

Invitation to Quote

**Invitation to Quote (ITQ) on behalf of Science & Technology
Facilities Council**

Subject Supply of Neutron Collimating Jaws

Sourcing reference number RE17215

UK Shared Business Services Ltd (UK SBS)
www.uksbs.co.uk

Registered in England and Wales as a limited company. Company Number 6330639.
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VAT registration GB618 3673 25
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UKSBS
Shared Business Services

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Section 1 – About UK Shared Business Services

Putting the business into shared services

UK Shared Business Services Ltd (UK SBS) brings a commercial attitude to the public sector; helping our customers improve efficiency, generate savings and modernise.

It is our vision to become the leading provider for our customers of shared business services in the UK public sector, continuously reducing cost and improving quality of business services for Government and the public sector.

Our broad range of expert services is shared by our customers. This allows our customers the freedom to focus resources on core activities; innovating and transforming their own organisations.

Core services include Procurement, Finance, Grants Admissions, Human Resources, Payroll, ISS, and Property Asset Management all underpinned by our Service Delivery and Contact Centre teams.

UK SBS is a people rather than task focused business. It's what makes us different to the traditional transactional shared services centre. What is more, being a not-for-profit organisation owned by its customers, UK SBS' goals are aligned with the public sector and delivering best value for the UK taxpayer.

UK Shared Business Services Ltd changed its name from RCUK Shared Services Centre Ltd in March 2013.

Our Customers

Growing from a foundation of supporting the Research Councils, 2012/13 saw Business, Energy and Industrial Strategy (BEIS) transition their procurement to UK SBS and Crown Commercial Services (CCS – previously Government Procurement Service) agree a Memorandum of Understanding with UK SBS to deliver two major procurement categories (construction and research) across Government.

UK SBS currently manages £700m expenditure for its Customers.

Our Customers who have access to our services and Contracts are detailed [here](#).

Section 2 – About Our Customer

Science and Technology Facilities Council (STFC)

STFC is a world-leading multi-disciplinary science organisation, whose goal is to deliver economic, societal, scientific and international benefits to the UK and its people – and more broadly to the world.

STFC support an academic community of around 1,700 in particle physics, nuclear physics, and astronomy including space science, who work at more than 50 universities and research institutes in the UK, Europe, Japan and the United States, including a rolling cohort of more than 900 PhD students.

The organisation's large-scale scientific facilities in the UK and Europe are used by more than 3,500 users each year, carrying out more than 2,000 experiments and generating around 900 publications.

The combination of access to world-class research facilities and scientists, office and laboratory space, business support, and an environment which encourages innovation has proven a compelling combination, attracting start-ups, SMEs and large blue chips such as IBM and Unilever.

Examples of funded research

- STFC is providing the design infrastructure for the £23bn UK microelectronics sector that underpins strategically important industries worth £78bn to the UK economy
- STFC's ISIS facility and its users, working in partnership with the NHS, developed a novel material to improve the treatment of cleft lip and palate, speeding up healing times and reducing operating costs
- STFC's Synchrotron Radiation Source was used to understand how conventional anti-malarial drugs work, allowing the development of more effective treatment to reduce the devastating global impact of malaria
- STFC's ISIS facility is identifying new materials that can safely and conveniently store hydrogen, enabling the development of hydrogen-fuelled cars reducing reliance on fossil fuels and cutting carbon emissions

Section 3 - Working with UK Shared Business Services Ltd.

In this section you will find details of your Procurement contact point and the timescales relating to this opportunity.

Section 3 – Contact details		
3.1	Customer Name and address	STFC Rutherford Appleton Laboratory Harwell Campus Didcot OX11 0QX
3.2	Buyer name	Sharon Keiller
3.3	Buyer contact details	Sharon.Keiller@uksbs.co.uk
3.4	Estimated value of the Opportunity	£60,000 Excluding VAT
3.5	Process for the submission of clarifications and Bids	All correspondence shall be submitted within the Emptoris e-sourcing tool. Guidance Notes to support the use of Emptoris is available here. Please note submission of a Bid to any email address including the Buyer <u>will</u> result in the Bid <u>not</u> being considered.

Section 3 - Timescales		
3.6	Date of Issue of Contract Advert and location of original Advert	Monday 14 th August 2017 Contracts Finder
3.7	Latest date/time ITQ clarification questions should be received through Emptoris messaging system	Monday 21st August 2017 11.00am Wednesday 30 th August 2017 11.00am
3.8	Latest date/time ITQ clarification answers should be sent to all potential Bidders by the Buyer through Emptoris	Tuesday 22nd August 2017 11.00am Friday 1 st September 2017 11.00am
3.9	Latest date/time ITQ Bid shall be submitted through Emptoris	Thursday 24th August 2017 14.00 Thursday 7 th September 2017 11.00
3.11	Anticipated rejection of unsuccessful Bids date	Thursday 7th September 2017 Thursday 14 th September 2017
3.12	Anticipated Award date	Thursday 7th September 2017 Monday 18 th September 2017
3.13	Anticipated Contract Start date	Monday 11th September 2017

		Tuesday 19 th September 2017
3.14	Anticipated Contract End date	Sunday 10th of September 2018 Tuesday 18 th of September 2018
3.15	Bid Validity Period	60 Days

Section 4 – Specification

Definitions and abbreviations within this specification

STFC	- Science & Technology Facilities Council
RAL	- Rutherford Appleton Laboratory, Chilton, UK
ISIS	- Facilities department within STFC concerned with procuring equipment
Supplier	- Company who is awarded the contract
CRISP	- One of 34 experiment areas within the STFC neutron facility
FAT	- Factory Acceptance Testing
SAT	- Site Acceptance Testing

The terms slit-set and jaws are used interchangeably to refer to the same component.

Accuracy – Maximum deviation of a measurement from a known standard or value.

Repeatability – The ability to obtain the same value from multiple and repeated measurements with the same system variables.

Resolution – The smallest increment that can be made and detected by a system.

1 Technical Requirements

The requirement is for one fully assembled neutron beam slit-set for defining the beam aperture on the CRISP beamline along with motion control cables. The jaws of the slit-set will consist of four independently controlled axes of motion (consisting of two Y and two Z axes) mounted upon a structure. Each axis will drive a neutron absorbing ‘blade’ in order to define a neutron beam to the required rectangular aperture.

The following sections of this document detail the motion, blade, operational and electrical requirements of this system.

1.1 Motion Requirements

1.1.1 Motion Overview

The following specification requirements apply locally¹ to all of the slit-set’s axes of motion at operating temperature (60-65°C).

Type of Drive	Servo or Stepper Motors
Speed (minimum)	5mm.s ⁻¹
Positional Accuracy	±50µm locally (over full range)
Positional Repeatability	±50µm locally (home position from a high precision limit switch)
Travel Restriction	Limit switch at both ends of all axes
Type of Feedback	Resolver or Encoder (2 or 3 channel, differential pair) suitable for high radiation area
Power Off Condition	Self-supporting mechanism capable of holding blade mass without a brake such as use of leadscrews. Feedback device shall stay live at all times.

Table 1 : Motion Overview

The Supplier shall consider the temperature and vacuum environmental conditions of any motors selected. As an example, if the Supplier decided to use stepper motors, the Phytron Vacuum Stepper Motor range, or equivalent, would be suitable if the jaws were designed in such a way that the motors fell within the operational vacuum of the housing. Radiation levels are not deemed high enough to pose a threat to any motors or switches however considerations should be made when selecting the type of feedback to utilise such that it is sufficiently resistant to radiation and other environmental conditions present. STFC have not made recommendations on the type of feedback to use or whether it shall be linear or rotary feedback. The supplier is responsible for specifying this feedback device to meet the requirements of the project and justifying their selection.

(http://www.phytron-elektronik.de/antrieb/index.php?Set_ID=160&PID=3)

¹ ‘Locally’ distinguishes these requirements from global specification requirements which would incorporate any errors from the “Jaw translation assembly”

1.1.2 Aperture Dimensions

The beam aperture through the slit-set jaws shall be a maximum of 80mm x 80mm as defined by the blades. The beam shall be able to be completely closed down with a 5mm minimum achievable overlap between blades to guarantee that no beam is able to pass through a closed 0mm x 0mm aperture. Alignment and perpendicularity of the aperture to the beam will be managed through kinematic mounts on the slit-set jaws vacuum enclosure.

To ensure there are no shine paths around blades, a minimum border of 5mm outside the maximum aperture will be required when fully closed in addition to this, each blade is required to translate 5mm past the centre line and right to the edge of the aperture (at either +/-40mm). This will result in a minimum blade width of 50mm.

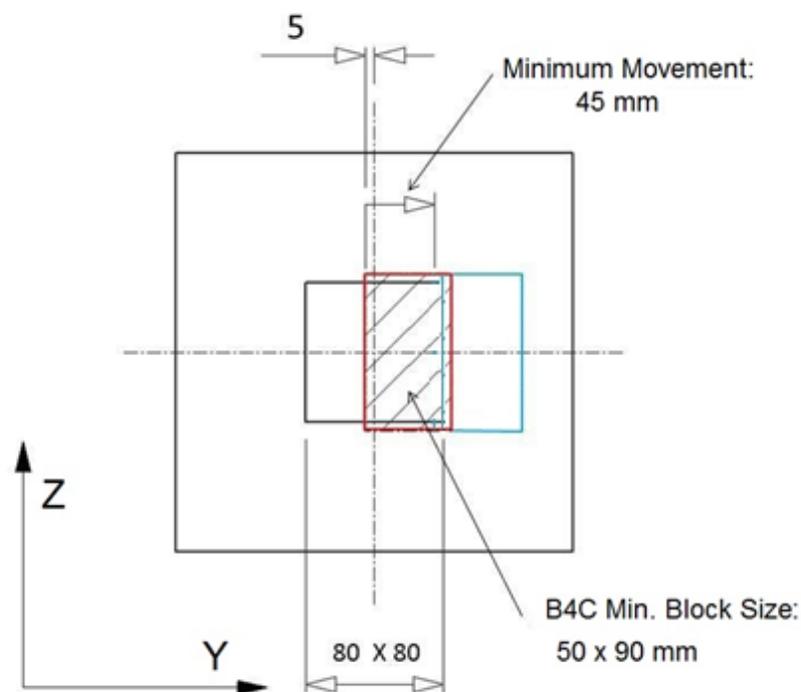


Figure 1 : Blade Travel Dimensions

1.2 Blades

1.2.1 Material

The blades within the slit-set are to be made from 10mm thick sintered B₄C, this material cannot be drilled or screwed and can only be clamped or bonded. STFC will free issue the blades but the Supplier is required to determine the blade size required before this can occur, STFC will also require 6-8 weeks to procure the blades before they can be sent to the Supplier. The Supplier shall take responsibility for the fitment of blades and shall ensure blade edges are parallel and square to their adjacent pair. Assuming a blade size of 50mm

width by 90mm height, which allows for the 5mm required overlap and travel required, the blade mass would be 112g given a 10mm thick blade with the density of sintered B4C being 2480 Kg/m³.

1.2.2 Arrangement

On the CRISP beamline, vertical divergence is more damaging to measurement than horizontal divergence, as a result of this, the pair of blades which correct for vertical divergence, North and South, should be downstream and closer to the sample than the orthogonal pair, East and West, due to the distance of this jaw set from the sample however, this requirement is not essential. The blade pairs; horizontal East and West, and vertical North and South, shall be separated by no more than 30mm (front of one pair to the front of the other pair). Each blade shall have minimal offset from its partner blade while retaining the ability to overlap the partner blade, to close the beam entirely, without clashing.

Upon meeting these requirements, the offset of blades in each pair and separation of blade pairs, should be minimised as much as possible.

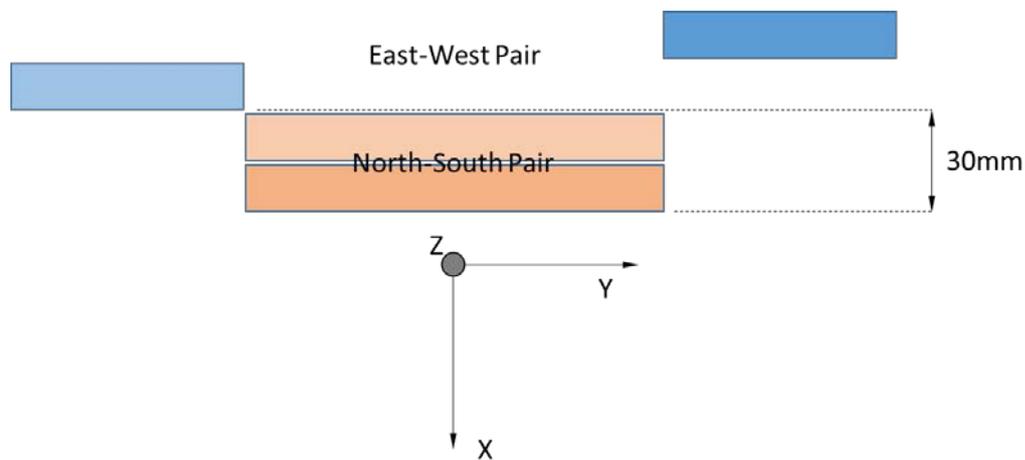


Figure 2 : Staggered Blade Arrangement

1.2.3 Mounting

During operation, only the blades are allowed to pass within the active area (the maximum beam aperture area) of the slit-set. All other structures, motion control equipment and mounting features will stay clear of this active area.

Mounting features are required to ensure the blades are positioned reliable and accurately. A fastening method that allows for maintenance, such as blade replacement, is preferred but adhesives can be used if necessary. The Supplier should also take care to consider the operational temperature and vacuum requirements of the system when selecting any resins and adhesives.

Blades shall be mounted perpendicular and parallel to each other within 0.6mm and 0.1mm respectively.

1.3 Operational Environment

1.3.1 Vacuum Environment

The slit-set vacuum enclosure will be subject to atmospheric pressure but shall operate with an internal vacuum of 1×10^{-3} mbar with a leak rate less than 1×10^{-6} mbar.L.s⁻¹.

A DN160 seal face, co-seal groove and clamp screw PCD, is required, front and back.

The supplied slit-set assembly shall be suitably cleaned for a vacuum environment and all trapped volumes shall be vented. All equipment operating within the vacuum shall have been proven to perform well within a similar vacuum range. Evidence will be required for any equipment without a vacuum rating. Lubricants and outgassing material should be kept to a minimum.

1.3.2 Space Envelope

The slit set vacuum enclosure, including electrical connectors, should fit in to an area of 400mm H x 400mm W x 150mm D. The Supplier should also make considerations for the bend radiuses required of the selected cables. This volume can be increased if the Supplier believes this space to be inadequate so the Supplier should aim to make the enclosure as compact as possible and shall state in the returned quotation what they believe to be the achievable space envelope required for the system.

The Supplier should investigate the feasibility of placing the electrical connectors on different faces if this were to pose a benefit to reducing the required space envelope for the slit-set assembly and cable routing.

1.3.3 Radiation Environment

Due to the close proximity of the slit-set to the target station wall and beam energy chopper, the slit-set should be capable of operating within an ISIS instrument area that receives relatively high amounts of neutron and gamma radiation. The induced radiation currently measured at the T-Zero blocking blade can vary from 100 microsieverts/hr to 200 microsieverts/hr. Aluminium alloys should be used for construction and stainless steel for fasteners where possible.

1.3.4 Magnetic Environment

CRISP does not utilise a polarised beam at this point in the beamline so there is no restriction on the use of magnetic feedback devices, motors or other components.

1.3.5 Operational Temperature

The slit-set shall operate in a temperature range between 60°C and 65°C and shall meet specification at these operational temperatures. This temperature range is due to the close proximity of the mounting location to the T-Zero chopper and seasonal variations. The selection of feedback devices and other components may be impacted if the ambient temperature is affected by more extreme experiments. The system shall be tested against the specification stated in section 1.1.1 at an ambient air temperature of approximately 23°C

Section 4 - Specification

and verified using external devices and also be subjected to a closed loop test using the built in feedback devices at a representative operational temperature of 65°C.

1.3.6 Operational Duty

During normal operation, the blades could be moved through their full range of motion up to five times per day but then be left stationary for long periods. The slit-set jaws will have an anticipated service life of 10 years. This equates to approximately 5000 cycles. The homing procedure to enable reliable positioning must be robust as the jaw set will be inaccessible in normal use.

5 cycles per day x 100 days per year x 10 years.

1.3.7 Installation and Maintenance

The slit-set installation area will only have direct access from above. After this time, the area will be surrounded by radiation shielding. The design shall incorporate features to assist in installation and removal for blade maintenance. This should be in the form of features such as a top mounted handle, all mounting fasteners accessible from above and all connectors accessible from above.

The enclosure shall utilise M4 p-clips for any cable routing.

1.3.8 Handling

The internal mechanisms of the slit-set should be robust enough to withstand general handling and assembly of the blades. The jaws and offsetting assembly shall be designed to be manually lifted and shall thus weigh less than 15kg.

1.4 Motion Control and Electrical Requirements

1.4.1 Connectors

The Supplier shall aim to use the LEMO B-series range of connectors for all electrical connections to the slit-set enclosure. As the CRISP slit-set is being used to investigate the reduction of cabling between slit-set and motion control rack, the Supplier shall aim to consolidate all feedback devices in to a single connector, all limit switches in to a single connector and all servo/stepper drives to a single connector, if viable. As outlined in the following sections, care shall be taken to follow the keying alignment stated in each section (sometimes as part of the part number). Reducing the overall connector count is considered a high priority and the Supplier should aim to ensure this target is met but if this is not viable, or would increase complexity of the delivered item, the Bidder shall state this reasoning to STFC at the tender return stage of the project. The Supplier shall present the selected connectors at the PDR stage of the project and will be responsible for defining an appropriate pin configuration for the connectors.

Section 4 - Specification

The following sections specify the use of hermetically sealed sockets/receptacles on the jaws, if however, the design is such that the connectors would not be required to hold a vacuum, the supplier may utilise non-sealed Lemo alternatives as long as they adhere to the outlined keying arrangements.

1.4.1.1 Feedback

The feedback connector used on the slit-set should be a hermetically sealed socket as defined by the following LEMO part number:

HGK 4B 324 CLA PV

The mating plug to this socket is available in either a straight or elbow variant.

Straight Plug :	LEMO FGK 4B 324 CYPD 13
Elbow Plug:	LEMO FHK 4B 324 CYPD 13

The design shall specify the recommended plug dependent on socket position used to conform to the space envelope constraints of the slit-set. The supplier shall specify appropriate cable collets and accessories in their provided cable assembly.

1.4.1.2 Limit Switches

The connector used for limit switches should be a hermetically sealed socket as defined by the following LEMO part number:

HGL 3B 324 CLA PV

The mating plug to this socket is available in either a straight or elbow variant.

Straight Plug:	LEMO FGL 3B 324 CYPD 11
Elbow Plug:	LEMO FHL 3B 324 CYPD 11

The design shall specify the recommended plug dependent on socket position used to conform to the space envelope constraints of the slit-set. The supplier shall specify appropriate cable collets and accessories in their provided cable assembly.

1.4.1.3 Motors

The connector for the motors shall be a hermetically sealed socket from the LEMO B-series range of connectors. The supplier is responsible for determining the electrical requirements of this connector, based on the servo or stepper motors selected for actuation of the blades, and should aim to reduce all motor connections in to a single connector of smallest viable size. The Supplier shall discuss with STFC if this is not a viable approach. Any LEMO connector selected for drive shall be keyed with the 'J' alignment.

1.4.2 Cables

The Supplier is expected to supply motion control cables, 10m in length, as part of the deliverables for this contract. STFC has made the following cable recommendations for feedback and limits based on the requirements of the project and utilising commercially available off-the-shelf² cables. No cable has been specified for the motors and it shall be the responsibility of the Supplier to select this cable based on the connector specified as part of section 1.4.1.3; the Supplier should aim to use either LAPP or Helukabel as the supplier. The Supplier is permitted to recommend other cable variants and suppliers as alternatives to those listed below if they believe the design and resulting slit-set would benefit from this but these changes shall be presented to STFC for approval before any decision is made.

The slit-set shall be designed to allow for the physical dimensions and bend radiuses of these cables and their resulting assemblies. The following information is purely for advisory purposes and the Supplier shall refer to the respective datasheets for more accurate information.

1.4.2.1 Feedback Cable

LAPP 0034044 : 10 x (2 x 0.22). This is a copper braided cable consisting of 10 individual, foil-wrapped, twisted pairs of conductor size 0.22mm² produced by LAPP. The outer-diameter of this cable is 12.5mm and the bend radius is 125mm. If resolvers are used as the feedback device, blades on the Y axis of motion, and likewise on the Z axis of motion, shall share a single twisted pair for their COM phase connections. Likewise, encoders shall be permitted to share power connections however if the design calls for three channel encoders the Z pairs will be passed through the limit switch cable of section 1.4.2.2.

1.4.2.2 Limit Switch Cable

HELUKABEL 21042 : 12 x 2 x 0.25. This is a copper braided cable with twisted pairs of conductor size 0.25mm². The outer diameter of this cable is 11.4mm and the bend radius is 57mm. All limit switches are permitted to use a single common ground connection but the Supplier should ensure this is suitable. As stated in section 1.4.2.1, the additional cores available on this cable are permitted to be used for the Z channel of encoders if 3 channel encoders are selected.

² Non-bespoke cable. Not custom made and readily available.

2 Qualifications, Inspections and Testing

2.1 Conformity to Motion Specification

Testing of the motion system will be initially conducted at the Supplier's site and witnessed by STFC to ensure that motion system operates and complies with the specification outlined in section 1.1. These tests shall be conducted at the expected operating temperature of 65°C. STFC will also witness the assembly when the power is turned off to ensure there is no drift in blade positioning.

When designing the system, suitable datum and alignment features should be added to ensure that both the accuracy and repeatability of the system can be determined using dial test indicators. Qualitative requirements will also be commented upon.

These tests shall be conducted using motion control equipment supplied by the Supplier. As previously stated, Bidders shall state during the quotation process if they do not have access to the appropriate motion control equipment, that supports all the components required, for testing this type of system.

2.2 Vacuum and Leak Tests

The slit-set assembly shall be sealed with suitable blanking flanges and evacuated to below 1×10^{-3} mbar. The use of vacuum grease is not permitted and the pump used cannot be oil based. For the final leak rate acceptance test, helium gas will be applied to the external surfaces of the enclosure assembly and leak detection, with a helium mass-spectrometer connected to the enclosure, shall not give a global leak rate larger than 1×10^{-6} mbar.L.s⁻¹. The leak detector shall be connected directly to the vessel, using no additional flanges, and certification shall be provided proving that the machine has been calibrated within the twelve months prior to the testing date.

The supplier shall be completely responsible for the leak testing and supply of all the necessary equipment. This includes vacuum pumps, helium leak detectors, gauges, pipe work, blanking flanges, pumping ports and fixings. If the Supplier has any concerns regarding this specific requirement they shall contact STFC to discuss these matters.

All four axes shall be tested, while holding vacuum conditions, along their full lengths of travel with the aim being to ensure that all motion control components work and the resolvers provide readouts under these conditions. Tests shall also be carried out under the expected operating temperature of 65°C.

The test will need to be witnessed by STFC in order to be approved.

2.3 Site Acceptance Tests

Upon receiving the complete slit-set assembly, STFC will inspect the assembly for visible signs of damage. STFC will then operate each axis, ensuring that the performance is comparable to that which was observed during the FAT.

3 Additional Deliverables

3.1 Design Review

At the Design Review meeting, the Supplier must present the detailed final design in person or via videoconference and provide the following items:

- a. 3D CAD files of complete assembly for the purpose of determining space envelope requirements. STFC operates Solid Edge as its 3D CAD system but compatible files are acceptable.
- b. Complete set of assembly drawings.
- c. Detailed design of the system including alignment methods.
- d. Detailed list of actuators, feedback devices and switches.
- e. Motion control requirements.
- f. Design calculations showing proposed actuators, motors, gearboxes, feedback devices, switches and amplifiers meeting the specification requirements.
- g. A programme with regular milestones to allow progress checking up to the point of delivery.
- h. Details of proposed acceptance tests to establish performance of the system against the agreed specification.

Unless otherwise agreed in writing by STFC, the Supplier should not proceed to order any materials, components or equipment required to fulfil this contract until STFC has approved the final design presented at the design review.

In the event that significant issues are raised through this design review, it may be necessary to repeat the review. The Supplier must honour any STFC request for further reviews and bear any costs that may be incurred as a result of this.

Any outcome of the design review will not relieve the Supplier from the responsibility of delivering to the specification or the contracted delivery date.

3.2 Documentation

The supplier shall supply the following documentation, in an electronic format at minimum, all of which should be clearly presented in English:

- a. Design Review (FDR) documentation.
- b. Factory acceptance test procedures.
- c. Factory acceptance test reports. These are required before equipment can be delivered.
- d. Full supporting documentation of equipment supplied, including installation, operation and maintenance manuals.
- e. Full set of assembly drawings for all equipment supplied with all dimensions listed in metric units. These should be "as built", two-dimensional, detailed, engineering drawings. Drawings shall be supplied in .dwg or .dxf formats.
- f. Complete 3D CAD model of the final assembly, for space envelope purposes, compatible with STFC's preferred software packages of Solid Edge for 3D models.
- g. List of recommended spare items, additional items and their relevant costs.
- h. Safety report.
- i. Quality assurance report.
- j. All relevant mechanical and electrical calculations used in the design of the equipment.

Section 4 - Specification

- k. Electrical connection schematics supplied in a format compatible with STFC's preferred software package of AutoCAD for electrical drawings.

3.3 Manuals

Detailed installation, operation and maintenance manuals, in English, shall be supplied in an electronic format alongside a hard-copy version. The manuals shall include the following items:

- a. Instructions for correct operation.
- b. Detailed assembly and disassembly instructions.
- c. Routine maintenance requirements including a detail description of tasks, the conditions under which they must be performed and the estimated time required to complete this task.
- d. Fault diagnosis instructions.
- e. Relevant mechanical and electrical drawings.
- f. Decommissioning and disposal route for equipment at end of service.

Bidders should note Section 4 Specification should be read in conjunction with the supporting background information provided at Appendix A Technical Data Sheet and Appendix B Project Aims.

Terms and Conditions

Bidders are to note that any requested modifications to the Contracting Authority Terms and Conditions on the grounds of statutory and legal matters only, shall be raised as a formal clarification during the permitted clarification period.

Section 5 – Evaluation model

The evaluation model below shall be used for this ITQ, which will be determined to two decimal places.

Where a question is ‘for information only’ it will not be scored.

The evaluation team may comprise staff from UK SBS, the Customer and any specific external stakeholders the Contracting Authority deems required. After evaluation the scores will be finalised by performing a calculation to identify (at question level) the mean average of all evaluators (Example – a question is scored by three evaluators and judged as scoring 5, 5 and 6. These scores will be added together and divided by the number of evaluators to produce the final score of 5.33 ($5+5+6 = 16 \div 3 = 5.33$))

Pass / fail criteria		
Questionnaire	Q No.	Question subject
Commercial	SEL1.2	Employment breaches/ Equality
Commercial	FOI1.1	Freedom of Information Exemptions
Commercial	AW1.1	Form of Bid
Commercial	AW1.3	Certificate of Bona Fide Bid
Commercial	AW3.1	Validation check
Commercial	AW4.1	Contract Terms
Price	AW5.5	E Invoicing
Price	AW5.6	Implementation of E-Invoicing
Quality	AW6.1	Compliance to the Specification
Commercial	SEL3.11	Compliance to Section 54 of the Modern Slavery Act
Quality	PROJ1.2	Compliance to manufacture commencement
Quality	PROJ1.3	Testing of equipment
-	-	Invitation to Quote – received on time within e-sourcing tool

Scoring criteria				
Evaluation Justification Statement				
In consideration of this particular requirement the Contracting Authority has decided to evaluate Potential Providers by adopting the weightings/scoring mechanism detailed within this ITQ. The Contracting Authority considers these weightings to be in line with existing best practice for a requirement of this type.				
Questionnaire	Q No.	Question subject	Maximum Marks	Weighting
Price	AW5.2	Price	100%	45%
Quality	PROJ1.4	Achievable delivery date	30%	55%
Quality	PROJ1.5	Number of electrical connectors	40%	
Quality	PROJ1.6	Space envelope	30%	

Evaluation of criteria

Non-Price elements

Each question will be judged on a score from 0 to 100, which shall be subjected to a multiplier to reflect the percentage of the evaluation criteria allocated to that question.

Where an evaluation criterion is worth 20% then the 0-100 score achieved will be multiplied by 20.

Example if a Bidder scores 60 from the available 100 points this will equate to 12% by using the following calculation: Score/Total Points available multiplied by 20 ($60/100 \times 20 = 12$)

Where an evaluation criterion is worth 10% then the 0-100 score achieved will be multiplied by 10.

Example if a Bidder scores 60 from the available 100 points this will equate to 6% by using the following calculation: Score/Total Points available multiplied by 10 ($60/100 \times 10 = 6$)

The same logic will be applied to groups of questions which equate to a single evaluation criterion.

The 0-100 score shall be based on (unless otherwise stated within the question):

0	The Question is not answered or the response is completely unacceptable.
10	Extremely poor response – they have completely missed the point of the question.
20	Very poor response and not wholly acceptable. Requires major revision to the response to make it acceptable. Only partially answers the requirement, with major deficiencies and little relevant detail proposed.
40	Poor response only partially satisfying the selection question requirements with deficiencies apparent. Some useful evidence provided but response falls well short of expectations. Low probability of being a capable supplier.
60	Response is acceptable but remains basic and could have been expanded upon. Response is sufficient but does not inspire.
80	Good response which describes their capabilities in detail which provides high levels of assurance consistent with a quality provider. The response includes a full description of techniques and measurements currently employed.
100	Response is exceptional and clearly demonstrates they are capable of meeting the requirement. No significant weaknesses noted. The response is compelling in its description of techniques and measurements currently employed, providing full assurance consistent with a quality provider.

All questions will be scored based on the above mechanism. Please be aware that the final score returned may be different as there may be multiple evaluators and their individual scores will be averaged (mean) to determine your final score.

Example

Evaluator 1 scored your bid as 60
Evaluator 2 scored your bid as 60
Evaluator 3 scored your bid as 40
Evaluator 4 scored your bid as 40
Your final score will $(60+60+40+40) \div 4 = 50$

Price elements will be judged on the following criteria.

The lowest price for a response which meets the pass criteria shall score 100.
All other bids shall be scored on a pro rata basis in relation to the lowest price. The score is

then subject to a multiplier to reflect the percentage value of the price criterion.

For example - Bid 1 £100,000 scores 100.

Bid 2 £120,000 differential of £20,000 or 20% remove 20% from price scores 80

Bid 3 £150,000 differential £50,000 remove 50% from price scores 50.

Bid 4 £175,000 differential £75,000 remove 75% from price scores 25.

Bid 5 £200,000 differential £100,000 remove 100% from price scores 0.

Bid 6 £300,000 differential £200,000 remove 100% from price scores 0.

Where the scoring criterion is worth 50% then the 0-100 score achieved will be multiplied by 50.

In the example if a supplier scores 80 from the available 100 points this will equate to 40% by using the following calculation: Score/Total Points multiplied by 50 ($80/100 \times 50 = 40$)

The lowest score possible is 0 even if the price submitted is more than 100% greater than the lowest price.

Once the evaluation process and due diligence is complete, should the result of the process result in a tied place(s) then the supplier(s) who scored the highest total in the Price criterion Table shall be considered the successful supplier and shall be awarded the opportunity.

Section 6 – Evaluation questionnaire

Bidders should note that the evaluation questionnaire is located within the **e-sourcing questionnaire**.

Guidance on completion of the questionnaire is available at <http://www.uksbs.co.uk/services/procure/Pages/supplier.aspx>

PLEASE NOTE THE QUESTIONS ARE NOT NUMBERED SEQUENTIALLY

Section 7 – General Information

What makes a good bid – some simple do's 😊

DO:

- 7.1 Do comply with Procurement document instructions. Failure to do so may lead to disqualification.
- 7.2 Do provide the Bid on time, and in the required format. Remember that the date/time given for a response is the last date that it can be accepted; we are legally bound to disqualify late submissions.
- 7.3 Do ensure you have read all the training materials to utilise e-sourcing tool prior to responding to this Bid. If you send your Bid by email or post it will be rejected.
- 7.4 Do use Microsoft Word, PowerPoint Excel 97-03 or compatible formats, or PDF unless agreed in writing by the Buyer. If you use another file format without our written permission we may reject your Bid.
- 7.5 Do ensure you utilise the Emptoris messaging system to raise any clarifications to our ITQ. You should note that typically we will release the answer to the question to all bidders and where we suspect the question contains confidential information we may modify the content of the question to protect the anonymity of the Bidder or their proposed solution
- 7.6 Do answer the question, it is not enough simply to cross-reference to a 'policy', web page or another part of your Bid, the evaluation team have limited time to assess bids and if they can't find the answer, they can't score it.
- 7.7 Do consider who your customer is and what they want – a generic answer does not necessarily meet every customer's needs.
- 7.8 Do reference your documents correctly, specifically where supporting documentation is requested e.g. referencing the question/s they apply to.
- 7.9 Do provide clear and concise contact details; telephone numbers, e-mails and fax details.
- 7.10 Do complete all questions in the questionnaire or we may reject your Bid.
- 7.11 Do check and recheck your Bid before dispatch.

What makes a good bid – some simple do not's 🙄

DO NOT

- 7.12 Do not cut and paste from a previous document and forget to change the previous details such as the previous buyer's name.
- 7.13 Do not attach 'glossy' brochures that have not been requested, they will not be read unless we have asked for them. Only send what has been requested and only send supplementary information if we have offered the opportunity so to do.
- 7.14 Do not share the Procurement documents, they are confidential and should not be shared with anyone without the Buyers written permission.
- 7.15 Do not seek to influence the procurement process by requesting meetings or contacting UK SBS or the Customer to discuss your Bid. If your Bid requires clarification the Buyer will contact you.
- 7.16 Do not contact any UK SBS staff or Customer staff without the Buyers written permission or we may reject your Bid.
- 7.17 Do not collude to fix or adjust the price or withdraw your Bid with another Party as we will reject your Bid.
- 7.18 Do not offer UK SBS or Customer staff any inducement or we will reject your Bid.
- 7.19 Do not seek changes to the Bid after responses have been submitted and the deadline for Bids to be submitted has passed.
- 7.20 Do not cross reference answers to external websites or other parts of your Bid, the cross references and website links will not be considered.
- 7.21 Do not exceed word counts, the additional words will not be considered.
- 7.22 Do not make your Bid conditional on acceptance of your own Terms of Contract, as your Bid will be rejected.

Some additional guidance notes

- 7.23 All enquiries with respect to access to the e-sourcing tool and problems with functionality within the tool may be submitted to Crown Commercial Service (previously Government Procurement Service), Telephone 0345 010 3503.
- 7.24 Bidders will be specifically advised where attachments are permissible to support a question response within the e-sourcing tool. Where they are not permissible any attachments submitted will not be considered.
- 7.25 Question numbering is not sequential and all questions which require submission are included in the Section 6 Evaluation Questionnaire.
- 7.26 Any Contract offered may not guarantee any volume of work or any exclusivity of supply.
- 7.27 We do not guarantee to award any Contract as a result of this procurement
- 7.28 All documents issued or received in relation to this procurement shall be the property of the Contracting Authority.
- 7.29 We can amend any part of the procurement documents at any time prior to the latest date / time Bids shall be submitted through Emptoris.
- 7.30 If you are a Consortium you must provide details of the Consortiums structure.
- 7.31 Bidders will be expected to comply with the Freedom of Information Act 2000 or your Bid will be rejected.
- 7.32 Bidders should note the Government's transparency agenda requires your Bid and any Contract entered into to be published on a designated, publicly searchable web site. By submitting a response to this ITQ Bidders are agreeing that their Bid and Contract may be made public
- 7.33 Your bid will be valid for 60 days or your Bid will be rejected.
- 7.34 Bidders may only amend the Contract terms if you can demonstrate there is a legal or statutory reason why you cannot accept them. If you request changes to the Contract and the Contracting Authority fail to accept your legal or statutory reason is reasonably justified we may reject your Bid.
- 7.35 We will let you know the outcome of your Bid evaluation and where requested will provide a written debrief of the relative strengths and weaknesses of your Bid.
- 7.36 If you fail mandatory pass / fail criteria we will reject your Bid.
- 7.37 Bidders are required to use IE8, IE9, Chrome or Firefox in order to access the functionality of the Emptoris e-sourcing tool.
- 7.38 Bidders should note that if they are successful with their proposal the Contracting Authority reserves the right to ask additional compliancy checks prior to the award of any Contract. In the event of a Bidder failing to meet one of the compliancy checks

the Contracting Authority may decline to proceed with the award of the Contract to the successful Bidder.

- 7.39 All timescales are set using a 24 hour clock and are based on British Summer Time or Greenwich Mean Time, depending on which applies at the point when Date and Time Bids shall be submitted through Emptoris.
- 7.40 All Central Government Departments and their Executive Agencies and Non Departmental Public Bodies are subject to control and reporting within Government. In particular, they report to the Cabinet Office and HM Treasury for all expenditure. Further, the Cabinet Office has a cross-Government role delivering overall Government policy on public procurement - including ensuring value for money and related aspects of good procurement practice.

For these purposes, the Contracting Authority may disclose within Government any of the Bidders documentation/information (including any that the Bidder considers to be confidential and/or commercially sensitive such as specific bid information) submitted by the Bidder to the Contracting Authority during this Procurement. The information will not be disclosed outside Government. Bidders taking part in this ITQ consent to these terms as part of the competition process.

- 7.41 From 2nd April 2014 the Government is introducing its new Government Security Classifications (GSC) classification scheme to replace the current Government Protective Marking System (GPMS). A key aspect of this is the reduction in the number of security classifications used. All Bidders are encouraged to make themselves aware of the changes and identify any potential impacts in their Bid, as the protective marking and applicable protection of any material passed to, or generated by, you during the procurement process or pursuant to any Contract awarded to you as a result of this tender process will be subject to the new GSC from 2nd April 2014. The link below to the Gov.uk website provides information on the new GSC:

<https://www.gov.uk/government/publications/government-security-classifications>

The Contracting Authority reserves the right to amend any security related term or condition of the draft contract accompanying this ITQ to reflect any changes introduced by the GSC. In particular where this ITQ is accompanied by any instructions on safeguarding classified information (e.g. a Security Aspects Letter) as a result of any changes stemming from the new GSC, whether in respect of the applicable protective marking scheme, specific protective markings given, the aspects to which any protective marking applies or otherwise. This may relate to the instructions on safeguarding classified information (e.g. a Security Aspects Letter) as they apply to the procurement as they apply to the procurement process and/or any contracts awarded to you as a result of the procurement process.

USEFUL INFORMATION LINKS

- [Emptoris Training Guide](#)
- [Emptoris e-sourcing tool](#)
- [Contracts Finder](#)
- [Tenders Electronic Daily](#)
- [Equalities Act introduction](#)
- [Bribery Act introduction](#)
- [Freedom of information Act](#)

Appendix A – Technical Data



APPENDIX A.docx

Appendix B – Project Aims



APPENDIX B.docx