



AEROSPACE STANDARD	AS1508™	REV. A
	Issued 1979-05 Reaffirmed 2012-11 Cancelled 2019-06 Superseded by MA1508	
Undercuts for Straight Screw Threads - Metric		

RATIONALE

Cancel and supersede by MA1508. This has been reviewed and approved by Aerospace Council.

CANCELLATION NOTICE

This Technical Report has been declared "CANCELLED" as of June 2019 and has been superseded by MA1508. By this action, this document will remain listed in the respective index, if applicable. Cancelled Technical Reports are available from SAE.

SAE Technical Standards Board 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 © 2019 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, 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:

Full document details: [SAE AS1508A](#)

SAE values your input. To provide feedback on this Technical Report, please visit <http://standards.sae.org/AS1508A>

Documents
Document Sharing Hub

1. SCOPE:

1.1 Purpose:

This standard provides recommended dimensional data for screw thread undercuts for straight 'MJ' metric screw threads in accordance with AS1370.

1.2 Application:

The thread undercut data included in this standard are primarily designed to provide a clearance for threading tool runout either where the thread is in a blind hole or where the thread is close to an adjacent shoulder. These thread undercuts are not recommended for bolts, screws or studs which are required to be necked, e.g. reduced shank contiguous to the thread, to improve their tensile, impact and cyclic load performance.

2. DIMENSIONS:

2.1 External Threads:

Table I and Figure 1 provides data for external screw thread undercuts. The basic width (A) of the undercut is based on $1.6 \times P$, where P = Pitch rounded to nearest 0.1 mm. Tolerance applied is H14¹.

The undercut diameter (ϕG) is equal to nominal thread size (T) less value shown in column 3, Table I; recommended tolerance is h12*.

Example: Required ϕG for T = MJ6 x 1 – 4h6h
 $\phi G_{\max} = 6.0 - 1.5 = 4.5$
Tolerance h12 = 0.12
Therefore $\phi G = 4.38 - 4.50$

1. Selected from ISO/R286 - System of Limits and Fits