

AMERICAN NATIONAL STANDARD

Large Rivets

ANSI B18.1.2 - 1972

1/2 Inch Nominal Diameter and Larger

(REVISION OF B18.4-1960)

REAFFIRMED 1995

FOR CURRENT COMMITTEE PERSONNEL
PLEASE SEE ASME MANUAL AS-11

SECRETARIAT

SOCIETY OF AUTOMOTIVE ENGINEERS
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

PUBLISHED BY

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

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FOREWORD

American National Standards Committee B18 for the standardization of bolts, screws, nuts, rivets and similar fasteners was organized in March 1922, as Sectional Committee B18, under the aegis of the American Engineering Standards Committee (later the American Standards Association, then the United States of America Standards Institute and, as of October 6, 1969, the American National Standards Institute, Inc.) with the Society of Automotive Engineers and the American Society of Mechanical Engineers as joint sponsors. Subcommittee 1 was subsequently appointed and charged with responsibility for the standardization of rivets.

Initial efforts of the Subcommittee were directed at development of a standard covering solid rivets of less than 1/2 inch nominal diameter which was approved and designated B18a-1927. This was followed by a standard covering tinnerns, coopers and belt rivets that was adopted under the designation B18g-1928.

Extensive research, periods of experimentation, and consultation with the American Society for Testing and Materials and the Boiler Code Committee of the American Society of Mechanical Engineers during the ensuing years culminated in Subcommittee acceptance, in 1936, of a proposal covering rivets 1/2 inch nominal size and larger. This proposal, following approval by the Sectional Committee and sponsor organizations was designated an American Standard, B18.4-1937, in March of 1937.

Following reorganization of Sectional Committee B18, in 1947, Subcommittee 1 was requested to review the documents under its jurisdiction to bring them up to date and, as necessary, develop them into complete product standards. A thorough study of the B18.4 standard was conducted over meetings of the Subcommittee held on October 9, 1947, June 4, 1948 and December 1, 1948. This resulted in a recommendation that the pan head rivets should be changed to conform with the American Bureau of Shipping and U. S. Navy design which all manufacturers, except one, were found to be producing. A proposal dated September 1959, reflecting this change and additional refinements was approved by letter ballot of the B18 Committee and sponsors, and presented to the American Standards Association for approval and designation as an American Standard. This was given on August 30, 1950.

The B18 Committee by letter ballot of August 13, 1956 approved reaffirmation of the B18.4-1950 document and, following approval by the sponsors, this status was confirmed by the American Standards Association on May 27, 1957.

A proposed revision dated August, 1959 was approved by the Sectional Committee, the sponsors, and the American Standards Association and was designated an American Standard on March 9, 1960.

During 1970, Subcommittee 1 developed a proposed revision incorporating changes to the nomenclature and the method of dimensioning applicable to countersunk type heads and a complete editorial revamping of the format to conform with related documents. Following letter ballot approval by the B18 Committee and sponsor organizations, the revision was submitted to the American National Standards Institute and was designated an American National Standard, ANSI B18.1.2-1972, on January 28, 1972.

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AMERICAN NATIONAL STANDARD

LARGE RIVETS

1/2 INCH NOMINAL DIAMETER AND LARGER

1 INTRODUCTORY NOTES

1.1 SCOPE

1.1.1 This standard covers complete general and dimensional data for those types of large solid rivets recognized as "American National Standard" together with dimensional data applicable to manufactured heads after driving, driven heads, and hold-on (dolly bar) and rivet set impressions. Also included are appendixes covering formulas on which dimensional data are based. It should be understood, however, that where questions arise concerning acceptance of product, the dimensions in the tables shall govern over recalculation by formula.

1.1.2 The inclusion of dimensional data in this standard is not intended to imply that all of the products described are stock production sizes. Consumers should consult with manufacturers concerning the availability of products.

1.2 RIVETS

1.2.1 Head Types. The head types covered by this standard are designated, respectively, as button head, high button head (acorn), cone head, flat countersunk head, oval countersunk head and pan head. All other head types for large solid rivets shall be considered special.

1.2.2 Shank Diameters. The diameters of rivet shanks as given for the respective types of rivets in the tables shall be standard. This, however, does not preclude the manufacture or use of rivets having other diameters required for special applications.

1.2.3 Head Proportions. The dimensions for heads of rivets specified in the respective tables shall be standard. Other head proportions shall be considered special. Where non-standard diameter rivets are required for special applications, the proportions of heads shall preferably be based on the formulations given in the appendixes.

1.2.4 Swell Necks. Large rivets are normally furnished with straight shanks up to the head. When specified, however, the swell neck included in Table 7

of this standard is applicable to all standard large rivets except the flat countersunk head and oval countersunk head.

1.3 MANUFACTURED HEADS AFTER DRIVING, DRIVEN HEADS, AND HOLD-ON (DOLLY BAR) AND RIVET SET IMPRESSIONS

Dimensions of manufactured heads after driving for button head, high button head, cone head and pan head types of rivets and for hold-on (dolly bar) impressions are included in this standard for design reference purposes. These dimensions apply also to driven heads of rivets as formed from the end and to the corresponding rivet set impressions. See Figure 1 for explanation of terms.

1.4 DIMENSIONS

All dimensions in this standard are given in inches, unless otherwise stated.

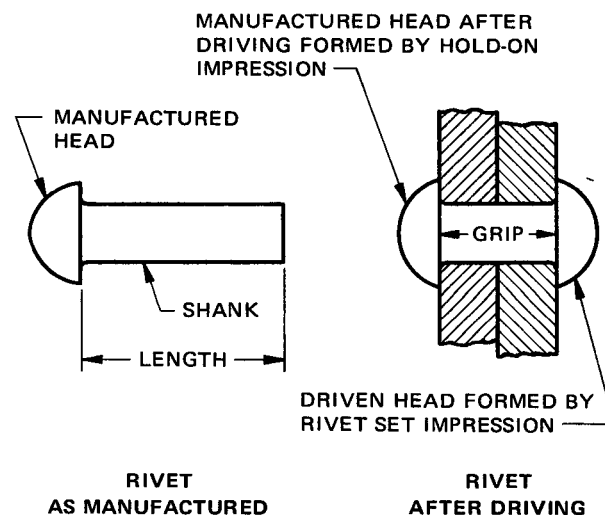


FIGURE 1 RIVET TERMS

1.5 TERMINOLOGY

The nomenclature applicable to rivets as manufactured and after driving is depicted in Figure 1. For definitions of other terms relating to fasteners or

component features thereof used in this standard refer to American National Standard, Glossary of Terms for Mechanical Fasteners, ANSI B18.12.

1.6 RELATED STANDARDS

It should be noted that standards for small solid rivets, tubular and split rivets, and other related fasteners are published under separate cover as listed on the back sheet of this standard.

2 GENERAL DATA

2.1 UNDERHEAD FILLETS

Rivets other than countersunk head types shall be furnished with a definite fillet under the head. The radius of fillet shall not exceed 0.062 in.

2.2 LENGTH

2.2.1 Measurement. The length of rivet shall be measured, parallel to the axis of rivet, from the extreme end to the plane of the bearing surface for rivets having flat bearing surface type heads, or to the intersection of the top surface of head with the head diameter for rivets having countersunk type heads.

2.2.2 Length Tolerance. The tolerance on length of rivets shall be as tabulated below:

Nominal Rivet Size	1/2 and 5/8	3/4 and 7/8	1 thru 1 3/4
Nominal Rivet Length	Tolerance on Length		
Thru 6 in.	±0.03	±0.06	±0.09
Over 6 in.	±0.06	±0.12	±0.19

2.3 POINTS

Rivets shall have plain sheared ends, suitable for the purposes of driving that end satisfactorily.

2.4 MATERIAL

Suitable materials for steel rivets are covered by the following ASTM Specifications which can be

obtained from the American Society for Testing and Materials, 1916 Race St., Philadelphia, Pennsylvania 19103.

A31 Specifications for Boiler Rivet Steel (American National Standard, ANSI G28.1)

A131 Specifications for Rivet Steel for Ships

A152 Specifications for Wrought-Iron Rivets and Rivet Rounds

A502 - Grade 1 Carbon Steel Structural Rivets for General Purposes (formerly A141)

A502 - Grade 2 Carbon Manganese Steel Rivets for Use with High-Strength Carbon and High-Strength Low Alloy Steels (formerly A195)

2.5 FINISHES

Unless otherwise specified, rivets shall be supplied with a natural (as processed) finish, unplated or uncoated.

2.6 QUALITY

The finished rivets shall be free from defects affecting their serviceability.

2.7 DESIGNATION

When specifying rivets, the following data shall be included in the designation and shall appear in the sequence shown:

Nominal Size (fraction or decimal equivalent)

Length (fraction or two-place decimal equivalent)

Type of Rivet (including head style)

Type of Neck (if required)

Material

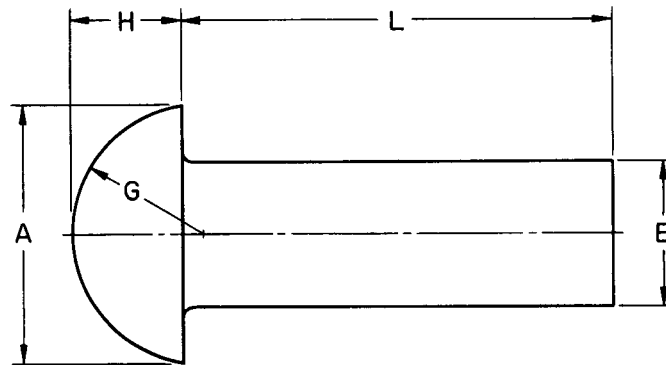
Finish (if required)

Examples:

1/2 x 2 Button Head Steel Rivet

.625 x 6.00 High Button Head Swell Neck Steel Rivet

1 3/8 x 7 Oval Countersunk Head Steel Rivet, Zinc Plated



**Table 1 Dimensions of Button Head Rivets
(Manufactured Shape)**

Nominal Size ¹ or Basic Shank Diameter	E		A			H		G
	Shank Diameter		Head Diameter			Head Height		Head Radius
	Max	Min	Basic	Max	Min	Max	Min (Basic)	Basic
1/2 0.500	0.520	0.478	0.875	0.938	0.844	0.406	0.375	0.443
5/8 0.625	0.655	0.600	1.094	1.157	1.063	0.500	0.469	0.553
3/4 0.750	0.780	0.725	1.312	1.390	1.281	0.593	0.562	0.664
7/8 0.875	0.905	0.850	1.531	1.609	1.500	0.687	0.656	0.775
1 1.000	1.030	0.975	1.750	1.828	1.719	0.781	0.750	0.885
1 1/8 1.125	1.160	1.098	1.969	2.063	1.938	0.891	0.844	0.996
1 1/4 1.250	1.285	1.223	2.188	2.282	2.157	0.985	0.938	1.107
1 3/8 1.375	1.415	1.345	2.406	2.500	2.375	1.078	1.031	1.217
1 1/2 1.500	1.540	1.470	2.625	2.719	2.594	1.188	1.125	1.328
1 5/8 1.625	1.665	1.588	2.844	2.938	2.813	1.282	1.219	1.439
1 3/4 1.750	1.790	1.713	3.062	3.171	3.031	1.375	1.312	1.549

¹Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.

For additional requirements refer to General Data on Page 2.

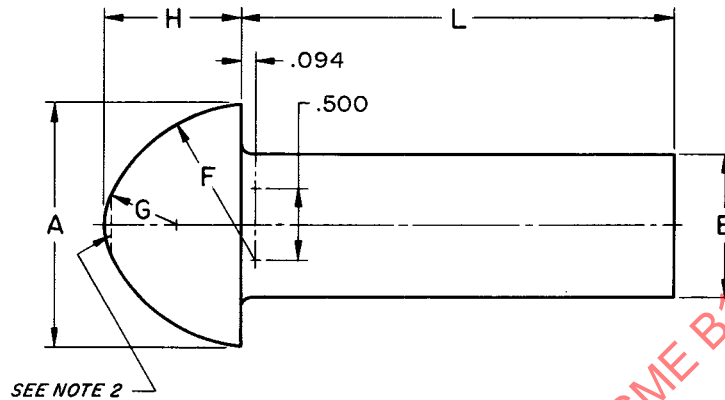


Table 2 Dimensions of High Button Head (Acorn) Rivets
(Manufactured Shape)

Nominal Size ¹ or Basic Shank Diameter	E		A			H			F	G
	Shank Diameter		Head Diameter			Head Height			Head Side Radius	Head Top Radius
	Max	Min	Basic	Max	Min	Basic	Max	Min	Basic	Basic
1/2 0.500	0.520	0.478	0.781	0.844	0.750	0.500	0.531	0.484	0.656	0.094
5/8 0.625	0.655	0.600	0.969	1.032	0.938	0.594	0.625	0.578	0.750	0.188
3/4 0.750	0.780	0.725	1.156	1.234	1.125	0.688	0.719	0.657	0.844	0.282
7/8 0.875	0.905	0.850	1.344	1.422	1.313	0.781	0.812	0.750	0.937	0.375
1 1.000	1.030	0.975	1.531	1.609	1.500	0.875	0.906	0.844	1.031	0.469
1 1/8 1.125	1.160	1.098	1.719	1.813	1.688	0.969	1.016	0.938	1.125	0.563
1 1/4 1.250	1.285	1.223	1.906	2.000	1.875	1.062	1.109	1.031	1.218	0.656
1 3/8 1.375	1.415	1.345	2.094	2.188	2.063	1.156	1.203	1.125	1.312	0.750
1 1/2 1.500	1.540	1.470	2.281	2.375	2.250	1.250	1.313	1.219	1.406	0.844
1 5/8 1.625	1.665	1.588	2.469	2.563	2.438	1.344	1.407	1.313	1.500	0.938
1 3/4 1.750	1.790	1.713	2.656	2.765	2.625	1.438	1.501	1.407	1.594	1.032

¹Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.

²A slight flat at the crest of the head shall be permissible providing specified head height limits are maintained.

For additional requirements refer to General Data on Page 2.

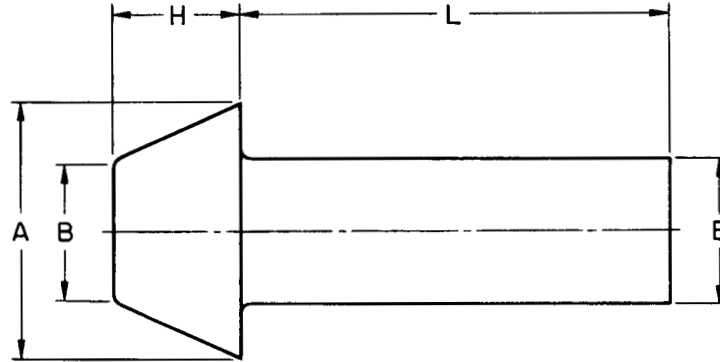


Table 3 Dimensions of Cone Head Rivets
(Manufactured Shape)

Nominal Size ¹ or Basic Shank Diameter	E		A			B			H	
	Shank Diameter		Major Head Diameter			Minor Head Diameter			Head Height	
	Max	Min	Basic	Max	Min	Basic	Max	Min	Max	Min (Basic)
1/2 0.500	0.520	0.478	0.875	0.938	0.844	0.469	0.532	0.438	0.469	0.438
5/8 0.625	0.655	0.600	1.094	1.157	1.063	0.586	0.649	0.555	0.578	0.547
3/4 0.750	0.780	0.725	1.312	1.390	1.281	0.703	0.781	0.672	0.687	0.656
7/8 0.875	0.905	0.850	1.531	1.609	1.500	0.820	0.898	0.789	0.797	0.766
1 1.000	1.030	0.975	1.750	1.828	1.719	0.938	1.016	0.907	0.906	0.875
1 1/8 1.125	1.160	1.098	1.969	2.063	1.938	1.055	1.149	1.024	1.031	0.984
1 1/4 1.250	1.285	1.223	2.188	2.282	2.157	1.172	1.266	1.141	1.141	1.094
1 3/8 1.375	1.415	1.345	2.406	2.500	2.375	1.290	1.384	1.259	1.250	1.203
1 1/2 1.500	1.540	1.470	2.625	2.719	2.594	1.406	1.500	1.375	1.375	1.312
1 5/8 1.625	1.665	1.588	2.844	2.938	2.813	1.524	1.618	1.493	1.485	1.422
1 3/4 1.750	1.790	1.713	3.062	3.171	3.031	1.641	1.750	1.610	1.594	1.531

¹Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.
For additional requirements refer to General Data on Page 2.

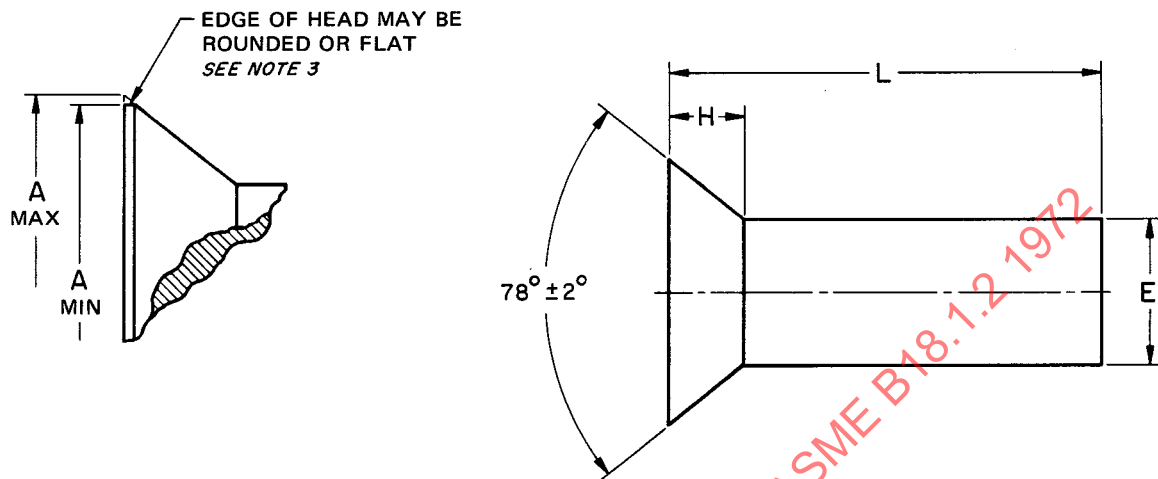


Table 4 Dimensions of Flat Countersunk Head Rivets
(Manufactured Shape)

Nominal Size ¹ or Basic Shank Diameter	E		A		H
	Shank Diameter		Head Diameter		Head Height
	Max	Min	Max ²	Min ³	Ref ⁴
1/2 0.500	0.520	0.478	0.936	0.872	0.260
5/8 0.625	0.655	0.600	1.194	1.112	0.339
3/4 0.750	0.780	0.725	1.421	1.322	0.400
7/8 0.875	0.905	0.850	1.647	1.532	0.460
1 1.000	1.030	0.975	1.873	1.745	0.520
1 1/8 1.125	1.160	1.098	2.114	1.973	0.589
1 1/4 1.250	1.285	1.223	2.340	2.199	0.650
1 3/8 1.375	1.415	1.345	2.567	2.426	0.710
1 1/2 1.500	1.540	1.470	2.793	2.652	0.771
1 5/8 1.625	1.665	1.588	3.019	2.878	0.831
1 3/4 1.750	1.790	1.713	3.262	3.121	0.901

¹Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.

²Sharp edged head. The tabulated maximum values represent between 97.5 and 98.7 per cent of the diameter extended to a theoretical sharp edge, calculated from the maximum shank diameter and 80° included angle.

³Rounded or flat edged irregular shaped head. Since the heads of these rivets are not machined or trimmed, the circumference may be somewhat irregular and edges may be rounded or flat.

⁴Head Height, H, is given for reference purposes only.

For additional requirements refer to General Data on Page 2.

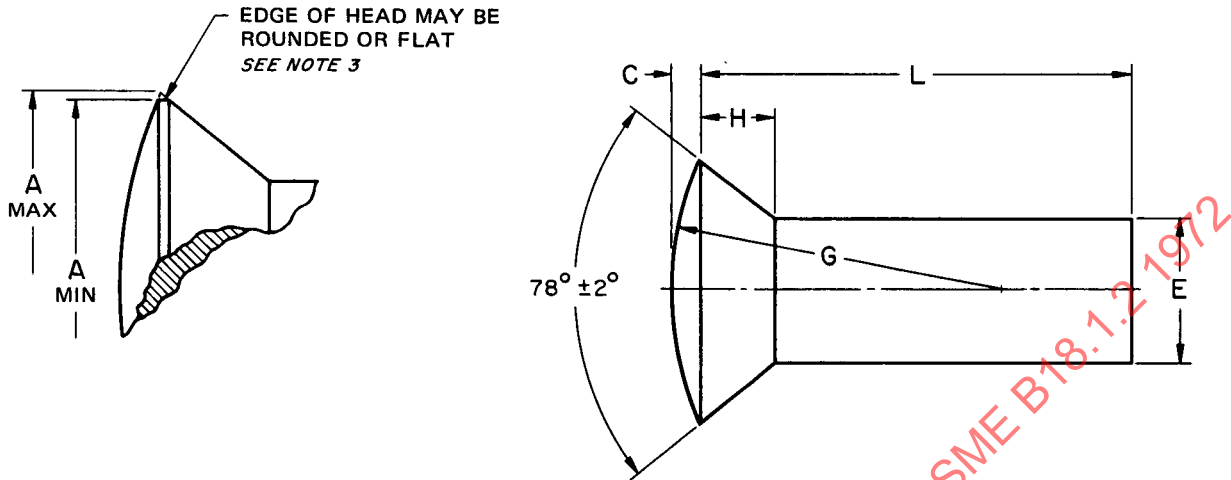


Table 5 Dimensions of Oval Countersunk Head Rivets⁵
(Manufactured Shape)

Nominal Size ¹ or Basic Shank Diameter	E		A		H	C	G
	Shank Diameter		Head Diameter		Head Height	Oval Crown Height	Oval Crown Radius
	Max	Min	Max ²	Min ³	Ref ⁴	Basic	Basic
1/2 0.500	0.520	0.478	0.936	0.872	0.260	0.095	1.125
5/8 0.625	0.655	0.600	1.194	1.112	0.339	0.119	1.406
3/4 0.750	0.780	0.725	1.421	1.322	0.400	0.142	1.688
7/8 0.875	0.905	0.850	1.647	1.532	0.460	0.166	1.969
1 1.000	1.030	0.975	1.873	1.745	0.520	0.190	2.250
1 1/8 1.125	1.160	1.098	2.114	1.973	0.589	0.214	2.531
1 1/4 1.250	1.285	1.223	2.340	2.199	0.650	0.238	2.812
1 3/8 1.375	1.415	1.345	2.567	2.426	0.710	0.261	3.094
1 1/2 1.500	1.540	1.470	2.793	2.652	0.771	0.285	3.375
1 5/8 1.625	1.665	1.588	3.019	2.878	0.831	0.309	3.656
1 3/4 1.750	1.790	1.713	3.262	3.121	0.901	0.332	3.938

¹Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.

²Sharp edged head. The tabulated maximum values represent between 97.5 and 98.7 per cent of the diameter extended to a theoretical sharp edge calculated from the maximum shank diameter and 80° included angle.

³Rounded or flat edged irregular shaped head. Since the heads of these rivets are not machined or trimmed, the circumference may be somewhat irregular and edges may be rounded or flat.

⁴Head height, H, is given for reference purposes only.

⁵This rivet was previously designated as a Round Top Countersunk Head.

For additional requirements refer to General Data on Page 2.

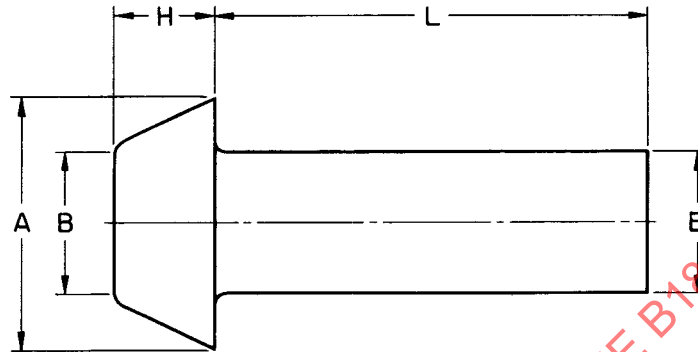


Table 6 Dimensions of Pan Head Rivets
(Manufactured Shape)

Nominal Size ¹ or Basic Shank Diameter	E		A				B			H	
	Shank Diameter		Major Head Diameter				Minor Head Diameter			Head Height	
	Max	Min	Basic	Max	Min	Basic	Max	Min	Basic	Max	Min (Basic)
1/2 0.500	0.520	0.478	0.800	0.863	0.769	0.500	0.563	0.469	0.381	0.350	
5/8 0.625	0.655	0.600	1.000	1.063	0.969	0.625	0.688	0.594	0.469	0.438	
3/4 0.750	0.780	0.725	1.200	1.278	1.169	0.750	0.828	0.719	0.556	0.525	
7/8 0.875	0.905	0.850	1.400	1.478	1.369	0.875	0.953	0.844	0.643	0.612	
1 1.000	1.030	0.975	1.600	1.678	1.569	1.000	1.078	0.969	0.731	0.700	
1 1/8 1.125	1.160	1.098	1.800	1.894	1.769	1.125	1.219	1.094	0.835	0.788	
1 1/4 1.250	1.285	1.223	2.000	2.094	1.969	1.250	1.344	1.219	0.922	0.875	
1 3/8 1.375	1.415	1.345	2.200	2.294	2.169	1.375	1.469	1.344	1.009	0.962	
1 1/2 1.500	1.540	1.470	2.400	2.494	2.369	1.500	1.594	1.469	1.113	1.050	
1 5/8 1.625	1.665	1.588	2.600	2.694	2.569	1.625	1.719	1.594	1.201	1.138	
1 3/4 1.750	1.790	1.713	2.800	2.909	2.769	1.750	1.859	1.719	1.288	1.225	

¹Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.

For additional requirements refer to General Data on Page 2.

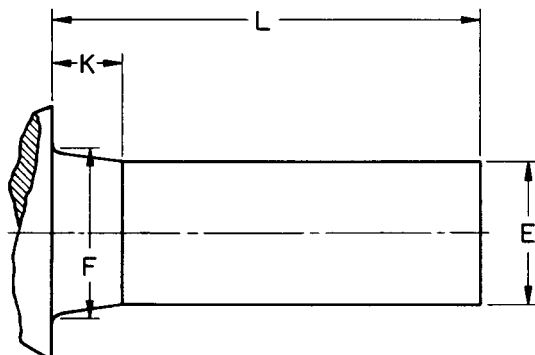


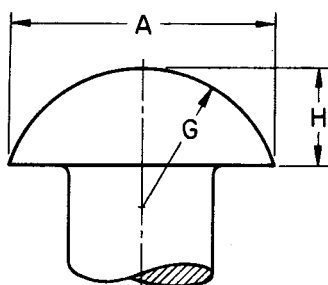
Table 7 Dimensions of Swell-Neck Rivets²
(Manufactured Shape)

Nominal Size ¹ or Basic Shank Diameter	E		F		K
	Shank Diameter		Neck Diameter Under Head		Neck Length
	Max	Min	Max (Basic)	Min	Basic
1/2 0.500	0.520	0.478	0.563	0.543	0.250
5/8 0.625	0.655	0.600	0.688	0.658	0.312
3/4 0.750	0.780	0.725	0.813	0.783	0.375
7/8 0.875	0.905	0.850	0.938	0.908	0.438
1 1.000	1.030	0.975	1.063	1.033	0.500
1 1/8 1.125	1.160	1.098	1.188	1.153	0.562
1 1/4 1.250	1.285	1.223	1.313	1.278	0.625
1 3/8 1.375	1.415	1.345	1.438	1.398	0.688
1 1/2 1.500	1.540	1.470	1.563	1.523	0.750
1 5/8 1.625	1.665	1.588	1.688	1.648	0.812
1 3/4 1.750	1.790	1.713	1.813	1.773	0.875

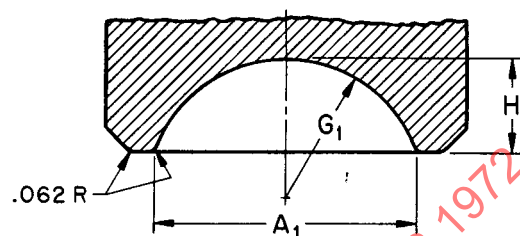
¹ Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.

² The swell neck is applicable to all standard large rivets except the flat countersunk head and oval countersunk head types.

For additional requirements refer to General Data on Page 2.



MANUFACTURED HEAD
AFTER DRIVING, ALSO
DRIVEN HEAD

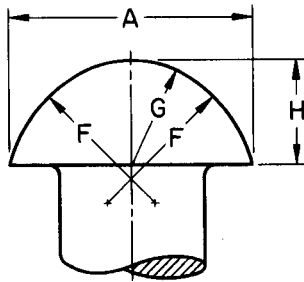


HOLD-ON (DOLLY BAR),
ALSO RIVET SET
IMPRESSION

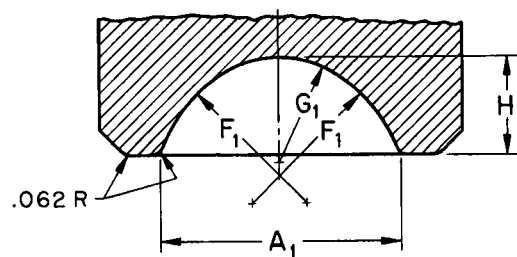
Table 8 Dimensions of Button Head Rivet
Manufactured Heads After Driving and Driven Heads,
Also Hold-On (Dolly Bar) and Rivet Set Impressions

Nominal Size ¹ or Basic Shank Diameter	Manufactured Heads After Driving and Driven Heads			Hold-On (Dolly Bar) and Rivet Set Impressions		
	A	H	G	A ₁	H ₁	G ₁
	Head Diameter	Head Height	Head Top Radius	Impression Diameter	Impression Depth	Impression Base Radius
	Basic	Basic	Basic	Basic	Basic	Basic
1/2 0.500	0.922	0.344	0.484	0.906	0.312	0.484
5/8 0.625	1.141	0.438	0.594	1.125	0.406	0.594
3/4 0.750	1.375	0.516	0.719	1.344	0.484	0.719
7/8 0.875	1.594	0.609	0.844	1.578	0.562	0.844
1 1.000	1.828	0.688	0.953	1.812	0.641	0.953
1 1/8 1.125	2.062	0.781	1.078	2.031	0.719	1.078
1 1/4 1.250	2.281	0.859	1.188	2.250	0.797	1.188
1 3/8 1.375	2.516	0.953	1.312	2.469	0.875	1.312
1 1/2 1.500	2.734	1.031	1.438	2.703	0.953	1.438
1 5/8 1.625	2.969	1.125	1.547	2.922	1.047	1.547
1 3/4 1.750	3.203	1.203	1.672	3.156	1.125	1.672

¹Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.
For additional requirements refer to General Data on Page 2.



MANUFACTURED HEAD
AFTER DRIVING, ALSO
DRIVEN HEAD



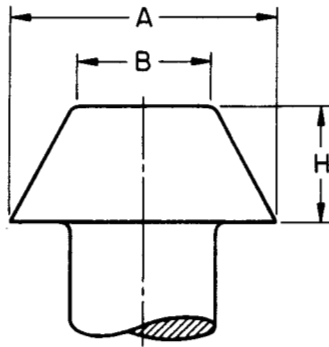
HOLD-ON (DOLLY BAR),
ALSO RIVET SET
IMPRESSION

Table 9 Dimensions of High Button Head (Acorn) Rivet
Manufactured Heads After Driving and Driven Heads,
Also Hold-On (Dolly Bar) and Rivet Set Impressions

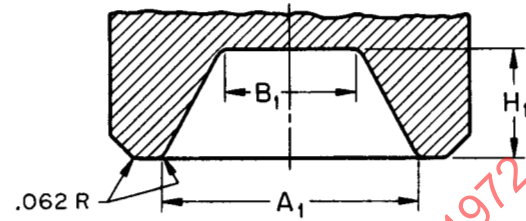
Nominal Size ¹ or Basic Shank Diameter	Manufactured Heads After Driving and Driven Heads				Hold-On (Dolly Bar) and Rivet Set Impressions			
	A	H	F	G	A ₁	H ₁	F ₁	G ₁
	Head Diameter	Head Height	Head Side Radius	Head Top Radius	Impression Diameter	Impression Depth	Impression Side Radius	Impression Base Radius
	Basic	Basic	Basic	Basic	Basic	Basic	Basic	Basic
1/2 0.500	0.875	0.375	0.562	0.375	0.859	0.344	0.562	0.375
5/8 0.625	1.062	0.453	0.672	0.453	1.047	0.422	0.672	0.453
3/4 0.750	1.250	0.531	0.797	0.531	1.234	0.500	0.797	0.531
7/8 0.875	1.438	0.609	0.922	0.609	1.422	0.578	0.922	0.609
1 1.000	1.625	0.688	1.031	0.688	1.609	0.656	1.031	0.688
1 1/8 1.125	1.812	0.766	1.156	0.766	1.797	0.719	1.156	0.766
1 1/4 1.250	2.000	0.844	1.266	0.844	1.984	0.797	1.266	0.844
1 3/8 1.375	2.188	0.938	1.406	0.938	2.172	0.875	1.406	0.938
1 1/2 1.500	2.375	1.000	1.500	1.000	2.344	0.953	1.500	1.000
1 5/8 1.625	2.562	1.094	1.641	1.094	2.531	1.031	1.641	1.094
1 3/4 1.750	2.750	1.172	1.750	1.172	2.719	1.109	1.750	1.172

¹Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.

For additional requirements refer to General Data on Page 2.



MANUFACTURED HEAD
AFTER DRIVING, ALSO
DRIVEN HEAD

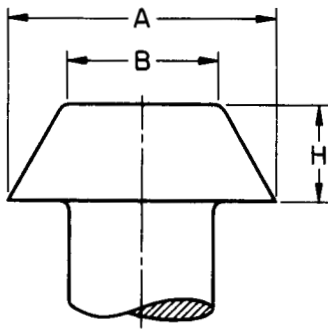


HOLD-ON (DOLLY BAR),
ALSO RIVET SET
IMPRESSION

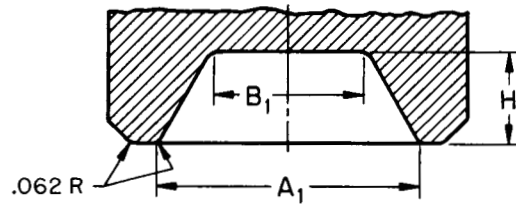
Table 10 Dimensions of Cone Head Rivet
Manufactured Heads After Driving and Driven Heads,
Also Hold-On (Dolly Bar) and Rivet Set Impressions

Nominal Size ¹ or Basic Shank Diameter	Manufactured Heads After Driving and Driven Heads			Hold-On (Dolly Bar) and Rivet Set Impressions		
	A	B	H	A ₁	B ₁	H ₁
	Major Head Diameter	Minor Head Diameter	Head Height	Impression Diameter	Bottom Impression Diameter	Impression Depth
	Basic	Basic	Basic	Basic	Basic	Basic
1/2 0.500	0.922	0.469	0.406	0.891	0.469	0.391
5/8 0.625	1.141	0.594	0.516	1.109	0.594	0.484
3/4 0.750	1.375	0.703	0.625	1.328	0.703	0.578
7/8 0.875	1.594	0.828	0.719	1.562	0.828	0.688
1 1.000	1.828	0.938	0.828	1.781	0.938	0.781
1 1/8 1.125	2.063	1.063	0.938	2.000	1.063	0.875
1 1/4 1.250	2.281	1.172	1.031	2.219	1.172	0.969
1 3/8 1.375	2.516	1.297	1.141	2.453	1.297	1.078
1 1/2 1.500	2.734	1.406	1.250	2.672	1.406	1.172
1 5/8 1.625	2.969	1.531	1.344	2.891	1.531	1.266
1 3/4 1.750	3.203	1.641	1.453	3.109	1.641	1.375

¹Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.
For additional requirements refer to General Data on Page 2.



MANUFACTURED HEAD
AFTER DRIVING, ALSO
DRIVEN HEAD



HOLD-ON (DOLLY BAR)
ALSO RIVET SET
IMPRESSION

Table 11 Dimensions of Pan Head Rivet
Manufactured Heads After Driving and Driven Heads,
Also Hold-On (Dolly Bar) and Rivet Set Impressions

Nominal Size ¹ or Basic Shank Diameter	Manufactured Heads After Driving and Driven Heads			Hold-On (Dolly Bar) and Rivet Set Impressions		
	A	B	H	A ₁	B ₁	H ₁
	Major Head Diameter	Minor Head Diameter	Head Height	Impression Diameter	Bottom Impression Diameter	Impression Depth
	Basic	Basic	Basic	Basic	Basic	Basic
1/2 0.500	0.844	0.500	0.328	0.812	0.500	0.297
5/8 0.625	1.047	0.625	0.406	1.031	0.625	0.375
3/4 0.750	1.266	0.750	0.484	1.234	0.750	0.453
7/8 0.875	1.469	0.875	0.578	1.438	0.875	0.531
1 1.000	1.687	1.000	0.656	1.641	1.000	0.609
1 1/8 1.125	1.891	1.125	0.734	1.844	1.125	0.688
1 1/4 1.250	2.094	1.250	0.812	2.047	1.250	0.766
1 3/8 1.375	2.312	1.375	0.906	2.250	1.375	0.844
1 1/2 1.500	2.516	1.500	0.984	2.453	1.500	0.906
1 5/8 1.625	2.734	1.625	1.062	2.656	1.625	0.984
1 3/4 1.750	2.938	1.750	1.141	2.875	1.750	1.063

¹Where specifying nominal size in decimals, zeros preceding decimal shall be omitted.

For additional requirements refer to General Data on Page 2.

APPENDIX I

FORMULAS FOR RIVET DIMENSIONS

Where: D = Basic diameter of rivet shank.

Shank Diameter

Nominal Rivet Size	Shank Diameter		
	Basic	Tolerance	
		Plus	Minus
1/2	0.500	0.020	0.022
5/8	0.625	0.030	0.025
3/4	0.750	0.030	0.025
7/8	0.875	0.030	0.025
1	1.000	0.030	0.025
1 1/8	1.125	0.035	0.027
1 1/4	1.250	0.035	0.027
1 3/8	1.375	0.040	0.030
1 1/2	1.500	0.040	0.030
1 5/8	1.625	0.040	0.037
1 3/4	1.750	0.040	0.037

Button Head

Nominal Rivet Size	Head Diameter			Head Height			Head Radius
	Basic	Tolerance		Basic	Tolerance		Basic
		Plus	Minus		Plus	Minus	
1/2 and 5/8 3/4 thru 1 1 1/8 thru 1 3/8 1 1/2 and 1 5/8 1 3/4	A = 1.750D	0.063 0.078 0.094 0.094 0.109	0.031 0.031 0.031 0.031 0.031	H = 0.750D	0.031 0.031 0.047 0.063 0.063	0.000 0.000 0.000 0.000 0.000	G = 0.885D

High Button Head (Acorn)

Nominal Rivet Size	Head Diameter			Head Height			Head Side Radius	Head Top Radius
	Basic	Tolerance		Basic	Tolerance		Basic	Basic
		Plus	Minus		Plus	Minus		
1/2 and 5/8 3/4 thru 1 1 1/8 thru 1 3/8 1 1/2 and 1 5/8 1 3/4	A = 1.500D + 0.031	0.063 0.078 0.094 0.094 0.109	0.031 0.031 0.031 0.031 0.031	H = 0.750D + 0.125	0.031 0.031 0.047 0.063 0.063	0.016 0.031 0.031 0.031 0.031	F = 0.750D + 0.281	G = 0.750D - 0.281