

[INCH-POUND]  
A-A-50585  
April 24, 1997  
SUPERSEDING  
MIL-G-28673C  
11 March 1994

## COMMERCIAL ITEM DESCRIPTION

### GANTRIES, HOIST, PORTABLE (SHOP TYPE)

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

1. **SCOPE.** This commercial item description (CID) covers portable type gantries mounted on casters for mobility, with provisions for a load lifting device or hoisting apparatus. The portable gantry is used indoor for support of lifting or hoisting apparatus in automotive, boat assembly and machine shops and to a limited extent, the transportation of workloads within the shop area. Items previously supplied to MIL-G-28673 shall be considered two-way interchangeable, (see cross-reference chart shown in 7.5).

2. **CLASSIFICATION.** Gantries are of the following types and styles, as specified (see 7.2).

- Size A - 1 ton capacity, 12-foot height, 6-foot span.  
(907.2 kilograms (kg), 3.65 metre (m), 1.82 m)
- Size B - 2 ton capacity, 10-foot height, 10-foot span.  
(1 814.4 kg, 3.04 m, 3.04 m)
- Size C - 5 ton capacity, 12-foot height, 10-foot span.  
(4 536 kg, 3.65 m, 3.04 m)
- Size D - 5 ton capacity, 14-foot height, 12-foot span.  
(4 536 kg, 4.26 m, 3.65 m)

Note: 1 ton = 2 000 pounds (907.2 kg)

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Commanding Officer (Code 15E2), Naval Construction Battalion Center, 1000 23rd Avenue, Port Hueneme, CA 93043-4301, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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Style 0 - Without trolley or chain hoist.

Style 1 - With plain trolley.

Style 2 - With plain trolley and link chain hoist.

Style 3 - With plain trolley and link chain hoist, hook suspension.

Style 4 - With geared trolley and link chain hoist.

Style 5 - With low headroom plain trolley and link chain hoist.

Style 6 - With low headroom geared trolley and link chain hoist.

Style 7 - With plain trolley and link chain or roller chain hoist, hook suspension, lever operated, fixed or convertible capacity.

Style 8 - With geared trolley and link or roller chain hoist, hook suspension, lever operated, fixed or convertible capacity.

### 3. SALIENT CHARACTERISTICS.

3.1 Description. The gantry shall be portable, knockdown type consisting of a crossmember I-beam supported at each end by an A-frame structure mounted on casters. The gantry shall be delivered unassembled and shall be furnished with instructions for assembly in the field. The gantry may include a trolley or a chain hoist.

3.2 Standard commercial product. The gantry shall, as a minimum, be in accordance with the requirements of this commercial item description and shall be the manufacturer's standard commercial product. Additional or better features which are not specifically prohibited by this commercial item description but which are a part of the manufacturer's standard commercial product, shall be included in the gantry being furnished. A standard commercial product is a product which has been sold or is being currently offered for sale on the commercial market, through advertisements or manufacturer's catalogs, or brochures, and represents the latest production model.

3.3 Performance. When subjected to static and dynamic loading the gantry shall not show any permanent deformation, and the casters, trolley, or chain hoist shall have no indication of binding or damage. The deflection of the I-beam at the center shall not be greater than 1/600 of the span when subjected to static loads of not less than 200 percent of its rated capacity. The gantry shall not show deformation for dynamic loads of not less than 150 percent of its rated capacity. Each static and dynamic tests shall be conducted for no less than 10 minutes. The gantry shall be stable under all conditions of loading whether stationary or in motion.

3.4 Design and construction. The gantry shall be designed and fabricated into sub-assemblies which shall provide for maximum compactness for shipping. Prefabrication shall be such that the gantry can be assembled in the field without special tools. The gantry shall have a built-in reserve capacity of not less than 15 percent of the rated capacity (see 2.) to compensate for the additional weight of a hoist and trolley assembly. Parts that are to be permanently joined together shall be welded. Assemblies that are to be put together in the field shall be bolted. Bolts and nuts shall be of sufficient straight to adequately support the gantries rated capacity. The specified height shall be measured from the floor (bottom of caster wheels) to the top of the I-beam. The specified span shall be measured between the centerlines of the A-frame supports.

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3.4.1 A-frame. The A-frame structure with diagonal braces located at each end of the crossmember I-beam shall be of a material to support the load that is imposed. The diagonal leg braces may be located on the inside or outside of the A-frame structure. Each A-frame structure shall be of the same height to ensure that when the gantry is assembled in a level surface, the crossmember I-beam shall be level.

3.4.2 Beam. The crossmember I-beam sizes (depth) shall be not less than 6 inches (152.4 millimetre (mm)) for size A gantry, 8 inches (203 mm) for size B gantry, 12 inches (305 mm) for size C gantry and 24 inches (610 mm) for size D gantry. Each end of the beam shall be provided with bolt trolley travel limit stops. A lifting lug centrally located on top of the beam shall also be furnished. The I-beam shall conform to MMA MH27.1.

3.4.3 Casters. Each caster shall be a 360 degrees swivel type with four position swivel locks and of extra heavy-duty replaceable commercial stock with load ratings of not less than 50 percent of gantry capacity. Casters shall have steel wheels and be provided with standard grease fittings for lubrication of bearings and moving parts. Bearings shall be sealed for dirt and dust protection. Caster wheel diameter shall be not less than 6 inches (153 mm) for size A and size B gantries, not less than 8 inches (203 mm) for size C and size D gantries. When specified (see 7.2), wheel brakes shall be furnished. When specified (see 7.2), elastomer caster wheels with the required type of material shall be furnished in lieu of steel wheels.

3.4.4 Trolley (without hoist). When required, the trolley to be furnished shall be of the same load rating as the gantry. The trolley shall be as specified herein. The plain trolley is not powered; the geared trolley is powered. The trolley side frames shall be connected at the bottom by a heavy steel equalizer pin, on which a steel hook plate or link is centrally located for attaching the hoist, and to ensure equal distribution of the load on the trolley wheels. Unless otherwise specified (see 7.2), trolley wheel diameter shall be not less than of 3.4-inch (86.3 mm) for size A and B gantries, and 4.6-inch (116.5 mm) for size C and D gantries. The wheel treads shall be crowned so as to be suitable for operation on both slope-flanged and flat-flanged I-beams, and shall be for the size and style specified (see 2.).

3.4.5 Chain hoist. When required, the chain hoist to be furnished shall be of the same load rating as the gantry. The hoist shall be of light weight material with required strength and service used for general material handling.

3.5 Identification marking. Identification shall be permanently and legibly marked directly on a corrosion-resisting metal plate securely attached (screwed or welded) to the gantry at the source of manufacture. Identification shall include the manufacturer's model and serial number, name, trademark, and load rating (TONS) to be readily identifiable to the manufacturer. Nonferrous screws, rivets, or bolts of not less than 0.375-inch (9.5 mm) in diameter shall be used to affix the plates. In addition, the specified load rating (TONS) shall be stenciled (painted) in bold letters centrally located on both sides of the crossmember I-beam. Height of letters shall be not less than 3.5 inches (88.9 mm).

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#### 4. REGULATORY REQUIREMENTS.

4.1 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). Unless otherwise specified herein, all equipment, material, and articles incorporated in the work covered by this commercial item description are to be new and fabricated using materials produced from recovered materials to the maximum extent possible without jeopardizing the intended use. The term “recovered materials” means materials which have been collected or recovered from solid waste and reprocessed to become a source of raw materials, as opposed to virgin raw materials. Unless otherwise specified, none of the above shall be interpreted to mean that the use of used or rebuilt products are allowed under this commercial item description.

4.2 Metric products. Products 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 version of ASTM E 380, and all other requirements of this commercial item description including form, fit and function are met. If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound units, a request should 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.

#### 5. QUALITY ASSURANCE PROVISIONS.

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

5.1.1 Functional tests. Each production gantry, including applicable trolley or hoist, shall be tested to determine the proper fit and function of all removable and movable parts. Casters and wheels shall turn freely. The trolley shall be moved, without load to the limits of its travel, and observed for simultaneous contact at all times of all wheels on the supporting beam flange. The gantry shall then be disassembled and examined for damaged or stripped threads, forced or improper fittings, and missing or mismatched parts. Evidence of inadequate design or poor workmanship shall constitute failure of this test.

6. PACKAGING. The preservation, packing, and marking shall be as specified in the contract or order.

#### 7. NOTES.

##### 7.1 Source of documents.

7.1.1 The Federal Acquisition Regulation (FAR) and Code of Federal Regulations (CFR) may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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7.1.2 ASTM Standard is available from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

7.1.3 ANSI Standard is available from American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

7.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number and date of this CID.
- b. Size and style required (see 2.).
- c. When wheel brakes are to be furnished (see 3.4.3).
- d. When elastomer caster wheels and the type of material required shall be furnished (see 3.4.3).
- e. When trolley wheel sizes shall be different (see 3.4.4).

7.3 Supersession data. This CID replaces Military Specification MIL-G-28673C, dated 11 March 1994.

7.4 Classification cross reference. Classification used in this CID (see 2.) are identical to those found in the superseded Military Specification, MIL-G-28673C.

7.5 Part Identification Number (PIN). The following part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor. The PIN to be used for items acquired to this description are created as follows:

AA50585 - X X

CID number \_\_\_\_\_

Size code (see 1.1) \_\_\_\_\_

Style code (see 1.1) \_\_\_\_\_

CLASSIFICATION	PIN CODE
Size A	A
Size B	B
Size C	C
Size D	D
Style 0	X
Style 1	1
Style 2	2
Style 3	3
Style 4	4
Style 5	5
Style 6	6
Style 7	7

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## 7.5.1 Example of PIN.

Example 1. 5-ton gantry, 14-foot high, 12-foot span, without trolley or chain hoist.  
PIN designation: AA50585-DX

Example 2. 2-ton gantry, 10-foot high, 10-foot span, with chain hoist (Type F).  
PIN designation: AA50585-B5

7.6 Subject term (key word) listing.

A-frame  
Caster  
I-beam  
Trolley

7.7 National Stock Numbers (NSNs). The following is a list of NSNs assigned which corresponds to this CID. The list may not be indicative of all NSNs associated with the CID.

NSN	Nomenclature
3950-00-351-9581	Trestle, Hoist, Portable

## MILITARY INTERESTS:

Custodians:

Navy - YD1  
Air Force - 99

Review Activities:

Air Force - 84  
DLA - CC

## CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

Preparing Activity:

Navy - YD1

(Project 3950-0314)

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

## INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

### I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER  
A-A-50585

2. DOCUMENT DATE (YYMMDD)  
970424

### 3. DOCUMENT TITLE

GANTRIES, HOIST, PORTABLE (SHOP TYPE)

### 4. NATURE OF CHANGE *(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)*

### 5. REASON FOR RECOMMENDATION

### 6. SUBMITTER

a. NAME *(Last, First, Middle Initial)*

b. ORGANIZATION

c. ADDRESS *(Include Zip Code)*

d. TELEPHONE *(Include Area Code)*  
(1) Commercial  
(2) AUTOVON  
*(if applicable)*

7. DATE SUBMITTED  
(YYMMDD)

### 8. PREPARING ACTIVITY

a. NAME

DANNY MUI

b. TELEPHONE *Include Area Code)*

(1) Commercial (805)-982-5666 (2) AUTOVON 551-5666

c. ADDRESS *(Include Zip Code)*

COMMANDING OFFICER, NCBC CODE 15E2G  
1000 23RD AVENUE  
PORT HUENEME, CA 93043-4301

IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:

DEFENSE QUALITY AND STANDARDIZATION OFFICE  
5203 Leesburg Pike, Suite 1403, Falls Church, VA 22401-3466  
Telephone (703) 756-2340 AUTOVON 289-2340