



Statement of Work (SOW) for BSC installation tooling 5-axis tables

The following documents are incorporated into and made a part this purchase order. Click on the following LIGO Document Control Center (DCC) links to access these documents or go on line to the LIGO Public DCC at <https://dcc.ligo.org/> to access the DCC#.

1.0 Terms:

<u>DCC #</u>	<u>Description</u>
C080185-v1	Laser Interferometer Gravitational Wave Observatory (LIGO) Commercial Items or Services Contract General Provisions California Institute of Technology “Institute”, LIGO Rev 11/12/08
F0810001-v4	Technical Direction Memorandum.

2.0 Quality Control:

<u>DCC #</u>	<u>Description</u>
Q0900001-v4	Advanced LIGO Supplier Quality Requirements, dated 2/10/10, describes following contractor/supplier QA/QC actions for this procurement:
<input type="checkbox"/> 3.1 Pre-Award Inspection	<input checked="" type="checkbox"/> 3.9 Discrepant Material Storage
<input checked="" type="checkbox"/> 3.2 Supplier In Process Quality Control	<input checked="" type="checkbox"/> 3.10 Quality Records
<input checked="" type="checkbox"/> 3.3 In Process Inspection	<input type="checkbox"/> 3.11 Drawing and Specification Change Control
<input checked="" type="checkbox"/> 3.4 Pre-Ship Inspection	<input checked="" type="checkbox"/> 3.12 Welding Certification
<input checked="" type="checkbox"/> 3.5 Receiving Inspection	<input checked="" type="checkbox"/> 3.13 End Item Data Package (including Certifications of Compliance)
<input checked="" type="checkbox"/> 3.6 Discrepant Material	<input checked="" type="checkbox"/> 4.1 Design Verification
<input checked="" type="checkbox"/> 3.7 Material Review Action	<input checked="" type="checkbox"/> 4.2 Raw Material Procurement
<input checked="" type="checkbox"/> 3.8 Material Review Actions at Contractor	<input checked="" type="checkbox"/> 4.3 Traceability of Materials
	<input checked="" type="checkbox"/> 4.4 Calibration Program
	<input type="checkbox"/> 4.5 Critical Interface
	<input checked="" type="checkbox"/> 4.6 Cleanliness
	<input checked="" type="checkbox"/> 4.7 Packaging
	<input checked="" type="checkbox"/> 4.8 Storage
	<input checked="" type="checkbox"/> 4.9 Transport
	<input type="checkbox"/> 4.10 Customs

For the above list the Supplier shall: 1) Identify the corresponding sections/paragraphs in their existing QA/QC system 2) meet or exceed the design requirements contained in the attached engineering documents for each area called out.

3.0 End Item Data Package:

At the time of delivery of the parts, the Supplier shall also provide the following data, as a minimum:

- o Any as-built modifications (with approval of the LIGO Contracting Officer) as mark-ups to the drawings
- o Material certifications
- o Dimensional & QC inspection reports—this shall include a report showing that parts have been inspected and fall within specified tolerances.
- o Certificate or statement of compliance with all contract and drawing process restrictions.

4.0 Included Documents:

The drawings are included in a single pdf under D1000587-v3. The Bill of materials (BOM) is part of D060145 (It is on both sheet 1 & 2 of D060145.) D060145 is part of D1000587-v3. The BOM lists all of the machined parts and hardware that is required to assemble one table. It should be noted that: -

* A couple of drawings are not included in the BOM but are part of the package.

* Several modifications have been added to the combined set of drawings as per D1000587-v3.

These should all be included as part of the quote.

In addition to the drawings, at the time of award the contractor will be provided with the available CAD solid models for of the parts (SolidWorks Professional 2009, SP5.0)

5.0 Scope:

This SOW is for the fabrication and complete assembly of five 5-axis installation tables, the parts included in D1000587-v2 and all of the hardware listed. Please also include the assembly as part of the quote. At the time of assembly support will be provided from Caltech for the first assembly. A photograph of a completed 5-axis installation table has been included as part of the package, D1000587-v3. It should be noted that **the cart** shown in the picture on page 1 of D1000587-v3 **is not** part of this procurement.

6.0 Quantity Required:

We require five assembled 5-axis installation tables as per [LIGO-D1000587-v3](#).

7.0 Delivery Requirements:

The deliveries are FOB at these destinations, i.e. the contractor has responsibility for shipping title and control of goods until they are delivered and the transportation has been completed. The contractor selects the carrier and is responsible for the risk of transportation and for filing claims for loss or damage.

These items will be shipped to:

LIGO Laboratory , California Institute of Technology

Attn: Kurt Buckland

391 South Holliston Avenue

California Institute of Technology

Mail Stop #18-34 Pasadena, CA 91125 USA

Shipping Containers:

The contractor is responsible for providing shipping containers and transportation which protects these parts from damage from the transportation environment (weather, handling, accidents, etc.). Mating edges of parts should be especially protected from damage during shipping.

8.0 Delivery Schedule

We require all five tables within 14 weeks ARO.

9.0 Manufacturing:

The contractor should refer to Metal components intended for use in the Adv LIGO Vacuum System LIGO-[E0900364-v2](#). It should be noted that D050446, D050447, D050448, D050449 and D050450 should all be Blanchard ground and then nickel plated, refer to E0900364-v2.