



Market consultation

5 manipulators for use in existing hot-cells

on behalf of

**Nuclear Research and consultancy Group
(NRG)**

1 Preface

1.1 Introduction

This is the market consultation for the purpose of obtaining information as input for an European tender. The European tender concerns contracting one supplier for the delivery of 5 manipulators for use in the hot-cells of NRG in Petten, the Netherlands.

For operators to work safely and radiation-free mechanical master-slave manipulators are used. The manipulators consist out of three parts, the master arm located at the outside of the cell or “cold side”, a trough-wall tube that runs through the shielding wall and providing the necessary radiation shielding, but also allowing the transfer of operating forces to the third part; the slave arm. The slave arm is located inside the hot cell where it is used to handle the radioactive materials.

NRG carries out his market consultation as preparation for putting together the detailed specifications for the tender. The Procurement department at NRG will guide the procedure and will function as contact point during the market consultation.

1.2 Purpose market consultation

Before proceeding with the preparation of a tender, NRG would like to consult the market on how this tender (in broad lines) can best be structured. Within the scope of the market consultation, advice is sought to gain insight into the market potential for the delivery of manipulators mentioned.

NRG has opted for an open consultation; i.e. this market consultation is published at TenderNed. In addition NRG will select parties with whom it wishes to conduct this market consultation. These are parties that, in the opinion of NRG, have knowledge of and experience with similar solutions as those required by NRG. NRG is only interested in parties who are able to build and maintain manipulators. NRG is not interested in consulting or engineering companies who do not have the capabilities to build and maintain manipulators.

The results of this market consultation may be processed in the tender documents, without traceability to participants.

1.3 Conduct of the market consultation

NRG has published a prior information notice on May 13th, 2020 of the tender procedure ‘5 manipulators for use in existing hot-cells’ on TenderNed with the aim of informing market parties as early as possible and obtain information from the potential candidates. Parties will have the opportunity to download documentation.

Interested parties need to answer the questions in Chapter two on June 3rd, 2020 at the latest by use of the attached form – annex 1. The filled in form can be send to the following contact person:

Mr. Daan Cruijff

E-mail: cruijff@nrg.eu

under reference: Market consultation manipulators

Based on the received answers NRG can contact parties for more information. If we consider more information meaningful, NRG will contact you and send you an invitation. The answers (if relevant) can furthermore be used in the preparation of the tender.

NRG will publish a general summary of the findings of the market consultation. This summary will be in line with paragraph 3.5 of this market consultation and will contain no information which is confidential. Also all the findings will be generally described with no direct link to the company who provided this information.

1.4 Schedule

Description/phase	Date
Prior information notice via TenderNed	May 13 th , 2020
Last day and time to submit questions	May 27 th , 2020
Response to submitted questions	May 29 th , 2020
Last day and time to submit reaction on market consultation	June 3 rd , 2020
Indication of the date when tender starts	From June 24 th , 2020

1.5 Nuclear Research and consultancy Group (NRG)

NRG is an internationally operating nuclear service provider. The company produces isotopes, conducts nuclear technological research, is a consultant on the safety and reliability of nuclear installations and provides services related to radiation protection. Research is performed for governments aimed at developing knowledge about nuclear technology.

NRG is a world market leader in the production of medical isotopes. In the Netherlands, NRG is the leading authority on integral radiation protection. NRG operates the High Flux Reactor owned by the European Union.

The company has around 600 world-class employees with high quality know-how and works for and with partners in healthcare, the energy market, industry, government and science

More information on NRG can be found on <http://www.nrg.eu/>.

2 Brief outline concerning the delivery/services

2.1 main principles

NRG wants to conclude a contract for the delivery and possibly maintenance services for 5 manipulators for use in a hot cell at NRG in Petten, Netherlands. The intended hot-cell is an existing hot cell with two lead glass windows on the front side. At both sides of the lead glass windows manipulators are placed. The lead glass windows, together with the manipulators makes it possible for the operators to perform their practices. The current manipulators are outdated and need to be replaced.

For this market consultation the following framework is set out:

1. It is required that the manipulators will have a combined reach with a pair of manipulators of at least a cube of dimensions 2000 x 1400 x 1512 mm [WxDxH] measured from the bottom of the innerbox (see annex 2) and capable of lifting min. 7,5 kilograms upright at any given position;
2. The new manipulators need to be installed using the existing through-wall tube in the cell (annex 3);
3. The manipulators must be able to be installed taking into account the installation space available on the front side of the hot cell , see annex 4;
4. The manipulators must be able to be installed taking into account the installation height of the manipulator, meaning the dimension between operator floor and center of trough-wall tube (annex 4);
5. The manipulator should be able to operate in the cell given the dimension from through-wall tube center to ceiling of the inner box given in annex 2;
6. Delivery and installation within 12 months after order date;
7. The manipulators are existing products and do not need a development processes. Small changes for customization purpose are acceptable. The manipulators are to be of “proven technology” in other words;

2.2 Questions

NRG would like to gain better insight into the delivery options from the market in relation to the boundary conditions set with the framework stated under paragraph 2.1. The obtained insights must lead to a tender matched to the capabilities and expertise of the market.

The main objective is:

NRG would like to know if the framework mentioned in 2.1 is realistic and feasible and in line with the market supply and possibilities.

Several consultation questions are distilled from this main question:

1. Can your company provide a manipulator that fits the boundary conditions as set out in the framework provided in 2.1? If yes, please provide production and product performance information. Furthermore, make mention of at least:
 - a) the time needed to disassemble for maintenance;
 - b) how many sections the manipulator is composed of for installation purposes;

- c) availability and lead time of bootings;
 - d) capacity in kilograms; (both tong and load hook)
 - e) seal tube (installation) dimensions
 - f) installation height
 - g) minimum and maximum slave arm extension
2. Are there other innovative and/or alternative solutions that your company can provide, but are not requested with this consultation? Please elaborate, if yes.

Information and data must be submitted using the Standard Form found in annex 1.

3. Administrative conditions

The basic principles and preconditions mentioned below apply to this market consultation

3.1 Approval market consultation

Participation in this market consultation constitutes the Parties' unconditional approval of the procedure as stated in this document.

3.2 Validity participation

This market consultation exclusively intended for interested parties from whom it is likely that they will participate in the tender. NRG reserves the right to exclude interested parties that evidently fall outside this target market from this market consultation.

If market Parties are not joining this market consultation, although they are able to deliver such products, they are kindly requested to forward this information to the NRG contact person named in section 1.3.

3.3 Equal information

This market consultation is solely intended to obtain information from potential candidates/ interested parties. This market consultation is not meant to provide potential candidates/ interested parties with information and data. All participants receive the same information, that is, present market consultation and appendixes. If additional information is provided during this market consultation, that information will be provided in writing to all interested parties via Tendered (as an appendix to this document). This market consultation and appendixes and the anonymized general summary of the findings of the market consultation will be part of the tender documents.

3.4 Absence of rights

This market consultation document was written in the context of the market consultation for the manipulators. This document may not be regarded as a call to submit a tender or the invitation for which this market consultation serves as preparation or any other call for tender. NRG is free to temporarily or definitely discontinue the process of the market consultation and/or the tender procedure.

The participating parties will not receive any reimbursement for costs incurred. Participation in this market consultation is entirely without obligation. The participating parties may not claim preferential treatment in the tender procedure either.

This market consultation contains merely provisional data and therefore parties cannot derive any rights from this information. In the context of the market consultation, information provided may differ from the information that will be provided in the tender procedure;

3.5 Confidentiality

Given the type and scope of this market consultation and the subsequent tender all information given in during the market consultation is public, in the sense that:

- NRG is entitled to use this information in the preparation for putting together the detailed specifications and the tender and in discussions prior to the publication of the tender;

- This information can be used in a general, anonymized summary of the findings of the market consultation which will be published in the tender documents unless the potential candidate has explicitly stated that its information is not to be disclosed.

3.6 General Summary

NRG will publish a general summary of the findings after the market consultation.

Annex 1. Standard Form

This form will be added separately to the folder 'tender documents' as a Word-document

Company data	
Official name and legal form	
Registered office	
Visiting address	
Postal code and place	
Mail address	
Postal code and place	
Country of residence	
Contact person	
Position contact person	
Phone number	
E-mail address	
Website	
Remarks and / or particulars.	

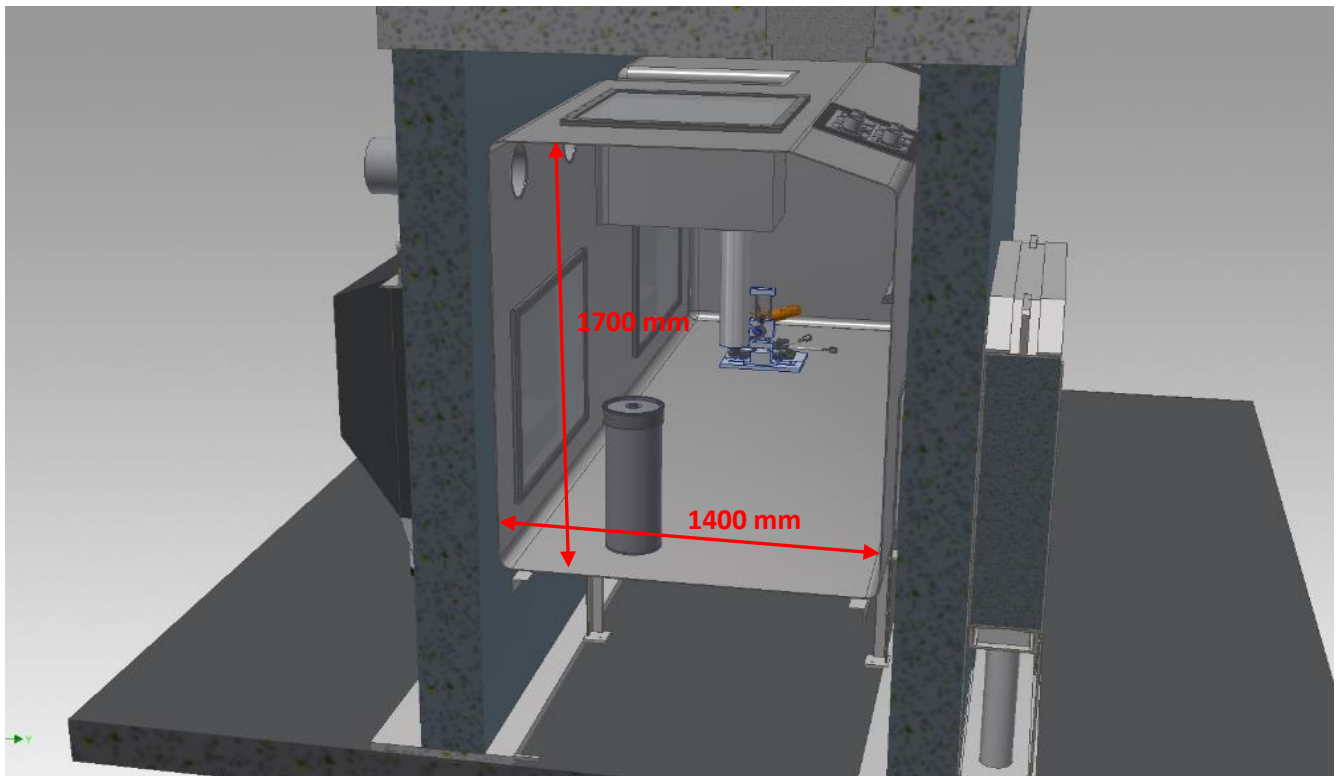
1. Can your company provide a manipulator that fits the boundary conditions as set out in the framework provided in 2.1? if yes, please provide production and product performance information:

Full model name	Model 1	Model 2	Model 3	Etc.
Load capacity [kg]	...	...	...	
Load capacity using load hook[kg]	...	...		
Number of sections	...			
Seal tube diameter [mm] (min-max)				
Seal tube length [mm] (min-max)				
Slave arm length [mm] (min-max)				
Master arm length [mm] (min-max)				
Installation height [mm] (min-max)				
Supply time booting				
Supply time manipulator				
Manipulator total weight [kg]				

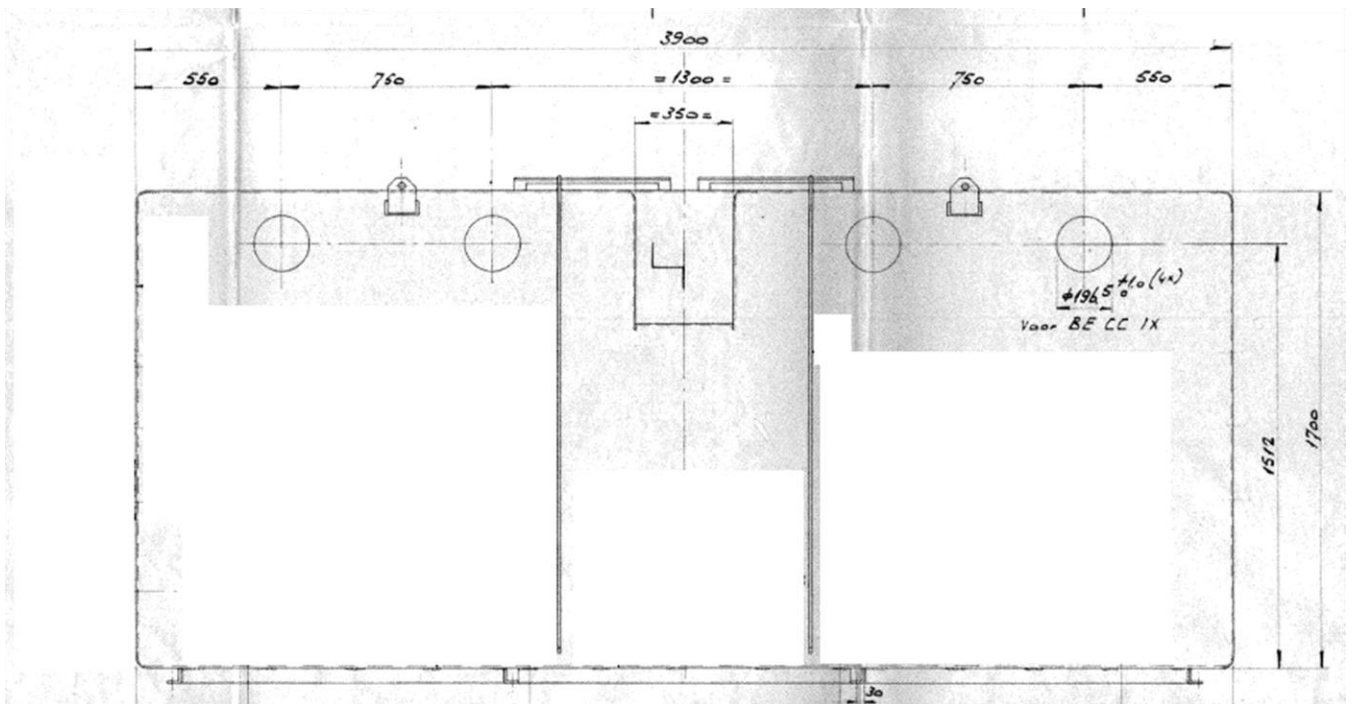
2. Are there other innovative and/or alternative solutions that your company can provide, but are not requested with this consultation? Please elaborate, if yes.

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Annex 2. Manipulator sizing **inside** the hot-cell

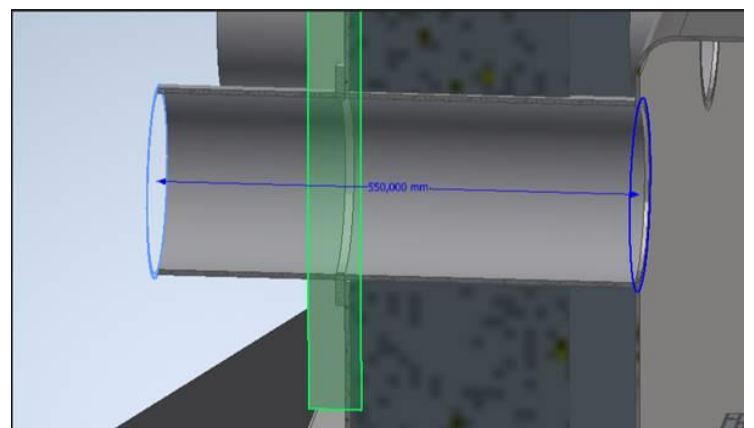
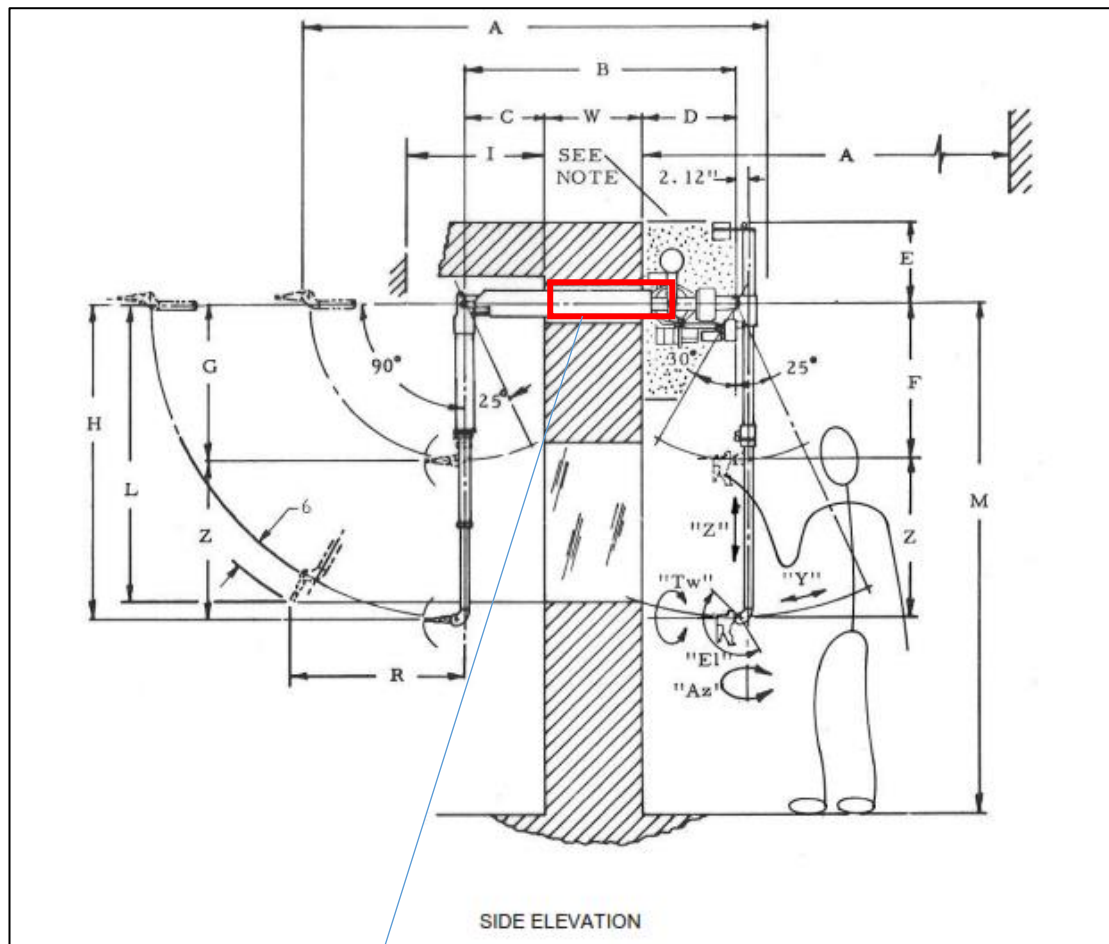


Cell inner box relevant sizing for manipulators



Front view of cell inner box incl. manipulator trough-wall tube positions

Annex 3. Through-wall tube sizing



Existing manipulator tube-sleeve sizing hot-cell:

Ø204 x 6 mm

Length 550 mm

*Source: CRL

Annex 4. Manipulator sizing limits outside hot-cell



