

ASME Y14.43-2011

[Revision of ASME Y14.43-2003 (R2008)]

Dimensioning and Tolerancing Principles for Gages and Fixtures

**Engineering Drawing and Related
Documentation Practices**

AN AMERICAN NATIONAL STANDARD



**The American Society of
Mechanical Engineers**

ADOPTION NOTICE

ASME Y14.43, Dimensioning and Tolerancing Principles for Gages and Fixtures, was adopted on 28 January 2003 for use by the Department of Defense (DoD). Proposed changes by DoD activities must be submitted to the DoD Adopting Activity: Commander, U.S. Army Research, Development and Engineering Center (ARDEC), ATTN: RDAR-QES-E, Picatinny Arsenal, NJ 07806-5000. Copies of this document may be purchased from The American Society of Mechanical Engineers (ASME), 22 Law Drive, P.O. Box 2900, Fairfield, NJ 07007-2900, <http://www.asme.org>.

Custodians:

Army — AR
Navy — SA
Air Force — 16
DLA — DH

Adopting Activity:

Army — AR

(Project DRPR-2010-001)

Reviewer Activities:

Army — CR, MI, PT, TM
Navy — AS, CG, CH, EC, MC, NP, TD
Air Force — 13, 99
DLA — IS
Other — MP, NS

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.

AMSC N/A

FSC DRPR

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

ASME Y14.43-2011

[Revision of ASME Y14.43-2003 (R2008)]

Dimensioning and Tolerancing Principles for Gages and Fixtures

**Engineering Drawing and Related
Documentation Practices**

AN AMERICAN NATIONAL STANDARD



**The American Society of
Mechanical Engineers**

Three Park Avenue • New York, NY • 10016 USA

Date of Issuance: August 22, 2011

This Standard will be revised when the Society approves the issuance of a new edition.

ASME issues written replies to inquiries concerning interpretations of technical aspects of this Standard. Periodically, certain actions of the ASME Y14 Committee may be published as Code Cases. Cases and interpretations are published on the ASME Web site under the Committee Pages at <http://cstools.asme.org> as they are issued.

ASME is the registered trademark of The American Society of Mechanical Engineers.

This code or standard was developed under procedures accredited as meeting the criteria for American National Standards. The Standards Committee that approved the code or standard was balanced to assure that individuals from competent and concerned interests have had an opportunity to participate. The proposed code or standard was made available for public review and comment that provides an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.

ASME does not “approve,” “rate,” or “endorse” any item, construction, proprietary device, or activity.

ASME does not take any position with respect to the validity of any patent rights asserted in connection with any items mentioned in this document, and does not undertake to insure anyone utilizing a standard against liability for infringement of any applicable letters patent, nor assumes any such liability. Users of a code or standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility.

Participation by federal agency representative(s) or person(s) affiliated with industry is not to be interpreted as government or industry endorsement of this code or standard.

ASME accepts responsibility for only those interpretations of this document issued in accordance with the established ASME procedures and policies, which precludes the issuance of interpretations by individuals.

No part of this document may be reproduced in any form,
in an electronic retrieval system or otherwise,
without the prior written permission of the publisher.

The American Society of Mechanical Engineers
Three Park Avenue, New York, NY 10016-5990

Copyright © 2011 by
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
All rights reserved
Printed in U.S.A.

CONTENTS

Foreword	iv
Committee Roster	vi
Correspondence With the Y14 Committee	vii
1 General	1
2 References	1
3 Definitions	1
4 Principles	4
5 Gage Design	10
6 Dimensioning and Tolerancing	18
7 Usage	30
8 Fixtures	33
Figures	
5-1 Fixed Pin Construction	14
5-2 Push Pin Construction — Type 1	15
5-3 Push Pin Construction — Type 2	16
6-1 Datum Target Symbol	20
6-2 Absolute Tolerancing Method	21
6-3 Gagemakers' Tolerance Classes	22
6-4 Gagemakers' Tolerance Chart	22
Tables	
6-1 Plug Gage Limit Dimensions — Classes ZM, YM, and XM	23
6-2 Plug Gage Limit Dimensions — Class XXM	25
6-3 Ring and Snap Gage Limit Dimensions — Classes ZM, YM, and XXM	27
6-4 Ring and Snap Gage Limit Dimensions — Class XXXM	29
Mandatory Appendices	
I Illustrations of Gaging Policy	35
II Material Condition Explanation	41
Nonmandatory Appendices	
A Examples of Gage Characteristics	47
B Gaging Examples and Illustrations	61
C Regardless of Feature Size (RFS) and Regardless of Material Boundary (RMB)	129