

RFQ NNK0929478Q
Cryogenic Vacuum Jacketed Pipe Spools
Questions and Answers

Question 1:

What is the maximum allowable spool length?

Answer 1:

The maximum spool length is **forty (40) foot lengths with a maximum variance of +/- ten (10) feet**. Each bidder should utilize the same number of spools to be fabricated / delivered to KSC as the number of pump out ports specified per isometric drawing.

Question 2:

The drawings in figures 1 thru 9 are not dimensioned, how do we determine spool configuration lengths?

Answer 2:

The intent is for the vendor to bid a fixed price using the isometric figures and material tables within the SOW, which show the maximum pipe length and the maximum number of fittings based on the current planned routing corridors. Isometric drawings with preliminary spool-out and support locations will be provided to winning vendor at contract award. Final shop drawing review will approve all final precise lengths between fittings and ending (termination) points. No cost change adjustment requests for any final approved shop drawings within these maximum pipe lengths and specified number of fittings will be considered. See statement of work section 3.1 "General" and section 3.2.2.2 for further information

Question 3:

Pipe specifications 732FPC00018 & 729FPC00009 mention bayonets and field joints; however neither is specified on the figure 1 thru 9 isometric drawings. Are we free to pick where to use each based on design pressures?

Answer 3:

No, use of bayonets and standard ASME flange joints are as called out in table for bid purposes. We have updated the SOW figures to point to the end locations of the bolted field joints. All intermediate connections will be welded. Field weld joints will be approved with final shop drawing reviews and all field joint hardware supplied by this contract, however, the field assembly and weld joint is by others in next phase contract (Not in scope of this contract to install and make field connection). See Statement of Work section 3.1 "General" for further information.

Revised figures 1-9 can be found attached to these questions and answers.

Question 4:

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Is the contractor responsible for taking field dimensions of the piping or will **the contractor** receive drawings to use to develop **the** fabrication drawings?

Answer 4:

No, **isometric** drawings showing detail dimensions and preliminary spool-out will be provided by contract award. The final exact fabrication dimensions will be per agreements at the 90% shop drawing review. The dimensions will be based on integrated CAD models of the ML under construction to be provided by NASA and its support subcontractors. See Statement of Work section 3.1 "General" for further information.

Question 5:

Our company normally ships vacuum jacketed pipe on dedicated flat bed trucks. The pipe is saddled and secured to the bed but not in separate crates or containers. Would that be acceptable? (Any shipment made by motor freight would be containerized).

Answer 5:

The following is a clarification of the Packing requirement identified in section 5.2 of the Statement of Work:

The vendor shall package each vacuum jacketed pipe section containing an end connector or pump out port appurtenance , etc within a hard sided container (at a minimum wood construction), using standard commercial practice at the specific end connection or appurtenance. Entire pipe section length must also be protected against damage using isolation / separation means between segments during shipment. Shipping containers shall conform to freight classification rules and applicable container specifications. The vendor shipping and protection plan must be submitted to NASA for review and approval by the 90% shop drawing review.

Question 6:

The government has referenced drawing numbers 242F1800006 Isometric Drawing LH2 System, Mobile Launcher and 242F1800008 Isometric Drawing LO2 System, Mobile Launcher however these have not been provided in the bid package. Can these drawings be provided?

Answer 6:

Isometric drawings showing detail dimensions and preliminary spool-out will be provided by contract award. Use the material tables and figures of the SOW for bid purposes **have been previously addressed in question 2.**

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Question 7:

Can you please provide us with a bill of materials required for the completion of the project so that we may effectively fit your needs? The documents provided on the FBO site did not appear to provide a definitive listing of specs for the pipe, tubing and fittings

Answer 7:

The material table along with isometrics within the pipe SOW provides the basis for the estimate. The required specifications are either referenced or written within the pipe technical specification. The official final Bill of Material will be part of the final shop drawing approval cycle submitted by the contractor.
