



INVITATION TO SUBMIT A BID

for the small size public procurement

„Positioning System for LUIS EUV Beam Transport TP20_018“

(“**Public Procurement**”) that is to be concluded in the procedure according to the Rules for applicants and beneficiaries (“**Rules**”) under the Research, Development and Education Operational Programme.

Name of the contracting authority:	Institute of Physics of Academy of Sciences of the Czech Republic, public research institution
Registered office:	Na Slovance 2, Praha 8, PSČ: 182 21
Identification No.:	68378271
Tax Identification No.:	CZ68378271
Person authorized to act on behalf of the contracting authority:	RNDr. Michael Prouza, Ph.D., director
Contact person:	David Pokorný
Telephone:	00420 601 555 056
E-mail:	David.Pokorny@eli-beams.eu

(“**Contracting Authority**”)

1. GENERAL INFORMATION

- 1.1 The Contracting Authority does not follow the rules for public procurements set out in the act no. 134/2016 Coll., on public contracts awarding (“**Act**”), because the Public procurement is considered a small size public procurement within the meaning of Section 27 of the Act.
- 1.2 If the Contracting Authority uses references to the Act, it means that the Contracting Authority shall proceed analogically in relation to the Act. However, these links to the Act do not imply that the Public Procurement is awarded in accordance with the Act.

2. PUBLIC PROCUREMENT SPECIFICATION

The subject-matter of the Public Procurement is the production and delivering of **Positioning System for LUIS EUV Beam Transport_TP20_018**, in accordance with the technical specification, which forms annex No. 3 hereto and under the terms and conditions stipulated in the contract, which forms annex No. 2 hereto (“**Products**”).



The bidder shall also include in the bid the description of the offered products so that the Contracting Authority may verify that its technical requirements are met.

3. THE TIME AND PLACE OF DELIVERY

3.1 The time of delivery is stipulated in in the contract, which forms annex No. 2 hereto.

3.2 The place of delivery is stipulated in the contract, which forms annex No. 2 hereto.

4. BUSINESS AND PAYMENT TERMS

4.1 Business and payments terms and conditions are contained in the draft of the contract that forms Annex 2 hereto.

4.2 The signed draft of the contract shall be inserted in the bid. The bidder shall fill in the data that are required (designated with yellow colour). The bidders are not entitled to modify the contract in any way.

4.3 The contract shall be signed and inserted in the bid in the version as is attached to this invitation (or as is officially modified during the award procedure by the Contracting Authority due to additional information/explanation.

4.4 Bidders shall not refer in their bids to their business conditions and terms. If the bidders include their own business terms and conditions in the bid, such terms and conditions shall be irrelevant and the bidder will be requested to conclude the contract as is attached to this invitation.

5. THE DATE AND PLACE OF THE SUBMISSION OF BIDS

5.1 Bids must be submitted to the address: **Fyzikální ústav AV ČR, v. v. i. - ELI, DEP. 95 – David Pokorný, Za Radnicí 835, Dolní Břežany, post code: 252 41, Czech Republic, on 7. 06. 2021 until 14:00** at the latest.

5.2 Bids may be supplied by post, courier, or personally to the above mentioned address in working days between 8-15 hours. On the last day of the period for the submission for bids the bids may be submitted until **14:00** o'clock.

6. ADDITIONAL INFORMATION

6.1 The supplier is entitled to require in written form explanations regarding the tender conditions from the Contracting Authority. The written request must be received by the Contracting Authority no later than 4 working days before the deadline for submission of bids.

6.2 The Contracting Authority sends explanations regarding the tender condition and possibly related documents no later than 2 working days after receiving written request from the supplier. If the request from the supplier is not delivered in time and despite this fact the Contracting Authority decides to provide explanations regarding the tender conditions, then the time limit in the preceding sentence does not need to be observed by the Contracting Authority.



- 6.3 The explanations regarding the tender conditions (including the exact wording of the request of the supplier) shall be provided to all suppliers at the same time and sent in the same manner as this invitation.
- 6.4 The Contracting Authority is entitled to provide explanations regarding the tender conditions without prior request. In such cases the Contracting Authority proceeds analogically according to the preceding paragraphs.
- 6.5 The Contracting Authority may modify the tender conditions before the deadline for submission of bids elapses. The modification has to be notified to the suppliers in the same manner as the tender conditions that was the subject of modification. If the Contracting Authority through explanations of the tender conditions makes modification of the tender conditions and the nature of the such modification requires it, the Contracting Authority shall adequately extend the deadline for the submission of bids. In the event such a modifications, which may extend the range of potential bidders, the Contracting Authority will extend the deadline so that the potential bidders have the entire length of the original deadline for the submission of bid.
7. **EVALUATION CRITERIA**
- 7.1 Bids shall be evaluated on the basis of the lowest bid price criterion.
8. **BID PRICE, MAXIMUM PERMISSIBLE BID PRICE**
- 8.1 The bidder shall fill in the bid price in the draft of the contract. The bid price shall be given in EUR.
- 8.2 The maximum permissible bid price is 1 999 000,- CZK. If the bidder states the price which exceeds this financial limit, the bidder shall be excluded from the award procedure.
- 8.3 Only for the purposes of determining whether the bid price exceeded the financial limit stated in the previous paragraph, the bid price shall be converted into CZK. The middle exchange rate of the Czech National Bank valid at the last day, on which bids could be submitted, shall be used.
9. **FORMAL BID REQUIREMENTS**
- 9.1 All bids must be submitted in writing in duly sealed envelope designated by the identification data of the bidder. The envelope must be designated by inscription **“DO NOT OPEN”** and by title of the Public Procurement **“Positioning System for LUIS EUV Beam Transport TP20_018”**. On the envelope shall be address to which the Contracting Authority may send information regarding the Public Procurement.
- 9.2 The bid shall contain identification data of the bidder. This requirement is fulfilled by filling the cover sheet of the bid, which forms Annex 1 hereto.
- 9.3 The bid must contain the draft of the contract signed by the person authorized to act on behalf of the bidder.



- 9.4 The bid must be submitted in Czech, Slovak or English language. This requirement is fulfilled if documents that by its nature cannot be in the required language are at least translated into one of the required languages.
- 9.5 All pages in the bid must be secured against unauthorized manipulation (e.g. bound by string and sealed), so that additional documents cannot be inserted nor any pages removed. The bid must be clearly readable, without any crossed words or other discrepancies.
- 9.6 The bidder must submit a bid in its original (paper) form.
- 9.7 The bidder must also include in the bid a CD-ROM, USB, or other generally used data carrier with an electronic copy of the bid (all paper documents in the bid).
- 9.8 If the bid is submitted jointly by several bidders (joint bid), a contact person authorized to represent all such bidders must be designated in the bid.
- 9.9 The bids must be structured in the following manner:
- a) **Cover sheet (Bid sheet)**
Bidders shall fill in cover sheet
 - b) **The description of the offered Product**
 - c) **Draft of the contract** signed by the person authorized to act on behalf of the bidder
10. **FINAL PROVISIONS**
- 10.1 The Contracting Authority is entitled to cancel the award procedure anytime prior to the signature of the contract.
- 10.2 The Contracting Authority does not allow alternative bids.
- 10.3 The Contracting Authority is entitled to change or supplement the provisions of this invitation.
- 10.4 The bidders shall bear all their costs connected with their participation in the award procedure initiated by this invitation.
- 10.5 The Contracting Authority reserves the right to publish/ distribute a notice on Public Procurement awarding conclusions in the same way as this Invitation to bid.
11. **LIST OF ANNEXES**
- a) Annex 1 (Cover sheet)
 - b) Annex 2 (Draft of the contract)
 - c) Annex 3 (Technical specification)

In Prague on 2021

.....
RNDr. Michael Prouza, Ph.D., director



ANNEX 1

COVER SHEET OF THE BID (BID SHEET)

Public procurement title: “Positioning System for LUIS EUV Beam Transport TP20_018”

Contracting Authority: Fyzikální ústav AV ČR, v.v.i.

Registered office: Na Slovance 2, 182 21 Praha 8

Registration No.: 68378271

**Person authorized to act
on behalf of the bidder:** RNDr. Michael Prouza, Ph.D., director

Contact person: David Pokorný, **Telephone:** 00420 601 555 056

E-mail: david.pokorny@eli-beams.eu

Bidder:

Registered office:

Identification No.:

**Person authorized to act
on behalf of the bidder:**

Contact person:

Contact address:

Telephone and e-mail:

The bidder is the payer of VAT: Yes/No*

*Cross out, which is not applicable

In _____ on _____

Company name
Authorised representative



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ANNEX 2

DRAFT OF THE CONTRACT



PURCHASE CONTRACT

This purchase contract ("Contract") was concluded pursuant to section 2079 *et seq.* of the act no. 89/2012 Coll., Civil Code ("Civil Code"), on the day, month and year stated below by and between:

- (1) **Institute of Physics of the Academy of Sciences of the Czech Republic, a public research institution,**
with its registered office at: Na Slovance 2, Praha 8, PSČ: 182 21,
registration no.: 68378271,
represented by: RNDr. Michael Prouza, Ph.D., director
("Buyer"); and
- (2) **[to be filled in by economic operator],**
with its registered office at: **[to be filled in by economic operator],**
registration no.: **[to be filled in by economic operator],**
represented by: **[to be filled in by economic operator]**
("Seller").

(The Buyer and the Seller are hereinafter jointly referred to as "Parties" and individually as "Party".)

WHEREAS

- (A) The Buyer is a public contracting authority and the beneficiary of public grants for projects within the Operational Programme Research, Development and Education.
- (B) For the successful realization of projects it is necessary to purchase the Object of Purchase (as defined below) in accordance with the act no. 134/2016 Coll., on public procurement, and Rules for the Selection of Suppliers within the Operational Programme Research, Development and Education.
- (C) The Seller wishes to provide the Object of Purchase to the Buyer for consideration.
- (D) The Seller's bid for the public procurement entitled "*Positioning System for LUIS EUV Beam Transport TP20_018*", whose purpose was to procure the Object of Purchase ("Public Procurement"), was selected by the Buyer as the most suitable.

IT WAS AGREED AS FOLLOWS:



1. BASIC PROVISIONS

- 1.1 Under this Contract the Seller shall hand over to the Buyer a system (including all accessories) that is described in Annex 1 (*Technical Specification*) to this Contract in the quality described therein (“Object of Purchase”) and shall transfer to the Buyer ownership right to the Object of Purchase, and the Buyer shall take over the Object of Purchase and shall pay the Seller the Purchase Price (as defined below), all under the terms and conditions stipulated in this Contract.
- 1.2 Under this Contract the Seller shall also:
- a) verify that Object of Purchase meet all requirements stipulated in this Contract;
 - b) transport the Object of Purchase to the place of delivery under the conditions stipulated in Annex 1 (*Technical Specification*);
 - c) to elaborate and hand over to the Buyer operational and maintenance manuals of the Object of Purchase in the extent specified in Annex 1 (*Technical Specification*) or other documents which are necessary for the proper takeover and use of the Object of Purchase in Czech or English language;
 - d) carry out other activities specified in Annex 1 (*Technical Specification*); and
 - e) cooperate with the Buyer during the performance of this Contract
- (“Related Activities”).

2. THE PLACE OF DELIVERY

The place of delivery is at the address: Fyzikální ústav AV ČR v.v.i/ELI beamlines, Průmyslová 836, post code 252 41, Dolní Břežany, Czech Republic.

3. THE TIME OF DELIVERY

- 3.1 The Seller shall deliver and install the Object of Purchase within 18 months from the effectiveness of this Contract. The Buyer is entitled to postpone the time of delivery by 1 month, if the premises at the place of delivery are not due to construction reasons prepared for acceptance of the Object of Purchase.

The Buyer shall extend the time of delivery at the request of the Seller, if the Seller is not able to fulfill this Contract due to circumstances that the Seller had no control over and such circumstances were hard to anticipate and are hard to overcome (e.g. covid-19 measures). In order for the Buyer to extend the time of delivery, the Seller must prove to the Buyer that such circumstances happened and explain how it adversely impacted the Seller. In case of doubts, the Buyer may also ask the Seller to support its claims with an adequate evidence. The Buyer shall extend the time of delivery by the period corresponding to the time that is necessary for obstacles to disappear or to be overcome by the Seller.



4. THE OWNERSHIP RIGHT

The ownership right to the Object of Purchase shall be transferred to the Buyer upon the acceptance of the Object of Purchase by the Buyer.

5. PRICE AND PAYMENT TERMS

- 5.1 The purchase price for the Object of Purchase is **[to be filled in by economic operator]**, - EUR (“**Purchase Price**”) without value added tax (“VAT”). VAT will be paid in accordance with the applicable legal regulations.
- 5.2 The Purchase Price cannot be exceeded and includes all costs and expenses of the Seller related to the performance of this Contract. The Purchase Price includes, among others, all expenses related to the handover and acceptance of the Object of Purchase and execution of Related Activities, costs of copyright, insurance, customs, warranty service and any other costs and expenses connected with the performance of this Contract.
- 5.3 The Purchase Price for the Object of Purchase shall be paid in EUR on the basis of a tax document – invoice, to the account of the Seller designated in the invoice.
- 5.4 The Purchase Price shall be paid after the acceptance of the Object of Purchase by the Buyer.
- 5.5 The Buyer shall realize payments on the basis of duly issued invoice within 30 days from its receipt (maturity period). The invoice shall be considered to be paid for on the day when the invoiced amount is deducted from the Buyer’s account on behalf of the Seller’s account. To avoid any doubts Parties declare that if on the invoice is stated a maturity period that is shorter than 30 days, then such maturity period may be disregarded by the Buyer.
- 5.6 The invoice issued by the Seller as a tax document 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:
- a) name and registered office of the Buyer,
 - b) tax identification number of the Buyer,
 - c) name and registered office of the Seller,
 - d) tax identification number of the Seller,
 - e) registration number of the tax document,
 - f) scope of the performance (including the reference to this Contract),
 - g) the date of the issue of the tax document,
 - h) the date of the fulfilment of the Contract,



- i) Purchase Price,
- j) registration number of this Contract, which the Buyer shall communicate to the Seller based on Seller's request prior to the issuance of the invoice,
- k) declaration that the performance of the Contract is for the purposes of a specific project (the number and the title of the project shall be communicated to the Seller based on Seller's request prior to the issuance of the invoice).

5.7 The Buyer prefers electronic invoicing on the following address: efaktury@fzu.cz.

5.8 In case that the invoice shall not contain the above mentioned information, the Buyer is entitled to return it to the Seller during its maturity period and this shall not be considered as a default. The new maturity period shall begin from the receipt of the supplemented or corrected invoice to the Buyer.

6. SELLER'S DUTIES

6.1 The Seller shall ensure that the Object of Purchase and Related Activities are in compliance with this Contract including all its annexes and applicable legal (e.g. safety), technical and quality norms.

6.2 During the performance of this Contract the Seller proceeds independently. If the Seller receives instructions from the Buyer, the Seller shall follow such instructions unless these are against the law or in contradiction to this Contract. If the Seller finds out or should have found out if professional care was exercised that the instructions are for any reason inappropriate or illegal or in contradiction to this Contract, then the Seller must notify the Buyer.

6.3 All things necessary for the performance of this Contract shall procure the Seller, unless this Contract stipulates otherwise.

6.4 The Seller is aware that the Buyer does not have at its disposal premises for the storage of packaging and, therefore, shall not store packaging of the Object of Purchase. The absence of original packaging cannot be an excuse for refusal of elimination of defects of the Object of Purchase.

7. HANDOVER AND ACCEPTANCE OF THE OBJECT OF PURCHASE

7.1 Once the Object of Purchase is delivered to the place of delivery, the Buyer only takes custody of the Object of Purchase in order to verify that the Object of Purchase was not damaged during the transport and meets all the requirements of this Contract. Once the Buyer is satisfied that the requirements are met, it will issue the signed acceptance protocol.

7.2 If the Seller fails to duly carry out all Related Activities or if the Object of Purchase does not meet requirements of this Contract, the Buyer is entitled to refuse the acceptance of the Object of Purchase. In such a case the Seller shall remedy the deficiencies within ten



(10) working days, unless Parties agree otherwise. The Buyer is entitled (but not obliged) to accept the Object of Purchase despite the above mentioned deficiencies, in particular if such deficiencies do not prevent the Buyer in the proper operation of the Object of Purchase. In such a case the Buyer shall notify the deficiencies to the Seller. The Seller shall remove the deficiencies within ten (10) working days, unless Parties (due to the nature of deficiencies) agree otherwise.

8. WARRANTY

8.1 The Seller shall provide a warranty of quality of the Object of Purchase for the period of 24 months. If on the warranty list or other document is the warranty period of longer duration, then this longer warranty period shall have priority over the period stated in this Contract.

8.2 The warranty period shall begin on the day of the acceptance of the Object of Purchase by the Buyer.

8.3 The Seller shall remove defects that occur during the warranty period free of charge and in the terms stipulated in this Contract.

8.4 If the Buyer ascertains a defect of the Object of Purchase during the warranty period, the Buyer shall notify such defect without undue delay to the Seller. Defects may be notified on the last day of warranty period, at the latest.

8.5 The Buyer notifies defects in writing via e-mail. The Seller shall accept notifications of defects on the following e-mail address: **[to be filled in by economic operator]**. The Seller shall confirm within 24 hours from the receipt of the notification.

8.6 In the notification the Buyer shall describe the defect and the manner of removal of the defect. The Buyer has the right to:

- a) ask for the removal of the defect by the delivery of new Object of Purchase or its individual parts, or
- b) ask for the removal of the defect by repair, or
- c) ask for the reasonable reduction of the Purchase Price.

The choice among the above mentioned rights belongs to the Buyer. The Buyer shall take into account the recommendation of the Seller.

8.7 The Seller shall remove the defect within 10 working days from its notification, unless Parties agree otherwise due to the nature of the defect or special circumstances of the case.

8.8 Parties shall execute a protocol on the removal of the defect, which shall contain the description of the defect and the confirmation that the defect was removed. The warranty period shall be extended by a period of time that elapses between the notification of the defect until its removal.



- 8.9 In case that the Seller does not remove the defect within stipulated time or if the Seller refuses to remove the defect, then the Buyer is entitled to remove the defect at his own costs and the Seller shall reimburse these costs within 10 days after the Buyer's request to do so.
- 8.10 The warranty does not cover defects caused by unprofessional manipulation or by the failure to follow Seller's instructions for the operation and maintenance of the Object of Purchase.

9. PENALTIES

- 9.1 If the Seller is in delay with the removal of the defect, the Seller shall pay to the Buyer a contractual penalty in the amount of 0,05% of the Purchase Price for every (even commenced) day of delay.
- 9.2 The Seller shall pay contractual penalties within fifteen (15) days from the day, on which the Buyer enumerated its claims. The payment of contractual penalties shall not affect the right of the Buyer to damages even to the extent to which such damages exceeds the contractual penalty.
- 9.3 The total amount of contractual penalties imposed on the Seller shall not exceed 7% of the Purchase Price.
- 9.4 The Buyer is entitled to unilaterally set off claims arising from the contractual penalties against the claim of the Seller for the payment of the Purchase Price.

10. RIGHT OF WITHDRAWAL

- 10.1 The Buyer is entitled to withdraw from this Contract without any penalties, if any of the following circumstances occur:
- a) the Seller shall be in delay with the fulfilment of this Contract and such delay lasts more than 1 month;
 - b) the insolvency proceeding is initiated against the Seller; or
 - c) the Buyer ascertains that the Seller provided in its bid for the Public Procurement information or documents that do not correspond to the reality and that had or could have had impact on the result of the tendering procedure, which preceded the conclusion of this Contract.

11. SPECIAL PROVISIONS

By signing this Contract, the Seller becomes a person that must cooperate during the finance control within the meaning of Section 2 letter e) of the act no. 320/2001 Coll., on finance control in the public administration, and shall provide to the Directing Body of the Operational Programme Research, Development and Education or other control bodies acces to all parts of the bid, Contract or other documents that are related to the legal



relationship formed by this Contract. This duty also covers documents that are subject to the protection in accordance with other acts (business secrets, secret information, etc.) provided that control bodies fulfil requirements stipulated by these acts. The Seller shall secure that all its subcontractors are also obliged to cooperate with control bodies in the above stipulated extent. The possibility of effective control must be preserved until the year 2033.

12. SOCIAL, ECOLOGICAL AND INNOVATIVE ASPECTS

12.1 The Buyer aims to conclude contracts with the suppliers that take into account and implement the principles of social responsibility, ecological sustainability and innovation. Therefore, the Seller shall ensure that

- 12.1.1 this Contract shall be fulfilled only by persons that are employed in accordance with the applicable legal regulations (no illegal or child workers);
- 12.1.2 while performing this Contract, all applicable health and safety regulations and rules at work place are observed;
- 12.1.3 all persons performing this Contract are employed under fair and non-discriminatory working conditions;
- 12.1.4 if presented with different manners of fulfilling this Contract, the Seller shall select the solution/process that is in accordance with the principles governing nature conservation and nature protection, ecological sustainability and ecological waste management; and
- 12.1.5 if presented with different manners of fulfilling this Contract, the Seller shall select the solution/process that is the most innovative.

13. FINAL PROVISIONS

- 13.1 This Contract is governed by the laws of the Czech Republic, especially by the Civil Code.
- 13.2 The terms and conditions of this Contract represent the whole agreement between the Parties regarding the subject matter of this Contract and any prior or oral agreements have been either consolidated into this Contract or are disregarded by the Parties.
- 13.3 Parties acknowledge that this Contract shall be published in the Register of Contracts in accordance with the Act no. 340/2015 Coll., on the Register of Contracts.
- 13.4 All disputes arising out of this Contract or out of legal relations connected with this Contract shall be preferable settled by a mutual negotiation. In case that the dispute is not settled within sixty (60) days, such dispute shall be decided by courts of the Czech Republic in the procedure initiated by one of the Parties.
- 13.5 The Seller is not entitled to set off any of its claims or his debtor's claims against the Buyer's claims. The Seller is not entitled to transfer its claims against Buyer that arose on



the basis or in connection with this Contract on third parties. The Seller is not entitled to transfer rights and duties from this Contract or its part on third parties.

- 13.6 All modifications and supplements of this Contract must be in writing.
- 13.7 If any of provisions of this Contract are invalid or ineffective, the Parties are bound to change this Contract in such a way that the invalid or ineffective provision is replaced by a new provision that is valid and effective and to the maximum possible extent correspond to the original invalid or ineffective provision.
- 13.8 This Contract is executed in four (4) counterparts and every Party shall receive two (2) counterparts.
- 13.9 An integral part of this Contract is Annex 1 (*Technical Specification*) including all its annexes. If Annex 1 (*Technical Specification*) uses the term "Contracting Authority", it means Buyer and if it uses the term "Supplier", it means Seller.
- 13.10 This Contract shall be valid on the date of the signature of both Parties and effective on the day, on which it is published in the Register of Contracts.

IN WITNESS WHEREOF attach Parties their handwritten signatures:

Buyer

Signature: _____

Name: RNDr. Michael Prouza, Ph.D., director

Position: director

Date:

Seller

Signature: _____

Name:

Position:

Date:



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ANNEX 1

TECHNICAL SPECIFICATION



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ANNEX 3

TECHNICAL SPECIFICATION

Confidentiality Level	<i>PU - Publish</i>	TC ID / Revision	00278847/D
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Document Type	<i>Requirements Specification Document (RSD)</i>		

[RSD product category B]

Positioning System for LUIS EUV Beam Transport

TP20_018



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<i>Name (Approver)</i>	<i>Position</i>	<i>Date</i>	<i>Signature</i>
Sergei Bulanov	Head of Department of Radiation Physics and Electron Acceleration	2021-05-07 Approved via TC	

<i>Revision History / Change Log</i>				
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1. Introduction

1.1. Purpose

This Requirements Specification Document (RSD) lists the technical requirements and constraints of product applying in RA2 & RA3 of ELI project. This can lead to the identification of product interfaces with the ELI science based technology and ELI building facility. This RSD also acts as the parent document for the technical requirements that need to be addressed in lower level design description documents.

1.2. Scope

This RSD contains all of the technical requirements: functional, performance, operational & design, transportation & installation, safety & quality requirements for the product **Positioning System for Photon Beam Transport** (further "EUV-PoS"), tender number **TP20_018**.

The product is an integral part of the standalone **LUIS Beamline** and will be installed in the E5 Experimental Hall. This product is registered in the PBS software under the following PBS code: **E.E5.LUX.PBT.2.1**.

This product is a product Category B

Category B is an Off-the-shelf Product with customization (e.g., product performance) that does not require any design modifications of the product. If there is no need in conducting specific tests regarding the product's performances the Supplier shall verify all requirements defined by appropriate RSD within own outgoing inspection and testing procedure. All non-conformances (if any) must be addressed by the Supplier in a timely manner.

1.3. Terms, Definitions and Abbreviations

For the purpose of this document, the following abbreviated terms are applied:

Abbreviation	Meaning
CA	Contracting Authority (Institute of Physics AV ČR, v. v. i.)
E5	Experimental hall 5
ELI	Extreme Light Infrastructure
EUV	Extreme Ultraviolet
NCR	Nonconformity Report
PBS	Product Breakdown Structure (code of ELI-Beamlines)
QR	Quality Report
RH	Relative Humidity
RMS	Root Mean Square
RSD	Requirements Specification Document

1.4. Definition of Translational and Rotational axes

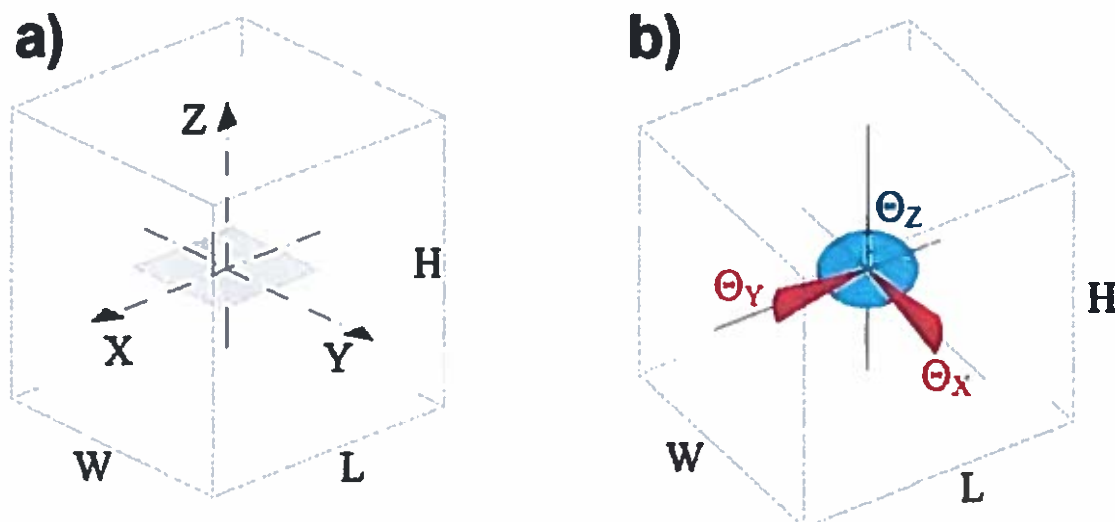


Figure 1: Schematic drawing for definition of (a) translation and (b) rotation axis.

1.5. References to Standards

If this document includes references to standards or standardized/ standardizing technical documents the CA allows/permits also another equal solution to be offered.

2. Functional, Performance and Design Requirements

The **EUV-PoS** is the central part of the EUV photon beam transport as a part of the LUIS experimental setup.

2.1. General EUV-PoS Requirements

REQ-030947/A

The **EUV-PoS** shall consist of following components:

- Linear positioner (rail) with the ability to handle several carriages (independently operated/controlled)
Travel range: ≤ 400 mm
The total length of the rail will be determined during the design phase by the CA.
- Carrier platforms (carriage)
- Hexapod or comparable construction to enable multi-degree-of-freedom operation. The degrees-of-freedom shall include:
 - rotation along x/y/z-axis

- x/y/z (linear)
 - customizable pivot-point
- Iris diaphragm
- Rotary stages
- Feedthrough flanges for connectors combined in following groups (if feasible):
 - 1x feedthrough flange for all linear positioners (rails)
 - 2x feedthrough flange for hexapods or comparable constructions
 - 3x feedthrough flange for irises (each)
 - 3x feedthrough flange for rotary stages (each)

Amount: 2 or more (if necessary)

Acceptable flange types: DN 100 ISO-F, DN 100 ISO-K, DN 40 ISO-KF

Acceptable connector types: D-Sub 9, D-Sub 15, or LEMO 16
- Motion control units
- Control software

Note:

*All positioning systems shall be vacuum-compatible. Required level of vacuum compatibility for the **EUV-PoS** is defined below in REQ-030958/A.*

REQ-030948/A

Cables (with connectors) between the positioners and the vacuum feedthroughs shall have length at least 1000 mm.

REQ-030949/A

Cables shall have the same vacuum compatibility as positioners.

Note: See REQ-030958/A.

REQ-030950/A

All positioners shall have metric holes to mount a sample/device on the positioner.

REQ-030951/A

The motion control units shall be delivered with EU compatible power supplies.

REQ-030952/A

The motion control units shall be delivered with cables between vacuum feedthroughs and the control units.

2.2. EUV-PoS Configuration and Design Requirements

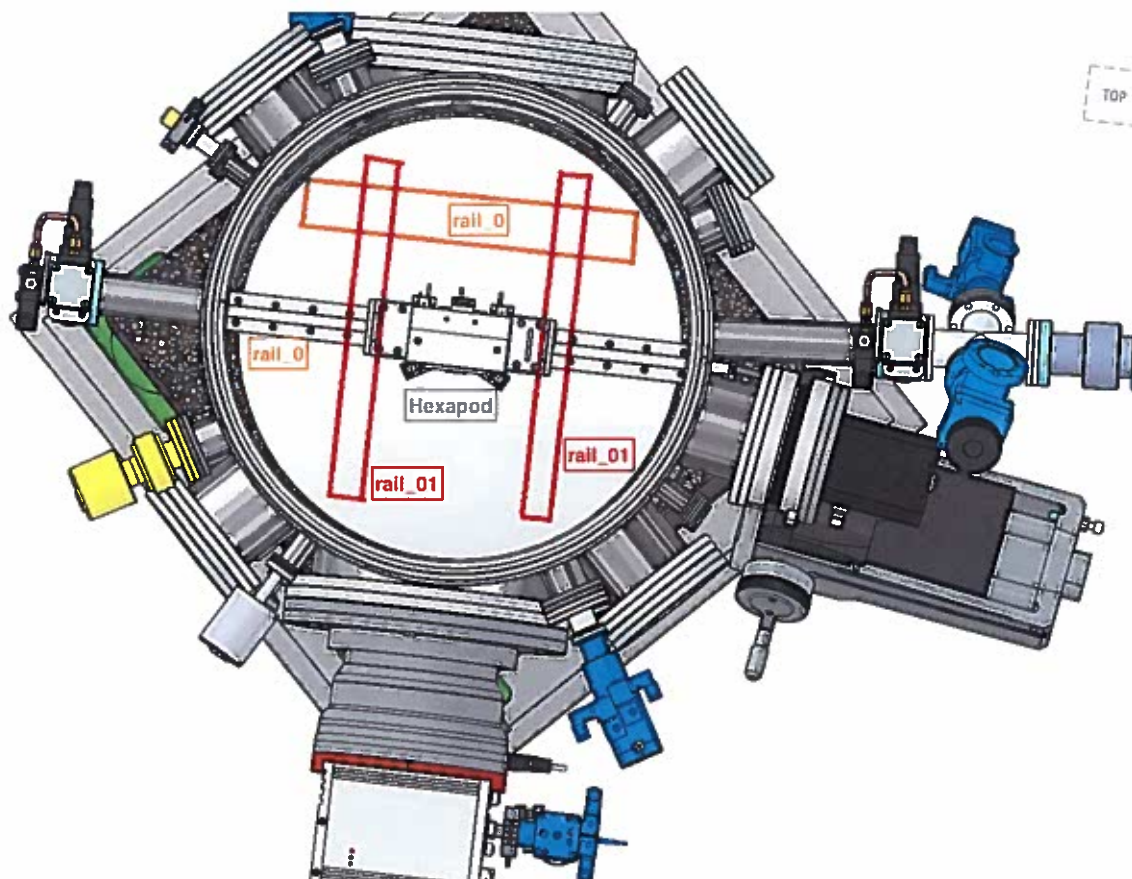


Figure 2: Design outline of the EUV-PoS. Please note, that linear positioners (rails) and one Hexapod are depicted in the sketch. Beam direction is from left to right.

The **EUV-PoS** configuration as described below is a functional design owned by ELI Beamlines.

REQ-030953/A

All Hexapods shall be mounted on one linear positioner (further "rail_0"). This implicates, that

- at least two carrier platforms (carriages) are needed for the Hexapods
- the carrier platforms (carriages) shall be operated independently from each other
- Travel axis of rail_0: Y.

REQ-030954/A

Rail_0 shall be installed perpendicular on a rail system (further "rail_1") to enhance the needed number of degrees-of-freedom of the **EUV-PoS**.

Travel axis of **rail_1**: X.
REQ-030955/A

The design of **rail_1** shall provide a stable and precise movement of **rail_0**.

- Over-all travel range of any rails in each direction: up to 450 mm
- Carrier platform (carriage) precision shall not be affected by any potential leverage effect

REQ-030956/A

Components shall fulfill minimal requirements stated in following specifications.

Hexapod specifications:

- Travel range x/y-axis [mm]: >45
- Travel range z-axis [mm]: >12
- Tilt range Θ_x : >40°
- Tilt range Θ_y : >30°
- Tilt range Θ_z : >40°
- Encoder: closed-loop
- Closed-loop repeatability [nm]: ± 15 (for 1 mm travel)
- Closed-loop repeatability [μ rad]: ± 10

Linear positioner (rail):

- Travel range x/z-axis [mm]: up to 450
- Encoder: closed-loop
- Closed-loop repeatability [nm]: ± 200

Rotary positioner (single unit):

- Aperture [mm]: 82
- Material: Aluminum
- Encoder: closed-loop
- Closed-loop resolution [μ°]: 5
- Blocking torque [Ncm]: >15
- Normal force [N]: 20
- Quantity: 3

Iris Diaphragm (single unit):

- Aperture [mm]: 0...22
- Material: Titanium base
- Encoder: closed-loop
- Closed-loop repeatability [μ m]: 20 (unidirectional)
- Quantity: 3

REQ-030957/A

The load capacity of the Hexapods shall be sufficient to handle 700g samples.

2.3. Environmental Requirements

REQ-030958/A

Vacuum compatibility shall be 10^{-6} mbar or better.

REQ-030959/A

The **EUV-PoS** shall be designed for operation in vacuum and at atmospheric pressure with relative humidity level within an interval from 30 % to 50 %.

REQ-030960/A

The **EUV-PoS** shall be designed for operation at a temperature range from 20 °C to 40 °C.

REQ-030961/A

The Supplier and the CA shall agree on the cleaning method to clean the **EUV-PoS** without decreasing the positioner's functionality and to avoid contamination of clean space.

NOTE: The cleaning methods may use high gas flow (dry and clean air or N₂) and specialized chemical cleaning liquids (alcohol, Isopropyl alcohol, demineralized water).

3. Delivery Requirements

REQ-030962A

The transportation to the final destination (ELI Beamlines) of the **EUV-PoS** shall be conducted by the Supplier.

REQ-030963/A

The **EUV-PoS** shall be delivered in a protective package, preferably a Polyethylene Terephthalate Glycol (PETG) container or other protective package with equivalent properties, preventing damage and contamination and a minimum of two plies separate clean films. Prior to delivery, the EUV-PoS shall be cleaned so that all its components fulfil the requirements of the cleanrooms of class 7 according to ČSN EN ISO 14644 (or equivalent, e.g. EN ISO 14644).

4. Safety Requirements

REQ-030964/A

The Supplier shall supply a Declaration of Conformity or any other equivalent document legally recognized and accepted in the Czech Republic for each product type if the appropriate legislation determines the Supplier's obligation to have a Declaration of Conformity (or the equivalent document) for the purposes of a Device

sale in the Czech Republic to fulfil the requirements of 2001/95/EC directive or applicable Czech law.

5. Quality control

5.1. Quality Reports (QRs)

REQ-030965/A

The Supplier shall perform a factory verification of the **EUV-PoS** and provide corresponding **specific quality reports (I, II)** proving that the requirements have been met:

I. **Functionality report (including accuracy and precision)**

II. **Dimensional report** providing information about a measured physical dimension of the manufactured product.

*NOTE 1: The results of the factory verification of the **EUV-PoS** shall be provided to the CA in the corresponding specific QRs before delivery.*

NOTE 2: The results shall be in print as well as in digital format.

5.2. Documentation and Data Control

REQ-030966/A

The Supplier shall provide the Product Manual as part of the delivered Device. Completeness of the Manual shall be approved by the CA. The Manual shall include the instructions and descriptions regarding the following procedures:

- transport;
- handling and cleaning (see REQ-030961/A);
- storage;
- installation and;
- safe operation and maintenance procedures.

REQ-030967/A

The Supplier shall provide information of outgoing check control of the Product. At least this information shall comprise declaration about execution of outgoing check and declaration of conformity with technical requirements defined by the product RSD and completeness of the Product.

NOTE: Alternatively the Supplier might provide the CA the information detailed enough to prove meeting all requirements stipulated herein (e.g.: catalogue/technical data sheets, product manuals or other similar documentation).

5.3. Nonconformity Control System

REQ-030968/A

The Supplier shall establish and maintain a nonconformity control system compatible with ČSN EN ISO 9001 (or equivalent, e.g. EN ISO 9001).

5.4. Acceptance

Acceptance will be carried out by the CA upon delivery of the final product not obviously damaged during transport. The basis for acceptance will be completed VCD summarizing the overall verification results together with relevant documentation supporting the verification (i.e. QRs, approved manufacturing drawings, Product User Manual and etc.).

In case of successful acceptance phase, the CA will provide to the Supplier signed acceptance protocol. In case of unsuccessful acceptance stage the CA will provide to the Supplier Nonconformity Report (NCR) and process in accordance with REQ-030968/A shall be applied.

REQ-030969/A

The Acceptance phase shall demonstrate the following:

- The final product has been successfully verified by the Supplier and the results of this process have been documented in an appropriate way through QRs (see chapter 5.1);
- All detected nonconformities have been solved in accordance with REQ-030968/A;
- The final product is free of fabrication errors and is ready for the intended operational use.