(Revision of ASME B16.26-2011)



# Foulad Cast Copper Alloy Line Fitting of Time **Fittings for Flared Copper Tubes**

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AN AMERICAN NATIONAL STANDARD



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## **ASME B16.26-2013**

(Revision of ASME B16.26-2011)

# Cast Copper Alloy Fittings for Flared Copper Tubes

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### AN AMERICAN NATIONAL STANDARD



Two Park Avenue • New York, NY • 10016 USA

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## **CONTENTS**

Fore	eword	iv
Cor	mmittee Roster	vi
Cor	respondence With the B16 Committee	vii
Sun	nmary of Changes	viii
1	Scope	1
2	General	1
3	Pressure Rating	1
4	Size	1
5	Marking	1
6	Material	1
7	Dimensions	1
8	Threading	2
9	Hydrostatic Test	2
Tabl	les	
1	General Dimensions — Cast Copper Alloy Fittings for Flared Copper Tubes	3
2	Thread Specifications: External Threads on Fittings — Class 2A	4
3	Thread Specifications: Internal Threads on Nuts — Class 2B	4
Mar	ndatory Appendices	
Ι	U.S. Customary Units	5
Π	References	7
Non	mandatory Appendices	
A	Flared Tube Dimensions	8
В	Ouality System Program	9

## **FOREWORD**

The development of a standard for brass fittings for flared copper water tubes was initiated by a subcommittee of the Copper Tube and Fitting Manufacturers Standardization Committee in 1929. When a general agreement had been reached, the draft of the proposed standard was submitted to Sectional Committee A40 on Minimum Requirements for Plumbing and Standardization of Plumbing Equipment, of the American Standards Association (ASA). Sectional Committee A40 was jointly sponsored by the American Society of Sanitary Engineering and The American Society of Mechanical Engineers (ASME).

Final ASA approval and designation as an American Standard, ASA A40.2-1936, was granted January 20, 1936.

The Standard remained unchanged and without reaffirmation until 1955 when this activity was transferred from Sectional Committee A40 to Sectional Committee B16 on Standardization of Pipe Flanges and Fittings, under the sponsorship of ASME, the Mechanical Contractors Association of America, Inc., and the Manufacturers Standardization Society of the Valve and Fittings Industry.

Subcommittee No. 9 B16 on Solder-Joint Fittings was instructed to develop a revised standard. The revised draft of this Standard was submitted to industry for criticism and comment. The final draft was approved by Sectional Committee B16 and its sponsors by letter ballot.

ASA approval and designation as ASA B16.26-1958 was granted on February 12, 1958. Beginning in 1965, consideration was given to reviewing the Standard in light of progress made in the production of these fittings. Subcommittee No. 9 completed its work by recommending the updating of referenced standards and thread specifications and including additional material. Following approval by the USA Standards Committee and Sponsors, the revision was approved by the new USA Standards Institute on April 21, 1967.

In 1982, American National Standards Committee B16 was reorganized as an ASME Committee operating under procedures accredited by the American National Standards Institute (ANSI). In the 1988 edition, metric units were omitted, and references to other standards were updated. Following approval by the B16 Main Committee and the ASME Supervisory Board, and after public review, the Standard was approved as an American National Standard by ANSI on August 23, 1988.

In the 2006 edition, metric units became the primary reference units while U.S. Customary units were maintained in either parenthetical or separate forms. SI values were positioned in the main text; U.S. Customary values were positioned in Mandatory Appendix I. The Scope was clarified, and a section on hydrostatic testing was added, along with a quality assurance recommendation in Nonmandatory Appendix B. Additional information concerning the design of the tube flare was also incorporated, in answer to user requests for such information, and was reported in Nonmandatory Appendix A. Following approval by the B16 Main Committee and the ASME Supervisory Board, and after public review, the Standard was approved as an American National Standard by ANSI on May 23, 2006.

In the 2011 edition, references to ASME standards were revised to no longer list specific edition years; the latest edition of ASME publications applies unless stated otherwise. Materials manufactured to other editions of the referenced ASTM standards have been permitted to be used to manufacture fittings meeting the requirements of this Standard as long as the fitting manufacturer verifies the material meets the requirements of the referenced edition. Following approval by the Standards Committee and the ASME Board on PTCS, the revision to the 2006 edition was approved as an American National Standard by ANSI on August 9, 2011 with the new designation ASME B16.26-2011.

In this 2013 edition, provisions have been included to recognize low lead alloys to comply with the U.S. Safe Drinking Water Act, which will be effective January 2014. Following approval by the ASME B16 Standards Committee, approval as an American National Standard was given by ANSI on July 29, 2013, with the new designation ASME B16.26-2013.

Requests for interpretations or suggestions for revisions should be sent to the Secretary, B16 Committee, The American Society of Mechanical Engineers, Two Park Avenue, New York, NY 10016-5990.

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Secretary, B16 Standards Committee The American Society of Mechanical Engineers Two Park Avenue New York, NY 10016-5990

As an alternative, inquiries may be submitted via email to: SecretaryB16@asme.org.

**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 paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent documentation.

**Proposing a Case.** Cases may be issued for the purpose of providing alternative rules when justified, to permit early implementation of an approved revision when the need is urgent, or to provide rules not covered by existing provisions. Cases are effective immediately upon ASME approval and shall be posted on the ASME Committee Web page.

Requests for Cases shall provide a Statement of Need and Background Information. The request should identify the Standard, the paragraph, figure or table number(s), and be written as a Question and Reply in the same format as existing Cases. Requests for Cases should also indicate the applicable edition(s) of the Standard to which the proposed Case applies.

**Interpretations.** Upon request, the B16 Committee will render an interpretation of any requirement of the Standard. Interpretations can only be rendered in response to a written request sent to the Secretary of the B16 Standards Committee.

The request for interpretation should be clear and unambiguous. It is further recommended that the inquirer submit his/her request in the following format:

Subject: Cite the applicable paragraph number(s) and the topic of the inquiry.

Edition: Cite the applicable edition of the Standard for which the interpretation is

being requested.

Question: Phrase the question as a request for an interpretation of a specific requirement

suitable for general understanding and use, not as a request for an approval of a proprietary design or situation. The inquirer may also include any plans or drawings that are necessary to explain the question; however, they should

not contain proprietary names or information.

Requests that are not in this format will be rewritten in this format by the Committee prior to being answered, which may inadvertently change the intent of the original request.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME Committee or Subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

**Attending Committee Meetings.** The B16 Standards Committee regularly holds meetings, which are open to the public. Persons wishing to attend any meeting should contact the Secretary of the B16 Standards Committee.

## **ASME B16.26-2013 SUMMARY OF CHANGES**

Following approval by the B16 Committee and ASME, and after public review, ASME B16.26-2013 was approved by the American National Standards Institute on July 29, 2013.

ASME B16.26-2013 consists of editorial changes, revisions, and corrections identified by a margin note, **(13)**, placed next to the affected area.

Page	Location	Change
1	6	Revised in its entirety

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## CAST COPPER ALLOY FITTINGS FOR FLARED COPPER TUBES

## 1 SCOPE

This Standard establishes specifications for cast copper alloy fittings and nuts used with flared seamless copper tube conforming to ASTM B88 (water and general plumbing systems). Included are requirements for the following:

- (a) pressure rating
- (b) size
- (c) marking
- (d) material
- (e) dimensions
- (f) threading
- (g) hydrostatic testing

#### 2 GENERAL

#### 2.1 References

Codes, standards, and specifications containing provisions to the extent referenced herein constitute requirements of this Standard. These reference documents are listed in Mandatory Appendix II.

## 2.2 Convention

For determining conformance with this Standard, the convention for fixing significant digits where limits (maximum and minimum values) are specified shall be as defined in ASTM E29. This requires that an observed or calculated value be rounded off to the nearest unit in the last right-hand digit used for expressing the limit. Decimal values and tolerances do not imply a particular method of measurement.

### 2.3 Relevant Units

This Standard states values in both SI (Metric) and U.S. Customary units. These systems of units are to be regarded separately as standard. Within the text, the U.S. Customary units are shown in parentheses or in separate tables that appear in Mandatory Appendix I. The values stated in each system are not exact equivalents; therefore, it is required that each system of units be used independently of the other. Combining values from the two systems constitutes nonconformance with the Standard.

### 2.4 Quality Systems

Requirements relating to the product manufacturer's quality system programs are described in Nonmandatory Appendix B.

### 2.5 Service Conditions

Criteria for selection of materials suitable for particular fluid service are not within the scope of this Standard.

#### 3 PRESSURE RATING

The fittings covered by this Standard are designed for a maximum cold-water service pressure of 1 200 kPa (175 psig).

#### 4 SIZE

The sizes of the fittings shown in Table 1 (Table I-1) correspond to standard water tube size as defined in ASTM B88.

## 5 MARKING

Each fitting shall be marked with the manufacturer's name or trademark and other applicable markings as required by MSS SP-25. Marking of fittings less than nominal size  $\frac{1}{2}$  is optional.

## 6 MATERIAL

(13)

- (a) Castings intended for use in applications up to 400°F (204°C) shall be of a copper alloy produced to meet
  - (1) the requirement of ASTM B62 Alloy C83600 or
- (2) the chemical and tensile requirements of ASTM B584 Alloy C83800 or C84400 and in all other respects comply with the requirements of ASTM B62
- (b) Castings intended for use in potable water applications, up to 200°F (93°C), shall be low lead (0.25% or less) and shall be
- (1) of a copper alloy produced to meet the requirements of ASTM B584 Alloy C87850 or C89833 or
- (2) of other cast copper alloys, provided the fittings produced meet mechanical and corrosion-resistant properties needed for potable water application

## 7 DIMENSIONS

### 7.1 Fitting and Nut

The dimensions and tolerances of fittings and nuts shall be as shown in Table 1 (Table I-1). Design of the sealing surfaces of the fitting and nut shall be at the discretion of the manufacturer.

## 7.2 Tube Flare

Dimensions relating to the flared end of the tube are described in Nonmandatory Appendix A. SI units are shown in Table A-1, and U.S. Customary units are shown in Table A-2.

#### 8 THREADING

Straight threads shall conform to ASME B1.1 Class 2A external and Class 2B internal. The dimensions of

straight threads are given in Tables 2 and 3 (Tables I-2 and I-3).

Taper pipe threads (NPT) shall conform to ANSI/ASME B1.20.1.

### 9 HYDROSTATIC TEST

Hydrostatic testing is not required.

Sould dine. Com

Corner of nut

Dotted lines show 90-deg elbow

A 45-deg elbow

Table 1 General Dimensions — Cast Copper Alloy Fittings for Flared Copper Tubes

Standard Water Tube Size	Outside Diameter of Tube	Diameter of Fitting Bore, <i>B</i> [Note (1)]	Minimum Center-to- Face, A	Minimum Center-to- Face of 45- deg Elbow, C	Length of Seat Projection, <i>L</i>	Minimum Metal Thickness, <i>G</i>	Diameter of Bore of Nut, <i>N</i> [Note (1)]	Minimum Length of Bore in Nut, D	Width Across Flats of Nut, E	Number of Flats on Nut
3/8	12.7	9.62	36	27.0	6.5	2.4	13.1	5.0	27.4	6
1/2	15.9	12.70	39	29.0	6.5	2.4	16.7	6.5	31.0	6
3/4	22.2	19.05	45	32.0	7.0	2.5	23.0	9.5	37.6	6
1	28.6	25.40	53	37.5	7.5	2.8	29.4	12.5	48.4	6
$1\frac{1}{4}$	34.9	31.75	58	40.0	8.0	3.2	35.7	16.0	54.8	8
$1\frac{1}{2}$	41.3	38.10	65	44.0	8.5	3.3	42.1	19.0	65.1	8
2	54.0	50.80	78	52.0	9.5	4.0	54.8	25.5	82.9	10

## GENERAL NOTES:

#### NOTE:

(1) Tolerance on diameter of bores through fitting and nut, all sizes,  $\pm 0.12$  mm.

<sup>(</sup>a) All dimensions are in millimeters.

<sup>(</sup>b) Nuts with 45-deg taper seat or convex curved seat are interchangeable on ball-joint fittings.

Table 2 Thread Specifications: External Threads on Fittings — Class 2A

Standard Water	Length Thread of Major Diameter		Diameter	Pitch D	Maximum Minor		
Tube Size	Designation, $H$	Thread, T	Max.	Min.	Max.	Min.	Diameter
3/8	<sup>7</sup> / <sub>8</sub> −14 UNF	11.0	22.184	21.923	21.005	20.869	19.959
1/2	1-14 UNS	11.0	25.356	25.096	24.178	24.037	23.131
3/4	1 <sup>1</sup> / <sub>4</sub> -14 UNS	12.5	31.709	31.448	30.530	30.394	29.484
1	1 <sup>5</sup> / <sub>8</sub> -12 UNS	14.0	41.229	40.940	39.855	39.706	38.663
11/4	$1^{7}/_{8}$ –12 UN	15.5	47.579	47.290	46.205	46.053	44.983
$1^{1}/_{2}$	$2\frac{1}{4}$ – 12 UN	17.5	57.104	56.815	55.730	55.576	54.508
2	$2^{7}/_{8}$ -12 UN	20.5	72.976	72.688	71.602	71.443	70.380

GENERAL NOTE: All dimensions are in millimeters, except thread designation.

Table 3 Thread Specifications: Internal Threads on Nuts — Class 2B

Standard Water	Thread	Length of	Maximum Major	Pitch D	iameter	Minor D	Diameter
Tube Size	Designation, $H$	Thread, T	Diameter	Max.	Min.	Max.	Min.
3/8	<sup>7</sup> / <sub>8</sub> −14 UNF	11.0	22.225	21.224	21.047	20.68	20.27
1/2	1-14 UNS	11.0	25.400	24.406	24.222	23.82	23.44
3/4	1 <sup>1</sup> / <sub>4</sub> -14 UNS	12.5	31.750	30.749	30.572	30.18	29.79
1	15/8-12 UNS	14.0	41.275	40.093	39.901	39.45	38.99
$1\frac{1}{4}$	$1\frac{7}{8}$ – 12 UN	15.5	47.625	46.448	46.251	45.80	45.34
$1\frac{1}{2}$	$2^{1}/_{4}$ -12 UN	17.5	57.150	55.976	55.776	55.32	54.86
2	$2\frac{7}{8}$ -12 UN	20.5	73.025	71.869	71.651	71.20	70.74

GENERAL NOTE: All dimensions are in millimeters, except thread designation.

# MANDATORY APPENDIX I U.S. CUSTOMARY UNITS

See Tables I-1 through I-3.

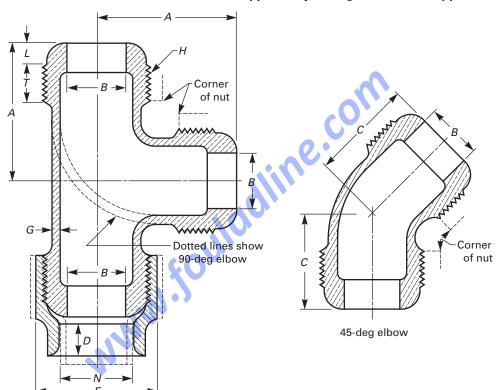


Table I-1 General Dimensions — Cast Copper Alloy Fittings for Flared Copper Tubes

Standard Water Tube Size	Outside Diameter of Tube	Diameter of Fitting Bore, <i>B</i> [Note (1)]	Minimum Center-to- Face, A	Minimum Center-to- Face of 45- deg Elbow, <i>C</i>	Length of Seat Projection, <i>L</i>	Minimum Metal Thickness, <i>G</i>	Diameter of Bore of Nut, <i>N</i> [Note (1)]	Minimum Length of Bore in Nut, D	Width Across Flats of Nut, <i>E</i>	Number of Flats on Nut
3/8	0.50	0.375	1.42	1.06	0.25	0.09	0.52	0.19	1.08	6
1/2	0.62	0.500	1.53	1.12	0.26	0.09	0.65	0.25	1.22	6
3/4	0.88	0.750	1.78	1.26	0.28	0.10	0.90	0.38	1.48	6
1	1.12	1.000	2.09	1.44	0.30	0.11	1.15	0.50	1.90	6
$1^{1}/_{4}$	1.38	1.250	2.28	1.56	0.32	0.12	1.41	0.63	2.16	8
$1\frac{1}{2}$	1.62	1.500	2.56	1.75	0.34	0.13	1.66	0.75	2.56	8
2	2.12	2.000	3.06	2.06	0.38	0.15	2.16	1.00	3.26	10

## GENERAL NOTES:

<sup>(</sup>a) All dimensions are in inches.

<sup>(</sup>b) Nuts with 45-deg taper seat or convex curved seat are interchangeable on ball-joint fittings.

<sup>(1)</sup> Tolerance on diameter of bores through fitting and nut, all sizes, ±0.005 in.

Table I-2 Thread Specifications: External Threads on Fittings — Class 2A

Standard Water	Thread	Length Thread of Major Dia		Diameter	meter Pitch Diameter		
Tube Size	Designation, H	Thread, T	Max.	Min.	Max.	Min.	Diameter
3/8	<sup>7</sup> / <sub>8</sub> −14 UNF	0.43	0.8734	0.8631	0.8270	0.8216	0.7858
1/2	1-14 UNS	0.43	0.9983	0.9880	0.9519	0.9463	0.9107
3/4	$1\frac{1}{4}$ -14 UNS	0.50	1.2484	1.2381	1.2020	1.1966	1.1608
1	$1\frac{5}{8}$ – 12 UNS	0.56	1.6232	1.6118	1.5691	1.5632	1.5210
11/4	$1^{7}/_{8}$ -12 UN	0.62	1.8732	1.8618	1.8191	1.8131	1.7710
$1\frac{1}{2}$	2 <sup>1</sup> / <sub>4</sub> -12 UN	0.69	2.2482	2.2368	2.1941	2.1880	2.1460
2	$2^{7/8} - 12$ UN	0.81	2.8731	2.8617	2.8190	2.8127	2.7709

GENERAL NOTE: All dimensions are in inches, except thread designation.

Table I-3 Thread Specifications: Internal Threads on Nuts — Class 2B

Standard Water	Thread	Length of	Maximum Major	Pitch D	iameter	Minor E	iameter
Tube Size	Designation, H	Thread, T	Diameter	Max.	Min.	Max.	Min.
3/8	<sup>7</sup> / <sub>8</sub> −14 UNF	0.43	0.8750	0.8356	0.8286	0.814	0.798
1/2	1-14 UNS	0.43	1.0000	0.9609	0.9536	0.938	0.923
3/4	1½-14 UNS	0.50	1.2500	1.2106	1.2036	1.188	1.173
1	15/ <sub>8</sub> -12 UNS	0.56	1.6250	1.5785	1.5709	1.553	1.535
1 <sup>1</sup> / <sub>4</sub>	$1\frac{7}{8}$ – 12 UN	0.62	1.8750	1.8287	1.8209	1.803	1.785
$1\frac{1}{2}$	2 <sup>1</sup> / <sub>4</sub> -12 UN	0.69	2.2500	2.2038	2.1959	2.178	2.160
2	$\frac{2^{7}}{8}$ - 12 UN	0.81	2.8750	2.8291	2.8209	2.803	2.785

GENERAL NOTE: All dimensions are in inches, except thread designation.

## MANDATORY APPENDIX II REFERENCES

The following is a list of publications referenced in this Standard. Unless otherwise specified, the latest edition of ASME publications shall apply. Materials manufactured to other editions of the referenced ASTM standards may be used to manufacture fittings meeting the requirements of this Standard as long as the fitting manufacturer verifies that material meets the requirements of the referenced edition.

ASME B1.1, Unified Inch Screw Threads (UN and UNR Thread Form)

ANSI/ASME B1.20.1, Pipe Threads, General Purpose (Inch)

Publisher: The American Society of Mechanical Engineers (ASME), Two Park Avenue, New York, NY 10016-5990; Order Department: 22 Law Drive, P.O. Box 2900, Fairfield, NJ 07007-2900 (www.asme.org)

ASTM B62-09, Standard Specification for Composition Bronze or Ounce Metal Castings

ASTM B88-09, Standard Specification for Seamless Copper Water Tube

ASTM B584-09a, Standard Specification for Copper Alloy Sand Castings for General Applications

ASTM E29-08, Standard Practice for Using Significant Digits in Test Data to Determine Conformance With Specifications

Publisher: American Society for Testing and Materials (ASTM International), 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 (www.astm.org)

ISO 9000: 2005, Quality management systems — Fundamentals and vocabulary<sup>1</sup>

ISO 9001: 2008/Cor 1:2009, Quality management systems — Requirements<sup>1</sup>

ISO 9004: 2009, Managing for the sustained success of an organization — A quality management approach<sup>1</sup>

Publisher: International Organization for Standardization (ISO), Central Secretariat, 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Genève 20, Switzerland/Suisse (www.iso.org)

MSS SP-25-2008, Standard Marking Systems for Valves, Fittings, Flanges and Unions

Publisher: Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. (MSS), 127 Park Street NE, Vienna, VA 22180 (www.mss-hq.org)

<sup>&</sup>lt;sup>1</sup> May also be obtained from American National Standards Institute (ANSI), 25 West 43rd Street, New York, NY 10036.

# NONMANDATORY APPENDIX A FLARED TUBE DIMENSIONS

See Tables A-1 and A-2.

Table A-1 Flared Tube Dimensions (SI)

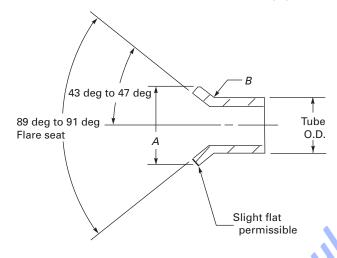
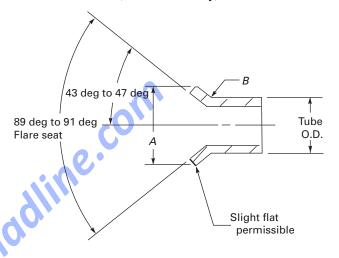


Table A-2	Flared Tub	e Dimensions
(l	J.S. Custon	nary)



Standard Water Tube Size	Outside Diameter of Tube	Minimum Flared Tube Diameter, <i>A</i>	Maximum Flared Tube Diameter, <i>A</i>	Flare Radius, <i>B</i> , ±0.3
3/8	12.7	16	17	0.5
1/2	15.9	19	20	0.5
3/4	22.2	26	27	0.5
1	28.6	33	34	0.5
$1\frac{1}{4}$	34.9	40	41	0.5
$1^{1}/_{2}$	41.3	48	49	0.5
2	54.0	62	63	0.5

Standard Water Tube Size	Outside Diameter of Tube	Minimum Flared Tube Diameter, <i>A</i>	Maximum Flared Tube Diameter, <i>A</i>	Flare Radius, <i>B</i> , ±0.01
3/8	0.50	0.63	0.67	0.02
1/2	0.62	0.75	0.79	0.02
3/4	0.88	1.01	1.05	0.02
1	1.12	1.31	1.35	0.02
11/4	1.50	1.56	1.60	0.02
$1^{1}/_{2}$	1.62	1.87	1.91	0.02
2	2.12	2.44	2.48	0.02

### **GENERAL NOTES:**

- (a) All dimensions are in millimeters.
- (b) Considerations, such as the effects of wall thickness on working pressures, length of thread engagements, etc., shall be the responsibility of the user.

### **GENERAL NOTES:**

- (a) All dimensions are in inches.
- (b) Considerations, such as the effects of wall thickness on working pressures, length of thread engagements, etc., shall be the responsibility of the user.

## NONMANDATORY APPENDIX B QUALITY SYSTEM PROGRAM

The products manufactured in accordance with this Standard shall be produced under ISO 9001. A determination of the need for registration and/or certification of the product manufacturer's quality system program

by an independent organization shall be the responsibility of the manufacturer. The detailed documentation demonstrating program compliance shall be available to the purchaser at the manufacturer's facility. A written summary description of the program utilized by the product manufacturer shall be available to the purchaser upon request. The product manufacturer is defined as the entity whose name or trademark appears on the product in accordance with the marking or identification requirements of this Standard.

The series is also available from the American National Standards Institute (ANSI) and the American Society for Quality (ASQ) as American National Standards that are identified by the prefix "ISO." Each standard of the series is listed under References in Mandatory Appendix II.

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## B16 AMERICAN NATIONAL STANDARDS FOR PIPING, PIPE FLANGES, FITTINGS, AND VALVES

Gray Iron Pipe Flanges and Flanged Fittings (Classes 25, 125, and 250)	
Malleable Iron Threaded Fittings: Classes 150 and 300	
Gray Iron Threaded Fittings: Classes 125 and 250	
Pipe Flanges and Flanged Fittings NPS ½ Through NPS 24 Metric/Inch Standard	
Factory-Made Wrought Buttwelding Fittings	
Face-to-Face and End-to-End Dimensions of Valves	B16.10-2009
Forged Fittings, Socket-Welding and Threaded	B16.11-2011
Cast Iron Threaded Drainage Fittings	B16.12-2009
Ferrous Pipe Plugs, Bushings, and Locknuts with Pipe Threads	B16.14-2010
Cast Copper Alloy Threaded Fittings	B16.15-2011
Cast Copper Alloy Solder Joint Pressure Fittings	B16.18-2012
Metallic Gaskets for Pipe Flanges: Ring-Joint, Spiral-Wound, and Jacketed	B16.20-2012
Nonmetallic Flat Gaskets for Pipe Flanges	B16.21-2011
Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings	B16.22-2013
Cast Copper Alloy Solder Joint Drainage Fittings: DWV	B16.23-2011
Cast Copper Alloy Pipe Flanges and Flanged Fittings: Classes 150, 300, 600, 900, 1500, and 2500	
Buttwelding Ends.	
Cast Copper Alloy Fittings for Flared Copper Tubes	B16.26-2013
Wrought Copper and Wrought Copper Alloy Solder-Joint Drainage Fittings — DWV	B16.29-2012
Manually Operated Metallic Gas Valves for Use in Gas Piping Systems Up to 125 psi	
(Sizes NPS ½ Through NPS 2)	B16.33-2012
Valves — Flanged, Threaded, and Welding End	B16.34-2013
Orifice Flanges	B16.36-2009
Large Metallic Valves for Gas Distribution: Manually Operated, NPS 2 ½ (DN 65)	
to NPS 12 (DN 300), 125 psig (8.6 bar) Maximum	B16.38-2012
Malleable Iron Threaded Pipe Unions: Classes 150, 250, and 300	
Manually Operated Thermoplastic Gas Shutoffs and Valves in Gas Distribution Systems	B16.40-2008
Ductile Iron Pipe Flanges and Flanged Fittings: Classes 150 and 300	
Manually Operated Metallic Gas Valves for Use in Aboveground Piping Systems Up to 5 psi	
Cast Iron Fittings for Sovent® Drainage Systems	
Large Diameter Steel Flanges NPS 26 Through NPS 60 Metric/Inch Standard	
Line Blanks	
Factory-Made Wrought Steel Buttwelding Induction Bends for Transportation and Distribution Systems	
Wrought Copper and Copper Alloy Braze-Joint Pressure Fittings	
Copper and Copper Alloy Press-Connect Pressure Fittings	
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