



Designation: B 107/B 107M – 00

Standard Specification for Magnesium-Alloy Extruded Bars, Rods, Profiles, Tubes, and Wire¹

This standard is issued under the fixed designation B 107/B 107M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope *

1.1 This specification covers magnesium-alloy extruded bars, rods, profiles, tubes, and wire of the composition given in Table 1.

1.2 The values stated in either inch-pound or SI units are to be regarded separately as standards. The SI units are shown in brackets or in separate tables or columns. The values stated in each system are not exact equivalents; therefore, each system must be used independent of the other. Combining values from the two systems may result in nonconformance with the specification.

1.3 Unless the order specifies the “M” specification designation, the material shall be furnished to the inch-pound units.

2. Referenced Documents

2.1 The following documents of the issue in effect on date of order acceptance form a part of this specification to the extent referenced herein.

2.2 ASTM Standards:

B 275 Practice For Codification of Certain Nonferrous Metals and Alloys, Cast and Wrought²

B 296 Practice for Temper Designations of Magnesium Alloys, Cast and Wrought²

B 557 Test Methods of Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products²

B 557M Test Methods of Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products (Metric)²

B 660 Practices for Packaging/Packing of Aluminum and Magnesium Products²

B 666/B 666M Practice for Identification Marking of Aluminum and Magnesium Products²

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications³

E 35 Test Methods for Chemical Analysis of Magnesium and Magnesium Alloys⁴

E 55 Practice for Sampling Wrought Nonferrous Metals and Alloys For Determination of Chemical Composition⁴

E 527 Practice for Numbering Metals and Alloys (UNS)⁵

3. Terminology

3.1 Definitions:

3.1.1 *extruded bar*—a solid extrusion, long in relation to its cross-sectional dimensions, having a symmetrical cross section that is square or rectangular with sharp or rounded corners or edges, or is a regular hexagon or octagon, and whose width or greatest distance between parallel faces is over 0.375 in. [10 mm].

3.1.2 *extruded profile*—a hollow or solid extrusion, long in relation to its cross-sectional dimensions, whose cross section is other than that of wire, rod, bar, or tube.

3.1.3 *extruded rod*—a solid round extrusion, long in relation to its diameter, whose diameter is over 0.375 in. [10 mm].

3.1.4 *extruded tube*—a hollow extrusion, long in relation to its cross-sectional dimensions, which is symmetrical and is round, square, rectangular, hexagonal, octagonal, or elliptical with sharp or rounded corners, and has a uniform wall thickness except as affected by corner radii.

3.1.5 *producer*—the primary manufacturer of a material.

3.1.6 *supplier*—includes only the category of jobbers and distributors as distinct from producer.

3.1.7 *wire*—a solid section long in relation to its cross-sectional dimensions, having a cross section that is round, hexagonal, or octagonal, and whose diameter, width, or greatest distance between parallel faces is up through 0.375 in. [10 mm], or having a symmetrical cross section that is square or rectangular (excluding flattened wire) with sharp or rounded corners or edges.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *capable of*—means that the test need not be performed by the producer of the material. However, should subsequent

¹ This specification is under the jurisdiction of ASTM Committee B07 on Light Metals and Alloys and is the direct responsibility of Subcommittee B07.04 on Magnesium Alloy Cast and Wrought Products.

Current edition approved May 10, 2000. Published August 2000. Originally published as B 107–36T. Last previous edition B 107/B 107M–94.

² Annual Book of ASTM Standards, Vol 02.02.

³ Annual Book of ASTM Standards, Vol 14.02.

⁴ Annual Book of ASTM Standards, Vol 03.05.

⁵ Annual Book of ASTM Standards, Vol 01.01.

*A Summary of Changes section appears at the end of this standard.

TABLE 1 Chemical Requirements^A

NOTE 1—Analysis shall regularly be made only for the elements specifically mentioned in this table. If, however, the presence of other elements is suspected or indicated in the course of routine analysis to be in amounts greater than the specified limits, further analysis shall be made to determine that the total of these other elements is not in excess of the limits specified in the last column of the table.

NOTE 2—The following applies to all specified limits in this table: For purposes of acceptance and rejection, an observed value or a calculated value obtained from analysis should be rounded-off to the nearest unit in the last right-hand place of figures used in expressing the specified limit.

| Alloy ^B | | Composition, % | | | | | | | | | | |
|--------------------|----------|----------------|----------|-----------------------|----------|----------------|---------|--------|--------|-------|---------|-------------------------------|
| UNS No. | ASTM No. | Magnesium | Aluminum | Manganese | Zinc | Zirconium, min | Silicon | Copper | Nickel | Iron | Calcium | Other ^C Impurities |
| M11311 | AZ31B | remainder | 2.5–3.5 | 0.20–1.0 | 0.6–1.4 | ... | 0.10 | 0.05 | 0.005 | 0.005 | 0.04 | 0.30 |
| M11312 | AZ31C | remainder | 2.4–3.6 | 0.15–1.0 ^D | 0.50–1.5 | ... | 0.10 | 0.10 | 0.03 | ... | ... | 0.30 |
| M11610 | AZ61A | remainder | 5.8–7.2 | 0.15–0.5 | 0.40–1.5 | ... | 0.10 | 0.05 | 0.005 | 0.005 | ... | 0.30 |
| M11800 | AZ80A | remainder | 7.8–9.2 | 0.12–0.5 | 0.20–0.8 | ... | 0.10 | 0.05 | 0.005 | 0.005 | ... | 0.30 |
| M15100 | M1A | remainder | ... | 1.2–2.0 | ... | ... | 0.10 | 0.05 | 0.01 | ... | 0.30 | 0.30 |
| M16400 | ZK40A | remainder | ... | ... | 3.5–4.5 | 0.45 | ... | ... | ... | ... | ... | 0.30 |
| M16600 | ZK60A | remainder | ... | ... | 4.8–6.2 | 0.45 | ... | ... | ... | ... | ... | 0.30 |

^A Limits are in weight percent maximum unless shown as a range or otherwise stated.

^B These alloy designations were established in accordance with Practice B 275 (see also Practice E 527).

^C Includes listed elements for which no specific limit is shown.

^D Manganese minimum limit need not be met if iron is 0.005 %, or less.

testing by the purchaser establish that the material does not meet these requirements, the material shall be subject to rejection.

4. Ordering Information

4.1 Orders for material to this specification shall include the following information:

- 4.1.1 This specification number,
- 4.1.2 Quantity in pieces or pounds [kilograms],
- 4.1.3 Alloy (Section 6),
- 4.1.4 Temper (Section 7),
- 4.1.5 Nominal cross-sectional dimensions as follows:
 - 4.1.5.1 For rod and round wire—diameter,
 - 4.1.5.2 For square corner bars and wire—depth and width,
 - 4.1.5.3 For sharp cornered hexagonal or octagonal bars and wire—distance across flats,
 - 4.1.5.4 For round tube—outside or inside diameter and wall thickness,
 - 4.1.5.5 For square or sharp cornered other than round tube—distance across flats and wall thickness,
 - 4.1.5.6 For round cornered bars and wire; profiles; tube other than round, square, rectangular, hexagonal or octagonal with sharp corners—drawing required,
- 4.1.6 Length,
- 4.1.7 Surface finish (see 9.2),
- 4.1.8 Whether inspection or witness of inspection and tests by the purchaser's representative is required prior to material shipment (Section 10),
- 4.1.9 Whether certification is required (Section 12),
- 4.1.10 Whether marking for identification is required (Section 13 and Practices B 660), and
- 4.1.11 Whether special packaging is required for shipment (Section 14).

5. Quality Assurance

5.1 *Responsibility for Inspection*— Unless otherwise specified in the contract or purchase order, the producer or supplier is responsible for the performance of all inspection and test requirements specified herein. Except as otherwise specified in

the contract or order, the producer or supplier may use his own or any other suitable facilities for the performance of the inspection and test requirements specified herein, unless disapproved by the purchaser at the time the order is placed. The purchaser shall have the right to perform any of the inspections and tests set forth in this specification where such inspections are deemed necessary to assure that material conforms to prescribed requirements.

6. Chemical Composition

6.1 *Limits*—The bars, rods, profiles, tubes, or wire shall conform to the chemical requirements in Table 1.

6.2 *Number of Samples*—The number of samples taken for determination of chemical composition shall be as follows:

6.2.1 When samples are taken at the time extrusion ingots are cast for determination of conformance to Table 1, one sample shall be taken for each group of ingots of the same alloy, poured at the same time, from the same source of molten metal when a batch process is employed. In cases where a continuous casting process is employed, one sample shall be taken for each quantity of material cast equivalent in size (weight or volume) to the last holding vessel before casting or 5000 lb [2270 kg], whichever is less. Ingots not conforming to Table 1 shall be rejected.

6.2.2 Unless compliance is established by 6.2.1, sampling of the finished product shall be in accordance with Practice E 55. One sample shall be taken for each 4000 lb (2000 kg) or less of material comprising the lot, except that not more than one analysis shall be required per piece.

6.3 *Methods of Chemical Analysis*—Any suitable method of chemical analysis may be used. In case of dispute, the analysis shall be made by methods given in Test Methods E 35 or any other standard methods of analysis approved by ASTM unless some other method is agreed upon.

7. Tensile Requirements

7.1 *Limits*—The bars, rods, profiles, tubes, and wire shall conform to the tensile properties requirements in Table 2 unless other agreement is made between producer or supplier and

purchaser. Properties for sizes and tempers not shown in Table 2 shall be as agreed by producer or supplier and purchaser.

7.2 *Number of Specimens*—From material having nominal weight of less than 1 lb/linear ft [through 1.7 kg/linear m], one tension test sample shall be taken for each 1000 lb [500 kg] or fraction thereof in the shipment. For material having a nominal weight of 1 lb/linear ft [over 1.7 kg/linear m] or more, one tension test shall be taken for each 1000 ft [300 m] or fraction thereof in the shipment. Other procedures for selecting samples may be employed if agreed upon by the seller and the purchaser.

7.3 *Geometry of test specimens and the location in the product from which they are taken shall be as specified in Test Methods B 557 and B 557M.*

7.4 *Test Methods*—The tension tests shall be made in accordance with Test Methods B 557 and B 557M.

7.5 *Retests*—If any tension specimen fails to conform to the requirements prescribed in Table 2, two additional specimens shall be selected and tested from other bars, rods, profiles, tubes, or wire in the lot. If either of these specimens fails to conform to the applicable requirements, the material may be rejected. If, however, the failure of the specimens to conform to the requirements is the result of an inadequate thermal treatment, the material may be reheat treated and resampled in accordance with 7.2.

TABLE 2 Tensile Requirements

NOTE—For purposes of determining conformance with this specification, each value for tensile strength and yield strength shall be rounded to the nearest 100 psi and each value for elongation shall be rounded to the nearest 0.5 %, both in accordance with the rounding method of Practice E 29.

| Alloy ^A | | Temper ^A | Form | Specified Diameter or Thickness | Over-Through | Specified Cross-Sectional Area, in. ² or OD of Tube, in. | Tensile Strength, min | | Yield Strength (0.2 % offset), min | | Elongation in 2 in. [50 mm] or 4 × Dia., min, % ^{B,C} |
|--------------------|----------|---------------------|--------------------------------------|---------------------------------|----------------|---|-----------------------|--------------|------------------------------------|-------|--|
| UNS No. | ASTM No. | | | in. ^{D,E} | [mm] | | ksi | [MPa] | ksi | [MPa] | |
| M11311 | AZ31B | F | bars, rods, profiles, and wire | 0.249 and under | [...–6.30] | all | 35.0 | [240] | 21.0 | [145] | 7 |
| | | | | 0.250–1.499 | [6.30–40.00] | all | 35.0 | [240] | 22.0 | [150] | 7 |
| | | | | 1.500–2.499 | [40.00–60.00] | all | 34.0 | [235] | 22.0 | [150] | 7 |
| | | | | 2.500–4.999 | [60.00–130.00] | all | 32.0 | [220] | 20.0 | [140] | 7 |
| | | | hollow profiles | all | all | 32.0 | [220] | 16.0 | [110] | 8 | |
| | | | tubes | 0.028–0.250 | [0.70–6.30] | 6.000 [150.00] and under | 32.0 | [220] | 20.0 | [140] | 8 |
| | | | | 0.250–0.750 | [6.30–20.00] | all | 32.0 | [220] | 16.0 | [110] | 4 |
| M11610 | AZ61A | F | bars, rods, profiles, and wire | 0.249 and under | [...–6.30] | all | 38.0 | [260] | 21.0 | [145] | 8 |
| | | | | 0.250–2.499 | [6.30–60.00] | all | 40.0 | [275] | 24.0 | [165] | 9 |
| | | | | 2.500–4.999 | [60.00–130.00] | all | 40.0 | [275] | 22.0 | [150] | 7 |
| | | | hollow profiles | all | all | 36.0 | [250] | 16.0 | [110] | 7 | |
| | | | tubes | 0.028–0.750 | [0.70–20.00] | 6.000 [150.00] and under | 36.0 | [250] | 16.0 | [110] | 7 |
| | | | | all | all | all | 36.0 | [250] | 16.0 | [110] | 7 |
| M11800 | AZ80A | F | bars, rods, solid profiles, and wire | 0.249 and under | [...–6.30] | all | 43.0 | [295] | 28.0 | [195] | 9 |
| | | | | 0.250–1.499 | [6.30–40.00] | all | 43.0 | [295] | 28.0 | [195] | 8 |
| | | | | 1.500–2.499 | [40.00–60.00] | all | 43.0 | [295] | 28.0 | [195] | 6 |
| | | | | 2.500–4.999 | [60.00–130.00] | all | 42.0 | [290] | 27.0 | [185] | 4 |
| M11800 | AZ80A | T5 | bars, rods, solid profiles, and wire | 0.249 and under | [...–6.30] | all | 47.0 | [325] | 30.0 | [205] | 4 |
| | | | | 0.250–2.499 | [6.30–60.00] | all | 48.0 | [330] | 33.0 | [230] | 4 |
| | | | | 2.500–4.999 | [60.00–130.00] | all | 45.0 | [310] | 30.0 | [205] | 2 |
| M15100 | M1A | F | bars, rods, profiles, and wire | 0.249 and under | [...–6.30] | all | 30.0 | [205] | ^F | [13] | 2 |
| | | | | 0.250–1.499 | [6.30–40.00] | all | 32.0 | [220] | ^F | [13] | 3 |
| | | | | 1.500–2.499 | [40.00–60.00] | all | 32.0 | [220] | ^F | [13] | 2 |
| | | | | 2.500–4.999 | [60.00–130.00] | all | 29.0 | [200] | ^F | [13] | 2 |
| | | | hollow profiles | all | all | 28.0 | [195] | ^F | [13] | 2 | |
| | | | tubes | 0.028–0.750 | [0.70–20.00] | 6.000 [150.00] and under | 28.0 | [195] | ^F | [13] | 2 |

TABLE 2 *Continued*

| Alloy ^A | | Temper ^A | Form | Specified Diameter or Thickness | Over-Through | Specified Cross-Sectional Area, in. ² or OD of Tube, in. | Tensile Strength, min | | Yield Strength (0.2 % offset), min | | Elongation in 2 in. [50 mm] or 4 × Dia., min, % ^{B,C} |
|--------------------|----------|---------------------|--------------------------------|---------------------------------|--------------|---|-----------------------|-------|------------------------------------|-------|--|
| UNS No. | ASTM No. | | | in. ^{D,E} | [mm] | | ksi | [MPa] | ksi | [MPa] | |
| M16400 | ZK40A | T5 | bars, rods, profiles, and wire | all | | 3.000 [1900] and under | 37.0 | [255] | 34.0 | [235] | 4.0 |
| | | | hollow profiles | all | | all | 40.0 | [275] | 37.0 | [255] | 4.0 |
| | | | tubes | 0.062–0.500 | [1.60–12.50] | 3.000 [80.00] and under | 40.0 | [275] | 36.0 | [255] | 4.0 |
| M16600 | ZK60A | F | bars, rods, profiles, and wire | all | | 4.999 [3200] and under | 43.0 | [295] | 31.0 | [215] | 5 |
| | | | | | | 5.000–39.999 [3201–26 000] | 43.0 | [295] | 31.0 | [215] | 6 |
| | | | hollow profiles | all | | all | 40.0 | [275] | 28.0 | [195] | 5 |
| | | | tubes | 0.028–0.750 | [0.70–20.00] | 3.000 [80.00] and under | 40.0 | [275] | 28.0 | [195] | 5 |
| M16600 | ZK60A | T5 | bars, rods, profiles, and wire | all | | 4.999 [3200] and under | 45.0 | [310] | 36.0 | [250] | 4 |
| | | | | | | 5.000–24.999 [3201–16 000] | 45.0 | [295] | 31.0 | [215] | 6 |
| | | | | | | 25.000–39.999 [16 001–26 000] | 43.0 | | | | 6 |
| | | | hollow profiles | all | | all | 46.0 | [315] | 38.0 | [260] | 4 |
| | | | tubes | 0.028–0.250 | [0.70–6.30] | 3.000 [80.00] and under | 46.0 | [315] | 38.0 | [260] | 4 |
| | | | | 0.094–1.188 | [2.50–30.00] | 3.001 [80.00]–8.500 [215] | 44.0 | [305] | 33.0 | [230] | 4 |

^A See Practice B 296.

^B Elongation of full-section and machined sheet-type specimens is measured in 2 in. [50 mm] of machined round specimens, in 4 × specimen dia. [5 × dia. in metric].

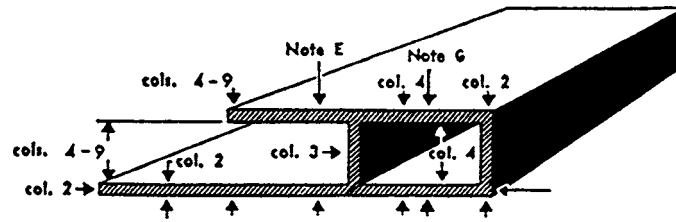
^C For material of such dimensions that a standard test specimen cannot be obtained, for wire less than 0.125 in. diameter [3.2 mm diameter], or for material thinner than 0.062 in. [1.60 mm] the test for elongation is not required.

^D Intermediate dimensions shall be rounded off to the third decimal place in accordance with Practice E 29.

^E Wall thickness of tubes.

^F Not required.

TABLE 3 Cross-Sectional Tolerances for Bars, Rods, Profiles, and Wire^A



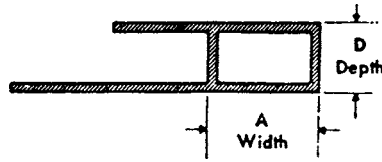
Tolerance^{B,C} in. ±

| Specified Dimension, in. | Metal Dimensions | | Space Dimensions | | | | | | |
|---|---|--|---|--|--|--|--|--|--------|
| | Allowable Deviation from Specified Dimension Where 75% or More of the Dimension is Metal ^D | | Allowable Deviation from Specified Dimension Where More than 25% of the Dimension is Space ^{E,F} | | | | | | |
| | All Except Those Covered By Column 3 | Wall Thickness ^{G,H,I} Completely Enclosing Space 0.11 in. ² and Over (Eccentricity) | At Dimensioned Points 0.250-0.624 in. from Base of Leg | At Dimensioned Points 0.625-1.249 in. from Base of Leg | At Dimensioned Points 1.250-2.499 in. from Base of Leg | At Dimensioned Points 2.500-3.999 in. from Base of Leg | At Dimensioned Points 4.000-5.999 in. from Base of Leg | At Dimensioned Points 6.000-8.000 in. from Base of Leg | |
| | Col. 1 | Col. 2 | Col. 3 | Col. 4 | Col. 5 | Col. 6 | Col. 7 | Col. 8 | Col. 9 |
| Circumscribing Circle Sizes Less than 10 in. in Dia | | | | | | | | | |
| 0.124 and under | 0.006 | ±10 % of specified dimension: | 0.010 | 0.012 | ... | ... | ... | ... | ... |
| 0.125-0.249 | 0.007 | ±0.060 max | 0.012 | 0.014 | 0.016 | ... | ... | ... | ... |
| 0.250-0.499 | 0.008 | 0.010 min | 0.014 | 0.016 | 0.018 | 0.020 | ... | ... | ... |
| 0.500-0.749 | 0.009 | | 0.016 | 0.018 | 0.020 | 0.022 | ... | ... | ... |
| 0.750-0.999 | 0.010 | | 0.018 | 0.020 | 0.022 | 0.025 | 0.30 | ... | ... |
| 1.000-1.499 | 0.012 | | 0.021 | 0.023 | 0.026 | 0.030 | 0.035 | ... | ... |
| 1.500-1.999 | 0.014 | | 0.024 | 0.026 | 0.031 | 0.036 | 0.042 | 0.050 | ... |
| 2.000-3.999 | 0.024 | | 0.034 | 0.038 | 0.048 | 0.057 | 0.068 | 0.080 | ... |
| 4.000-5.999 | 0.034 | | 0.044 | 0.050 | 0.064 | 0.078 | 0.094 | 0.110 | ... |
| 6.000-7.999 | 0.044 | | 0.054 | 0.062 | 0.082 | 0.099 | 0.120 | 0.140 | ... |
| 8.000-9.999 | 0.054 | | 0.064 | 0.074 | 0.100 | 0.120 | 0.145 | 0.170 | ... |
| Circumscribing Circle Sizes 10 in. in Dia and Over | | | | | | | | | |
| 0.124 and under | 0.014 | ±15 % of specified dimension: | 0.018 | 0.020 | ... | ... | ... | ... | ... |
| 0.125-0.249 | 0.015 | ±0.090 max | 0.019 | 0.022 | 0.028 | ... | ... | ... | ... |
| 0.250-0.499 | 0.016 | ±0.015 min | 0.020 | 0.024 | 0.030 | 0.050 | ... | ... | ... |
| 0.500-0.749 | 0.017 | | 0.022 | 0.027 | 0.040 | 0.060 | ... | ... | ... |
| 0.750-0.999 | 0.018 | | 0.023 | 0.030 | 0.050 | 0.070 | 0.090 | ... | ... |
| 1.000-1.499 | 0.019 | | 0.024 | 0.034 | 0.060 | 0.080 | 0.100 | ... | ... |
| 1.500-1.999 | 0.024 | | 0.034 | 0.044 | 0.070 | 0.090 | 0.110 | 0.170 | ... |
| 2.000-3.999 | 0.034 | | 0.044 | 0.054 | 0.080 | 0.100 | 0.120 | 0.180 | ... |
| 4.000-5.999 | 0.044 | | 0.054 | 0.064 | 0.090 | 0.110 | 0.130 | 0.190 | ... |
| 6.000-7.999 | 0.054 | | 0.064 | 0.074 | 0.100 | 0.120 | 0.140 | 0.200 | ... |
| 8.000-9.999 | 0.064 | | 0.074 | 0.084 | 0.110 | 0.130 | 0.150 | 0.210 | ... |
| 10.000-11.999 | 0.074 | | 0.084 | 0.094 | 0.120 | 0.140 | 0.160 | 0.220 | ... |
| 12.000-13.999 | 0.084 | | 0.094 | 0.104 | 0.130 | 0.150 | 0.170 | 0.230 | ... |
| 14.000-15.999 | 0.094 | | 0.104 | 0.114 | 0.140 | 0.160 | 0.180 | 0.240 | ... |
| 16.000-17.999 | 0.104 | | 0.114 | 0.124 | 0.150 | 0.170 | 0.190 | 0.250 | ... |
| 18.000-19.999 | 0.114 | | 0.124 | 0.134 | 0.160 | 0.180 | 0.200 | 0.260 | ... |
| 20.000-21.999 | 0.124 | | 0.134 | 0.144 | 0.170 | 0.190 | 0.210 | 0.270 | ... |
| 22.000-23.999 | 0.134 | | 0.144 | 0.154 | 0.180 | 0.200 | 0.220 | 0.280 | ... |

^A These tolerances are applicable to the average profile. Wider tolerances may be required for some profiles and closer tolerances may be possible for others.
^B The tolerances applicable to a dimension composed of two or more component dimensions is the sum of the tolerances of the component dimensions if all of the component dimensions are indicated.
^C When a tolerance is specified other than as an equal bilateral tolerance, the value of the standard tolerance is that which would apply to the mean of the maximum dimensions permissible under the tolerance.
^D These tolerances do not apply to space dimensions such as dimensions X and Z of the example even when Y is 75 % or more of X. For the tolerance applicable to dimensions X, use Col. 4, 5, 6, 7, 8 or 9, dependent on distance A and the circumscribing circle diameter.
^E At points less than 0.250 in. from base of leg the tolerances in Column 2 are applicable.

ASTM B 107/B 107M

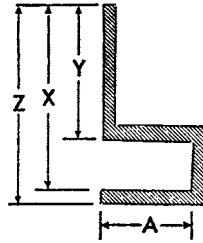
^F The following tolerances apply where the space is completely enclosed (hollow profiles): For the width (*A*) the tolerance is the value shown in Column 4 for the depth (*D*), the tolerance is the value shown in Column 4 for the width (*A*). In no case is the tolerance for either width or depth less than at the corners (Column 2, metal dimensions).



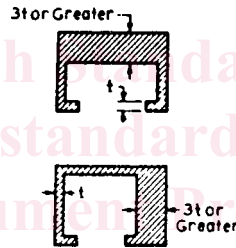
Example—Hollow profile having 1 by 3 in. rectangular outside dimensions and having a circumscribing circle diameter less than 10 in.: width tolerance is ± 0.024 in. and depth tolerance ± 0.034 in. (Tolerances at corners, Column 2, metal dimensions, are ± 0.024 in. for the width and ± 0.012 in. for the depth.)

^G Where dimensions specified are outside and inside, rather than wall thickness itself, the allowable deviation (eccentricity) given in Column 3 applies to mean wall thickness (mean wall thickness is the average of two wall thickness measurements taken at opposite sides of the void).

^H In the case of Class 1 Hollow Profiles the standard wall thickness tolerance for extruded round tube is applicable. (A Class 1 Hollow Profile is one whose void is round and 1 in. or more in diameter and whose weight is equally distributed on opposite sides of two or more equally spaced axes.)



^I Tolerance applicable to the wall thickness enclosing the void of hollow and semihollow profiles is subject to negotiation when the nominal thickness of one wall is three times or greater than that of the opposite wall.



iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ASTM B107/B107M-00

<https://standards.iteh.ai/catalog/standards/sist/41e38cbb-e275-4320-b3f2-0db3bfd5e136/astm-b107-b107m-00>