty term shall commence on the day following the date of signing of the acceptance protocol pursuant to Section 9.5 hereof. The warranty does not cover consumable things.
- 14.2 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 email address. The Seller shall be obliged to review any warranty claim within 3 business days from its receipt and to propose solution, unless agreed otherwise by the Parties.
- 14.3 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. 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 shipping of the rectified Equipment.

- 14.4 Any and all costs associated with the transport of the Equipment for repair to the Seller's premises shall be borne by the Buyer. Any and all costs associated with the transport of the rectified Equipment back to the Buyer, or travel expenses of a qualified engineer sent to inspect and/or repair the Equipment on site, shall be always borne by the Seller.
- 14.5 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.
- 14.6 The repaired portion of the Equipment 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 Repair Protocol was confirmed by the Buyer. However, the aggregate warranty period shall not exceed 36 months.
- 14.7 If the Equipment show defects for which it cannot be demonstrably used in full for more than 60 days (defect period) within six or less consecutive months of the warranty period, the Seller is obliged to remove the defect by delivering new Equipment without defect within 90 days from the date of dispatch of the invitation to deliver, unless the Parties agree otherwise.
- 14.8 The Seller declares that he shall ensure paid post-warranty [out-of-warranty] service for the period of 10 years after the expiration of the warranty; the service terms shall be identical to those of Sections 14.2 and 14.3.

## **15. CONTRACTUAL PENALTIES**

- 15.1 The Buyer shall have the right to a penalty in the amount of 50,- USD for each commenced day of delay with rectifying of defects claimed within the warranty period.
- 15.2 In case of default in payment of any due receivables (monetary debt) under the Contract, the defaulting Buyer or Seller (the debtor) shall be obliged to pay a contractual penalty in the amount of 0.1 % of the owed amount for each commenced day of delay with the payment.
- 15.3 Contractual penalties are payable within 30 days of notification demanding payment thereof.
- 15.4 Payment of the contractual penalty does not prejudice the rights of the Parties to claim damages.
- 15.5 Payment of any contractual penalty cannot be demanded if the breach of the contractual obligation causes force majeure.





## **16. DISPUTES**

16.1 Any and all disputes arising out of this Contract or the legal relationships connected with the Contract shall be resolved by the Parties by mutual negotiations. In the event that any dispute cannot be resolved by negotiations within sixty (60) days, the dispute shall be resolved by the competent court in the Czech Republic based on application of any of the Parties; 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. ACCEPTANCE OF THE PROJECT RULES**

17.1 The Seller, using all necessary professional care, shall cooperate during financial inspections carried out in accordance with Act No. 320/2001 Coll., on Financial Inspections, as amended, or during other financial inspections carried out by any auditing entities (particularly by the Managing Authority of the Operational Program Research, Development and Education) and shall allow access also to those portions of the bid submitted within the Procurement Procedure, the Contract and related documents which may be protected by special legal regulation, given that all requirements set forth by legal regulation with respect to the manner of executing such inspections will have been observed.

## **18. FINAL PROVISIONS**

18.1 This Contract represents the entire agreement between the Buyer and the Seller. The relationships between the Parties not regulated in this Contract shall be governed by the Act No. 89/2012 Coll., the Civil Code, as amended (hereinafter the **“Civil Code”**).

18.2 In the event that any of the provisions of this Contract shall later be shown or determined to be invalid, ineffective or unenforceable, then such invalidity, ineffectiveness or unenforceability shall not cause invalidity, ineffectiveness or unenforceability of the Contract as a whole. In such event the Parties undertake without undue delay to subsequently clarify any such provision or replace after mutual agreement such invalid, ineffective or unenforceable provision of the Contract by a new provision, that in the extent permitted by the laws and regulations of the Czech Republic, relates as closely as possible to the intentions of the Parties to the Contract at the time of creation hereof.

18.3 This Contract may be changed or supplemented solely by means of numbered amendments in writing, furnished with the details of time and place and signed by duly authorised representatives of the Parties. The Parties expressly reject modifications to the Contract in any other manner.

18.4 The Parties expressly agree that the Contract as a whole, including all attachments and data on the Parties, subject-matter of the Contract, numerical designation of this Contract, the Price and the



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date of the Contract conclusion, 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 (hereinafter the "**CRA**"). The Parties hereby declare that all information contained in the Contract and its Annexes are not considered trade secrets under § 504 of the Civil Code and grant permission for their use and disclosure without setting any additional conditions.

18.5 The Parties agree that the Buyer shall ensure the publication of the Contract in the Contract Register in accordance with CRA.

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

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

Annex No. 1: Technical specification on the subject of performance

Annex No. 2: Technical description of the Equipment as presented in Seller's bid

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

For the Buyer:  
30. 10. 2020

For the Seller:  
28. 10. 2020

\_\_\_\_\_  
RNDr. Michael Prouza, Ph.D.  
Director

\_\_\_\_\_  
Sales  
On the basis of authorization by the President  
of the Company



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### Annex No. 1 - Technical specification on the subject of performance

The Equipment is a Dual flow nitrogen and helium gas cooler for single-crystal X-ray structure analysis. It 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.	The lowest temperature at least 30 K	Lowest temperature 11K with helium gas flowing	Yes
2.	The highest temperature at least 400 K	Highest temperature is 500K	Yes
3.	The instrument is designed for cooling samples for single-crystal X-ray analysis on a laboratory X-ray diffractometer	Cryostat is: A Cryocool-G2B-LT (Low Temperature) Closed Cycle Cryogen Free X-Ray Diffractometer Cryogenic System	Yes
4.	The instrument uses gaseous helium or nitrogen as a cooling medium, depending on the cooling temperature	Cryostat uses either helium or nitrogen gas flow. Ice-free single flow eliminates the need for shield gas	Yes
5.	The instrument allows for seamless switching between the helium and nitrogen supply without interrupting the experiment	The instrument allows for seamless switching between the helium and nitrogen supply	Yes
6.	The instrument allows for long experiments (> 24 hours) without icing on the X-ray sample	The instrument allows for long experiments (> 24 hours) without icing on the X-ray sample	Yes
7.	The cryostat generating the cold flow and the nozzle used for cooling of the crystal sample must be separated, with a connection hose minimally 1-meter long, in order to keep the cryostat out of the diffractometer cabinet	All welded stainless-steel transfer line for long term reliability. Entire length flexible for easy handling and manipulation of nozzle, 1.5-meter flexible length. Sample is separated from the Cryostat generating the cooling by 1.5 meter flex line.	Yes

Tab. 2 – Evaluation criterion according to paragraph 7.2.2 of the Tender Documentation - Technical characteristics of the bid

Subcriterion	Value
Lowest temperature on the sample ( <i>in K</i> )	11K in Nozzle and ~13-14K at the sample
Highest temperature on the sample ( <i>in K</i> )	500K



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# Annex No. 2

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



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**CIA** Cryo Industries of America, Inc.

QUOTE NO.: CD200824-10

Rev: 2

Monday, September 28, 2020

**QUOTATION**

**FZU - Institute of Physics of the Czech Acade  
Na Slovance 1999/2  
Prague, Czechia 8 182 21**

Item	Qty	Part No	Description	Unit Price	Amount
Item 1	1	C03-003-003	<p>CRYOCOOL-G2B-LT (Low Temperature) Closed-Cycle Cryogen Free X-Ray Diffractometer Cryogenic System 11K-300K Temperature</p> <p>Reference CRYO Drawing No.: CGS-3928-G2b-LT</p> <ul style="list-style-type: none"> <li>•Operating temperature range from 11 K to 300 K when using helium gas flow</li> <li>•Operating temperature range from 78 K to 300 K when using nitrogen gas flow</li> <li>•Ice free single flow - eliminates the need for shield gas</li> <li>•Cold stream temperature stability better than +/- 0.1K</li> <li>•Closed Cycle Cryogen Free Refrigerator - use no gas or liquid cryogens for cooling cycle (Cold stream gas supplied by customer)</li> <li>•Quiet direct drive SHI refrigerator with cooling power of 1.5 watts @4.2K refrigerator</li> <li>•Water cooled compressor: Model F-70L (3 phase, 200AC, (+/-10%) 50/60Hz) or Model F-70H (3 phase AC 380-415V (+/-10%) / 50Hz) (3 phase, AC 480V(+/-10%) / 60Hz) (Customer must specify F-70L low voltage or F-70H high voltage compressor choice)</li> <li>•20M interconnecting refrigerator hoses</li> <li>•6M CH power cable and 5M Input control cable</li> <li>•Large nozzle diameter of 0.312 inch (~8 mm) and inside diameter 0.272 inch (~ 7 mm)</li> <li>•Control heater installed in transfer line nozzle</li> <li>•Accurate silicon diode temperature sensor installed in nozzle</li> <li>•Vacuum and superinsulated for highest efficiency</li> <li>•All welded stainless steel transfer line for long term reliability</li> <li>•Entire length flexible for easy handling and manipulation of nozzle, 1.5 meter flexible length</li> <li>•Pressure relief installed on vacuum spaces</li> <li>•Built-in cold trap for gas stream contaminant removal</li> <li>• Long term continuous operation</li> <li>• Control heaters installed on refrigerator cooling stages</li> <li>•Temperature sensors installed on refrigerator cooling stages</li> <li>•Electronic Flow Controller</li> <li>•Slave Power Supply for refrigerator second stage heater</li> </ul> <p>•Startup toolkit with operational manuals</p> <p>Model 336 Autotune Temperature Controller</p> <ul style="list-style-type: none"> <li>•Two PID control loops (100 watts, 50 watts into a 50 Ohms or 25 Ohm load)</li> <li>•Four sensor inputs and four independent control outputs</li> <li>•Supports diode and RTD temperature sensors</li> <li>•Sensor excitation current reversal eliminates thermal EMF errors in resistance sensors</li> <li>•Ethernet, USB and IEEE-488 interfaces</li> <li>•Cryostat to controller interface cables included</li> <li>•Fully integrated and tested with system</li> </ul> <ul style="list-style-type: none"> <li>•Complete system test</li> <li>•Operation manual(s)</li> <li>•One year warranty</li> </ul>		

**CIA** Cryo Industries of America, Inc.

QUOTE NO.: CD200824-10 Rev: 2

Monday, September 28, 2020

**QUOTATION**

**FZU - Institute of Physics of the Czech Acade  
Na Slovance 1999/2  
Prague, Czechia 8 182 21**

Item	Qty	Part No	Description	Unit Price	Amount
Item 2	1	C03-000-001	X-Y-Z Nozzle Support Stand		

Reference Cryo Drawing: Cryocool-Stand  
X-Y-Z Axis Metric Stage for precision nozzle adjustment

- 60 mm total travel each axis
- 20 mm travel per knob rotation
- 1 mm increment scale, locking knobs
- Stand with tilt, rotation, up-down and in-out adjustments
- Sturdy lightweight corrosion-resistant anodized aluminum and stainless steel construction

Item	Qty	Part No	Description	Unit Price	Amount
Item 3	1	C03-009-026	500K Special High Temperature Option for Cryocool-G2B-LT		

- Extends system to 500K Operating Temperature Range
- Durable High Temperature gas stream heater
- Wiring, insulation, joints and materials to withstand 500K

Item	Qty	Part No	Description	Unit Price	Amount
Item 4	1	C20-004-006	Shipping, Handling, and Insurance Fees		

Shipping to:

Fyzikální ústav AV ČR, v. v. i.,  
at Cukrovarnická 112/10,  
162 00 Praha 6, Czech Republic.

				<b>Total</b>	
				<b>Inland Freight, Packing, and Misc. Charges</b>	
				<b>Net Total</b>	<b>\$94,330.00</b>
<b>Delivery (Estimated)14 Weeks ARO</b>		<b>FOB: Manchester, NH 03103</b>		<b>Terms: Letter of Credit</b>	

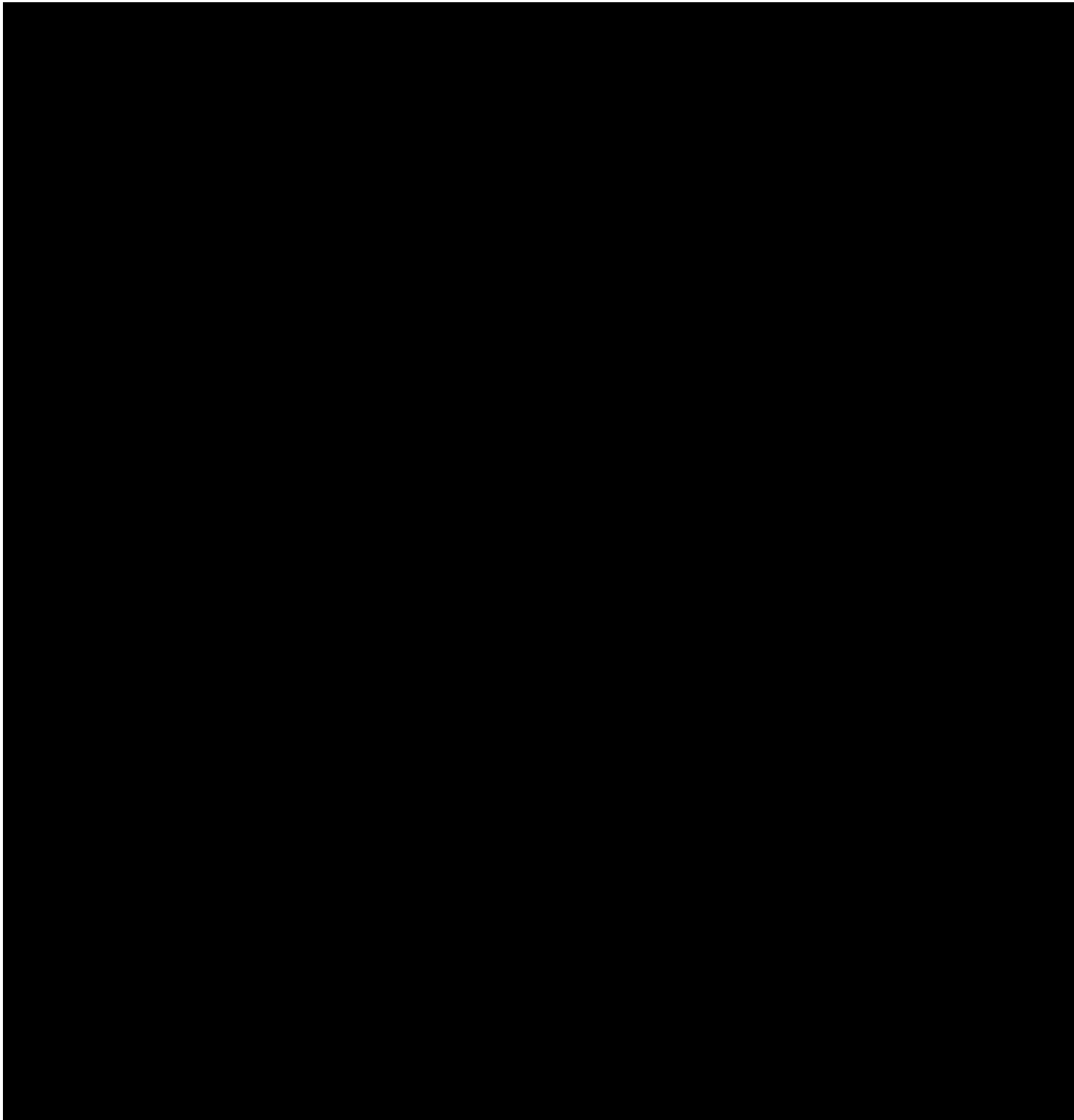
CRYO standard terms and conditions of sale apply, copies available on request

Authorized Signature - (EMail )

Cryo Industries of America, Inc. - 11124 S. Willow St. - Manchester, NH 03103

Tel: (603) 621-9957 - Fax:( 603) 621-9960





# CRYOCOOL-G2b-LT

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	<b>TITLE:</b> CLOSED CYCLE CRYOCOOL-G2b-LT NEVER ICE GAS STREAM SYSTEM (11K)	<b>REV.</b>	<b>DATE</b>	<b>BY</b>
<b>DWN. BY:</b> CLD	<b>SCALE:</b> NTS			
<b>CHKD. BY:</b> GJS	<b>DATE:</b> 02/10/20			