



AEROSPACE STANDARD

AS18280™/2**REV. B**

Issued	2000-09
Revised	2006-06
Reaffirmed	2013-01
Stabilized	2024-09

Superseding AS18280/2A

Sleeves, Internally or Externally Swaged or Welded,
24° Cone Flareless Fitting, 3000 psi

RATIONALE

This technical report is being stabilized because it covers technology, products, or processes which are mature and not likely to change in the foreseeable future.

STABILIZED NOTICE

This document has been declared "STABILIZED" by SAE G-3, Aerospace Couplings, Fittings, Hose, Tubing Assemblies Committee and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

SAENORM.COM : Click to view the full PDF of AS18280-2B

SAE Executive Standards Committee Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2024 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, or used for text and data mining, AI training, or similar technologies, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
<http://www.sae.org>

SAE WEB ADDRESS:

For more information on this standard, visit
<https://www.sae.org/standards/content/AS18280/2B/>

1. SCOPE:

1.1 Scope:

This SAE Aerospace Standard (AS) establishes the requirements for internally or externally swaged or welded sleeves or tube end adapters for use with 24° cone flareless fluid connection fittings per AS18280.

1.2 Classification:

Sleeves and tube end adapters shall be furnished in the types and styles designated by the applicable AS and other engineering standard drawings. This specification is intended to serve as a procurement specification for the fittings described herein and in Section 6.

2. REFERENCES:

2.1 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.

SAENORM.COM : Click to view the full PDF of as18280_2B

- 2.1.1 SAE Publications: Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

AS1576	Fittings, Welded, Hydraulic, Titanium and Corrosion Resistant Steel, 3000 psi Hydraulic
AS4459	Fittings, Tube, Fluid System, 3000 Psig Maximum, Permanently Attached, Specification for
AS5148	Assembly, Installation and Torque for Flareless and Straight Thread Fluid Fittings and Tube Assemblies
AS18280	Fittings, 24° Cone Flareless, Fluid Connection, 3000 psi
AMS 5659	Steel, Corrosion Resistant, Bars, Wire, Forgings, Rings, and Extrusions 15Cr 4.5Ni 0.30Cb 3.5Cu, Consumable Electrode Melted, Solution Heat Treated, Precipitation Hardenable
AMS-QQ-A-225/9	Aluminum Alloy 7075, Bar, Rod, Wire and Special Shapes; Rolled, Drawn or Cold Finished
AMS 2700	Passivation Treatments for Corrosion Resistant Steel

- 2.1.2 ASQ Publications: Available from American Society for Quality, 600 North Plankinton Avenue, Milwaukee, WI 53203, Tel: 800-248-1946 (North America) or +1-414-272-8575 (International), www.asq.org.

ASQ Z1.4	Sampling Procedures and Tables for Inspection by Attributes
----------	---

3. TECHNICAL REQUIREMENTS:

3.1 Material:

Fittings shall be fabricated of materials listed in Table 1 and in compliance with requirements in this specification or as specified on the applicable part standard drawing.

TABLE 1 - Materials

Permanent Connection	Material	Form	Specification	Alloy & Temper	Material Code
Externally swaged	See AS4459	-	-	-	-
Weld 3000 psi	See AS1576	-	-	-	-
Internally swaged	Aluminum alloy	Bars, rods	AMS-QQ-A-225/9	7075-T73	None
	Corrosion resistant steel		AMS 5659	15-5PH	None

3.2 Design and Fabrication:

The design and fabrication of the tube joints shall be in accordance with the permanent fitting specifications AS1576 and AS4459 and the applicable drawings. The sleeves when assembled to tubing are intended to mate with the 24° cone flareless fitting end of AS18280.

3.3 Finish:

See AS18280.

3.4 Identification of Product:

See AS18280.

3.5 Performance:

The sleeves and tube end unions when assembled to tubing with fittings per AS18280 shall meet the performance requirements of AS18280 and the following additional requirements.

- 3.5.1 Joint Strength: This requirement applies to internally swaged corrosion resistant steel sleeves on 21-6-9 CRES tubing with wall thicknesses in accordance with AS18280. The test assembly when assembled at minimum torque shall withstand the loads as specified in Table 2 without slippage of the sleeve on the tubing or cracking of the sleeve when tested at room temperature per 4.1.3.