

MIL-STD-1452
8 December 1970

MILITARY STANDARD

GAGING,
GENERAL PRINCIPLES
OF

This military standard is mandatory for use by all Departments and Agencies of the Department of Defense.

PURPOSE: To provide for operational compatibility of military equipments through mutually understood and agreed engineering practices relating to gaging.

SCOPE: All gaging equipments required by the Department of Defense to verify compliance of product with design parameters specified in the relevant product drawing and specification.

REQUIREMENTS: The principles of gaging described herein shall be adhered to insofar as practicable:

1. Single feature gages, which verify the maximum material limits of a part, will have a unilateral tolerance zone located within the limits of size of the part and follow the principle: "that no part will be accepted which does not lay within the limits of size specified on the drawing."
2. Multi-feature gages for checking position, symmetry, etc. should be so toleranced and dimensioned that they obey the following principle: "Design sizes and tolerances of features of such gages should be those which allow the full drawing tolerance to the work piece when the gages are perfect, i.e. have no error in size or position."
3. Gages which verify the concentricity of a hole in relation to a thread will have the thread tolerance reversed for the threaded portion and the dimension of the non-threaded portion of the gage will be determined by adjusting the minimum hole diameter by the concentricity tolerance.
4. Setting pieces for dial indicator gages will be made to a single nominal dimension and will have a greatly reduced tolerance. The profile of these setting pieces will simulate the part. Dial indicator gages will not be used for measuring, but as comparators to eliminate any inaccuracy.
5. Automatic electronic or air gaging inspection machines will simulate the contour of the part being gaged. The master settings for gaging the upper and lower limits will have a greatly reduced tolerance. This tolerance will be the nominal plus (+) dimension for "Not Go" and the nominal minus (-) dimension for "Go".

FSC 5220

MIL-STD-1452

6. The gaging blank and handles shall be in accordance with the requirements of US Department of Commerce, Commercial Standard CS-8, Gage Blanks.

Custodians:

Army - MU
Navy - AS
Air Force - 84

Preparing activity:

Army - MU

Review activities:

Army - MU, MI, AT
Navy - AS
Air Force - 84

User activities:

Army - AV, ME, GL

Project No. 5220-0121

NOTE: - Certain provisions (#1 to #5 inclusive) of this standard are the subject of international standardization agreement (ABC-NAVY-STD-48). When amendment, revision or cancellation of this standard is proposed which will affect or violate the international agreement concerned, the preparing activity will take appropriate reconciliation action through international standardization channels, including departmental standardization offices, if required.