

MIL-C-27487F
 19 September 1986
 SUPERSEDING
 MIL-C-27487E
 16 July 1980

MILITARY SPECIFICATION
 COUPLING HALVES, QUICK-DISCONNECT,
 CAM-LOCKING TYPE

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

1. SCOPE

1.1 Scope. This specification covers cam-locking type, quick-disconnect coupling halves.

1.2 Classification. Coupling halves should be furnished in the types, classes and sizes designated by the applicable MS or other engineering standard drawings approved by the procuring activity (see 6.2).

Type I	- Male, internal pipe thread.	- MS27020
Type II	- Male, hose shank.	- MS27021
Type III	- Male, external pipe thread.	- MS27022
Type IV	- Male, flanged.	- MS27023
Size	- 2 inch.	
Size	- 2-1/2 inch.	
Size	- 3 inch.	
Size	- 4 inch.	
Size	- 6 inch.	
Class 1	- Aluminum.	
Class 2	- Brass.	

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: USA Belvoir Research, Development, and Engineering Center, ATTN: STRBE-TSE, Fort Belvoir, VA 22060-5606 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 4730

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

MIL-C-27487F

Type V	- Female, internal pipe thread.	- MS27024
Type VI	- Female, hose shank.	- MS27025
Type VII	- Female, external pipe thread.	- MS27026
Type VIII	- Female, flanged circular.	- MS27027
Size	- 2 inch	
Size	- 2-1/2 inch.	
Size	- 3 inch.	
Size	- 4 inch.	
Size	- 6 inch.	
Class 1	- Aluminum.	
Class 2	- Brass.	
	- Female, flanged, hexagon.	- MS70091
Size	- 1-1/2 inch.	
Size	- 2 inch.	
Size	- 2-1/2 inch.	
Size	- 3 inch.	
Size	- 4 inch.	
Size	- 6 inch.	
Class 1	- Aluminum.	
Class 2	- Brass.	
Type IX	- Cap, dust.	- MS27028
Type X	- Plug, dust.	- MS27029
Size	- 1/2 inch.	
Size	- 3/4 inch.	
Size	- 1 inch.	
Size	- 1-1/4 inch.	
Size	- 1-1/2 inch.	
Size	- 2 inch.	
Size	- 2-1/2 inch.	
Size	- 3 inch.	
Size	- 4 inch.	
Size	- 6 inch.	
Class 1	- Aluminum.	
Class 2	- Bronze or brass.	
Type XI	- Reducer, male by female and female by male quick-disconnect, cam-locking type.	- MS49000
Nominal end size		
	<u>Female</u>	<u>Male</u>
Size	- 4	x 3 inch.
Size	- 4	x 2 inch.
Size	- 3	x 2 inch.
Size	- 2	x 1-1/2 inch.
Size	- 1-1/2	x 1 inch.

MIL-C-27487F

Size	- 3	x 4 inch.
Size	- 2	x 4 inch.
Size	- 2	x 3 inch.

Nominal end size

	<u>Female</u>	<u>Male</u>
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Size	- 1-1/2	x 2 inch.
Size	- 1	x 1 inch.
Size	- 1	x 1-1/2 inch.
Size	- 6	x 4 inch.
Size	- 4	x 6 inch.
Class 1	- Aluminum.	
Class 2	- Brass.	

Type XII	- Reducer, external pipe thread by quick-disconnect, cam-locking type, male.	- MS49001
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<u>Threaded</u>	<u>Cam-lock</u>
<u>End</u>	<u>End</u>

Size	- 4	x 3 inch.
Size	- 3	x 4 inch.
Size	- 3	x 2 inch.
Size	- 2	x 1 inch.
Size	- 6	x 4 inch.
Size	- 1-1/2	x 2 inch.
Size	- 2	x 1-1/2 inch.
Size	- 1	x 1 inch.
Class 1	- Aluminum.	
Class 2	- Brass.	

Type XIII	- Reducer, external pipe thread by quick-disconnect, cam-locking type, female.	- MS49002
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<u>Threaded</u>	<u>Cam-lock</u>
<u>End</u>	<u>End</u>

Size	- 1	x 1 inch.
Size	- 1-1/2	x 2 inch.
Size	- 2	x 1 inch.
Size	- 2	x 1-1/2 inch.
Size	- 3	x 2 inch.
Size	- 3	x 4 inch.
Size	- 4	x 3 inch.
Size	- 6	x 4 inch.
Class 1	- Aluminum.	
Class 2	- Brass.	

MIL-C-27487F

Type XV	- Adapter, 45 degree, female thread, swivel collar, quick-disconnect, cam-locking, male (tank car).	- MS70088				
Size	- 5 x 4 inch.					
Class 1	- Aluminum.					
Class 2	- Brass.					
Type XVI	- Female, quick-disconnect, cam-locking type to external straight threads, (for use with NATO equipment).	- MS70096				
Type XVII	- Male, quick-disconnect, cam-locking type to internal straight threads, (for use with NATO equipment).	- MS70095				
Size	- 3/4 inch					
Size	- 1 inch.					
Size	- 1-1/2 inch.					
Size	- 2 inch.					
Size	- 2-1/2 inch.					
Size	- 3 inch.					
Size	- 4 inch.					
Size	- 6 inch.					
Class 2	- Brass.					
Type XVIII	- Reducer, quick-disconnect, cam-locking type, by internal pipe thread.	- MS70097				
	<table><tr><td><u>Cam-lock</u></td><td><u>Threaded</u></td></tr><tr><td><u>End</u></td><td><u>End</u></td></tr></table>	<u>Cam-lock</u>	<u>Threaded</u>	<u>End</u>	<u>End</u>	
<u>Cam-lock</u>	<u>Threaded</u>					
<u>End</u>	<u>End</u>					
Size	- 3 x 2 inch.					
Size	- 4 x 3 inch.					
Size	- 6 x 4 inch.					
Class 1	- Aluminum.					
Class 2	- Brass.					
Type XIX	- Nipple, adapter, quick-disconnect, cam-locking type, male, by external grooved pipe.	- MS70100				
Size	- 4 inch.					
Size	- 6 inch.					
Class 1	- Aluminum.					
Class 2	- Bronze or brass.					
Type XX	- Y connection, quick-disconnect, cam-locking type, flange.	- MS39336				

MIL-C-27487F

Size	- 3 x 3 x 3 inch.	
Size	- 4 x 4 x 4 inch.	
Size	- 6 x 6 x 6 inch.	
Class 1	- Aluminum.	
Class 2	- Brass.	
Type XXI	- Adapter male by male, quick-disconnect, cam-locking type.	- MS39352
Size	- 1-1/2 x 1-1/2 inch.	
Size	- 1-1/2 x 2 inch.	
Size	- 1-1/2 x 3 inch.	
Size	- 1-1/2 x 4 inch.	
Size	- 2 x 2 inch.	
Size	- 2 x 3 inch.	
Size	- 2 x 4 inch.	
Size	- 3 x 3 inch.	
Size	- 3 x 4 inch.	
Size	- 4 x 4 inch.	
Size	- 6 x 6 inch.	
Class 1	- Aluminum.	
Class 2	- Brass.	
Class 3	- Aluminum bronze.	

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS

FEDERAL

PPP-B-636 - Boxes, Shipping, Fiberboard.

MILITARY

MIL-P-775 - Packaging of Hose Assemblies; Rubber, Plastic, Fabric or Metal (Including Tubing); and Fittings, Nozzles, and Strainers.

STANDARDS

MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-129 - Marking for Shipment and Storage.
MIL-STD-889 - Dissimilar Metals.

MIL-C-27487F

MS27019	- Coupling Assembly, Quick Disconnect, Cam-Locking Type.
MS27020	- Coupling Half, Quick Disconnect, Cam-Locking Type, Male, Internal Pipe Thread, Type I.
MS27021	- Coupling Half, Quick Disconnect, Cam-Locking Type, Male, Hose Shank, Type II.
MS27022	- Coupling Half, Quick Disconnect, Cam-Locking Type, Male, External Pipe Thread, Type III.
MS27023	- Coupling Half, Quick Disconnect, Cam-Locking Type, Male, Flanged, Type IV.
MS27024	- Coupling Half, Quick Disconnect, Cam-Locking Type, Female, Internal Pipe Thread, Type V.
MS27025	- Coupling Half, Quick Disconnect, Cam-Locking Type, Female, Hose Shank, Type VI.
MS27026	- Coupling Half, Quick Disconnect, Cam-Locking Type, Female, External Pipe Thread, Type VII.
MS27027	- Coupling Half, Quick Disconnect, Cam-Locking Type, Female, Flanged, Type VIII.
MS27028	- Coupling Half, Quick Disconnect, Cam-Locking Type, Cap, Dust, Type IX.
MS27029	- Coupling Half, Quick Disconnect, Cam-Locking Type, Plug, Dust, Type X.
MS27030	- Gasket-Coupling Half, Quick Disconnect, Cam-Locking Type.
MS27031	- Coupling Half, Quick Disconnect, Cam-Locking Type, Drilling Template.
MS39336	- Y Connection, Quick Disconnect, Cam-Locking Type, Flange, Type XX.
MS39352	- Adapter Male by Male, Quick-Disconnect, Cam-Locking Type, Type XXI.
MS49000	- Reducer, Male by Female and Female by Male, Quick Disconnect, Cam-Locking, Type XI.
MS49001	- Reducer, External Pipe Thread by Quick Disconnect, Cam-Locking Type, Male, Type XII.
MS49002	- Reducer, External Pipe Thread by Quick Disconnect, Cam-Locking, Female, Type XIII.
MS70088	- Adapter, 45°, Female Thread Swivel Collar, Quick Disconnect, Cam-Locking, Male (Tank Car).
MS70091	- Coupling Half, Quick-Disconnect, Cam-Locking Type, Female, Flanged, Type VIII (for D-1 Nozzle-Aircraft).
MS70095	- Coupling Half, Quick Disconnect, Cam-Locking Type, Male, Internal Straight Threads, Type XVII (For Use With NATO Equipment).
MS70096	- Coupling Half, Quick Disconnect, Cam-Locking Type, Female, External Straight Threads, Type XVI (For Use With NATO Equipment).

MIL-C-27487F

MS70097

- Coupling Half, Quick Disconnect, Cam-Locking Type, Female Reducer (Internal Pipe Thread), Type XVIII.

MS70100

- Coupling Half, Quick Disconnect, Cam-Locking Type, Nipple Adapter, Male by External Grooved Pipe, Type XIX.

(Copies of specifications and standards required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted shall be those listed in the issue of the DoDISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS shall be the issue of the non-Government documents which is current on the date of the solicitation.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

B46.1 - Surface Texture.

(Application for copies should be addressed to the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 3951 - Standard Practice for Commercial Packaging.

E 18 - Tests for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

(Non-Government standards and other publications are normally available from the organizations which prepare or which distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Description. The coupling halves, quick-disconnect, cam-locking type (hereinafter called "coupling(s)") shall be in accordance with military standards as applicable, and shall consist of coupling body, wire rings, cam arms, and gasket(s), as specified herein.

3.2 First article. Unless otherwise specified (see 6.2), a sample shall be subjected to first article inspection (see 4.3 and 6.3). Any changes or

MIL-C-27487F

deviations of couplings halves from the approved first article during production will be subject to the approval of the contracting officer. Approval of the first article will not relieve the contractor of his obligation to furnish coupling halves conforming to this specification.

3.3 Material. Material shall be as specified herein and as shown on the applicable standards. Materials not specified shall be selected by the contractor and shall be subject to all provisions of this specification.

3.3.1 Material deterioration prevention and control. The couplings shall be fabricated from compatible materials, inherently corrosion resistant or treated to provide protection against the various forms of corrosion and deterioration that may be encountered in any of the applicable operation and storage environments to which the coupling may be exposed.

3.3.2 Dissimilar metals. Dissimilar metals shall not be used in intimate contact with each other unless protected against galvanic corrosion. Dissimilar metals and methods of protection are defined and detailed in MIL-STD-889.

3.3.3 Identification of materials and finishes. The contractor shall identify the specific material, material finish or treatment for use with component and subcomponent and shall make information available upon request to the contracting officer or designated representative.

3.3.4 Recovered materials. For the purpose of this requirement, recovered materials are those materials which have been collected from solid waste and reprocessed to become a source of raw materials, as distinguished from virgin raw materials. The components, pieces and parts incorporated in the couplings may be newly fabricated from recovered materials to the maximum extent practicable, provided the couplings produced meets all other requirements of this specification. Used, rebuilt or remanufactured components, pieces and parts shall not be incorporated in the couplings.

3.4 Construction.

3.4.1 Male couplings. Male couplings shall be fabricated to the dimensions and tolerances specified on applicable standards (see 1.2). After fabrication, male couplings shall not leak or distort when hydrostatically tested as specified herein and on applicable standards (see 1.2).

3.4.2 Female couplings. Female couplings shall mate with the male coupling gage specified herein. When tested as specified herein, the torque required to completely close each cam arm and amount of gasket compression shall be in accordance with the values specified in table I. Female couplings, complete with gaskets, shall not leak or distort and the cam arms shall not visually show movement toward the unlocking direction when hydrostatically tested as specified herein and on applicable standards (see 1.2).

MIL-C-27487F

TABLE I. Torque values.

Coupling size (inch)	Maximum allowable torque-to-close (inch-pound)	Minimum gasket compression (inch)
1/2 and 3/4	60	0.030
1	70	0.030
1-1/4 to 2-1/2	100	0.030
3	115	0.025
4	130	0.025
6	200	0.025

3.4.3 Male gage for gasket compression. A gage for each size female coupling shall be fabricated of steel, and shall have a hardness from 60 to 65 Rockwell C when tested as specified herein, and shall conform to the dimensions and tolerances specified in figure 1.

3.5 Safety. Unless otherwise specified herein and on applicable standards (see 1.2), nonfunctional sharp edges, projecting points, and excessive length of fastening devices shall be avoided.

3.6 Identification marking. The couplings shall be legibly marked by either casting, die-stamping or embossing, stenciling, or by attaching an aluminum tag not less than 0.03 inch in thickness by a soft annealed wire. The marking shall include the symbol MS, standard number and dash number, the manufacturer's identification, and size.

3.7 Interchangeability. All parts having the same part number of any single type, size, and class coupling shall be functionally and dimensionally interchangeable. Interchangeable parts are defined as two or more like parts possessing such functional and physical characteristics as to be equivalent in performance and durability, and capable of being exchanged one for the other without alteration of the parts themselves or of adjoining parts, except for adjustment, and without selection for fit or performance.

3.8 Finish. Class 1, class 2, and class 3 couplings shall be finished as specified on applicable standards (see 1.2).

3.9 Workmanship. All parts, components, and assemblies of the couplings, including castings, forgings, stampings, and machined surfaces, shall be clean and free from sand, dirt, pits, sprues, scale, and other harmful extraneous material. External surfaces shall be free from burrs, sharp edges, and corners, except where sharp edges and corners are required.

3.9.1 Castings. Castings shall be sound and free from blowholes, patching, misplaced coring, warping, and any other defects which might render the castings unsound or unsuitable for their intended use.

3.9.2 Machining. Tolerances and gages for interface fits shall conform to the limitations specified herein and on applicable standards (see 1.2).

MIL-C-27487F

3.9.3 Threads. Threads shall be as specified on the applicable standards (see 1.2).

3.9.4 Cleaning. The couplings shall be thoroughly cleaned of all machining oil, residue of tests, grease, dirt, metal shavings and filings, and other contaminants. Cleaning shall be accomplished in a manner that will not leave a residue or otherwise render the couplings unsuitable for use.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, 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. 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.

4.1.1 Responsibility for compliance. All items must meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.1.2 Component and material inspection. The contractor is responsible for insuring that components and materials are manufactured, examined and tested in accordance with referenced specifications and standards, as applicable.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.3).
- b. Quality conformance inspection (see 4.4).
- c. Inspection of packaging (see 4.6).

4.3 First article inspection.

4.3.1 Examination. The first article couplings shall be examined as specified in 4.5.1. Presence of one or more defects shall be cause for rejection.

4.3.1.1 Inspection conditions. Unless otherwise specified in a test, test instruments, coupling parts, and other devices used in dimensioning, gaging, and performance testing shall be stabilized at, and used in, an ambient temperature of 75 °F, ± 15 °F.

MIL-C-27487F

4.3.2 Tests.4.3.2.1 Gages.

4.3.2.1.1 Hardness. Gages shall be tested for hardness as specified in 4.5.2.1.1. Failure of the test shall be cause for rejection.

4.3.2.1.2 Accuracy. Gages shall be tested for accuracy as specified in 4.5.2.1.2. Failure of the test shall be cause for rejection.

4.3.2.2 Couplings. The first article female and male couplings shall be tested as specified in 4.5.2.2 and 4.5.2.3 using the gage(s) that have successfully completed the tests specified in 4.3.2.1. Failure of either test shall be cause for rejection.

4.4 Quality conformance inspection.

4.4.1 Sampling. Sampling for examination shall be in accordance with MIL-STD-105.

4.4.2 Examination.

4.4.2.1 Individual. Each coupling shall be examined for the critical defects specified in 4.5.1. Presence of a critical defect shall be cause for rejection.

4.4.2.2 Samples. Samples selected in accordance with 4.4.1 shall be examined for the major and minor defects specified in 4.5.1. AQL shall be 1.0 percent defective for major defects and 6.5 percent defective for minor defects.

4.4.3 Tests.

4.4.3.1 Individual. Each female coupling shall be tested as specified in 4.5.2.2 and 4.5.2.3. Each male coupling shall be tested as specified in 4.5.2.3. Failure of any test shall be cause for rejection.

4.5 Inspection procedure.

4.5.1 Examination. The couplings shall be examined as specified herein for the following defects:

Critical

1. Evidence of blowholes, or pits in castings, which would render part unsound or unsuitable.
2. Noncompliance to interchangeability.

Major

101. Material not as specified.
102. Materials are not resistant to corrosion or deterioration or treated to be made resistant to corrosion or deterioration for the applicable storage and operating environment.

MIL-C-27487F

- 103. Dissimilar metals as defined in MIL-STD-889 are not effectively insulated from each other.
- 104. Contractor does not have documentation available for identification of material, material finishes or treatments.
- 105. Used, rebuilt, or remanufactured components, pieces, or parts incorporated in the coupling halves.
- 106. Dimensions and tolerances not as specified.
- 107. Gage(s) not as specified.
- 108. Gasket(s) not as specified.
- 109. Fasteners (cam arms) not functioning or not functioning properly.
- 110. Noncompliance to environmental conditions.
- 111. Threads not as specified.

Minor

- 201. Noncompliance to safety conditions.
- 202. Identification or special marking missing, illegible, misleading, or incomplete.
- 203. Treatment, painting, or finish not as specified on the applicable standard.
- 204. Cleaning not as specified.
- 205. Workmanship not as specified.

4.5.2 Tests.4.5.2.1 Gages.

4.5.2.1.1 Hardness. The hardness test method shall be conducted in accordance with the applicable requirements of ASTM E 18. Indentations shall be made on the end face or flat surface of the gage. Three equally spaced indentations, approximately 1/8 inch in from the gage outside diameter, shall be made on each end surface. Nonconformance to 3.4.3 shall constitute failure of this test.

4.5.2.1.2 Accuracy. Each dimension of each gage shall be verified by means of calibrated instruments with the applicable dimensions and tolerances specified on figure 1. Nonconformance to figure 1 shall constitute failure of this test. The furnishing of a written certification from an independent laboratory that the gage(s) conforms to figure 1 may be accepted by the contracting officer in lieu of the above verification (see 6.2).

4.5.2.2 Closing torque and gasket compression test procedure, female couplings. The female coupling shall be washed of any residual lubricant and dried prior to being coupled with the gage specified in 3.4.3. The coupling and measurement of coupling action and gasket compression shall be as follows:

- a. After insertion of the male gage into the female coupling to the maximum penetration without using the cam arms or any other gasket compression force, measurement shall be made of the distance from the outside end of the male gage shown in figure 1, to the insertion end of the female coupling at three points spaced equidistant around the face circumference. The average distance shall be computed to the nearest thousandth of an inch.

MIL-C-27487F

- b. After insertion to the maximum penetration, each female coupling cam-arm shall be subjected to a closing torque. This closing torque shall be applied simultaneously to each cam arm and shall be sufficient to completely close the female coupling over the male gage. Measure the maximum closing torque during the closing movement of each cam arm. Closing torque in excess of the maximum allowable torque specified in table I shall constitute failure of this test.
- c. When the cam arms are completely closed, measurement shall again be made as in "a", and the average distance computed to the nearest thousandth of an inch. This average distance shall be deducted from the average distance computed in "a". The resultant difference is representative of the amount of gasket compression. Nonconformance to table I shall constitute failure of this test.

4.5.2.3 Hydrostatic. The male and female coupling shall be subjected to an internal hydrostatic pressure as specified on applicable standards (see 1.2). The hydrostatic pressure shall be sustained for not less than 45 seconds. Gaskets shall be in place during testing of female couplings. The fluid used for the test shall be distinctly dyed to facilitate visual examination for leakage. Evidence of leakage, distortion, or movement of cam arms shall constitute failure of this test.

4.6 Inspection of packaging.

4.6.1 Military. Preservation, packing, and marking for military levels of protection shall be examined to determine compliance with the quality assurance provisions of MIL-P-775.

4.6.2 Commercial. Preservation, packing, and marking for commercial degree of protection shall be examined for compliance with ASTM D 3951.

5. PACKAGING

5.1 Preservation. Preservation shall be level A or commercial, as specified (see 6.2).

5.1.1 Level A. Couplings shall be preserved in accordance with the level A preservation and packaging requirements of MIL-P-775.

5.1.2 Commercial. Couplings shall be preserved in accordance with ASTM D 3951.

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

5.2.1 Level A. Couplings, preserved as specified in 5.1, shall be packed in accordance with the level A packing requirements of MIL-P-775.

5.2.2 Level B. Couplings, preserved as specified in 5.1, shall be packed in accordance with the level B packing requirements of MIL-P-775. Closure of fiberboard boxes for level B packing shall be in accordance with method V closure requirements of PPP-B-636.

MIL-C-27487F

5.2.3 Commercial. Couplings, preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Marking.

5.3.1 Military. Marking for military levels of protection shall be in accordance with MIL-STD-129.

5.3.2 Commercial. Marking for commercial degree of protection shall be in accordance with ASTM D 3951.

6. NOTES

6.1 Intended use. The quick-disconnect couplings covered by this specification are primarily used in suction hose, discharge hose, and nozzles for various fittings or manifolds for handling of liquid petroleum products.

6.2 Ordering data. Procurement documents should specify the following:

- a. Title, number, and date of this specification.
- b. Military standard part number required (see 1.2 and applicable MS).
- c. Time frame required for submission of first article couplings and number of couplings required (see 3.2).
- d. When the Government will conduct any or all of the first article model examination and tests. When the Government will conduct some but not all of the first article examination and tests, the contracting officer should specify which examination and test will be conducted by the Government and which examination and tests shall be conducted by the contractor (see 3.2).
- e. When certification will be accepted in lieu of verification (see 4.5.2.1.2).
- f. Degree of preservation and degree of packing required (see 5.1 and 5.2).

6.3 First article. When a first article inspection is required, the items should be initial production. The first article should consist of one or more couplings. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, tests, and approval of the first article test results and disposition of the first article.

6.4 International standardization. Certain provisions of this specification and referenced standards (see 1.2) are the subject of international standardization agreement (QSTAG 240 and STANAG 2761). When amendment, revision, or cancellation of this specification is proposed which affects or violates the international agreement concerned, the preparing activity will take appropriate reconciliation action through international standardization channels, including departmental standardization offices, if required.

6.5 Classification change. Type XIV, Y Connection, MS49003, with all sizes and classes has been deleted as no longer required.

MIL-C-27487F

6.6 Subject term (Key word) listing.

Coupling, quick disconnect
Coupling, halves
Fuel, transport of
Water, transport of

6.7 Changes from previous issue. Asterisks (or vertical lines) are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:

Army - ME
Navy - YD
Air Force - 99

Preparing activity:

Army - ME

Project 4730-0778

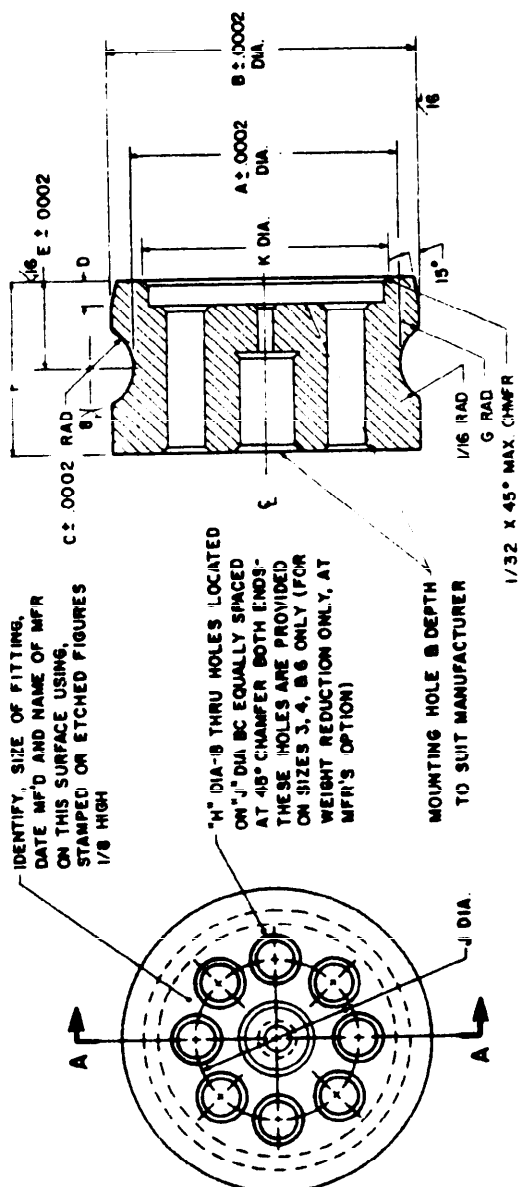
Review activities:

Army - AV, GL
Air Force - 82
DLA - CS

User activity:

Army - AT
Navy - MC

MIL-C-27487F



SECTION A-A

DIN.	NOMINAL SIZE OF FITTINGS									
	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
A	1.0325	1.0325	1.1415	1.2875	1.6875	2.0625	2.5625	3.1975	4.3045	6.3355
B	1.2415	1.2415	1.7895	2.1025	2.4915	2.4915	3.6015	4.7055	6.2165	
C	1.3750	1.3750	2.3750	3.1800	4.3800	4.3800	4.3800	5.9920	7.3560	
D	1.3750	1.3750	1.7600	2.1700	2.1700	1.7600	3.1600	3.1600	7.3200	
E	1.4480	1.4480	1.5620	1.6870	1.6870	1.6870	1.6870	1.6870	1.6870	9.6000
F	1.4480	1.4480	1.5716	1.9116	1-5/8	1-7/8	1-15/16	2	2-1/16	2-1/4
G	1.062	1.062	1.093	1.275	1.275	1.275	1.275	1.275	1.275	1.275
H							1/2	1/2	3/4	1-3/4
I							6	2	2-3/4	4
J							2-7/32	2-11/16	1-13/16	5-7/8
K	3/4	3/4	15/16	1-7/64	1-13/32	1-25/32	2-7/32	2-11/16	1-13/16	5-7/8

NOTES:

1. HAVE ALL EDGES
2. DIMENSIONS ARE IN INCHES.
3. FABRICATING TOLERANCES (WIRE AND METAL CAGES EXCLUDED) FRACTIONS $\pm 1/64$; DECIMALS $\pm .005$; ANGLES $\pm 0^\circ 30'$.
4. SURFACE TEXTURE SHALL BE IN ACCORDANCE WITH ANSI B46.1.

FIGURE 1. Gega, gaska? compression; coupling half, quick disconnect, cam-locking type, male.

X 2022A

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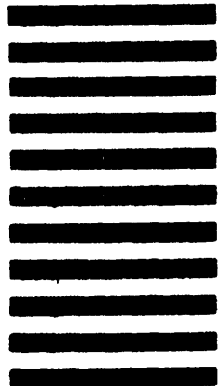
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