ASME B47.1-2007

(Revision of ASME/ANSI B47.1-1988)

Gage Blanks

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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ERRATA
to
ASME B47.1-2007
Gage Blanks

On page 48, Table 32, decimal range for line 8-T corrected. Lines 9-T and 10-T added. The revised table is on the following page.

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
Three Park Avenue, New York, NY 10016-5990

January 2010

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Table 32 Thread Ring Gages — Range No. 0 to and Including 4¾ in.; Also Fine-Pitch Instrument Thread Ring Gages, No. 0 to and Including No. 12 (Cont'd)

Ring Size No.	Ring Assembly No.	Nominal Range, Inclusive, No. or in.	Decimal Range, Above and Including	General Dimensions																		
				A	*B*	*C*	*D*	*E*	*F*	*H*	*J*	*K*	*L*	*M* ± 1/64	*N* ± 1/64	Drill Size, *P* (No. or in.)	Drill Size, *R*	Ream, *S*		*U*			*V*	*W*
																		Min.	Max.	Size	Pitch Diameter Min.	Pitch Diameter Max.		
1-T	1	No. 0 to 6 (1)	0.059–0.230	1	1/4	...	...	...	1/32	5/16	5/32	5/16	7/32	5/32	1/16	No. 41 (0.0960)	11/64 (0.1719)	0.1370	0.1373	0.164-36	0.1400	0.1478	0.010 (2)	1/32
2-T	2	1/4–5/16	0.230–0.365	1 3/8	11/32	...	...	5/32	1/32	7/16	3/16	3/8	11/32	1/4	1/8	No. 31 (0.1200)	7/32 (0.2187)	0.1810	0.1813	0.216-28	0.1928	0.1950	1/32	1/16
3-T	3	3/8–1/2	0.365–0.510	1 3/4	7/16	...	...	3/16	3/64	19/32	1/4	15/32	1/2	3/8	3/16	No. 25 (0.1495)	17/64 (0.2656)	0.2150	0.2153	0.250-28	0.2268	0.2290	1/32	3/32
4-T	4	9/16–3/4	0.510–0.825	2 3/16	9/16	3/4	1 1/16	11/32	1/16	3/4	5/16	11/16	17/32	13/32	7/32	No. 7 (0.2010)	21/64 (0.3281)	0.2720	0.2723	0.3125-24	0.2854	0.2878	1/16	3/32
5-T	5	1/8–1 1/8	0.825–1.135	2 5/8	11/16	15/16	1 1/2	9/16	1/16	31/32	5/16	7/8	17/32	13/32	9/32	No. 1 (0.2280)	25/64 (0.3906)	0.3340	0.3344	0.375-24	0.3479	0.3503	1/16	3/32
6-T	6	1 1/4–1 1/2	1.135–1.510	3 1/4	3/4	1 1/8	1 7/8	27/32	1/16	1 3/16	3/8	1 1/8	5/8	7/16	5/16	17/64 (0.2656)	29/64 (0.4531)	0.3890	0.3894	0.4375-20	0.4050	0.4076	1/16	3/32
7-T	6	1 5/8–2	1.510–2.010	3 3/4	13/16	1 1/4	2 3/8	1 3/16	3/32	1 7/16	3/8	1 3/8	5/8	7/16	5/16	17/64 (0.2656)	29/64 (0.4531)	0.3890	0.3894	0.4375-20	0.4050	0.4076	1/16	1/8
8-T	7	2 1/8–2 1/2	2.010–2.510	4 1/2	7/8	1 5/16	2 7/8	1 19/32	3/32	1 3/4	7/16	1 11/16	13/16	9/16	7/16	21/64 (0.3281)	33/64 (0.5156)	0.4510	0.4515	0.500-20	0.4675	0.4701	3/32	1/8
9-T	7	2 5/8–3	2.510–3.010	5	7/8	1 3/8	3 3/8	2	3/32	2	7/16	1 15/16	13/16	9/16	7/16	21/64 (0.3281)	33/64 (0.5156)	0.4510	0.4515	0.500-20	0.4675	0.4701	3/32	1/8
10-T	7	3 1/8–3 1/2	3.010–3.510	5 1/2	15/16	1 7/16	3 7/8	2 7/16	3/32	2 7/32	7/16	2 3/16	13/16	9/16	7/16	21/64 (0.3281)	33/64 (0.5156)	0.4510	0.4515	0.500-20	0.4675	0.4701	3/32	1/8
11-T	8	3 5/8–4	3.510–4.010	6 3/8	15/16	1 1/2	4 5/8	2 15/16	3/32	2 5/8	1/2	2 9/16	1	3/4	5/8	13/32 (0.4062)	41/64 (0.6406)	0.5710	0.5715	0.625-18	0.5889	0.5919	3/32	1/8
12-T	8	4 1/8–4 3/4	4.010–4.760	7 1/4	1	1 1/2	5 3/8	3 3/8	3/32	3 1/32	1/2	3	1	3/4	5/8	13/32 (0.4062)	41/64 (0.6406)	0.5710	0.5715	0.625–18	0.5880	0.5919	3/32	1/8

GENERAL NOTES:

(a) All dimensions are in inches.

(b) Thin gage blanks are to be used for all NOT GO thread ring gages. For GO thread ring gages, use thin or thick blanks as follows.

Diameter, in.	Thin Blank	Thick Blank
From No. 0 to 1/2, inclusive	All pitches	...
Above 1/2 to 1 1/8, inclusive	Pitches 12 TPI and finer except 9/16–12	Pitches coarser than 12 TPI
Above 1 1/8	Pitches 10 TPI and finer	Pitches coarser than 10 TPI

(c) Screws and sleeves are not shown.

(d) Special thicker blanks are sometimes required for checking long lengths of engagement or exceptionally coarse pitch threads.

(e) Solid working thread ring gages are of similar standard thickness and furnished without adjustment feature. Outside diameter of solid ring blanks may be smaller to suit particular requirements. See Table 39 for solid setting and master thread ring gage blanks.

NOTES:

(1) Blanks for the range Nos. 0 to 12, inclusive, may be either counterbored or milled, as shown in illustration for Table 32.

(2) Approximate.

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Gage Blanks

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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FOREWORD

The original American Gage Design Committee was formed in 1926 to consolidate, for the benefit of industry at large, the many independent efforts at gage standardization that were in progress at the time.

In March 1930, the standards developed were published as Miscellaneous Publication No. 100 of the National Bureau of Standards, entitled "Plain and Thread Plug and Ring Gage Blanks, Recommended Commercial Standards," and were subsequently promulgated by the Department of Commerce as Commercial Standard CS8-30. They were later approved by the American Standards Association (now the American National Standards Institute) as American Standard B47-1932.

The first revision was designated CS8-33 and also approved as ASA B47-1933. A second revision was made in 1940, and a third revision was published as CS8-51, effective April 15, 1951. A Supplement was issued to CS8-51 in 1955 and preparation of a fourth revision in supplement form was approved in 1961. It was decided, however, to issue a new document instead of adding another supplement and, in 1961, the American Gage Design Committee, operating under the guidance of a Chairman, Secretary, Executive Committee, and seven technical subcommittees, prepared the last revision of this document published by the U.S. Department of Commerce as Commercial Standard CS8-61.

In 1962, the American Standards Association accepted the responsibility for distribution and maintenance of the American Gage Design Standard CS8-61, Gage Blanks. The American Standards Association designated this standard as ASA B47.1-1962.

U.S.A. Standards Committee B47 was organized and staffed at a meeting held in Dearborn, Michigan, in January 1969. This Committee functions under the new designation American National Standards Committee B47. Seven subcommittees worked on the revision of the B47.1-1962 document.

In 1975, the dial indicator standardization was transferred from the jurisdiction of the B47.1 Standards Committee to that of ANSI Standards Committee B89.

An American Standard implies a consensus of those substantially concerned with its scope and provisions. An American Standard is intended as a guide to aid the manufacturer, the consumer, and the general public. The existence of an American Standard does not in any respect preclude anyone, whether he has approved the standard or not, from manufacturing, marketing, purchasing, or using products, process, or procedures not conforming to the standard. American Standards are subject to periodic review and users are cautioned to obtain the latest editions. Producers of goods made in conformity with the American Standard are encouraged to state, on their own responsibility in advertising and promotion material, or on tags or labels, that the goods are produced in conformity with particular American Standards.

A metric translation of B47.1 was issued in 1978. This separate document, B47.1A, contained primarily a soft conversion of certain dimensions and tables considered to be most important. It established official metric diameter ranges and gaging lengths for plain and thread plug and ring gages and related handles, plus snap gage ranges. Note that changes made in the 1981 revision of B47.1 automatically superseded the metric dimensions since it is intended that blank lengths, size ranges, and other dimensions be essentially the same whether expressed in inches or millimeters. Appendix A of that document gives helpful information for converting other inch dimensions into millimeters.

The 1981 revision was approved as an American National Standard by the American National Standards Institute and designated as ANSI B47.1 on March 1981.

A periodic review of this Standard, undertaken by the Committee in 1986, resulted in agreement that the standard be updated to include revision to trilock blanks lightening holes and some of the snap gage anvil screws and snap gage frames in order to make the dimensions standard, as well as in the agreement that pipe trilock blanks 3.5 in. to 6 in. should be the same as smaller trilock in reference to the locking grooves and counterbore.

It was also agreed that the metric supplement, B47.1aM, which was published in 1982, be a part of this Standard in the form of an Appendix. The intent of the supplement was to establish metric range and gaging lengths for plugs, handles, and snap gage ranges. Dimensions are soft conversions.

A proposal containing these and other changes, as well as editorial corrections, was prepared for and balloted by letter ballot to ASME Committee B47. Following approval by ASME, the 1988 edition was submitted to the American National Standards Institute, and was approved as an American National Standard on February 18, 1988.

In 2006 a revision of the document included footnote changes and further clarification of various tables. It also gave the Committee an opportunity to correct prior dimensional errors.

This Standard was approved as an American National Standard on January 29, 2007.

ASME B47 COMMITTEE
Gage Blanks

(The following is the roster of the Committee at the time of approval of this Standard.)

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CORRESPONDENCE WITH THE B47 COMMITTEE

General. ASME Standards are developed and maintained with the intent to represent the consensus of concerned interests. As such, users of this Standard may interact with the Committee by proposing revisions, and attending Committee meetings. Correspondence should be addressed to:

Secretary, B47 Standards Committee
The American Society of Mechanical Engineers
Three Park Avenue
New York, NY 10016-5990

Proposing Revisions. Revisions are made periodically to the Standard to incorporate changes that appear necessary or desirable, as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published periodically.

The Committee welcomes proposals for revisions to this Standard. Such proposals should be as specific as possible, citing the edition, the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal including any pertinent documentation.

Attending Committee Meetings. The B47 Standards Committee schedules meetings as needed, which are open to the public. Persons wishing to attend any meeting should contact the Secretary of the B47 Standards Committee.

GAGE BLANKS

1 SCOPE

This Standard covers standard designs for the following:

(a) plain and thread plug gage blanks to 12.010 in. maximum gaging diameter

(b) plain and thread ring gage blanks to 12.260 in. maximum gaging diameter

(c) involute and serrated spline plug and ring gage blanks to 8.000 in. major diameter

(d) straight-sided spline plug and ring gage blanks to major diameters of 8.000 in. for plugs and 6.000 in. for rings

(e) machine taper plug and ring gage blanks to 5.000 in. gaging diameter

(f) adjustable snap gages to 12 in.

(g) adjustable length gages to any desired length

(h) master disks up to 8.010 in. in diameter

Recommended general designs covering taper plug and ring gages for special applications, flush-pin gages, and flat plug gages are also included.

This Standard is intended to deal only with the dimensions of blanks, frames, and fittings. However, it is expected that gages made from these blanks shall be finished in accordance with accepted good gage making practice with respect to accuracy and workmanship.

NOTES:

(1) While compliance to the revised specifications in this document is urged as soon as possible, the use of blanks and designs in ASME/ANSl B47.1-1988 is permissible for a period of 5 years from approval date of this document.

(2) Types of steel or other material for gage blanks and components are not standardized in this document. The type of material and hardness should be agreed upon by producer and user of the gages.

(3) Certain tables in this document show both nominal thread ranges as well as decimal ranges. In such cases, the decimal range establishes the official dividing line from one blank or handle size to the next.

(4) The following designates correct blank size to use:
- *(a)* thread plugs — go actual major
- *(b)* plain plugs — no go major
- *(c}* thread rings — go actual major
- *(d)* plain rings — go gage/dimensions

2 TERMINOLOGY

The following glossary is intended to clarify the meaning of certain technical terms employed in this Standard. The definitions are not intended to be general; rather, they are specific as to their application to the American Gage Design Standards.

adjusting screw: a threaded member employed for adjusting, to any predetermined setting, the gaging pins or gaging buttons of an adjustable snap, plug, or length gage.

adjusting slots: radial slots provided in thread ring gages in order to facilitate expansion and contraction of gage size by means of the adjusting device. An adjusting slot always terminates in an adjusting slot terminal hole.

American Gage Design Standard: designates gages made to the design specifications promulgated by the American Gage Design Committee.

anvil: designates the gaging member of a gage when constructed as a fixed nonadjustable block, or as the integral jaw of the gage.

disk, marking: a plate that can be attached to a gage frame to provide, when suitably marked, a means of identification for the gage.

disk, master: a cylinder provided with insulating grips, used for setting comparators, snap gages, etc.

drift hole (also known as drift slot): a small hole or slot provided in the side of a taper lock gage handle near the GO end, through which a pin or drift may be inserted for the purpose of ejecting the gaging member from the handle.

flange: external portion of a large ring gage that is reduced in sections for the purpose of lightening the gage.

frame of a snap gage: the body portion of the gage as distinct from the gaging pins, gaging buttons, anvils, and adjusting or locking mechanism.

gage, adjustable length: a complete external caliper gage employed for the size control of relatively large external dimensions, comprising length gage spacing tubes and length gage heads.

gage, annular plug: a shell type plug gage in which the gaging member is in the form of a ring, the external surface of which is the gaging section, the central portion of the web being machined away for the purpose of reducing weight, ball handles being provided for convenience in handling. This construction is employed for plain and thread plug gages in the ranges above 8.010 in.

gage, composite spline: gage having a full complement of teeth.

gage, flat plug: a plug gage made in the form of a central axial segment of a plain cylindrical plug gage.

gage, flush pin: a gage for checking the distance between two surfaces, comprising a body having a through hole, and a pin in the hole that projects from a face of the body a distance equal to the dimension to be gaged when the opposite or indicating end of the pin is flush with the opposite face of the body. The indicating end of the pin or the adjacent face of the body has a step of a depth equal to the tolerance of the dimension gaged.

gage, involute spline: a gage having on its gaging circumference a number of involute shaped teeth that correspond in contour, number, diameter, and spacing with the product specification.

gage, plain adjustable snap: a complete external caliper gage employed for the size control of plain external dimensions, comprising an open frame in both jaws of which gaging members are provided, one or more pairs of which can be set and locked to any predetermined size within the range of the gage.

gage, plain cylindrical plug: a complete internal gage of a single- or double-ended type for the size control of holes and other applications. It consists of a handle and a gaging member or members, with suitable locking means.

gage, plain ring: an external gage of circular form employed for the size control of external diameters. In the smaller sizes it may consist of a gage body into which is pressed a bushing, the latter being accurately finished to size for gaging purposes.

gage, plain solid snap: a complete external caliper gage employed for the size control of plain external dimensions, comprising an open frame and jaws, the latter carrying gaging members in the form of fixed, parallel, nonadjustable anvils.

gage, progressive cylindrical plug: a complete internal gage consisting of a handle and a gaging member in which the GO and NOT GO gaging sections are combined in a single unit secured to one end of the handle.

gage, serrated spline: a gage having on its gaging circumference a number of straight-sided triangular shaped teeth that correspond in angle contour, number, diameter, and spacing with the product specifications.

gage, spline plug: a plug gage having a series of projecting keys, equally spaced about the periphery, that fit into the spline-ways to be gaged.

gage, spline ring: a ring gage having keys that are complementary to the splined shaft to be gaged.

gage, straight-sided spline: a gage having on its gaging circumference a number of keys or keyways with parallel sides that correspond in width, number, spacing, and diameter with the product specifications.

gage, taper lock plug: a plug gage in which the gaging member has a taper shank that is forced into a taper hole in the handle. This design is standard for plug gages in the range above 0.059 in. to and including 1.510 in. and for pipe-thread plug gages to and including 2 in. nominal pipe size. (The wire type plug gage is standard in the range above 0.010 in. to and including 1.010 in. See definition of wire type plug gage.)

gage, taper plug: an internal gage in the form of a frustum of a cone having diameter, taper, and length suitable for the internal gaging of taper dimensions in accordance with the specifications of the product. An extended portion may be provided for checking a tang slot when specified.

gage, taper ring: an external gage the internal contour of which conforms to the frustum of a cone having diameter, taper, and length suitable for the gaging of external taper dimensions in accordance with the specifications of the product. An extended portion may be provided for checking a driving tang when specified.

gage, thread plug: a complete internal thread gage of either single- or double-ended type, comprising a handle and a threaded gaging member or members, with suitable locking means.

gage, thread ring: an external thread gage employed for the size control of threaded work, with means of adjustment provided.

gage, trilock plug: a plug gage in which three wedge-shaped locking prongs on the handle are engaged with corresponding locking grooves in the gaging member by means of a single through screw, thus providing a self-centering support with a positive lock. This design is standard for plug gages in the ranges above 0.760 in. to and including 8.010 in., with the exception of pipe thread plug gages, for which it is standard in the ranges above 2 in. nominal pipe size, to and including 6 in. nominal pipe size.

gage, wire type plug: a plug gage comprising a gaging member of straight cylindrical section throughout its length held in a collet type handle. This design is standard in the range above 0.010 in. to and including 1.010 in.

gaging button: an adjustable gaging member of an adjustable snap or length gage, consisting of a shank and a flanged portion, the latter constituting the gaging section.

gaging member: integral unit of a gage that is accurately finished to size and is employed for size control of the work. In taper lock plug gages, the gaging member consists of a shank and a gaging section.

gaging section: portion of the gage that comes into physical contact with the work. In the plug range above 1.510 in. to and including 12.010 in. the gaging section is identical with the gaging member.

handle: portion of gage that is employed as supporting means for the gaging member or members. In the American Gage Design Standards, six types of handles are employed: taper lock design handle, trilock design handle, wire type gage handle, ball handle, spline design, and flat plug design.

hub: midsection of a flanged ring gage. It determines the length of the gaging section.

length gage heads: the end portions of a length gage, carrying and including the gaging members, that can be set and locked to any predetermined size within the range of adjustment.

length gage spacing tubes: constitute the central portion of a length gage and carry at their extremities the two length gage heads.

lightening holes: drilled holes provided in the heavier sizes of gaging members for the purpose of reducing the weight of the gage.

locking device, snap gage: portion of an adjustable snap, plug, or length gage that is employed for locking the adjustable gaging members in fixed position. It comprises a locking screw, a locking bushing, and a locking nut.

locking device, thread ring gage: provides a means of expanding, contracting, and locking the thread ring gage primarily during the manufacturing process. It comprises an adjusting screw, a locking screw, and a sleeve.

locking slot: slot that passes entirely through the wall of a thread ring gage. In conjunction with the thread ring gage locking device, it permits expansion and contraction of the gage blank during manufacturing and reconditioning.

shank: portion of the gaging member that is employed for fixing the gaging member in the handle or frame.

snap gage pin: a straight, unflanged adjustable gaging member of an adjustable snap gage.

taper plug gage tang: portion of a taper plug gage that conforms to the width and centrality of the driving slot of the tool spindle.

taper ring tang check: portion of a taper ring gage that conforms to the shape of and checks the dimensions of the driving tang on the tool shank.

3 DETAILS OF CONSTRUCTION — AMERICAN GAGE DESIGN STANDARDS

3.1 Plain Cylindrical Plug Gage Blanks

Four separate designs have been adopted for plain cylindrical plug gages, as follows:

(a) the *taper lock* design for the range from 0.059 in. to and including 1.510 in.

(b) the *wire type* design from 0.010 in. to and including 1.010 in.

(c) the *trilock* design with gaging members from above 0.760 in. to and including 8.010 in.

(d) the *annular* design for the range from above 8.010 in.

For sizes above 0.059 in. to and including 8.010 in. both straight and progressive gaging members are provided.

3.1.1 Wire Type Design, Above 0.010 in. to and Including 1.010 in.

(a) Considerations of convenience and economy have indicated the desirability of having a wire type design of plain plug gage in small diameters. This gage is comprised of a wire type member or members held firmly in a collet type handle of suitable proportions. The gaging member may be extended from the handle a specific amount, as desired, and reversed to increase the useful life of the gage. These gages are available in both single- and double-end types.

(b) Dimensions and tolerances have been established for handles and collets to accommodate any diameter of plug through the range above 0.010 in. to and including 1.010 in. Lengths for a given range of diameters have been established for the wire type plugs. Details of construction will be apparent from Fig. 1 and Tables 1 through 6.

3.1.2 Taper Lock Design, Above 0.059 in. to and Including 1.510 in.

(a) This type of gage is simple and is economical to produce and maintain. The gaging member has a taper shank that is forced into a taper hole in the handle. When properly assembled, the taper lock gage possesses the rigidity of a solid gage and is entirely free of shake or "wink." Drift slots or drift holes are provided near the GO end of the handle, permitting gaging members to be removed when replacement is necessary. In the case of double-end gages, the other end is removed by running a rod through the hollow handle.

(b) Complete dimensional tolerances have been established for the mating parts of gaging members and handles, insuring absolute interchangeability of gaging members and handles wherever manufactured. General details of construction will be apparent from Fig. 1. See also Tables 7, 8, 10, and 12.

3.1.3 Trilock Design, Above 0.760 in. to and Including 8.010 in.

(a) Considerations of rigidity of construction and long life have dictated the trilock design for the size range above 0.760 in. to and including 8.010 in. With this construction there is no chance for shake or wink to interfere with the sensitive feel so necessary in gages of this type. Three wedge-shaped locking prongs on the handle are engaged with corresponding grooves in the gaging member by a single through screw, thus providing a self-centering support with a positive lock. This results in a degree of rigidity equivalent to that of a solid gage. The useful life of the plug, furthermore, is materially

increased, for when one end is worn the plug can be reversed; it is then, for most purposes, as good as new.

(b) The construction is protected by carefully worked out dimensional limits, and interchangeability is insured between gaging members and handles, wherever manufactured. Details of construction will be apparent from Fig. 1. See also Tables 9, 13, and 14.

3.1.4 Annular Design Above 8.010 in.

(a) Because of the fact that large plug gages are heavy and difficult to handle, it was necessary to adopt a design for the range above 8.010 in. that would have the lightest possible section consistent with strength and permanence. The annular design having a rim and web of properly proportioned section, the center being bored out for purposes of weight reduction, has, therefore, been adopted as standard. The web is provided with four tapped holes for convenience in bolting to a face plate during manufacturing. Two of these are further employed for fixing ball handles to the gaging member.

(b) Details of construction have been worked out and are completely dimensioned. See Fig. 2 and Table 15.

3.2 Handles for Plain Cylindrical and Thread Plug Gage Blanks

(a) Handles for wire type gages are hexagonal with hexagonal collet nuts, and are provided in both single- and double-end types. See Tables 1 through 5 for details. Handles for the taper lock types are provided with tapered holes in both ends. See Tables 7 and 8. Handles for the trilock type gages are provided in both single- and double-end types. See Table 9. Commercial ball handles are employed for the annular plug gage and for certain of the large ring gages. See references in Tables 15, 21, and 35.

(b) Handles as designed for all gages offer a feature of economy in that they may be disassembled from gaging members, when the latter are worn out, or discarded for any other reason, and then reassembled with new gaging members, thus giving them, with reasonable care, practically indefinite life.

(c) Wire type handles and their bushings might vary slightly in design from one gage supplier manufacturer to another, and shall be considered acceptable as long as they hold the gage member securely.

3.3 Thread Plug Gage Blanks

The wire type, taper lock, trilock, and annular designs have been adopted for thread plug gage blanks and handles. The designs are patterned after the plain cylindrical plug gage blanks described in para. 3.1 through 3.1.4, Fig. 1 and Tables 1 through 14, with the exception that the length of thread gaging members is slightly different in some instances. The use of taper locks blanks and handles for pipe thread plug gages is standard to and including 2 in. nominal pipe size. General details of construction will be apparent from Fig. 3. Data for thread plug gages are presented in Tables 16 through 21. Tables 22 and 23, which set forth dimensions of gaging members for fine pitch instrument thread plugs, and Tables 24 through 26, for thread settings plugs. Tables 27 and 28, specifying handles and gaging members for pipe-thread plug gages.

3.4 Plain Ring Gage Blanks

(a) The use of the solid ring gage design for size control being well established, the Committee's work on plain rings gages was concerned chiefly with matters of proportion. In the smaller sizes of plain ring gages, a hardened bushing may be pressed into a soft gage body, in place of the one-piece ring gage. This design is optional in the range above 0.010 in. to and including 0.510 in. However, the single-piece gage may be employed in this range, and it is standard in all cases above 0.510 in. Gages in sizes above 1.510 in. are flanged in order to eliminate unnecessary weight and to facilitate handling. General details of construction are shown in Fig. 4 and dimensions are given in Tables 29 and 30.

(b) No dimensional difference exists between GO and NOT GO blanks of identical size range and service class, but an annular groove is provided in the periphery of NOT GO blanks as a means of identification.

(c) Gages in sizes above 5.510 in. may be provided with two 0.500-13 UNC-2B tapped holes, in the web, 180 deg apart, to accommodate No. 7 ball handles.

3.5 Thread Ring Gage Blanks

(a) The Committee found universal accord as to the superiority of the adjustable thread ring gage over the solid type, with the result that all American Gage Design Standard thread ring gage blanks are equipped with an effective device for adjusting and locking the gage in the manufacturing or resizing processes. Of the many locking devices considered, the single-unit locking device was finally adopted as standard, as it permits a minimum diameter of blank for a given size range and provides a simple adjustment and positive lock without introducing, into the gage body, any mechanical stresses that might tend to create distortion after setting. Referring to Fig. 5, the construction and operation of this device are as follows:

(b) The adjusting screw is threaded externally and internally and split longitudinally. Turning this screw to the right exerts pressure in the sleeve against the shoulder in the left-hand side of the gage here shown, thus spreading the ring. Once the ring has been properly adjusted by means of the adjusting screw, the adjustment is locked by tightening locking screw. The tightening of the locking screw exerts a pull between the shoulder, immediately under its head, and the internal threads of the adjusting screw, which causes the adjusting screw to expand into the threads in the wall of the gage, the thrust of this action being taken up longitudinally by

the sleeve. Therefore, the clamping is accomplished by expansion of the adjusting screw equally in all directions and not by the application of any eccentric forces that tend to distort the gage or upset the adjustment. The locking pressure, it is seen, is taken up centrally in the locking screw itself as the reacting support is directly under the head of the locking screw in the form of shoulder in the gage. The sleeve, being accurately fitted, serves as a large dowel to maintain the alignment of the gage.

(c) Dimensions for thread ring gage blanks in the range from No. 0 to 12¼ in., inclusive, and for parts for the thread ring gage locking device, are given in Tables 31 through 38.

(d) Five types of thread ring gage blanks for straight threads have been provided as illustrated in Figs. 6 and 7, namely

(1) a thin flat disk type with one adjusting slot (two slots optional) for all diameters and pitches, both GO and NOT GO Nos. 0 to 6, inclusive

(2) a thin flat disk type with two adjusting slots for the following:

(a) all diameters and pitches GO and NOT GO above No. 6 to and including ½ in.

(b) fine pitches GO and NOT GO above ½ in. to and including 4¾ in.

(c) coarse pitches NOT GO only above ½ in. to and including 4¾ in.

(3) a thick flanged type with two adjusting slots for all GO coarse pitch gages above ½ in. to and including 4¾ in.

(4) a thin flat type provided with ball handles and a plurality of adjusting slots for all fine pitch GO gages and all NOT GO gages in the range above 4.760 in. to and including 12.260 in.

(5) a thick flanged type provided with ball handles and a plurality of adjusting slots for all coarse pitch GO gages in the range from 4.760 in. to and including 12.260 in.

(e) For thread setting and master ring gages, a solid thin flat disk type and a solid thick flanged type are provided in Table 39.

(f) For taper pipe threads a solid flanged type has been provided, as shown in Table 40 for nominal pipe sizes from ⅛ in. to 8 in., inclusive.

3.6 Taper Plug and Ring Gages for Checking Taper Lock Handles and Gaging Members

(a) It has been deemed advisable to formulate specifications for a complete set of finished gages for inspecting the taper shanks and handles of gages of taper lock design.

(b) A complete set consists of a taper plug, a taper ring, and a taper check plug for each size range. General details of construction will be apparent from Table 41.

(c) The taper limits established by the American National Standards Committee B47 for taper lock handles and shanks may be readily maintained by the use of gages shown in Table 41, in which the taper plug gage is of the single-end limit type, with a ground step representing the minimum size of hole. Equally satisfactory results may be secured by using a single-end taper plug gage, on which a scribed line represents the minimum size of hole and the shoulder of the gage represents the maximum size of hole. Both designs are sanctioned by ASME B47 Standards Committee.

3.7 Involute, Serrated, and Straight-Sided Spline Plug and Ring Gage Blanks

The development of standard gage blanks, required for a standard gaging system for involute, serrated, and straight-sided splines, was requested of the Committee. A system of such blanks is presented herein. (See Figs. 8 and 9, also Tables 42, 43, and 44.)

(a) The series of blanks for producing gages used in the gaging of internal splines (Tables 45 through 50) comprises the following:

(1) spline plug gages and relieved type spline plug gages, with integral handles, for sizes to and including 2 in.

(2) spline gaging members, pilot type spline gaging members, and pilot relieved type spline gaging members, with handles for same, for sizes above 1.5 in. to and including 8 in.

(3) spline tapered tooth plug gages, with either integral or detachable handles, for sizes to and including 8 in.

(4) plug gage stands

(5) spline tapered tooth plug gages for sizes to and including 8 in.

(b) The series of blanks for producing gages used in the gaging of external splines (Tables 51 through 53) comprises the following:

(1) spline ring gages and pilot type spline ring gages for sizes to and including 8 in.

(2) prong type spline relation ring gages in two models, one for space width greater than 0.070 in. and one for width of 0.070 in. or less

(3) double-end prong type spline alignment ring gages for sizes above 1 in. to and including 6 in.

(4) built-up double-end snap gages for tooth thicknesses to and including 0.750 in., see Table 54

3.8 Machine Taper Plug and Ring Gage Blanks

(a) Taper plug and ring gages for standard machine tapers have been in use for many years. In response to demands for standard designs of gage blanks for Morse, B & S, Jarno, A.S.A., and Series Nos. 10 to 50 milling machine tapers, the Committee has designed gage blanks as follows:

(1) taper ring gages, with tang, 24 blanks

(2) taper plug gages, with tang, 20 blanks
(3) taper ring gages, without tang, 48 blanks
(4) taper plug gages, without tang, 37 blanks

(b) As useful information but not comprising an essential part of the standard for gage blanks, the finished dimensions of these gages are also tabulated.

(c) Brown & Sharpe tapers as listed in Tables 55 through 58 are not used in all cases. Brown & Sharpe tapers in No. 4, 5, 7, 9, 10, and 11 sizes as used for milling machines, milling arbors, shank cutters, etc., have different plug depths and different diameters at the end of the sockets. No blank dimensions have been established for these but the essential finished dimensions for these sizes are as follows:

Taper No.	Plug Depth, *M*	Plugs, *K*, or Rings, *I*
4	$1\frac{1}{4}$	0.4023
5	$1\frac{3}{4}$	0.5232
7	3	0.7254
9	4	1.0671
10	$5\frac{11}{16}$	1.2893
11	$6\frac{3}{4}$	1.5318

3.9 Plain Adjustable Snap Gages

(a) Five styles of adjustable snap gages have been provided, as illustrated in Figs. 10 and 11 and as shown below.

Style	Description
Model A	Employing four gaging pins
Model B	Employing four gaging buttons, either square or round
Model C	Employing two gaging buttons, either square or round, and single block anvil
Model MC	A miniature snap gage with two gaging buttons, either square or round, and a single block anvil
Model E	Employing two gaging buttons, either square or round, and a single block anvil extending beyond the gaging buttons

(b) The frames of models A, B, and C have been so designed that common patterns can be used for all three. Frames are of the conventional C or semicircular type, of cast iron with solid web. Particular attention was given to weight, which approximated the average of former proprietary designs.

(c) The straight gaging pins are of circular cross section, an arcuate bevel being provided at the front edge where they first engage the work. The flanged gaging buttons are provided with either square or circular heads, the former being chamfered on their forward edges, and the latter being provided with an arcuate bevel where they first engage the work. The gap between GO and NOT GO has been kept to a minimum.

(d) A locking device was adopted that has stood the test of time – the three-piece type with two flats on the shank of the gaging button or pin, and a locking nut and locking bushing, each provided with a bevel flat. The design adopted incorporates the following:

(1) a design of frame that has proved to be exceptionally rigid under severe tests
(2) reduction of weight to as low a point as strength of materials permits
(3) distribution of metal to assure a nice balance and feel
(4) an effective and proved locking device
(5) suitable construction of gaging pins, buttons, and anvils to give ample rigidity and maintain accuracy
(6) ease and simplicity of adjustment
(7) provision for sealing
(8) careful selection of limits and tolerances to preserve accuracy and permit interchangeability

(e) General details of construction are shown in Figs. 10 and 11, and dimensions are given in Tables 60 through 72, and Fig. 12.

3.10 Adjustable Length Gages

(a) The American Gage Design Standard adjustable length gage employs, for gaging members and adjusting and locking means, the same fittings that are utilized in adjustable snap gages, as detailed in Table 73.

(b) The gage heads are designed in two models, as follows:

(1) the double-sided model with GO and NOT GO gaging members on opposite sides of the spacing tubes;
(2) the progressive model with two pairs of gaging members on the same side of the spacing tubes. All models may be used to cover a very wide range, as the spacing tubes may be constructed in any length desired. See Table 74.

(c) General details of construction and dimensions are shown in Figs. 13 through 19.

3.11 Thread Snap and Indicating Thread Gages

(a) *Thread Snap Gages.* Thread snap gages are usually adjustable and are comprised of a U-shaped frame on which are mounted one or two pair of gaging elements — one pair for checking GO (maximum-material limit), the second pair for checking NOT GO (minimum-material limit). These gages most commonly are made to check external product threads and, as such, are usually set to conventional thread setting plug gages.

(b) *Indicating Thread Gages.* Indicating thread gages usually comprise a frame with an arm on which are mounted one or more pairs of gaging elements and means for registering the variation of movement on a dial indicator or other means. These gages are usually set to conventional thread setting gages.

(c) There are no American Gage Design standards at present for thread snap or indicating thread gages. Various types are in general usage and no attempt is made to pass judgment on or standardize any particular designs. This paragraph is inserted in this document to establish recognition of these gages and their relationship to other types of gages. Possibly some details of

the designs can be standardized in future revisions of this Standard.

3.12 Master Disks

Master disks have been manufactured by various firms and have been widely used for the setting and checking of comparators and adjustable snap gages and for other applications where precision gage blocks might be used, but where gages of cylindrical form would be preferred. The designs shown in Tables 75 through 81, and Figs. 20 and 21 were adopted as standard by the Committee in 1938. These cover the range of size from above 0.105 in. to and including 8.010 in.

4 OFFICIAL MONOGRAM FOR DESIGNATING PRODUCTS MADE TO AMERICAN GAGE DESIGN STANDARDS

The optional use of the monogram shown in Fig. 22 to identify gages made to American Gage Design Standards is sanctioned by the Committee. The monogram, it will be noted, consists of the initial "AD," the right-hand side of the "A" and the straight side of the "D" being common. The monogram, if used, should be placed adjacent to the maker's trademark.

5 APPLICATION OF AMERICAN GAGE DESIGN STANDARDS TO SPECIAL TYPES OF GAGES — RECOMMENDED PRACTICE

(a) While the American Gage Design Standards have been adopted with specific types and sizes of gages in mind, it is recommended that standard blanks, handles, etc., be used wherever practicable in the design and manufacture of special gages, the design of which does not come within the scope of the Committee's work.

(b) Where lengths and diameters are entirely special and blanks of standard dimensions cannot be utilized, it is further recommended that standard handles and fittings be used.

(c) Observance of the practices in paras. (a) and (b) will tend to reduce costs and facilitate procurement.

(d) There are many commonly used gages that are not adaptable to detailed standardization, but that can be classified, to advantage, as to types or general designs. A number of these have been considered, and it is recommended that the general construction outlined in Figs. 23 through 26 and Table 82 be adhered to whenever practicable.

6 FLUSH PIN GAGES

(a) There are many and varied types of flush pin gages in use throughout industry. Although each gage is designed to fit a particular application, the body of the gage fits one of several basic design patterns in the greater majority of cases.

(b) Because of the wide use of this type of gage, some expansion to the previous design was in order, and several recommended styles with dimensions are practical for the different size ranges. It was felt that this would be a benefit to both users and suppliers.

(c) Four variations of style were adopted. These are illustrated in Table 83 and Figs. 25, 26, and 27 as follows:

(1) Style 1 — the barrel type with pin diameters ranging from 0.250 in. to 0.750 in. (shown in Table 83).

(2) Style 2 — the bar type with bar lengths in 2 in. increments. While the $^{7}/_{16}$ in. diameter pin seems the most common and thus shown as the standard, other pin diameters can be supplied according to application requirements as defined by the user (shown in Fig. 25).

(3) Styles 3A and 3B — the bar spanner and bar countersink type, being applicable for countersink depth dimensions or for depth dimensions where a straight pin will not reach (shown in Figs. 26 and 27). Figure 28 was added to illustrate a countersink application of the gage.

(d) The illustrations show the gaging step to be ground on the pin as this represents the more convenient and less expensive method of manufacture, and thus will be considered the standard method of completing those gages whose pin diameters are greater than 0.282 in. diameter. Gage users who prefer that the step be ground on the gage body should so specify when ordering. Gages having a pin diameter of 0.282 in. diameter or smaller will normally have the step ground on the body to facilitate greater efficiency of usage.

7 DOUBLE-END BUILT-UP SNAP GAGES

(a) Because built-up snap gages are always designed to fit special applications, they are not readily adaptable to detailed standardization. As a means of affording some measure of cost savings, however, the Committee has expanded the recommended design to cover two size ranges and has revised the dimensioning to provide greater applicability.

(b) Figure 29 shows the recommended dimensions for gages in the measuring range of 0.000 in. to 0.250 in., and Fig. 30 shows the dimensions for gages in the measuring range of above 0.250 in. to 1.000 in.

(c) The Committee would like to point out that while it is imperative that the upper and lower jaws be hardened, the center piece or spacer seldom needs to be hardened. Recommended material for the spacer is either mild steel or tool steel left soft. Cold rolled steel should never be used due to its instability.

8 FLAT PLUG GAGES

(a) The recommended design for flat plug gages is shown in Tables 84 and 85, which indicates the gage thickness for the various size ranges. The thicknesses

shown provide for the manufacture of blanks from available standard thicknesses of heat treatable flat ground stock. A progressive plug member is illustrated so as to include sufficient dimensioning to cover all gage types and applications.

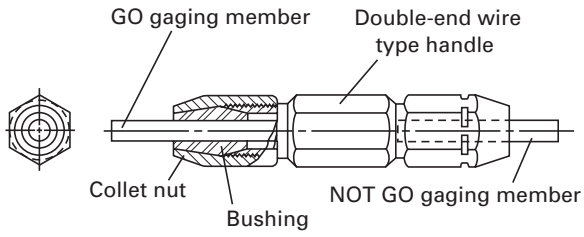
(b) Recognizing that flat plug gages will perhaps be more often used as single-end NOT GO gages as a means of detecting oversize conditions where out-of-roundness exists, and when used as such, as well as in other applications, a handle would be highly desirable, the Committee has added a second illustration showing the additional dimensioning required to provide the threads and locking grooves necessary for handle attachment. A table accompanies this second illustration to show the thread and screw sizes for the two size ranges. Note that the dimensioning is such that the same tooling used for trilock gages can be used for the bilock design here recommended.

(c) It should be recognized that the addition of the provisions for the attachment of a handle adds an additional cost to the manufacture of the gage blank, and that in many applications the handle will not be a definite advantage. Gages, therefore, will be furnished with such provisions only specified by the user.

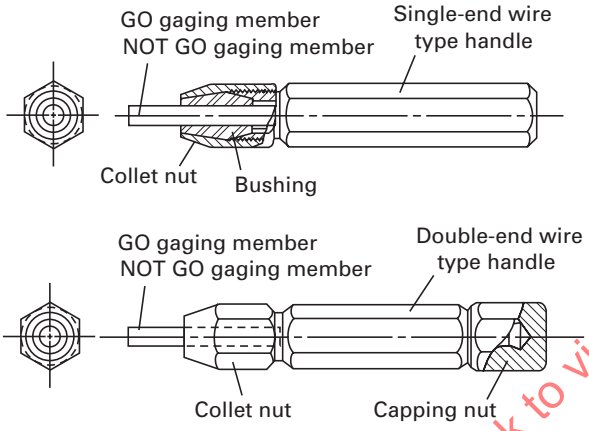
9 HANDLES, BILOCK, FOR FLAT PLUG GAGES

Handles for flat plug gages, as illustrated in Table 85, are of the bilock type with the configuration of the locking prongs developed so that manufacture can be accomplished using the same tooling as is used in the manufacture of trilock handles. These handles are hexagonal, and for the present are designed only for single-end application.

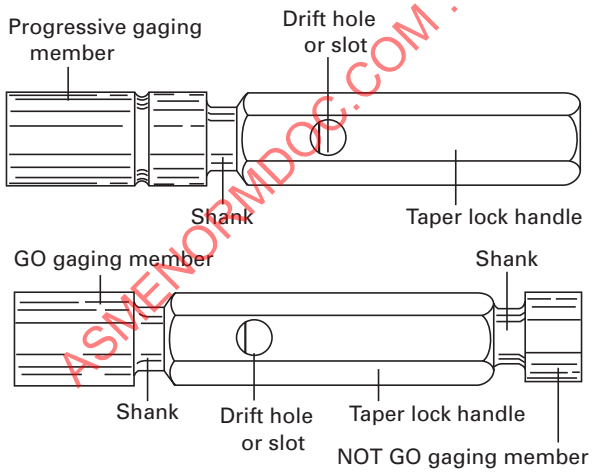
Fig. 1 Plain Cylindrical Plug Gages, Details of Construction — Range Above 0.010 in. to and Including 8.010 in.



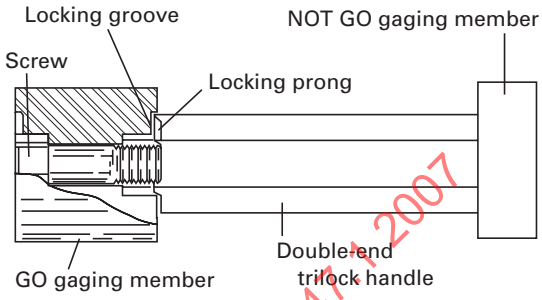
(a) Range — Above 0.010 in. to and Including 1.010 in.

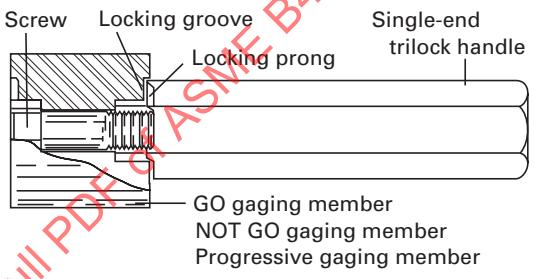


(b) Range — Above 0.010 in. to and Including 1.010 in.

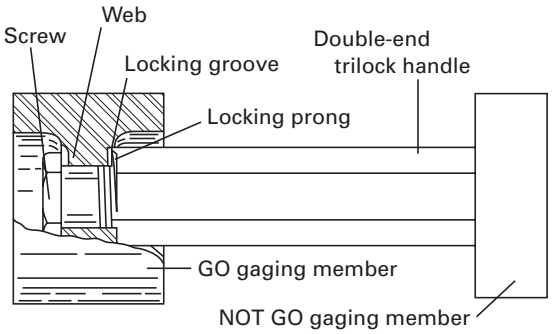


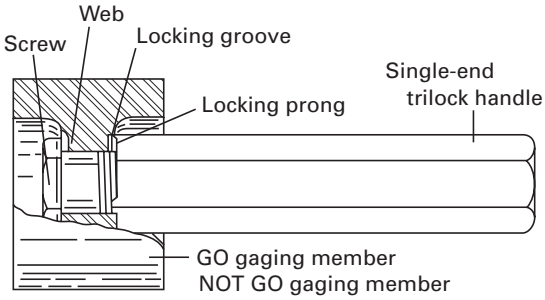
(c) Range — Above 0.059 in. to and Including 1.510 in.





(d) Range — Above 0.760 in. to and Including 2.510 in. [Note (1)]

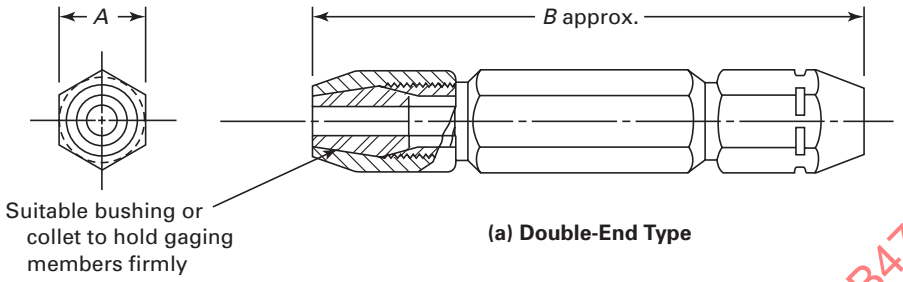




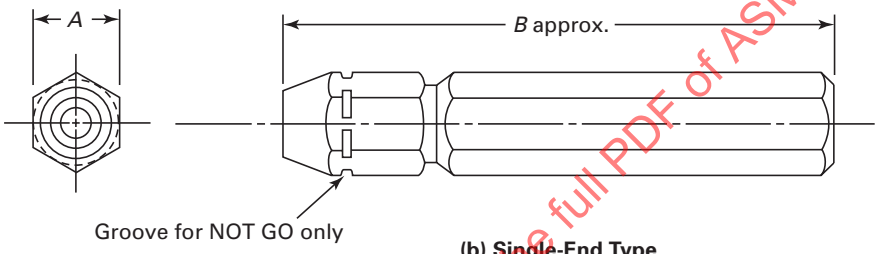
(e) Range — Above 2.510 in. to and Including 8.010 in.

NOTE:
(1) For range above 0.760 in. to and including 1.510 in., the locking screw should be tightened only enough to hold member to handle securely, thereby avoiding excessive distortion of gaging member.

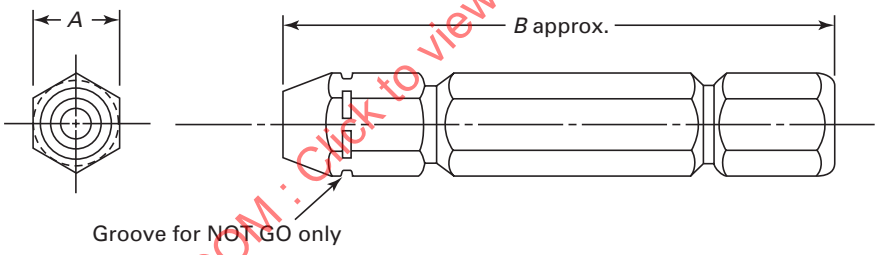
Table 1 Handles for Wire Type Plain Cylindrical and Wire Type Thread Plug Gages, Wire Type Design — Range Above 0.010 in. to and Including 1.010 in.



(a) Double-End Type



(b) Single-End Type



(c) Single-End Type (Alt.) [Note (1)]

Handle Size No.			Size Range, Nominal			
Double End	Single End	Single End (Alt.)	Above	To and Including	*A*	Min. *B*
1W	1W-S	1W-A	0.010	0.075	1/4	1 29/32
2W	2W-S	2W-A	0.075	0.180	3/8	2 15/32
3W	3W-S	3W-A	0.180	0.281	9/16	3 1/8
4W	4W-S	4W-A	0.281	0.406	11/16	3 19/32
5W	5W-S	5W-A	0.406	0.510	13/16	4 3/16
6W	6W-S	6W-A	0.510	0.635	15/16	4 17/32
7W	7W-S	7W-A	0.635	0.760	1 1/16	4 21/32
8W	8W-S	8W-A	0.760	1.010	1 1/4	5 1/4

GENERAL NOTES:

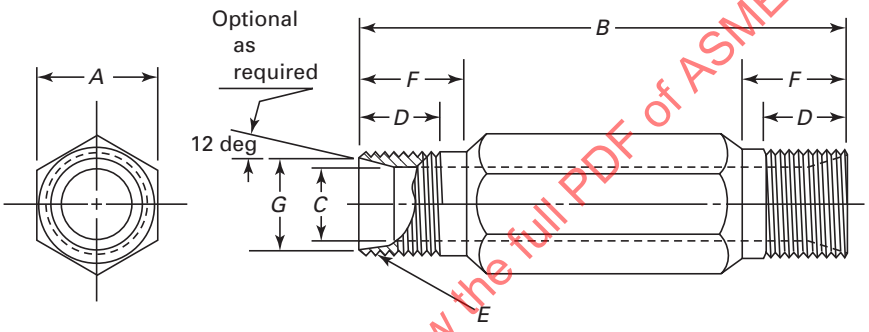
(a) All dimensions are in inches.

(b) If collet nuts are colored, they shall be green for GO and red for NOT GO.

NOTE:

(1) The alternate single-end type is a double-end type converted to suit single-end applications.

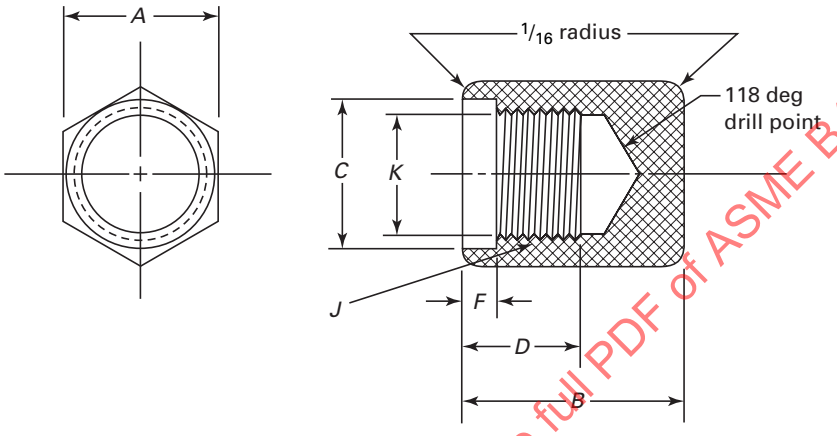
Table 2 Wire Type Plug Gage Handles, Details of Body



Handle Size No.	Size Range Above	Size Range To and Including	A	B Min.	C	D	E	F	G
1W	0.010	0.075	1/4	1 5/16	3/32	9/32	0.216-32 UNEF-2A	21/64	0.151
2W	0.075	0.180	3/8	1 27/32	3/16	5/16	0.3125-32 UNEF-2A	7/16	0.235
3W	0.180	0.281	9/10	2 1/8	19/64	13/32	0.500-28 UNEF-2A	1/2	0.348
4W	0.281	0.406	11/16	2 19/32	27/64	7/16	0.625-28 UN-2A	5/8	0.473
5W	0.406	0.510	13/16	3 1/16	33/64	5/8	0.750-28 UN-2A	3/4	0.588
6W	0.510	0.635	15/16	3 1/4	41/64	5/8	0.875-28 UN-2A	3/4	0.740
7W	0.635	0.760	1 1/16	3 3/8	49/64	5/8	1.000-28 UN-2A	3/4	0.865
8W	0.760	1.010	1 1/4	4	1 1/32	5/8	1.1875-28 UN-2A	3/4	. . .

GENERAL NOTE: All dimensions except *E* are in inches.

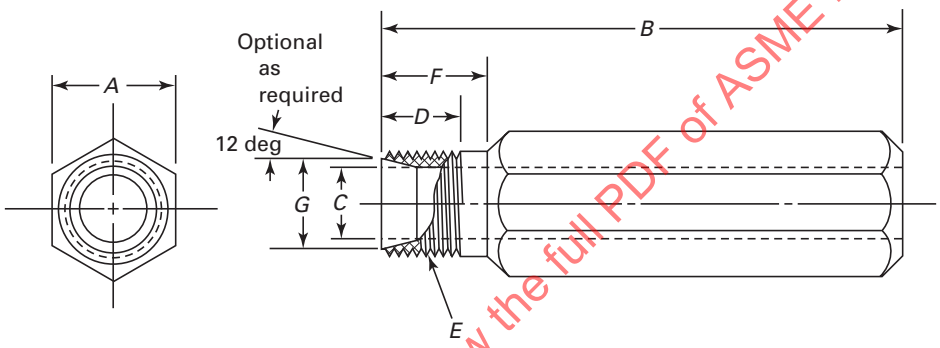
Table 3 Wire Type Plug Gage Handles, Details of Capping Nut



Handle Size No.	Size Range, Nominal: Above	Size Range, Nominal: To and Including	A	B	C	D	F	J	Minor Diameter, K
1W-A	0.010	0.075	1/4	5/8	0.220	5/16	3/32	0.216-32 UNEF-2B	0.182
1W-A	0.010	0.075	1/4	5/8	0.230	5/16	3/32	0.216-32 UNEF-2B	0.190
2W-A	0.075	0.180	3/8	11/16	0.316	3/8	1/8	0.3125-32 UNEF-2B	0.279
2W-A	0.075	0.180	3/8	11/16	0.326	3/8	1/8	0.3125-32 UNEF-2B	0.286
3W-A	0.180	0.281	9/16	15/16	0.504	7/16	1/8	0.500-28 UNEF-2B	0.461
3W-A	0.180	0.281	9/16	15/16	0.514	7/16	1/8	0.500-28 UNEF-2B	0.470
4W-A	0.281	0.406	11/16	1 1/16	0.630	9/16	1/4	0.625-28 UN-2B	0.586
4W-A	0.281	0.406	11/16	1 1/16	0.640	9/16	1/4	0.625-28 UN-2B	0.595
5W-A	0.406	0.510	13/16	1 1/4	0.755	11/16	3/16	0.750-28 UN-2B	0.711
5W-A	0.406	0.510	13/16	1 1/4	0.765	11/16	3/16	0.750-28 UN-2B	0.720
6W-A	0.510	0.635	15/16	1 9/32	0.880	11/16	3/16	0.875-28 UN-2B	0.836
6W-A	0.510	0.635	15/16	1 9/32	0.890	11/16	3/16	0.875-28 UN-2B	0.845
7W-A	0.635	0.760	1 1/16	1 9/32	1.005	11/16	3/16	1.000-28 UN-2B	0.961
7W-A	0.635	0.760	1 1/16	1 9/32	1.015	11/16	3/16	1.000-28 UN-2B	0.970
8W-A	0.760	1.010	1 1/4	1 5/16	1.193	1 3/16	3/16	1.1875-28 UN-2B	1.156
8W-A	0.760	1.010	1 1/4	1 5/16	1.203	1 3/16	3/16	1.1875-28 UN-2B	1.166

GENERAL NOTE: All dimensions except *J* are in inches.

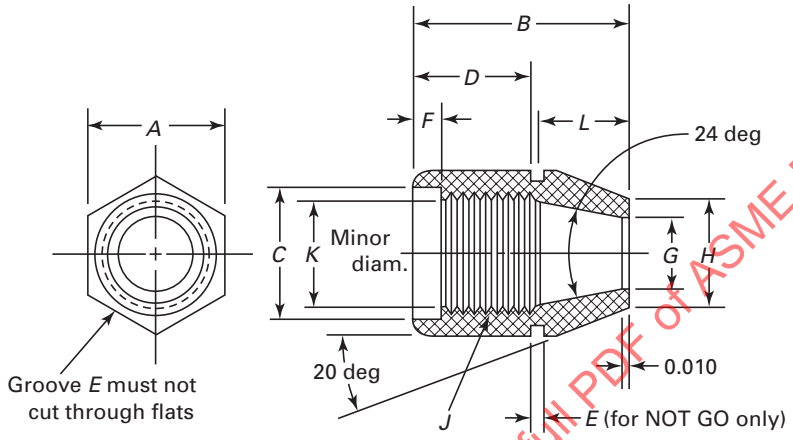
Table 4 Single-End Wire Type Plug Gage Handles, Details of Body



Handle Size No.	Size Range, Nominal: Above	Size Range, Nominal: To and Including	A	Min. B	C	D	E	F	G
1W-S	0.010	0.075	1/4	1 5/8	3/32	9/32	0.216-32 UNEF-2A	21/64	0.151
2W-S	0.075	0.180	3/8	2 5/32	3/16	5/16	0.3125-32 UNEF-2A	7/16	0.235
3W-S	0.180	0.281	9/16	2 5/8	19/64	13/32	0.500-28 UNEF-2A	1/2	0.348
4W-S	0.281	0.406	11/16	3 3/32	27/64	7/16	0.625-28 UN-2A	5/8	0.473
5W-S	0.406	0.510	13/16	3 5/8	33/64	5/8	0.750-28 UN-2A	3/4	0.588
6W-S	0.510	0.635	15/16	3 7/8	41/64	5/8	0.875-28 UN-2A	3/4	0.740
7W-S	0.635	0.760	1 1/16	4	49/64	5/8	1.000-28 UN-2A	3/4	0.865
8W-S	0.760	1.010	1 1/4	4	1 3/32	5/8	1.1875-28 UN-2A	3/4	. . .

GENERAL NOTE: All dimensions except *E* are in inches.

Table 5 Wire Type Plug Gage Collet Nuts



Handle Size No.	Size Range												
	Above	To and Including	A	B	C	D	E	F	G	H	J	K	L
1W	0.010	0.075	1/4	9/16	0.220	11/32	1/32	3/32	0.078	7/32	0.216-32 UNEF-2B	0.182	5/32
1W	0.010	0.075	1/4	9/16	0.230	11/32	1/32	3/32	0.078	7/32	0.216-32 UNEF-2B	0.190	5/32
2W	0.075	0.180	3/8	11/16	0.316	7/16	1/32	1/8	0.185	5/16	0.3125-32 UNEF-2B	0.279	7/32
2W	0.075	0.180	3/8	11/16	0.326	7/16	1/32	1/8	0.185	5/16	0.3125-32 UNEF-2B	0.286	7/32
3W	0.180	0.281	9/16	15/16	0.504	1/2	1/16	1/8	0.285	7/16	0.500-28 UNEF-2B	0.461	13/32
3W	0.180	0.281	9/16	15/16	0.514	1/2	1/16	1/8	0.285	7/16	0.500-28 UNEF-2B	0.470	13/32
4W	0.281	0.406	11/16	1 1/16	0.630	5/8	1/16	1/4	0.412	9/16	0.625-28 UN-2B	0.586	7/16
4W	0.281	0.406	11/16	1 1/16	0.640	5/8	1/16	1/4	0.412	9/16	0.625-28 UN-2B	0.595	7/16
5W	0.406	0.510	13/16	1 1/4	0.755	3/4	1/16	3/16	0.515	21/32	0.750-28 UN-2B	0.711	1/2
5W	0.406	0.510	13/16	1 1/4	0.765	3/4	1/16	3/16	0.515	21/32	0.750-28 UN-2B	0.720	1/2
6W	0.510	0.635	15/16	1 9/32	0.880	13/16	1/16	3/16	0.640	3/4	0.875-28 UN-2B	0.836	1/2
6W	0.510	0.635	15/16	1 9/32	0.890	13/16	1/16	3/16	0.640	3/4	0.875-28 UN-2B	0.845	1/2
7W	0.635	0.760	1 1/16	1 9/32	1.005	13/16	1/16	3/16	0.765	7/8	1.000-28 UN-2B	0.961	1/2
7W	0.635	0.760	1 1/16	1 9/32	1.015	13/16	1/16	3/16	0.765	7/8	1.000-28 UN-2B	0.970	1/2
8W	0.760	1.010	1 1/4	1 5/16	1.193	3/4	1/16	3/16	1.015	1 1/8	1.1875-28 UN-2B	1.156	17/32
8W	0.760	1.010	1 1/4	1 5/16	1.203	3/4	1/16	3/16	1.015	1 1/8	1.1875-28 UN-2B	1.166	17/32

GENERAL NOTES:

(a) All dimensions except *J* are in inches.

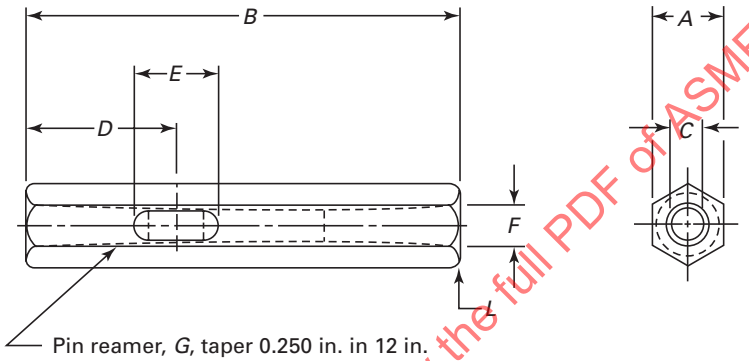
(b) If collet nuts are colored, they shall be green for GO and red for NOT GO.

Table 6 Wire Type Plug Gage Collet Bushings, Size Ranges

Bushing No.	Size Range, in.	Bushing No.	Size Range, in.
1-W-0.015	0.010–0.015	4-W-0.331	0.321–0.331
1-W-0.020	0.015–0.020	4-W-0.341	0.331–0.341
1-W-0.025	0.020–0.025	4-W-0.351	0.341–0.351
1-W-0.030	0.025–0.030	4-W-0.361	0.351–0.361
1-W-0.035	0.030–0.035	4-W-0.371	0.361–0.371
1-W-0.040	0.035–0.040	4-W-0.382	0.371–0.382
1-W-0.045	0.040–0.045	4-W-0.394	0.382–0.394
1-W-0.050	0.045–0.050	4-W-0.406	0.394–0.406
1-W-0.055	0.050–0.055	5-W-0.420	0.406–0.420
1-W-0.060	0.055–0.060	5-W-0.435	0.420–0.435
1-W-0.065	0.060–0.065	5-W-0.450	0.435–0.450
1-W-0.070	0.065–0.070	5-W-0.465	0.450–0.465
1-W-0.075	0.070–0.075	5-W-0.480	0.465–0.480
2-W-0.082	0.075–0.082	5-W-0.495	0.480–0.495
2-W-0.089	0.082–0.089	5-W-0.510	0.495–0.510
2-W-0.096	0.089–0.096	6-W-0.532	0.510–0.532
2-W-0.103	0.096–0.103	6-W-0.547	0.532–0.547
2-W-0.110	0.103–0.110	6-W-0.563	0.547–0.563
2-W-0.117	0.110–0.117	6-W-0.579	0.563–0.579
2-W-0.124	0.117–0.124	6-W-0.594	0.579–0.594
2-W-0.131	0.124–0.131	6-W-0.610	0.594–0.610
2-W-0.138	0.131–0.138	6-W-0.625	0.610–0.625
2-W-0.145	0.138–0.145	6-W-0.635	0.625–0.635
2-W-0.152	0.145–0.152	7-W-0.656	0.635–0.656
2-W-0.159	0.152–0.159	7-W-0.672	0.656–0.672
2-W-0.166	0.159–0.166	7-W-0.688	0.672–0.688
2-W-0.173	0.166–0.173	7-W-0.704	0.688–0.704
2-W-0.180	0.173–0.180	7-W-0.719	0.704–0.719
3-W-0.188	0.180–0.188	7-W-0.735	0.719–0.735
3-W-0.196	0.188–0.196	7-W-0.750	0.735–0.750
3-W-0.204	0.196–0.204	7-W-0.760	0.750–0.760
3-W-0.212	0.204–0.212	8-W-0.781	0.760–0.781
3-W-0.220	0.212–0.220	8-W-0.812	0.781–0.812
3-W-0.228	0.220–0.228	8-W-0.843	0.812–0.843
3-W-0.236	0.228–0.236	8-W-0.875	0.843–0.875
3-W-0.244	0.236–0.244	8-W-0.906	0.875–0.906
3-W-0.252	0.244–0.252	8-W-0.937	0.906–0.937
3-W-0.261	0.252–0.261	8-W-0.968	0.937–0.968
3-W-0.271	0.261–0.271	8-W-1.010	0.968–1.010
3-W-0.281	0.271–0.281		
4-W-0.291	0.281–0.291		
4-W-0.301	0.291–0.301		
4-W-0.311	0.301–0.311		
4-W-0.321	0.311–0.321		

GENERAL NOTE: Bushings must be adjustable for any plug within the respective size ranges tabulated.

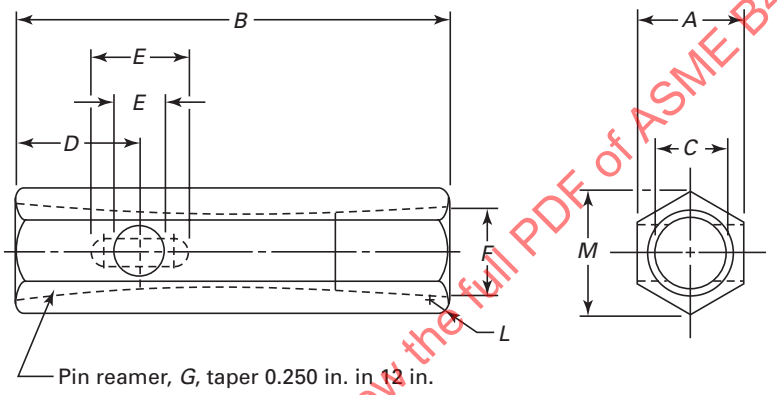
Table 7 Handles for Plain Cylindrical and Thread Plug Gages, Taper Lock Design — Range Above 0.059 in. to and Including 0.230 in.



Handle Size No.	Nominal Range, Thread Plug Diameters, Inclusive		Decimal Range, Plain and Thread Plug Diameters		General Dimensions								
	From No.	To No.	Above	To and Including	*A*	*B*	Drill Size, *C*	*D*	*E*	*F* Min.	*F* Max.	*G*, No.	*L*
000	0	3	0.059	0.105	1/4	1 1/2	No. 34 (0.111)	9/16	5/64 × 1/4	0.125	0.126	000	1/32
00	4	6	0.105	0.150	1/4	1 3/4	No. 29 (0.136)	5/8	3/32 × 5/16	0.155	0.156	0	1/32
0	8	12	0.150	0.230	5/16	2	No. 20 (0.161)	11/16	1/8 × 3/8	0.180	0.181	2	1/32

GENERAL NOTES:
(a) All dimensions except *C* are in inches.
(b) It shall be standard practice to insert GO member in the end of the handle having the drift hole.

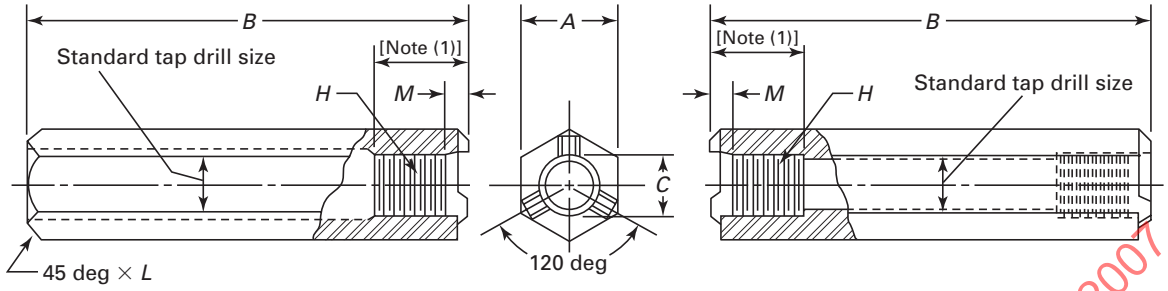
Table 8 Handles for Plain Cylindrical and Thread Plug Gages, Taper Lock Design — Range Above 0.230 in. to and Including 1.510 in.



Handle Size No.	Nominal Range, Thread Plug Diameters, Inclusive		Decimal Range, Plain and Thread Plug Diameters		General Dimensions									
										F		*G*,		Reference,
	From	To	Above	To and Including	*A*	*B*	*C*	*D*	*E*	Min.	Max.	No.	*L*	*M*
1	1/4	5/16	0.230	0.365	3/8	2 3/4	7/32	25/32	1/8 × 1/2	0.239	0.240	4	1/16	0.433
2	3/8	1/2	0.365	0.510	1/2	3	0.29	25/32	15/64	0.309	0.310	6	1/16	0.577
3	9/16	3/4	0.510	0.825	11/16	3 1/4	25/64	53/64	9/32	0.409	0.410	7	3/32	0.794
4	7/8	1 1/8	0.825	1.135	7/8	3 5/8	37/64	63/64	3/8	0.609	0.610	10	3/32	1.010
5	1 1/4	1 1/2	1.135	1.510	1	4	25/32	1 1/8	7/16	0.809	0.810	11	1/8	1.155

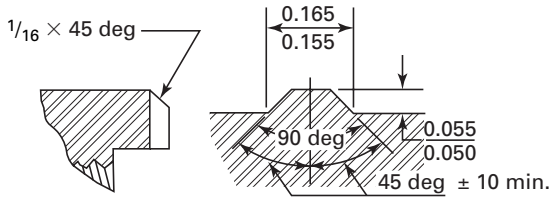
GENERAL NOTES:
(a) All dimensions except *G* are in inches.
(b) Taper lock handles are standard for all taper pipe thread plug gages to and including NPS 2 (see Table 27).
(c) It shall be standard practice to insert the GO member in the end of the handle having the drift hole.

Table 9 Handles and Screws for Plain Cylindrical, Thread, and Spline (Involute, Serrated, Straight-Sided) Plug Gages, Trilock Design — Range Above 0.760 in. to and Including 8.010 in.

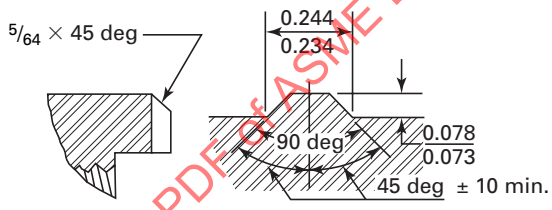


Single-End Handle

Double-End Handle



$2^1/_2$, $3^1/_2$, and $4^1/_2$ Handles [Note (2)]

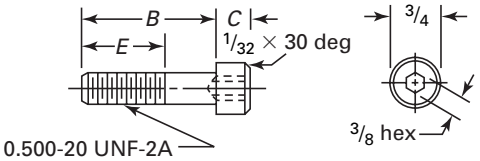


$5^1/_2$, 6, and 7 Handles [Note (2)]

Handle Size No.	Nominal Range		Decimal Range		General Dimensions						
	From	To	Above	To and Including	*A*	*B*	*C*	*H*	*L*	*M*	Screw No.
$2^1/_2$	$^3/_4$	$^{15}/_{16}$	0.760	0.947	$^1/_2$	4	$^5/_{16}$	0.250-20 UNC-2B	$^1/_{16}$	$^1/_8$	3
$3^1/_2$	$^{15}/_{16}$	$1^1/_8$	0.947	1.135	$^5/_8$	4	$^{25}/_{64}$	0.250-20 UNC-2B	$^1/_{16}$	$^1/_8$	3
$4^1/_2$	$1^1/_8$	$1^1/_2$	1.135	1.510	$^{13}/_{16}$	4	$^9/_{16}$	0.375-16 UNC-2B	$^3/_{32}$	$^1/_8$	4
$5^1/_2$	$1^1/_2$	2	1.510	2.010	1	$4^1/_2$	$^3/_4$	0.500-20 UNF-2B	$^1/_8$	$^1/_4$	1
6	2	$2^1/_2$	2.010	2.510	$1^1/_8$	5	$^{13}/_{16}$	0.500-20 UNF-2B	$^1/_8$	$^1/_4$	1
7	$2^1/_2$	8	2.510	8.010	$1^1/_4$	6	$^{15}/_{16}$	0.875-14 UNF-2B	$^5/_{32}$	$^1/_4$	2

NOTES:
(1) Thread depth to be $^7/_8$ in. minimum on both ends of double end.
(2) Enlarged sections of locking prongs.

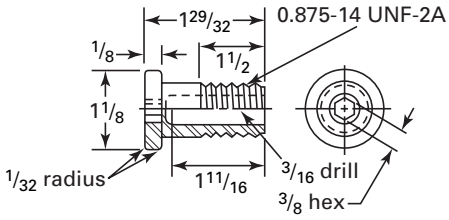
Table 9 Handles and Screws for Plain Cylindrical, Thread, and Spline (Involute, Serrated, Straight-Sided) Plug Gages, Trilock Design — Range Above 0.760 in. to and Including 8.010 in. (Cont'd)



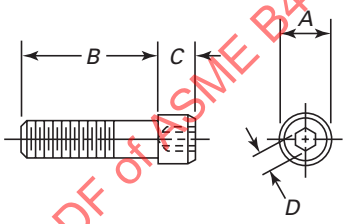
(a) Screw No. 1

Screw No. 1

Plug	B	C	E
GO (for fine threads)			
16 TPI and finer	1 1/2	5/16	1 1/4
NOT GO	1 1/2	5/16	1 1/4
GO	2 1/4	1/2	1 1/4
Progressive	3	1/2	1 1/4



(b) Screw No. 2



(c) Screw Nos. 3 and 4

Screw Nos. 3 and 4

Screw No.	Socket Head Cap Screw Size	A	Length, B — GO: Plain and Coarser Than 12 TPI	GO: 12 Pitch and Finer	NOT GO: Plain	NOT GO: Thread	C	D
3	0.250-20 UNC-2A	3/8	1 1/2	1 1/2	1	1	1/4	3/16
4	0.375-16 UNC-2A	9/16	1 1/2	1 1/4	1 1/4	1 1/4	3/8	5/16

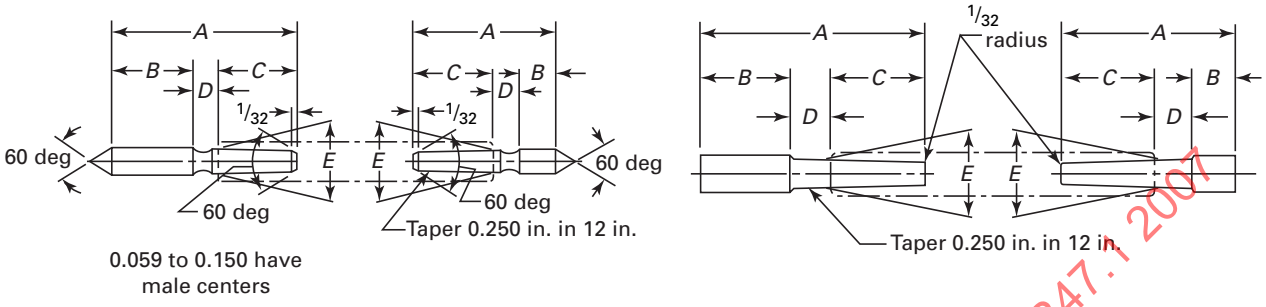
GENERAL NOTES:

(a) All dimensions are in inches.

(b) Screw No. 2 is 2 3/4 in. under the head when used for progressive length blanks, or truncated set plug blanks for thick rings (see Table 26).

(c) *C* dimension for NOT GO screw is 1/4 in.

Table 10 Plain Cylindrical Plug Gaging Members, Taper Lock Design — Range Above 0.059 in. to and Including 0.230 in.



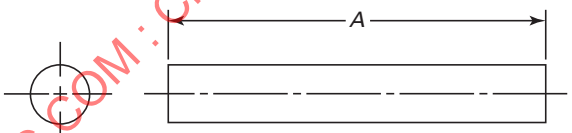
Handle Size No.	Range in Diameter Above	Range in Diameter To and Including	General Dimensions GO A	GO B	GO C	GO D	GO E Min.	GO E Max.	NOT GO A	NOT GO B	NOT GO C	NOT GO D	NOT GO E Min.	NOT GO E Max.
000	0.059	0.105	$1\frac{1}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{16}$	0.125	0.126	$\frac{7}{8}$	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{3}{16}$	0.125	0.126
00	0.105	0.150	$1\frac{1}{8}$	$\frac{3}{8}$	$\frac{9}{16}$	$\frac{3}{16}$	0.155	0.156	$\frac{31}{32}$	$\frac{7}{32}$	$\frac{9}{16}$	$\frac{3}{16}$	0.155	0.156
0	0.150	0.230	$1\frac{9}{32}$	$\frac{13}{32}$	$\frac{5}{8}$	$\frac{1}{4}$	0.180	0.181	$1\frac{5}{32}$	$\frac{9}{32}$	$\frac{5}{8}$	$\frac{1}{4}$	0.180	0.181

GENERAL NOTES:

(a) All dimensions are in inches.

(b) Progressive style plain plug blanks would have *B* gaging lengths of $\frac{11}{16}$ in., $\frac{23}{32}$ in., and 1 in., respectively, which allows for GO and NOT GO sections of standard length plus a $\frac{1}{16}$ in. minimum recess in between.

Table 11 Plain Cylindrical Plug Gage Blanks, Wire Type Design — Range Above 0.010 in. to and Including 1.010 in.



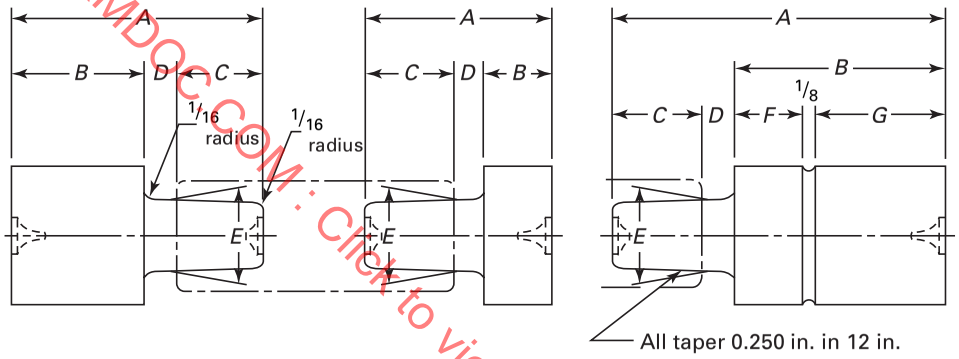
Handle Size No.	Range in Diameters Above	Range in Diameters To and Including	GO and NOT GO Length, *A* [Note (1)]
1W, 1W-S, or 1W-A	0.010	0.075	1
2W, 2W-S, or 2W-A	0.075	0.180	$1\frac{1}{4}$
3W, 3W-S, or 3W-A	0.180	0.281	$1\frac{1}{2}$
4W, 4W-S, or 4W-A	0.281	0.406	$1\frac{3}{4}$
5W, 5W-S, or 5W-A	0.406	0.510	2
6W, 6W-S, or 6W-A	0.510	0.635	2
7W, 7W-S, or 7W-A	0.635	0.760	2
8W, 8W-S, or 8W-A	0.760	1.010	2

GENERAL NOTE: All dimensions are in inches.

NOTE:

(1) Lengths shown for *A* in ranges above 0.010 in. to and including 1.010 in. are minimum. Commercially available lengths exceeding these values shall be considered acceptable alternates.

Table 12 Plain Cylindrical Plug Gaging Members, Taper Lock Design — Range Above 0.230 in. to and Including 1.510 in.

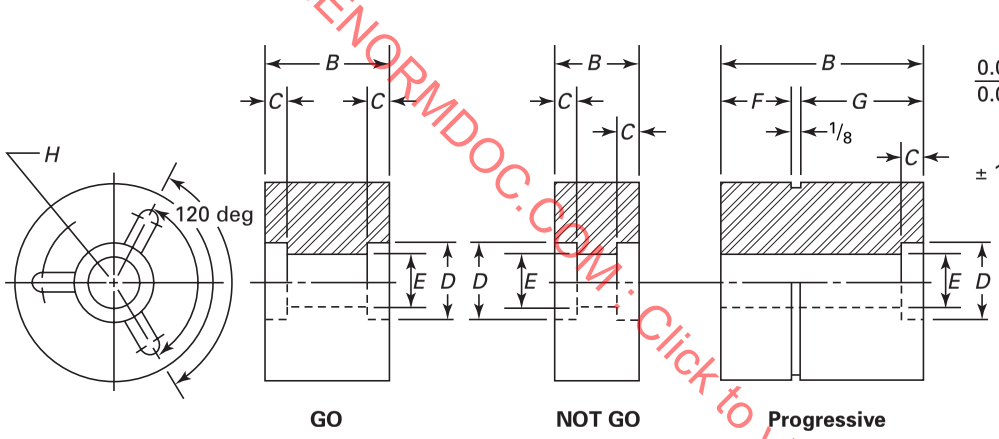


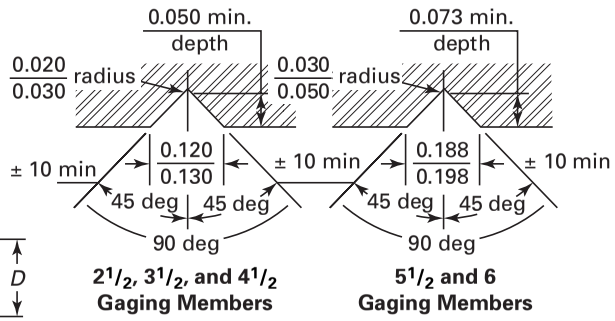
GO NOT GO Progressive

Handle Size No.	Range on Diameters		General Dimensions																			
			GO						NOT GO						Progressive							
							E					E							E			
	Above	To and Including	A	B	C	D	Min.	Max.	A	B	C	D	Min.	Max.	A	B	C	D	Min.	Max.	F	G
1	0.230	0.365	$1\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{4}$	0.239	0.240	$1\frac{5}{16}$	$\frac{5}{16}$	$\frac{3}{4}$	$\frac{1}{4}$	0.239	0.240	$2\frac{3}{16}$	$1\frac{3}{16}$	$\frac{3}{4}$	$\frac{1}{4}$	0.239	0.240	$\frac{5}{16}$	$\frac{3}{4}$
2	0.365	0.510	2	1	$\frac{3}{4}$	$\frac{1}{4}$	0.309	0.310	$1\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{4}$	0.309	0.310	$2\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{4}$	0.309	0.310	$\frac{3}{8}$	1
3	0.510	0.825	$2\frac{1}{4}$	$1\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{4}$	0.408	0.410	$1\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{4}$	0.408	0.410	$2\frac{7}{8}$	$1\frac{7}{8}$	$\frac{3}{4}$	$\frac{1}{4}$	0.408	0.410	$\frac{1}{2}$	$1\frac{1}{4}$
4	0.825	1.135	$2\frac{11}{16}$	$1\frac{1}{2}$	$\frac{7}{8}$	$\frac{5}{16}$	0.608	0.610	$1\frac{13}{16}$	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{5}{16}$	0.608	0.610	$3\frac{5}{16}$	$2\frac{1}{8}$	$\frac{7}{8}$	$\frac{5}{16}$	0.608	0.610	$\frac{5}{8}$	$1\frac{1}{2}$
5	1.135	1.510	3	$1\frac{5}{8}$	1	$\frac{3}{8}$	0.808	0.810	$2\frac{1}{8}$	$\frac{3}{4}$	1	$\frac{3}{8}$	0.808	0.810	$3\frac{3}{4}$	$2\frac{3}{8}$	1	$\frac{3}{8}$	0.808	0.810	$\frac{3}{4}$	$1\frac{5}{8}$

GENERAL NOTES:
(a) All dimensions are in inches.
(b) Above dimensions may also be used for the manufacture of HI-LO thread setting plug blanks.

Table 13 Plain Cylindrical Plug Gaging Members, Trilock Design — Range Above 0.760 in. to and Including 2.510 in.





Enlarged section of internal locking grooves – three required on both ends of all except progressive gages [see Note (1)]

Handle Size No.	Plain Plug Diameters				GO				NOT GO				Progressive						
	Nominal Range Inclusive		Decimal Range																
	From	To	Above	To and Including	B	C	D	E	B	C	D	E	B	C	D	E	F	G	H
2 1/2	3/4	15/16	0.760	0.947	1 1/4	1/4	25/64	17/64	3/4	1/4	25/64	17/64	(1)	...	...	...	...	...	15/64
3 1/2	15/16	1 1/8	0.947	1.135	1 3/8	1/4	25/64	17/64	3/4	1/4	25/64	17/64	(1)	...	...	...	...	...	21/64
4 1/2	1 1/8	1 1/2	1.135	1.510	1 1/2	3/8	37/64	25/64	3/4	1/4	37/64	25/64	(1)	...	...	...	...	...	27/64
5 1/2	1 1/2	2	1.510	2.010	1 7/8	1/2	25/32	17/32	7/8	5/16	25/32	17/32	2 7/8	1/2	25/32	17/32	7/8	1 7/8	9/16
6	2	2 1/2	2.010	2.510	2	1/2	25/32	17/32	7/8	5/16	25/32	17/32	3	1/2	25/32	17/32	7/8	2	5/8

GENERAL NOTES:

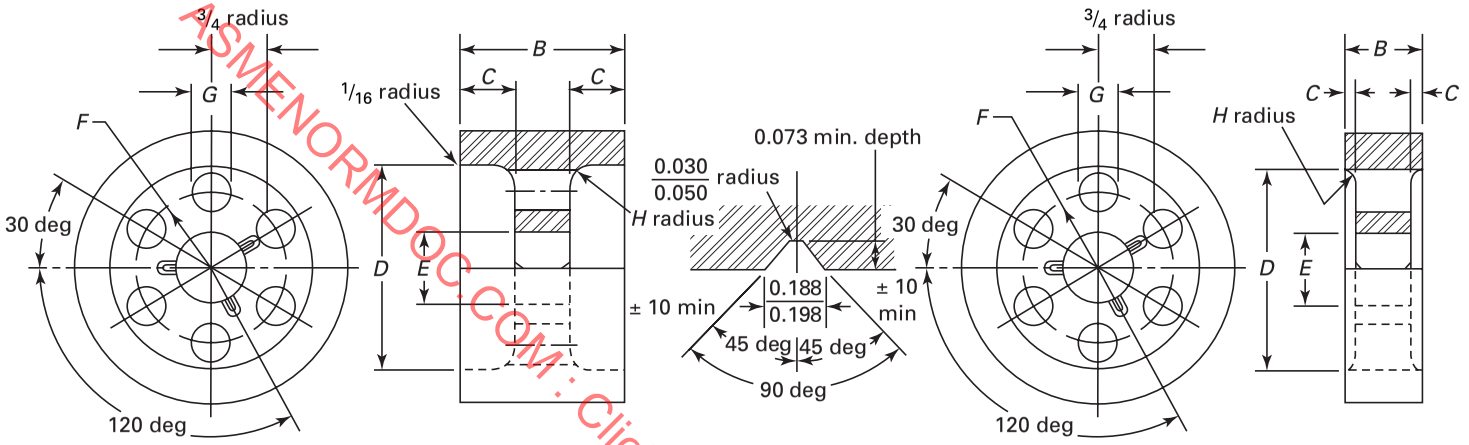
(a) All dimensions are in inches.

(b) Above dimensions may also be used for the manufacture of HI-LO thread setting plug blanks.

NOTE:

(1) See Table 12 for taper lock progressive members in range from 0.760 in. through 1.510 in.

Table 14 Plain Cylindrical Plug Gaging Members, Trilock Design — Range Above 2.510 in. to and Including 8.010 in.



Enlarged section of locking groove – three required on both ends of all gages

GO NOT GO

Handle Size No.	Plain Plug Diameters				GO							NOT GO						
	Nominal Range, Inclusive		Decimal Range															
	From	To	Above	To and Including	B	C	D	E	F	G	H	B	C	D	E	F	G	H
7	2 1/2	3	2.510	3.010	2	5/8	1 7/8	29/32	...	...	5/16	1	1/8	1 7/8	29/32	...	...	3/16
7	3	3 1/2	3.010	3.510	2	5/8	2 1/4	29/32	...	...	5/16	1	1/8	2 1/4	29/32	...	...	3/16
7	3 1/2	4	3.510	4.010	2 1/8	11/16	2 5/8	29/32	...	...	5/16	1	1/8	2 5/8	29/32	...	...	3/16
7	4	4 1/2	4.010	4.510	2 1/8	11/16	3	29/32	...	...	5/16	1	1/8	3	29/32	...	...	3/16
7	4 1/2	5	4.510	5.010	2 1/8	11/16	3 7/16	29/32	...	...	5/16	1	1/8	3 7/16	29/32	...	...	3/16
7	5	5 1/2	5.010	5.510	2 1/8	11/16	3 7/8	29/32	...	...	5/16	1	1/8	3 7/8	29/32	...	...	3/16
7	5 1/2	6	5.510	6.010	2 1/8	11/16	4 5/16	29/32	1 3/8	1	5/16	1	1/8	4 5/16	29/32	1 3/8	1	3/16
7	6	6 1/2	6.010	6.510	2 1/8	11/16	4 3/4	29/32	1 1/2	1 1/8	5/16	1	1/8	4 3/4	29/32	1 1/2	1 1/8	3/16
7	6 1/2	7	6.510	7.010	2 1/8	11/16	5 1/4	29/32	1 5/8	1 1/4	5/16	1	1/8	5 1/4	29/32	1 5/8	1 1/4	3/16
7	7	7 1/2	7.010	7.510	2 1/8	11/16	5 3/4	29/32	1 3/4	1 3/8	5/16	1	1/8	5 3/4	29/32	1 3/4	1 3/8	3/16
7	7 1/2	8	7.510	8.010	2 1/8	11/16	6 1/4	29/32	1 7/8	1 1/2	5/16	1	1/8	6 1/4	29/32	1 7/8	1 1/2	3/16

GENERAL NOTES:

(a) All dimensions are in inches.

(b) Blanks for progressive style plain plug gages are same as those in Table 26 for truncated type setting plugs for thick rings. This provides total gaging lengths that allow GO and NOT GO sections of standard lengths, per above, plus a 1/8 in. recess in between. Progressive blanks require handle Screw No. 2, having a 2 3/4 in. length under the head.

(c) Above dimensions may also be used for the manufacture of HI-LO thread setting plug blanks.

Fig. 2 Plain Cylindrical Plug Gages, Details of Construction — Range Above 8.010 in.

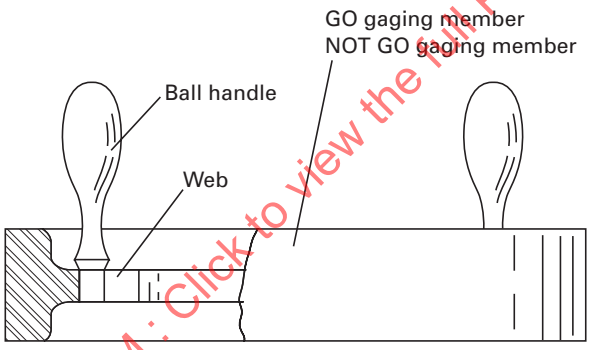
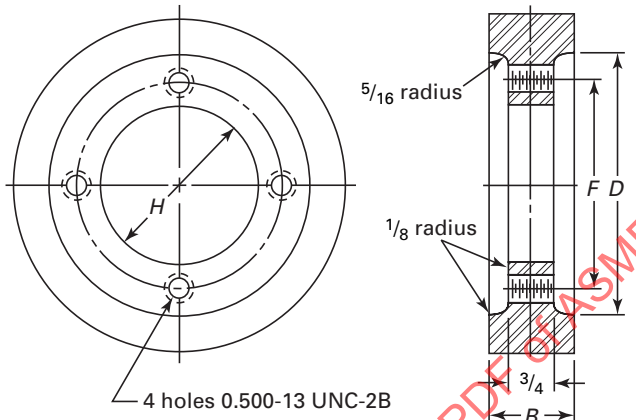
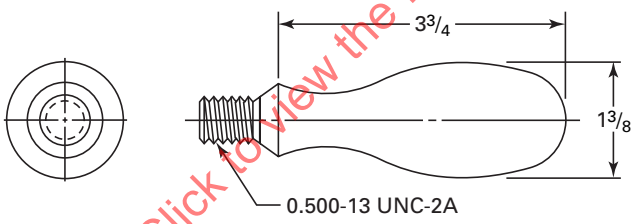


Table 15 Plain Cylindrical Plug Gages, Annular Design — Range Above 8.010 in. to and Including 12.010 in.





No. 7 Handle (Commercial No. 7 Ball Handle)

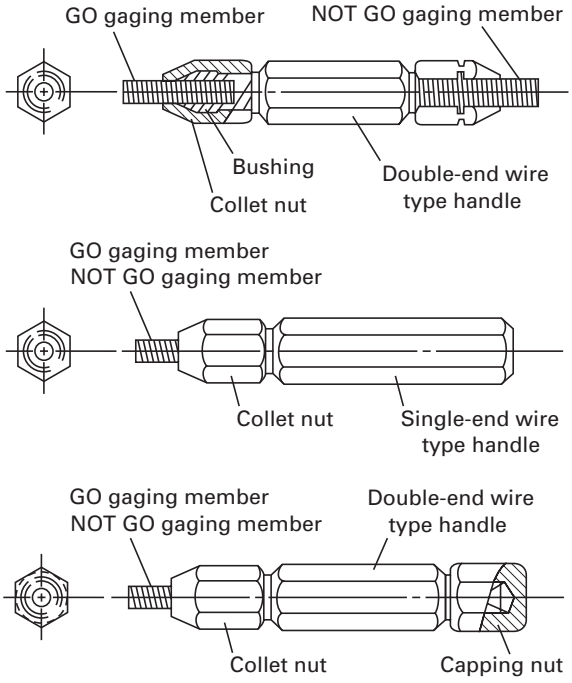
Ball Handle Size No. [Note (1)]	Plain Plug Diameters								
	Nominal Range, Inclusive		Decimal Range		*B*				
	From	To	Above	To and Including	GO	NOT GO	*D*	*F*	*H*
7	8	8 1/2	8.010	8.510	2 1/4	1	6 1/2	5 1/4	4
7	8 1/2	9	8.510	9.010	2 1/4	1	6 15/16	5 5/8	4 3/8
7	9	9 1/2	9.010	9.510	2 1/4	1	7 3/8	6	4 3/4
7	9 1/2	10	9.510	10.010	2 1/4	1	7 13/16	6 1/2	5 1/8
7	10	10 1/2	10.010	10.510	2 1/4	1	8 1/4	6 7/8	5 1/2
7	10 1/2	11	10.510	11.010	2 1/4	1	8 11/16	7 1/4	5 7/8
7	11	11 1/2	11.010	11.510	2 1/4	1	9 1/8	7 11/16	6 1/4
7	11 1/2	12	11.510	12.010	2 1/4	1	9 9/16	8 1/8	6 5/8

GENERAL NOTE: All dimensions are in inches.

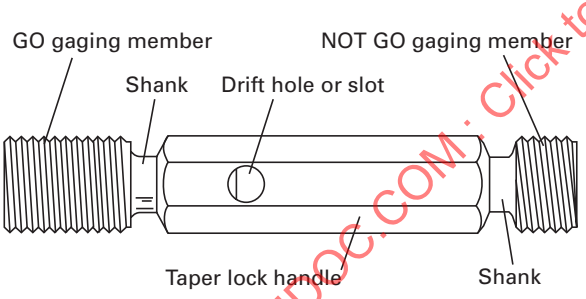
NOTE:

(1) Two required per gage.

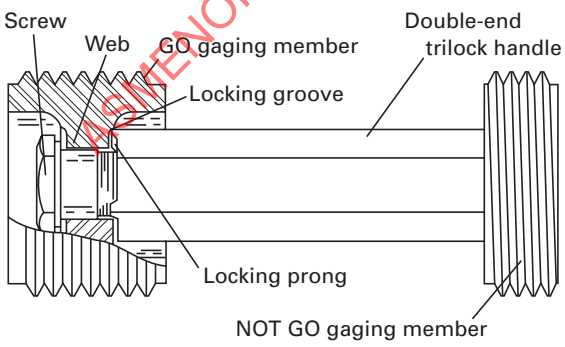
Fig. 3 Thread Plug Gages — Details of Construction



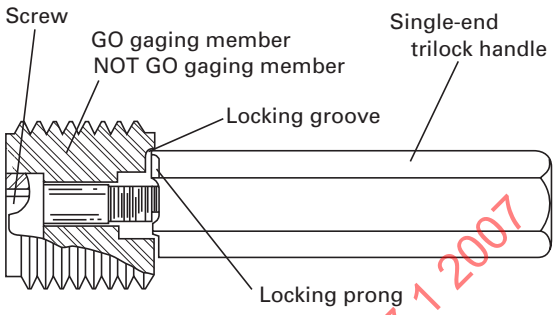
(a) Range – Above 0.059 in. to and Including 1.010 in.



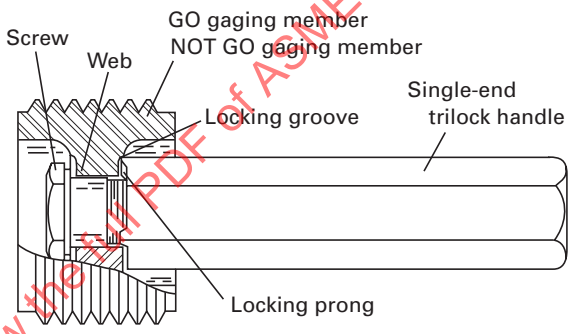
(b) Range – No. 0 to and Including 1.510 in.



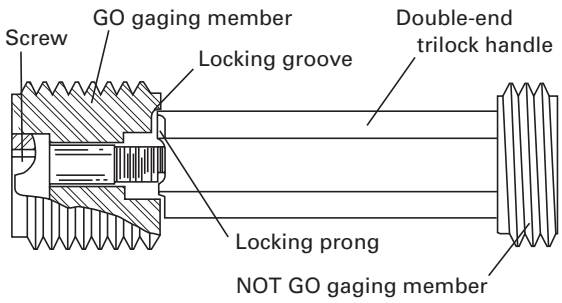
(c) Range – Above 2.510 in. to and Including 8.010 in.



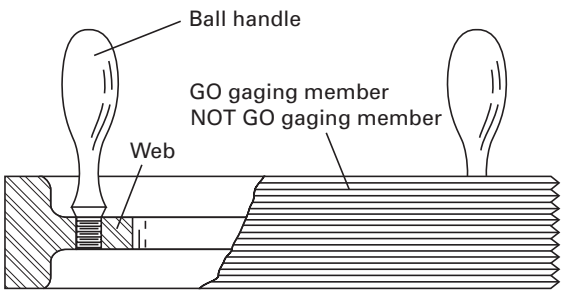
(d) Range – Above 0.760 in. to and Including 2.510 in.



(e) Range – Above 2.510 in. to and Including 8.010 in.

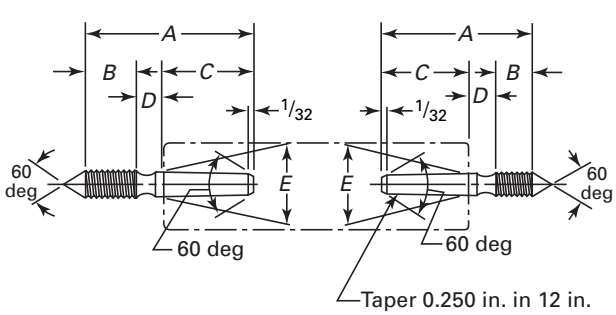


(f) Range – Above 0.760 in. to and Including 2.510 in.

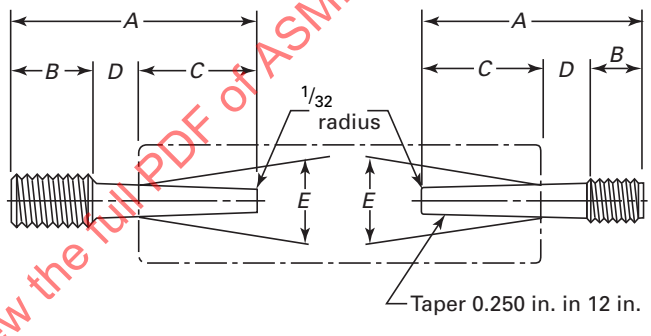


(g) Range – Above 8.010 in.

Table 16 Thread Plug Gaging Members, Taper Lock Design — Range From No. 0 to No. 12, Inclusive



No. 0 to No. 6, Inclusive [Note (1)]



No. 8 to No. 12, Inclusive

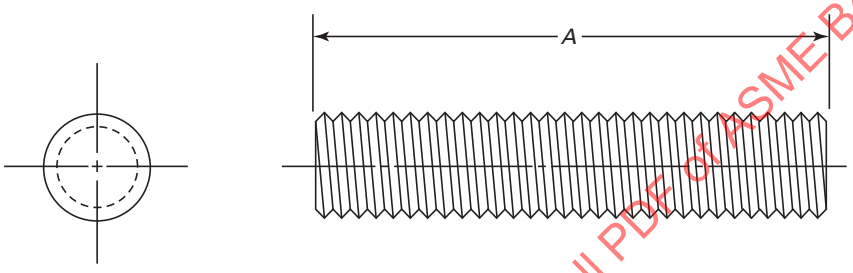
Handle Size No.	Range, Thread Plug Diameters				General Dimensions											
	Nominal, Inclusive		Decimal		GO						NOT GO					
									E						E	
	From No.	To No.	Above	To and Including	A	B	C	D	Min.	Max.	A	B	C	D	Min.	Max.
000	0	3	0.059	0.105	15/16	1/4	1/2	3/16	0.125	0.126	7/8	3/16	1/2	3/16	0.125	0.126
00	4	6	0.105	0.150	1 1/16	5/16	9/16	3/16	0.155	0.156	31/32	7/32	9/16	3/16	0.155	0.156
0	8	12	0.150	0.230	1 9/32	13/32	5/8	1/4	0.180	0.181	1 5/32	9/32	5/8	1/4	0.180	0.181

GENERAL NOTE: All dimensions are in inches.

NOTE:

(1) Male centers provided unless female specified.

Table 17 Thread Plug Gaging Members, Wire Type Design — Range Above 0.030 in. to and Including 1.010 in.

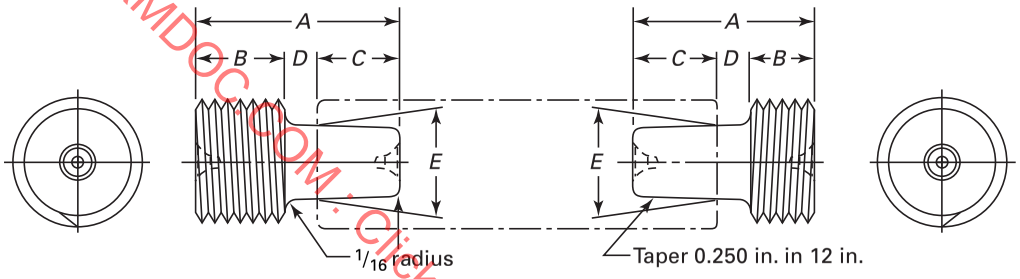


	Thread Diameters							
	Nominal Range, Inclusive, No. or in.		Decimal Range, in.		Length, *A*, in. [Note (1)]		Fine Pitch Instrument Lengths	
Handle Size No.	From	To	Above	To and Including	GO	NOT GO	TPI and Finer	GO and NOT GO Length, *A*
1W, 1W-S, or 1W-A	No. 0	No. 1	0.030	0.075	1/2	1/2	...	...
2W, 2W-S, or 2W-A	No. 2	No. 5	0.075	0.130	5/8	5/8	...	...
2W, 2W-S, or 2W-A	No. 6	No. 8	0.130	0.180	3/4	3/4	...	...
3W, 3W-S, or 3W-A	No. 10	1/4	0.180	0.281	7/8	7/8	48	3/4
4W, 4W-S, or 4W-A	1/4	5/16	0.281	0.320	1	1	40	3/4
4W, 4W-S, or 4W-A	5/16	3/8	0.320	0.406	1 1/8	1 1/8	40	7/8
5W, 5W-S, or 5W-A	3/8	7/16	0.406	0.450	1 1/4	1 1/4	36	1
5W, 5W-S, or 5W-A	7/16	1/2	0.450	0.510	1 3/8	1 3/8	36	1
6W, 6W-S, or 6W-A	1/2	5/8	0.510	0.635	1 1/2	1 3/8	32	1 1/8
7W, 7W-S, or 7W-A	5/8	3/4	0.635	0.760	1 3/4	1 3/8	32	1 1/4
8W, 8W-S, or 8W-A	3/4	1	0.760	1.010	2	1 1/2	28	1 1/4

NOTE:

(1) These lengths apply to standard and special diameter-pitch combinations not covered by Table 22. Lengths shown for *A* in ranges above 0.030 in. to and including 1.010 in. are minimum. Commercially available lengths exceeding these values shall be considered acceptable alternates.

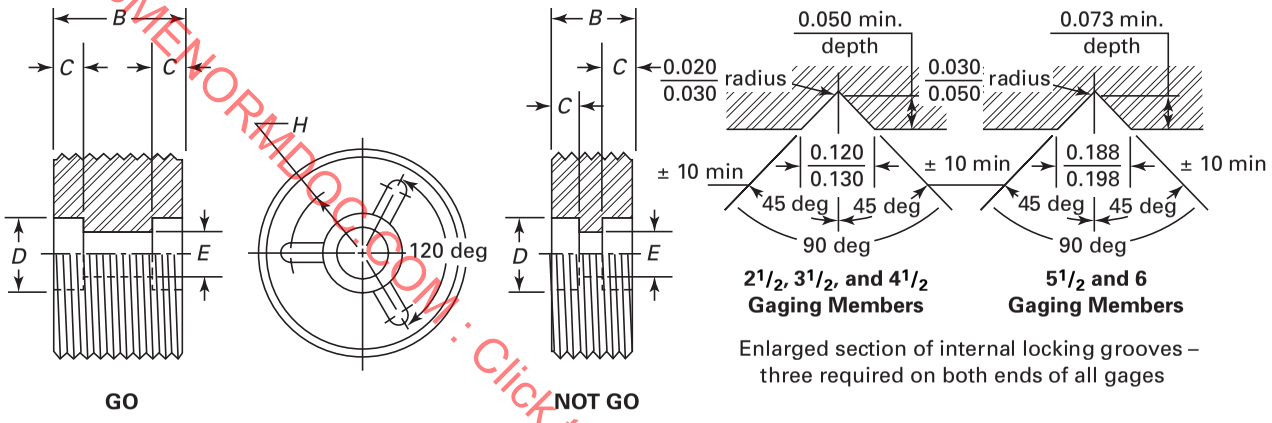
Table 18 Thread Plug Gaging Members, Taper Lock Design — Range from 1/4 in. to and Including 1 1/2 in.



Handle Size No.	Range: Thread Plug Diameters: Nominal Range, Inclusive: From	To	Decimal Range: Above	To and Including	TPI	General Dimensions: GO: A	B	C	D	E: Min.	Max.	NOT GO: A	B	C	D	E: Min.	Max.
1	1/4	5/16	0.230	0.365	...	1 1/2	1/2	3/4	1/4	0.239	0.240	1 5/16	5/16	3/4	1/4	0.239	0.240
2	3/8	1/2	0.365	0.510	...	1 3/4	3/4	3/4	1/4	0.309	0.310	1 3/8	3/8	3/4	1/4	0.309	0.310
3	9/16	3/4	0.510	0.825	...	1 7/8	7/8	3/4	1/4	0.408	0.410	1 1/2	1/2	3/4	1/4	0.408	0.410
4	7/8	1 1/8	0.825	1.135	...	2 3/16	1	7/8	5/16	0.608	0.610	1 13/16	5/8	7/8	5/16	0.608	0.610
5	1 1/4	1 1/2	1.135	1.510	Coarser than 12	2 5/8	1 1/4	1	3/8	0.808	0.810	2 1/8	3/4	1	3/8	0.808	0.810
5	1 1/4	1 1/2	1.135	1.510	12 and finer	2 3/8	1	1	3/8	0.808	0.810	2 1/8	3/4	1	3/8	0.808	0.810

GENERAL NOTES:
(a) All dimensions are in inches.
(b) Taper lock gaging members are standard for all taper pipe-thread plug gages to and including NPS 2. (See Tables 27 and 28.)
(c) Not less than three full threads must remain on NOT GO plug after convolution.

Table 19 Thread Plug Gaging Members, Trilock Design — Range Above ¾ in. to and Including 2½ in.

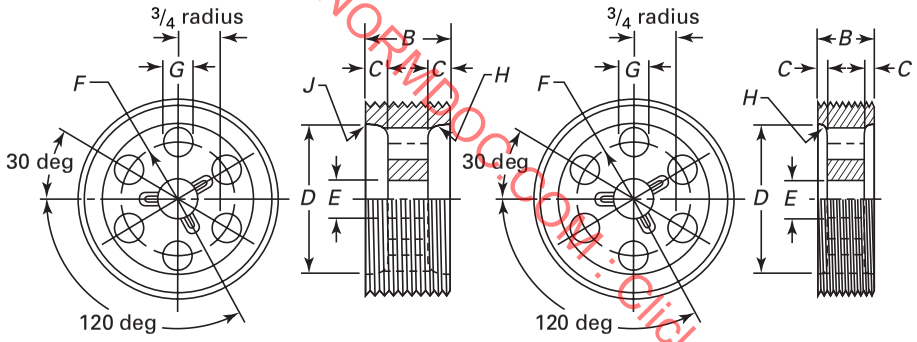


Handle Size No.	Thread Plug Diameters: Nominal Range, Inclusive From	To	Decimal Range Above	To and Including	GO: 7 TPI and Coarser B	C	D	E	GO: Finer Than 7 TPI and Coarser Than 13 B	C	D	E	GO: 13 TPI and Finer B	C	D	E	NOT GO, All Pitches B	C	D	E	H
2½	¾	15/16	0.760	0.947	1¼	¼	25/64	17/64	1	¼	25/64	17/64	1	¼	25/64	17/64	¾	¼	25/64	17/64	15/64
3½	15/16	1⅛	0.947	1.135	1⅜	¼	25/64	17/64	1⅛	¼	25/64	17/64	1	¼	25/64	17/64	¾	¼	25/64	17/64	21/64
4½	1⅛	1½	1.135	1.510	1½	⅜	37/64	25/64	1¼	⅜	37/64	25/64	1	⅜	37/64	25/64	¾	¼	37/64	25/64	27/64

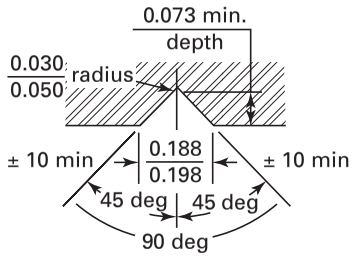
Handle Size No.	Thread Plug Diameters: Nominal Range, Inclusive From	To	Decimal Range Above	To and Including	GO: 7 TPI and Coarser B	C	D	E	GO: Finer Than 7 TPI and Coarser Than 16 B	C	D	E	GO: 16 TPI and Finer B	C	D	E	NOT GO, All Pitches B	C	D	E	H
5½	1½	2	1.510	2.010	1⅞	½	25/32	17/32	1¼	⅜	25/32	17/32	⅞	5/16	25/32	17/32	⅞	5/16	25/32	17/32	9/16
6	2	2½	2.010	2.510	2	½	25/32	17/32	1⅜	⅜	25/32	17/32	⅞	5/16	25/32	17/32	⅞	5/16	25/32	17/32	5/8

GENERAL NOTE: All dimensions are in inches.

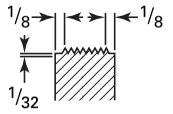
Table 20 Thread Plug Gaging Members, Trilock Design — Range Above 2½ in. to and Including 8 in.



GO NOT GO



Enlarged section of locking groove – three required on both ends of all gages

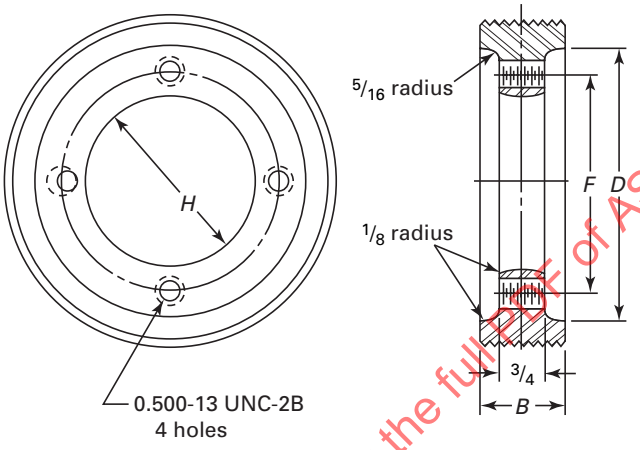


Options NOT GO gages 16 TPI and finer may be relieved on both 1/32 below sharp roots of threads as shown

Handle Size No.	Thread Plug Diameters: Nominal Range, Inclusive From	To	Decimal Range: Above	To and Including	GO: 7 TPI and Coarser B	C	H	J	Finer Than 7 TPI and Coarser Than 16 TPI B	C	H	J	16 TPI and Finer B	C	H	NOT GO, All Pitches B	C	H	All Pitches D	E	F	G
7	2½	3	2.510	3.010	2	5/8	5/16	1/16	1½	3/8	3/16	1/16	1	1/8	3/16	1	1/8	3/16	1 7/8	29/32	...	...
7	3	3½	3.010	3.510	2	5/8	5/16	1/16	1½	3/8	1/4	1/16	1	1/8	3/16	1	1/8	3/16	2 1/4	29/32	...	...
7	3½	4	3.510	4.010	2 1/8	11/16	5/16	1/16	1½	3/8	1/4	1/16	1	1/8	3/16	1	1/8	3/16	2 5/8	29/32	...	...
7	4	4½	4.010	4.510	2 1/8	11/16	5/16	1/16	1½	3/8	1/4	1/16	1	1/8	3/16	1	1/8	3/16	3	29/32	...	...
7	4½	5	4.510	5.010	2 1/8	11/16	5/16	1/16	1½	3/8	1/4	1/16	1	1/8	3/16	1	1/8	3/16	3 7/16	29/32	...	...
7	5	5½	5.010	5.510	2 1/8	11/16	5/16	1/16	1½	3/8	1/4	1/16	1	1/8	3/16	1	1/8	3/16	3 7/8	29/32	...	...
7	5½	6	5.510	6.010	2 1/8	11/16	5/16	1/16	1½	3/8	1/4	1/16	1	1/8	3/16	1	1/8	3/16	4 5/16	29/32	1 3/8	1
7	6	6½	6.010	6.510	2 1/8	11/16	5/16	1/16	1½	3/8	1/4	1/16	1	1/8	3/16	1	1/8	3/16	4 3/4	29/32	1 1/2	1 1/8
7	6½	7	6.510	7.010	2 1/8	11/16	5/16	1/16	1½	3/8	1/4	1/16	1	1/8	3/16	1	1/8	3/16	5 1/4	29/32	1 5/8	1
7	7	7½	7.010	7.510	2 1/8	11/16	5/16	1/16	1½	3/8	1/4	1/16	1	1/8	3/16	1	1/8	3/16	5 3/4	29/32	1 3/4	1 3/8
7	7½	8	7.510	8.010	2 1/8	11/16	5/16	1/16	1½	3/8	1/4	1/16	1	1/8	3/16	1	1/8	3/16	6 1/4	29/32	1 7/8	1 1/2

GENERAL NOTE: All dimensions are in inches.

Table 21 Thread Plug Gaging Members, Annular Design — Range Above 8.010 in.



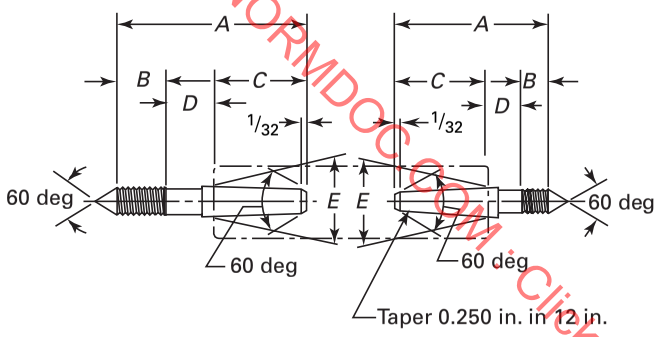
Ball Handle Size No. [Note (1)]	Thread Plug Diameters				GO				All Pitches		
	Nominal Range, Inclusive		Decimal Range		7 TPI and Coarser	Finer Than 7 TPI and Coarser Than 16 TPI	16 TPI and Finer	NOT GO, All Pitches			
	From	To	Above	To and Including	*B*				*D*	*F*	*H*
7	8	8½	8.010	8.510	2¼	1½	1	1	6½	5¼	4
7	8½	9	8.510	9.010	2¼	1½	1	1	6 15/16	5⅝	4⅜
7	9	9½	9.010	9.510	2¼	1½	1	1	7⅜	6	4¾
7	9½	10	9.510	10.010	2¼	1½	1	1	7 13/16	6½	5⅛
7	10	10½	10.010	10.510	2¼	1½	1	1	8¼	6⅞	5½
7	10½	11	10.510	11.010	2¼	1½	1	1	8 11/16	7¼	5⅞
7	11	11½	11.010	11.510	2¼	1½	1	1	9⅛	7 11/16	6¼
7	11½	12	11.510	12.010	2¼	1½	1	1	9 9/16	8⅛	6⅝

GENERAL NOTE: All dimensions are in inches.

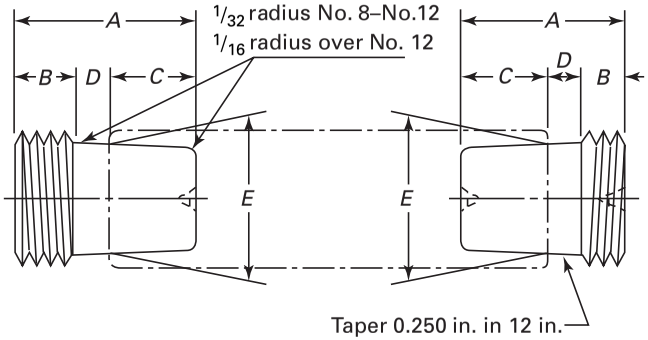
NOTE:

(1) Two required per gage, purchased separately.

Table 22 Fine-Pitch Instrument Thread Plug Gaging Members, Taper Lock Design — Range No. 0 to 1½ in., Inclusive



No. 0 to No. 6, Inclusive [Note (1)]



No. 8 to 1 1/2 in., Inclusive

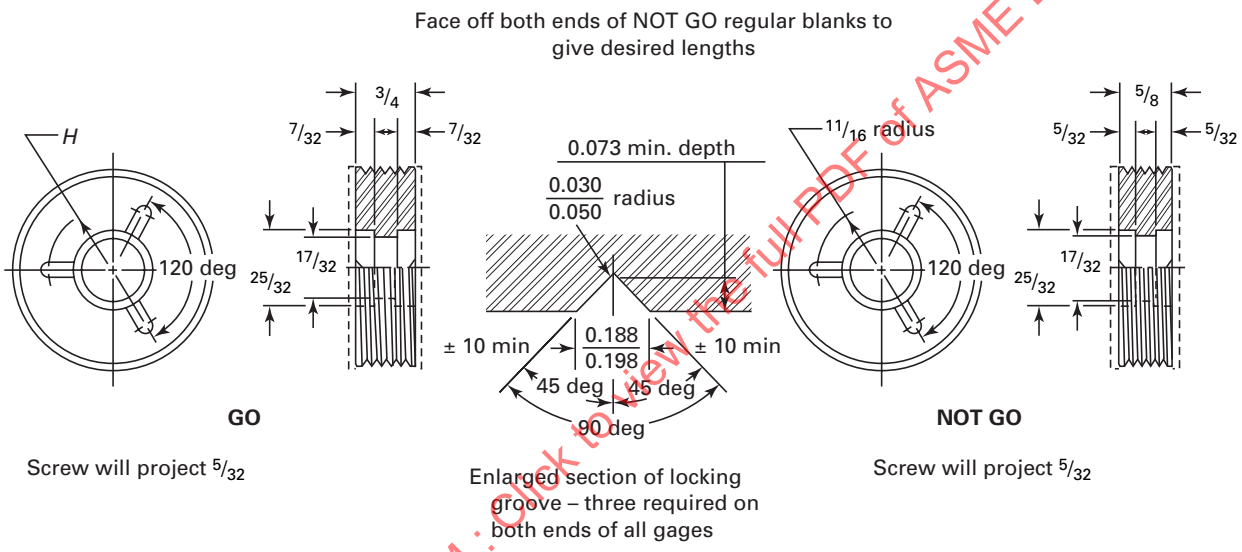
Handle Size No.	Thread Plug Diameters: Nominal Range, No. or in., Inclusive From	To	Decimal Range: Above	To and Including	TPI and Finer	General Dimensions: GO A	B	C	D	E Min.	E Max.	NOT GO A	B	C	D	E Min.	E Max.
000	No. 0	No. 3	0.059	0.105	80	7/8	3/16	1/2	3/16	0.125	0.126	13/16	1/8	1/2	3/16	0.125	0.126
00	No. 4	No. 6	0.105	0.150	60	31/32	7/32	9/16	3/16	0.155	0.156	29/32	5/32	9/16	3/16	0.155	0.156
0	No. 8	No. 12	0.150	0.230	48	1 5/32	9/32	5/8	1/4	0.180	0.181	1 3/32	7/32	5/8	1/4	0.180	0.181
1	1/4	5/16	0.230	0.365	40	1 5/16	5/16	3/4	1/4	0.239	0.240	1 1/4	1/4	3/4	1/4	0.239	0.240
2	3/8	1/2	0.365	0.510	36	1 3/8	3/8	3/4	1/4	0.309	0.310	1 5/16	5/16	3/4	1/4	0.309	0.310
3	9/16	3/4	0.510	0.825	32	1 1/2	1/2	3/4	1/4	0.408	0.410	1 3/8	3/8	3/4	1/4	0.408	0.410
4	7/8	1 1/8	0.825	1.135	28	1 13/16	5/8	7/8	5/16	0.608	0.610	1 5/8	7/16	7/8	5/16	0.608	0.610
5	1 1/4	1 1/2	1.135	1.510	28	2 1/8	3/4	1	3/8	0.808	0.810	1 7/8	1/2	1	3/8	0.808	0.810

GENERAL NOTE: All dimensions are in inches.

NOTE:

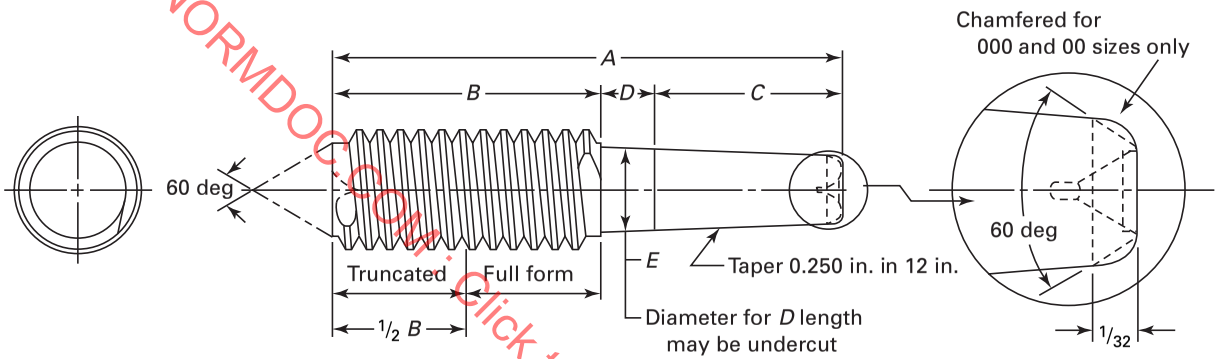
(1) Male centers provided unless female specified.

Table 23 Fine-Pitch Instrument Thread Plug Gaging Members, Trilock Design — Range Above 1½ in. to and Including 2½ in.



Handle Size No.	Thread Plug Diameters, in. Nominal Range, Inclusive From	To	Decimal Range Above	To and Including	TPI and Finer Than	*H*
5½	1½	2	1.510	2.010	28	9/16
6	2	2½	2.010	2.510	28	5/8

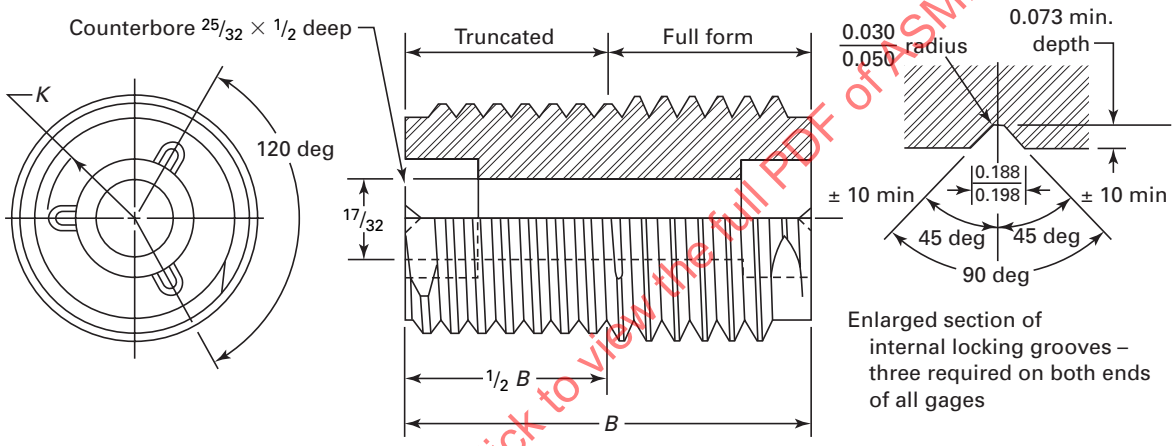
Table 24 Thread-Setting Plug Gaging Members, Truncated Type — Range No. 0 to 1½ in., Inclusive



Handle Size No.	Thread Diameters: Nominal Range, No. or in., Inclusive From	To	Decimal Range Above	To and Including	General Dimensions: For Thin Ring A	B	For Thick Ring A	B	For Fine-Pitch Instrument Thread Ring A	B	C	D	E Min.	Max.
000	No. 0	No. 2	0.059	0.090	29/32	7/32	...	...	...	...	1/2	3/16	0.125	0.126
000	No. 3	No. 3	0.090	0.105	1 1/16	3/8	...	...	...	...	1/2	3/16	0.125	0.126
00	No. 4	No. 6	0.105	0.150	1 1/8	3/8	...	...	...	...	9/16	3/16	0.155	0.156
0	No. 8	No. 12	0.150	0.230	1 9/32	13/32	...	...	...	...	5/8	1/4	0.180	0.181
1	1/4	1 5/16	0.230	0.365	1 3/4	3/4	...	...	1 1/2	1/2	3/4	1/4	0.239	0.240
2	3/8	1/2	0.365	0.510	2	1	...	...	1 3/4	3/4	3/4	1/4	0.309	0.310
3	9/16	3/4	0.510	0.825	2 1/4	1 1/4	2 7/8	1 7/8	1 7/8	7/8	3/4	1/4	0.408	0.410
4	7/8	1 1/8	0.825	1.135	2 11/16	1 1/2	3 5/16	2 1/8	2 3/16	1	7/8	5/16	0.608	0.610
5	1 1/4	1 1/2	1.135	1.510	3	1 5/8	3 3/4	2 3/8	2 5/8	1 1/4	1	3/8	0.808	0.810

GENERAL NOTES:
(a) All dimensions are in inches.
(b) For full-form setting plugs, use GO thread plug gaging members (see Tables 16 and 18). For fine-pitch instrument threads, see Table 22.
(c) Through No. 6 male center provided unless female specified.

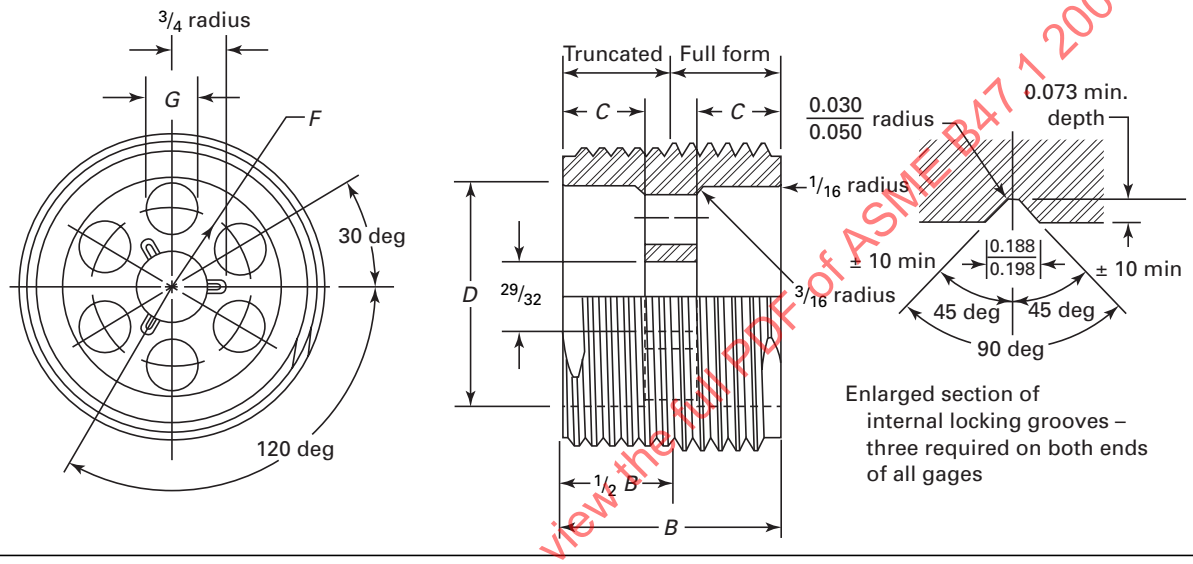
Table 25 Thread-Setting Plug Gaging Members, Truncated Type — Range Above 1½ in. to and Including 2½ in.



Handle Size No.	Thread Diameters: Nominal Range From	Thread Diameters: Nominal Range To	Thread Diameters: Decimal Range Above	Thread Diameters: Decimal Range To and Including	K (Radius)	B: For Thin Ring	B: For Thick Ring	B: For Fine-Pitch Instrument Thread Ring
5½	1½	2	1.510	2.010	9/16	1⅞	2⅞	1⅝
6	2	2½	2.010	2.510	⅝	2	3	1⅞

GENERAL NOTES:
(a) All dimensions are in inches.
(b) For full-form setting plug, use GO thread plug gaging members (see Table 19). For fine-pitch instrument threads, see Table 23.

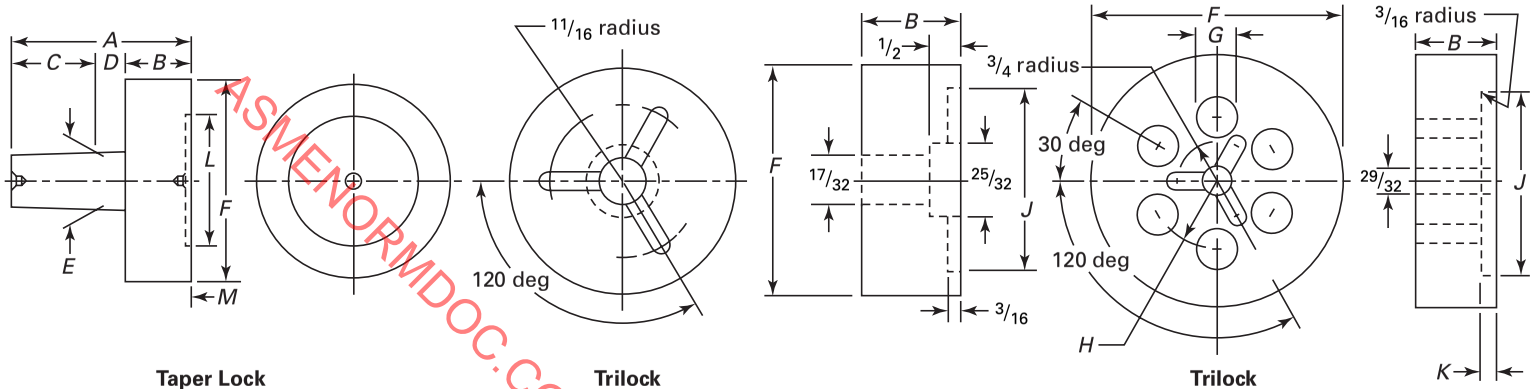
Table 26 Thread-Setting Plug Gaging Members, Truncated Type — Range Above 2½ in. to and Including 6½ in.



Handle Size No.	Thread Diameters: Nominal Range From	Nominal Range To	Decimal Range Above	Decimal Range To and Including	General Dimensions: For Thin Ring B	For Thin Ring C	For Thick Ring B	For Thick Ring C	D	F (Radius)	G
7	2½	3	2.510	3.010	2	5/8	3 1/8	11/16	1 7/8	. . .	. . .
7	3	3½	3.010	3.510	2	5/8	3 1/8	11/16	2 1/4	. . .	. . .
7	3½	4	3.510	4.010	2 1/16	11/16	3 1/4	3/4	2 5/8	. . .	. . .
7	4	4½	4.010	4.510	2 1/8	11/16	3 1/4	3/4	3	. . .	. . .
7	4½	5	4.510	5.010	2 1/8	11/16	3 1/4	3/4	3 7/16	. . .	. . .
7	5	5½	5.010	5.510	2 1/8	11/16	3 1/4	3/4	3 7/8	. . .	. . .
7	5½	6	5.510	6.010	2 1/8	11/16	3 1/4	3/4	4 5/16	1 3/8	1
7	6	6½	6.010	6.510	2 1/8	11/16	3 1/4	3/4	4 3/4	1 1/2	1 1/8

GENERAL NOTES:
(a) All dimensions are in inches.
(b) For full-form setting plug, use GO thread plug gaging members (see Table 20).
(c) Truncated setting plug blanks for thick rings require handle screw no. 2 having 2¾ in. length under the head. See General Note to Table 9.

Table 27 Taper Pipe-Thread Plug Gaging Members (*L*-1) — Range 1/16 in. to and Including 6 in.



Taper Lock
1/16 in. –2 in.

Trilock
2 1/2 in. and 3 in. [Note (1)]

Trilock
3 1/2 in. –6 in., inclusive [Notes (1), (2)]

Nominal Pipe Size	Type Blank	Handle Size No.	General Dimensions												
							E								Min.
			A	B	C	D	Min.	Max.	F	G	H	J	K	L	M
1/16	Taper lock	1	1.300	0.300	3/4	1/4	0.239	0.240	3/8	...	...	...	...	...	...
1/8	Taper lock	2	1.310	0.310	3/4	1/4	0.309	0.310	7/16	...	...	...	...	3/16	1/16
1/4	Taper lock	3	1.450	0.450	3/4	1/4	0.408	0.410	9/16	...	...	...	...	7/32	1/16
3/8	Taper lock	3	1.460	0.460	3/4	1/4	0.408	0.410	11/16	...	...	...	...	1/4	1/16
1/2	Taper lock	4	1.768	0.580	7/8	5/16	0.608	0.610	7/8	...	...	...	...	5/16	1/16
3/4	Taper lock	4	1.788	0.600	7/8	5/16	0.608	0.610	1 1/16	...	...	...	...	1/2	1/16
1	Taper lock	5	2.115	0.740	1	3/8	0.808	0.810	1 3/8	...	...	...	...	5/8	1/16
1 1/4	Taper lock	5	2.145	0.770	1	3/8	0.808	0.810	1 11/16	...	...	...	...	1	1/16
1 1/2	Taper lock	5	2.165	0.790	1	3/8	0.808	0.810	1 15/16	...	...	...	...	1 1/4	1/16
2	Taper lock	5	2.205	0.830	1	3/8	0.808	0.810	2 7/16	...	...	...	...	1 5/8	1/16
2 1/2 [Note (3)]	Trilock	6	...	1.210	...	...	...	...	3	...	...	2	...	...	...
3	Trilock	6	...	1.300	...	...	...	...	3 5/8	...	...	2 1/2	...	...	...
3 1/2	Trilock	7	...	1.350	...	...	...	...	4 1/8	...	...	2 5/8	9/16	...	...
4	Trilock	7	...	1.425	...	...	...	...	4 5/8	...	...	3	3/4	...	...
5	Trilock	7	...	1.550	...	...	...	...	5 11/16	...	...	4 5/16	3/4	...	...
6	Trilock	7	...	1.700	...	...	...	...	6 3/4	1 1/4	1 5/8	5 1/4	3/4	...	...

GENERAL NOTE: All sizes and dimensions are in inches.

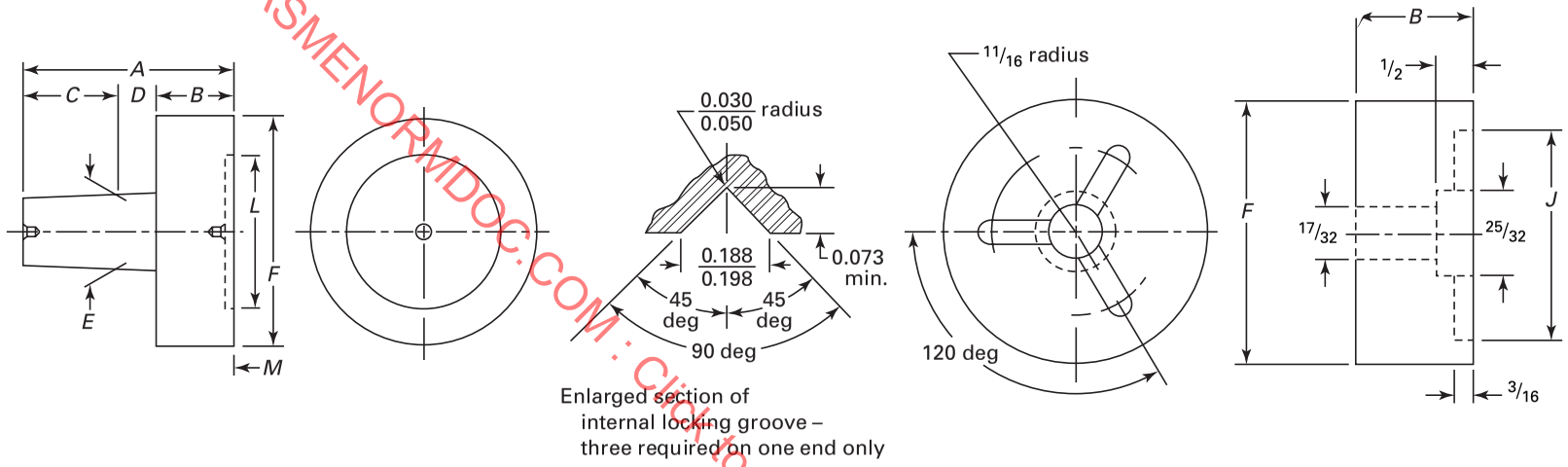
NOTES:

(1) Locking grooves on one side only on sizes 2 1/2 through 6.

(2) Without holes, *G* — 3 1/2 in. only
— 4 in. only
— 5 in. only

(3) For 2 1/2 and up trilock style pipe thread blanks, alternate use of standard trilock thread or cylindrical blanks with *B* length *A* minimum of above diameters is acceptable.

Table 28 Taper Pipe-Thread Plug Gaging Members for *L*-3 and Minor Diameter Check (6 Step)

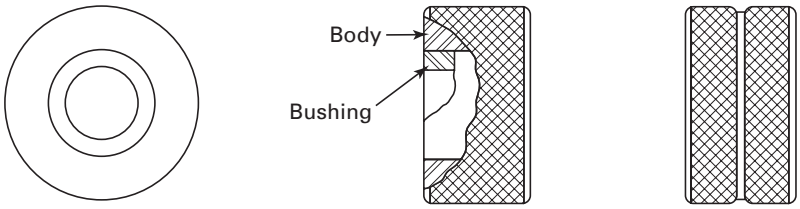


Taper Lock, 1/16 in. –2 in. **Trilock, 2 1/2 in. and 3 in.**

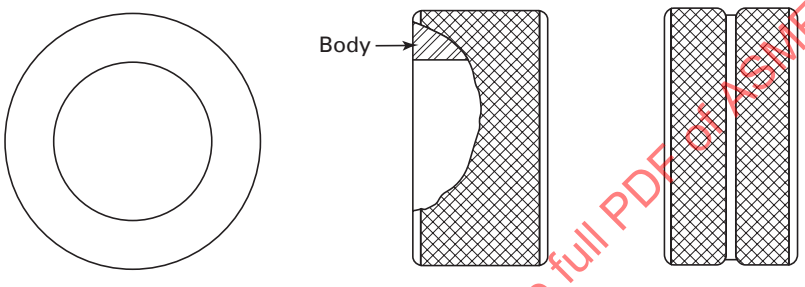
Nominal Pipe Size	Type Blank	Handle Size No.	General Dimensions									
							E					Min.
			A	*B*	*C*	*D*	Min.	Max.	*F*	*J*	*L*	*M*
1/16	Taper lock	1	1.420	0.420	3/4	1/4	0.239	0.240	3/8	...	...	...
1/8	Taper lock	2	1.460	0.460	3/4	1/4	0.309	0.310	7/16	...	3/16	1/16
1/4	Taper lock	3	1.550	0.550	3/4	1/4	0.408	0.410	9/16	...	7/32	1/16
3/8	Taper lock	3	1.620	0.620	3/4	1/4	0.408	0.410	11/16	...	1/4	1/16
1/2	Taper lock	4	1.928	0.740	7/8	5/16	0.608	0.610	7/8	...	5/16	1/16
3/4	Taper lock	4	1.968	0.780	7/8	5/16	0.608	0.610	1 1/16	...	1/2	1/16
1	Taper lock	5	2.315	0.940	1	3/8	0.808	0.810	1 3/8	...	5/8	1/16
1 1/4	Taper lock	5	2.315	0.940	1	3/8	0.808	0.810	1 11/16	...	1	1/16
1 1/2	Taper lock	5	2.315	0.940	1	3/8	0.808	0.810	1 15/16	...	1 1/4	1/16
2	Taper lock	5	2.315	0.940	1	3/8	0.808	0.810	2 3/8	...	1 5/8	1/16
2 1/2	Trilock	6	...	1.580	...	...	...	...	2 15/16	2	...	...
3 1/2	Trilock	6	...	1.580	...	...	...	...	3 1/2	2 1/2	...	...

GENERAL NOTES:
(a) All sizes and dimensions are in inches.
(b) Locking grooves on one side only for sizes 2 1/2 and 3.

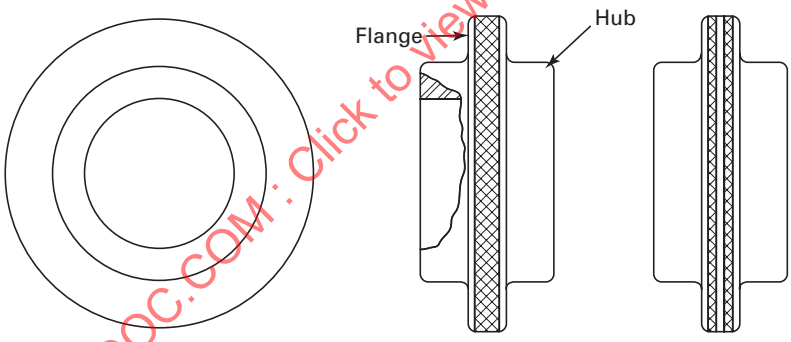
Fig. 4 Plain Ring Gages — Details of Construction



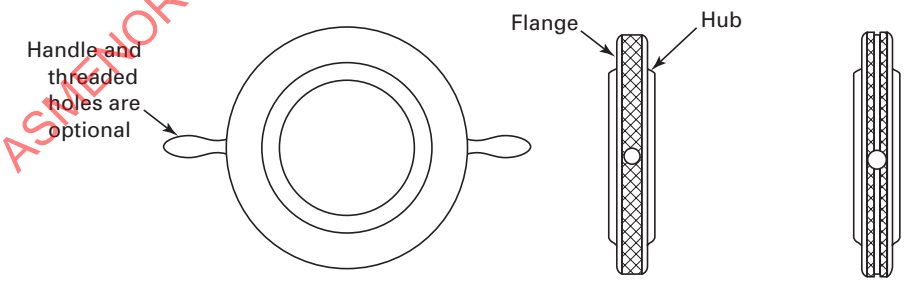
(a) Range – Above 0.010 in. to and Including 0.510 in. (Solid Design Shown Below is Optional).



(b) Range – Above 0.510 in. to and Including 1.510 in. (Optional Above 0.010 in. to and Including 0.510 in.)

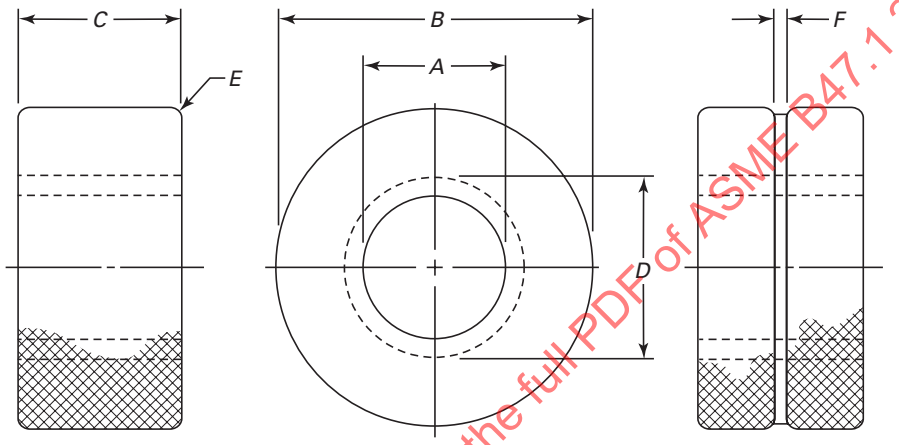


(c) Range – Above 1.510 in. to and Including 5.510 in.



(d) Range – Above 5.510 in. to and Including 12.260 in.

Table 29 Plain Ring Gages — Range Above 0.010 in. to and Including 1.510 in.



Ring Size No.	Range, *A*		General Dimensions					
	Above	To and Including	Outside Diameter, *B*	Thickness, *C*	Bushing Diameter, *D* [Note (1)]	Radius, *E*	NOT GO Groove Width, *F*	Length of Bushing
000	0.010	0.040	$\frac{15}{16}$	$\frac{1}{16}$ (2)	$\frac{3}{8}$	$\frac{1}{32}$	$\frac{1}{32}$	(1) (3)
00	0.040	0.150	$\frac{15}{16}$	$\frac{3}{16}$	$\frac{3}{8}$	$\frac{1}{32}$	$\frac{1}{32}$	(1) (3)
0	0.150	0.230	$\frac{15}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{32}$	$\frac{1}{16}$	(1) (3)
1	0.230	0.365	$1\frac{1}{8}$	$\frac{9}{16}$	$\frac{9}{16}$	$\frac{1}{16}$	$\frac{3}{32}$	(1) (3)
2	0.365	0.510	$1\frac{3}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{16}$	$\frac{3}{32}$	(1) (3)
3	0.510	0.825	$1\frac{3}{4}$	$\frac{15}{16}$	(4)	$\frac{3}{32}$	$\frac{3}{32}$	(4)
4	0.825	1.135	$2\frac{1}{8}$	$1\frac{1}{8}$	(4)	$\frac{3}{32}$	$\frac{3}{32}$	(4)
5	1.135	1.510	$2\frac{1}{2}$	$1\frac{5}{16}$	(4)	$\frac{3}{32}$	$\frac{3}{32}$	(4)

GENERAL NOTE: All dimensions are in inches.

NOTES:

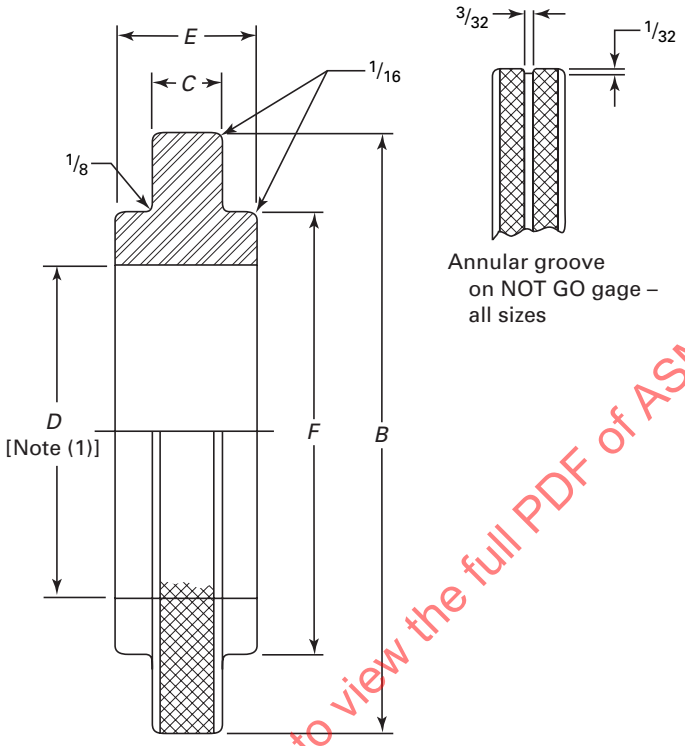
(1) Ring gages of sizes 000, 00, 0, 1, and 2 may be of the bushing type or of the solid type, at the option of the manufacturer.

(2) Thickness of $\frac{1}{16}$ in. on 000 blank is minimum.

(3) Bushings may be $\frac{1}{16}$ in. longer than ring thickness, but are ground flush after hole is finished.

(4) Sizes 3, 4, and 5 are solid.

Table 30 Plain Ring Gages — Range Above 1.510 in. to and Including 12.260 in.



Ring Size No.	A (Range for D) Above	A (Range for D) To and Including	Inspection, Working, Ring Gages B	C	E	F
6	1.510	2.010	4	1/2	1 1/2	2 7/8
7	2.010	2.510	4 1/2	9/16	1 1/2	3 3/8
8	2.510	3.010	5	5/8	1 1/2	4
9	3.010	3.510	5 1/2	11/16	1 1/2	4 1/2
10	3.510	4.010	6 1/4	3/4	1 1/2	5 1/8
11	4.010	4.760	7 1/4	7/8	1 1/2	5 7/8
12	4.760	5.510	8 1/4	1	1 1/2	6 5/8
13	5.510	6.260	9 1/4	1	1 1/2	7 3/8
14	6.260	7.010	10 1/4	1	1 1/2	8 1/8
15	7.010	7.760	11 1/4	1	1 1/2	8 7/8
16	7.760	8.510	12 1/4	1	1 1/2	9 5/8
17	8.510	9.260	13 1/4	1	1 1/2	10 3/8
18	9.260	10.010	14 1/4	1	1 1/2	11 1/8
19	10.010	10.760	15 1/4	1	1 1/2	11 7/8
20	10.760	11.510	16 1/4	1	1 1/2	12 5/8
21	11.510	12.260	17 1/4	1	1 1/2	13 3/8

GENERAL NOTE: All dimensions are in inches.

NOTE:

(1) D = finished gage diameter.

Fig. 5 Thread Ring Gage Locking Device, Details of Construction — Range 1 in. to 5½ in., Inclusive

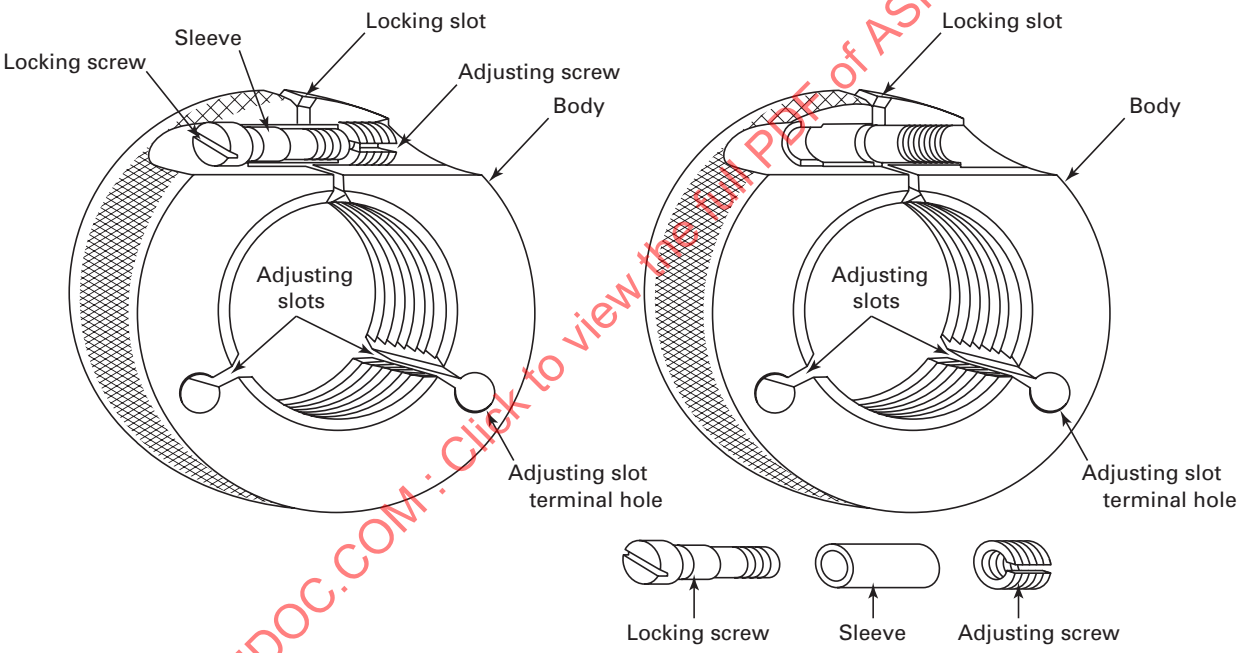
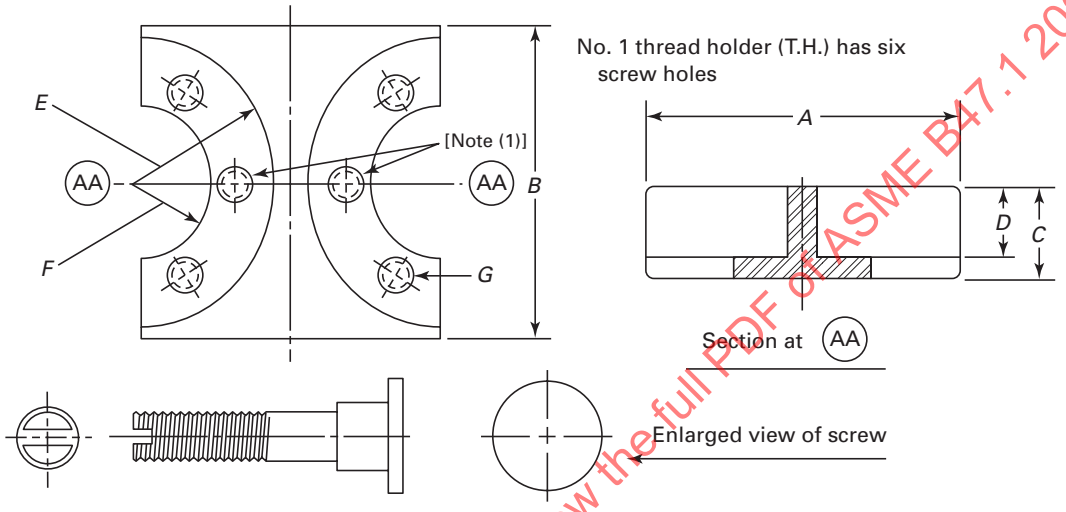


Table 31 Holders for Thread Ring Gages



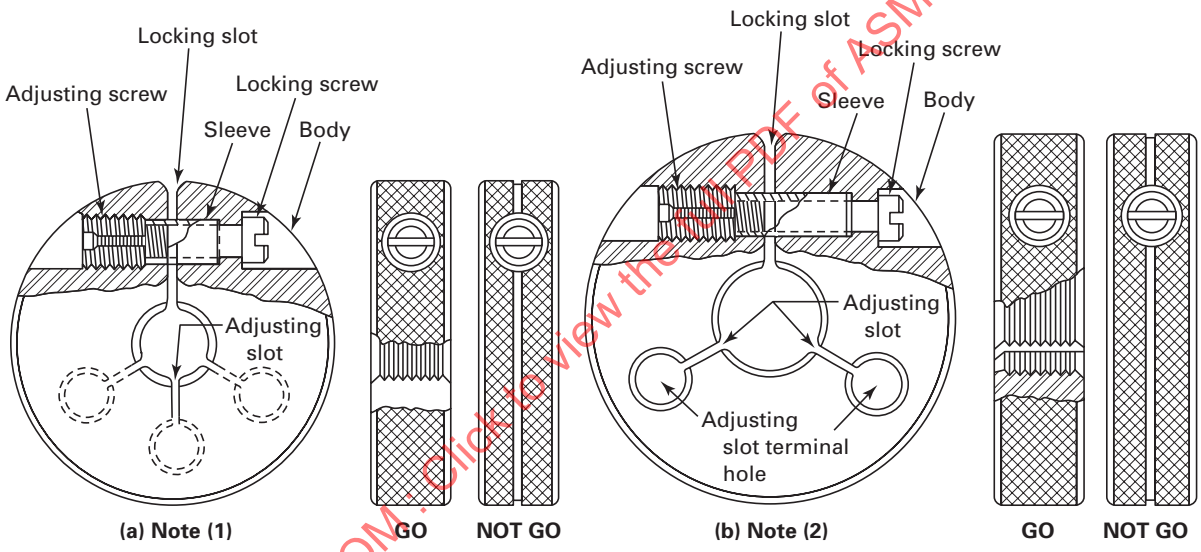
Size No.	Range From	Range To and Including	General Dimensions A	B	C	D	E	F	G
1 T.H.	#0	#12	$1\frac{1}{16}$	$1\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{4}$	0.525 0.530	$\frac{5}{32}$	0.138-40 UNF-3B
2 T.H.	$\frac{1}{4}$	$\frac{5}{16}$	$1\frac{7}{16}$	$1\frac{5}{8}$	$\frac{1}{2}$	$\frac{11}{32}$	0.7125 0.7175	$\frac{7}{32}$	0.164-36 UNF-3B
3 T.H.	$\frac{3}{8}$	$\frac{1}{2}$	$1\frac{13}{16}$	2	$\frac{5}{8}$	$\frac{7}{16}$	0.900 0.905	$\frac{5}{16}$	0.216-28 UNF-3B
4 T.H.	$\frac{9}{16}$	$\frac{3}{4}$	$2\frac{1}{4}$	$2\frac{7}{16}$	$\frac{3}{4}$	$\frac{9}{16}$	1.119 1.124	$\frac{17}{32}$	0.250-28 UNF-3B
5 T.H.	$\frac{7}{8}$	$1\frac{1}{8}$	$2\frac{11}{16}$	$2\frac{7}{8}$	$\frac{7}{8}$	$\frac{11}{16}$	1.338 1.343	$\frac{3}{4}$	0.250-28 UNF-3B
6 T.H.	$1\frac{1}{4}$	$1\frac{1}{2}$	$3\frac{5}{16}$	$3\frac{1}{2}$	1	$\frac{3}{4}$	1.650 1.655	$\frac{15}{16}$	0.3125-24 UNF-3B

GENERAL NOTE: All dimensions except *G* are in inches.

NOTE:

(1) Holders and screws of slightly different design are considered acceptable as long as they hold the gages securely and without distortion.

Fig. 6 Thread Ring Gages, Details of Construction — Range 0.060 in. to and Including 4.760 in.

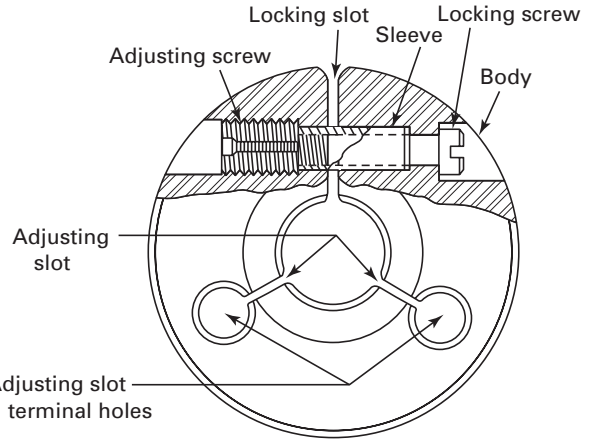


NOTES:

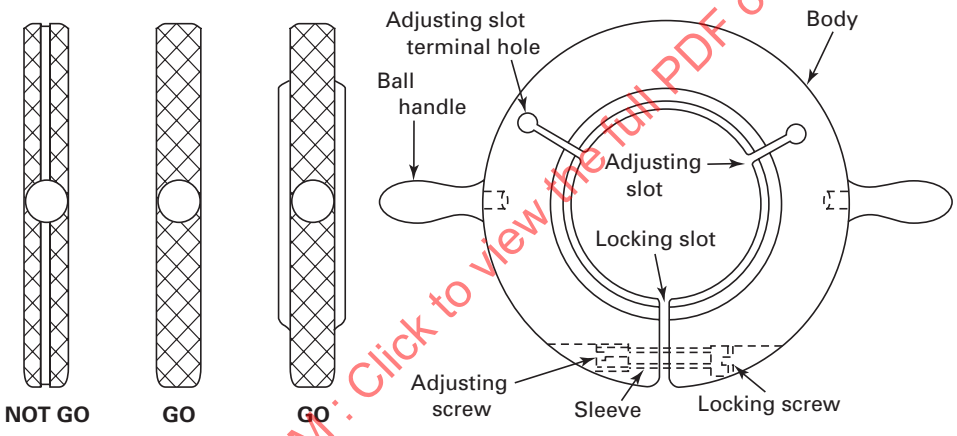
(1) Range – 0.060 in. to and including 0.150 in., GO and NOT GO gages, all pitches. Two adjusting slots are optional with the gage manufacturer.

(2) Range – above 0.150 in. to and including 0.510 in., GO and NOT GO gages, all pitches; 0.510 in. to and including 4.760 in. GO and NOT GO gages, fine pitches; 0.510 in. to and including 4.760 in., NOT GO gage only, coarse pitches.

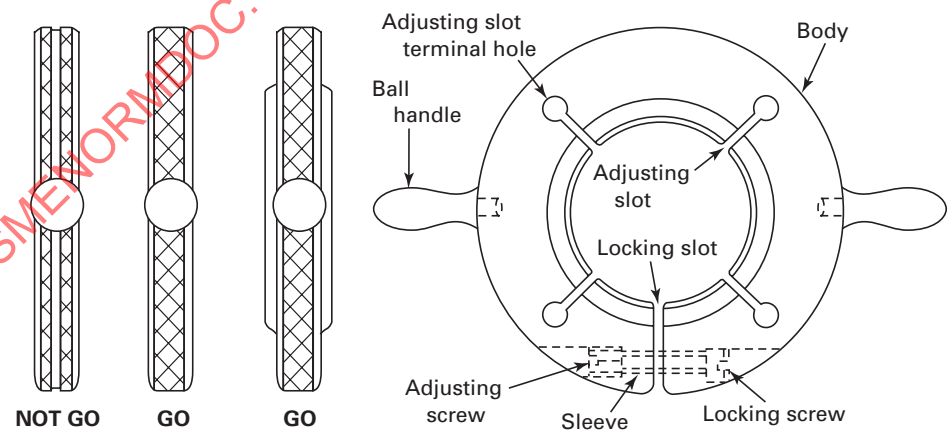
Fig. 7 Thread Ring Gages, Details of Construction — Range Above 0.510 in. to and Including 12.260 in.



(a) Range – Above 0.510 in. to and Including 4.760 in. GO Gages Only, Coarse Pitches



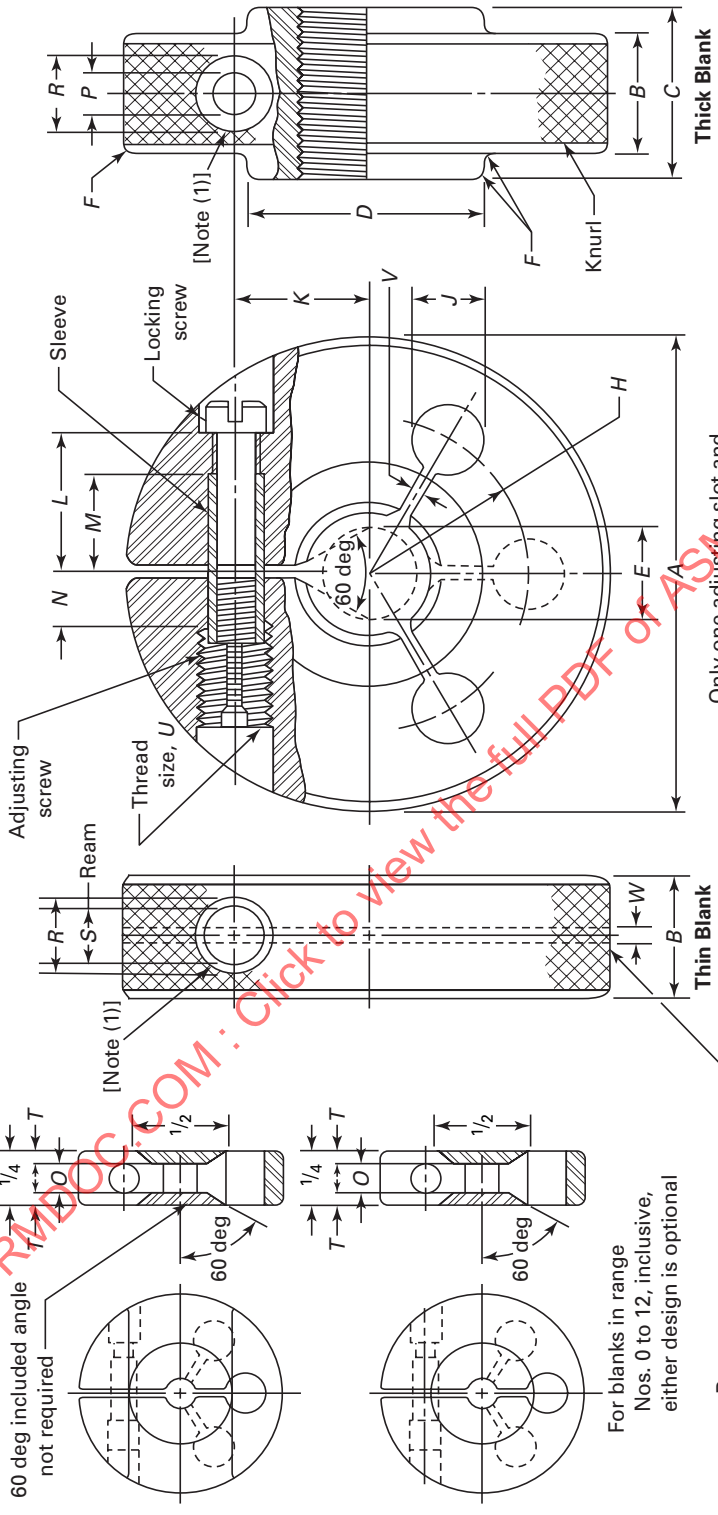
(b) Range – Above 4.760 in. to and Including 8.510 in.



(c) Range – Above 8.510 in. to and Including 12.260 in.

GENERAL NOTE: Thick blank for coarse pitches, GO gages. Thin blank for fine pitches, GO gages and all NOT GO gages.

Table 32 Thread Ring Gages — Range No. 0 to and Including $4\frac{3}{4}$ in.; Also Fine-Pitch Instrument Thread Ring Gages, No. 0 to and Including No. 12



Range (inclusive)	O	T
No. 0 to 2	3/32	5/64
No. 3 to 6	5/32	3/64
No. 8 to 12	3/16	1/32

Table 32 Thread Ring Gages — Range No. 0 to and Including 4¾ in.; Also Fine-Pitch Instrument Thread Ring Gages, No. 0 to and Including No. 12 (Cont'd)

Ring Size No.	Ring Assembly No.	Nominal Range, Inclusive, No. or in.	Decimal Range, Above and Including	General Dimensions																		
				A	*B*	*C*	*D*	*E*	*F*	*H*	*J*	*K*	*L*	*M* ± 1/64	*N* ± 1/64	Drill Size, *P* (No. or in.)	Drill Size, *R*	Ream, *S*		*U*			*V*	*W*
																		Min.	Max.	Size	Pitch Diameter Min.	Pitch Diameter Max.		
1-T	1	No. 0 to 6 (1)	0.059–0.230	1	1/4	...	...	...	1/32	5/16	5/32	5/16	7/32	5/32	1/16	No. 41 (0.0960)	11/64 (0.1719)	0.1370	0.1373	0.164-36	0.1400	0.1478	0.010 (2)	1/32
2-T	2	1/4–5/16	0.230–0.365	1 3/8	11/32	...	...	5/32	1/32	7/16	3/16	3/8	11/32	1/4	1/8	No. 31 (0.1200)	7/32 (0.2187)	0.1810	0.1813	0.216-28	0.1928	0.1950	1/32	1/16
3-T	3	3/8–1/2	0.365–0.510	1 3/4	7/16	...	...	3/16	3/64	19/32	1/4	15/32	1/2	3/8	3/16	No. 25 (0.1495)	17/64 (0.2656)	0.2150	0.2153	0.250-28	0.2268	0.2290	1/32	3/32
4-T	4	9/16–3/4	0.510–0.825	2 3/16	9/16	3/4	1 1/16	11/32	1/16	3/4	5/16	11/16	17/32	13/32	7/32	No. 7 (0.2010)	21/64 (0.3281)	0.2720	0.2723	0.3125-24	0.2854	0.2878	1/16	3/32
5-T	5	1/8–1 1/8	0.825–1.135	2 5/8	11/16	15/16	1 1/2	9/16	1/16	31/32	5/16	7/8	17/32	13/32	9/32	No. 1 (0.2280)	25/64 (0.3906)	0.3340	0.3344	0.375-24	0.3479	0.3503	1/16	3/32
6-T	6	1 1/4–1 1/2	1.135–1.510	3 1/4	3/4	1 1/8	1 7/8	27/32	1/16	1 3/16	3/8	1 1/8	5/8	7/16	5/16	17/64 (0.2656)	29/64 (0.4531)	0.3890	0.3894	0.4375-20	0.4050	0.4076	1/16	3/32
7-T	6	1 5/8–2	1.510–2.010	3 3/4	13/16	1 1/4	2 3/8	1 3/16	3/32	1 7/16	3/8	1 3/8	5/8	7/16	5/16	17/64 (0.2656)	29/64 (0.4531)	0.3890	0.3894	0.4375-20	0.4050	0.4076	1/16	1/8
8-T	7	2 1/8–2 1/2	2.010–3.510	4 1/2	7/8	1 5/16	2 7/8	1 19/32	3/32	1 3/4	7/16	1 11/16	13/16	9/16	7/16	21/64 (0.3281)	33/64 (0.5156)	0.4510	0.4515	0.500-20	0.4675	0.4701	3/32	1/8
11-T	8	3 5/8–4	3.510–4.010	6 3/8	15/16	1 1/2	4 5/8	2 15/16	3/32	2 5/8	1/2	2 9/16	1	3/4	5/8	13/32 (0.4062)	41/64 (0.6406)	0.5710	0.5715	0.625-18	0.5889	0.5919	3/32	1/8
12-T	8	4 1/8–4 3/4	4.010–4.760	7 1/4	1	1 1/2	5 3/8	3 3/8	3/32	3 1/32	1/2	3	1	3/4	5/8	13/32 (0.4062)	41/64 (0.6406)	0.5710	0.5715	0.625–18	0.5880	0.5919	3/32	1/8

GENERAL NOTES:

(a) All dimensions are in inches.

(b) Thin gage blanks are to be used for all NOT GO thread ring gages. For GO thread ring gages, use thin or thick blanks as follows.

Diameter, in.	Thin Blank	Thick Blank
From No. 0 to 1/2, inclusive	All pitches	...
Above 1/2 to 1 1/8, inclusive	Pitches 12 TPI and finer except 9/16–12	Pitches coarser than 12 TPI
Above 1 1/8	Pitches 10 TPI and finer	Pitches coarser than 10 TPI

(c) Screws and sleeves are not shown.

(d) Special thicker blanks are sometimes required for checking long lengths of engagement or exceptionally coarse pitch threads.

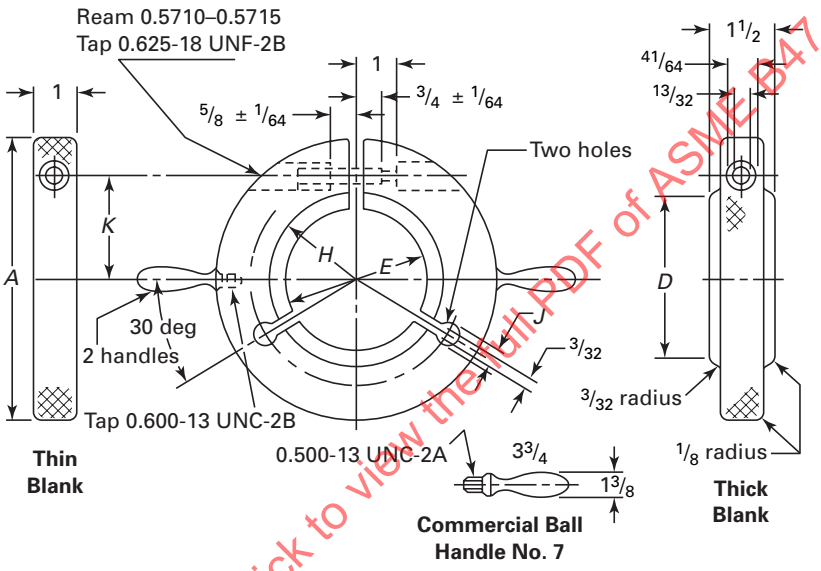
(e) Solid working thread ring gages are of similar standard thickness and furnished without adjustment feature. Outside diameter of solid ring blanks may be smaller to suit particular requirements. See Table 39 for solid setting and master thread ring gage blanks.

NOTES:

(1) Blanks for the range Nos. 0 to 12, inclusive, may be either counterbored or milled, as shown in illustration for Table 32.

(2) Approximate.

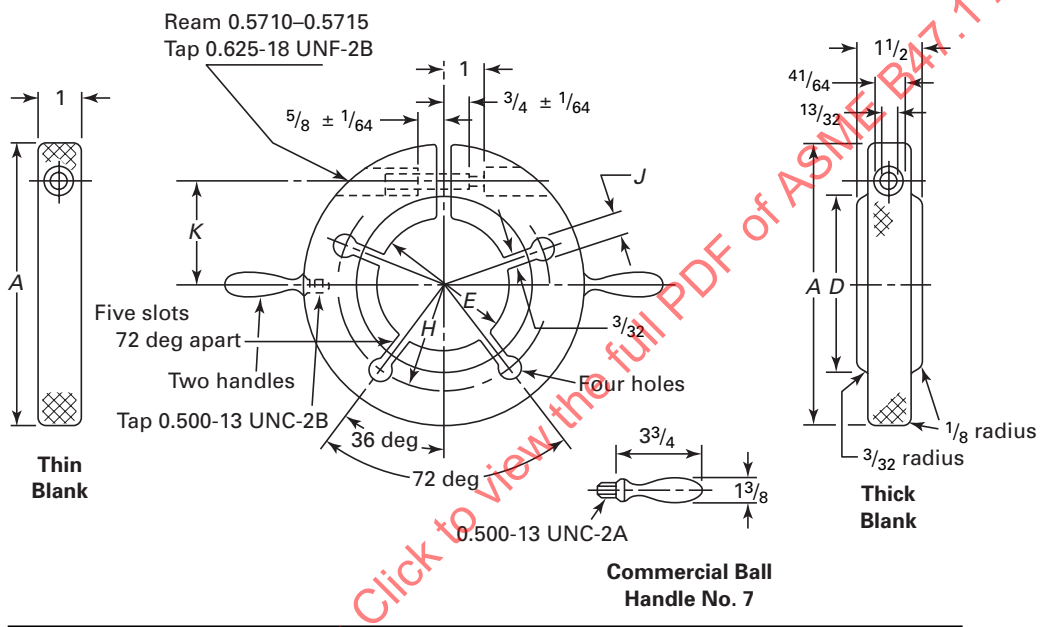
Table 33 Thread Ring Gages — Range Above 4.760 in. to and Including 8.510 in.



Ring Size No.	Ring Assembly No.	Nominal Range, Inclusive	Decimal Range		A	D	E	H	J	K
			Above	To and Including						
13-T	8	4¾–5½	4.760	5.510	8¼	6⅝	4	3 9/16	½	3½
14-T	8	5½–6¼	5.510	6.260	9¼	7⅜	4¾	4 1/16	½	3 15/16
15-T	8	6¼–7	6.260	7.010	10¼	8⅛	5½	4½	½	4⅜
16-T	8	7–7¾	7.010	7.760	11¼	8⅞	6¼	4⅞	⅝	5
17-T	8	7¾–8½	7.760	8.510	12¼	9⅝	7	5 5/16	⅝	5⅛

GENERAL NOTES:
(a) All dimensions are in inches.
(b) For use of thin or thick blanks, see General Note (b) to Table 32. Locking device is the same size in the range above 3⅝ in. to and including 12¼.
(c) See Notes to Table 32 for solid thread ring gages.

Table 34 Thread Ring Gages — Range Above 8.510 in. to and Including 12.260 in.



Ring Size No.	Ring Assembly No.	Nominal Range, Inclusive	Decimal Range		A	D	E	H	J	K
			Above	To and Including						
18-T	8	8 1/2–9 1/4	8.510	9.260	13 1/4	10 3/8	7 3/4	5 13/16	5/8	5 5/8
19-T	8	9 1/4–10	9.260	10.010	14 1/4	11 1/8	8 1/2	6 7/32	11/16	6 1/8
20-T	8	10–10 3/4	10.010	10.760	15 1/4	11 7/8	9 1/4	6 23/32	11/16	6 5/8
21-T	8	10 3/4–11 1/2	10.760	11.510	16 1/4	12 5/8	10	7 1/4	3/4	7 1/4
22-T	8	11 1/2–12 1/4	11.510	12.260	17 1/4	13 3/8	10 3/4	7 5/8	3/4	7 5/8

GENERAL NOTES:

(a) All dimensions are in inches.

(b) Special thicker blanks are sometimes required for checking long lengths of engagement or exceptionally coarse pitch threads..

(c) For use of thin or thick blanks, see General Note (b) to Table 32. Locking device is the same size in the range above 3 5/8 in. to and including 12 1/4.

Table 35 Fine-Pitch Instrument Thread Ring Gages — Range Above 0.240 in. to and Including 2.510 in.

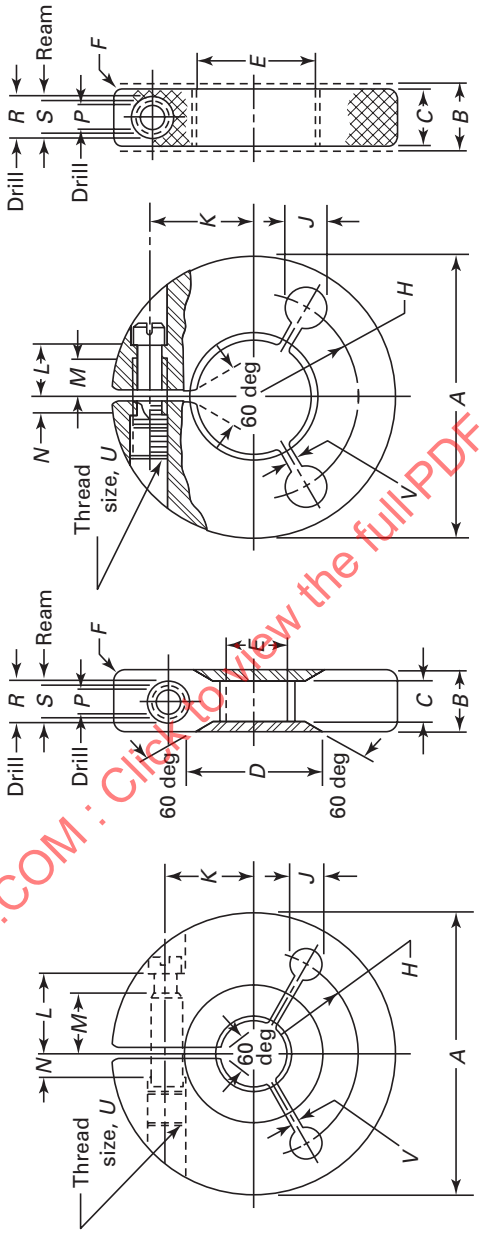


Table 35 Fine-Pitch Instrument Thread Ring Gages — Range Above 0.240 in. to and Including 2.510 in. (Cont'd)

Ring Size No.	Nominal Range, Inclusive	Decimal Range		TPI and Finer	General Dimensions											
		Above	To and Including		*A*	*B*	*C*	*D*	*E*	*F*	*H*	*J*	*K*	*L*	*M*, ± 1/64	*N*, ± 1/64
2T	1/4–5/16	0.230	0.365	40	1 3/8	11/32	1/4	3/4	5/32	1/32	7/16	3/16	3/8	11/32	1/4	1/8
3T	3/8–1/2	0.365	0.510	36	1 3/4	7/16	5/16	1	3/16	3/64	19/32	1/4	15/32	1/2	3/8	3/16
4T	9/16–3/4	0.510	0.825	32	2 3/16	9/16	15/32	...	11/32	1/16	3/4	5/16	11/16	17/32	13/32	7/32
5T	7/8–1 1/8	0.825	1.135	28	2 5/8	11/16	17/32	...	9/16	1/16	31/32	5/16	7/8	17/32	13/32	9/32
6T	1 1/4–1 1/2	1.135	1.510	28	3 1/4	3/4	5/8	...	27/32	1/16	1 5/16	3/8	1 1/8	5/8	7/16	5/16
7T	1 5/8–2	1.510	2.010	28	3 3/4	13/16	5/8	...	1 3/16	3/32	1 7/16	3/8	1 3/8	5/8	7/16	5/16
8T	2 1/8–2 1/2	2.010	2.510	28	4 1/2	7/8	11/16	...	1 19/32	3/32	1 3/4	7/16	1 11/16	13/16	9/16	7/16

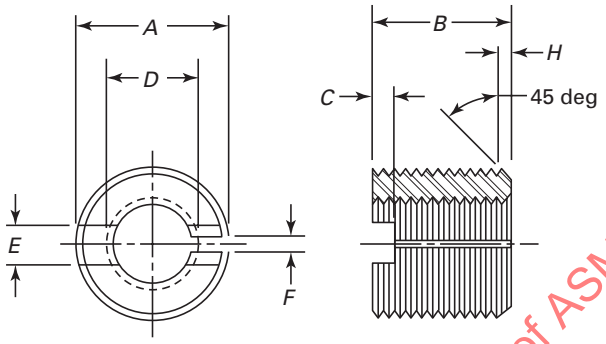
Ring Size No.	Nominal Range, Inclusive	General Dimensions								
		Drill Size, *P* (No. or in.)	Drill Size, *R*	Ream, *S*		*U*			*V*	*W*
				Min.	Max.	Size	Pitch Diameter Min.	Pitch Diameter Max.		
2T	1/4–5/16	No. 31 (0.1200)	7/32 (0.2187)	0.1810	0.1813	0.216-28	0.1928	0.1950	1/32	1/16
3T	3/8–1/2	No. 25 (0.1495)	17/64 (0.2656)	0.2150	0.2153	0.250-28	0.2268	0.2290	1/32	3/32
4T	9/16–3/4	No. 7 (0.2010)	21/64 (0.3281)	0.2720	0.2723	0.3125-24	0.2854	0.2878	1/16	3/32
5T	7/8–1 1/8	No. 1 (0.2280)	25/64 (0.3906)	0.3340	0.3344	0.375-24	0.3479	0.3503	1/16	3/32
6T	1 1/4–1 1/2	17/64 (0.2656)	29/64 (0.4531)	0.3890	0.3894	0.4375-20	0.4050	0.4076	1/16	3/32
7T	1 5/8–2	17/64 (0.2656)	29/64 (0.4531)	0.3890	0.3894	0.4375-20	0.4050	0.4076	1/16	1/8
8T	2 1/8–2 1/2	21/64 (0.3281)	33/64 (0.5156)	0.4510	0.4515	0.500-20	0.4676	0.4701	3/32	1/8

GENERAL NOTES:

(a) All dimensions are in inches.

(b) Solid working thread ring gages are of similar standard thickness and furnished without adjustment feature. Outside diameter of solid ring blanks may be smaller to suit particular requirements. See Table 39 for solid setting or master thread ring gage blanks.

Table 36 Thread Ring Gage Adjusting Screws



For Ring Size No.	Ring Assembly No.	Gage Range, Nominal, No. or in.	A					B [Note (1)]	C
			Size (External Thread)	Pitch Diameter		Minor Diameter			
				Min.	Max.	Min.	Max.		
1-T	1	Nos. 0 to 12	0.164-36	0.1442	0.1460	0.1315	0.1333	3/16	3/64
2-T	2	1/4–5/16	0.216-28	0.1906	0.1928	0.1744	0.1766	1/4	3/64
3-T	3	3/8–1/2	0.250-28	0.2246	0.2268	0.2084	0.2106	5/16	1/16
4-T	4	9/16–3/4	0.3125-24	0.2830	0.2854	0.2641	0.2665	5/16	1/16
5-T	5	7/8–1 1/8	0.375-24	0.3455	0.3479	0.3266	0.3290	3/8	5/64
6-7-T	6	1 1/4–2	0.4375-20	0.4024	0.4050	0.3797	0.3823	7/16	5/64
8-10-T	7	2 1/8–3 1/2	0.500-20	0.4649	0.4675	0.4422	0.4448	1/2	3/32
11-22-T	8	3 5/8–12 1/4	0.625-18	0.5859	0.5889	0.5607	0.5637	9/16	3/32

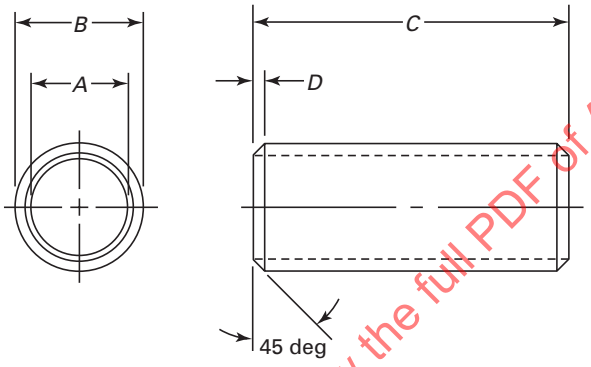
For Ring Size No.	Ring Assembly No.	Gage Range, Nominal, No. or in.	D				E	F	H
			Size (Internal Thread)	Pitch Diameter		Tap Drill			
				Min.	Max.				
1-T	1	Nos. 0 to 12	0.086-64	0.0759	0.0773	50 (0.070)	1/32	1/64	0.020
2-T	2	1/4–5/16	0.112-48	0.0985	0.1001	42 (0.093)	1/32	1/64	0.020
3-T	3	3/8–1/2	0.138-40	0.1218	0.1235	32 (0.116)	3/64	1/32	0.020
4-T	4	9/16–3/4	0.190-32	0.1697	0.1716	20 (0.161)	3/64	1/32	1/32
5-T	5	7/8–1 1/8	0.216-28	0.1928	0.1950	14 (0.182)	1/16	3/64	1/32
6-7-T	6	1 1/4–2	0.250-28	0.2268	0.2290	3 (0.213)	1/16	3/64	1/32
8-10-T	7	2 1/8–3 1/2	0.3125-24	0.2854	0.2878	I (0.272)	5/64	1/16	3/64
11-22-T	8	3 5/8–12 1/4	0.375-24	0.3479	0.3503	Q (0.332)	5/64	1/16	3/64

GENERAL NOTE: All dimensions are in inches.

NOTE:

(1) Tolerance on length $B = \pm 1/64$ in.

Table 37 Thread Ring Gage Sleeves



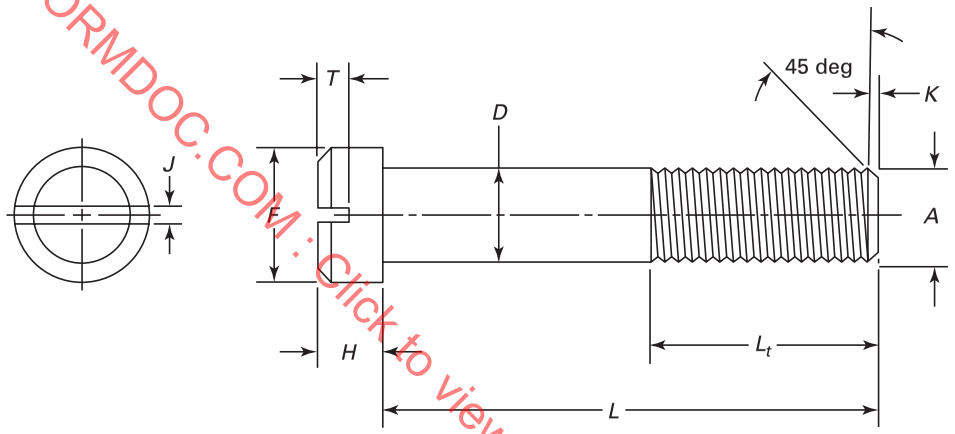
For Ring Size No.	Ring Assembly No.	Gage Range, Nominal, No. or in.	A		B		C, [Note (1)]	D
			Drill Size	Decimal Equivalent	Min.	Max.		
1-T	1	Nos. 0 to 12	No. 43	0.089	0.1368	0.1370	1/4	0.010
2-T	2	1/4–5/16	No. 32	0.116	0.1808	0.1810	7/16	0.020
3-T	3	3/8–1/2	No. 27	0.144	0.2148	0.2150	5/8	0.020
4-T	4	9/16–3/4	No. 10	0.193	0.2718	0.2720	11/16	1/32
5-T	5	7/8–1 1/8	No. 2	0.221	0.3337	0.3340	3/4	1/32
6-7-T	6	1 1/4–2	F	0.257	0.3887	0.3890	13/16	1/32
8-10-T	7	2 1/8–3 1/2	P	0.323	0.4507	0.4510	1 1/16	3/64
11-22-T	8	3 5/8–12 1/4	25/64	0.391	0.5707	0.5710	1 1/2	3/64

GENERAL NOTE: All dimensions are in inches.

NOTE:

(1) Tolerance on length C = ± 1/64 in.

Table 38 Thread Ring Gage Locking Screws



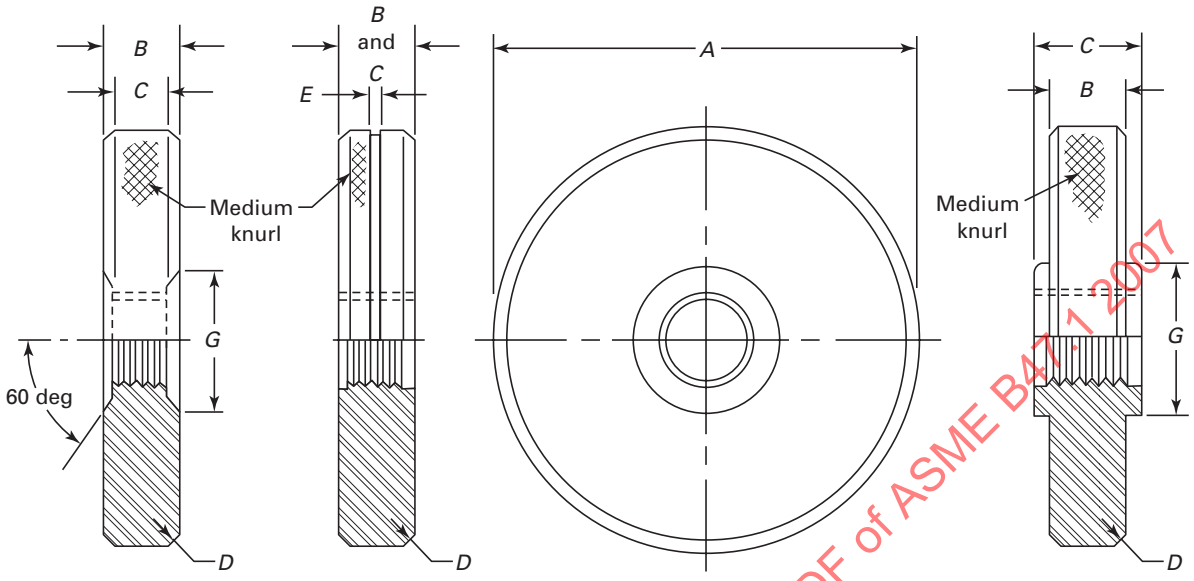
For Ring Size No.	Ring Assembly No.	Gage Range, Nominal, No. or in.	A			D		F		H		J		T		K	L, [Note (1)]	L_t
			Size	Pitch Diameter Min.	Pitch Diameter Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.			
1-T	1	Nos. 0 to 12	0.086-64 UNF-3A	0.0744	0.0759	0.0840	0.0860	0.136	0.140	0.066	0.083	0.023	0.031	0.025	0.037	0.010	29/64	3/16
2-T	2	1/4–5/16	0.112-48 UNF-3A	0.0967	0.0985	0.1096	0.1120	0.178	0.183	0.088	0.107	0.031	0.039	0.035	0.048	0.020	23/32	5/16
3-T	3	3/8–1/2	0.138-40 UNF-3A	0.1198	0.1218	0.1353	0.1380	0.221	0.226	0.111	0.132	0.039	0.048	0.045	0.060	0.020	1	7/16
4-T	4	9/16–3/4	0.190-32 UNF-3A	0.1674	0.1697	0.1867	0.1900	0.306	5/16	0.156	0.180	0.050	0.060	0.064	0.083	1/32	1 1/16	7/16
5-T	5	7/8–1 1/8	0.216-28 UNF-3A	0.1904	0.1928	0.2127	0.2160	0.337	11/32	0.178	0.205	0.056	0.067	0.074	0.094	1/32	1 3/16	1/2
6-7-T	6	1 1/4–2	0.250-28 UNF-3A	0.2243	0.2268	0.2464	0.2500	0.367	3/8	0.207	0.237	0.064	0.075	0.087	0.109	1/32	1 23/64	9/16
8-10-T	7	2 1/8–3 1/2	0.3125-24 UNF-3A	0.2827	0.2854	0.3084	0.3125	0.429	7/16	0.262	0.295	0.072	0.084	0.110	0.137	3/64	1 23/32	5/8
11-22-T	8	3 5/8–12 1/4	0.375-24 UNF-3A	0.3450	0.3479	0.3705	0.3750	0.553	9/16	0.315	0.355	0.081	0.094	0.133	0.164	3/64	2 3/16	3/4

GENERAL NOTE: All dimensions are in inches.

NOTE:

(1) Tolerance on length $L = \pm 1/32$ in.

Table 39 Solid, Nonadjustable Thread-Setting and Master (Reference) Ring Gage Blanks — Range 0.059 in. to 6.010 in.



Blank No. 1	Blank No. 2	Blank No. 3

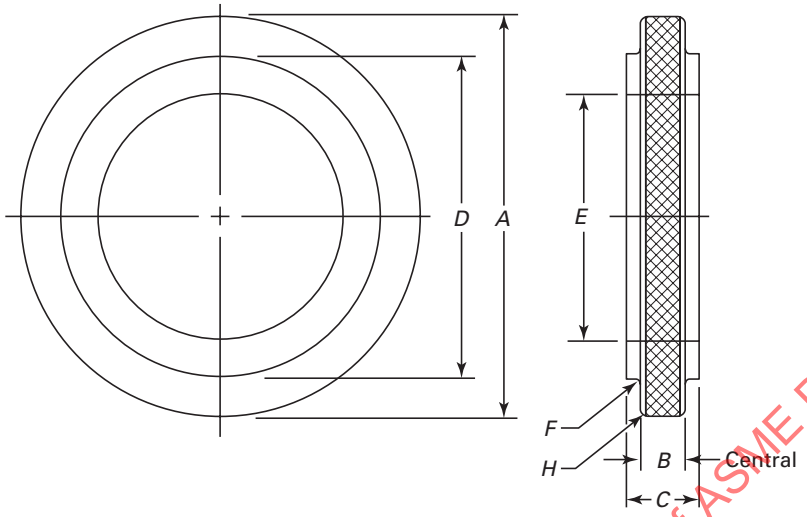
Table 39 Solid, Nonadjustable Thread-Setting and Master (Reference) Ring Gage Blanks — Range 0.059 in. to 6.010 in. (Cont'd)

Nominal Range, Inclusive, No. or in.	Decimal Range, Above and Including	General Dimensions					Reference Only	
		A	*B*	*C*, Pitches	*D*	*E*	TPI	4 Pitches
							80	0.050000
Nos. 0 to 6	0.059	1	0.125	4	1/64	1/32	72	0.055556
	0.150						64	0.062500
Nos. 8 to 12	0.150	1	0.167	4	1/64	3/64	56	0.071428
	0.230						48	0.083332
1/4–5/16	0.230	1 1/4	0.167	4	1/64	3/64	44	0.090908
	0.365						40	0.100000
3/8–1/2	0.365	1 1/4	0.200	4	1/32	1/16	36	0.111112
	0.510						32	0.125000
9/16–3/4	0.510	1 1/2	0.286	4	2/64	1/16	28	0.142856
	0.825						24	0.166668
7/8–1 1/8	0.825	1 7/8	0.333	4	3/64	3/32	20	0.200000
	1.135						18	0.222224
1 1/4–1 1/2	1.135	2 1/2	0.333	4	3/64	3/32	16	0.250000
	1.510						14	0.285716
1 5/8–2	1.510	3 1/8	0.333	4	3/64	3/32	13	0.307692
	2.010						12	0.333332
2 1/8–2 1/2	2.010	3 5/8	0.333	4	3/64	3/32	11 1/2	0.347828
	2.510						11	0.363636
2 5/8–3	2.510	4 1/8	0.333	4	3/64	3/32	10	0.400000
	3.010						9	0.444444
3 1/8–3 1/2	3.010	4 3/4	0.500	4	3/64	3/32	8	0.500000
	3.510						7	0.571428
3 5/8–4	3.510	5 1/2	0.500	4	3/64	3/32	6	0.666666
	4.010						5	0.800000
4 1/8–4 3/4	4.010	6 1/4	0.500	4	3/64	3/32	4 1/2	0.888888
	4.760						4	1.000000
4 7/8–5 3/8	4.760	7	0.500	4	3/64	3/32	. . .	. . .
	5.385							
5 1/2–6	5.385	7 3/4	0.500	4	3/64	3/32	. . .	. . .
	6.010							

GENERAL NOTES:

(a) No. 1 Blank—all pitches where *C* is less than *B*.
(b) No. 2 Blank—all pitches where *C* and *B* are the same.
(c) No. 3 Blank—all pitches where *C* is greater than *B*.
(d) Outside diameter (OD) may be modified from dimension stated.
(e) All dimensions are in inches.
(f) *G* is 0.375 in. larger than the maximum major diameter of the thread and is applied only when *C* is less than or greater than the blank width *B*.
(g) *Option*. When blank No. 1 is used, diameter *G* may be counterbored to *C* from one side.
(h) Annular groove *E* to designate NOT GO gage, depth equals one-half the width.

Table 40 Taper Pipe-Thread Ring Gages L_1 and L_2 — Range 1/16 in. to 8 in., Inclusive (Standard Basic Notch Design)



Nominal Pipe Size	A	B	C, L_1	C, L_2	D	E	F	H
1/16	1 1/8	7/64	7/32	5/16	11/16	3/16	1/32	1/32
1/8	1 1/8	7/64	7/32	5/16	11/16	9/32	1/32	1/32
1/4	1 3/8	9/64	5/16	31/64	7/8	3/8	1/32	1/32
3/8	1 1/2	9/64	11/32	1/2	1	1/2	1/32	1/32
1/2	1 3/4	3/16	27/64	5/8	1 1/4	5/8	3/64	1/32
3/4	2	13/64	7/16	41/64	1 7/16	13/16	3/64	1/32
1	2 1/2	17/64	1/2	25/32	1 13/16	1	3/64	1/32
1 1/4	3	9/32	33/64	51/64	2 3/16	1 11/32	3/64	3/64
1 1/2	3 1/4	9/32	33/64	13/16	2 3/8	1 9/16	3/64	2/64
2	3 3/4	19/64	17/32	27/32	2 15/16	2 1/32	1/16	3/64
2 1/2	4 1/4	1/2	13/16	1 1/4	3 3/8	2 7/16	3/32	1/16
3	5	9/16	29/32	1 5/16	4	3 1/16	3/32	1/16
3 1/2	5 3/4	5/8	61/64	. . .	4 5/8	3 9/16	3/32	1/16
4	6 1/2	21/32	1	. . .	5 3/16	4 1/16	3/32	1/16
5	7 1/2	23/32	1 1/16	. . .	6 1/4	5 1/8	3/32	3/32
6	9	23/32	1 3/32	. . .	7 1/2	6 1/8	3/32	3/32
8	11	13/16	1 3/16	. . .	9 1/2	8 1/8	1/8	3/32

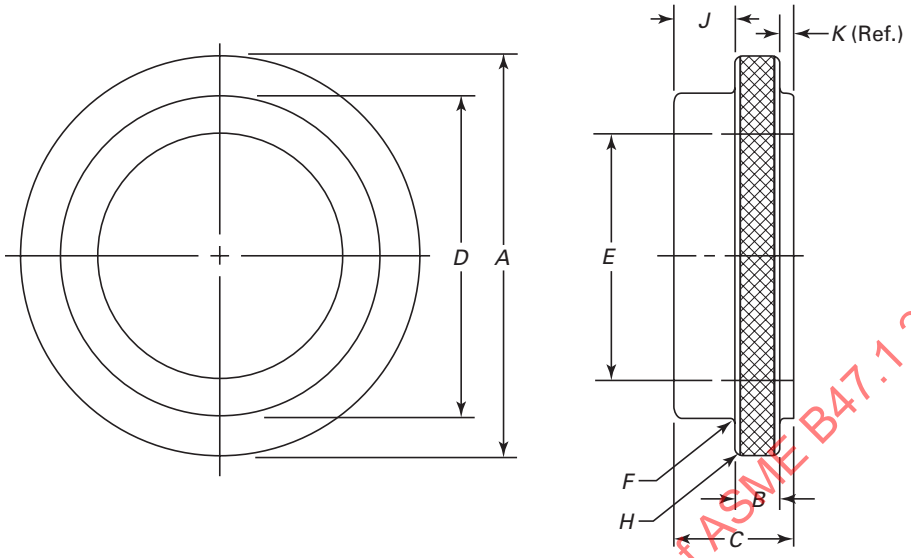
GENERAL NOTES:

(a) All dimensions are in inches.

(b) Master ring gage for checking L_1 and L_2 working plug gages can be made from CL_2 blanks.

(c) As an alternate standard, L_2 basic notch ring gages can be made from same blanks as the PTF-SAE L_2 short-step limit blanks shown in Table 40A.

Table 40A Taper Pipe-Thread Ring Gages — Step Limit Design



Nominal Pipe Size	L_1 Step Limit			L_2 Step Limit			PTF-SAE L_1 Short-Step Limit			PTF-SAE L_2 Short-Step Limit		
	C	*J*	*K* (Ref.)	*C*	*J*	*K* (Ref.)	*C*	*J*	*K* (Ref.)	*C*	*J*	*K* (Ref.)
1/16	1/4	7/64	1/32	23/64	5/32	3/32	7/32	5/64	1/32	5/16	1/8	5/64
1/8	1/4	7/64	1/32	23/64	5/32	3/32	7/32	5/64	1/32	5/16	1/8	5/64
1/4	3/8	11/64	1/16	35/64	1/4	5/32	5/16	1/8	3/64	31/64	13/64	9/64
3/8	25/64	3/16	1/16	9/16	17/64	5/32	11/32	9/64	1/16	1/2	7/32	9/64
1/2	1/2	7/32	3/32	45/64	21/64	3/16	27/64	11/64	1/16	5/8	17/64	11/64
3/4	33/64	7/32	3/32	23/32	21/64	3/16	7/16	11/64	1/16	41/64	17/64	11/64
1	19/32	1/4	5/64	7/8	25/64	7/32	1/2	11/64	1/16	25/32	5/16	13/64
1 1/4	5/8	1/4	3/32	7/8	25/64	13/64	33/64	11/64	1/16	51/64	5/16	13/64
1 1/2	5/8	1/4	3/32	29/32	25/64	15/64	33/64	11/64	1/16	13/16	21/64	13/64
2	5/8	1/4	5/64	15/16	13/32	15/64	17/32	11/64	1/16	27/32	21/64	7/32
2 1/2	15/16	21/64	7/64	1 3/8	9/16	5/16	13/16	1/4	1/16	1 1/4	15/32	9/32
3	1 1/32	23/64	7/64	1 7/16	9/16	5/16	29/32	17/64	5/64	1 5/16	15/32	9/32

GENERAL NOTES:

(a) All dimensions are in inches.

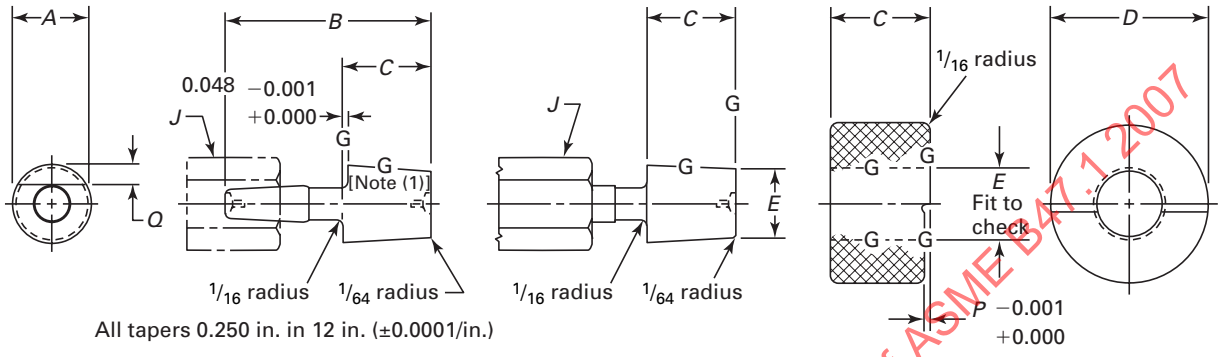
(b) *A*, *B*, *D*, *E*, *F*, and *H* are same as shown in Table 40.

(c) For step limit design gages, the flange *B* is not central.

(d) For L_1 and L_2 step limit gages, *J* will accommodate a maximum step of 2 pitch length.

(e) For PTF-SAE L_1 and L_2 short gages, *J* will accommodate a maximum step of $1\frac{1}{2}$ pitch length.

Table 41 Plug and Ring Gages for Checking Handles and Gaging Member Taper Shanks of Taper Lock Plug Gages — Range Above 0.059 in. to and Including 1.510 in.



Plug Gage **Check Gage** **Ring Gage**

Plug Gages for Checking Handles

Size No. of Handle to be Gaged	*A* +0.0000 −0.0001	*B*	*C*	Handle Size No., *J*	*Q*
000	0.126	$1\frac{3}{8}$	$\frac{1}{2}$	000	0.015
00	0.156	$1\frac{17}{32}$	$\frac{9}{16}$	00	0.015
0	0.181	$1\frac{17}{32}$	$\frac{5}{8}$	0	0.020
1	0.240	2	$\frac{3}{4}$	1	0.025
2	0.310	2	$\frac{3}{4}$	1	0.025
3	0.410	2	$\frac{3}{4}$	2	0.050
4	0.610	$2\frac{3}{16}$	$\frac{7}{8}$	3	0.100
5	0.810	$2\frac{5}{16}$	1	3	0.200

Ring Gages for Checking Gaging Members, and Check Gages

Size No. of Shank to be Gaged	*E* −0.0000 +0.0001	*C*	*D*	Handle Size No., *J*	*P* +0.000 −0.001
000	0.1146	$\frac{9}{16}$	1	000	0.0480
00	0.1433	$\frac{5}{8}$	1	00	0.0480
0	0.1670	$\frac{11}{16}$	$1\frac{1}{8}$	0	0.0480
1	0.2234	$\frac{13}{16}$	$1\frac{1}{8}$	1	0.0480
2	0.2934	$\frac{13}{16}$	$1\frac{1}{4}$	1	0.0480
3	0.3924	$\frac{7}{8}$	$1\frac{3}{8}$	2	0.0960
4	0.5898	1	$1\frac{9}{16}$	3	0.0960
5	0.7872	$1\frac{1}{8}$	$1\frac{3}{4}$	3	0.0960

GENERAL NOTES:

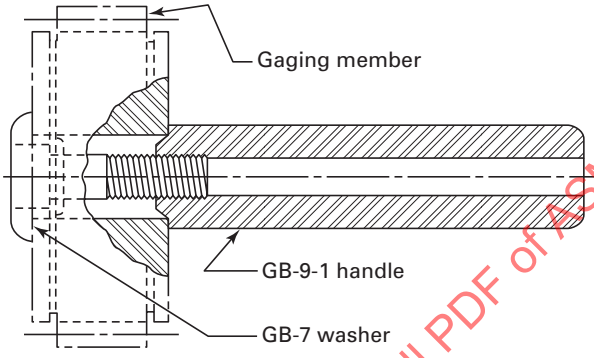
(a) All dimensions except *J* are in inches.

(b) Dimensions not specified above shall conform to American Gage Design Standards (see Tables 7, 8, 10, and 12).

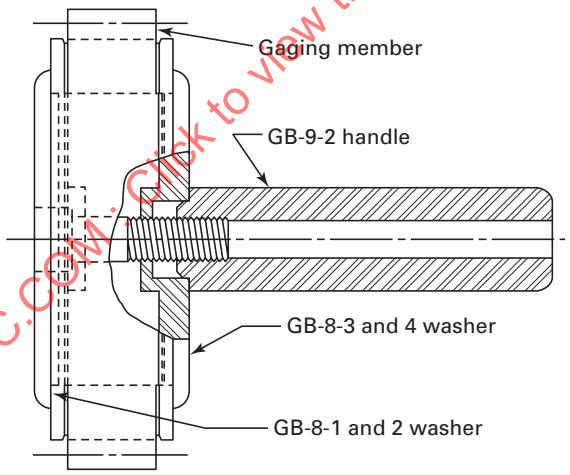
NOTE:

(1) G = ground surface.

Fig. 8 Three-Piece Spline Plug Gage Assembly



(a) Range – Above 1.5 in. to and Including 5.0 in.



(b) Range – Above 5.0 in. to and Including 8.0 in.

GENERAL NOTE: For details of handles and washers, see Tables 42, 43, and 44.

Fig. 9 Spline Plug Gage Stands

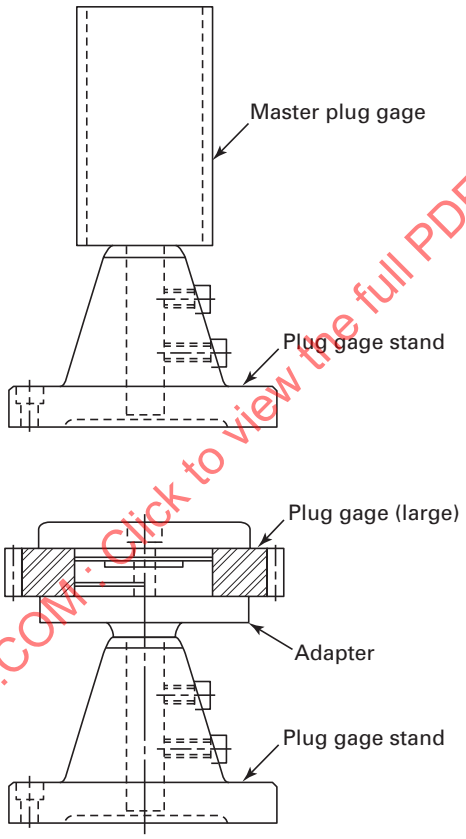
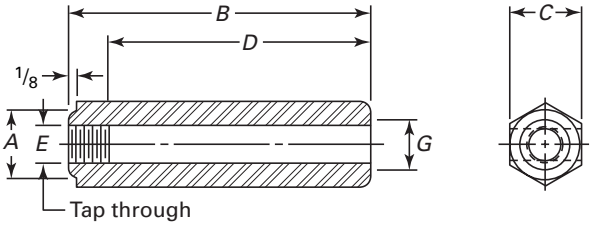


Table 42 Handles for Spline Plug Gages — Range Above 1.5 in. to and Including 8 in.



Handle No.	Dimensions					
	A	*B*	*C*	*D*	*E*	*G*
GB-9-1	47/64	4 1/8	13/16	3 3/4	0.375-16 UNC-2B [Note (2)]	
GB-9-2 [Note (1)]	63/64	4 7/8	1 1/8	4 1/4	0.500-20 UNF-2B [Note (2)]	

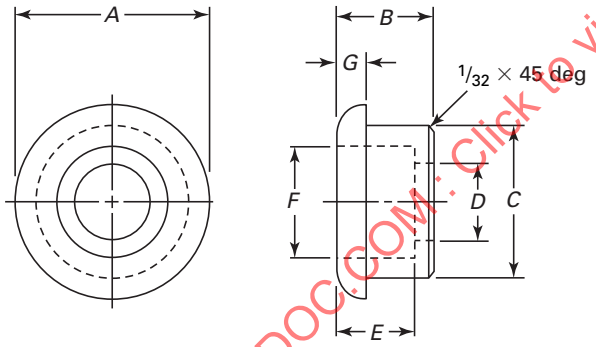
GENERAL NOTE: All dimensions except *E* are in inches.

NOTES:

(1) Can be made from A.G.D. handle No. 6.

(2) Use standard tap drill.

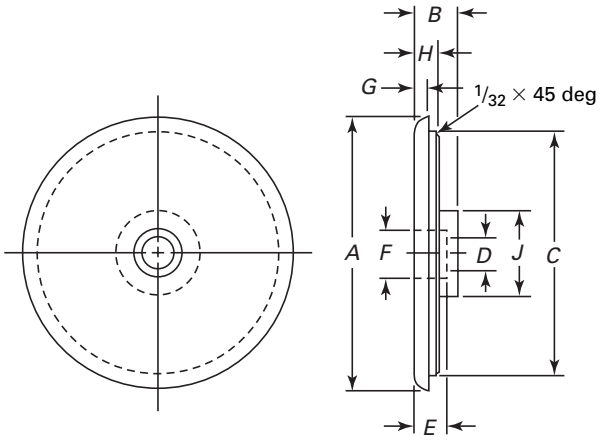
Table 43 Washers for Spline Plug Gaging Members (Cup Type, Small) — Range Above 1.5 in. to and Including 5 in.



Washer No.	Dimensions						
	A	*B*	*C*	*D*	*E*	*F*	*G*
GB-7-1	1	1/2	47/64	13/32	3/8	19/32	3/16
GB-7-2	1 1/4	5/8	63/64	17/32	1/2	25/32	3/16

GENERAL NOTE: All dimensions are in inches.

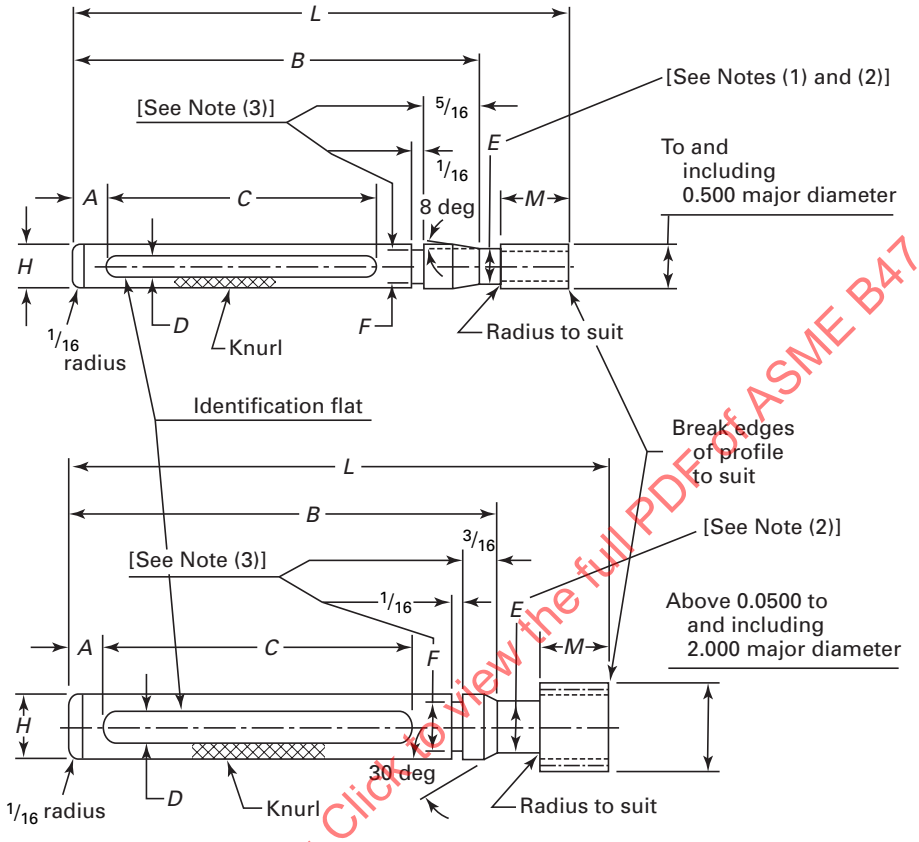
Table 44 Washers for Spline Plug Gaging Members (Cup Type, Large) — Range Above 5 in. to and Including 8 in.



Washer No.	Dimensions								
	A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*J*
GB-8-1	3	5/8	2 47/64	17/32	1/2	25/32	3/16	5/16	1 1/4
GB-8-2	4 3/8	5/8	3 63/64	17/32	1/2	25/32	3/16	5/16	1 1/4
GB-8-3	3	5/8	2 47/64	17/32	1/2	1 1/64	3/16	5/16	1 1/4
GB-8-4	4 3/8	5/8	3 63/64	17/32	1/2	1 1/64	3/16	5/16	1 1/4

GENERAL NOTE: All dimensions are in inches.

Table 45 Involute, Serrated, and Straight-Sided Spline Composite and Sector Plug Gages — Range to and Including 2 in.



Major Diameter		Dimensions											
		B					*F*				*M*	
Above	To and Including	*A*	GO	NOT GO	*C*	*D*	GO	NOT GO	*H*	*L*	GO	NOT GO
0.000	0.250	3/16	2 1/8	2 1/4	1 1/2	1/8	[Note (3)]	3/16	1/4	2 3/4	3/8	1/4
0.250	0.375	3/16	2 1/8	2 1/4	1 1/2	3/16	[Note (3)]	1/4	5/16	2 7/8	1/2	3/8
0.375	0.500	3/16	2 1/4	2 3/8	1 3/4	3/16	[Note (3)]	5/16	3/8	3	1/2	3/8
0.500	0.750	9/32	2 7/16	2 9/16	1 7/8	1/4	[Note (3)]	3/8	7/16	3 3/8	5/8	1/2
0.750	1.000	5/16	2 1/2	2 3/4	1 7/8	5/16	[Note (3)]	1/2	9/16	3 5/8	3/4	1/2
1.000	1.500	5/16	2 3/4	3 1/8	2 1/8	5/16	[Note (3)]	11/16	3/4	4 1/8	1	5/8
1.500	2.000	5/16	2 3/4	3 1/8	2 1/8	5/16	[Note (3)]	11/16	3/4	4 1/4	1 1/8	3/4

GENERAL NOTES:

(a) All dimensions are in inches.

(b) An alternate design having a removable or reversible member similar to that shown in Table 46 may be used.

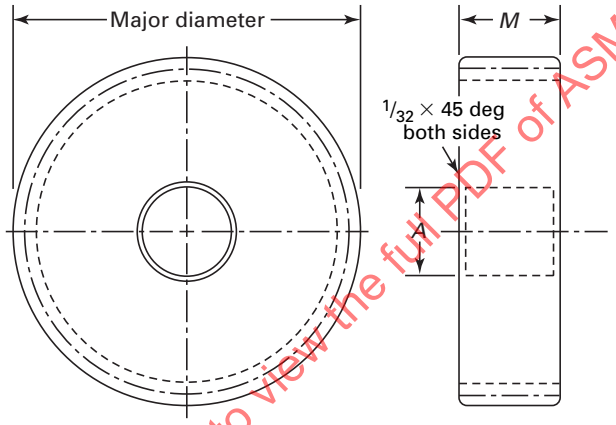
NOTES:

(1) To clear minor diameter by 0.003 in. minimum.

(2) To clear minor diameter by 0.010 in. minimum for 1/2 in. and smaller.

(3) These dimensions apply to NOT GO only.

Table 46 Involute, Serrated, and Straight-Sided Spline Composite and Sector Plug Gaging Members — Range Above 1.5 in. to and Including 8 in.

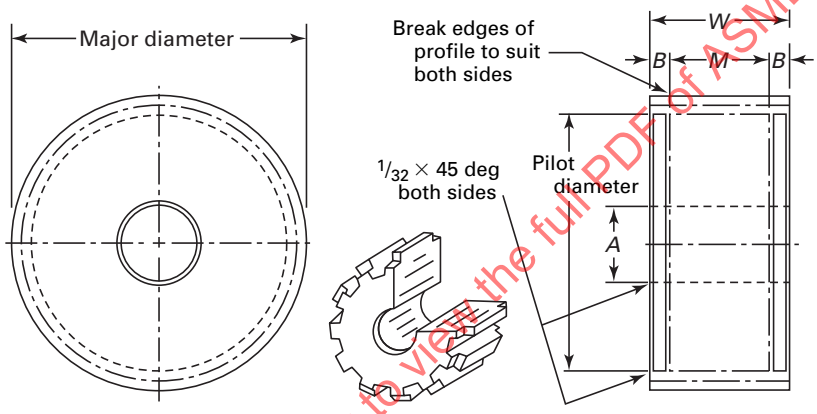


Major Diameter		Dimensions					
		A		*M*			
Above	To and Including	Min.	Max.	GO	NOT GO	Handle No.	Washer No.
1.500	3.000	0.7500	0.7503	1⅛	⅞	GB-9-1	GB-7-1
3.000	5.000	1.0000	1.0003	1½	1	GB-9-2	GB-7-2
5.000	7.000	2.7500	2.7504	1½	1	GB-9-2	GB-8-1 and 3 [Note (1)]
7.000	8.000	4.0000	4.0005	1½	1	GB-9-2	GB-8-2 and 4 [Note (1)]

GENERAL NOTE: All dimensions are in inches.

NOTE:
(1) See Fig. 9 for stand adapter.

Table 47 Involute, Serrated, and Straight-Sided Spline Composite and Sector Plug Gaging Members, Pilot Type — Range, Above 1.5 in. to and Including 8 in.



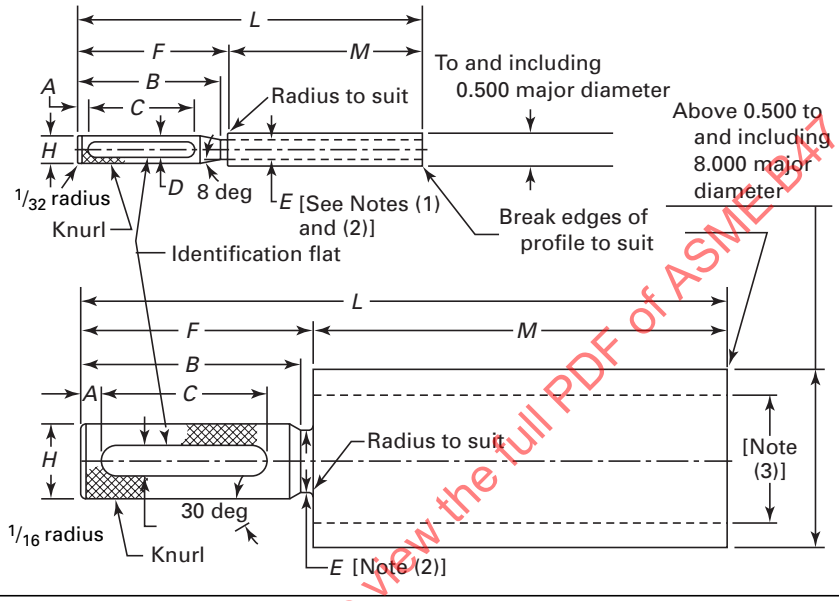
Major Diameter		Dimensions								
		A			M		W			
Above	To and Including	Min.	Max.	B	GO	NOT GO	GO	NOT GO	Handle No.	Washer No.
1.500	3.000	0.7500	0.7503	3/16	1 1/8	7/8	1 1/2	1 1/4	GB-9-1	GB-7-1
3.000	5.000	1.0000	1.0003	3/16	1 1/2	1	1 7/8	1 3/8	GB-9-2	GB-7-2
5.000	7.000	2.7500	2.7504	3/16	1 1/2	1	1 7/8	1 3/8	GB-9-2	GB-8-1 and 3 [Note (1)]
7.000	8.000	4.0000	4.0005	3/16	1 1/2	1	1 7/8	1 3/8	GB-9-2	GB-8-2 and 4 [Note (1)]

GENERAL NOTE: All dimensions are in inches.

NOTE:

(1) See Fig. 9 for stand adapter.

Table 48 Involute, Serrated, and Straight-Sided Spline Tapered-Tooth Composite and Sector Plug Gages, Master and Working — Range to and Including 8 in.



Major Diameter		Dimensions						
Above	To and Including	*A*	*B*	*C*	*D*	*F*	*H*	*M* (Max.)
0.000	0.250	3/16	2 1/8	1 1/2	1/8	2 3/8	1/4	4.5 × P.D.
0.250	0.375	3/16	2 1/8	1 1/2	3/16	2 3/8	5/16	4.5 × P.D.
0.375	0.500	3/16	2 3/8	1 3/4	3/16	2 1/2	3/8	4.5 × P.D.
0.500	0.625	9/32	2 1/2	1 7/8	1/4	2 3/4	7/16	4.5 × P.D.
0.625	0.750	9/32	2 1/2	1 7/8	1/4	2 3/4	7/16	4 × P.D.
0.750	1.250	5/16	2 9/16	1 7/8	5/16	2 7/8	9/16	4 × P.D.
1.250	1.750	5/16	2 13/16	2 1/8	5/16	3 1/8	3/4	4 × P.D.
1.750	2.250	3/8	3 3/16	2 1/4	3/8	3 3/8	1	7
2.250	3.000	3/8	3 7/16	2 1/2	1/2	3 5/8	1 1/4	7
3.000	8.000	3/8	3 11/16	2 3/4	1/2	3 7/8	1 1/4	7

GENERAL NOTES:

(a) All dimensions are in inches.

(b) An alternate design having a removable or reversible member similar to that shown in Table 46 may be used.

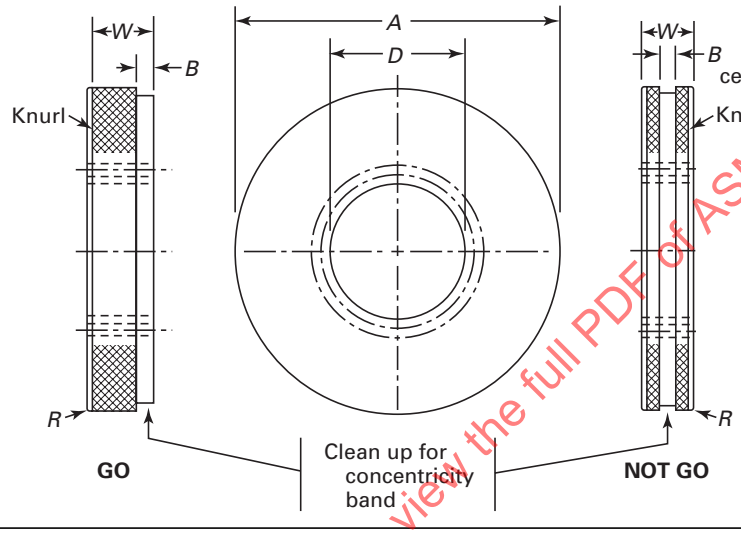
NOTES:

(1) To clear minor diameter by 0.003 in. minimum.

(2) To clear minor diameter by 0.010 in. minimum for 1/2 in. and smaller.

(3) May be bored out to suit for weight relief.

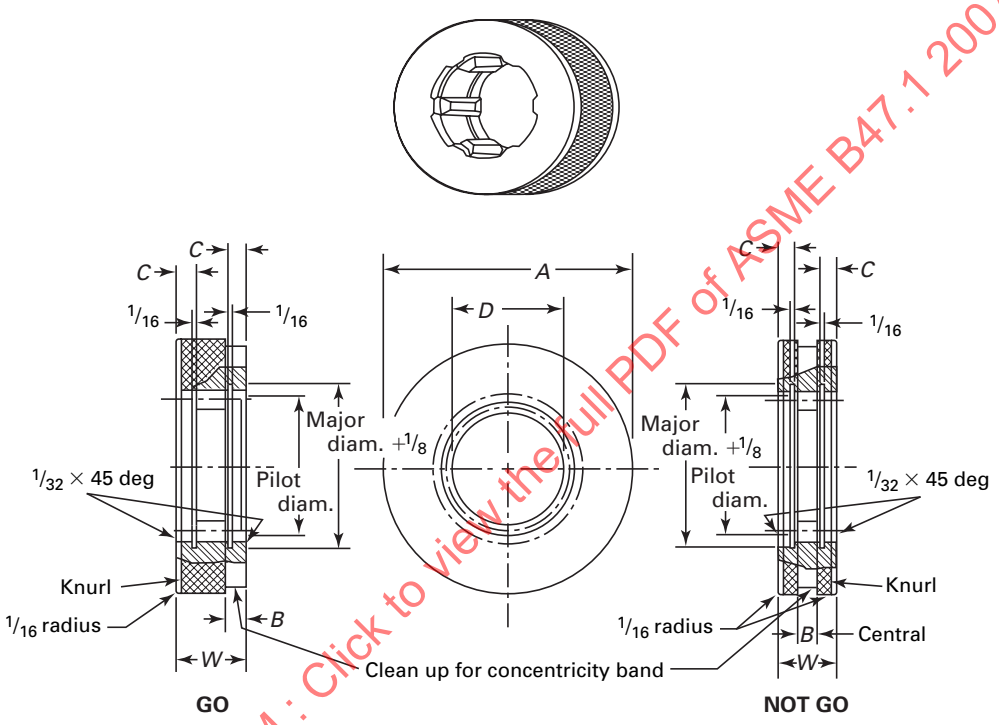
Table 49 Involute and Serrated Spline Composite and Sector Ring Gages — Range to and Including 8 in.



Major Diameter		Dimensions					
						W	
Above	To and Including	*A*	*B*	*D*	*R*	GO	NOT GO
0.000	0.375	$1\frac{1}{2}$	$\frac{3}{32}$	0	$\frac{1}{32}$	$\frac{1}{4}$	$\frac{1}{4}$
0.375	0.500	$1\frac{1}{2}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{32}$	$\frac{3}{8}$	$\frac{3}{8}$
0.500	0.750	2	$\frac{1}{8}$	$\frac{5}{16}$	$\frac{1}{32}$	$\frac{1}{2}$	$\frac{3}{8}$
0.750	1.000	$2\frac{1}{2}$	$\frac{1}{8}$	$\frac{5}{16}$	$\frac{1}{32}$	$\frac{1}{2}$	$\frac{3}{8}$
1.000	1.500	3	$\frac{3}{16}$	$\frac{5}{8}$	$\frac{1}{16}$	$\frac{5}{8}$	$\frac{1}{2}$
1.500	2.250	4	$\frac{3}{16}$	1	$\frac{1}{16}$	$\frac{5}{8}$	$\frac{1}{2}$
2.250	3.000	$4\frac{3}{4}$	$\frac{1}{4}$	$1\frac{5}{8}$	$\frac{1}{16}$	$\frac{3}{4}$	$\frac{5}{8}$
3.000	4.000	6	$\frac{1}{4}$	$2\frac{3}{8}$	$\frac{1}{16}$	$\frac{3}{4}$	$\frac{5}{8}$
4.000	5.000	7	$\frac{1}{4}$	$3\frac{3}{8}$	$\frac{1}{16}$	1	$\frac{3}{4}$
5.000	6.000	8	$\frac{1}{4}$	$4\frac{3}{8}$	$\frac{1}{16}$	1	$\frac{3}{4}$
6.000	7.000	$9\frac{1}{2}$	$\frac{1}{4}$	$5\frac{3}{8}$	$\frac{1}{16}$	$1\frac{1}{8}$	$\frac{7}{8}$
7.000	8.000	$10\frac{1}{2}$	$\frac{1}{4}$	$6\frac{3}{8}$	$\frac{1}{16}$	$1\frac{1}{8}$	$\frac{7}{8}$

GENERAL NOTE: All dimensions are in inches.

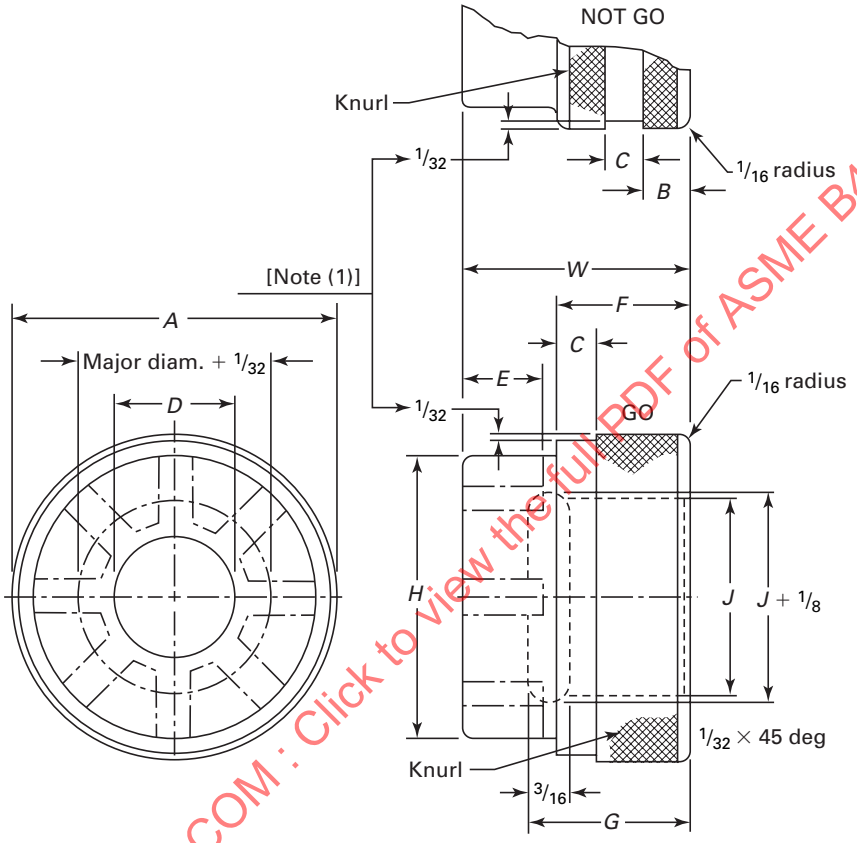
Table 50 Involute and Serrated Spline Composite and Sector Ring Gages, Pilot Type — Range Above 1.5 in. to and Including 8 in.



Major Diameter		Dimensions					
						W	
Above	To and Including	*A*	*B*	*C*	*D*	GO	NOT GO
1.500	2.250	4	3/16	3/16	1	1	7/8
2.250	3.000	4 3/4	1/4	1/4	1 5/8	1 1/4	1 1/8
3.000	4.000	6	1/4	1/4	2 3/8	1 1/4	1 1/8
4.000	5.000	7	1/4	1/4	3 3/8	1 1/2	1 1/4
5.000	6.000	8	1/4	1/4	4 3/8	1 1/2	1 1/4
6.000	7.000	9 1/2	1/4	1/4	5 3/8	1 5/8	1 3/8
7.000	8.000	10 1/2	1/4	1/4	6 3/8	1 5/8	1 3/8

GENERAL NOTE: All dimensions are in inches.

Table 51 Straight-Sided Spline Composite Ring Gages, Prong Type, for Space Widths 0.070 in. or Less — Range to and Including 1 in.



Major Diameter		Dimensions									
Above	To and Including	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*J*	*W*
0.000	0.250	1	3/16	1/8	0	1/4	1/2	5/8	3/4	[Notes (2), (3)]	13/16
0.250	0.500	1 1/4	3/16	1/8	0	5/16	1/2	5/8	1	[Notes (2), (3)]	7/8
0.500	0.750	1 1/2	7/32	3/16	0	3/8	5/8	3/4	1 3/8	[Notes (2), (3)]	1 1/16
0.750	1.000	1 3/4	9/32	3/16	3/8	7/16	3/4	7/8	1 5/8	[Notes (2), (3)]	1 1/4

GENERAL NOTE: All dimensions are in inches.

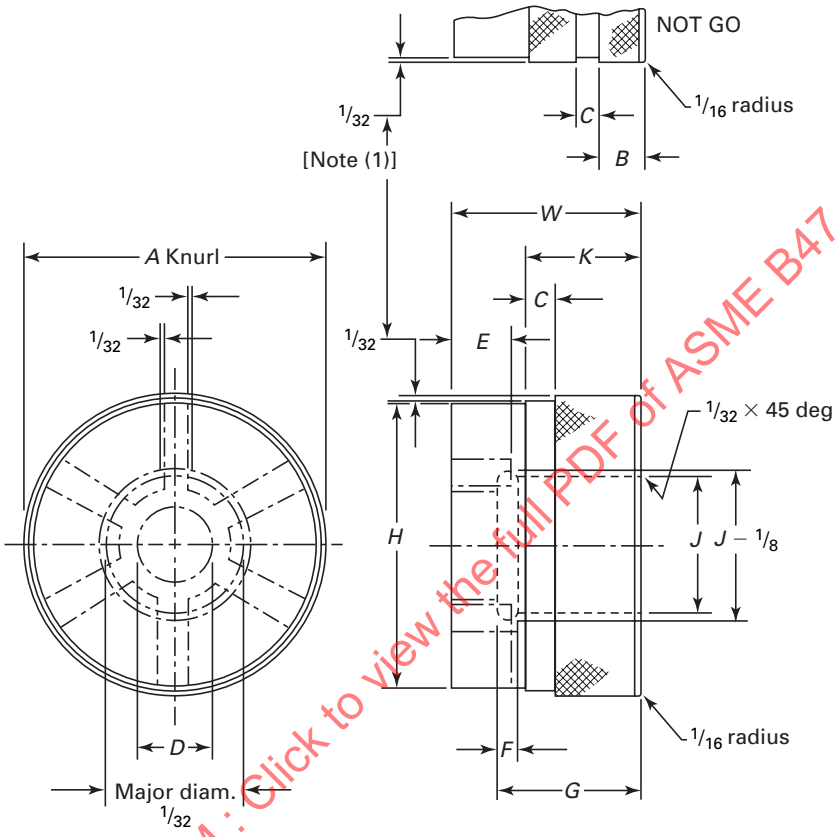
NOTES:

(1) Grind for concentricity band if required.

(2) Relief beyond *J* is optional.

(3) Major diameter plus minimum of 1/32 in. to the nearest 1/8 in.

Table 52 Straight-Sided Spline Composite Ring Gages, Prong Type, for Space Widths Greater Than 0.070 in. — Range to and Including 6 in.



Major Diameter		Dimensions										
Above	To and Including	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*J*	*K*	*W*
0.000	0.500	$1\frac{5}{8}$	$\frac{1}{4}$	$\frac{3}{16}$	0	$\frac{9}{16}$	$\frac{3}{16}$	$\frac{15}{16}$	$1\frac{1}{2}$	[Note (2)]	$\frac{11}{16}$	$1\frac{3}{8}$
0.500	1.000	$2\frac{1}{8}$	$\frac{3}{8}$	$\frac{3}{16}$	$\frac{3}{8}$	$\frac{9}{16}$	$\frac{3}{16}$	$1\frac{3}{16}$	2	[Note (2)]	$\frac{15}{16}$	$1\frac{5}{8}$
1.000	1.500	$2\frac{3}{4}$	$\frac{7}{16}$	$\frac{3}{16}$	$\frac{5}{8}$	$\frac{9}{16}$	$\frac{3}{16}$	$1\frac{5}{16}$	$2\frac{5}{8}$	[Note (2)]	$1\frac{1}{16}$	$1\frac{3}{4}$
1.500	2.000	$3\frac{1}{2}$	$\frac{13}{32}$	$\frac{3}{16}$	1	$\frac{11}{16}$	$\frac{3}{16}$	$1\frac{3}{16}$	$3\frac{3}{8}$	[Note (2)]	1	$1\frac{3}{4}$
2.000	2.500	$4\frac{1}{4}$	$\frac{17}{32}$	$\frac{3}{16}$	$1\frac{3}{8}$	$\frac{11}{16}$	$\frac{3}{16}$	$1\frac{7}{16}$	$4\frac{1}{8}$	[Note (2)]	$1\frac{1}{4}$	2
2.500	3.000	5	$\frac{9}{16}$	$\frac{1}{4}$	$1\frac{3}{4}$	$\frac{11}{16}$	$\frac{3}{16}$	$1\frac{9}{16}$	$4\frac{7}{8}$	[Note (2)]	$1\frac{3}{8}$	$2\frac{1}{8}$
3.000	4.000	6	$\frac{23}{32}$	$\frac{1}{4}$	$2\frac{1}{8}$	$\frac{3}{4}$	$\frac{1}{4}$	$1\frac{15}{16}$	$5\frac{7}{8}$	[Note (2)]	$1\frac{11}{16}$	$2\frac{1}{2}$
4.000	5.000	$7\frac{1}{2}$	$\frac{13}{16}$	$\frac{1}{4}$	$3\frac{1}{8}$	$\frac{3}{4}$	$\frac{1}{4}$	$2\frac{3}{16}$	$7\frac{3}{8}$	[Note (2)]	$1\frac{7}{8}$	$2\frac{3}{4}$
5.000	6.000	$8\frac{1}{2}$	$\frac{7}{8}$	$\frac{1}{4}$	$3\frac{7}{8}$	$\frac{3}{4}$	$\frac{1}{4}$	$2\frac{5}{16}$	$8\frac{3}{8}$	[Note (2)]	2	3

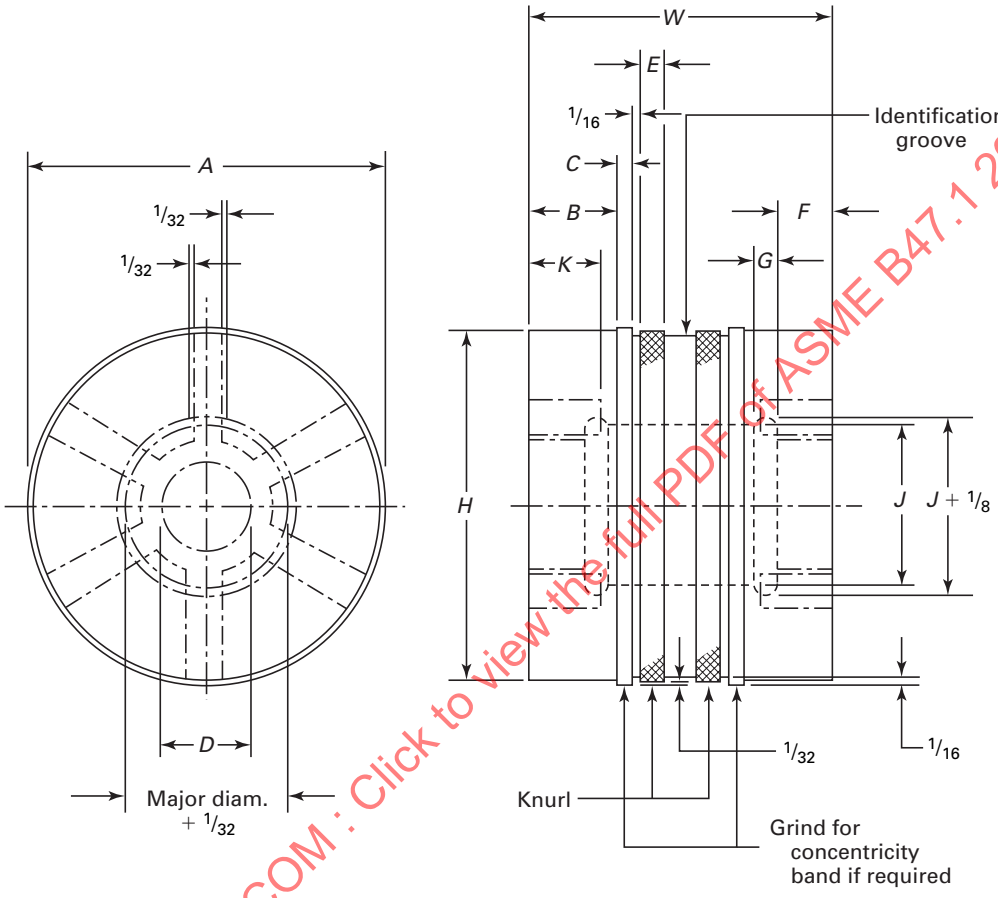
GENERAL NOTE: All dimensions are in inches.

NOTES:

(1) Grind for concentricity band if required.

(2) Major diameter plus minimum of $\frac{1}{32}$ in. to the nearest $\frac{1}{8}$ in.

Table 53 Straight-Sided Spline Composite Alignment Ring Gages, Double-End Prong Type — Range Above 1 in. to and Including 6 in.



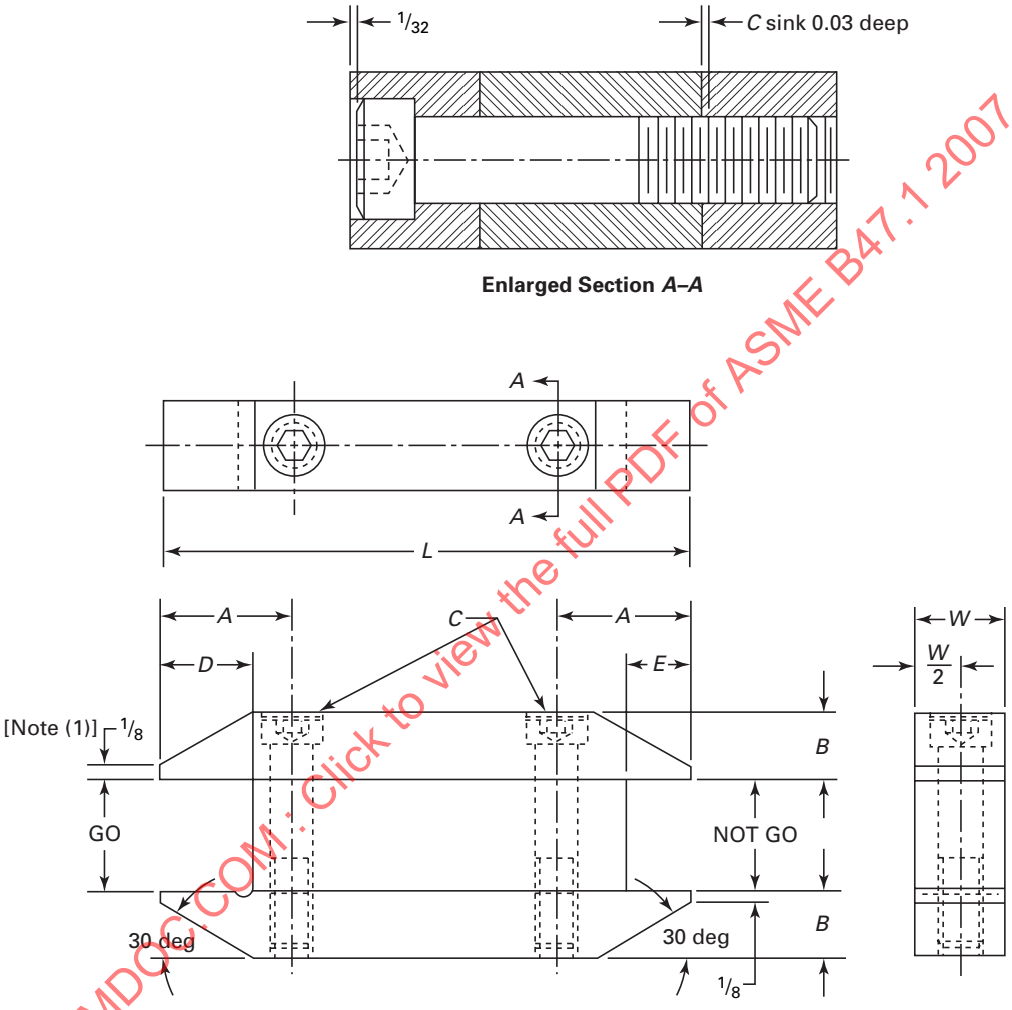
Major Diameter		Dimensions										
Above	To and Including	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*J*	*K*	*W*
1.000	1.500	2 3/4	11/16	1/8	5/8	3/16	7/16	3/16	2 11/16	[Note (1)]	9/16	2 3/8
1.500	2.000	3 1/2	3/4	1/8	1	3/16	9/16	3/16	3 7/16	[Note (1)]	11/16	2 1/2
2.000	2.500	4 1/2	3/4	3/16	1 3/8	1/4	9/16	3/16	4 7/16	[Note (1)]	11/16	2 3/4
2.500	3.000	5	3/4	3/16	1 3/4	1/4	9/16	3/16	4 15/16	[Note (1)]	11/16	2 7/8
3.000	4.000	6	13/16	1/4	2 1/8	5/16	9/16	1/4	5 15/16	[Note (1)]	3/4	3 1/4
4.000	5.000	7 1/2	7/8	1/4	3 1/8	3/8	9/16	1/4	7 7/16	[Note (1)]	3/4	3 1/2
5.000	6.000	8 1/2	1	1/4	3 7/8	7/16	11/16	1/4	8 7/16	[Note (1)]	7/8	3 7/8

GENERAL NOTE: All dimensions are in inches.

NOTE:

(1) Major diameter plus minimum of 1/32 in.

Table 54 Built-Up Double-End Snap Gages for Tooth Thickness of Straight-Sided External Splines



Tooth Thickness		Dimensions						
Above	To and Including	*L*	*W*	*A*	*B*	*C*	*D*	*E*
0.000	0.250	2	3/8	5/8	5/16	0.190-32 UNF-2A/2B	[Note (2)]	[Note (3)]
0.250	0.500	2 1/2	1/2	3/4	5/16	0.190-32 UNF-2A/2B	[Note (2)]	[Note (3)]
0.500	0.750	3	1/2	3/4	3/8	0.250-20 UNC-2A/2B	[Note (2)]	[Note (3)]

GENERAL NOTE: All dimensions except *C* are in inches.

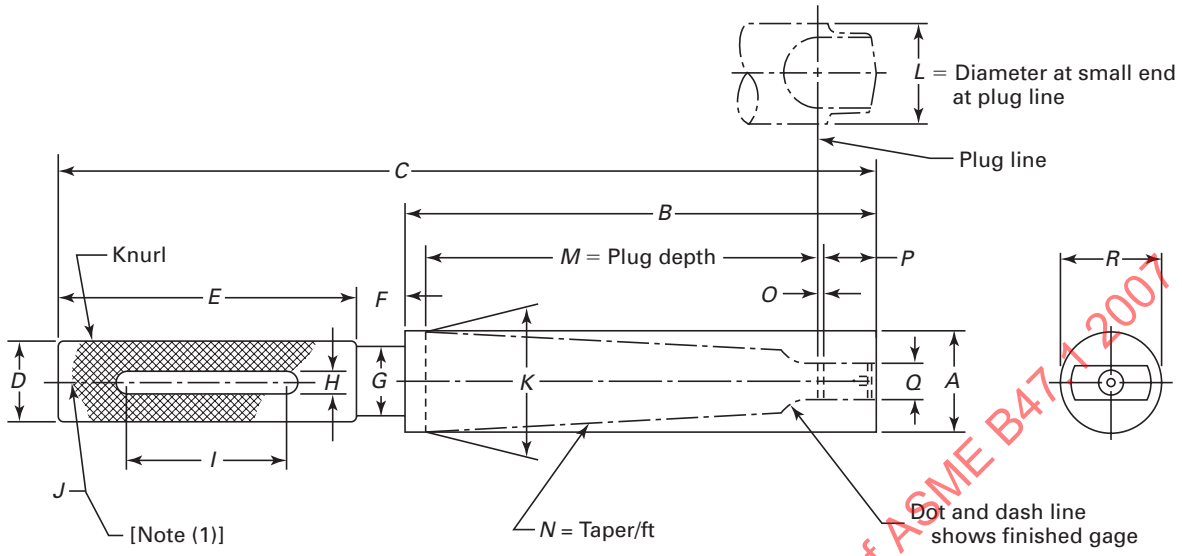
NOTES:

(1) Check individual gage for interference.

(2) $\frac{\text{Major diameter} - \text{minor diameter}}{2} + \frac{3}{16}$

(3) $\frac{\text{Major diameter} - \text{minor diameter}}{2} + \frac{1}{16}$

Table 55 Machine Taper Plug Gages, With Tang



	Blank Dimensions										
Blank No.	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J* [Note (1)]	Used for
1	17/64	1 7/16	3 11/16	5/16	1 7/8	3/8	3/16	3/16	1 1/2	A-1	B & S #1
2	21/64	1 3/4	4	5/16	1 7/8	3/8	3/16	3/16	1 1/2	A-1	B & S #2
3	13/32	2 7/16	4 15/16	3/8	2 1/8	3/8	5/16	1/4	1 1/2	C-2	B & S #3 Morse #0
4	29/64	2 11/32	5 15/32	7/16	2 3/4	3/8	5/16	1/4	1 1/2	C-2	B & S #4
5	9/16	2 13/16	6 1/8	7/16	2 7/8	7/16	3/8	1/4	1 1/2	D-1	B & S #5 Morse #1
6	3/4	3 11/16	7 1/8	5/8	3	7/16	9/16	1/4	1 1/2	D-1	B & S #7 [Note (2)] Morse #2
7	5/8	3 1/8	6 1/2	9/16	2 5/8	1/2	1/2	1/4	1 1/2	D-1	B & S #6
8	31/32	4 3/8	8 3/16	3/4	3 1/4	9/16	11/16	1/4	1 1/2	E-1	B & S #8 Morse #3
9	1 17/64	5	9 1/16	1	3 1/2	9/16	7/8	5/16	2	F-1	B & S #9 [Note (2)] Morse #4
10	1 9/32	6	10 3/8	1	3 3/4	5/8	7/8	5/16	2	F-1	B & S #10 [Note (2)]
11	1 17/32	5 3/8	10 3/8	1 1/8	4 3/8	5/8	1	5/16	2	F-1	Morse #4 1/2
12	1 17/32	7 1/32	12 5/32	1 1/4	4 1/2	5/8	1 1/8	5/16	2	F-1	B & S #11 [Note (2)]
13	1 25/32	6 1/8	11 1/4	1 1/2	4 1/2	5/8	1 1/8	3/8	2	F-1	Morse #5
14	1 53/64	8 3/16	13 5/16	1 1/2	4 1/2	5/8	1 1/8	3/8	2	F-1	B & S #12
15	2 3/32	8 3/4	14	1 1/2	4 5/8	5/8	1 1/8	3/8	2	J-1	B & S #13
16	2 3/8	9 11/32	14 23/32	1 5/8	4 3/4	5/8	1 1/4	3/8	2	J-1	B & S #14
17	2 17/32	8 9/16	13 15/16	1 5/8	4 3/4	5/8	1 3/8	3/8	2	J-1	Morse #6
18	2 41/64	9 27/32	15 5/32	1 3/4	5	5/8	1 3/8	3/8	2	J-1	B & S #15
19	2 29/32	10 1/2	16 1/8	1 3/4	5	5/8	1 3/8	3/8	2	J-1	B & S #16
20	3 5/16	11 5/8	17 1/4	1 3/4	5	5/8	1 3/8	3/8	2	M-1	Morse #7

Table 55 Machine Taper Plug Gages, With Tang (Cont'd)

(See illustration on opposite page)

Finished Dimensions									
K	*L*	*M*	*N*	*O*	*P*	*Q*	*R*	Used for	Blank No.
0.23922	0.2000	15/16	0.502	1/16	3/16	1/8	0.170	B & S #1	1
0.29968	0.2500	1 3/16	0.502	1/16	1/4	5/32	0.220	B & S #2	2
0.37525	0.3125	1 1/2	0.502	1/16	5/16	3/16	0.282	B & S #3	3
0.3561	0.252	2	0.6246	1/16	3/16	5/32	15/64	Morse #0	
0.42065	0.3500	1 11/16	0.5024	1 1/16	11/32	7/32	0.320	B & S #4 [Note (2)]	4
0.53883	0.4500	2 1/8	0.5016	1/16	3/8	1/4	0.420	B & S #5 [Note (2)]	5
0.4750	0.369	2 1/8	0.59858	1/16	9/32	13/64	11/32	Morse #1	
0.7201	0.600	2 7/8	0.50147	1/16	15/32	5/16	0.560	B & S #7 [Note (2)]	6
0.700	0.572	2 9/16	0.59941	1/16	11/32	1/4	17/32	Morse #2	
0.59961	0.5000	2 3/8	0.50329	1/16	7/16	9/32	0.460	B & S #6	7
0.8987	0.7500	3 9/16	0.50100	1/16	1/2	11/32	0.710	B & S #8	8
0.938	0.778	3 3/16	0.60235	1/16	15/32	5/16	23/32	Morse #3	
1.0775	0.9001	4 1/4	0.50085	1/16	9/16	3/8	0.800	B & S #9 [Note (2)]	9
1.231	1.020	4 1/16	0.62326	1/16	17/32	15/32	31/32	Morse #4	
1.2597	1.04465	5	0.51612	1/16	21/32	7/16	1.010	B & S #10 [Note (2)]	10
1.500	1.266	4 1/2	0.6240	1/16	19/32	9/16	1 13/64	Morse #4 1/2	11
1.4978	1.24995	5 15/16	0.5010	1/16	21/32	7/16	1.210	B & S #11 [Note (2)	12
1.748	1.475	5 3/16	0.63151	1/16	21/32	5/8	1 13/32	Morse #5	13
1.7968	1.5001	7 1/8	0.49973	1/16	3/4	1/2	1.460	B & S #12	14
2.0731	1.75005	7 3/4	0.50020	1/16	3/4	1/2	1.710	B & S #13	15
2.3437	2.000	8 1/4	0.5000	1/16	27/32	9/16	1.960	B & S #14	16
2.494	2.116	7 1/4	0.62565	1/16	31/32	3/4	2	Morse #6	17
2.6146	2.2500	8 3/4	0.5000	1/16	27/32	9/16	2.210	B & S #15	18
2.8854	2.500	9 1/4	0.5000	1/16	15/16	5/8	2.450	B & S #16	19
3.270	2.750	10	0.62400	1/16	1 7/32	1 1/8	2 5/8	Morse #7	20

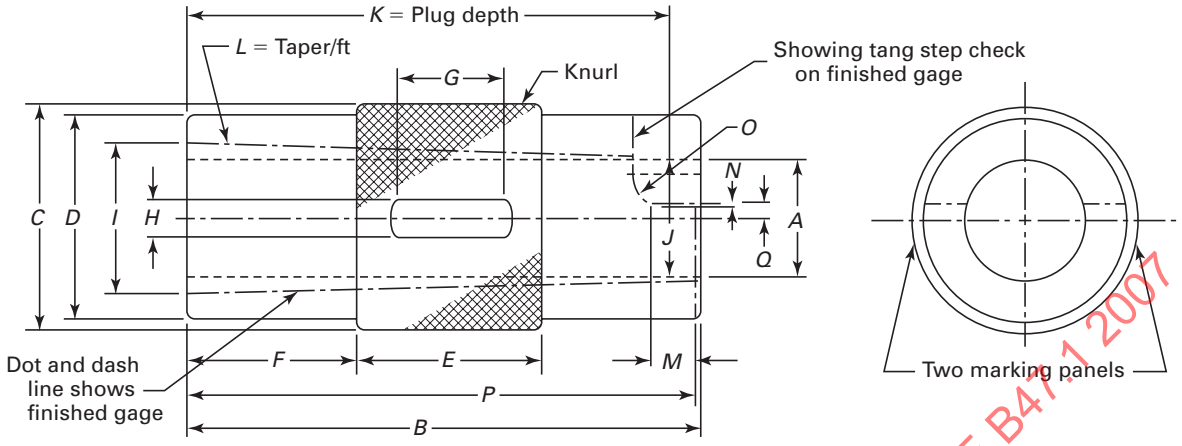
GENERAL NOTE: All dimensions are in inches.

NOTES:

(1) See Table 59.

(2) See para. 3.8(c).

Table 56 Machine Taper Ring Gages, With Tang



Blank No.	Blank Dimensions A	B	C	D	E	F	G	H	Used for
1	11/64	1 7/32	15/16	7/8	1/2	1/4	1/2	1/2	B & S #1
2	7/32	1 17/32	1 1/16	1	1/2	1/2	1/2	1/2	B & S #2
3	7/32	2 1/4	1 1/16	1	1	39/64	5/8	1/2	Morse #0
4	9/32	1 29/32	1 3/16	1 1/8	3/4	9/16	3/4	1/2	B & S #3
5	5/16	2 1/8	1 1/4	1 3/16	3/4	5/32	3/4	1/2	B & S #4 [Note (1)]
6	21/64	2 15/32	1 5/16	1 1/4	1	23/32	5/8	1/2	Morse #1
7	27/64	2 19/32	1 3/8	1 5/16	1 1/4	5/32	1 1/8	1/2	B & S #5 [Note (1)]
8	15/32	2 29/32	1 1/2	1 7/16	1 3/8	1/2	1 1/8	1/2	B & S #6
9	17/32	2 31/32	1 3/8	1 5/16	1 1/16	15/16	3/4	1/2	Morse #2
10	9/16	3 7/16	1 7/8	1 3/4	1 1/2	1/2	1 1/4	9/16	B & S #7 [Note (1)]
11	45/64	4 5/32	2 1/4	2 1/8	2	3/4	1 3/4	9/16	B & S #8
12	47/64	3 23/32	1 11/16	1 9/16	1 3/16	1 1/4	3/4	1/2	Morse #3
13	55/64	4 29/32	2 3/8	2 1/4	2 1/4	7/8	2	5/8	B & S #9 [Note (1)]
14	31/32	4 21/32	2 1/4	2 1/8	1 5/8	1 1/2	1	1/2	Morse #4
15	1	5 3/4	2 7/8	2 3/4	2 3/8	1 3/8	2	5/8	B & S #10 [Note (1)]
16	1 13/64	6 11/16	3	2 7/8	2 1/2	1 5/8	2	5/8	B & S #11 [Note (1)]
17	1 27/64	5 29/32	2 3/4	2 5/8	2 3/8	1 3/4	1 1/2	5/8	Morse #5
18	1 29/64	7 31/32	3 3/8	3 1/4	2 1/2	2	2	5/8	B & S #12
19	1 45/64	8 19/32	3 5/8	3 1/2	2 3/4	2 3/8	2	5/8	B & S #13
20	1 15/16	9 3/16	3 5/8	3 1/2	3 1/4	2 3/4	2	5/8	B & S #14
21	2 3/64	8 5/16	3 5/8	3 1/2	3 3/4	2 1/4	1 1/2	5/8	Morse #6
22	2 3/16	9 23/32	3 3/4	3 5/8	3 3/8	3 1/8	2	5/8	B & S #15
23	2 7/16	10 5/16	4 3/8	4 1/4	3 5/8	3 1/4	2	5/8	B & S #16
24	2 43/64	11 5/16	5	4 7/8	6	2 5/8	1 1/2	5/8	Morse #7

Table 56 Machine Taper Ring Gages, With Tang (Cont'd)

(See illustration on opposite page)

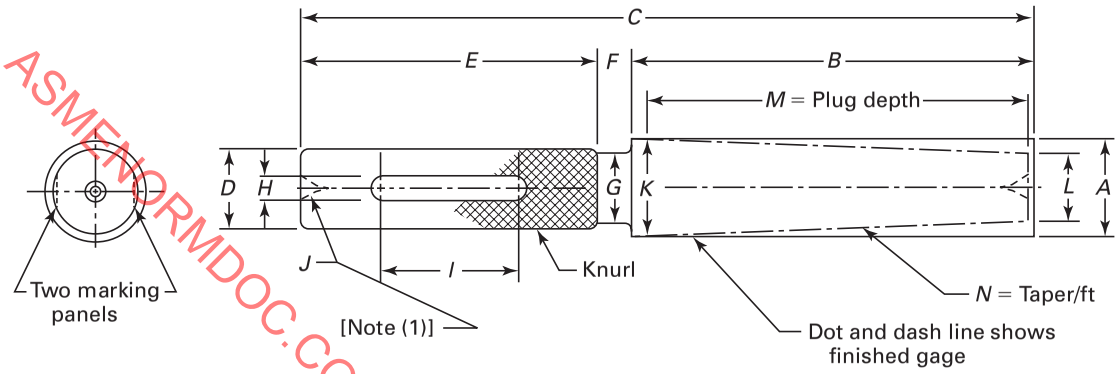
Blank Dimensions										
I	*J*	*K*	*L*	*M*	*N*	*O*	*P*	*Q*	Used for	Blank No.
0.23922	0.200	15/16	0.502	9/32	1/64	3/16	1 3/16	1/16	B & S #1	1
0.29968	0.250	1 3/16	0.502	11/32	1/64	3/16	1 1/2	5/64	B & S #2	2
0.35610	0.252	2	0.6246	11/32	1/64	3/16	2 1/32	0.078	Morse #0	3
0.37525	0.3125	1 1/2	0.502	13/32	1/64	3/16	1 7/8	3/32	B & S #3	4
0.42065	0.350	1 11/16	0.5024	7/16	1/64	5/16	2 3/32	7/64	B & S #4	5
0.4750	0.369	2 1/8	0.59858	7/16	1/64	3/16	2 7/16	0.1015	Morse #1	6
0.53883	0.4500	2 1/8	0.5016	15/32	1/32	5/16	2 9/16	1/8	B & S #5	7
0.59961	0.5000	2 3/8	0.50329	17/32	1/32	5/16	2 7/8	9/64	B & S #6	8
0.700	0.572	2 9/16	0.59941	1/2	1/32	5/16	2 15/16	0.125	Morse #2	9
0.7201	0.600	2 7/8	0.50147	9/16	1/32	3/8	3 13/32	5/32	B & S #7	10
0.8987	0.750	3 9/16	0.5010	19/32	1/32	3/8	4 1/8	11/64	B & S #8	11
0.938	0.778	3 3/16	0.60235	5/8	1/32	5/16	3 11/16	0.156	Morse #3	12
1.0775	0.9001	4 1/4	0.50085	21/32	1/32	7/16	4 7/8	3/16	B & S #9	13
1.231	1.020	4 1/16	0.62326	11/16	1/32	5/16	4 5/8	0.234	Morse #4	14
1.2597	1.04465	5	0.51612	3/4	1/32	7/16	5 23/32	7/32	B & S #10	15
1.4978	1.24995	5 15/16	0.5010	3/4	1/32	1/2	6 21/32	7/32	B & S #11	16
1.748	1.475	5 3/16	0.63151	13/16	1/32	3/8	5 7/8	0.312	Morse #5	17
1.7968	1.5001	7 1/8	0.49973	27/32	1/32	1/2	7 15/16	1/4	B & S #12	18
2.0731	1.75005	7 3/4	0.50020	27/32	1/32	5/8	8 9/16	1/4	B & S #13	19
2.3437	2.000	8 1/4	0.5000	15/16	1/32	5/8	9 5/32	9/32	B & S #14	20
2.494	2.116	7 1/4	0.62565	1 1/4	1/32	3/8	8 1/4	0.375	Morse #6	21
2.6146	2.250	8 3/4	0.5000	15/16	1/32	5/8	9 21/32	9/32	B & S #15	22
2.8854	2.500	9 1/4	0.5000	1 1/32	1/32	5/8	10 1/4	5/16	B & S #16	23
3.270	2.750	10	0.6240	1 3/8	1/32	3/8	11 1/4	0.5625	Morse #7	24

GENERAL NOTE: All dimensions are in inches.

NOTE:

(1) See para. 3.8(c).

Table 57 Machine Taper Plug Gages, Without Tang



	Blank Dimensions											Finished Dimensions			
Blank No.	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J* [Note (1)]	Used for	*K*	*L*	*M*	*N*
1	21/64	1 1/4	3 5/8	5/16	2	3/8	3/16	3/16	1 1/2	A-1	Jarno #1	0.125	0.100	1/2	0.600
											Jarno #2	0.250	0.200	1	0.600
											ASA #239	0.23922	0.200	15/16	0.502
											ASA #299	0.29968	0.250	1 3/16	0.502
											B & S #1	0.23922	0.200	15/16	0.502
2	13/32	2 1/4	5 1/8	3/8	2 1/2	3/8	1/4	1/4	1 1/2	C-2	B & S #2	0.29968	0.250	1 3/16	0.502
											B & S #3	0.37525	0.3125	1 1/2	0.502
											Jarno #3	0.375	0.300	1 1/2	0.600
											Morse #0	0.3561	0.252	2	0.6246
											ASA #375	0.37525	0.3125	1 1/2	0.502
3	17/32	2 3/8	5 1/2	7/16	2 3/4	3/8	3/8	1/4	1 1/2	C-2	B & S #4 (2)	0.42065	0.3500	1 11/16	0.5024
											Jarno #4	0.500	0.400	2	0.600
											Morse #1	0.4750	0.369	2 1/8	0.59858
											ASA #1	0.4750	0.369	2 1/8	0.59858
4	21/32	2 3/4	6 1/16	5/8	2 7/8	7/16	7/16	1/4	1 1/2	D-1	B & S #5 (2)	0.53883	0.450	2 1/8	0.5016
											B & S #6	0.59961	0.500	2 3/8	0.50329
											Jarno #5	0.625	0.500	2 1/2	0.600
5	23/32	1 1/8	4 5/16	5/8	2 7/8	5/16	3/8	1/4	1 1/2	D-1	Series #10	0.625	0.375	0.8571	3.500
6	25/32	3 1/4	6 11/16	5/8	3	7/16	9/16	1/4	1 1/2	D-1	B & S #7 (2)	0.7201	0.600	2 7/8	0.50147
											Jarno #6	0.750	0.600	3	0.600
											Morse #2	0.700	0.572	2 9/16	0.59941
											ASA #2	0.7000	0.5720	2 9/16	0.59941

Table 57 Machine Taper Plug Gages, Without Tang (Cont'd)

Blank No.	Blank Dimensions A	B	C	D	E	F	G	H	I	J [Note (1)]	Used for	Finished Dimensions K	L	M	N
7	31/32	1 9/16	4 15/16	3/4	3	3/8	1/2	1/4	1 1/2	F-1	Series #20	0.875	0.500	1.2857	3.500
8	31/32	3 15/16	7 11/16	3/4	3 1/4	1/2	5/8	1/4	1 1/2	E-1	B & S #8	0.8987	0.750	3 9/16	0.5010
											Jarno #7	0.875	0.700	3 1/2	0.600
											Morse #3	0.938	0.778	3 3/16	0.60235
											ASA #3	0.9380	0.77805	3 3/16	0.60235
9	1 7/64	4 1/2	8 1/2	1	3 1/2	1/2	7/8	5/16	2	E-1	B & S #9 (2)	1.0775	0.9001	4 1/4	0.50085
											Jarno #8	1.000	0.800	4	0.600
10	1 9/32	5 1/4	9 1/2	1	3 3/4	1/2	7/8	5/16	2	F-1	B & S #10 (2)	1.2597	1.04465	5	0.51612
											Jarno #9	1.125	0.900	4 1/2	0.600
											Jarno #10	1.250	1.000	5	0.600
											Morse #4	1.231	1.020	4 1/16	0.62326
											ASA #4	1.2310	1.020	4 1/16	0.62326
11	1 11/32	2 5/16	6 15/16	1	4 1/8	1/2	11/16	1/4	1 1/2	F-1	Series #30	1.250	0.6877	1.928	3.500
12	1 13/32	5 13/16	10 9/16	1 1/8	4 1/4	1/2	1	5/16	2	F-1	Jarno #11	1.375	1.100	5 1/2	0.600
13	1 17/32	4 3/4	9 5/8	1 1/8	4 3/8	1/2	1	5/16	2	F-1	ASA #4 1/2	1.5000	1.2660	4 1/2	0.62400
											Morse #4 1/2	1.5000	1.266	4 1/2	0.6240
14	1 21/32	6 3/4	11 3/4	1 1/4	4 1/2	1/2	1 3/16	5/16	2	F-1	B & S #11 (2)	1.4978	1.24995	5 15/16	0.5010
											Jarno #12	1.500	1.200	6	0.600
											Jarno #13	1.625	1.300	6 1/2	0.600
15	1 25/32	5 9/16	10 11/16	1 1/2	4 1/2	5/8	1 3/8	3/8	2	F-1	Morse #5	1.748	1.475	5 3/16	0.63151
											ASA #5	1.7480	1.475	5 3/16	0.63151
16	1 27/32	2 15/16	7 15/16	1 1/2	4 1/2	1/2	1	5/16	2	F-1	Series #40	1.750	1.000	2.5715	3.500
17	1 29/32	7 3/4	12 7/8	1 1/2	4 1/2	5/8	1 3/8	3/8	2	F-1	B & S #12	1.7968	1.5001	7 1/8	0.49973
											Jarno #14	1.750	1.400	7	0.600
											Jarno #15	1.875	1.500	7 1/2	0.600
18	2 1/64	5	10 1/4	1 1/2	4 5/8	5/8	1 3/8	5/16	2	J-1	ASA #200	2.000	1.70312	4 3/4	0.7500
19	2 5/32	8 3/4	14	1 1/2	4 5/8	5/8	1 3/8	3/8	2	J-1	B & S #13	2.0731	1.75005	7 3/4	0.50020
											Jarno #16	2.000	1.600	8	0.600
											Jarno #17	2.125	1.700	8 1/2	0.600

Table 57 Machine Taper Plug Gages, Without Tang (Cont'd)

Blank No.	Blank Dimensions A	B	C	D	E	F	G	H	I	J [Note (1)]	Used for	Finished Dimensions K	L	M	N
20	$2\frac{9}{32}$	$9\frac{1}{2}$	$14\frac{7}{8}$	$1\frac{5}{8}$	$4\frac{3}{4}$	$\frac{5}{8}$	$1\frac{3}{8}$	$\frac{3}{8}$	2	J-1	Jarno #18	2.250	1.800	9	0.600
21	$2\frac{3}{8}$	$8\frac{5}{8}$	14	$1\frac{5}{8}$	$4\frac{3}{4}$	$\frac{5}{8}$	$1\frac{3}{8}$	$\frac{3}{8}$	2	J-1	B & S #14	2.3437	2.000	$8\frac{1}{4}$	0.500
22	$2\frac{13}{32}$	10	$15\frac{3}{8}$	$1\frac{5}{8}$	$4\frac{3}{4}$	$\frac{5}{8}$	$1\frac{3}{8}$	$\frac{3}{8}$	2	J-1	Jarno #19	2.375	1.900	$9\frac{1}{2}$	0.600
23	$2\frac{33}{64}$	$5\frac{1}{2}$	$10\frac{7}{8}$	$1\frac{5}{8}$	$4\frac{3}{4}$	$\frac{5}{8}$	$1\frac{3}{8}$	$\frac{5}{16}$	2	J-1	ASA #250	2.5000	2.1562	$5\frac{1}{2}$	0.7500
24	$2\frac{17}{32}$	$7\frac{5}{8}$	13	$1\frac{5}{8}$	$4\frac{3}{4}$	$\frac{5}{8}$	$1\frac{3}{8}$	$\frac{3}{8}$	2	J-1	Morse #6	2.494	2.116	$7\frac{1}{4}$	0.62565
											ASA #6	2.494	2.116	$7\frac{1}{4}$	0.62565
25	$2\frac{17}{32}$	$10\frac{1}{2}$	$16\frac{1}{8}$	$1\frac{3}{4}$	5	$\frac{5}{8}$	$1\frac{3}{8}$	$\frac{3}{8}$	2	J-1	Jarno #20	2.500	2.000	10	0.600
26	$2\frac{41}{64}$	$9\frac{1}{8}$	$14\frac{3}{4}$	$1\frac{3}{4}$	5	$\frac{5}{8}$	$1\frac{3}{8}$	$\frac{3}{8}$	2	J-1	B & S #15	2.6146	2.2500	$8\frac{3}{4}$	0.500
27	$2\frac{55}{64}$	$4\frac{9}{16}$	$10\frac{3}{16}$	$1\frac{3}{4}$	5	$\frac{5}{8}$	$1\frac{1}{4}$	$\frac{5}{16}$	2	J-1	Series #50	2.750	1.562	4.073	3.500
28	$2\frac{29}{32}$	$9\frac{5}{8}$	$15\frac{1}{4}$	$1\frac{3}{4}$	5	$\frac{5}{8}$	$1\frac{3}{8}$	$\frac{3}{8}$	2	J-1	B & S #16	2.8854	2.500	$9\frac{1}{4}$	0.500
29	$3\frac{1}{64}$	$6\frac{1}{2}$	$12\frac{1}{8}$	$1\frac{3}{4}$	5	$\frac{5}{8}$	$1\frac{3}{8}$	$\frac{5}{16}$	2	M-1	ASA #300	3.0000	2.6093	$6\frac{1}{4}$	0.75000
30	$3\frac{3}{16}$	$10\frac{1}{8}$	$15\frac{7}{8}$	$1\frac{3}{4}$	5	$\frac{3}{4}$	$1\frac{1}{2}$	$\frac{3}{8}$	2	M-1	B & S #17	3.1562	2.7500	$9\frac{3}{4}$	0.500
31	$3\frac{5}{16}$	$10\frac{3}{8}$	16	$1\frac{3}{4}$	5	$\frac{5}{8}$	$1\frac{1}{2}$	$\frac{3}{8}$	2	M-1	Morse #7	3.270	2.750	10	0.624
											ASA #7	3.270	2.750	10	0.6240
32	$3\frac{15}{32}$	$10\frac{5}{8}$	$16\frac{5}{8}$	$1\frac{7}{8}$	$5\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{2}$	$\frac{3}{8}$	2	M-1	B & S #18	3.4271	3.000	$10\frac{1}{4}$	0.500
33	$3\frac{33}{64}$	$7\frac{1}{4}$	$13\frac{1}{4}$	$1\frac{7}{8}$	$5\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{2}$	$\frac{5}{16}$	2	M-1	ASA #350	3.5000	3.0625	7	0.75000
34	$4\frac{1}{64}$	8	14	$1\frac{7}{8}$	$5\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{2}$	$\frac{5}{16}$	2	M-1	ASA #400	4.000	3.5156	$7\frac{3}{4}$	0.7500
35	$4\frac{33}{64}$	$8\frac{3}{4}$	$14\frac{3}{4}$	$1\frac{7}{8}$	$5\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{2}$	$\frac{5}{16}$	2	M-1	ASA #450	4.500	3.9687	$8\frac{1}{2}$	0.7500
36	$5\frac{1}{64}$	$9\frac{1}{2}$	$15\frac{1}{2}$	$1\frac{7}{8}$	$5\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{2}$	$\frac{5}{16}$	2	M-1	ASA #500	5.000	4.4208	$9\frac{1}{4}$	0.7500
37	$4\frac{3}{8}$	$6\frac{5}{8}$	$12\frac{5}{8}$	$1\frac{7}{8}$	$5\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{2}$	$\frac{5}{16}$	2	M-1	Series #60	4.250	2.3906	$6\frac{3}{8}$	3.500

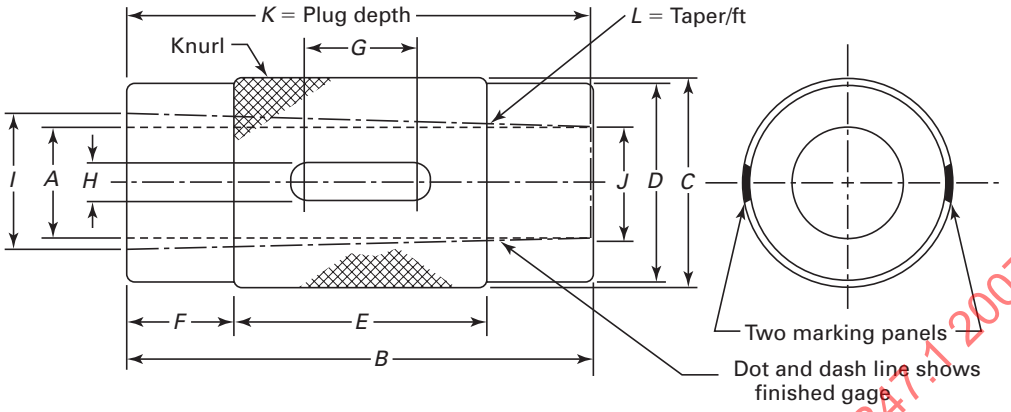
GENERAL NOTE: All dimensions are in inches.

NOTES:

(1) See Table 59.

(2) See para 3.8(c).

Table 58 Machine Taper Ring Gages, Without Tang



Blank No.	Blank Dimensions, in.								Used for	Finished Dimensions, in.			
	A	*B*	*C*	*D*	*E*	*F*	*G*	*H*		*I*	*J*	*K*	*L*
1	5/64	17/32	3/4	...	17/32	...	17/32	3/8	Jarno #1	0.125	0.100	1/2	0.600
2	3/16	1 1/32	15/16	...	1 1/32	...	1 1/32	1/2	B & S #1	0.23922	0.200	15/16	0.502
									ASA #239	0.23922	0.200	15/16	0.502
									Jarno #2	0.250	0.200	1	0.600
3	15/64	1 7/32	1 1/16	...	1 7/32	...	1 7/32	1/2	B & S #2	0.29968	0.250	1 3/16	0.502
									ASA #299	0.29968	0.250	1 3/16	0.502
4	15/64	2 1/32	1 1/16	1	1	1/2	1	1/2	Morse #0	0.3561	0.252	2	0.6246
5	9/32	1 17/32	1 3/16	1 1/8	1	1/4	1	1/2	B & S #3	0.37525	0.3125	1 1/2	0.502
									Jarno #3	0.375	0.300	1 1/2	0.600
									ASA #375	0.37525	0.3125	1 1/2	0.502
6	21/64	1 23/32	1 5/16	1 1/4	1	11/32	1	1/2	B & S #4 (1)	0.42065	0.3500	1 11/16	0.5024
7	23/64	2 5/32	1 1/4	1 3/16	1	9/16	1	1/2	Morse #1	0.4750	0.369	2 1/8	0.59858
									ASA #1	0.4750	0.369	2 1/8	0.59858
8	23/64	1 1/16	1 1/4	...	1 1/16	...	1 1/16	1/2	Series #10	0.625	0.375	0.8571	3.500
9	3/8	2 5/32	1 1/4	1 3/16	1 1/2	5/16	1	1/2	B & S #5 (1)	0.53883	0.450	2 1/8	0.5016
									Jarno #4	0.500	0.400	2	0.600
10	31/64	2 19/32	1 1/2	1 7/16	1 1/2	17/32	1 1/8	1/2	B & S #6	0.59961	0.500	2 3/8	0.50329
									Jarno #5	0.625	0.500	2 1/2	0.600
									Morse #2	0.700	0.572	2 9/16	0.59941
									ASA #2	0.700	0.572	2 9/16	0.59941
11	31/64	1 9/16	1 1/2	1 7/16	7/8	7/32	7/8	1/2	Series #20	0.875	0.500	1.2857	3.500
12	37/64	3 1/32	1 7/8	1 3/4	1 3/4	5/8	1 1/4	1/2	B & S #7 (1)	0.7201	0.600	2 7/8	0.50147
									Jarno #6	0.750	0.600	3	0.600
13	43/64	2 5/16	2 3/8	2 1/4	1 1/8	3/8	1	1/2	Series #30	1.250	0.6875	1.928	3.500
14	11/16	3 19/32	2 1/8	2	2	25/32	1 3/4	9/16	B & S #8	0.8987	0.750	3 9/16	0.5010
									Jarno #7	0.875	0.700	3 1/2	0.600
15	49/64	3 7/32	1 11/16	1 9/16	1 7/16	7/8	1	1/2	Morse #3	0.938	0.778	3 3/16	0.60235
									ASA #3	0.938	0.77805	3 3/16	0.60235
16	25/32	4 1/32	2 1/4	2 1/8	2 1/4	7/8	2	5/8	Jarno #8	1.000	0.800	4	0.600
17	7/8	4 17/32	2 3/8	2 1/4	2 1/4	1 1/8	2	5/8	B & S #9 (1)	1.0775	0.9001	4 1/4	0.50085
									Jarno #9	1.125	0.900	4 1/2	0.600
18	61/64	2 15/16	3	2 7/8	1 5/8	17/32	1 3/8	1/2	Series #40	1.750	1.000	2.5715	3.500
19	63/64	5 1/32	2 1/2	2 3/8	3	1	2	5/8	B & S #10 (1)	1.2597	1.04465	5	0.51612
									Jarno #10	1.250	1.000	5	0.600
20	1	4 3/32	2 7/8	2 3/4	1 3/4	1 5/32	1 1/2	1/2	Morse #4	1.231	1.020	4 1/16	0.62326
									ASA #4	1.231	1.020	4 1/16	0.62326
21	1 5/64	5 17/32	2 1/2	2 3/8	3	1 1/4	2	5/8	Jarno #11	1.375	1.100	5 1/2	0.600

Table 58 Machine Taper Ring Gages, Without Tang (Cont'd)

Blank No.	Blank Dimensions, in. A	B	C	D	E	F	G	H	Used for	Finished Dimensions, in. I	J	K	L
22	1 3/16	6 1/32	2 3/4	2 5/8	3 1/4	1 3/8	2	5/8	B & S #11 (1)	1.4978	1.24995	5 15/16	0.5010
									Jarno #12	1.500	1.200	6	0.600
23	1 1/4	4 17/32	2 3/8	2 1/4	2	1 1/3	1 1/2	1/2	Morse #4 1/2	1.500	1.266	4 1/2	0.6240
									ASA #4 1/2	1.500	1.266	4 1/2	0.6240
24	1 9/32	6 17/32	3	2 7/8	4	1 1/4	2	5/8	Jarno #13	1.625	1.300	6 1/2	0.600
25	1 3/8	7 1/32	3 1/4	3 1/8	4	1 1/2	2	5/8	Jarno #14	1.750	1.400	7	0.600
26	1 29/64	5 7/32	2 3/4	2 5/8	2 3/16	1 1/2	1 1/2	1/2	Morse #5	1.748	1.475	5 3/16	0.63151
									ASA #5	1.748	1.475	5 3/16	0.63151
27	1 31/64	7 17/32	3 3/8	3 1/4	4	1 3/4	2	5/8	B & S #12	1.7968	1.5001	7 1/8	0.49975
									Jarno #15	1.875	1.500	7 1/2	0.600
28	1 35/64	4 9/16	4 1/4	4 1/8	2 3/4	3/8	2	5/8	Series #50	2.750	1.562	4.073	3.500
29	1 37/64	8 1/32	3 3/8	3 1/4	5	1 1/2	2	5/8	Jarno #16	2.000	1.600	8	0.600
30	1 11/16	8 17/32	3 5/8	3 1/2	5	1 3/4	2	5/8	Jarno #17	2.125	1.700	8 1/2	0.600
31	1 11/16	4 25/32	3 1/8	3 1/16	2	1 3/8	1 1/2	1/2	ASA #200	2.000	1.70312	4 3/4	0.7500
32	1 47/64	7 25/32	3 3/8	3 1/4	3 3/8	2 3/16	2	5/8	B & S #13	2.0731	1.75005	7 3/4	0.50020
33	1 25/32	9 1/32	3 3/4	3 5/8	5	2	2	5/8	Jarno #18	2.250	1.800	9	0.600
34	1 7/8	9 17/32	3 5/8	3 1/2	5 1/2	2	2	5/8	Jarno #19	2.375	1.900	9 1/2	0.600
35	1 63/64	8 9/32	3 5/8	3 1/2	4 1/2	1 7/8	2	5/8	B & S #14	2.3437	2.000	8 1/4	0.500
36	1 63/64	10 1/32	3 3/4	3 5/8	6	2	2	5/8	Jarno #20	2.500	2.000	10	0.600
37	2 3/32	7 5/16	3 1/2	3 3/8	3 3/4	1 3/4	1 1/2	1/2	Morse #6	2.494	2.116	7 1/4	0.62565
									ASA #6	2.494	2.116	7 1/4	0.62565
38	2 9/64	5 9/16	3 3/4	3 11/16	2 1/2	1 1/2	1 1/2	1/2	ASA #250	2.500	2.1562	5 1/2	0.7500
39	2 15/64	8 13/16	4	3 7/8	3 3/4	2 1/2	2	1/2	B & S #15	2.6146	2.2500	8 3/4	0.500
40	2 23/64	6 1/2	5 3/4	5 5/8	3 1/2	1 15/32	2	5/8	Series #60	4.250	2.3906	6 5/8	3.500
41	2 31/64	9 5/16	4 1/2	4 3/8	4	2 5/8	2	5/8	B & S #16	2.8854	2.500	9 1/4	0.500
42	2 19/32	6 5/16	4 1/4	4 3/16	3 1/4	1 1/2	1 1/2	1/2	ASA #300	3.000	2.6093	6 1/4	0.7500
43	2 47/64	10 1/16	5	4 7/8	4	3	2	5/8	B & S #17	3.1562	2.7500	9 3/4	0.500
									Morse #7	3.270	2.750	10	0.624
									ASA #7	3.270	2.750	10	0.624
44	2 43/64	10 5/16	5 1/2	5 3/8	4	3 1/8	2	5/8	B & S #18	3.4271	3.000	10 1/4	0.500
45	3 3/64	7 1/16	4 3/4	4 11/16	3 1/2	1 3/4	1 1/2	1/2	ASA #350	3.500	3.0625	7	0.7500
46	3 1/2	7 13/16	5 1/4	5 3/16	4	1 7/8	2	5/8	ASA #400	4.000	3.5156	7 3/4	0.7500
47	3 61/64	8 9/16	5 3/4	5 11/16	5	1 3/4	2	5/8	ASA #450	4.500	3.9687	8 1/2	0.7500
48	4 13/32	9 5/16	6 1/4	6 3/16	5 1/2	1 7/8	2	5/8	ASA #500	5.000	4.4208	9 1/4	0.7500

GENERAL NOTE: All dimensions are in inches.

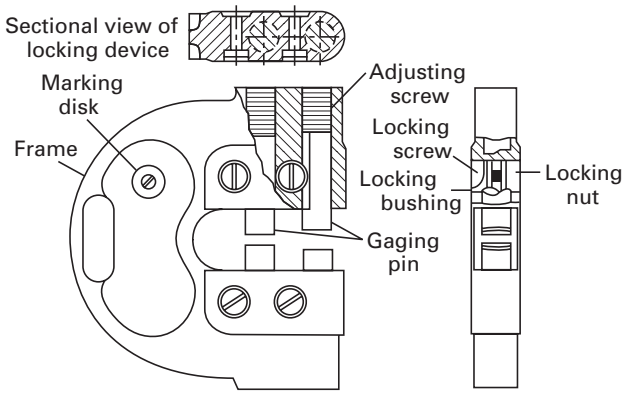
NOTE:
(1) See para. 3.8(c).

Table 59 Sizes of Combination Drills and Countersinks for Machine Taper Plug Gages

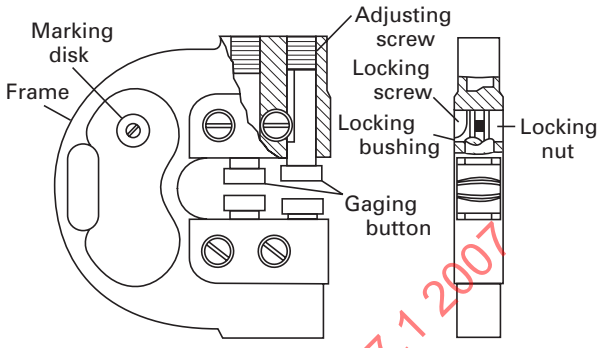
Size	Diameter of Body, in.	Diameter of Drill Point, in.
A1	1/8	3/64
C2	13/64	1/16
D1	15/64	5/64
E1	0.300	3/32
F1	7/16	5/32
J1	1/2	7/32
M1	5/8	7/32

GENERAL NOTE: See Table 55.

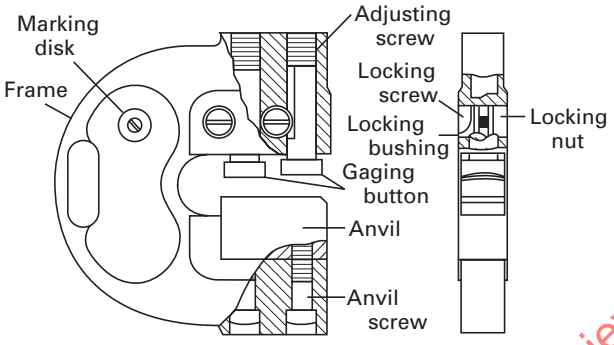
Fig. 10 Adjustable Snap Gages, Details of Construction — Models A, B, C, and MC



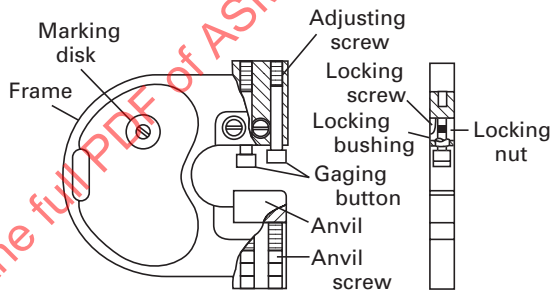
(a) Model A: Range 0 in. to 12 in., Incl.



(b) Model B: Range $^{1}/_{2}$ in. to $11^{1}/_{4}$ in., Incl.

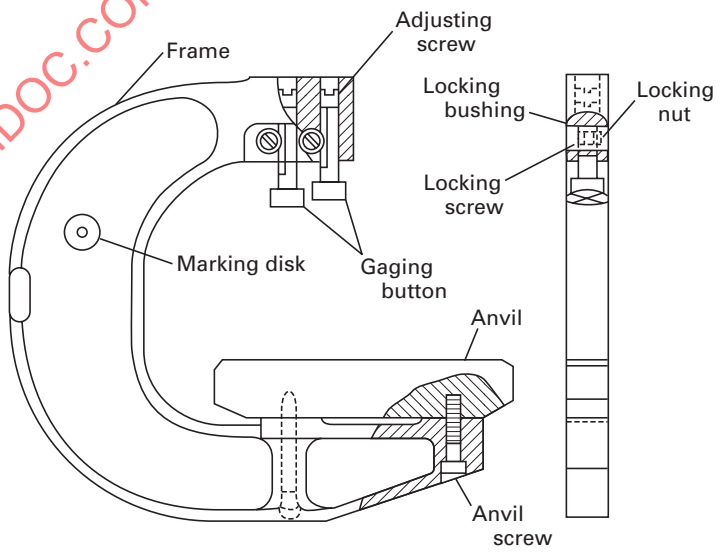


(c) Model C: Range 0 in. to $11^{5}/_{8}$ in., Incl.



(d) Model MC: Range 0 in. to 0.760 in., Incl.

Fig. 11 Adjustable Snap Gages, Details of Construction — Model E



Model E: Range 0 in. to $5\ ^{11}/_{16}$ in., Incl.

Table 60 Plain Adjustable Snap Gages, Models A and B — Details of Frame

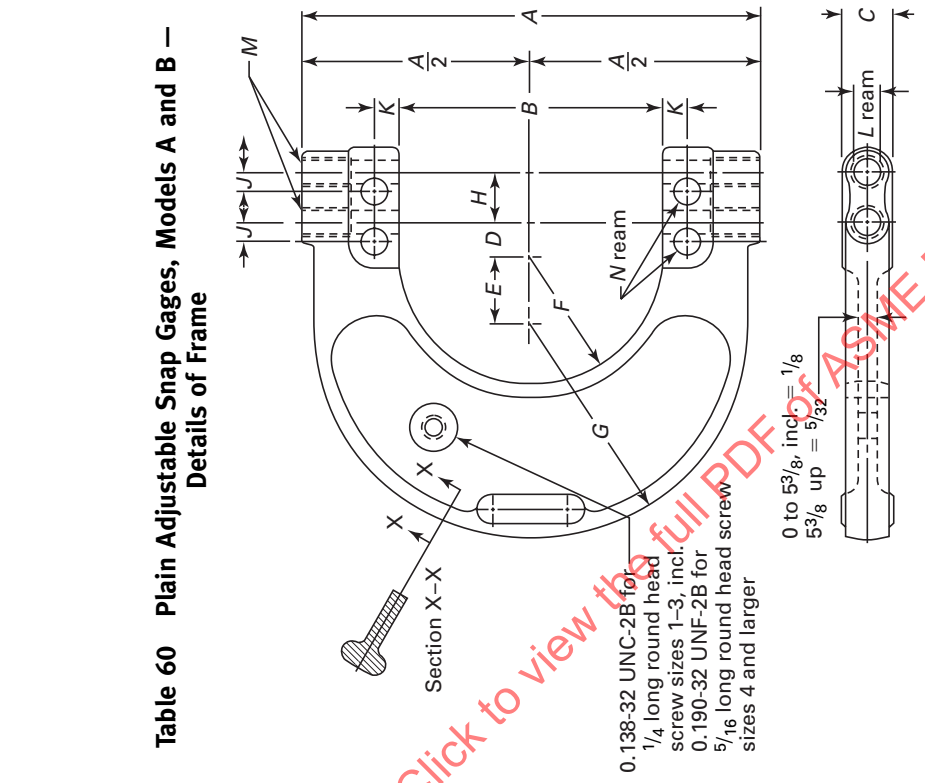
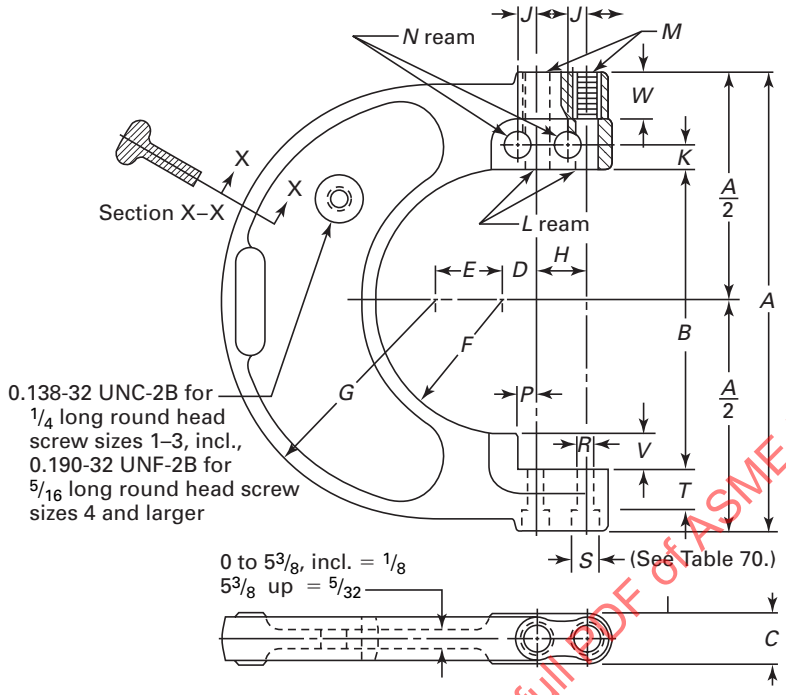


Table 60 Plain Adjustable Snap Gages, Models A and B — Details of Frame (Cont'd)

Model A			Model B																			
	Range			Range										J			L			N		
Symbol	Above	To and Including	Symbol	Above	To and Including	Frame No.	A	B	C	D	E	F	G	H	Max.	Min.	K	Max.	Min.	M	Max.	Min.
A-1	0	1/2	...	...	...	1	3	5/8	31/64	3/8	3/16	5/16	1 3/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125
A-2	1/2	1	...	...	...	2	3 1/2	1 1/8	31/64	3/8	5/16	9/16	1 5/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125
A-3	1	1 1/2	B-3	1/2	1	3	4	1 5/8	31/64	3/8	7/16	13/16	1 7/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125
A-4	1 1/2	2	B-4	1	1 1/2	4	4 1/2	2 1/8	31/64	3/8	9/16	1 1/16	2 1/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125
A-5	2	2 1/2	B-5	1 1/2	2	5	5	2 5/8	31/64	3/8	11/16	1 5/16	2 3/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125
A-6	2 1/2	3	B-6	2	2 1/2	6	5 1/2	3 1/8	31/64	3/8	13/16	1 9/16	2 5/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125
A-7	3	3 3/4	B-7	2 1/2	3 1/8	7	6 7/8	3 15/16	39/64	7/16	7/8	1 31/32	3 5/16	23/32	0.311	0.309	3/8	0.3753	0.3750	0.3950-40 UNS-3B	0.376	0.375
A-8	3 3/4	4 1/2	B-8	3 1/3	3 7/8	8	7 5/8	4 11/16	39/64	7/16	1	2 11/32	3 11/16	23/32	0.311	0.309	3/8	0.3753	0.3750	0.3950-40 UNS-3B	0.376	0.375
A-9	4 1/2	5 1/4	B-9	3 7/8	4 5/8	9	8 3/8	5 7/16	39/64	7/16	1 1/8	2 23/32	4 1/16	23/32	0.311	0.309	3/8	0.3753	0.3750	0.3950-40 UNS-3B	0.376	0.375
A-10	5 1/4	6	B-10	4 5/8	5 3/8	10	9 1/8	6 3/16	39/64	7/16	1 1/4	3 3/32	4 7/16	23/32	0.311	0.309	3/8	0.3753	0.3750	0.3950-40 UNS-3B	0.376	0.375
A-11	6	7	B-11	5 3/8	6 1/4	11	10 3/4	7 1/4	47/64	1/2	1 3/8	3 5/8	5 1/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375
A-12	7	8	B-12	6 1/4	7 1/4	12	11 3/4	8 1/4	47/64	1/2	1 1/2	4 1/8	5 3/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375
A-13	8	9	B-13	7 1/4	8 1/4	13	12 3/4	9 1/4	47/64	1/2	1 5/8	4 5/8	6 1/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375
A-14	9	10	B-14	8 1/4	9 1/4	14	13 3/4	10 1/4	47/64	1/2	1 3/4	5 1/8	6 3/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375
A-15	10	11	B-15	9 1/4	10 1/4	15	14 3/4	11 1/4	47/64	1/2	1 7/8	5 5/8	7 1/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375
A-16	11	12	B-16	10 1/4	11 1/4	16	15 3/4	12 1/4	47/64	1/2	2	6 1/8	7 3/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375

GENERAL NOTE: All dimensions except *M* are in inches.

Table 61 Plain Adjustable Snap Gages, Model C — Details of Frame



Part A (See Part B for other dimensions.)

Model C					Model C				
	Range					Range			
Symbol	Above	To and Including	Height of Anvil	Frame No.	Symbol	Above	To and Including	Height of Anvil	Frame No.
C-1	0	1/4	1/2	1	C-9	4 3/16	4 9/16	15/16	9
C-2	1/4	1/2	3/4	2	C-9X	4 9/16	4 15/16	9/16	
C-2X	1/2	3/4	1/2		C-10	4 15/16	5 5/16	15/16	10
C-3	3/4	1	3/4	3	C-10X	5 5/16	5 11/16	9/16	
C-3X	1	1 1/4	1/2		C-11	5 11/16	6 1/8	1 1/8	11
C-4	1 1/4	1 1/2	3/4	4	C-11X	6 1/8	6 5/8	5/8	
C-4X	1 1/2	1 3/4	1/2		C-12	6 5/8	7 1/8	1 1/8	12
C-5	1 3/4	2	3/4	5	C-12X	7 1/8	7 5/8	5/8	
C-5X	2	2 1/4	1/2		C-13	7 5/8	8 1/8	1 1/8	13
C-6	2 1/4	2 1/2	3/4	6	C-13X	8 1/8	8 5/8	5/8	
C-6X	2 1/2	2 3/4	1/2		C-14	8 5/8	9 1/8	1 1/8	14
C-7	2 3/4	3 1/16	15/16	7	C-14X	9 1/8	9 5/8	5/8	
C-7X	3 1/16	3 7/16	9/16		C-15	9 5/8	10 1/8	1 1/8	15
C-8	3 7/16	3 13/16	15/16	8	C-15X	10 1/8	10 5/8	5/8	
C-8X	3 13/16	4 3/16	9/16		C-16	10 5/8	11 1/8	1 1/8	16
					C-16X	11 1/8	11 5/8	5/8	

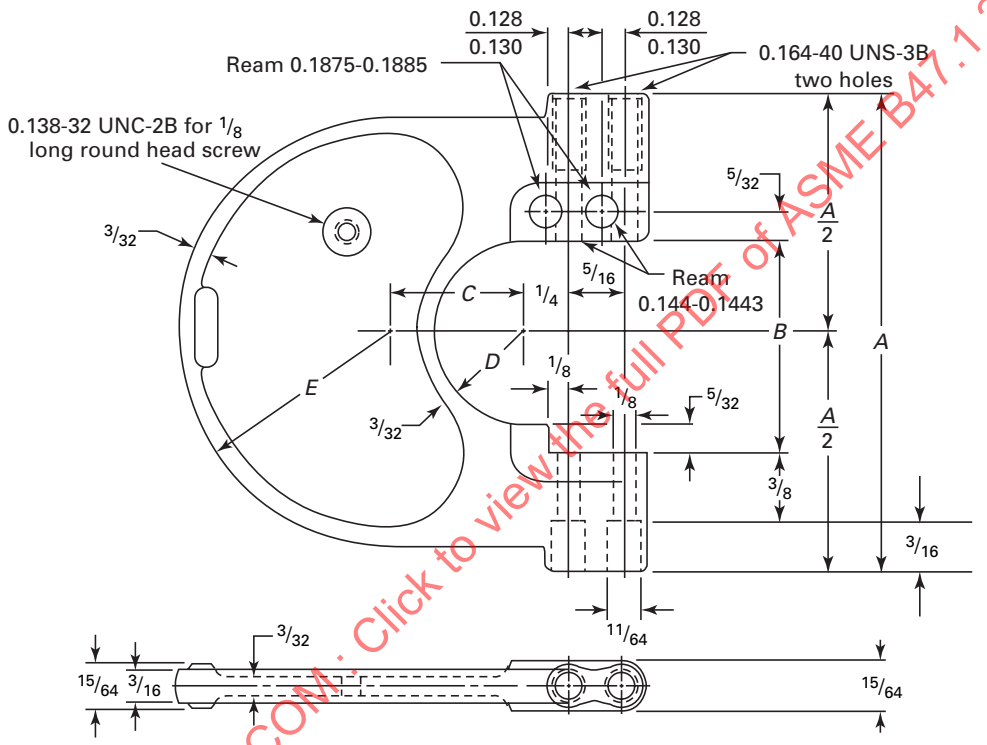
Table 61 Plain Adjustable Snap Gages, Model C — Details of Frame (Cont'd)

Part B (See Part A for symbols, range, etc.)

Frame No.	A	B	C	D	E	F	G	H	J		K	L		M	N		R		S	T	P	V	W
									Max.	Min.		Max.	Min.		Max.	Min.	Max.	Min.					
1	3	1 1/16	31/64	3/8	3/16	5/16	1 3/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125	0.1927	0.1900	3/8	1/2	1/4	7/16	5/8
2	3 1/2	1 9/16	31/64	3/8	5/16	9/16	1 5/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125	0.1927	0.1900	3/8	1/2	1/4	7/16	5/8
3	4	2 1/16	31/64	3/8	7/16	13/16	1 7/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125	0.1927	0.1900	3/8	1/2	1/4	7/16	5/8
4	4 1/2	2 9/16	31/64	3/8	9/16	1 1/16	2 1/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125	0.1927	0.1900	3/8	1/2	1/4	7/16	5/8
5	5	3 1/16	31/64	3/8	11/16	1 5/16	2 3/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125	0.1927	0.1900	3/8	1/2	1/4	7/16	5/8
6	5 1/2	3 9/16	31/64	3/8	13/16	1 9/16	2 5/8	19/32	0.258	0.256	5/16	0.3128	0.3125	0.3325-40 UNS-3B	0.3135	0.3125	0.1927	0.1900	3/8	1/2	1/4	7/16	5/8
7	6 7/8	4 13/32	39/64	7/16	7/8	1 31/32	3 5/16	23/32	0.311	0.309	3/8	0.3753	0.375	0.3950-40 UNS-3B	0.3760	0.3750	0.2531	0.2500	7/16	21/32	5/16	15/32	3/4
8	7 5/8	5 5/32	39/64	7/16	1	2 11/32	3 23/32	23/32	0.311	0.309	3/8	0.3753	0.375	0.3950-40 UNS-3B	0.3760	0.3750	0.2531	0.2500	7/16	21/32	5/16	15/32	3/4
9	8 3/8	5 29/32	39/64	7/16	1 1/8	2 23/32	4 3/32	23/32	0.311	0.309	3/8	0.3753	0.375	0.3950-40 UNS-3B	0.3760	0.3750	0.2531	0.2500	7/16	21/32	5/16	15/32	3/4
10	9 1/8	6 21/32	39/64	7/16	1 1/4	3 3/32	4 7/16	23/32	0.311	0.309	3/8	0.3753	0.375	0.3950-40 UNS-3B	0.3760	0.3750	0.2531	0.2500	7/16	21/32	5/16	15/32	3/4
11	10 3/4	7 3/4	47/64	1/2	1 3/8	3 5/8	5 1/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375	0.3158	0.3125	17/32	13/16	3/8	1/2	1
12	11 3/4	8 3/4	47/64	1/2	1 1/2	4 1/8	5 3/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375	0.3158	0.3125	17/32	13/16	3/8	1/2	1
13	12 3/4	9 3/4	47/64	1/2	1 5/8	4 5/8	6 1/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375	0.3158	0.3125	17/32	13/16	3/8	1/2	1
14	13 3/4	10 3/4	47/64	1/2	1 3/4	5 1/8	6 3/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375	0.3158	0.3125	17/32	13/16	3/8	1/2	1
15	14 3/4	11 3/4	47/64	1/2	1 7/8	5 5/8	7 1/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375	0.3158	0.3125	17/32	13/16	3/8	1/2	1
16	15 3/4	12 3/4	47/64	1/2	2	6 1/8	7 3/4	27/32	0.365	0.363	7/16	0.4378	0.4375	0.4575-40 UNS-3B	0.4385	0.4375	0.3158	0.3125	17/32	13/16	3/8	1/2	1

GENERAL NOTE: All dimensions except *M* are in inches.

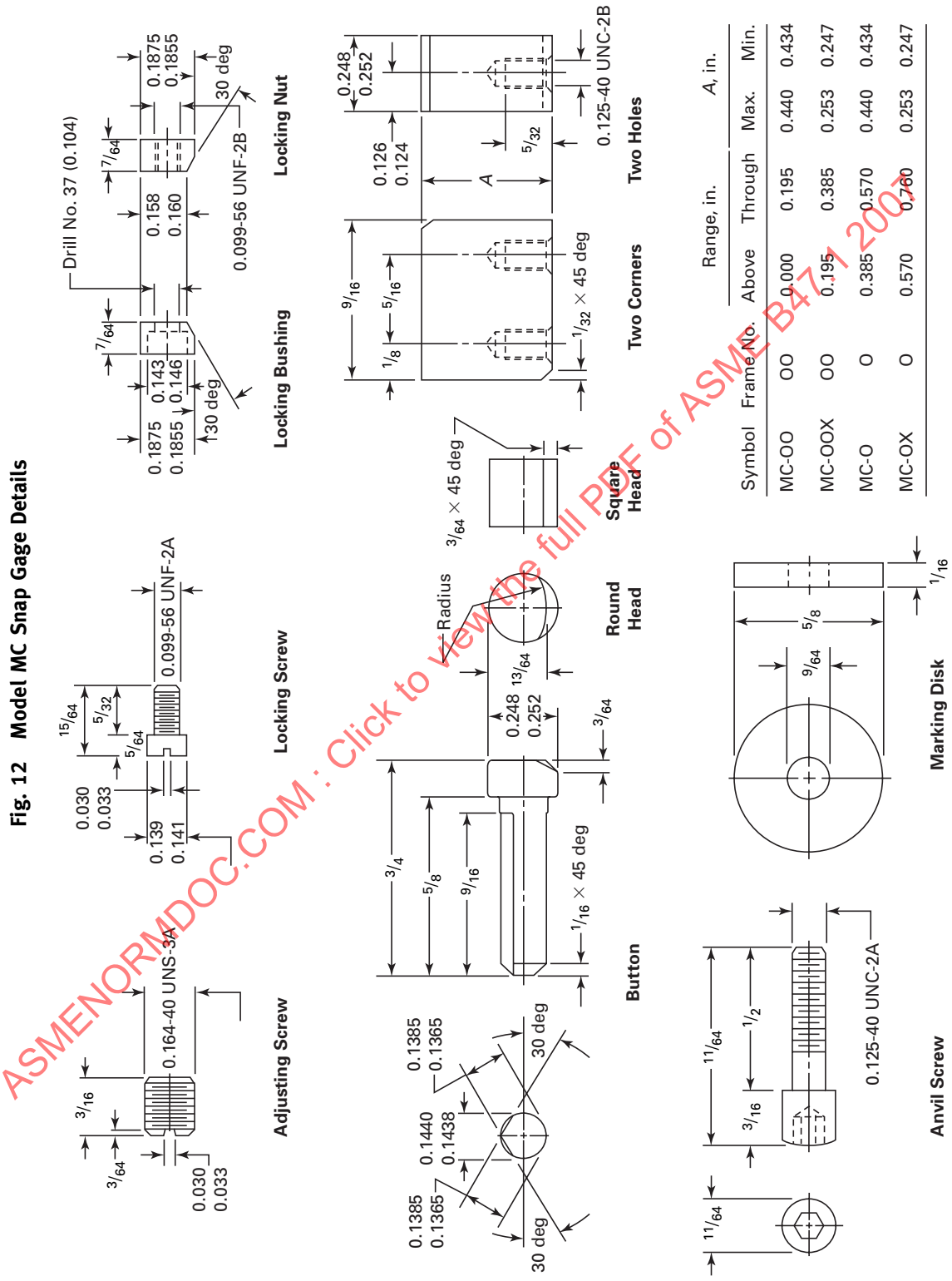
Table 62 Plain Adjustable Snap Gages, Model MC — Details of Frame



Symbol	Range: Above	Range: To and Including	Frame No.	*A*	*B*	*C*	*D*	*E*
MC-00	0.000	0.195	00	$2\frac{1}{4}$	$\frac{25}{32}$	$\frac{5}{8}$	$\frac{5}{16}$	1
MC-00X	0.195	0.385						
MC-0	0.385	0.570	0	$2\frac{5}{8}$	$1\frac{5}{32}$	$\frac{3}{4}$	$\frac{1}{2}$	$1\frac{3}{16}$
MC-0X	0.570	0.760						

GENERAL NOTE: All dimensions are in inches.

Fig. 12 Model MC Snap Gage Details



Symbol	Frame No.	Range, in. Above	Through	*A*, in. Max.	Min.
MC-OO	OO	0.000	0.195	0.440	0.434
MC-OOX	OO	0.195	0.385	0.253	0.247
MC-O	O	0.385	0.570	0.440	0.434
MC-OX	O	0.570	0.760	0.253	0.247

Table 63 Adjustable Snap Gages, Extended Anvil, Model E — Details of Frame

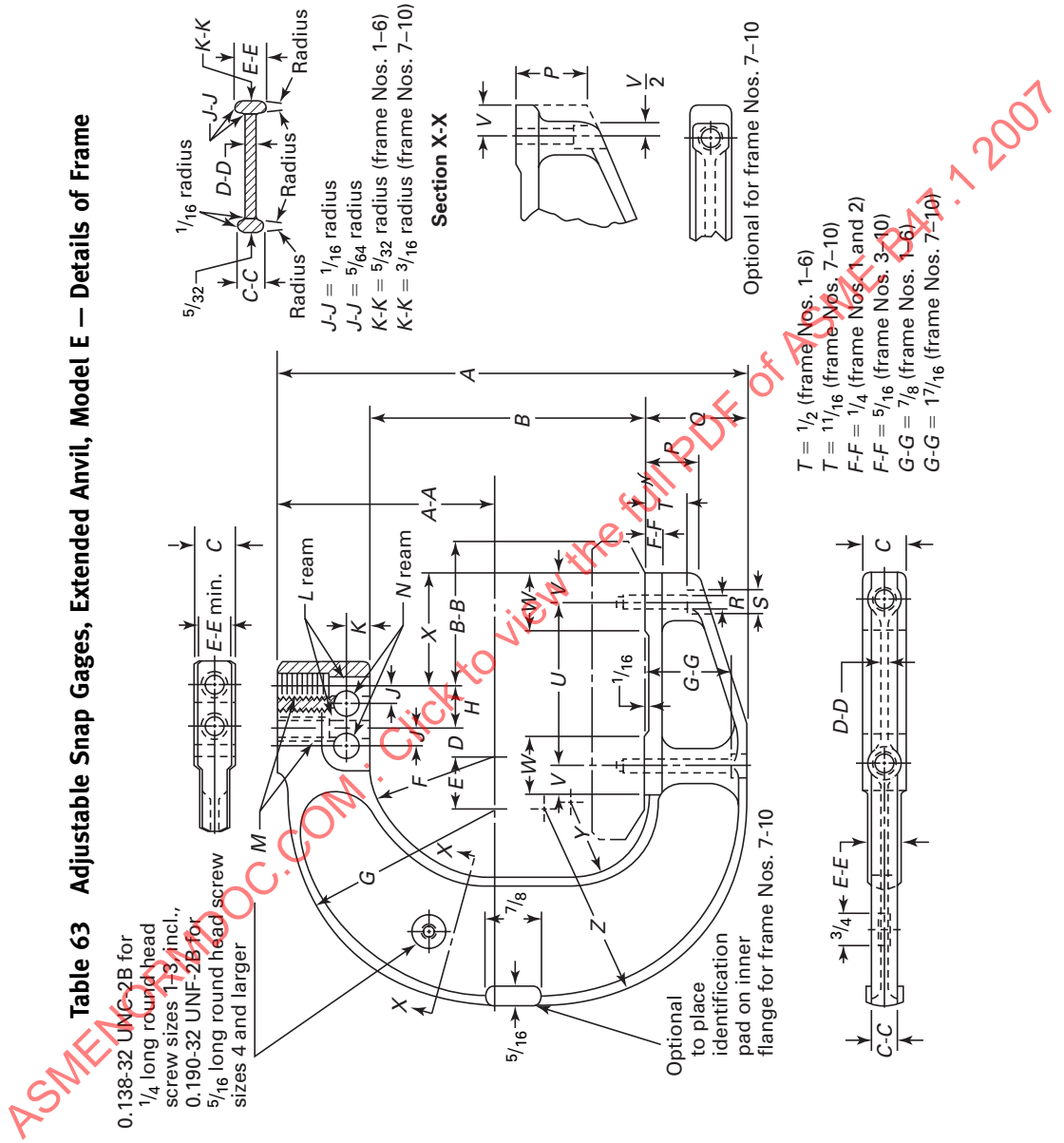


Table 63 Adjustable Snap Gages, Extended Anvil, Model E — Details of Frame (Cont'd)

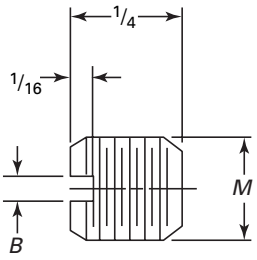
Symbol and Range		Frame No.	Dimensions [Note (1)]												
			A	*P*	*Q*	*U*	*V*	*W*	*X*	*Y*	*Z*	*A-A*	*B-B*	*C-C*	*D-D*	*E-E*
E-1—0–1/4	. . .	1	3 3/8	9/16	1 1/8	1 1/4	5/16	5/8	7/8	1/4	1 3/16	1 1/2	1	11/32	7/64	7/16
E-2—1/4–1/2	E-2X—1/2–3/4	2	3 15/16	5/8	1 3/16	1 1/4	5/16	5/8	7/8	1/2	1 3/8	1 3/4	1	11/32	7/64	7/16
E-3—3/4–1	E-3X—1–1 1/4	3	4 1/2	5/8	1 1/4	1 1/2	3/8	3/4	1 1/8	5/8	1 5/8	2	1 1/4	3/8	1/8	7/16
E-4—1 1/4–1 1/2	E-4X—1 1/2–1 3/4	4	5 1/16	11/16	1 5/16	1 3/4	3/8	3/4	1 1/4	3/4	1 13/16	2 1/4	1 1/2	3/8	1/8	7/16
E-5—1 3/4–2	E-5X—2–2 1/4	5	5 11/16	3/4	1 7/16	2	3/8	3/4	1 3/8	13/16	2	2 1/2	1 3/4	3/8	1/8	7/16
E-6—2 1/4–2 1/2	E-6X—2 1/2–2 3/4	6	6 5/16	13/16	1 9/16	2 1/4	3/8	13/16	1 9/16	1	2 1/4	2 3/4	2	3/8	1/8	7/16
E-7—2 3/4–3 1/16	E-7X—3 1/16–3 7/16	7	7 9/16	7/8	1 11/16	2 3/4	1/2	1	1 15/16	1 1/4	2 13/16	3 7/16	2 7/16	7/16	9/64	9/16
E-8—3 7/16–3 13/16	E-8X—3 13/16–4 3/16	8	8 7/16	15/16	1 13/16	3 3/16	9/16	1 1/8	2 1/4	1 3/8	3 3/16	3 13/16	2 13/16	7/16	9/64	9/16
E-9—4 3/16–4 9/16	E-9X—4 9/16–4 15/16	9	9 5/16	1	1 15/16	3 9/16	5/8	1 1/4	2 1/2	1 1/2	3 1/2	4 3/16	3 3/16	7/16	5/32	9/16
E-10—4 15/16–5 5/16	E-10X—5 5/16–5 11/16	10	10 3/16	1 1/16	2 1/16	4	11/16	1 3/8	2 13/16	1 5/8	3 3/4	4 9/16	3 9/16	7/16	5/32	9/16

GENERAL NOTE: All dimensions are in inches.

NOTE:

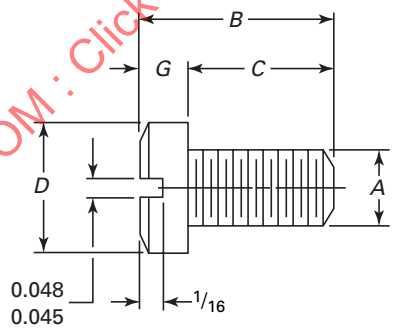
(1) Dimensions for *B*, *C*, *D*, *E*, *F*, *G*, *H*, *J*, *K*, *L*, *M*, *N*, *R*, and *S* are the same as for Model C (Table 61).

Table 64 Models A, B, C, and E Snap Gage, and Models K and L Adjustable Length Gage Adjusting Screws



Snap Gage Frame Nos., Inclusive	*B*, in.		
	Max.	Min.	*M*
1–6	0.048	0.045	0.3325-40 UNS-3A
7–10	0.048	0.045	0.3950-40 UNS-3A
11–16	0.048	0.045	0.4575-40 UNS-3A

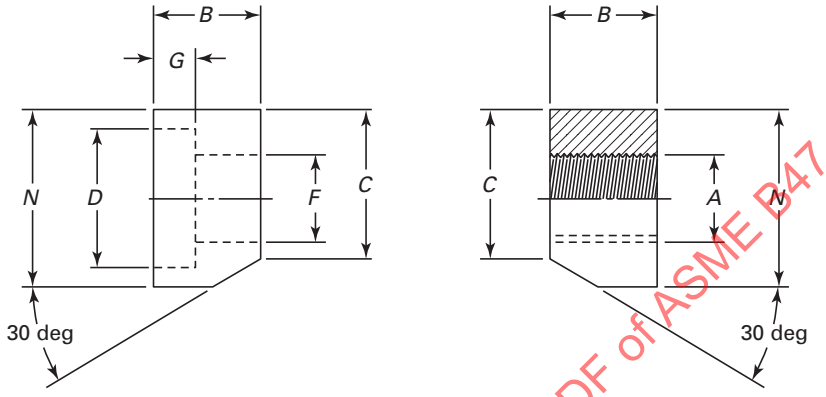
Table 65 Models A, B, C, and E Snap Gage, and Models K and L Adjustable Length Gage Locking Screws



Snap Gage Frame Nos., Inclusive	*A*	*B*	*C*	*D*		*G*
				Max.	Min.	
1–6	0.164-36 UNF-2A	7/16	11/32	0.252	0.248	3/32
7–10	0.190-32 UNF-2A	17/32	27/64	0.315	0.310	7/64
11–16	0.216-28 UNF-2A	21/32	17/32	0.346	0.341	1/8

GENERAL NOTE: All dimensions except *A* are in inches.

Table 66 Models A, B, C, and E Snap Gage, and Models K and L Adjustable Length Gage Locking Bushings and Nuts

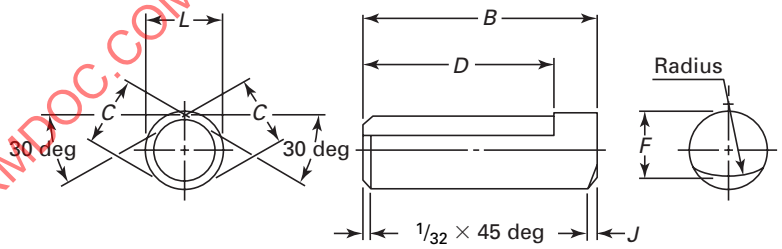


Locking Bushing Locking Nut

Snap Gage Frame Nos., Inclusive	A	B	C		D		F	G	N	
			Max.	Min.	Max.	Min.			Max.	Min.
1–6	0.164-36 UNF-2B	11/64	0.276	0.271	0.260	0.255	11/64	3/32	0.3125	0.3105
7–10	0.190-32 UNF-2B	15/64	0.333	0.328	0.323	0.318	13/64	7/64	0.3750	0.3730
11–16	0.216-28 UNF-2B	19/64	0.385	0.380	0.355	0.350	15/64	1/8	0.4375	0.4355

GENERAL NOTE: All dimensions except *A* are in inches.

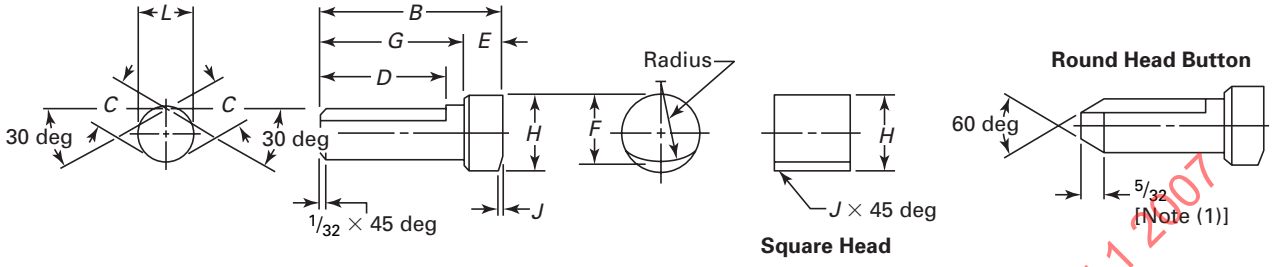
Table 67 Model A Snap Gage Gaging Pins



Snap Gage Frame Nos., Inclusive	B	C		D	F	J	L	
		Max.	Min.				Max.	Min.
1–6	15/16	0.300	0.298	13/16	17/64	3/64	0.3125	0.3123
7–10	1 7/32	0.358	0.356	1 1/32	21/64	3/64	0.375	0.3748
11–16	1 1/2	0.417	0.415	1 1/4	3/8	1/16	0.4375	0.4373

GENERAL NOTE: All dimensions are in inches.

Table 68 Models B, C, and E Snap Gage, and Models K and L Adjustable Length Gage Gaging Buttons



Snap Gage Frame Nos., Inclusive	B	C		D	E	F	G	H		J	L	
		Max.	Min.					Max.	Min.		Max.	Min.
1–6 [Note (2)]	1 3/16	0.300	0.298	13/16	1/4	7/16	15/16	0.505	0.500	3/64	0.3125	0.3123
7–10	1 17/32	0.358	0.356	1 1/32	5/16	9/16	1 7/32	0.630	0.625	3/64	0.3750	0.3748
11–16	1 7/8	0.417	0.415	1 1/4	3/8	5/8	1 1/2	0.755	0.750	1/16	0.4375	0.4373

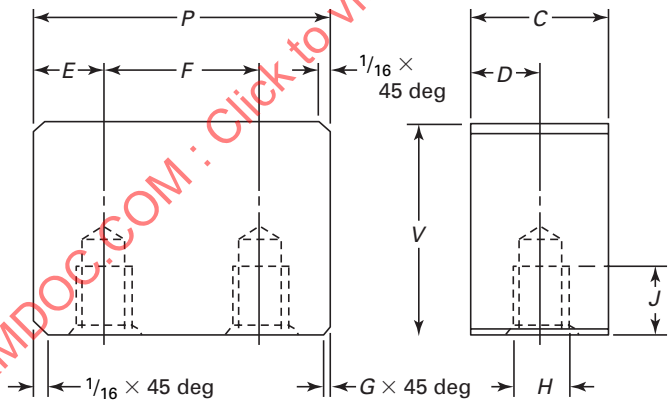
GENERAL NOTE: All dimensions are in inches.

NOTES:

(1) Square head gaging buttons are optional.

(2) Modification of gaging button to permit assembly in Model C, Frame No. 1, range 0 in. to 1/4 in.

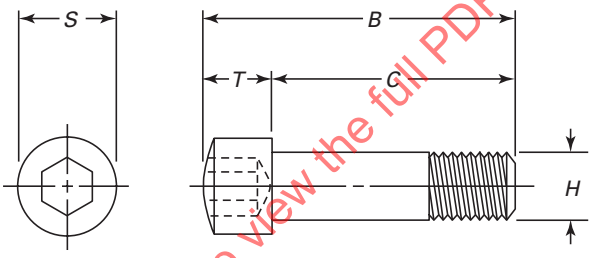
Table 69 Model C Snap Gage and Model L Adjustable Length Gage Anvils



Snap Gage Symbol	Snap Gage Frame Nos., Inclusive	C		D		E	F	G	H	J	P	V
		Max.	Min.	Max.	Min.							
C1 and C-2X–C-6X	1–6	0.505	0.500	0.2525	0.2500	1/4	19/32	1/64	0.190-32 UNF-2B	5/16	1 3/32	1/2
C-2–C-6	2–6	0.505	0.500	0.2525	0.2500	1/4	19/32	1/64	0.190-32 UNF-2B	5/16	1 3/32	3/4
C-7X–C-10X	7–10	0.630	0.625	0.3150	0.3125	5/16	23/32	1/32	0.250-28 UNF-2B	11/32	1 11/32	9/16
C-7–C-10	7–10	0.630	0.625	0.3150	0.3125	5/16	23/32	1/32	0.250-28 UNF-2B	11/32	1 11/32	15/16
C-11X–C-16X	11–16	0.755	0.750	0.3775	0.3750	3/8	27/32	1/32	0.3125-24 UNF-2B	3/8	1 19/32	5/8
C-11–C-16	11–16	0.755	0.750	0.3775	0.3750	3/8	27/32	1/32	0.3125-24 UNF-2B	3/8	1 19/32	1 1/8

GENERAL NOTE: All dimensions except *H* are in inches.

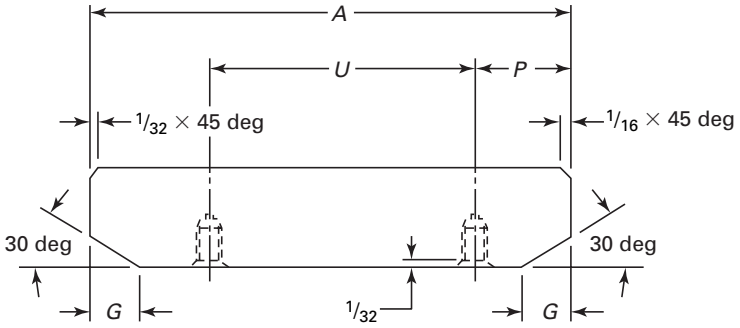
Table 70 Model C Snap Gage and Model L Adjustable Length Gage Anvil Screws



Snap Gage Frame Nos., Inclusive	*B*	*C*	*H*	*S*	*T*
1–6	$^{15}/_{16}$	$^{3}/_{4}$	0.190-32 UNF-2A	$^{5}/_{16}$	$^{3}/_{16}$
7–10	$1\,^{3}/_{16}$	$^{5}/_{8}$	0.250-28 UNF-2A	$^{3}/_{8}$	$^{1}/_{4}$
11–16	$1\,^{7}/_{16}$	$^{3}/_{4}$	0.3125-24 UNF-2A	$^{13}/_{32}$	$^{5}/_{16}$

GENERAL NOTE: All dimensions except *H* are in inches.

Table 71 Model E Snap Gage Anvil and Anvil Screws



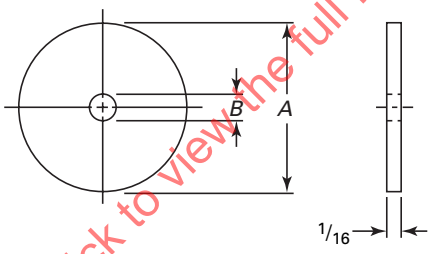
Gage No.	Frame No.	A	C		D		G	H	J	P	U	V
			Max.	Min.	Max.	Min.						
E-1	1	2 1/8	0.505	0.500	0.2525	0.250	1/8	0.190-32 UNF-2B	5/16	7/16	1 1/4	1/2
E-2	2	2 1/8	0.505	0.500	0.2525	0.250	1/8	0.190-32 UNF-2B	5/16	7/16	1 1/4	3/4
E-2X			0.505	0.500	0.2525	0.250	1/8	0.190-32 UNF-2B	5/16	7/16	1 1/4	1/2
E-3	3	2 5/8	0.505	0.500	0.2525	0.250	1/8	0.190-32 UNF-2B	5/16	1/2	1 1/2	3/4
E-3X			0.505	0.500	0.2525	0.250	1/8	0.190-32 UNF-2B	5/16	1/2	1 1/2	1/2
E-4	4	3 1/8	0.505	0.500	0.2525	0.250	1/4	0.190-32 UNF-2B	5/16	5/8	1 3/4	3/4
E-4X			0.505	0.500	0.2525	0.250	1/4	0.190-32 UNF-2B	5/16	5/8	1 3/4	1/2
E-5	5	3 5/8	0.505	0.500	0.2525	0.250	3/8	0.190-32 UNF-2B	5/16	3/4	2	3/4
E-5X			0.505	0.500	0.2525	0.250	3/8	0.190-32 UNF-2B	5/16	3/4	2	1/2
E-6	6	4 1/8	0.505	0.500	0.2525	0.250	7/16	0.190-32 UNF-2B	5/16	13/16	2 1/4	3/4
E-6X			0.505	0.500	0.2525	0.250	7/16	0.190-32 UNF-2B	5/16	13/16	2 1/4	1/2
E-7	7	5	0.630	0.625	0.3150	0.3125	1/2	0.250-28 UNF-2B	11/32	1	2 3/4	15/16
E-7X			0.630	0.625	0.3150	0.3125	1/2	0.250-28 UNF-2B	11/32	1	2 3/4	9/16
E-8	8	5 3/4	0.630	0.625	0.3150	0.3125	9/16	0.250-28 UNF-2B	11/32	1 1/8	3 3/16	15/16
E-8X			0.630	0.625	0.3150	0.3125	1/2	0.250-28 UNF-2B	11/32	1 1/8	3 3/16	9/16
E-9	9	6 1/2	0.630	0.625	0.3150	0.3125	11/16	0.250-28 UNF-2B	11/32	1 5/16	3 9/16	15/16
E-9X			0.630	0.625	0.3150	0.3125	1/2	0.250-28 UNF-2B	11/32	1 5/16	3 9/16	9/16
E-10	10	7 1/4	0.630	0.625	0.3150	0.3125	3/4	0.250-28 UNF-2B	11/32	1 7/16	4	15/16
E-10X			0.630	0.625	0.3150	0.3125	1/2	0.250-28 UNF-2B	11/32	1 7/16	4	9/16

Anvil Screws (Hexagon-Socket-Head Cap Screws)

Frame Nos., Inclusive	Size	Length	
		Front Screw	Rear Screw
1–6	0.190-32 UNF-2A	3/4	1 1/8
7–10	0.250-28 UNF-2A	1	1 3/4

GENERAL NOTE: All dimensions except *H* are in inches.

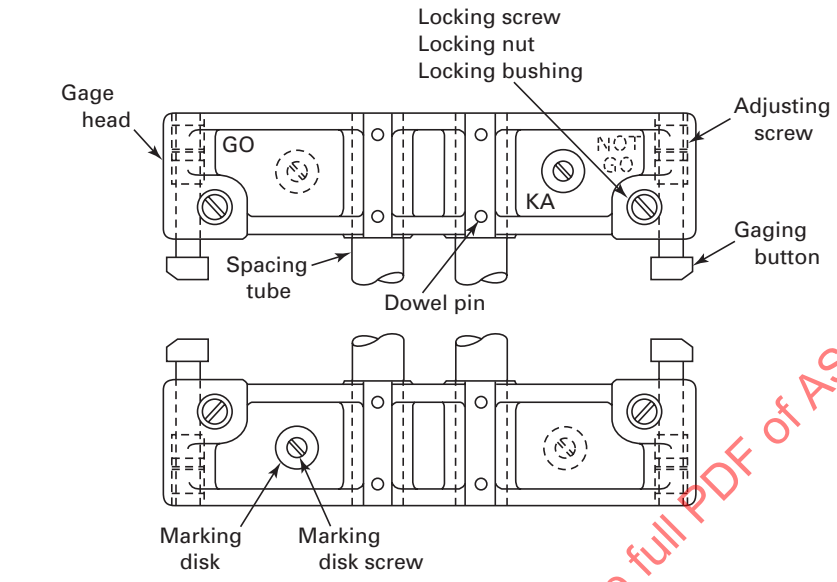
Table 72 Models A, B, C, E, and MC Snap Gage, and Models KA, KB, LA, and LB Adjustable Length Gage Marking Disks



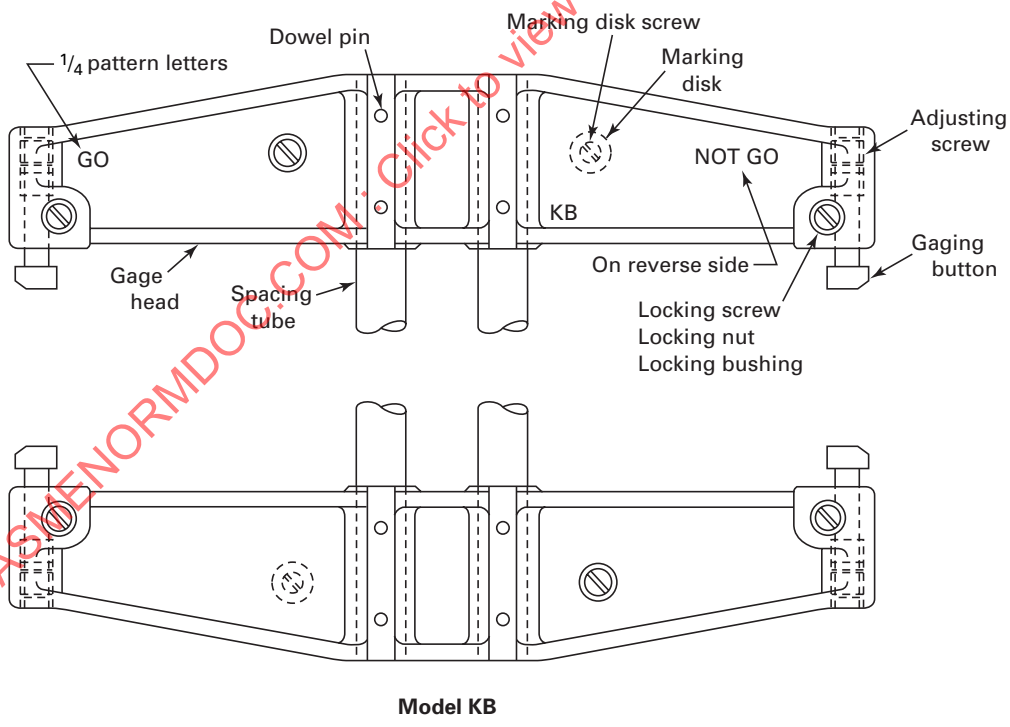
Snap Gage Frame Nos., Inclusive	*A*	*B*
00, 0, and 1	5/8	9/64
2 and 3	7/8	9/64
4–16	1	13/64

GENERAL NOTE: All dimensions are in inches.

Fig. 13 Adjustable Length Gage, Double Sided, Models KA and KB, Details of Construction

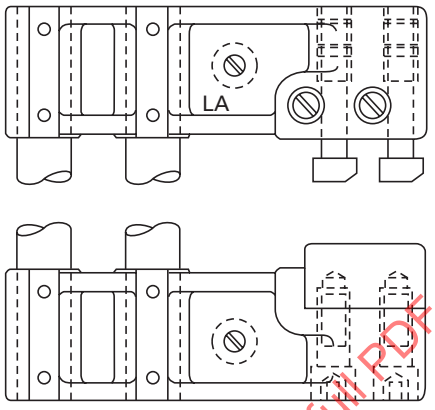


Model KA

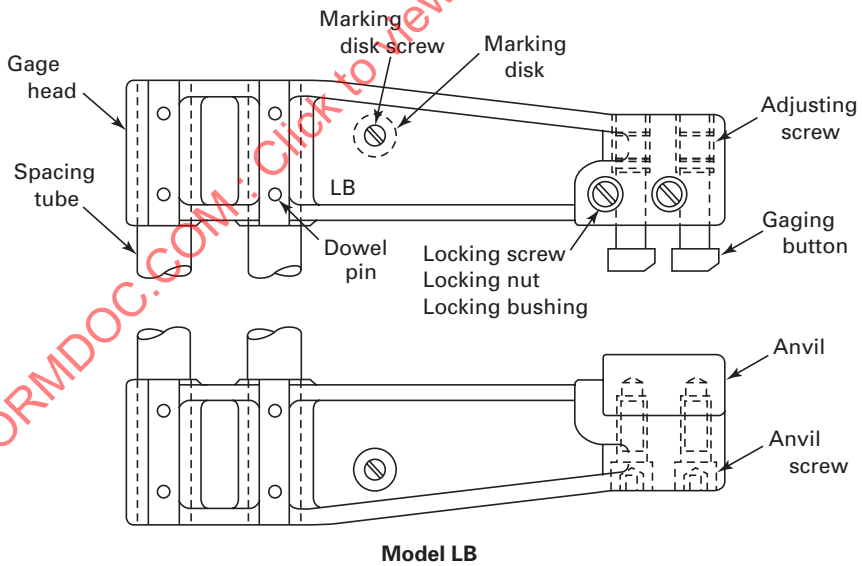


Model KB

Fig. 14 Adjustable Length Gage, Progressive, Models LA and LB, Details of Construction



Model LA



Model LB

Fig. 15 Adjustable Length Gage, Double Sided, Model KA, Details of Gage Heads

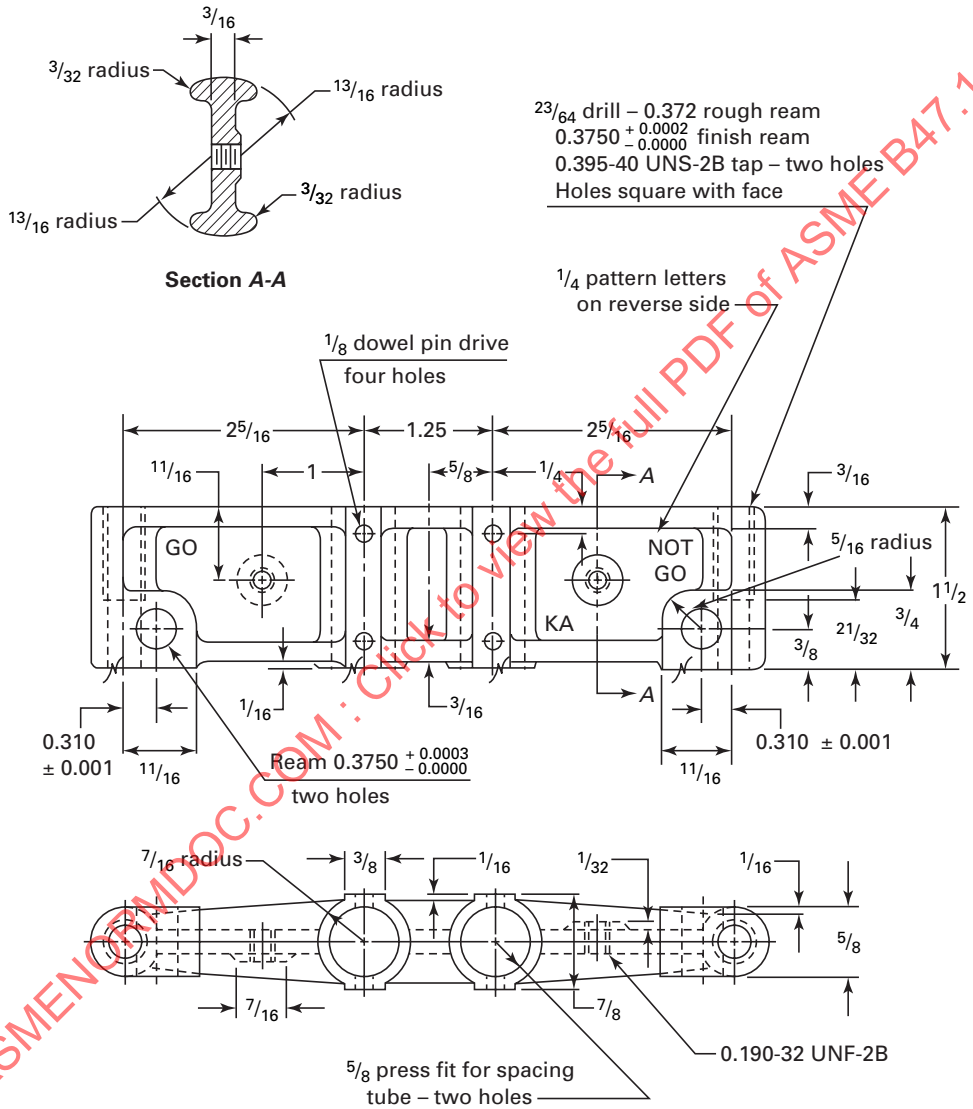


Fig. 16 Adjustable Length Gage, Double Sided, Model KB, Details of Gage Heads

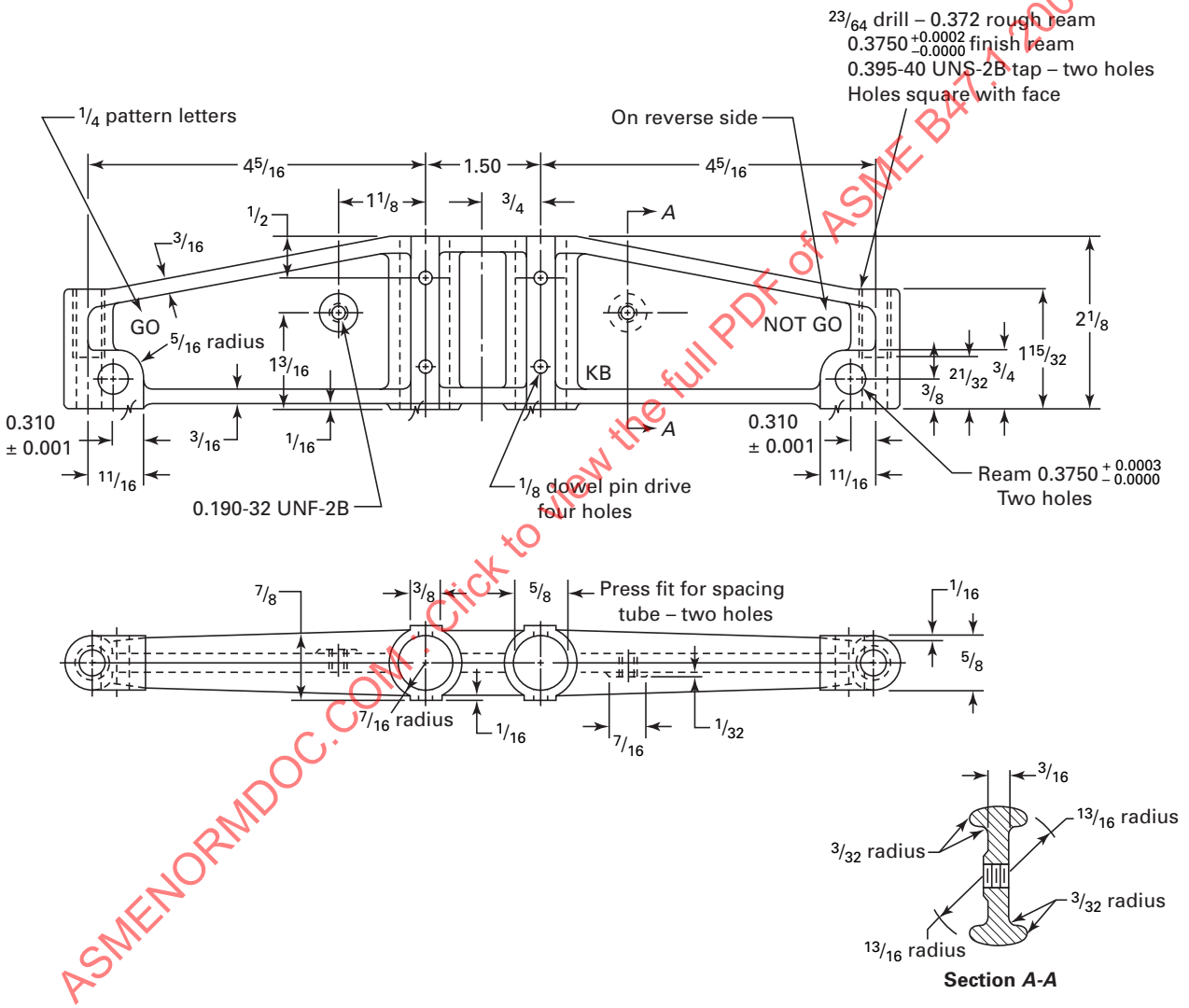


Fig. 17 Adjustable Length Gage, Progressive, Model LA, Details of Gage Heads

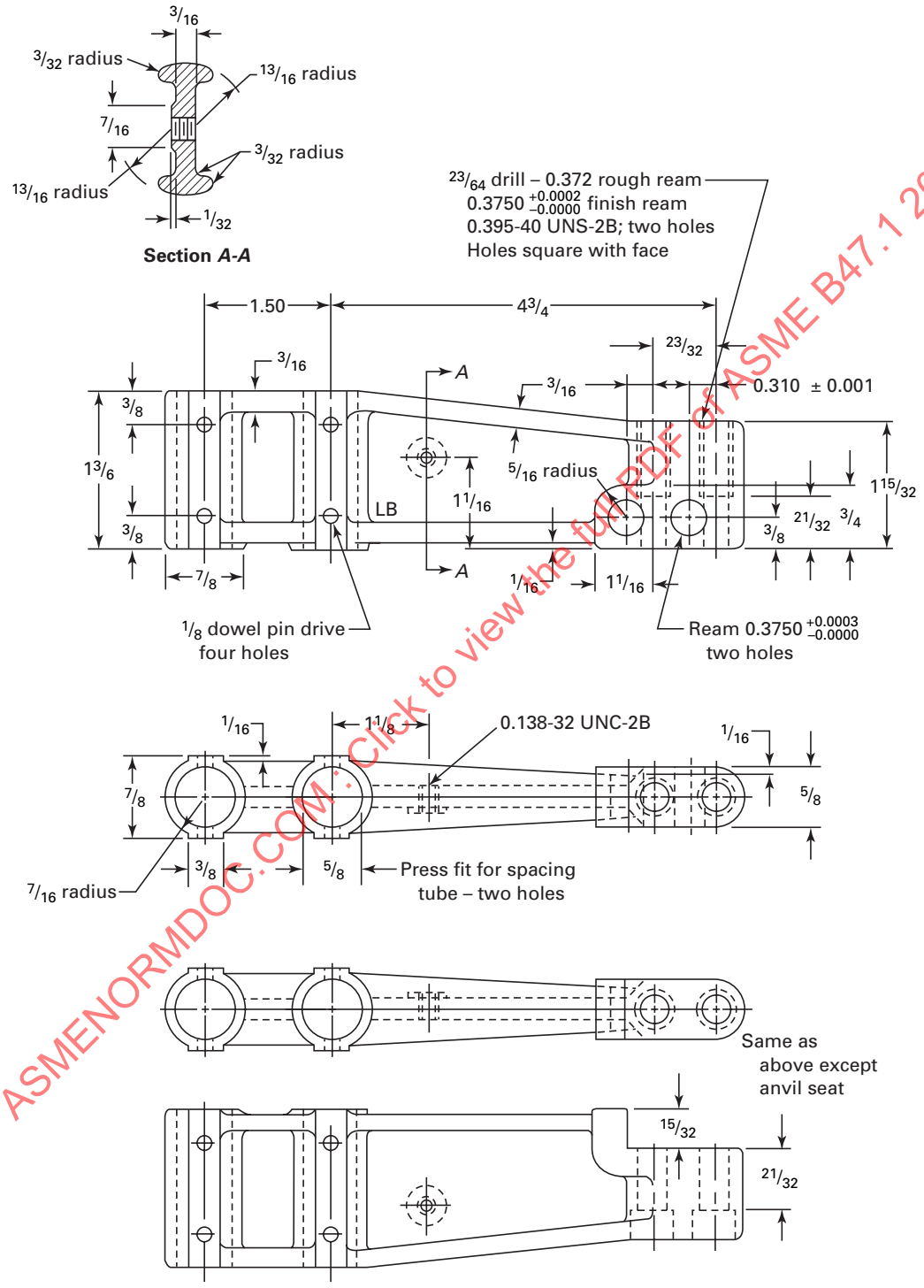


Fig. 18 Adjustable Length Gage, Progressive, Model LB, Details of Gage Heads

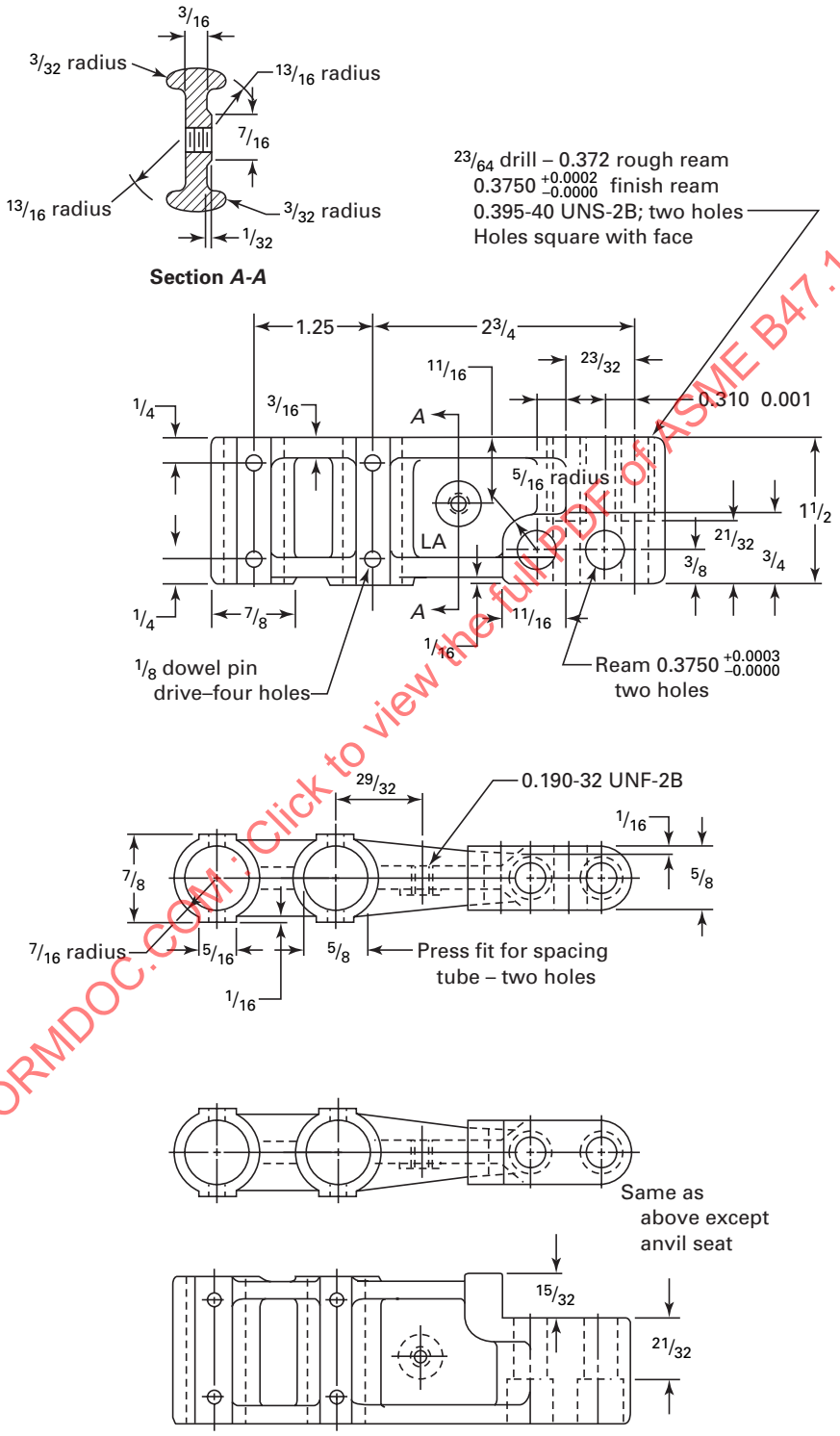


Fig. 19 Adjustable Length Gages — Details of Spacing Tubes

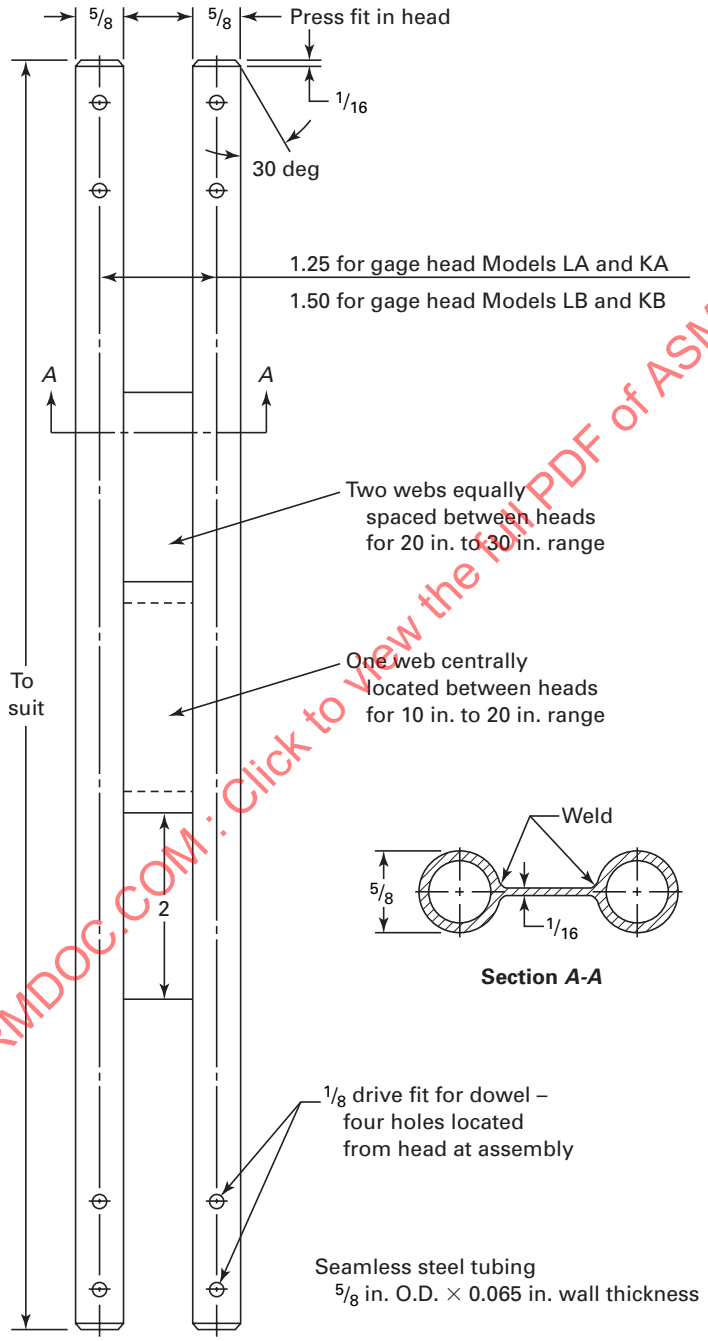


Table 73 Adjustable Length Gages, Parts List

Part	Double Sided (Specification or Reference)		Progressive (Specification or Reference)	
	Model KA	Model KB	Model LA	Model LB
Gage head	Fig. 15	Fig. 16	Fig. 17	Fig. 18
Spacing tube	Fig. 19	Fig. 19	Fig. 19	Fig. 19
Gaging button	Table 68, frame nos. 7–10	Table 68, frame nos. 7–10	Table 68, frame nos. 7–10	Table 68, frame nos. 7–10
Locking screw	Table 65, frame nos. 7–10	Table 65, frame nos. 7–10	Table 65, frame nos. 7–10	Table 65, frame nos. 7–10
Locking nut	Table 66, frame nos. 7–10	Table 66, frame nos. 7–10	Table 66, frame nos. 7–10	Table 66, frame nos. 7–10
Locking bushing	Table 66, frame nos. 7–10	Table 66, frame nos. 7–10	Table 66, frame nos. 7–10	Table 66, frame nos. 7–10
Adjusting screw	Table 64, frame nos. 7–10	Table 64, frame nos. 7–10	Table 64, frame nos. 7–10	Table 64, frame nos. 7–10
Dowel pins	$\frac{1}{8}$ in. diam. × $\frac{7}{8}$ in.	$\frac{1}{8}$ in. diam. × $\frac{7}{8}$ in.	$\frac{1}{8}$ in. diam. × $\frac{7}{8}$ in.	$\frac{1}{8}$ in. diam. × $\frac{7}{8}$ in.
Marking disk	Table 72, frame nos. 2 and 3	Table 72, frame nos. 4-16	Table 72, frame nos. 2 and 3	Table 72, frame nos. 4-16
Marking disk screw	0.190-32 UNF-2A × $\frac{1}{4}$ in.	0.190-32 UNF-2A × $\frac{1}{4}$ in.	0.138-32 UNC-2A × $\frac{1}{4}$ in.	0.190-32 UNF-2A × $\frac{1}{4}$ in.
Anvil	. . .	. . .	Table 69, frame nos. 7–10	Table 69, frame nos. 7–10
Anvil screw	. . .	. . .	Table 70, frame nos. 7–10	Table 70, frame nos. 7–10

Table 74 Recommended Applicability of Adjustable Length Gage as Related to Product Tolerance

Range		
Above	To and Including	Product Tolerance, Not Less Than
0	12	0.005
12	30	0.010
30	. . .	0.020

GENERAL NOTE: All dimensions are in inches.

Fig. 20 Master Disks — Styles 1, 2, and 3

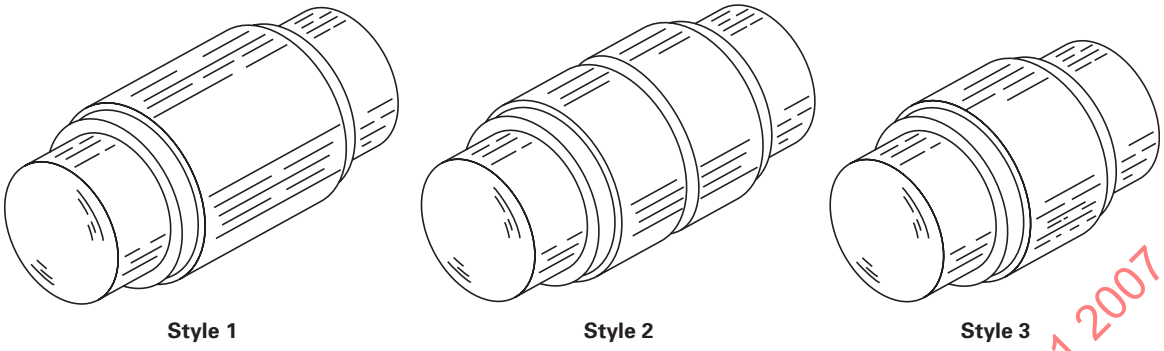
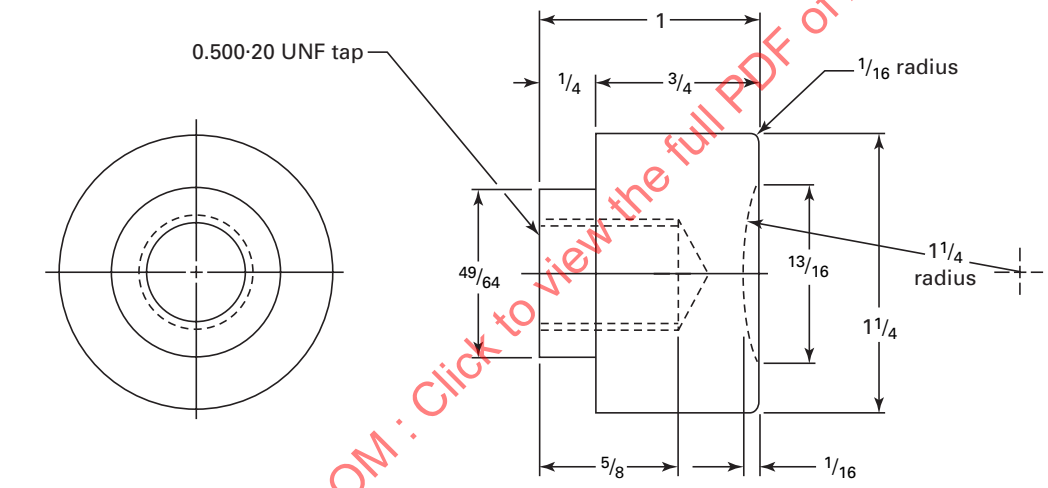
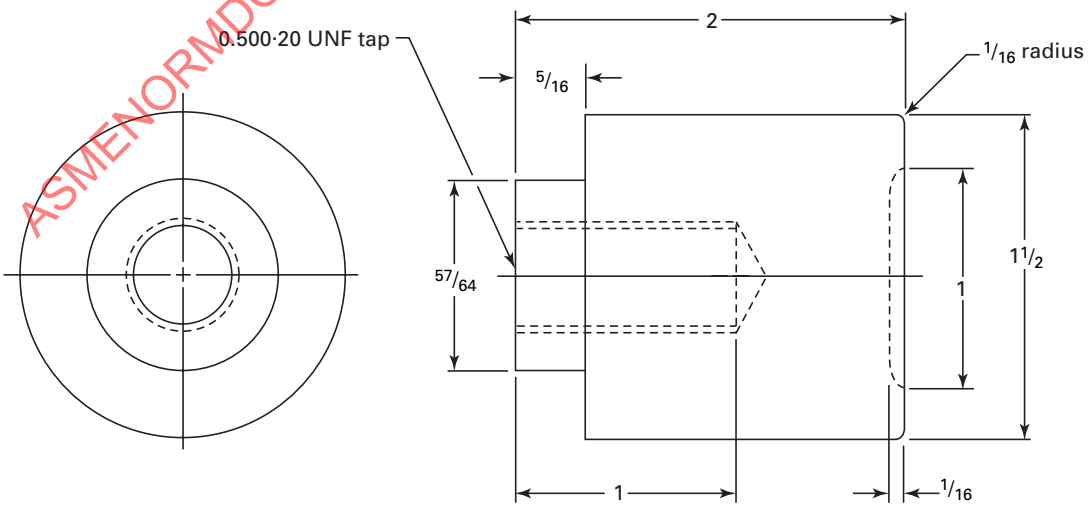


Fig. 21 Insulating Grips for Master Disks — Range Above 1.510 in. to and Including 8.010 in.



(a) No. 6 Grip – Range 1.510 in. to and Including 2.510 in.



(b) No. 7 Grip – Range 2.510 in. to and Including 8.010 in.