



Statement of Work (SOW) for D1002424 Vibration Absorber parts

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 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.

LIGO prefers to utilize the vendors existing QA/QC programs to the fullest extent possible consistent with the LIGO QA and QC requirements. All bidders are requested to submit a written description/plan of their existing QA/QC system with their quotes. The bidder must also submit QA/QC plans for managing subcontractor work and materials.

In the event that a prospective contractor lacks an existing quality system, the contractor/vendor shall develop and implement a quality assurance program in compliance with requirements negotiated at contract/PO award.

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:

- Any as-built modifications (with approval of the LIGO Contracting Officer) as mark-ups to the drawings
- Material certifications
- Dimensional & QC inspection reports—this shall include a report showing that the first, last and 10% of the parts have been inspected and fall within specified tolerances, including surface finish.
- Certificate or statement of compliance with all contract and drawing process restrictions.

4.0 Included Documents:

In addition to the specifications listed below, all part drawings, with required quantities, are included in a single pdf file under [D1002537-v1](#).

In addition to the drawings, the contractor will be provided with CAD solid models of the parts (SolidWorks Professional 2010).

<u>DCC #</u>	<u>Description</u>
E0900364-v5	Metal components intended for use in the AdvLIGO Vacuum System

5.0 Scope:

This SOW is for the fabrication of all the parts required to build 164 D1002424 Vibration Absorber assemblies and an assortment of clamps/brackets for various structures.

6.0 Quantity Required:

See D1002537-v1 in section 4.0

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.

Shipping Location:

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 Manufacturing:

Parts shall be marked per drawing notes and manufactured in accordance with:
E0900364 Metal components intended for use in the AdvLIGO Vacuum System (see E0900364 in section 4.0)

8.1 If there is a conflict between the SOW and the drawing, the drawing has precedence. The parts are to be produced using the CAD models which will be provided to the contractor upon award. If there are discrepancies between the drawings and the CAD model, the model takes precedence.

9.0 Delivery Schedule:

All parts to be delivered within 8 weeks ARO.