



AEROSPACE STANDARD

AS6847™

Issued

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Fitting End, Bulkhead, Cone, Design Standard

RATIONALE

This document provides details for designing a type of bulkhead fitting end commonly used with aircraft oxygen equipment that has not been standardized. Because such fittings are specific to oxygen use, only those sizes commonly used in the industry will be defined in this document.

1. SCOPE

This SAE Aerospace Standard specifies the dimensions and design requirements that are required to produce a typical bulkhead fitting used with aircraft oxygen equipment. This fitting may come in different configurations; however, the end design remains the same for all configurations. The purpose of fittings designed using this standard is to mate applicable oxygen equipment, e.g., an oxygen filling cart connection mated with an aircraft oxygen port for refilling of the oxygen system supply, mating two sensing lines, etc. Dimensions are developed from AND10089 and AS4377.

NOTE: This document is not a design for a complete fitting; it only defines a fitting end that may be used as part of a fitting design.

2. APPLICABLE DOCUMENTS

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (U.S. and Canada only) or +1 724-776-4970 (outside U.S. and Canada), www.sae.org.

AS4377 Fitting End, Bulkhead, Flareless, Design Standard

AS8879 Screw Threads - UNJ Profile, Inch, Controlled Radius Root with Increased Minor Diameter

2.2 U.S. Government Publications

Copies of these documents are available online at <https://quicksearch.dla.mil>.

AND10089 Fitting End, Design Standard, For Cone Connection

MIL-S-7742 Screw Threads, Standard, Optimum Selected Series: General Specification For

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2.3 ASME Publications

Available from ASME, Two Park Avenue, New York, NY 10016-5990, Tel: 800-843-2763 (U.S./Canada), 001-800-843-2763 (Mexico), 646-616-3100 (outside North America), www.asme.org.

ASME B46.1 Surface Texture (Surface Roughness, Waviness, and Lay)

ASME Y14.5 Dimensioning and Tolerancing

3. REQUIREMENTS

Fittings designed using this standard shall be fabricated in compliance with the following requirements:

1. Where indicated in Figures 1 through 4, surface roughness shall be in accordance with ASME B46.1. Unless otherwise specified, machined surfaces shall be 125 μ in Ra.
2. Break edges 0.001 to 0.020 unless otherwise specified, and remove burrs and slivers.
3. The sealing surface roughness shall be 63 μ in Ra maximum, shall be free from burrs, nicks, and longitudinal and spiral tool marks, and shall be smooth, except that annular tool marks will be allowed to 100 μ in Ra maximum.
4. Materials used to meet this SAE Aerospace Standard shall be compatible for oxygen use.

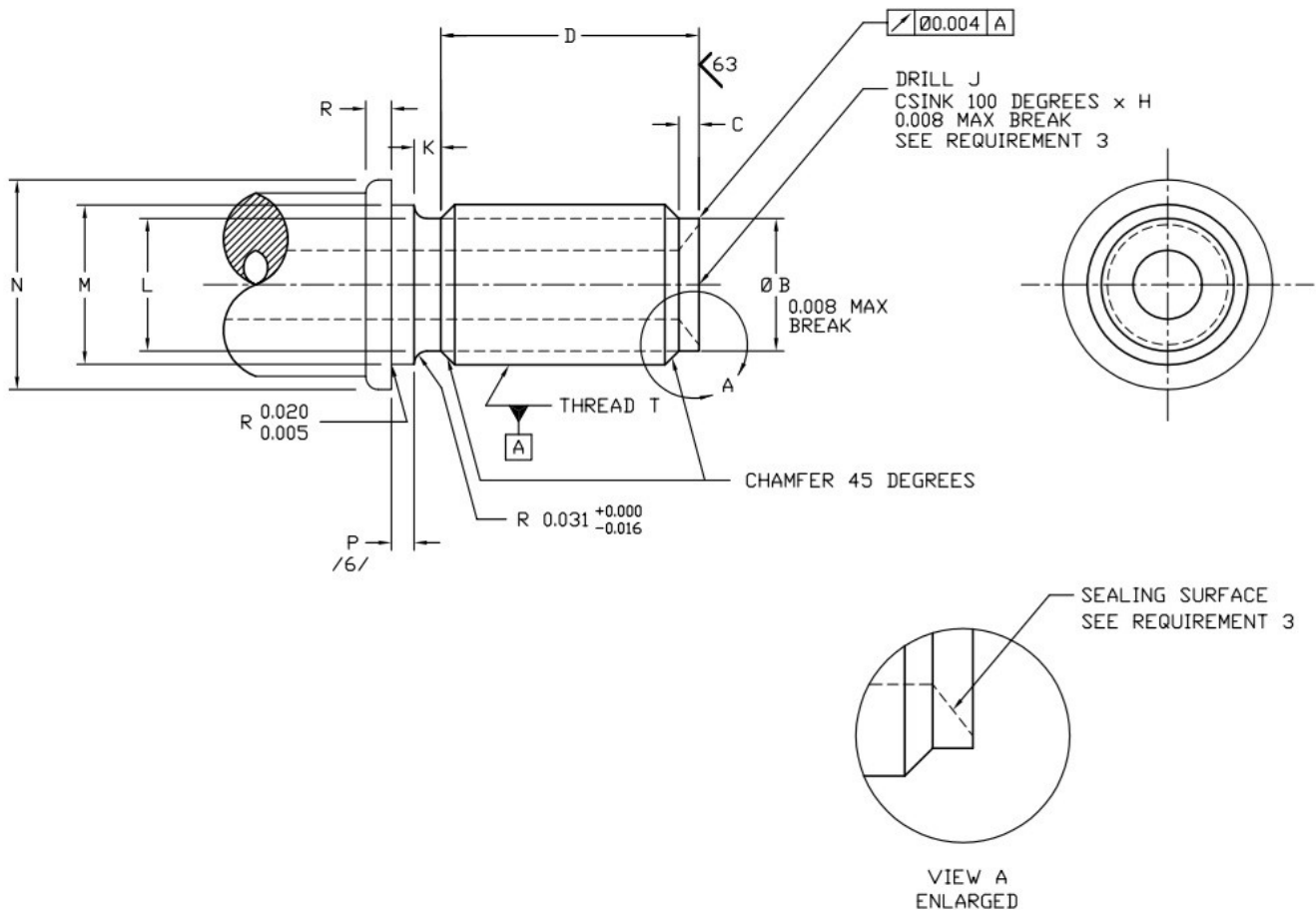


Figure 1 - Fitting end design, Style G (see 4.1.4 and 4.1.5)