

MIL-R-2327F

19 January 1972

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SUPERSEDING

MIL-R-2327E

8 February 1967

## MILITARY SPECIFICATION

### RINGS, CONNECTING, ROUND

This specification is mandatory for use by all Departments and Agencies of the Department of Defense.

#### 1. SCOPE

- \* 1.1 Scope.- This specification covers connecting rings.
- \* 1.2 Classification.- Connecting rings shall be of the following classes and sizes, as specified (see 6.2).

Class 2 - Steel wire  
Class 4 - Steel tubing  
Class 5 - Cast malleable iron  
Sizes - See Drawing 4-1-206

#### 2. APPLICABLE DOCUMENTS

- \* 2.1 The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

#### SPECIFICATIONS

##### FEDERAL

QQ-I-666	- Iron, Malleable, Ferretic, For Castings
QQ-T-830	- Tube, Steel, (Carbon, Mechanical; Seamless and Welded)
QQ-W-461	- Wire, Steel, Carbon (Round, Bare and Coated)
QQ-Z-325	- Zinc Coating, Electrodeposited Requirements for
PPP-B-566	- Boxes, Folding, Paperboard
PPP-B-601	- Boxes, Wood, Cleated-Plywood
PPP-B-621	- Boxes, Wood, Nailed and Lock-Corner
PPP-B-636	- Boxes, Shipping, Fiberboard (Interior and Exterior)

FSC 5365

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- PPP-B-640 - Box, Fiberboard, Corrugated, Triple-Wall
- PPP-B-665 - Boxes; Paperboard, Metal Stayed (Including Stay Material)
- PPP-B-676 - Boxes, Set-up

MILITARY

- MIL-E-480 - Enamel, Baking, Phenol-or Urea-Formaldehyde
- MIL-L-10547 - Liners, Case, and Sheet, Overwrap; Water-Vaporproof or Waterproof, Flexible

STANDARDS

FEDERAL

- FED-STD-595 - Colors

MILITARY

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
- MIL-STD-129 - Marking for Shipment and Storage

DRAWING

ARMY NATICK LABORATORIES

- 4-1-206 - Rings, Connecting, Round

(Miniature copy of Drawing 4-1-206, identified as figure 1, is attached for information purposes only.)

(Copies of specifications, standards, drawings and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

- \* 2.2 Other publications.- The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

National Motor Freight Traffic Association, Inc., Agent

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Associations, Inc., Tariff Order Section, 1616 P Street, N.W., Washington, D. C. 20036.)

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Uniform Classification Committee, Agent

## Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 202, Union Station, 516 W. Jackson Blvd., Chicago, Illinois 60606.)

(Technical society and technical association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

## 3. REQUIREMENTS

3.1 Materials.- Materials shall conform to the applicable specifications and requirements specified herein. All wire sizes shall conform to commercial tolerances.

- \* 3.1.1 Steel wire.-- The steel wire shall conform to steel numbers 1006 to 1020, finish 1, any tensile strength of QQ-W-461.

3.1.2 Steel tube.-- The steel tube shall be seamless, round, CD condition of QQ-T-830.

3.1.3 Malleable iron.-- The malleable iron shall conform to grade I or II of QQ-I-666 except that the requirements for marking the castings are not applicable.

- \* 3.1.4 Enamel.-- The enamel shall conform to types I or II, of MIL-E-480. The color shall be black, Color No. 27038 of FED-STD-595.

- \* 3.2 Construction.- The connecting rings shall be constructed in accordance with details and dimensions shown on Drawing 4-1-206 and as specified herein.

- \* 3.2.1 Welds.-- The welds shall be sound, smooth, and free from porosity, fissures, burns, reduced areas, and excess flux deposit.

- \* 3.3 Finish.- The rings shall be given a supplementary phosphate treated zinc plate conforming to type III, class 2 of QQ-Z-325, followed by bake enameling. The enamel shall conform to 3.1.4. The coating shall level out to a uniform dry thickness, without orange peel, wrinkles, drops, streaks, or areas of exposed zinc plate or bare metal.

- \* 3.4 Workmanship.- All surfaces shall be free from burrs, fins, rough spots, sharp edges, cracks, and holes.

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## 4. QUALITY ASSURANCE PROVISIONS

- \* 4.1 Responsibility for inspection.- Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification, where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Inspection.- Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated hereinafter.

4.2.1 Component and material inspection.- In accordance with 4.1 above, components and materials shall be inspected and tested in accordance with all the requirements of referenced specifications, drawings, and standards unless otherwise excluded, amended, modified or qualified in this specification or applicable purchase document.

- \* 4.2.2 Process inspection.- Process inspection shall be conducted to see that the rings are given a phosphate treated zinc plate as specified in 3.3. Whenever nonconformance is noted, correction shall be made to affected items and the process.

4.2.3 End item inspection.- The lot shall be all of the rings of one class and size offered for inspection at one time. The sample unit for this examination shall be one finished ring.

- \* 4.2.3.1 Visual examination.- Examination shall be made of the finished rings for defects in table I. The inspection level shall be II with an acceptable quality level (AQL) of 2.5 for major defects and 6.5 for total defects, expressed in terms of defects per hundred units.

TABLE I.- Classification of defects

Examine	Defect	Classification	
		Major	Minor
Finish (general)	Not finished	X	
	Color not as specified		X
	Exposed bare metal	X	
	Exposed zinc plate		X
	Finish not free of wrinkles, orange peel, drops, or streaks		X

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TABLE I.- Classification of defects (cont'd)

Examine	Defect	Classification	
		Major	Minor
Construction and workmanship	Sharp edges, burrs, fins, rough spots, cracks, and holes		X
Welding	Not sound, i.e., contains porosity, fissures, burns, reduced area or excess flux deposit	X	
	Not smooth		X

- \* 4.2.3.2 Dimensional examination.- Examination shall be made of the end item for defects in dimensions. Any dimension not within the specified requirements shall be classified as a defect. The inspection level shall be S-2 with an AQL of 4.0, expressed in terms of defects per hundred units.
- \* 4.2.4 Examination of preparation for delivery.- An examination shall be made to determine that the packaging, packing, and marking are in compliance with section 5. Defects shall be scored as specified in table II. The sample unit shall be one shipping container fully prepared for delivery. The lot shall be the number of containers offered for inspection at one time. The inspection level shall be S-2 with an AQL of 2.5 defects, expressed in terms of defects per hundred units.

TABLE II.- Examination of preparation for delivery

Examination	Defect
Marking (exterior and interior container)	Omitted; incorrect; illegible; of improper size, location, sequence or method of application.
Material	Any nonconforming component, component missing, or damaged.
Workmanship	Bulged or distorted container. Large rings not neatly stacked, as applicable. Not a compact and well filled box.
Contents (exterior and interior container)	Content per container is more or less than required.

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- \* 4.2.5 Examination of shipping containers.- When shipping containers are required to be in accordance with PPP-B-566, PPP-B-601, PPP-B-621, PPP-B-636, PPP-B-665, or PPP-B-676, examination for defects in closure, waterproofing, strapping or tape banding shall be made in accordance with the appendix of the applicable specification.

## 5. PREPARATION FOR DELIVERY

5.1 Packaging.- Packaging shall be level A or C, as specified (see 6.2).

- \* 5.1.1 Level A.- Rings, of one class and size only, shall be packaged in quantities shown in table III, in a snug-fitting fiberboard box conforming to style optional, grade W5c or W5s of PPP-B-636. The box shall be agitated from time to time; or the large rings neatly stacked during packaging, to assure a compact and well-filled box. Quantities of rings less than those shown in table III (see 6.2), shall be packaged in boxes conforming to PPP-B-566, PPP-B-636, PPP-B-665 or PPP-B-676. The gross weight of the boxes shall not exceed the weight limitations of the applicable box specification. Box closure shall be in accordance with the applicable box specification, or appendix thereto.

5.1.2 Level C.- Rings shall be packaged to afford adequate protection against damage during shipment from the supply source to the first receiving activity. The supplier may use his standard practice when it meets this requirement.

TABLE III.- Quantities per container

ALL CLASSES		
Size	Package	Shipping container
1	6,000	36,000
2	2,500	15,000
4	1,200	7,200
5	1,000	6,000
6	900	5,400
7	300	1,800
8	100	600
9	200	1,200

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TABLE III.- Quantities per container (cont'd)

ALL CLASSES		
Size	Package	Shipping container
10	140	840
11	200	1,200
12	80	480
13	125	750
14	100	600
15	80	480
16	40	240
17	10	60

5.2 Packing.- Packing shall be level A, B, or C, as specified (see 6.2).

- \* 5.2.1 Level A.- Rings, packaged as specified in 5.1, shall be packed in quantities not exceeding those shown in table III in a snug-fitting shipping container conforming to V2s of PPP-B-636; or overseas type of PPP-B-601; or class 2, style 2 or 4 of PPP-B-621. Fiberboard shipping containers shall be waterproofed or sealed in accordance with the appendix of the applicable container specification. Cleated plywood and nailed wood shipping containers shall be provided with a type I or II, grade C case liner conforming to MIL-L-10547. Each shipping container shall be closed and reinforced with flat strapping or tape banding in accordance with the appendix of the applicable container specification. The weight of contents of each fiberboard shipping container conforming to PPP-B-636 shall not exceed 70 pounds.

5.2.2 Level B.- Rings, packaged as specified in 5.1, shall be packed in quantities not exceeding those shown in table III, in a snug-fitting shipping container conforming to type CF, variety SW, or type SF, class domestic of PPP-B-636; or class 1, grade B, style E of PPP-B-640, or domestic type, style A or B of PPP-B-601, or class 1, style 2 or 4 of PPP-B-621. Closure of fiberboard shipping containers conforming to the appendix of PPP-B-636 shall be in accordance with method II. The weight of contents of each fiberboard shipping container conforming to PPP-B-636 shall not exceed 70 pounds.

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- \* 5.2.2.1 When specified (see 6.2), the shipping container shall be a grade V3c, V3s or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with the appendix thereto.
- \* 5.2.3 Level C.— Rings, packaged as specified in 5.1, shall be packed in a manner to insure carrier acceptance and safe delivery at destination at the lowest transportation rate for such supplies. Containers shall be in accordance with Uniform Freight Classification Rules or National Motor Freight Classification Rules, as applicable.

5.3 Marking.— In addition to any special marking required by the contract or order, interior packages and shipping containers shall be marked in accordance with MIL-STD-129.

## 6. NOTES

6.1 Intended use.— The connecting rings are intended for use on equipage items and tentage.

- \* 6.2 Ordering data.— Procurement documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Class and size required (see 1.2).
- (c) Selection of applicable levels of packaging and packing (see 5.1 and 5.2).
- (d) Quantity required if other than those specified in table III (see 5.1.1).

- \* 6.3 The margins of this specification are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and suppliers are cautioned to evaluate the requirements of this document based on the entire content as written irrespective of the marginal notations and relationship to the last previous issue.

### Custodians:

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Air Force - 82

### Preparing activity:

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Project No. 5340-0547

### Review activity:

1. DSA - IS

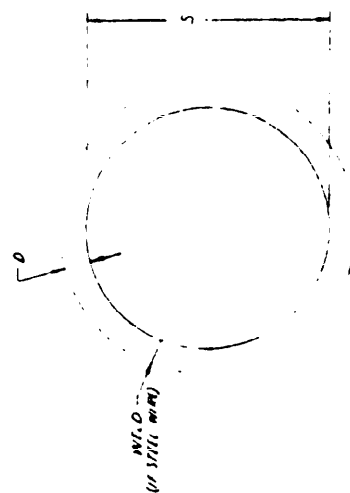
### User activity:

Army - ME



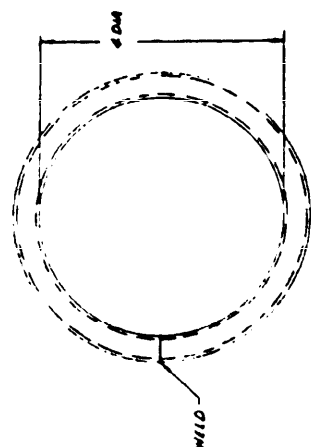
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ITEM LIST				DWG NO
NO	NAME	QTY	MATERIAL	



RING, ROUND  
WELD, 1/4\"/>

SIZES	DIAMETER (D)	COST	STEEL
1	1/4	1035	WIRE
2	3/8	1205	
3	1/2		
4	5/8	1405	
5	3/4	1605	
6	7/8	1805	
7	1	2070	
8	1 1/8	2625	
9	1 1/4	2625	
10	1 1/2	3045	
11	1 3/4	3625	
12	2	3625	
13	2 1/4	2830	
14	3	2830	
15	4	2830	
16	4	3855	
17	10	4870	



RING, 4 INCH  
WELD, 1/4\"/>

THIS FIGURE IS A MINUTURE COPY OF A COPY WHICH LABORATORIES, DRAWING NUMBER 2327F, REVISION NUMBER 1, DATED 10/1/54, THIS COPY IS FOR INFORMATION ONLY, THE DRAWING REFERENCED IN PARAGRAPH 2.1 SUPERSEDES

FIGURE - 1 RINGS, CONNECTING, ROUND

WELD, 1/4\"/>



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