

INCH-POUND

A-A-59721

25 March 2004

COMMERCIAL ITEM DESCRIPTION

LOAD BANK, ELECTRICAL

The General Services Administration has authorized the use of this commercial item description, for all federal agencies.

1. SCOPE

1.1 Scope. This Commercial Item Description (CID) describes an alternating current (AC) lightweight, suitcase size, and portable type load bank. The commercially available load bank shall be suitable for electrical performance testing of ground power generators.

2. SALIENT CHARACTERISTICS

2.1 Safety and Environmental. The equipment shall meet all safety and environmental requirements as specified in MIL-PRF-28800 for Class 2 equipment, except as stated herein.

2.2 Electrical Power Sources. All operating power for internal circuits of the suitcase size load bank shall be derived from the output power of the source being tested.

2.3 Operating Temperature. The equipment shall meet its performance and accuracy requirements in an operating environment of -40 degrees F to +125 degrees F.

2.4 Non-operating Temperature. The equipment shall meet its performance and accuracy requirements after being in a non-operating environment (Storage Temperature) of -60 degrees F to +160 degrees F.

2.5 Mean Time Between Failures. (MTBF). The equipment Mean Time Between Failures (MTBF) shall be 2,000 hours. The lower test MTBF shall be 2,000 hours and the upper test MTBF shall be 4,000 hours.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: WR-ALC/TILCC, 420 Second Street, Suite 100, Robins AFB, GA 31098-1640

AMSC N/A

FSC 6150

A-A-59721

2.6 Calibration and Maintenance Adjustments. The design of the system shall provide for readily accessible calibration adjustments and maintenance adjustments. The calibration adjustments, wherever possible, shall be accessible without removal of the instrument case or modules. These adjustments shall be provided by variable value components, which are adjustable, by the use of simple means. The calibration by substitution of selected components or parts is unacceptable unless specifically approved. The calibration interval shall be a period of one year or greater based on an operating time of 2,000 hours.

2.7 Resistive Load Testing.

2.7.1 The suitcase size load bank shall be capable of resistive load testing of ground power generator sets producing 115/200 volt AC (+/-5%), 3 phase, and 400 Hz power.

2.7.2 The load bank shall have a minimum load test rating of 90 kW, 1.0 power factor, 250 amps, and 200 volts at 400Hz.

2.7.3 The load bank shall have the capability for step loading. Step loading shall be available to reach load values from 20 kW to 75kW (+/- 5kW).

2.7.4 The load bank shall be capable of a continuous run at full load for up to an hour. The load bank will be capable of cool down within 5 minutes, under no load conditions, and be capable of performing multiple back to back full loads without damage to components.

2.7.5 The load bank shall have the capability to simulate the 28 VDC interlock control circuit found on some aircraft. This circuit shall be testable through the E and F pins of the output power cable of the ground power generator set when plugged into the male receptacle of the load bank. The load bank shall be able to receive the 28 VDC signal from the Ground Power Unit (GPU) and send a 28 VDC signal back to the GPU to complete the Interlock Circuit. The load bank shall not be sensitive to the polarity of the DC current in the E and F loop. The Interlock Circuit shall be able to be bypassed by the use of a switch.

2.7.6 The load bank control panel shall have as a minimum have the following: AC Voltmeter 0 - 250 volts, AC Ammeter 0 - 300 amps, Frequency Meter 360 - 440 Hz, meter selector switch to read all three (A, B, C) phases, load step controls, phase indicator lamps, E and F Interlock indicator, E and F interlock circuit controls, phase rotation lamps (ABC and CBA), 28 volt DC interlock circuit cable pin, and a male power receptacle to connect the ground power generator cable head.

2.7.7 The load bank shall come equipped with a carrying case (suitcase). This suitcase shall have rollers or wheels of which two are stationary (non-swivel) at one end of the case, two wheels at opposite end of the case swivel type.

2.7.8 The nominal dimensions for the load bank shall be no larger than 22" length, 10" width, and 23" height without the carrying case.

2.7.9 The weight of the load bank shall not exceed 75 lb. without the carrying case.

2.7.10 Load elements shall be adequately protected with circuit breakers, fuses, or thermal switches.

2.7.11 The load bank shall be constructed to withstand the jars, vibrations, and other conditions incident to shipping, storage, and operation.

2.7.12 The load bank shall be provided with a minimum 1 year standard manufacturer's warranty that includes warranty information on parts, labor, shipping costs, and how to obtain warranty performance.

3. REGULATORY REQUIREMENTS.

3.1 Recycled recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

4. PRODUCT CONFORMANCE PROVISIONS.

4.1 Product Conformance. The products provided shall meet the salient characteristics of this PD, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and is the same product offered for sale in the commercial market. The government reserves the right to require proof of such conformance.

4.2 Responsibility of Inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection, examination, and test requirements specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own facilities or any other facilities suitable for the inspection requirements specified herein, unless disapproved by the government. The government reserves the right to set forth in this description where such inspections, examinations and tests are deemed necessary to assure supplies and services conform to prescribed requirements.

4.3 Examination. Each load bank shall be visually examined to determine conformance with all requirements of this description.

4.4 Operational Test. Each load bank shall be operated, after complete assembly and prior to shipment, to ensure all moving parts are functioning according to the manufacturer's requirements.

5. PACKAGING.

5.1 Packaging. Preservation, Packaging, Labeling, and Marking shall be as specified in the contract or order.

A-A-59721

6. NOTES.

MIL-PRF-28800 Test Equipment for use with Electrical and Electronic
Equipment, General Specification for

Unless otherwise indicated, copies of federal and military specifications, standards and handbooks are available from the standardization document order desk, 700 Robins Ave. Bldg. No. 4, Section D, Philadelphia, PA. 19111-5094. Phone (215) 697-2179. Other phone extensions at above No. 0158,0159,0162,2667.

MILITARY INTEREST:

Custodian:
Air Force – 99

Preparing Activity:
Air Force – 84

Agent:
Air Force – 99

(Project No. 6150-0325)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at www.dodssp.daps.mil.