

INCH-POUND

A-A-50696C

22 February 2016

SUPERSEDING

A-A-50696B

7 October 2014

COMMERCIAL ITEM DESCRIPTION**REELS, STATIC DISCHARGE, GROUNDING, 50, 75,
AND 100 FOOT CABLE LENGTHS**

The General Services Administration has authorized the use of this
Commercial Item Description for all federal agencies.

1. **SCOPE.** This Commercial Item Description (CID) describes industrial type static discharge reels with either 50, 75, or 100 foot cable lengths (fully extracted) used to dispel static charges from ground support equipment.

2. **CLASSIFICATION.**

2.1 The static discharge reels are classified as follows:

Type	Description
I	Large (75 foot cable)
II	Small (50 foot cable)
III	Extra Large (100 foot cable)

Comments, suggestions, or questions on this document should be addressed to: AFLCMC/WNZE, Robins AFB GA 31098-1813 or emailed to SPEC99@us.af.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.dla.mil>.

AMSC N/A

FSC 4930

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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3. STATIC DISCHARGE REELS DESCRIPTION

3.1 Environmental, Safety, and Occupational Health (ESOH).

3.1.1 Hazardous Material. The design shall minimize and control hazards associated with the inclusion or use of hazardous or toxic materials and the generation of toxic or noxious gases. The static discharge reels shall not generate or use Class I or Class II Ozone Depleting Substances (ODS) during operation, maintenance, or disposal. Class I ODS and controlled substances identified in AFI 32-7086 (Hazardous Materials Management) shall not be used in any system, component, or process. The static discharge reels shall not contain or use either hexavalent chromium or cadmium without written approval by the procuring activity.

3.1.2 Component Protection. All space in which work is performed during operation, service, and maintenance shall be free of hazardous protrusions, sharp edges, or other features which may cause injury to personnel. All rotating and reciprocating parts and all parts subject to high operational temperatures or subject to being electrically energized, that are of such nature or so located as to be hazardous to personnel, shall be guarded or insulated to eliminate the hazard. All wires, cables, tubes, and hoses shall be supported and protected to minimize chafing and abrasion and shall be located so as to provide adequate clearance from moving parts and high operational temperatures. Grommets shall be provided wherever wires, cables, tubes, or hoses pass through bulkheads, partitions, or structural members.

3.1.3 Foreign Object Damage. All loose metal parts, such as pins or connector covers, shall be securely attached to the static discharge reels with wire ropes or chains. "Dog tag" style beaded chains shall not be used. Removable panels, if provided, shall be attached with captive fasteners.

3.2 Metals. Those metals used shall possess low resistivity. Metals other than those specified shall be corrosion resistant or treated to resist corrosion throughout the life of the unit due to contact with fuels, salt spray, or the following atmospheric conditions:

- a. Storage temperatures of -80 degrees F to +160 degrees F.
- b. Operational Temperatures between -65 degrees F and +125 degrees F.
- c. A relative humidity of 95 \pm 5 percent.
- d. Airborne dust and sand particles encountered in desert operation.

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3.3 Fungus-proof materials. Materials which are not nutrients for fungi shall be used to the greatest practical extent. Where materials that are nutrients for fungi must be used, such materials shall be treated with a fungicidal agent commercially acceptable and compatible with those materials on which it is to be applied.

3.4 Dissimilar metals. Unless protected against electrolytic corrosion, dissimilar metals shall not be used in intimate contact with each other in accordance with MIL-STD-889 (Dissimilar Metals).

3.5 Construction. The reel trough shall be of such size to contain the entire cable lengths as specified herein when in the fully retracted position. When bolted to an appropriate fixture, the reel and base shall be so constructed as to be capable of withstanding a static load of 150 pounds applied at the cable free end grounding device or cable free end when grounding device is not installed.

3.6 Workmanship. The static discharge reels, including all parts and accessories, shall be constructed and finished in a thoroughly workmanlike manner. Workmanship objectives shall include freedom from blemishes, defects, burrs and sharp corners and edges; accuracy of dimensions, surface finish, and radii of fillets; thoroughness of welding, painting, and riveting; marking of parts and assemblies; and proper alignment of parts and tightness of assembly fasteners.

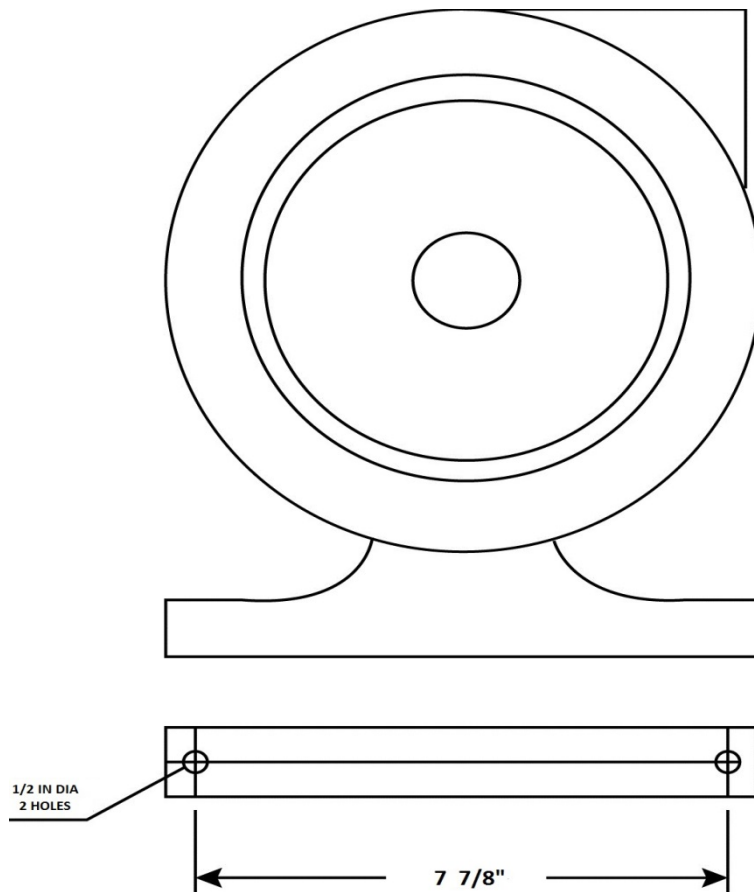
3.7 Dimensions. The envelope dimensions of the reel in an upright position shall not exceed 12 inches in height, 11 inches in depth, and 5 inches in width. For mounting, two ½ inch diameter bolt holes shall be symmetrically located in the base 7-7/8 inches apart on center (see Figure 1).

3.8 Mounting position. The unit shall be capable of operating when mounted in any position about a 360 degree axis.

3.9 Cable outlet guide. A cable outlet guide shall be provided that will allow the cable to return to the reel from any position within a 90 degree arc to the plane of rotation of the reel without kinking or tangling.

3.10 Automatic rewind. The reel shall be spring loaded with a spring manufactured from corrosion resistant steel or one of steel that has been treated to prevent corrosion which will automatically retract the entire length of the cable extension when extended in any direction within 90 degrees from the axis of the cable outlet guide.

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NOTE:

1. The contour is shown only for holes positioning.

FIGURE 1. Mounting bolt hole locations.

3.11 Cable latching mechanism. The reel shall be equipped with a latching mechanism to release and restore cable tension. After latching has occurred, the cable shall remain in an extended position. Further extension of the cable shall cause the latching mechanism to release and permit the cable to retract.

3.12 Cable. The cable for each type of static discharge reel shall be as shown in the table below. The specifications shown are sheets associated with MIL-DTL-83420 (Wire Rope, Flexible, for Aircraft Control, General Specification for).

TABLE I. Reel length specifications.

Reel Type	Length	Cable Specification
Type I	75 Feet	MIL-DTL-83420/4-014
Type II	50 Feet	MIL-DTL-83420/4-014
Type III	100 Feet	MIL-DTL-83420/3-011

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3.13 Cable stop. A cable stop shall be furnished with each unit which is capable of preventing the cable from being inadvertently withdrawn into the reel housing.

3.14 Cable end ground devices. A welder style grip clamp in accordance with MIL-DTL-83413/7 (Connectors and Assemblies, Electrical, Aircraft Grounding: Grounding Clamp Connector for Types I and III Grounding Assemblies, Aluminum Clip, Electrical) and a grounding plug in accordance with MIL-DTL-83413/4 (Connectors and Assemblies, Electrical, Aircraft Grounding: Plugs, for Types I and II Grounding Assemblies) shall be furnished with each reel assembly. The cable end grounding devices shall not be attached to the cable.

3.15 Color. The Type III reel shall be color no. 11140 (Red, Gloss) in accordance with FED-STD-595. The Type I and Type II reel shall be color no. 24052 (Green, Semigloss) in accordance with FED-STD-595. MIL-HDBK-808 (Finish, Protective and Codes for Finishing Schemes for Ground and Ground Support Equipment) is appropriate guidance for cleaning, painting, plating, anodic films, and chemical treatments for this part.

3.16 Electrical resistance. The electrical resistance between the cable free end grounding device or end of cable if no grounding device is furnished (in either extended or retracted condition) and the contact surfaces on the mounting base or the reel frame shall not exceed 10 ohms. Metal components shall be electrically bonded together to prevent sparking during operation.

3.17 Repairability. The unit shall contain provisions for cable replacement under field conditions. Replacement of the cable and end attachments shall be accomplished using common hand tools.

3.18 Lubrication. The drum shaft bearings shall be permanently lubricated and sealed for the life of the unit. The use of grease fittings shall be limited only to the latching mechanism. Where lubricants are required, the reel shall so be designed that excess grease or oil cannot contaminate electrical contacts causing disruptions in continuity of the unit.

3.19 Reliability requirements. The unit provided by the contractor shall be capable of a minimum of 5,000 cycles (full extensions and retractions) before failure.

3.20 Cable stop. A caution label with black lettering on a yellow background shall be packaged with the reel and shall read as follows:

“Grounding clamps/plugs shall not be allowed to drag across the ramp.
Clamps/plugs shall be carried to reels on equipment.”

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4. PRODUCT CONFORMANCE PROVISIONS.

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government.

4.2 Classification of inspection. The inspection requirements specified herein are classified as first article inspection and quality conformance inspection.

4.3 First article inspection. First article inspection shall be performed on one static discharge reel when a first article test is specified in the contract or order. This Inspection shall determine whether the contractor's design meets all the salient characteristics specified herein and shall include examination and functional testing as specified herein.

4.4 Quality conformance inspection. Quality conformance inspection shall be performed on the sample static discharge reels selected in accordance with the inspection lot and sampling requirements. This inspection shall include examination and functional tests as specified herein.

4.5 Inspection lot. All units of the same type offered to the Government at one time shall be considered a lot for purpose of inspection. No inspection lot shall exceed 500 units. The sample unit shall be one complete reel and the sample size shall be determined by the Government Quality Assurance Representative, except that the sample size chosen for reliability testing shall not exceed one reel from each inspection lot.

4.6 Examination. Each sample selected in accordance with the inspection lot and sampling requirements, as well as the first article, shall be examined for compliance with salient characteristic requirements specified herein. This element of inspection shall encompass all visual and dimensional measurements.

4.7 Functional tests.

4.7.1 Electrical resistance. The sample reels shall be tested for compliance with the electrical resistance requirements specified herein.

4.7.2 Reliability. The sample reels shall be tested for compliance with the reliability requirements specified herein. Reels used for reliability testing shall not be included in any Government shipment or order, but shall be retained for two years beyond the completion of the contract along with all records of inspection and testing.

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4.8 Certification.

4.8.1 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this CID, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices. The Government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

4.9 Metric.

4.9.1 Metric products. Reels manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, provided they fall within specified tolerances using conversion tables contained in the latest revision of FED-STD-376 (Preferred Metric Unit for General Use by the Federal Government), and all other requirements of this CID are met.

If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound units, a request shall be made to the contracting officer to determine if the product is acceptable.

The contracting officer has the option of accepting or rejecting the product.

4.10 Recycled, recovered, environmentally preferable, or biobased materials. Recycled, recovered, environmentally preferable, or biobased materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with 23.403 of the Federal Acquisition Regulation (FAR). However, used, rebuilt, or refurbished items shall not be provided.

5. PACKAGING.

5.1 Preservation, packaging, and marking shall be as specified in the contract or order.

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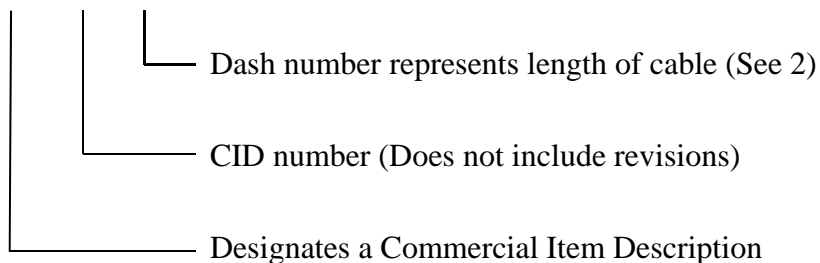
6. NOTES.

6.1 Acquisition requirements. Acquisition documents shall specify the following:

- a. Title, number, and date of the CID.
- b. Part Identifying Number as designated by "PIN".
- c. First Article Inspection, when required.
- d. Whether a commercial off-the-shelf operating manual is to be furnished.
- e. Whether a commercial parts list is to be furnished.
- f. Whether applicable manufacturers' drawings are to be furnished.
- g. Preservation, packaging and markings to be as specified by the contract.

6.2 Part Identifying Number (PIN). The following PIN is developed for Government purposes and use with this CID. It does not constitute a requirement for the contractor:

SAMPLE: A-A-50696-1



6.2.1 National Stock Number (NSN). The following is a list of NSN's assigned that correspond to this CID. The list may not be indicative of all possible NSN's associated with this CID.

NSN
4930-00-930-5303
4930-01-150-3807
4930-01-165-0829
4930-01-395-7286
4930-01-395-7287

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6.3 Source of documents.

6.3.1 Military Specifications, Standards and Handbooks referenced herein may be obtained at <http://quicksearch.dla.mil> or from the Standardization Documents Order Desk, 700Robbins Avenue, Bldg. 4, Section D, Philadelphia PA 19111-5094.

6.3.2 Federal Acquisition Regulations (FAR) may be obtained from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Electronic copies of the FAR may be obtained from <https://www.acquisition.gov/far/> .

6.3.3 AFI publications may be obtained from the Defense Logistics Agency, 8725 John J. Kingman Road, Fort Belvoir, VA 22060-622 or on-line at <http://www.e-publishing.af.mil> .

6.4 Key Words.

Aircraft
Helicopter
Load Cells

6.5 Changes from previous issue. The margins of this CID are marked with a vertical line to indicate the changes made with respect to the previous issue.

Concluding material:

Custodians:
Air Force - 184

Preparing Activity:
Air Force - 184

Reviewer:
Air Force – 68, 99
DLA - CC

Agent:
Air Force – 99
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