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EXTERNAL REFERENCE / VERSION

## Technical Specifications (In-Cash Procurement)

### **Technical specification for WS1 electrical cherry picker**

Technical specification for the supply of an electrical cherry picker to be used in WS1 (B13/B17)

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# 1 Purpose

## 1.1 Background

ITER is a joint international research and development project aiming to demonstrate the scientific and technological feasibility of fusion power for peaceful purposes. The seven members of the ITER Organization are: The European Union (represented by EURATOM), Japan, the People's Republic of China, India, the Republic of Korea, the Russian Federation and the USA. Further information is available on the ITER website: <http://www.iter.org>. The ITER Organization is located in Saint Paul Lez Durance (13115) – France.

ITER construction activities have started on the ITER Site. To address the handling demand for activities in the Assembly Hall (B13) and to respect the increase of clean conditions, an electrical cherry picker is needed. The objective of this tendering is to implement a contract for the provision of a new electrical cherry picker and its yearly maintenance for 5 years.

## 1.2 Purpose

The purpose of this technical specification is:

- To provide the Contractor background information that is necessary to complete this project, e.g. the loads specification and work conditions of the e-cherry picker;
- To provide the technical requirements for the provision and maintenance of the e-cherry picker;
- To specify applicable norms and regulations that the Contractor shall have to respect in order to meet the requirements of the ITER Organization.

# 2 Scope

The scope of this contract is the provision of a new electrical cherry picker that shall include the following items:

- Designing, manufacturing, delivering, testing, and taking over at the ITER Organization the new e-cherry picker;
- Providing all necessary manuals and documentation required to operate and maintain the new e-cherry picker;
- Providing at least two years / 24 months warranty for the e-cherry picker after taking over date;
- Providing training for the staff of operation and maintenance;
- Providing back-up spares for regular maintenance during and after the warranty period;
- Maintain on a yearly basis the e-cherry picker.

### 3 Reference documents

- [1] ITER Site Master Plan [27X5FM](#);
- [2] CAD instructions for companies [9PNNM4](#);
- [3] Work authorisation procedure [7K66XB](#);
- [4] ITER Construction Site Access Procedure [S3893D](#);
- [5] Internal Regulations [27WDZW](#);
- [6] Alert procedure [7LB8NY](#);
- [7] Safety plan template – English and French [T76WJE](#);
- [8] Environmental requirements [97WRFP](#);
- [9] Environmental Respect Plan template [9FUP5C](#);
- [10] PGC SPS Vol 1 IO F4E [T6V4RP](#);
- [11] ITER Procurement Quality Requirements [22MFG4](#);
- [12] Cleanliness strategy [WW78E8](#).

### 4 Working Condition Description

#### 4.1 Introduction

The electrical cherry picker shall be used in the ITER Assembly Hall located on ITER site in Saint-Paul-lez-Durance. The e-cherry picker shall be required to be operational inside the Assembly Hall.

#### 4.2 Floor conditions

In the Assembly Hall, the floor is a clean and smooth painted concrete surface finished area with the minimum bearing capacity of 20t/m<sup>2</sup>. Inside the warehouses, the floors are concrete slabs.

#### 4.3 Load specifications

Three people shall fit in the basket of the e-cherry picker, e.g 400 kg. Indoor use.

### 5 Technical Requirements

#### 5.1 Cherry pickers Technical Requirements

The e-cherry picker shall be designed, manufactured & assembled to confirm in all respect to high standard of engineering, design, workmanship and be capable of performing handling operations under the work conditions described in Section 4.

All material used shall be new and of first quality and shall be duly supported with material test certificates from the original material manufacturer.

The e-cherry picker shall be able to manoeuvre within the constraints of B13, as such it shall be able to turn North next to SSAT 2\* without impacting the working area 4. Drawings of this area and space constraints are attached in appendix 1.

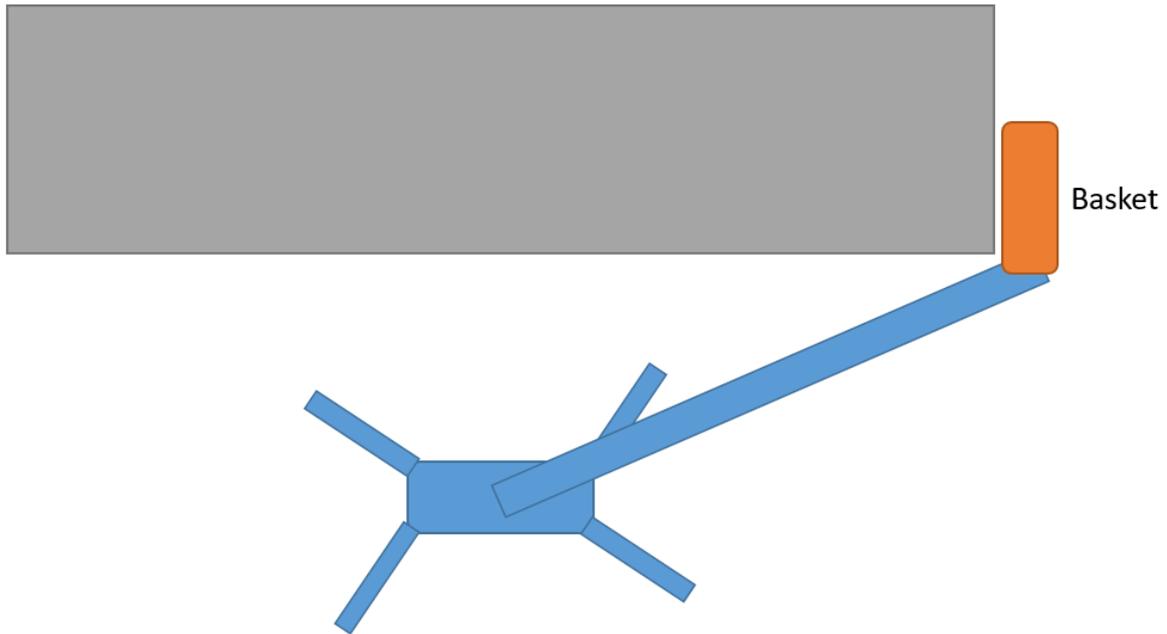
*\*SSAT: Sub-Sector Assembly Tool 2 located North of B13.*

Cherry picker type	Electrical elevating platform e-cherry Picker
Minimum reachable height of the working platform	36m
Minimum reachable outreach at maximum load	16m
First articulation point minimum reachable height	20m
Maximum Overall Length	6m
Load capacity in the basket	Minimum 400 kg, 3 operators
Dimensions basket	Minimum 2m by 0.80m
Safety features	<p>Compliant with EN 280-1:2022 applicable standard for mobile elevated work platform (MEWP) or equivalent</p> <p>For example, not limited to: high pitched horn, 2 emergency stop button in the basket and on the engine, SWL inscribed, 1 sound notification system anytime the cherry picker is moving, permanent rotating beacon or blinking.</p>

The e-cherry picker will be used fully electrical directly connected to the electrical network or using a battery (such as lithium). For a larger electrical motor, the preference is for a 63A connection, 100A is also possible but is considered not practical as this would have to be a fixed connection. The local electrical network, without extra provisions, has relative high requirements on leak currents. Standard protection is at 30 mA, type B residual current breaker. If this is not suitable for the e-cherry picker, the relevant information to correctly define protection of the network needs to be provided as early as possible (peak currents and duration).

The electrical drive should provide sufficient power for reasonable quick operation of the e-cherry picker. Experience with different cherry pickers is that with diesel engine the overall operation speed is not unreasonable, but electrically the operation speed is significantly reduced. The diesel engine is not needed and if limiting for placing a large electrical motor, the diesel engine can be removed.

With a specific configuration of its basket to be presented by the tenderer, the e-cherry picker shall be able to work on the side of a structure to minimize the number of movement / reconfiguration leading to time of operation.



To extend the working range, and unless the boom has an additional articulation before the basket, it is considered that the basket is mounted on the short side to be able to work along the side. As such the tenderer shall propose a basket optimizing this possibility and the related impact on the working load and cost of the e-cherry picker. With extra articulation, the relevant load curves shall be presented, giving the remaining load capacity at the basket.

The e-cherry picker will be used often in a horizontal plan at 15m and above. It is important to reach this position in a relatively quick duration. The target between ground floor and full height is less than 2 mns. It is considered that for this purpose, the primary boom is maintained upright and the descent is mainly done by the second boom. The contractor shall clarify how to best use the e-cherry picker in that sense to minimize travel time to the working level and what limitations the kinematics of the e-cherry picker impose.

Given the space constraints in which the e-cherry picker is used, the contractor shall provide the scheme indicating the space envelope required to set-up and unfold the e-cherry picker.

The wheel / track system and outrigger feet shall, as much as possible, not mark the floor.

The time needed to move from one workplace at height to another workplace at height shall be minimal, considering working range and moving the e-cherry picker.

## 5.2 Inspection and Test

The Contractor shall be responsible for the Quality assurance and Quality control for the e-cherry picker together with all accessories.

The Contractor shall generate Inspection and Test Plan (ITP) covering complete details of all required inspection and tests to be carried out at works at various stages along with final performance test procedure with guaranteed parameters for customer approval within five (5) weeks of placement of contract and shall obtain IO's approval. The Contractor shall prepare "Inspection & Test plan" for the equipment and sub-contractor items under his supply scope covering all required inspection and tests in line with the requirements specified in this technical

specification. Procurement and manufacturing activities shall only be taken up by the Contractor after approval of ITP from the IO.

The Contractor shall be responsible for carrying out all required inspection, and tests.

### **5.3 Maintenance**

The e-cherry picker shall be of a modular design to guarantee the best accessibility for the maintenance and service. Electronic and hydraulic lines shall be separated and well organized for easy check and maintenance. Lubrication points shall be centralized and easily accessible.

It is foreseen to use the e-cherry picker around 1000 running hours per year. The Contractor shall conduct at least one preventive maintenance visit per year. The contractor shall provide this maintenance on-site.

### **5.4 Delivery, Assembly & Commissioning**

The Contractor shall plan the delivery based on its own resources, including the safe transportation.

The commissioning of the e-cherry picker on site and training shall be carried out by personnel trained and authorised by the Contractor and follow up the ITER rules defined in Sections 6 and 7.

A step file of the e-cherry picker shall be delivered with the equipment to do access verification by the IO as part of the work preparation. If requested by the Contractor, a non-disclosure agreement can be established between both parties.

### **5.5 Taking over**

The e-cherry picker shall be accepted with a Taking over certificate where it is identifiable by its serial number, which specifies that the e-cherry picker fulfil these technical specifications with mention of reserves if any.

### **5.6 Training**

The Contractor shall provide operation and maintenance trainings at ITER site to IO's authorized logistics service provider and the material handling equipment fleet management contractor.

### **5.7 Warranty**

The e-cherry picker shall carry the manufacturer's warranty of 24 months or 2000 running hours whichever comes first after the taking over by the IO. A certificate shall be provided.

### **5.8 Spare Parts availability**

Spares parts for the e-cherry picker shall be available for the IO's procurement in the next ten years following the taking over certificate.

## **5.9 Documents**

### *5.9.1 Tendering documents*

The following documentation shall be provided (in soft copy in English language):

- Technical data sheets which proves that the e-cherry picker answers to these Technical specifications;
- List of sub-suppliers of components.

### *5.9.2 As built documents*

The following is the set of documentation to be supplied by the Contractor (in soft copy in English language), as per [2]:

- Two (2) sets of parts catalogue, including but not limited to Engine parts manual, Drive axle service manual, Transmission service manual, Electrical circuit drawings, Schematic diagrams for hydraulic systems;
- Two (2) sets of comprehensive cherry picker service and operation manual;
- Two (2) sets of comprehensive cherry picker repair and maintenance manual;
- Final product certificates and relevant CE certificates;
- Proof of training and content of the training;
- Start of the warranty certificate.

## **5.10 Norms and regulations**

The e-cherry picker shall be fully certified and CE marked. The work of the contractor shall be compliant with all relevant norms and regulations.

## **6 Site constrains**

### **6.1 Access plan of the ITER Site**

Access to the Assembly Hall B13 shall be made as per [1].

### **6.2 Operational hours**

The receiving hours are 8 am until 4 pm excluding bank holidays and weekends.

## **7 General conditions and information**

### **7.1 Safety**

The Contractor shall comply with the requirements of References [5], [6] and [10]. A safety plan shall be established by the Contractor prior to the start of the works, using the template given in reference [7]. All employees of the contractor who will work at the ITER site for 5 or more days shall be required to attend a “safety induction training” of about 2 hours to obtain access badges.

## 7.2 Environmental protection

The Contractor shall comply with environmental protection requirements and procedures applicable on the ITER site as given in references [8] and prepare an Environmental Respect Plan as per [9].

## 7.3 Access to the site

Access to the ITER site is subject to the requirements of reference [4].

## 7.4 Permit To Work

Prior to the start of any works on the ITER site, a Permit To Work must be submitted and approved in accordance with, reference [3].

## 7.5 Language

All formal communications with the ITER Organization shall be in English.

## 7.6 Quality Assurance

The Contractor should have an ISO 9001 accredited quality system or be able to provide and have approved by the IO a quality plan as per [11].

# 8 Deliverables

The following tentative schedule will apply for the provision of the e-cherry picker:

Deliverables	Due date
D1- Overall Works schedule to demonstrate the milestones, Quality Plan if necessary, Inspection and Test Plan (ITP)	T0+5 weeks
D2- Documentation required prior the commencement of the works, taking over certificate of the e-cherry picker	T0+6 months
D2- As-built documents, training certificate and start of the warranty certificate	T0+7 months

Note: T0 is the date of signature by the last signing Party of the Contract.

# 9 Acceptance Criteria

The acceptance criteria shall be the demonstration by the Contractor of compliance with all the requirements of this technical specification.

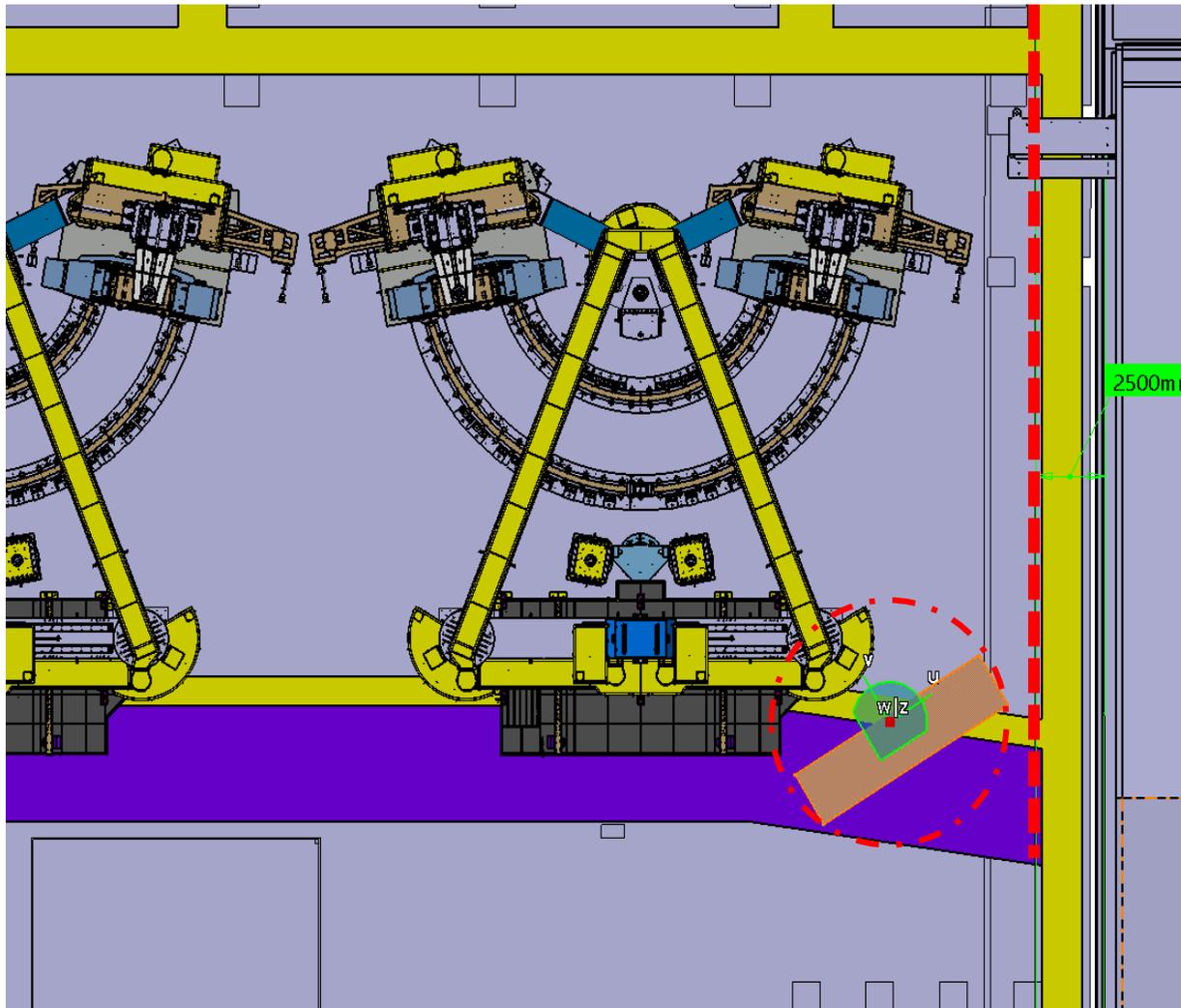
## **10 Work monitoring**

A kick-off meeting shall be convened at the IO site within 2 weeks following the signature by both parties under this contract.

The Contractor shall delegate a representative to be present on the IO site during the assembling and commissioning phase. Meetings are foreseen on a regular basis, which shall be agreed by the Contractor and the IO prior to the contract signature.

The Contractor shall hold at the disposal of the IO and make available to it such information and documentation as the IO deems necessary to determine the progress, quality and status of the work. All documentation to be delivered to the IO must be in English using Microsoft office standards or Adobe PDF. The Contractor shall ensure that all documents, records and software are uniquely identified and traceable.

## 11 Appendix 1: space constraints around SSAT2 B13 North



Local rotation without translation feasible

