

BRITISH STANDARD

Screw gauge limits and tolerances –

Part 4: Limits of size for gauges for screw threads of unified form diameters $\frac{1}{4}$ in and larger

ICS 21.040.10

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Summary of pages

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Foreword

This British Standard was published by BSI and came into effect on 31 October 2007. It was prepared by Subcommittee SFTSE/1, *Screws and fasteners technical specification committee*, under the authority of Technical Committee TDW/4, *Technical product realization*. A list of organizations represented on these committees can be obtained on request to their secretaries.

BS 919, *Screw gauge limits and tolerances* is in four parts:

Part 1: Specification for gauges for screw threads of unified form

Part 2: Specification for gauges for screw threads of Whitworth and B.A. forms

Part 3: Specification for gauges for screw threads of ISO metric form

Part 4: Limits of size for gauges for screw threads of unified form diameters $\frac{1}{4}$ in and larger

Supersession

This Part of BS 919 supersedes BS 919-4:1964, which is withdrawn.

Relationship with other publications

This British Standard is intended for use with BS 1580-1, which specifies the corresponding screw threads.

Information about this document

This British Standard has been fully revised to bring it up to date.

The start and finish of text introduced or altered by Corrigendum No. 1 is indicated in the text by tags **[C1]** **[C1]**.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in notes in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard specifies the limits of size for the following types of gauges, setting plugs and check plugs for the various classes of standard Unified Coarse (UNC), Unified Fine (UNF) and Unified Extra Fine (UNEF) threads specified in BS 1580-1.

- a) GO and NOT GO screw gauges:
 - 1) screw plug gauges;
 - 2) solid screw ring gauges;
 - 3) adjustable screw ring gauges;
 - 4) adjustable screw calliper gauges.
- b) Setting plugs for GO and NOT GO adjustable screw ring gauges and for GO and NOT GO adjustable screw calliper gauges:
 - 1) double length type;
 - 2) single length type.
- c) GO and NOT GO check plugs for solid screw ring gauges.
- d) GO and NOT GO plug gauges and GO and NOT GO calliper gauges for the crest diameters of product threads.

NOTE The values tabulated in this standard have been derived from the application of the tolerances specified in BS 919-1 to the limits of size given in [C1] BS 1580-1[C1], and reference should be made to the former standard for general information, details of the form of thread for Unified screw gauges, and tolerances on pitch and thread angle.

[C1] 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 1580-1, *Unified screw threads – Part 1: Screw threads with diameters ¼ in and larger – Requirements*

BS 6528:1984, *Glossary of terms for cylindrical screw threads* [C1]

[C1] 3 Terms and definitions [C1]

For the purposes of this part of BS 919, the terms and definitions given in BS 6528:1984 and the following apply.

[C1] 3.1 effective diameter [C1]

diameter of the pitch cylinder

NOTE 1 This is the “simple” effective diameter, as distinct from the “virtual” effective diameter (see [C1] 3.2 [C1]).

NOTE Also known as “pitch diameter”.

[C1] 3.2 virtual effective diameter [C1]

effective diameter of an imaginary thread of perfect pitch and flank angle, having the full depth of flanks, but clear at the crests and roots, which would just assemble with the actual thread over the prescribed length of engagement

NOTE The “virtual” effective diameter exceeds the effective diameter in the case of an external thread, but is less than the effective diameter in the case of an internal thread by an amount corresponding to the combined diametral effects due to any errors in the pitch and/or the flank angles of the thread.

Section 1: Unified coarse threads, UNC

Table 1 Limits of size for GO screw plug gauges (all classes of thread)

1	2	3	4	5
Designation	Major diameter		Effective diameter	
	Max.	Min.	Max.	Min.
	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.250 5	0.250 0	0.217 8	0.217 5
$\frac{5}{16}$ — 18 UNC	0.313 0	0.312 5	0.276 7	0.276 4
$\frac{3}{8}$ — 16 UNC	0.375 6	0.375 0	0.334 7	0.334 4
$\frac{7}{16}$ — 14 UNC	0.438 1	0.437 5	0.391 4	0.391 1
$\frac{1}{2}$ — 13 UNC	0.500 6	0.500 0	0.450 3	0.450 0
$\frac{9}{16}$ — 12 UNC	0.563 1	0.562 5	0.508 7	0.508 4
$\frac{5}{8}$ — 11 UNC	0.625 6	0.625 0	0.566 3	0.566 0
$\frac{3}{4}$ — 10 UNC	0.750 6	0.750 0	0.685 3	0.685 0
$\frac{7}{8}$ — 9 UNC	0.875 7	0.875 0	0.803 1	0.802 8
1 — 8 UNC	1.000 7	1.000 0	0.919 2	0.918 8
$1\frac{1}{8}$ — 7 UNC	1.125 7	1.125 0	1.032 6	1.032 2
$1\frac{1}{4}$ — 7 UNC	1.250 7	1.250 0	1.157 6	1.157 2
$1\frac{3}{8}$ — 6 UNC	1.375 8	1.375 0	1.267 1	1.266 7
$1\frac{1}{2}$ — 6 UNC	1.500 8	1.500 0	1.392 1	1.391 7
$1\frac{3}{4}$ — 5 UNC	1.750 8	1.750 0	1.620 6	1.620 1
2 — $4\frac{1}{2}$ UNC	2.000 8	2.000 0	1.856 2	1.855 7
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.250 8	2.250 0	2.106 2	2.105 7
$2\frac{1}{2}$ — 4 UNC	2.500 9	2.500 0	2.338 1	2.337 6
$2\frac{3}{4}$ — 4 UNC	2.750 9	2.750 0	2.588 1	2.587 6
3 — 4 UNC	3.000 9	3.000 0	2.838 1	2.837 6
$3\frac{1}{4}$ — 4 UNC	3.250 9	3.250 0	3.088 1	3.087 6
$3\frac{1}{2}$ — 4 UNC	3.500 9	3.500 0	3.338 1	3.337 6
$3\frac{3}{4}$ — 4 UNC	3.750 9	3.750 0	3.588 1	3.587 6
4 — 4 UNC	4.000 9	4.000 0	3.838 1	3.837 6

Table 2 Limits of size for NOT GO screw plug gauges (low addendum and high addendum)¹⁾, Class 1B threads

1	2	3	4	5	6	7
Designation	Major diameter				Effective diameter	
	Low addendum		High addendum		Both types	
	Max.	Min.	Max.	Min.	Max.	Min.
	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.235 6	0.235 1	0.246 5	0.246 0	0.225 1	0.224 8
$\frac{5}{16}$ — 18 UNC	0.296 3	0.295 8	0.308 4	0.307 9	0.284 6	0.284 3
$\frac{3}{8}$ — 16 UNC	0.356 4	0.355 8	0.370 0	0.369 4	0.343 2	0.342 9
$\frac{7}{16}$ — 14 UNC	0.415 8	0.415 2	0.431 2	0.430 6	0.400 6	0.400 3
$\frac{1}{2}$ — 13 UNC	0.476 3	0.475 7	0.493 0	0.492 4	0.460 0	0.459 7
$\frac{9}{16}$ — 12 UNC	0.536 6	0.536 0	0.554 7	0.554 1	0.518 9	0.518 6
$\frac{5}{8}$ — 11 UNC	0.596 4	0.595 8	0.616 1	0.615 5	0.577 0	0.576 7
$\frac{3}{4}$ — 10 UNC	0.718 1	0.717 5	0.739 8	0.739 2	0.696 8	0.696 5
$\frac{7}{8}$ — 9 UNC	0.839 2	0.838 5	0.863 2	0.862 5	0.815 4	0.815 1
1 — 8 UNC	0.959 1	0.958 4	0.986 1	0.985 4	0.932 4	0.932 0
$1\frac{1}{8}$ — 7 UNC	1.077 2	1.076 5	1.108 2	1.107 5	1.046 7	1.046 3
$1\frac{1}{4}$ — 7 UNC	1.202 5	1.201 8	1.233 5	1.232 8	1.172 0	1.171 6
$1\frac{3}{8}$ — 6 UNC	1.318 3	1.317 5	1.354 4	1.353 6	1.282 6	1.282 2
$1\frac{1}{2}$ — 6 UNC	1.443 6	1.442 8	1.479 7	1.478 9	1.407 9	1.407 5
$1\frac{3}{4}$ — 5 UNC	1.680 8	1.680 0	1.724 1	1.723 3	1.638 0	1.637 5
2 — $4\frac{1}{2}$ UNC	1.922 4	1.921 6	1.970 5	1.969 7	1.874 8	1.874 3
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.172 8	2.172 0	2.220 9	2.220 1	2.125 2	2.124 7
$2\frac{1}{2}$ — 4 UNC	2.411 9	2.411 0	2.466 1	2.465 2	2.358 3	2.357 8
$2\frac{3}{4}$ — 4 UNC	2.662 3	2.661 4	2.716 5	2.715 6	2.608 7	2.608 2
3 — 4 UNC	2.912 6	2.911 7	2.966 8	2.965 9	2.859 0	2.858 5
$3\frac{1}{4}$ — 4 UNC	3.162 9	3.162 0	3.217 1	3.216 2	3.109 3	3.108 8
$3\frac{1}{2}$ — 4 UNC	3.413 2	3.412 3	3.467 4	3.466 5	3.359 6	3.359 1
$3\frac{3}{4}$ — 4 UNC	3.663 5	3.662 6	3.717 7	3.716 8	3.609 9	3.609 4
4 — 4 UNC	3.913 8	3.912 9	3.968 0	3.967 1	3.860 2	3.859 7

¹⁾ These terms are explained in BS 919-1.

Table 3 Limits of size for NOT GO screw plug gauges (low addendum and high addendum), Class 2B threads

1	2	3	4	5	6	7
Designation	Major diameter				Effective diameter	
	Low addendum		High addendum		Both types	
	Max.	Min.	Max.	Min.	Max.	Min.
	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.233 1	0.232 6	0.244 0	0.243 5	0.222 6	0.222 3
$\frac{5}{16}$ — 18 UNC	0.293 7	0.293 2	0.305 8	0.305 3	0.282 0	0.281 7
$\frac{3}{8}$ — 16 UNC	0.353 6	0.353 0	0.367 2	0.366 6	0.340 4	0.340 1
$\frac{7}{16}$ — 14 UNC	0.412 7	0.412 1	0.428 1	0.427 5	0.397 5	0.397 2
$\frac{1}{2}$ — 13 UNC	0.473 2	0.472 6	0.489 8	0.489 2	0.456 8	0.456 5
$\frac{9}{16}$ — 12 UNC	0.533 2	0.532 6	0.551 3	0.550 7	0.515 5	0.515 2
$\frac{5}{8}$ — 11 UNC	0.592 9	0.592 3	0.612 6	0.612 0	0.573 5	0.573 2
$\frac{3}{4}$ — 10 UNC	0.714 3	0.713 7	0.736 0	0.735 4	0.693 0	0.692 7
$\frac{7}{8}$ — 9 UNC	0.835 1	0.834 4	0.859 1	0.858 4	0.811 3	0.811 0
1 — 8 UNC	0.954 7	0.954 0	0.981 7	0.981 0	0.928 0	0.927 6
$1\frac{1}{8}$ — 7 UNC	1.072 5	1.071 8	1.103 5	1.102 8	1.042 0	1.041 6
$1\frac{1}{4}$ — 7 UNC	1.197 7	1.197 0	1.228 7	1.228 0	1.167 2	1.166 8
$1\frac{3}{8}$ — 6 UNC	1.313 2	1.312 4	1.349 3	1.348 5	1.277 5	1.277 1
$1\frac{1}{2}$ — 6 UNC	1.438 3	1.437 5	1.474 4	1.473 6	1.402 6	1.402 2
$1\frac{3}{4}$ — 5 UNC	1.675 0	1.674 2	1.718 3	1.717 5	1.632 2	1.631 7
2 — $4\frac{1}{2}$ UNC	1.916 2	1.915 4	1.964 3	1.963 5	1.868 6	1.868 1
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.166 4	2.165 6	2.214 5	2.213 7	2.118 8	2.118 3
$2\frac{1}{2}$ — 4 UNC	2.405 2	2.404 3	2.459 4	2.458 5	2.351 6	2.351 1
$2\frac{3}{4}$ — 4 UNC	2.655 4	2.654 5	2.709 6	2.708 7	2.601 8	2.601 3
3 — 4 UNC	2.905 6	2.904 7	2.959 8	2.958 9	2.852 0	2.851 5
$3\frac{1}{4}$ — 4 UNC	3.155 8	3.154 9	3.210 0	3.209 1	3.102 2	3.101 7
$3\frac{1}{2}$ — 4 UNC	3.406 0	3.405 1	3.460 2	3.459 3	3.352 4	3.351 9
$3\frac{3}{4}$ — 4 UNC	3.656 2	3.655 3	3.710 4	3.709 5	3.602 6	3.602 1
4 — 4 UNC	3.906 4	3.905 5	3.960 6	3.959 7	3.852 8	3.852 3

Table 4 Limits of size for NOT GO screw plug gauges (low addendum and high addendum), Class 3B threads

1	2	3	4	5	6	7
Designation	Major diameter				Effective diameter	
	Low addendum		High addendum		Both types	
	Max.	Min.	Max.	Min.	Max.	Min.
	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.231 9	0.231 4	0.242 8	0.242 3	0.221 4	0.221 1
$\frac{5}{16}$ — 18 UNC	0.292 3	0.291 8	0.304 4	0.303 9	0.280 6	0.280 3
$\frac{3}{8}$ — 16 UNC	0.352 2	0.351 6	0.365 8	0.365 2	0.339 0	0.338 7
$\frac{7}{16}$ — 14 UNC	0.411 2	0.410 6	0.426 6	0.426 0	0.396 0	0.395 7
$\frac{1}{2}$ — 13 UNC	0.471 4	0.470 8	0.488 1	0.487 5	0.455 1	0.454 8
$\frac{9}{16}$ — 12 UNC	0.531 5	0.530 9	0.549 6	0.549 0	0.513 8	0.513 5
$\frac{5}{8}$ — 11 UNC	0.591 1	0.590 5	0.610 8	0.610 2	0.571 7	0.571 4
$\frac{3}{4}$ — 10 UNC	0.712 3	0.711 7	0.734 0	0.733 4	0.691 0	0.690 7
$\frac{7}{8}$ — 9 UNC	0.833 0	0.832 3	0.857 0	0.856 3	0.809 2	0.808 9
1 — 8 UNC	0.952 5	0.951 8	0.979 5	0.978 8	0.925 8	0.925 4
$1\frac{1}{8}$ — 7 UNC	1.070 2	1.069 5	1.101 2	1.100 5	1.039 7	1.039 3
$1\frac{1}{4}$ — 7 UNC	1.195 3	1.194 6	1.226 3	1.225 6	1.164 8	1.164 4
$1\frac{3}{8}$ — 6 UNC	1.310 6	1.309 8	1.346 7	1.345 9	1.274 9	1.274 5
$1\frac{1}{2}$ — 6 UNC	1.435 7	1.434 9	1.471 8	1.471 0	1.400 0	1.399 6
$1\frac{3}{4}$ — 5 UNC	1.672 1	1.671 3	1.715 4	1.714 6	1.629 3	1.628 8
2 — $4\frac{1}{2}$ UNC	1.913 1	1.912 3	1.961 2	1.960 4	1.865 5	1.865 0
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.163 3	2.162 5	2.211 4	2.210 6	2.115 7	2.115 2
$2\frac{1}{2}$ — 4 UNC	2.401 8	2.400 9	2.456 0	2.455 1	2.348 2	2.347 7
$2\frac{3}{4}$ — 4 UNC	2.652 0	2.651 1	2.706 2	2.705 3	2.598 4	2.597 9
3 — 4 UNC	2.902 1	2.901 2	2.956 3	2.955 4	2.848 5	2.848 0
$3\frac{1}{4}$ — 4 UNC	3.152 3	3.151 4	3.206 5	3.205 6	3.098 7	3.098 2
$3\frac{1}{2}$ — 4 UNC	3.402 5	3.401 6	3.456 7	3.455 8	3.348 9	3.348 4
$3\frac{3}{4}$ — 4 UNC	3.652 6	3.651 7	3.706 8	3.705 9	3.599 0	3.598 5
4 — 4 UNC	3.902 8	3.901 9	3.957 0	3.956 1	3.849 2	3.848 7

Table 5 Limits of size for GO and NOT GO plain plug gauges for minor diameters

1	2	3	4	5	6	7
Designation	GO gauges		NOT GO gauges			
	All classes of thread		Classes 1B and 2B threads		Class 3B threads	
	Max.	Min.	Max.	Min.	Max.	Min.
	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.196 2	0.195 9	0.207 7	0.207 4	0.207 0	0.206 7
$\frac{5}{16}$ — 18 UNC	0.252 7	0.252 4	0.265 4	0.265 1	0.263 3	0.263 0
$\frac{3}{8}$ — 16 UNC	0.307 6	0.307 3	0.321 7	0.321 4	0.318 5	0.318 2
$\frac{7}{16}$ — 14 UNC	0.360 5	0.360 2	0.376 3	0.376 0	0.372 0	0.371 7
$\frac{1}{2}$ — 13 UNC	0.417 0	0.416 7	0.433 9	0.433 6	0.428 7	0.428 4
$\frac{9}{16}$ — 12 UNC	0.472 6	0.472 3	0.490 7	0.490 4	0.484 6	0.484 3
$\frac{5}{8}$ — 11 UNC	0.526 9	0.526 6	0.546 3	0.546 0	0.539 4	0.539 1
$\frac{3}{4}$ — 10 UNC	0.642 0	0.641 7	0.663 0	0.662 7	0.654 8	0.654 5
$\frac{7}{8}$ — 9 UNC	0.755 0	0.754 7	0.777 8	0.777 5	0.768 8	0.768 5
1 — 8 UNC	0.865 0	0.864 7	0.890 0	0.889 7	0.880 0	0.879 7
$1\frac{1}{8}$ — 7 UNC	0.970 7	0.970 4	0.998 3	0.998 0	0.987 8	0.987 5
$1\frac{1}{4}$ — 7 UNC	1.095 7	1.095 4	1.123 3	1.123 0	1.112 8	1.112 5
$1\frac{3}{8}$ — 6 UNC	1.194 9	1.194 6	1.225 3	1.225 2	1.214 9	1.214 6
$1\frac{1}{2}$ — 6 UNC	1.319 9	1.319 6	1.350 5	1.350 2	1.339 9	1.339 6
$1\frac{3}{4}$ — 5 UNC	1.533 9	1.533 5	1.567 9	1.567 5	1.557 9	1.557 5
2 — $4\frac{1}{2}$ UNC	1.759 8	1.759 4	1.795 6	1.795 2	1.786 5	1.786 1
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.009 8	2.009 4	2.045 6	2.045 2	2.036 5	2.036 1
$2\frac{1}{2}$ — 4 UNC	2.229 8	2.229 4	2.267 3	2.266 9	2.259 8	2.259 4
$2\frac{3}{4}$ — 4 UNC	2.479 8	2.479 4	2.517 3	2.516 9	2.509 8	2.509 4
3 — 4 UNC	2.729 8	2.729 4	2.767 3	2.766 9	2.759 8	2.759 4
$3\frac{1}{4}$ — 4 UNC	2.979 9	2.979 4	3.017 4	3.016 9	3.009 9	3.009 4
$3\frac{1}{2}$ — 4 UNC	3.229 9	3.229 4	3.267 4	3.266 9	3.259 9	3.259 4
$3\frac{3}{4}$ — 4 UNC	3.479 9	3.479 4	3.517 4	3.516 9	3.509 9	3.509 4
4 — 4 UNC	3.729 9	3.729 4	3.767 4	3.766 9	3.759 9	3.759 4

Table 6 Limits of size for GO screw ring gauges, solid type

1	2	3	4	5	6	7	8	9
Designation	Classes 1A and 2A threads				Class 3A threads			
	Minor diameter		Effective diameter		Minor diameter		Effective diameter	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
	in	in	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.194 2	0.194 8	0.215 8	0.216 4	0.195 3	0.195 9	0.216 9	0.217 5
$\frac{5}{16}$ — 18 UNC	0.250 6	0.251 2	0.274 6	0.275 2	0.251 8	0.252 4	0.275 8	0.276 4
$\frac{3}{8}$ — 16 UNC	0.305 4	0.306 0	0.332 5	0.333 1	0.306 7	0.307 3	0.333 8	0.334 4
$\frac{7}{16}$ — 14 UNC	0.358 2	0.358 8	0.389 1	0.389 7	0.359 6	0.360 2	0.390 5	0.391 1
$\frac{1}{2}$ — 13 UNC	0.414 6	0.415 2	0.447 9	0.448 5	0.416 1	0.416 7	0.449 4	0.450 0
$\frac{9}{16}$ — 12 UNC	0.470 0	0.470 7	0.506 0	0.506 8	0.471 6	0.472 3	0.507 6	0.508 4
$\frac{5}{8}$ — 11 UNC	0.524 3	0.525 0	0.563 6	0.564 4	0.525 9	0.526 6	0.565 2	0.566 0
$\frac{3}{4}$ — 10 UNC	0.639 2	0.639 9	0.682 4	0.683 2	0.641 0	0.641 7	0.684 2	0.685 0
$\frac{7}{8}$ — 9 UNC	0.752 1	0.752 8	0.800 1	0.800 9	0.754 0	0.754 7	0.802 0	0.802 8
1 — 8 UNC	0.862 0	0.862 7	0.916 0	0.916 8	0.864 0	0.864 7	0.918 0	0.918 8
$1\frac{1}{8}$ — 7 UNC	0.967 5	0.968 2	1.029 2	1.030 0	0.969 7	0.970 4	1.031 4	1.032 2
$1\frac{1}{4}$ — 7 UNC	1.092 5	1.093 2	1.154 2	1.155 0	1.094 7	1.095 4	1.156 4	1.157 2
$1\frac{3}{8}$ — 6 UNC	1.191 5	1.192 2	1.263 5	1.264 3	1.193 9	1.194 6	1.265 9	1.266 7
$1\frac{1}{2}$ — 6 UNC	1.316 5	1.317 2	1.388 5	1.389 3	1.318 9	1.319 6	1.390 9	1.391 7
$1\frac{3}{4}$ — 5 UNC	1.530 0	1.530 8	1.616 4	1.617 4	1.532 7	1.533 5	1.619 1	1.620 1
2 — $4\frac{1}{2}$ UNC	1.755 7	1.756 5	1.851 8	1.852 8	1.758 6	1.759 4	1.854 7	1.855 7
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.005 7	2.006 5	2.101 8	2.102 8	2.008 6	2.009 4	2.104 7	2.105 7
$2\frac{1}{2}$ — 4 UNC	2.225 5	2.226 3	2.333 5	2.334 5	2.228 6	2.229 4	2.336 6	2.337 6
$2\frac{3}{4}$ — 4 UNC	2.475 4	2.476 2	2.583 4	2.584 4	2.478 6	2.479 4	2.586 6	2.587 6
3 — 4 UNC	2.725 4	2.726 2	2.833 4	2.834 4	2.728 6	2.729 4	2.836 6	2.837 6
$3\frac{1}{4}$ — 4 UNC	2.975 2	2.976 1	3.083 1	3.084 3	2.978 5	2.979 4	3.086 4	3.087 6
$3\frac{1}{2}$ — 4 UNC	3.225 2	3.226 1	3.333 1	3.334 3	3.228 5	3.229 4	3.336 4	3.337 6
$3\frac{3}{4}$ — 4 UNC	3.475 1	3.476 0	3.583 0	3.584 2	3.478 5	3.479 4	3.586 4	3.587 6
4 — 4 UNC	3.725 1	3.726 0	3.833 0	3.834 2	3.728 5	3.729 4	3.836 4	3.837 6

Table 7 Limits of size for NOT GO screw ring gauges, solid type

1	2	3	4	5	6	7	8	9	10	11	12	13
Designation	Class 1A threads				Class 2A threads				Class 3A threads			
	Minor diameter		Effective diameter		Minor diameter		Effective diameter		Minor diameter		Effective diameter	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
	in	in	in	in	in	in	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.200 0	0.200 6	0.210 3	0.210 8	0.201 9	0.202 5	0.212 2	0.212 7	0.203 9	0.204 5	0.214 2	0.214 7
$\frac{5}{16}$ — 18 UNC	0.257 1	0.257 7	0.268 6	0.269 1	0.259 2	0.259 8	0.270 7	0.271 2	0.261 4	0.262 0	0.272 9	0.273 4
$\frac{3}{8}$ — 16 UNC	0.313 1	0.313 7	0.326 1	0.326 6	0.315 2	0.315 8	0.328 2	0.328 7	0.317 6	0.318 2	0.330 6	0.331 1
$\frac{7}{16}$ — 14 UNC	0.367 1	0.367 7	0.382 1	0.382 6	0.369 5	0.370 1	0.384 5	0.385 0	0.372 1	0.372 7	0.387 1	0.387 6
$\frac{1}{2}$ — 13 UNC	0.424 5	0.425 1	0.440 6	0.441 1	0.426 9	0.427 5	0.443 0	0.443 5	0.429 7	0.430 3	0.445 8	0.446 3
$\frac{9}{16}$ — 12 UNC	0.481 0	0.481 7	0.498 4	0.499 0	0.483 6	0.434 3	0.501 0	0.501 6	0.486 5	0.487 2	0.503 9	0.504 5
$\frac{5}{8}$ — 11 UNC	0.536 4	0.537 1	0.555 5	0.556 1	0.539 2	0.539 9	0.558 3	0.558 9	0.542 2	0.542 9	0.561 3	0.561 9
$\frac{3}{4}$ — 10 UNC	0.652 8	0.653 5	0.673 8	0.674 4	0.655 7	0.656 4	0.676 7	0.677 3	0.659 0	0.659 7	0.680 0	0.680 6
$\frac{7}{8}$ — 9 UNC	0.767 3	0.768 0	0.709 8	0.791 4	0.770 5	0.771 2	0.794 0	0.794 6	0.774 0	0.774 7	0.797 5	0.798 1
1 — 8 UNC	0.879 6	0.880 3	0.906 1	0.906 7	0.882 9	0.883 6	0.909 4	0.910 0	0.886 6	0.887 3	0.913 1	0.913 7
$1\frac{1}{8}$ — 7 UNC	0.988 2	0.988 9	1.018 5	1.019 1	0.991 9	0.992 6	1.022 2	1.022 8	0.995 9	0.996 6	1.026 2	1.026 8
$1\frac{1}{4}$ — 7 UNC	1.113 0	1.113 7	1.143 3	1.143 9	1.116 7	1.117 4	1.147 0	1.147 6	1.120 8	1.121 5	1.151 1	1.151 7
$1\frac{3}{8}$ — 6 UNC	1.216 2	1.216 9	1.251 7	1.252 3	1.220 2	1.220 9	1.255 7	1.256 3	1.224 6	1.225 3	1.260 1	1.260 7
$1\frac{1}{2}$ — 6 UNC	1.341 1	1.341 8	1.376 6	1.377 2	1.345 1	1.345 8	1.380 6	1.381 2	1.349 5	1.350 2	1.385 0	1.385 6
$1\frac{3}{4}$ — 5 UNC	1.560 7	1.561 5	1.603 2	1.604 0	1.565 2	1.566 0	1.607 7	1.608 5	1.570 1	1.570 9	1.612 6	1.613 4
2 — $4\frac{1}{2}$ UNC	1.790 4	1.791 2	1.837 7	1.838 5	1.795 2	1.796 0	1.842 5	1.843 3	1.800 5	1.801 3	1.847 8	1.848 6
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.040 1	2.040 9	2.087 4	2.088 2	2.045 0	2.045 8	2.092 3	2.093 1	2.050 3	2.051 1	2.097 6	2.098 4
$2\frac{1}{2}$ — 4 UNC	2.264 9	2.265 7	2.318 2	2.319 0	2.270 0	2.270 8	2.323 3	2.324 1	2.275 7	2.276 5	2.329 0	2.329 8
$2\frac{3}{4}$ — 4 UNC	2.514 5	2.515 3	2.567 8	2.568 6	2.519 8	2.520 6	2.573 1	2.573 9	2.525 6	2.526 4	2.578 9	2.579 7
3 — 4 UNC	2.764 2	2.765 0	2.817 5	2.818 3	2.769 6	2.770 4	2.822 9	2.823 7	2.775 5	2.776 3	2.828 8	2.829 6
$3\frac{1}{4}$ — 4 UNC	3.013 9	3.014 8	3.067 1	3.068 0	3.019 3	3.020 2	3.072 5	3.073 4	3.025 3	3.026 2	3.078 5	3.079 4
$3\frac{1}{2}$ — 4 UNC	3.263 6	3.264 5	3.316 8	3.317 7	3.269 2	3.270 1	3.322 4	3.323 3	3.275 2	3.276 1	3.328 4	3.329 3
$3\frac{3}{4}$ — 4 UNC	3.513 3	3.514 2	3.566 5	3.567 4	3.518 9	3.519 8	3.572 1	3.573 0	3.525 1	3.526 0	3.578 3	3.579 2
4 — 4 UNC	3.763 1	3.764 0	3.816 3	3.817 2	3.768 8	3.769 7	3.822 0	3.822 9	3.775 0	3.775 9	3.828 2	3.829 1

Table 8 Limits of size for GO screw check plugs for GO screw ring gauges, solid type

1	2	3	4	5	6	7	8	9
Designation	Classes 1A and 2A threads				Class 3A threads			
	Effective diameter ^{A)}		Major diameter		Effective diameter ^{A)}		Major diameter	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min. ∇C_1
	in	in	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.215 8	0.215 5	0.248 3	0.248 0	0.216 9	0.216 6	0.249 4	0.249 1
$\frac{5}{16}$ — 18 UNC	0.274 6	0.274 3	0.310 7	0.310 4	0.275 8	0.275 5	0.311 9	0.311 6
$\frac{3}{8}$ — 16 UNC	0.332 5	0.332 2	0.373 1	0.372 8	0.333 8	0.333 5	0.374 4	0.374 1
$\frac{7}{16}$ — 14 UNC	0.389 1	0.388 8	0.435 5	0.435 2	0.390 5	0.390 2	0.436 9	0.436 6
$\frac{1}{2}$ — 13 UNC	0.447 9	0.447 6	0.497 9	0.497 6	0.449 4	0.449 1	0.499 4	0.499 1
$\frac{9}{16}$ — 12 UNC	0.506 0	0.505 6	0.560 1	0.559 7	0.507 6	0.507 2	0.561 7	0.561 3
$\frac{5}{8}$ — 11 UNC	0.563 6	0.563 2	0.622 6	0.622 2	0.565 2	0.564 8	0.624 2	0.623 8
$\frac{3}{4}$ — 10 UNC	0.682 4	0.682 0	0.747 4	0.747 0	0.684 2	0.683 8	0.749 2	0.748 8
$\frac{7}{8}$ — 9 UNC	0.800 1	0.799 7	0.872 3	0.871 9	0.802 0	0.801 6	0.874 2	0.873 8
1 — 8 UNC	0.916 0	0.915 6	0.997 2	0.996 8	0.918 0	0.917 6	0.999 2	0.998 8
$1\frac{1}{8}$ — 7 UNC	1.029 2	1.028 8	1.122 0	1.121 6	1.031 4	1.031 0	1.124 2	1.123 8
$1\frac{1}{4}$ — 7 UNC	1.154 2	1.153 8	1.247 0	1.246 6	1.156 4	1.156 0	1.249 2	1.248 8
$1\frac{3}{8}$ — 6 UNC	1.263 5	1.263 1	1.371 8	1.371 4	1.265 9	1.265 5	1.374 2	1.373 8
$1\frac{1}{2}$ — 6 UNC	1.388 5	1.388 1	1.496 8	1.496 4	1.390 9	1.390 5	1.499 2	1.498 8
$1\frac{3}{4}$ — 5 UNC	1.616 4	1.615 9	1.746 3	1.745 8	1.619 1	1.618 6	1.749 0	1.748 5
2 — $4\frac{1}{2}$ UNC	1.851 8	1.851 3	1.996 1	1.995 6	1.854 7	1.854 2	1.999 0	1.998 5
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.101 8	2.101 3	2.246 1	2.245 6	2.104 7	2.104 2	2.249 0	2.248 5
$2\frac{1}{2}$ — 4 UNC	2.333 5	2.333 0	2.495 9	2.495 4	2.336 6	2.336 1	2.499 0	2.498 5
$2\frac{3}{4}$ — 4 UNC	2.583 4	2.582 9	2.745 8	2.745 3	2.586 6	2.586 1	2.749 0	2.748 5
3 — 4 UNC	2.833 4	2.832 9	2.995 8	2.995 3	2.836 6	2.836 1	2.999 0	2.998 5

^{A)} Both the effective diameter and virtual effective diameter should lie within these tolerances.

Table 9 Limits of size for NOT GO effective diameter check plugs for new GO screw ring gauges, solid type

1	2	3	4	5	6	7	8	9
Designation	Classes 1A and 2A threads				Class 3A threads			
	Effective diameter ^{A)}		Major diameter		Effective diameter ^{A)}		Major diameter	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
$\boxed{C_1}$								$\boxed{C_1}$
	in	in	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.216 6	0.216 4	0.227 2	0.226 9	0.217 7	0.217 5	0.228 3	0.228 0
$\frac{5}{16}$ — 18 UNC	0.275 4	0.275 2	0.287 2	0.286 9	0.276 6	0.276 4	0.288 4	0.288 1
$\frac{3}{8}$ — 16 UNC	0.333 3	0.333 1	0.346 6	0.346 3	0.334 6	0.334 4	0.347 9	0.347 6
$\frac{7}{16}$ — 14 UNC	0.389 9	0.389 7	0.405 2	0.404 9	0.391 3	0.391 1	0.406 6	0.406 3
$\frac{1}{2}$ — 13 UNC	0.448 7	0.448 5	0.465 1	0.464 8	0.450 2	0.450 0	0.466 6	0.466 3
$\frac{9}{16}$ — 12 UNC	0.507 1	0.506 8	0.524 8	0.524 4	0.508 7	0.508 4	0.526 4	0.526 0
$\frac{5}{8}$ — 11 UNC	0.564 7	0.564 4	0.584 1	0.583 7	0.566 3	0.566 0	0.585 7	0.585 3
$\frac{3}{4}$ — 10 UNC	0.683 5	0.683 2	0.704 9	0.704 5	0.685 3	0.685 0	0.706 7	0.706 3
$\frac{7}{8}$ — 9 UNC	0.801 2	0.800 9	0.825 0	0.824 6	0.803 1	0.802 8	0.826 9	0.826 5
1 — 8 UNC	0.917 1	0.916 8	0.943 9	0.943 5	0.919 1	0.918 8	0.945 9	0.945 5
$1\frac{1}{8}$ — 7 UNC	1.030 3	1.030 0	1.060 9	1.060 5	1.032 5	1.032 2	1.063 1	1.062 7
$1\frac{1}{4}$ — 7 UNC	1.155 3	1.155 0	1.185 9	1.185 5	1.157 5	1.157 2	1.188 1	1.187 7
$1\frac{3}{8}$ — 6 UNC	1.264 6	1.264 3	1.300 4	1.300 0	1.267 0	1.266 7	1.302 8	1.302 4
$1\frac{1}{2}$ — 6 UNC	1.389 6	1.389 3	1.425 4	1.425 0	1.392 0	1.391 7	1.427 8	1.427 4
$1\frac{3}{4}$ — 5 UNC	1.617 8	1.617 4	1.660 7	1.660 2	1.620 5	1.620 1	1.663 4	1.662 9
2 — $4\frac{1}{2}$ UNC	1.853 2	1.852 8	1.900 9	1.900 4	1.856 1	1.855 7	1.903 8	1.903 3
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.103 2	2.102 8	2.150 9	2.150 4	2.106 1	2.105 7	2.153 8	2.153 3
$2\frac{1}{2}$ — 4 UNC	2.334 9	2.334 5	2.388 6	2.388 1	2.338 0	2.337 6	2.391 7	2.391 2
$2\frac{3}{4}$ — 4 UNC	2.584 8	2.584 4	2.638 5	2.638 0	2.588 0	2.587 6	2.641 7	2.641 2
3 — 4 UNC	2.834 8	2.834 4	2.888 5	2.888 0	2.838 0	2.837 6	2.891 7	2.891 2

^{A)} Both the effective diameter and virtual effective diameter should lie within these tolerances.

Table 10 Limits of size for NOT GO effective diameter check plugs for worn GO screw ring gauges, solid type

1	2	3	4	5	6	7	8	9
Designation	Classes 1A and 2A threads				Class 3A threads			
	Effective diameter ^{A)}		Major diameter		Effective diameter ^{A)}		Major diameter	
	$\sqrt{C_1}$ Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min. $\sqrt{C_1}$
	in	in	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.216 8	0.216 6	0.227 2	0.226 9	0.217 9	0.217 7	0.228 3	0.228 0
$\frac{5}{16}$ — 18 UNC	0.275 6	0.275 4	0.287 2	0.286 9	0.276 8	0.276 6	0.288 4	0.288 1
$\frac{3}{8}$ — 16 UNC	0.333 5	0.333 3	0.346 6	0.346 3	0.334 8	0.334 6	0.347 9	0.347 6
$\frac{7}{16}$ — 14 UNC	0.390 1	0.389 9	0.405 2	0.404 9	0.391 5	0.391 3	0.406 6	0.406 3
$\frac{1}{2}$ — 13 UNC	0.448 9	0.448 7	0.465 1	0.464 8	0.450 4	0.450 2	0.466 6	0.466 3
$\frac{9}{16}$ — 12 UNC	0.507 4	0.507 1	0.524 8	0.524 4	0.509 0	0.508 7	0.526 4	0.526 0
$\frac{5}{8}$ — 11 UNC	0.565 0	0.564 7	0.584 1	0.583 7	0.566 6	0.566 3	0.585 7	0.585 3
$\frac{3}{4}$ — 10 UNC	0.683 8	0.683 5	0.704 9	0.704 5	0.685 6	0.685 3	0.706 7	0.706 3
$\frac{7}{8}$ — 9 UNC	0.801 5	0.801 2	0.825 0	0.804 6	0.803 4	0.803 1	0.826 9	0.826 5
1 — 8 UNC	0.917 4	0.917 1	0.943 9	0.943 5	0.919 4	0.919 1	0.945 9	0.945 5
$1\frac{1}{8}$ — 7 UNC	1.030 6	1.030 3	1.060 9	1.060 5	1.032 8	1.032 5	1.063 1	1.062 7
$1\frac{1}{4}$ — 7 UNC	1.155 6	1.155 3	1.185 9	1.185 5	1.157 8	1.157 5	1.188 1	1.187 7
$1\frac{3}{8}$ — 6 UNC	1.264 9	1.264 6	1.300 4	1.300 0	1.267 3	1.267 0	1.302 8	1.302 4
$1\frac{1}{2}$ — 6 UNC	1.389 9	1.389 6	1.425 4	1.425 0	1.392 3	1.392 0	1.427 8	1.427 4
$1\frac{3}{4}$ — 5 UNC	1.618 2	1.617 8	1.660 7	1.660 2	1.620 9	1.620 5	1.663 4	1.662 9
2 — $4\frac{1}{2}$ UNC	1.853 6	1.853 2	1.900 9	1.900 4	1.856 5	1.856 1	1.903 8	1.903 3
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.103 6	2.103 2	2.150 9	2.150 4	2.106 5	2.106 1	2.153 8	2.153 3
$2\frac{1}{2}$ — 4 UNC	2.335 3	2.334 9	2.388 6	2.388 1	2.338 4	2.338 0	2.391 7	2.391 2
$2\frac{3}{4}$ — 4 UNC	2.585 2	2.584 8	2.638 5	2.638 0	2.588 4	2.588 0	2.641 7	2.641 2
3 — 4 UNC	2.835 2	2.834 8	2.888 5	2.888 0	2.838 4	2.838 0	2.891 7	2.891 2

^{A)} Both the effective diameter and virtual effective diameter should lie within these tolerances.

Table 11 Limits of size for GO screw check plugs for NOT GO effective diameter ring gauges, solid type

1	2	3	4	5	6	7	8	9	10	11	12	13
Designation	Class 1A threads				Class 2A threads				Class 3A threads			
	Effective diameter ^{A)}		Major diameter		Effective diameter ^{A)}		Major diameter		Effective diameter ^{A)}		Major diameter	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
	in	in	in	in	in	in	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.210 3	0.210 0	0.248 6	0.248 3	0.212 2	0.211 9	0.249 2	0.248 9	0.214 2	0.213 9	0.250 3	0.250 0
$\frac{5}{16}$ — 18 UNC	0.268 6	0.268 3	0.311 1	0.310 8	0.270 7	0.270 4	0.311 6	0.311 3	0.272 9	0.272 6	0.312 8	0.312 5
$\frac{3}{8}$ — 16 UNC	0.326 1	0.325 8	0.373 8	0.353 5	0.328 2	0.327 9	0.374 0	0.373 7	0.330 6	0.330 3	0.375 3	0.375 0
$\frac{7}{16}$ — 14 UNC	0.382 1	0.381 8	0.436 4	0.436 1	0.384 5	0.384 2	0.436 4	0.436 1	0.387 1	0.386 8	0.437 8	0.437 5
$\frac{1}{2}$ — 13 UNC	0.440 6	0.440 3	0.498 8	0.498 5	0.443 0	0.442 7	0.498 8	0.498 5	0.445 8	0.445 5	0.500 3	0.500 0
$\frac{9}{16}$ — 12 UNC	0.498 4	0.498 0	0.561 3	0.560 9	0.501 0	0.500 6	0.561 3	0.560 9	0.503 9	0.503 5	0.562 9	0.562 5
$\frac{5}{8}$ — 11 UNC	0.555 5	0.555 1	0.623 8	0.623 4	0.558 3	0.557 9	0.623 8	0.623 4	0.561 3	0.560 9	0.625 4	0.625 0
$\frac{3}{4}$ — 10 UNC	0.673 8	0.673 4	0.748 6	0.748 2	0.676 7	0.676 3	0.748 6	0.748 2	0.680 0	0.679 6	0.750 4	0.750 0
$\frac{7}{8}$ — 9 UNC	0.790 8	0.790 4	0.873 5	0.873 1	0.794 0	0.793 6	0.873 5	0.873 1	0.787 5	0.787 1	0.875 4	0.875 0
1 — 8 UNC	0.906 1	0.905 7	0.998 4	0.998 0	0.909 4	0.909 0	0.998 4	0.998 0	0.913 1	0.912 7	1.000 4	1.000 0
$1\frac{1}{8}$ — 7 UNC	1.018 5	1.018 1	1.123 2	1.122 8	1.022 2	1.021 8	1.123 2	1.122 8	1.026 2	1.025 8	1.125 4	1.125 0
$1\frac{1}{4}$ — 7 UNC	1.143 3	1.142 9	1.248 2	1.247 8	1.147 0	1.146 6	1.248 2	1.247 8	1.151 1	1.150 7	1.250 4	1.250 0
$1\frac{3}{8}$ — 6 UNC	1.251 7	1.251 3	1.373 0	1.372 6	1.255 7	1.255 3	1.373 0	1.372 6	1.260 1	1.259 7	1.375 4	1.375 0
$1\frac{1}{2}$ — 6 UNC	1.376 6	1.376 2	1.498 0	1.497 6	1.380 6	1.380 2	1.498 0	1.497 6	1.385 0	1.384 6	1.500 4	1.500 0
$1\frac{3}{4}$ — 5 UNC	1.603 2	1.602 7	1.747 8	1.747 3	1.607 7	1.607 2	1.747 8	1.747 3	1.612 6	1.612 1	1.750 5	1.750 0
2 — $4\frac{1}{2}$ UNC	1.837 7	1.837 2	1.997 6	1.997 1	1.842 5	1.842 0	1.997 6	1.997 1	1.847 8	1.847 3	2.000 5	2.000 0
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.087 4	2.086 9	2.247 6	2.247 1	2.092 3	2.091 8	2.247 6	2.247 1	2.097 6	2.097 1	2.250 5	2.250 0
$2\frac{1}{2}$ — 4 UNC	2.318 2	2.317 7	2.497 4	2.496 9	2.323 3	2.322 8	2.497 4	2.496 9	2.329 0	2.328 5	2.500 5	2.500 0
$2\frac{3}{4}$ — 4 UNC	2.567 8	2.567 3	2.747 3	2.746 8	2.573 1	2.572 6	2.747 3	2.746 8	2.578 9	2.578 4	2.750 5	2.750 0
3 — 4 UNC	2.817 5	2.817 0	2.997 3	2.996 8	2.822 9	2.822 4	2.997 3	2.996 8	2.828 8	2.828 3	3.000 5	3.000 0

^{A)} Both the effective diameter and virtual effective diameter should lie within these tolerances.

Table 12 Limits of size for NOT GO screw check plugs for NOT GO effective diameter ring gauges, solid type

1	2	3	4	5	6	7	8	9	10	11	12	13
Designation	Class 1A threads				Class 2A threads				Class 3A threads			
	Effective diameter ^{A)}		Major diameter		Effective diameter ^{A)}		Major diameter		Effective diameter ^{A)}		Major diameter	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min. ∇C_1
	in	in	in	in	in	in	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.211 0	0.210 8	0.221 6	0.221 3	0.212 9	0.212 7	0.223 5	0.223 2	0.214 9	0.214 7	0.225 5	0.225 2
$\frac{5}{16}$ — 18 UNC	0.269 3	0.269 1	0.281 1	0.280 8	0.271 4	0.271 2	0.283 2	0.282 9	0.273 6	0.273 4	0.285 4	0.285 1
$\frac{3}{8}$ — 16 UNC	0.326 8	0.326 6	0.340 1	0.339 8	0.328 9	0.328 7	0.342 2	0.341 9	0.331 3	0.331 1	0.344 6	0.344 3
$\frac{7}{16}$ — 14 UNC	0.382 8	0.382 6	0.398 1	0.397 8	0.385 2	0.385 0	0.400 5	0.400 2	0.387 8	0.387 6	0.403 1	0.402 8
$\frac{1}{2}$ — 13 UNC	0.441 3	0.441 1	0.457 7	0.457 4	0.443 7	0.443 5	0.460 1	0.459 8	0.446 5	0.446 3	0.462 9	0.462 8
$\frac{9}{16}$ — 12 UNC	0.499 3	0.499 0	0.517 0	0.516 6	0.501 9	0.501 6	0.519 6	0.519 2	0.504 8	0.504 5	0.522 5	0.522 1
$\frac{5}{8}$ — 11 UNC	0.556 4	0.556 1	0.575 8	0.575 4	0.559 2	0.558 9	0.578 6	0.578 2	0.562 2	0.561 9	0.581 6	0.581 2
$\frac{3}{4}$ — 10 UNC	0.674 7	0.674 4	0.696 1	0.695 7	0.677 6	0.677 3	0.699 0	0.698 6	0.680 9	0.680 6	0.702 3	0.701 9
$\frac{7}{8}$ — 9 UNC	0.791 7	0.791 4	0.815 5	0.815 1	0.794 9	0.794 6	0.818 7	0.818 3	0.798 4	0.798 1	0.822 2	0.821 8
1 — 8 UNC	0.907 0	0.906 7	0.933 8	0.933 4	0.910 3	0.910 0	0.937 1	0.936 7	0.914 0	0.913 7	0.940 8	0.940 4
$1\frac{1}{8}$ — 7 UNC	1.019 4	1.019 1	1.050 0	1.049 6	1.023 1	1.022 8	1.053 7	1.053 3	1.027 1	1.026 8	1.057 7	1.057 3
$1\frac{1}{4}$ — 7 UNC	1.144 2	1.143 9	1.174 8	1.174 4	1.147 9	1.147 6	1.178 5	1.178 1	1.152 0	1.151 7	1.182 6	1.182 2
$1\frac{3}{8}$ — 6 UNC	1.252 6	1.252 3	1.288 4	1.288 0	1.256 6	1.256 3	1.292 4	1.292 0	1.261 0	1.260 7	1.296 8	1.296 4
$1\frac{1}{2}$ — 6 UNC	1.377 5	1.377 2	1.413 3	1.412 9	1.381 5	1.381 2	1.417 3	1.416 9	1.385 9	1.385 6	1.421 7	1.421 3
$1\frac{3}{4}$ — 5 UNC	1.604 4	1.604 0	1.647 3	1.646 8	1.608 9	1.608 5	1.651 8	1.651 3	1.613 8	1.613 4	1.656 7	1.656 2
2 — 4 $\frac{1}{2}$ UNC	1.838 9	1.838 5	1.886 6	1.886 1	1.843 7	1.843 3	1.891 4	1.890 9	1.849 0	1.848 6	1.896 7	1.896 2
$2\frac{1}{4}$ — 4 $\frac{1}{2}$ UNC	2.088 6	2.088 2	2.136 3	2.135 8	2.093 5	2.093 1	2.141 2	2.140 7	2.098 8	2.098 4	2.146 5	2.146 0
$2\frac{1}{2}$ — 4 UNC	2.319 4	2.319 0	2.373 1	2.372 6	2.324 5	2.324 1	2.378 2	2.377 7	2.330 2	2.329 8	2.383 9	2.383 4
$2\frac{3}{4}$ — 4 UNC	2.569 0	2.568 6	2.622 7	2.622 2	2.574 3	2.573 9	2.628 0	2.627 5	2.580 1	2.579 7	2.633 8	2.633 3
3 — 4 UNC	2.818 7	2.818 3	2.872 4	2.871 9	2.824 1	2.823 7	2.877 8	2.877 3	2.830 0	2.829 6	2.883 7	2.883 3

^{A)} Both the effective diameter and virtual effective diameter should lie within these tolerances.

Table 13 Limits of size for GO and NOT GO plain check plugs for the minor diameter of GO screw ring gauges, solid type

1	2	3	4	5	6	7	8	9
Designation	GO check plugs				NOT GO check plugs			
	Classes 1A and 2A threads		Class 3A threads		Classes 1A and 2A threads		Class 3A threads	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
$\boxed{C_1}$	in	in	in	in	in	in	in	$\boxed{C_1}$
$\frac{1}{4}$ — 20 UNC	0.194 2	0.194 1	0.195 3	0.195 2	0.194 9	0.194 8	0.196 0	0.195 9
$\frac{5}{16}$ — 18 UNC	0.250 6	0.250 5	0.251 8	0.251 7	0.251 3	0.251 2	0.252 5	0.252 4
$\frac{3}{8}$ — 16 UNC	0.305 4	0.305 3	0.306 7	0.306 6	0.306 1	0.306 0	0.307 4	0.307 3
$\frac{7}{16}$ — 14 UNC	0.358 2	0.358 1	0.359 6	0.359 5	0.358 9	0.358 8	0.360 3	0.360 2
$\frac{1}{2}$ — 13 UNC	0.414 6	0.414 5	0.416 1	0.416 0	0.415 3	0.415 2	0.416 8	0.416 7
$\frac{9}{16}$ — 12 UNC	0.470 0	0.469 9	0.471 6	0.471 5	0.470 8	0.470 7	0.472 4	0.472 3
$\frac{5}{8}$ — 11 UNC	0.524 3	0.524 2	0.525 9	0.525 8	0.525 1	0.525 0	0.526 7	0.526 6
$\frac{3}{4}$ — 10 UNC	0.639 2	0.639 1	0.641 0	0.640 9	0.640 0	0.639 9	0.641 8	0.641 7
$\frac{7}{8}$ — 9 UNC	0.752 1	0.752 0	0.754 0	0.753 9	0.753 9	0.752 8	0.754 8	0.754 7
1 — 8 UNC	0.862 0	0.861 9	0.864 0	0.863 9	0.862 8	0.862 7	0.864 8	0.864 7
$1\frac{1}{8}$ — 7 UNC	0.967 5	0.967 4	0.969 7	0.969 6	0.968 3	0.968 2	0.970 5	0.970 4
$1\frac{1}{4}$ — 7 UNC	1.092 5	1.092 4	1.094 7	1.094 6	1.093 3	1.093 2	1.095 5	1.095 4
$1\frac{3}{8}$ — 6 UNC	1.191 5	1.191 4	1.193 9	1.193 8	1.192 3	1.192 2	1.194 7	1.194 6
$1\frac{1}{2}$ — 6 UNC	1.316 5	1.316 4	1.318 9	1.318 8	1.317 3	1.317 2	1.319 7	1.319 6
$1\frac{3}{4}$ — 5 UNC	1.530 0	1.529 8	1.532 7	1.532 5	1.531 0	1.530 8	1.533 7	1.533 5
2 — $4\frac{1}{2}$ UNC	1.755 7	1.755 5	1.758 6	1.758 4	1.756 7	1.756 5	1.759 6	1.759 4
$2\frac{1}{4}$ — $4\frac{1}{2}$ UNC	2.005 7	2.005 5	2.008 6	2.008 4	2.006 7	2.006 5	2.009 6	2.009 4
$2\frac{1}{2}$ — 4 UNC	2.225 5	2.225 3	2.228 6	2.228 4	2.226 5	2.226 3	2.229 6	2.229 4
$2\frac{3}{4}$ — 4 UNC	2.475 4	2.475 2	2.478 6	2.478 4	2.476 4	2.476 2	2.479 6	2.479 4
3 — 4 UNC	2.725 4	2.725 2	2.728 6	2.728 4	2.726 4	2.726 2	2.729 6	2.729 4

Table 14 Limits of size for GO and NOT GO plain check plugs for the minor diameter of NOT GO effective diameter ring gauges, solid type

1	2	3	4	5	6	7	8	9	10	11	12	13
Designation	GO check plugs						NOT GO check plugs					
	Class 1A threads		Class 2A threads		Class 3A threads		Class 1A threads		Class 2A threads		Class 3A threads	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min. $\sqrt{C_1}$
	in	in	in	in	in	in	in	in	in	in	in	in
$\frac{1}{4}$ — 20 UNC	0.200 0	0.199 9	0.201 9	0.201 8	0.203 9	0.203 8	0.200 7	0.200 6	0.202 6	0.202 5	0.204 6	0.204 5
$\frac{5}{16}$ — 18 UNC	0.257 1	0.257 0	0.259 2	0.259 1	0.261 4	0.261 3	0.257 8	0.257 7	0.259 9	0.259 8	0.262 1	0.262 0
$\frac{3}{8}$ — 16 UNC	0.313 1	0.313 0	0.315 2	0.315 1	0.317 6	0.317 5	0.313 8	0.313 7	0.315 9	0.315 8	0.318 3	0.318 2
$\frac{7}{16}$ — 14 UNC	0.367 1	0.367 0	0.369 5	0.369 4	0.372 1	0.372 0	0.367 8	0.367 7	0.370 2	0.370 1	0.372 8	0.372 7
$\frac{1}{2}$ — 13 UNC	0.424 5	0.424 4	0.426 9	0.426 8	0.429 7	0.429 6	0.425 2	0.425 1	0.427 6	0.427 5	0.430 4	0.430 3
$\frac{9}{16}$ — 12 UNC	0.481 0	0.480 9	0.483 6	0.483 5	0.486 5	0.486 4	0.481 8	0.481 7	0.434 4	0.434 3	0.487 3	0.487 2
$\frac{5}{8}$ — 11 UNC	0.536 4	0.536 3	0.539 2	0.539 1	0.542 2	0.542 1	0.537 2	0.537 1	0.540 0	0.539 9	0.543 0	0.542 9
$\frac{3}{4}$ — 10 UNC	0.652 8	0.652 7	0.655 7	0.655 6	0.659 0	0.658 9	0.653 6	0.653 5	0.656 5	0.656 4	0.659 8	0.659 7
$\frac{7}{8}$ — 9 UNC	0.767 3	0.767 2	0.770 5	0.770 4	0.774 0	0.773 9	0.768 1	0.768 0	0.771 3	0.771 2	0.774 8	0.774 7
1 — 8 UNC	0.879 6	0.879 5	0.882 9	0.882 8	0.886 6	0.886 5	0.880 4	0.880 3	0.883 7	0.883 6	0.887 4	0.887 3
$1\frac{1}{8}$ — 7 UNC	0.988 2	0.988 1	0.991 9	0.991 8	0.995 9	0.995 8	0.989 0	0.988 9	0.992 7	0.992 6	0.996 7	0.996 6
$1\frac{1}{4}$ — 7 UNC	1.113 0	1.112 9	1.116 7	1.116 6	1.120 8	1.120 7	1.113 8	1.113 7	1.117 5	1.117 4	1.121 6	1.121 5
$1\frac{3}{8}$ — 6 UNC	1.216 2	1.216 1	1.220 2	1.220 1	1.224 6	1.224 5	1.217 0	1.216 9	1.221 0	1.220 9	1.225 4	1.225 3
$1\frac{1}{2}$ — 6 UNC	1.341 1	1.341 0	1.345 1	1.345 0	1.349 5	1.349 4	1.341 9	1.341 8	1.345 9	1.345 8	1.350 3	1.350 2
$1\frac{3}{4}$ — 5 UNC	1.560 7	1.560 5	1.565 2	1.565 0	1.570 1	1.569 9	1.561 7	1.561 5	1.566 2	1.566 0	1.571 1	1.570 9
2 — 4 $\frac{1}{2}$ UNC	1.790 4	1.790 2	1.795 2	1.795 0	1.800 5	1.800 3	1.791 4	1.791 2	1.796 2	1.796 0	1.801 5	1.801 3
$2\frac{1}{4}$ — 4 $\frac{1}{2}$ UNC	2.040 1	2.039 9	2.045 0	2.044 8	2.050 3	2.050 1	2.041 1	2.040 9	2.046 0	2.045 8	2.051 3	2.051 1
$2\frac{1}{2}$ — 4 UNC	2.264 9	2.264 7	2.270 0	2.269 8	2.275 7	2.275 5	2.265 9	2.265 7	2.271 0	2.270 8	2.276 7	2.276 5
$2\frac{3}{4}$ — 4 UNC	2.514 5	2.514 3	2.519 8	2.519 6	2.525 6	2.525 4	2.515 5	2.515 3	2.520 8	2.520 6	2.526 6	2.526 4
3 — 4 UNC	2.764 2	2.764 0	2.769 6	2.769 4	2.775 5	2.775 3	2.765 2	2.765 0	2.770 6	2.770 4	2.776 5	2.776 3