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About This Guide

About This Guide contains information about what is contained in this user guide and the conventions used.

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Purpose

The BASIC LIBRARY is a collection of commonly used engineering parts and features ready to use in your assemblies and parts.

Audience

You can use the BASIC LIBRARY features as follows:

- The features are already made, completely defined with appropriate dimensioning schemes and relations, and are generically sized and located on a reference part. This means that you can use the feature in your part, sized and placed to suit your needs.
- BASIC LIBRARY features can be modified by you and stored back in the library where other users can access them. This allows you to add a family table to the feature if you have specific sizes of the feature you use repeatedly. This will save your users the time of modifying the dimensions of the feature when they retrieve it.
- You can also add your own features to the feature library directory. Pro/LIBRARY then makes all your UDFs available as library features. Expanding the library improves efficiency because your users will not have to spend time re-creating your generic features.

Contents

This document contains illustrations of all the BASIC LIBRARY parts and features, and all the information necessary to find and use any part or feature.

At the beginning of this catalog is the Table of Contents that lists, by name and description, all the BASIC LIBRARY parts and features. Refer to this when searching for a particular item.

The manual contains the following sections:

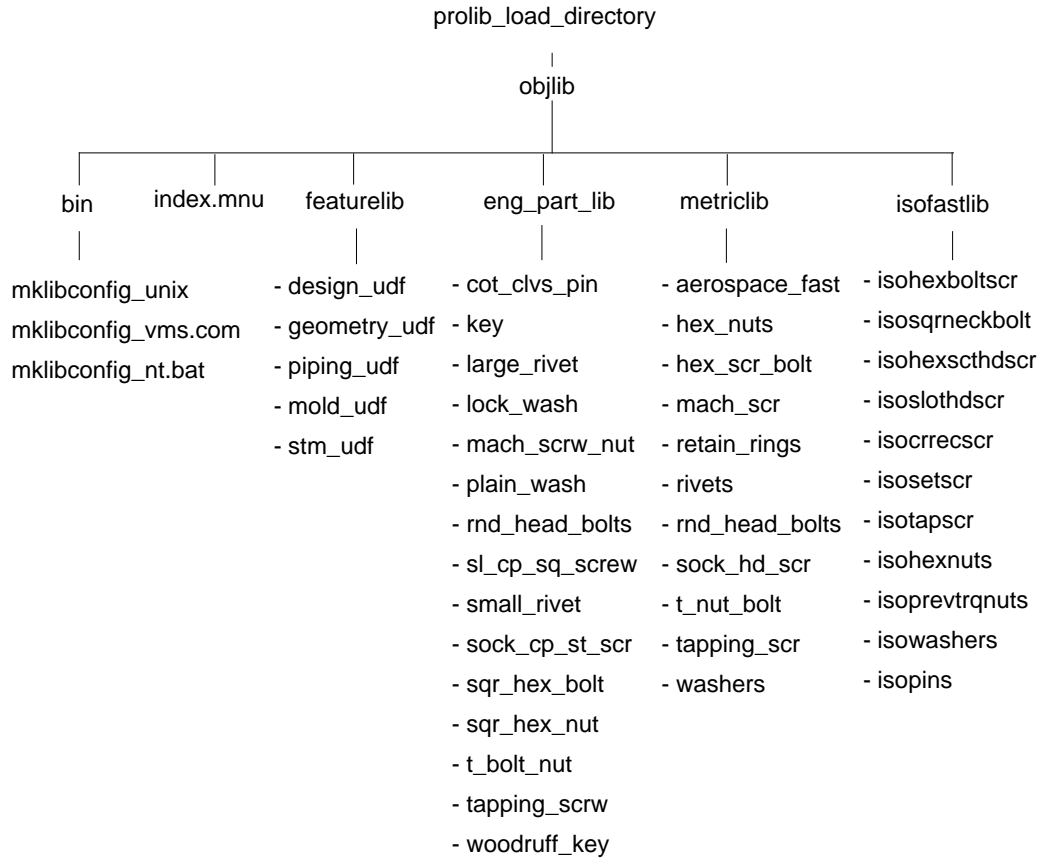
- SECTION 1—**Common features**—This is a collection of commonly used engineering features (pertaining to geometry, piping, design, and so on) of generic shapes (such as hexagonal, oval, and octagonal) and sizes. These are user-defined features (UDFs) with cross-sections, feature attributes, and relations built into the feature. The features are found in the */objlib/featurelib* directory and are ready to use in your parts.
- SECTION 2—**Standard parts**—This is a collection of common fasteners (bolts, nuts, rivets, screws, and so on) of sizes corresponding to the ANSI inch series. The parts are easily retrievable using common callouts (such as basic diameter and rivet size) and are ready to use in your assemblies. They are found in the */objlib/eng_part_lib* directory.
- SECTION 3—**Metric parts**—This is a collection of common fasteners in metric sizes that conform to ANSI standards. These parts are also retrievable using common callouts, and are ready for use in assemblies. They are found in the */objlib/metriclib* directory.
- SECTION 4—**ISO fasteners and parts**—This is a collection of common fasteners and parts that conform to the ISO standard. These parts are retrievable using common callouts, and are ready for use in assemblies. They are found in the */objlib/isofastlib* directory.

You can also browse the BASIC LIBRARY using the yellow one-line help appearing in the Message Window of Pro/ENGINEER. When your mouse cursor is over a menu item of the library, whether a directory or part name, the system displays the contents of the highlighted item.

The different sizes for the parts were created using “standard” type family tables. Standard type tables have the advantage that only the instances being used are stored when you use the **File > Save** option, or when you store an assembly or drawing that uses the instances. The generic part is not usually stored. This saves disk space, and ensures that, as long as the proper search paths are maintained, the assembly can be retrieved wherever it is.

The following figure shows the directory hierarchy of the BASIC LIBRARY.

Figure 0-1: The BASIC LIBRARY Directory Structure



Prerequisites

To use an existing UDF, you need either a Pro/FEATURE or a Pro/LIBRARY ACCESS™ license. However, to create your own UDFs, you need a Pro/FEATURE™ license.

Documentation

For more information about using the BASIC LIBRARY, see the *Introduction to the Libraries*.

Conventions

The following table lists conventions and terms used throughout this book.

Convention	Description
UPPERCASE	Pro/ENGINEER-type menu name (for example, PART).
Boldface	Windows-type menu name or menu or dialog box option (for example, View), or utility (for example, promonitor).
Monospace (Courier)	Code samples appear in courier font like this.
SMALLCAPS	Key names appear in smallcaps (for example, ENTER).
<i>Emphasis</i>	Important information appears <i>in italics like this</i> .
Choose	Highlight a menu option by placing the arrow cursor on the option, and pressing the left mouse button.
Select	A synonym for “choose” as above, select also describes the actions of selecting elements on a model, and checking boxes.
Element	An element describes redefinable characteristics of a feature in a model.
Mode	An environment in Pro/ENGINEER in which you can perform a group of closely related functions (Drawing, for example).
Model	A part, subassembly or top level assembly.
Object	The selected part of the model you view and manipulate.
Option	An item in a menu or an entry in a configuration file or a setup file.

Notes:

- Important information that should not be overlooked appears in notes like this.
- All references to mouse clicks assume the use of a right-handed mouse.

Section 1

Features Library

Section 1 of the *BASIC LIBRARY Catalog* contains commonly used engineering features. These features (pertaining to geometry, design, piping, and so on) are of generic shape (such as hexagonal, oval, or octagonal) and sizes. These are UDFs with cross-sections, feature attributes, and relations built into the feature. The features are ready to use in your part.



1

Geometric Features

The Pro/LIBRARY directory *featurelib/geometry_udf* contains protrusions and cuts in standardized sections. Use a datum point on any surface to place these features in a part.

Protrusions

Pro/LIBRARY contains protrusions in the subdirectory *protrusion_ufd*. Protrusions are grouped by standardized cross-sections. Identify a datum point on the surface of your part as a location before you add a protrusion. The group name is UGP x , where x identifies the type of cross-section as follows:

- C - Circular
- E - Elliptical
- H - Hexagonal
- OC - Octagonal
- OV - Oval
- R - Rectangular
- S - Slot

Prompts

When you use a protrusion in your part, you must have already defined a datum point on the surface of the part for the center of the group, and a reference plane for the direction. The system prompts you to do the following:

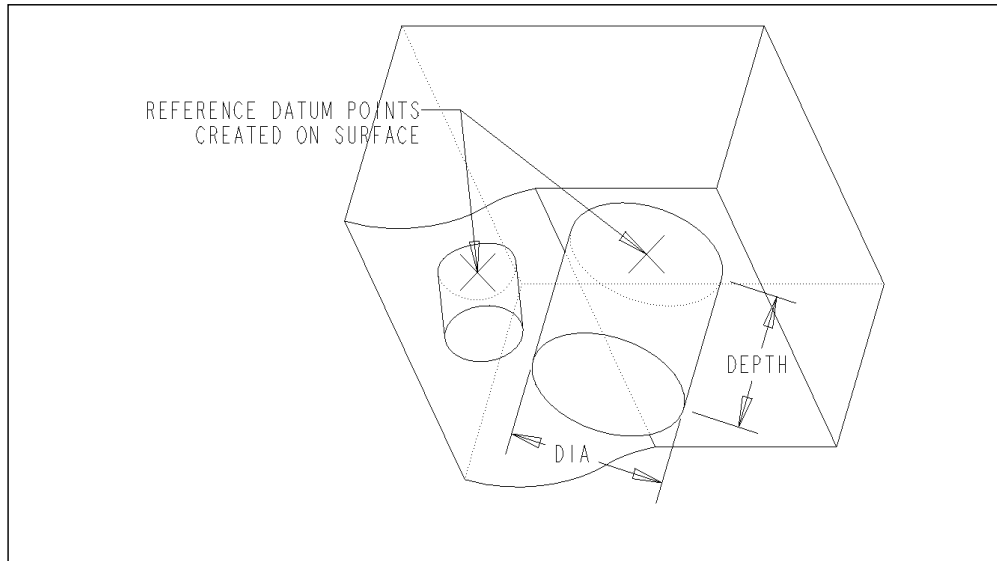
1. Select placement and scaling options for the feature.
2. Enter the dimensions of the feature section. See Section Types for the information needed. The height value you enter here will be measured from the FRONT reference plane.
3. Select the center of the protrusion. This is a predefined datum point.
4. Select the reference plane which defines the direction of the protrusion. This is a datum plane or planar surface.
5. Indicate the reference direction.
6. If you have entered all valid points, the group will automatically regenerate in your drawing box.

You can edit the values for the protrusion before you close creation of the group.

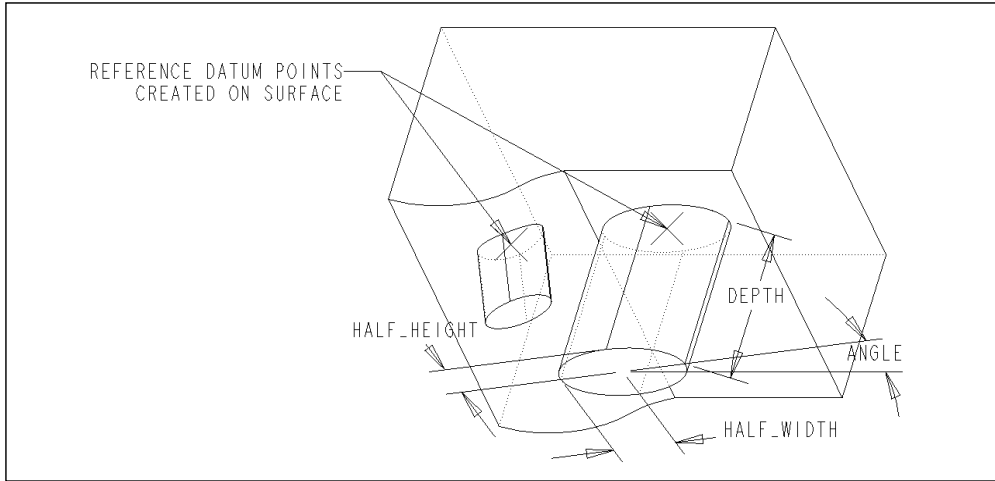
Section Types

Listed below are examples of each type of cross-section of protrusions. Included in the drawings are the dimensions which you will need to enter to specify the protrusion.

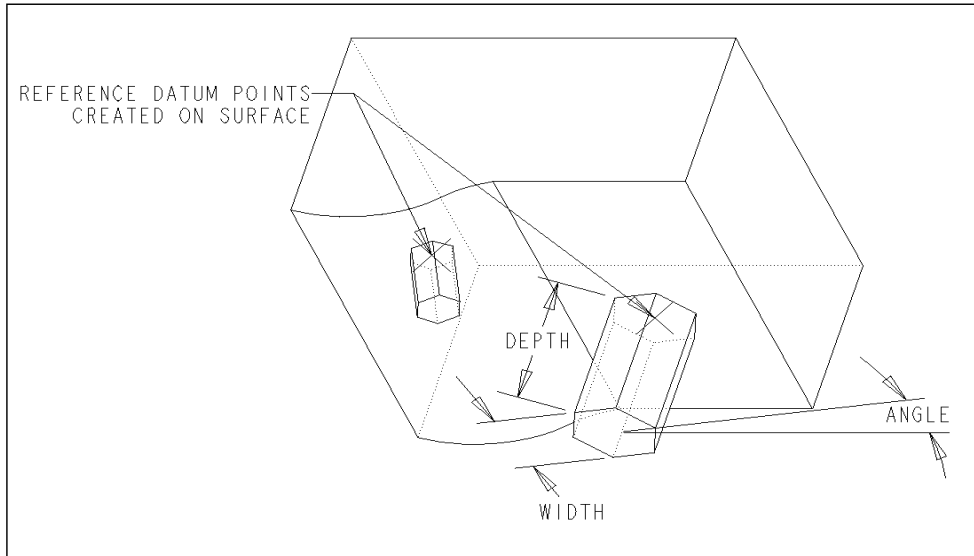
Example of Circular Protrusion



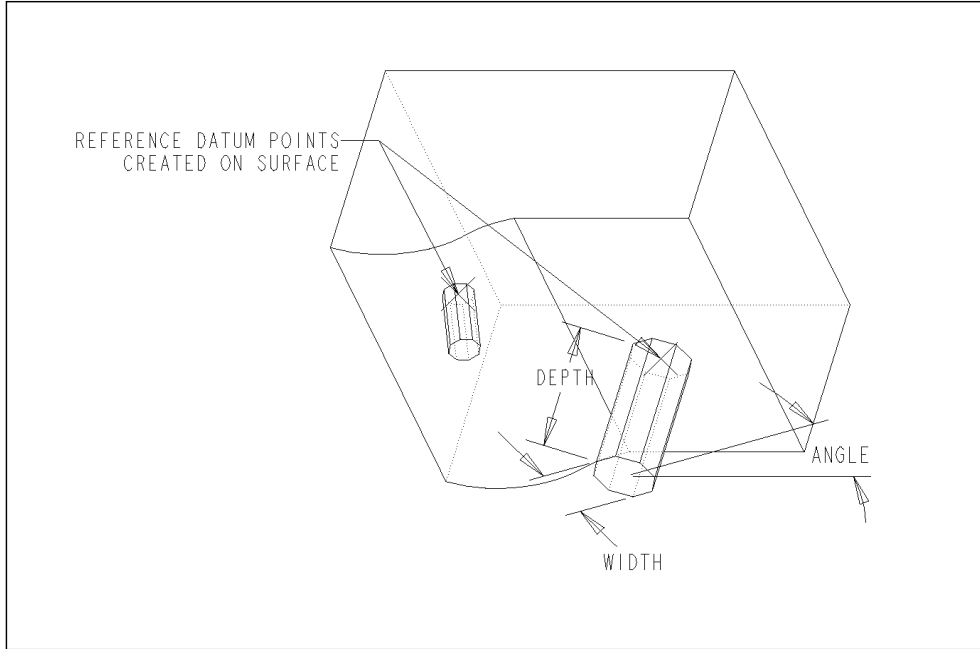
Example of Elliptical Protrusion



Example of Hexagonal Protrusion

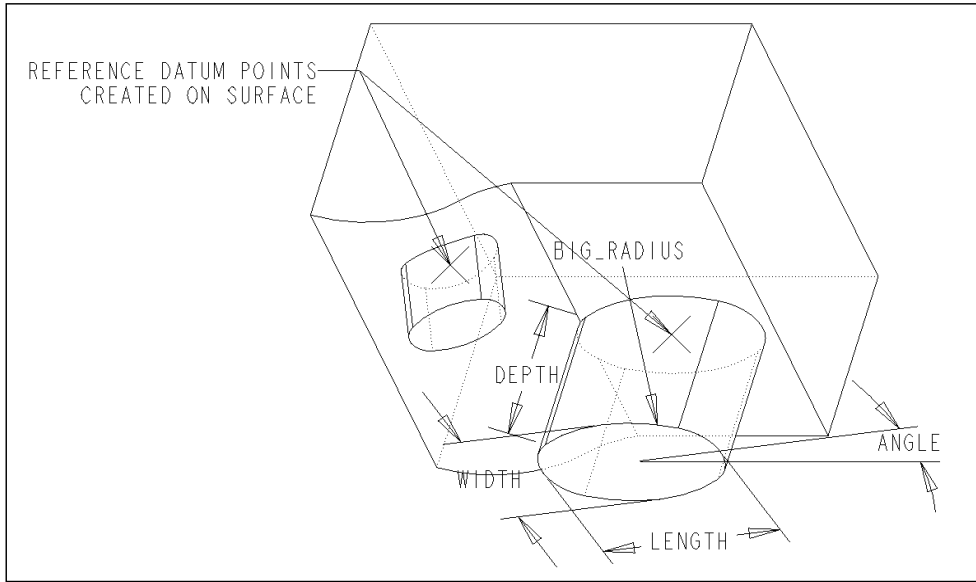


Example of Octagonal Protrusion

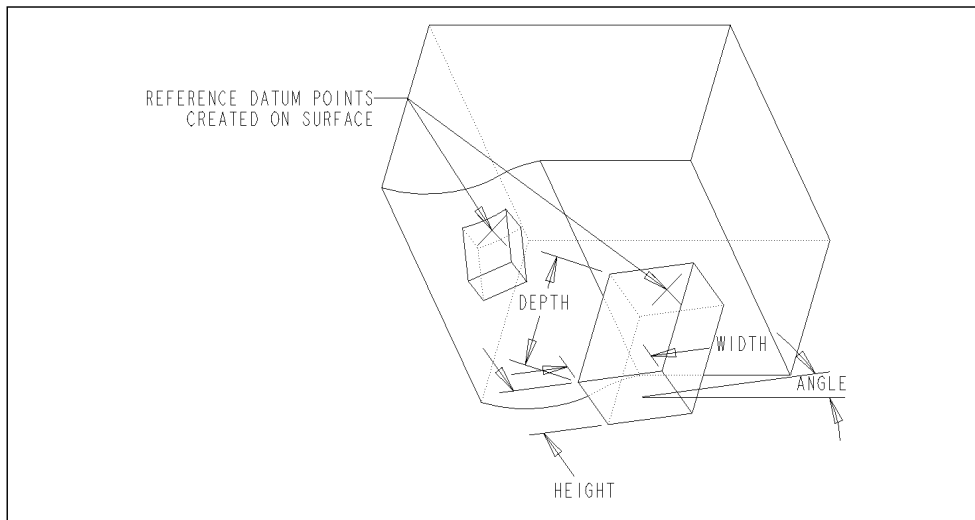


Geometric Features

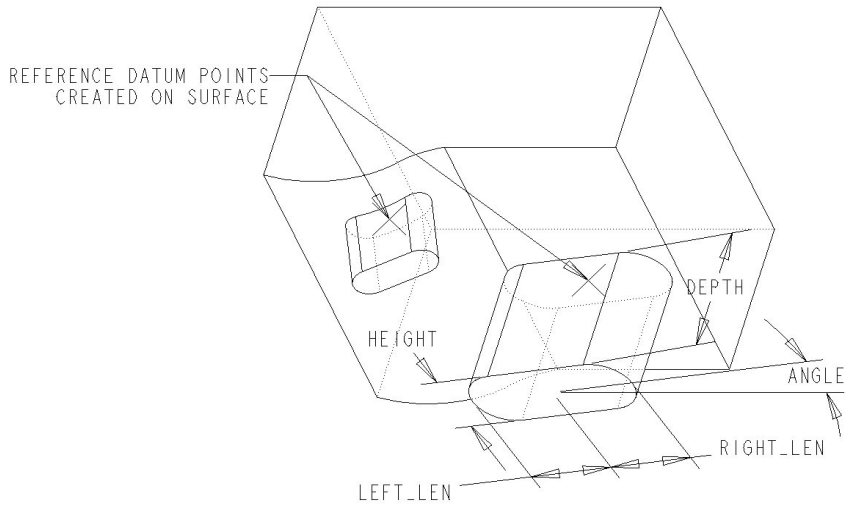
Example of Oval Protrusion



Example of Rectangular Protrusion



Example of Slot Protrusion



Cuts

Pro/LIBRARY contains cuts in the subdirectory *cuts_udf*. Cuts are grouped by standardized sections. Identify a datum point on the surface of your part as a location before you add a cut. The group name is UGCx, where x identifies the cross-section as follows:

- C - Circular
- E - Elliptical
- H - Hexagonal
- OC - Octagonal
- OV - Oval
- R - Rectangular
- S - Slot

Prompts

When you use a cut in your part, you must have already defined a datum point on the surface of your part for the center of the cut. The system prompts you to do the following:

1. Select the placement and scaling options for the feature.

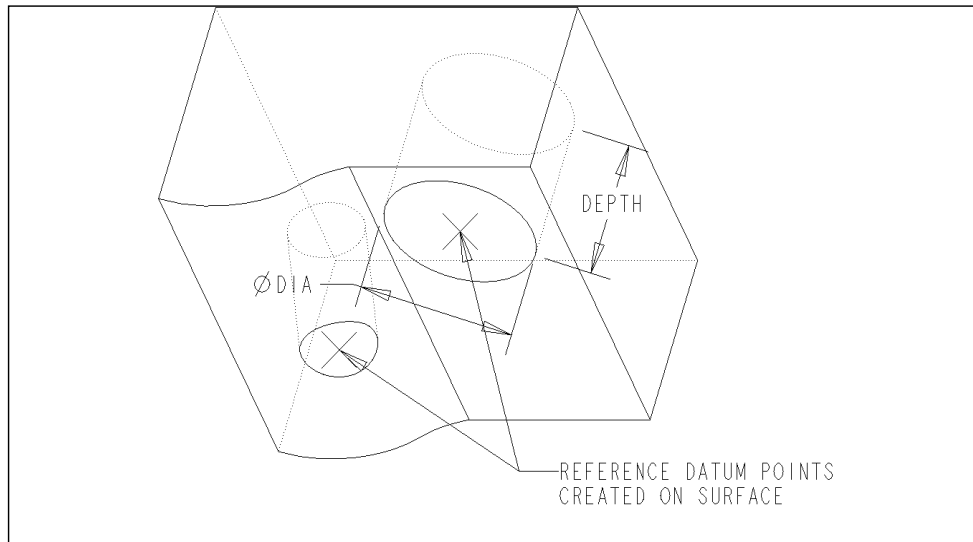
2. Enter the dimensions of the feature section. *See Section Types for the information needed.* The depth value you enter here will be measured from the FRONT reference plane.
3. Select the display options for invariable dimensions.
4. Select the point for the center of the feature. This is a predefined datum point.
5. Select the reference plane. This is a datum plane or planar surface.
6. Select the reference direction for the cut.

You can change the attributes of the cut before you close creation of the group.

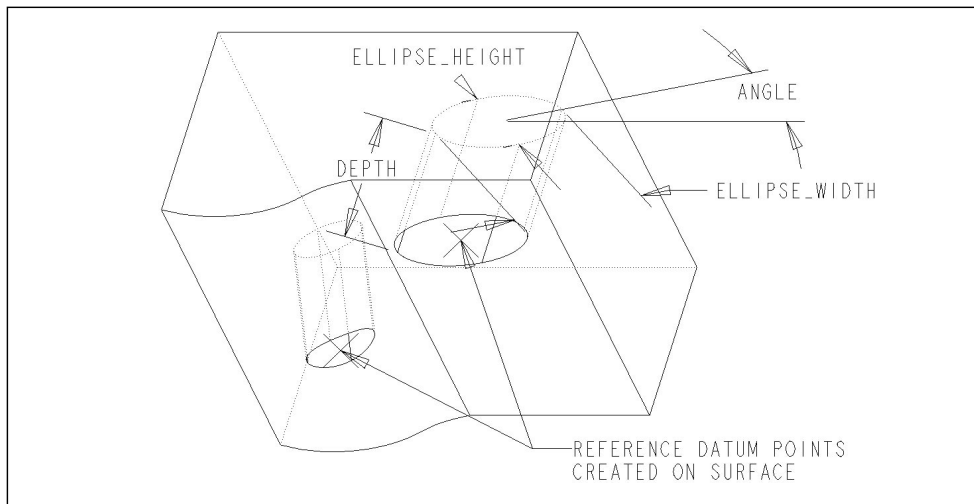
Section Types

Shown below are examples of each shape of cut available in the UDF library. Included in the drawings are the dimensions which you will enter to specify the cuts.

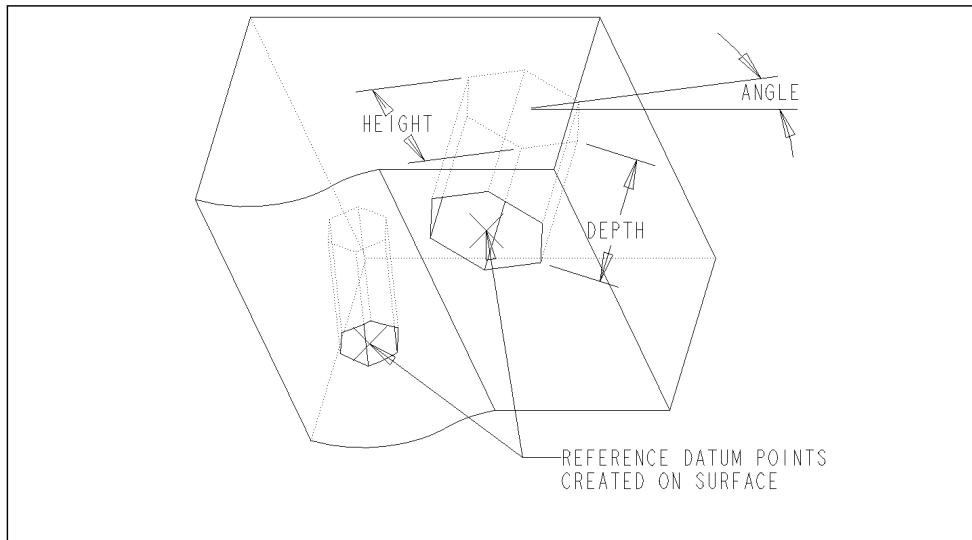
Example of Circular Cut



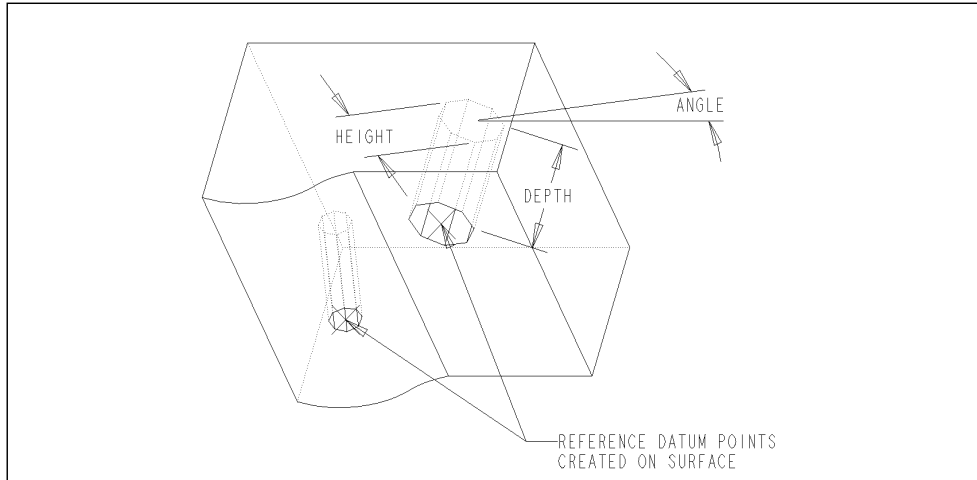
Example of Elliptical Cut



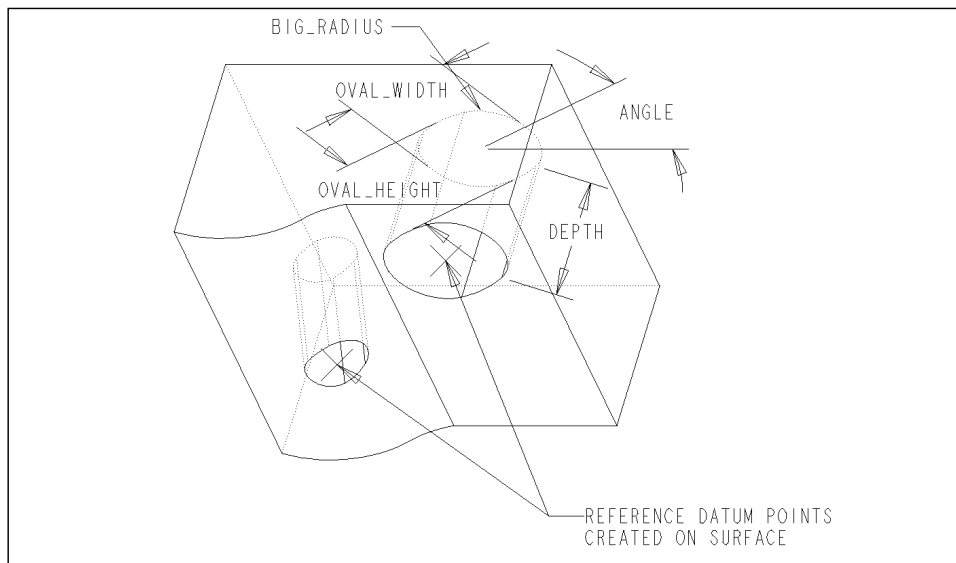
Example of Hexagonal Cut



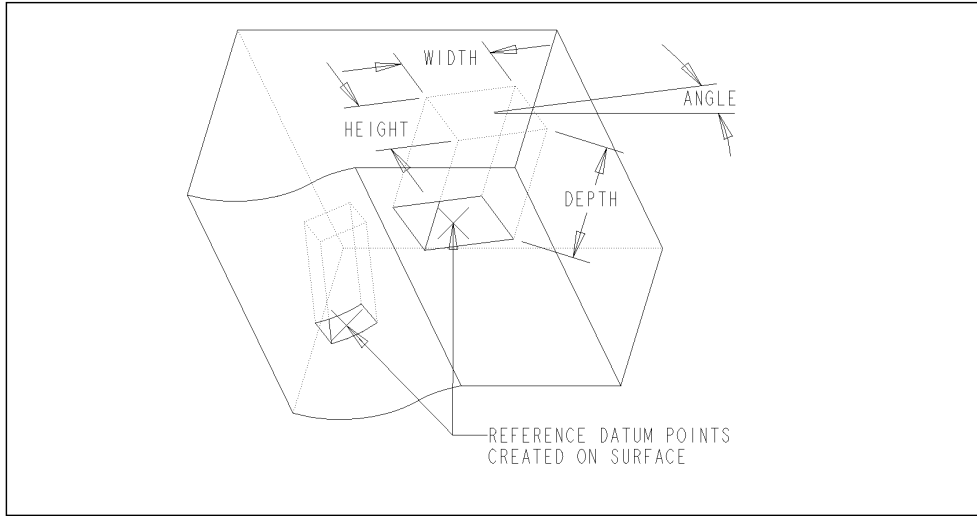
Example of Octagonal Cut



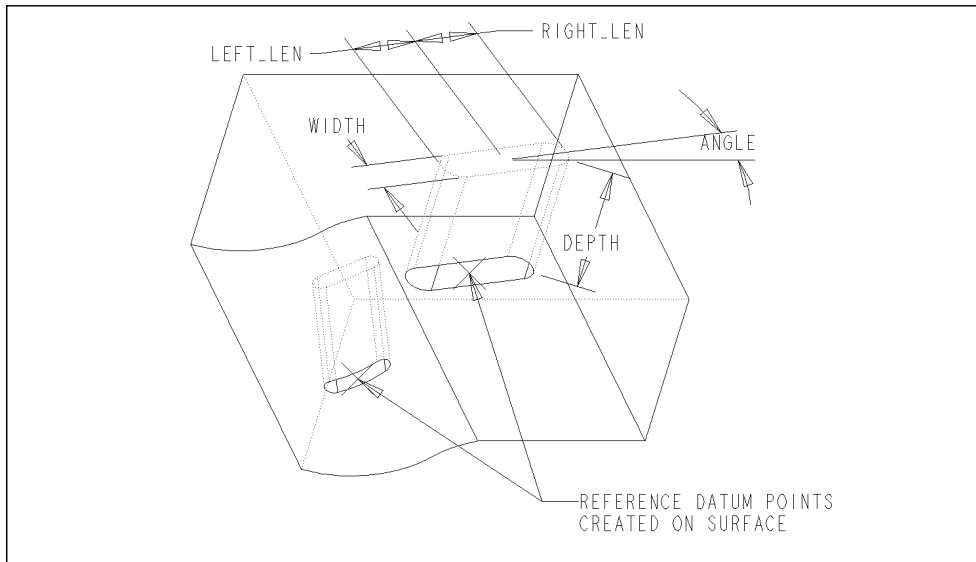
Example of Oval Cut



Example of Rectangular Cut



Example of Slot Cut



2

Design Features

Pro/LIBRARY group DESIGN contains both standard and metric design features such as holes, threaded holes and grooves. Standard features are in the directory *design_udf_st*, and metric features are in the directory *design_udf_m*.

Standard Design Features

The standard design features are grouped under the structure USxx. The naming convention is as follows:

- **xx** - Identifies the type of hole or thread. The possible values are as follows:
 - TC - Coarse-Thread Threaded Holes
 - TF - Fine-Thread Threaded Holes
 - SN - Holes for Countersunk Head Screws
 - HN - Holes for Hexagon Head Screws
 - CN - Holes for Socket Head Screws
- A *p* at the end of the part name indicates that the feature is normal to a plane rather than to the surface of the part.

Prompts

When you use a design feature in your part, you must have already defined a datum point on the surface of the part for the center of the feature, and a reference plane for the direction. The system prompts you to do the following:

1. Select placement and scaling options for the feature.
2. Enter the dimensions of the feature section. See Hole Types and Family Tables for the information needed. The height value you enter here will be measured from the surface datum point.
3. Select the center of the feature. This is the predefined datum point.
4. Select the reference plane which defines the direction of the feature. This is a datum plane or planar surface.
5. Indicate the reference direction.
6. If you have entered all valid points, the group will automatically regenerate in your drawing box.

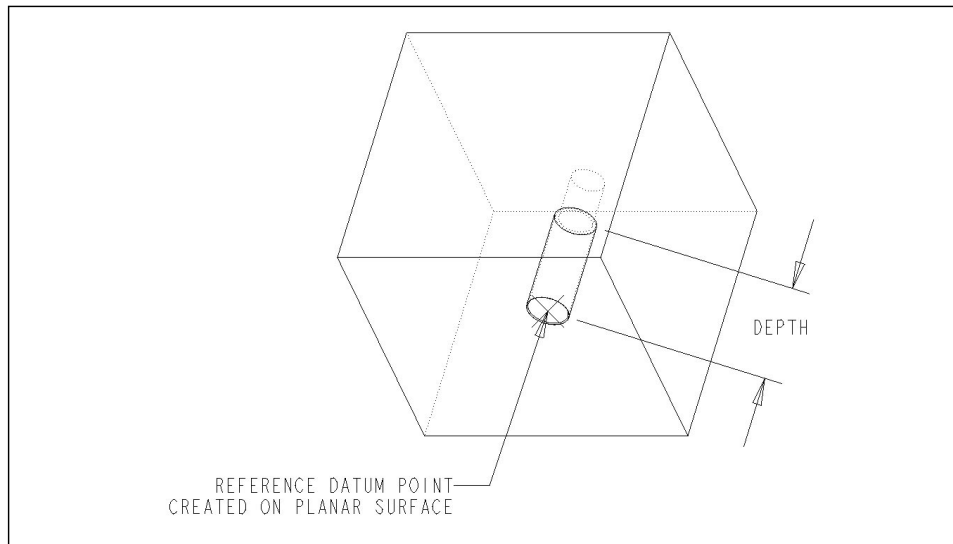
You can edit the values for the feature before you close creation of the group.

Hole Types and Family Tables

Following are examples of each of the standard design features. Included in the drawings are the dimensions and references you should supply. Holes for screws have associated family tables, which are listed in this section.

Threaded Holes

Example of Coarse Threaded Hole - USTC

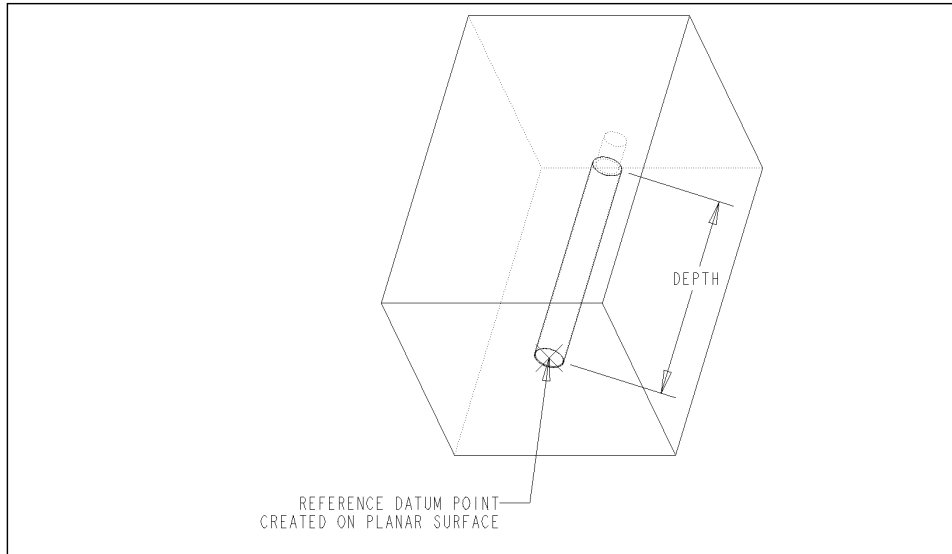


Design Features

Name	NOM_THREAD_DIA	THREAD_DIA	DRILL_DIA	MAX_THREAD_DIA	CS_DIA
GENERIC	NO.1	0.073	0.06	0.077	0.077
USTC01	NO.2	0.086	0.07	0.090	0.090
USTC02	NO.3	0.099	0.08	0.104	0.104
USTC03	NO.4	0.112	0.09	0.118	0.118
USTC04	NO.5	0.125	0.10	0.131	0.131
USTC05	NO.6	0.138	0.11	0.145	0.145
USTC06	NO.8	0.164	0.14	0.172	0.172
USTC07	NO.10	0.190	0.15	0.200	0.200
USTC08	NO.12	0.216	0.18	0.227	0.227

Name	NOM_THREAD_DIA	THREAD_DIA	DRILL_DIA	MAX_THREAD_DIA	CS_DIA
USTC09	1/4	0.250	0.20	0.262	0.262
USTC10	5/16	0.313	0.26	0.328	0.328
USTC11	3/8	0.375	0.32	0.394	0.394
USTC12	7/16	0.438	0.37	0.459	0.459
USTC13	1/2	0.500	0.43	0.525	0.525
USTC14	9/16	0.563	0.48	0.591	0.591
USTC15	5/8	0.625	0.53	0.656	0.656
USTC16	3/4	0.750	0.65	0.787	0.787
USTC17	7/8	0.875	0.77	0.919	0.919
USTC18	1	1.000	0.88	1.050	1.050
USTC19	1 1/8	1.125	0.98	1.181	1.181
USTC20	1 1/4	1.250	1.10	1.312	1.312
USTC21	1 3/8	1.375	1.21	1.444	1.444
USTC22	1 1/2	1.500	1.34	1.575	1.575
USTC23	1 3/4	1.750	1.56	1.837	1.837
USTC24	2	2.000	1.77	2.100	2.100

Example of Fine Threaded Hole - USTF

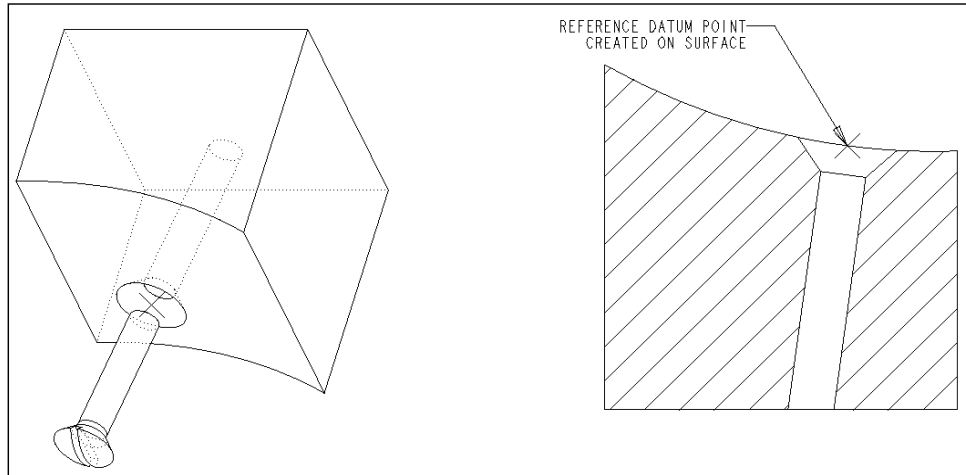


Name	NOM_ THREAD_ DIA	THREAD_ DIA	DRILL_ DIA	MAX_ THREAD_ DIA	CS_DIA
GENERIC	NO.0	0.060	0.049	0.063	0.063
USTF01	NO.1	0.073	0.061	0.077	0.077
USTF02	NO.2	0.086	0.075	0.091	0.091
USTF03	NO.3	0.099	0.085	0.104	0.104
USTF04	NO.4	0.112	0.095	0.118	0.118
USTF05	NO.5	0.125	0.106	0.131	0.131
USTF06	NO.6	0.138	0.116	0.145	0.145
USTF07	NO.8	0.164	0.138	0.172	0.172
USTF08	NO.10	0.190	0.161	0.200	0.200
USTF09	NO.12	0.216	0.185	0.227	0.227
USTF10	1/4	0.250	0.217	0.263	0.263
USTF11	5/16	0.313	0.272	0.328	0.328
USTF12	3/8	0.375	0.335	0.394	0.394
USTF13	7/16	0.438	0.390	0.495	0.495
USTF14	1/2	0.500	0.453	0.525	0.525
USTF15	9/16	0.563	0.508	0.591	0.591
USTF16	5/8	0.625	0.571	0.656	0.656
USTF17	3/4	0.750	0.689	0.788	0.788
USTF18	7/8	0.875	0.803	0.919	0.919
USTF19	1	1.000	0.915	1.050	1.050
USTF20	1 1/8	1.125	1.043	1.181	1.181
USTF21	1 1/4	1.250	1.160	1.313	1.313
USTF22	1 3/8	1.375	1.290	1.444	1.444
USTF23	1 1/2	1.500	1.417	1.575	1.575

Design Features

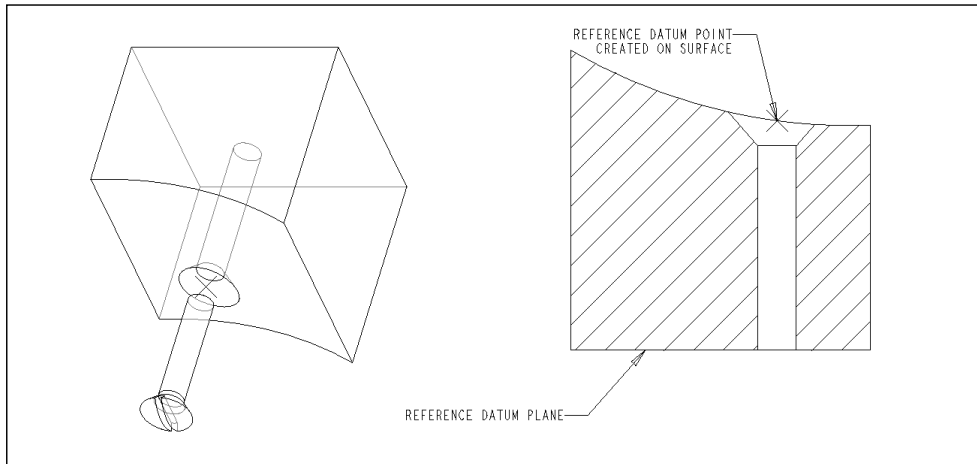
Countersunk Head Screw Holes

Example of Hole for Countersunk Head Screw - USSN



Name	NOM_SCREW_DIA	HEAD_HEIGHT	HOLE_DIA
GENERIC	1/4	0.190	0.281
USSN01	1/4	0.190	0.281
USSN02	5/16	0.228	0.344
USSN03	3/8	0.265	0.406
USSN04	7/16	0.265	0.469
USSN05	1/2	0.308	0.531
USSN06	5/8	0.378	0.656
USSN07	3/4	0.442	0.781
USSN08	7/8	0.510	0.906
USSN09	1	0.576	1.031
USSN10	1 1/8	0.634	1.171
USSN11	1 1/4	0.692	1.312
USSN12	1 3/8	0.758	1.437
USSN13	1 1/2	0.825	1.562

Example of Hole for Countersunk Head Screw Normal to Plane - USSNP

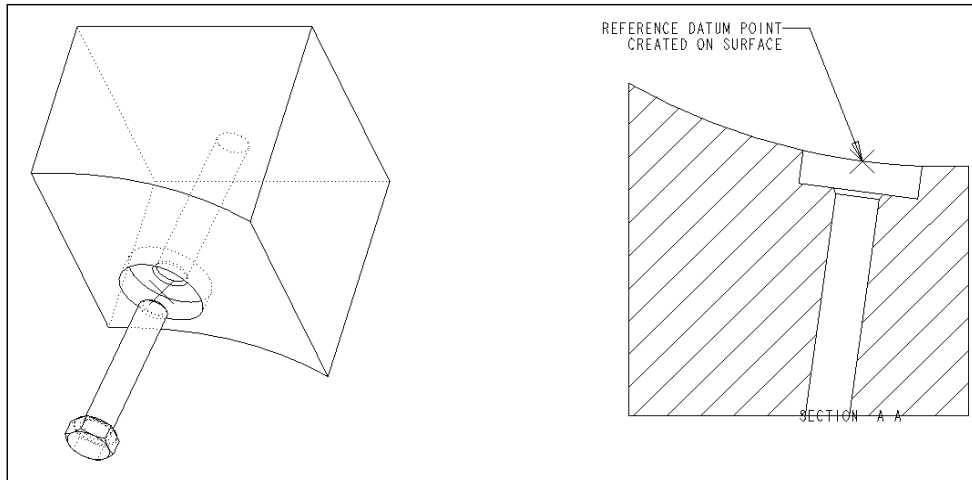


Design Features

Name	NOM_SCREW_DIA	HEAD_HEIGHT	HOLE_DIA
GENERIC	1/4	0.190	0.281
USSNP01	1/4	0.190	0.281
USSNP02	5/16	0.228	0.344
USSNP03	3/8	0.265	0.406
USSNP04	7/16	0.265	0.469
USSNP05	1/2	0.308	0.531
USSNP06	5/8	0.378	0.656
USSNP07	3/4	0.442	0.781
USSNP08	7/8	0.510	0.906
USSNP09	1	0.576	1.031
USSNP10	1 1/8	0.634	1.171
USSNP11	1 1/4	0.692	1.312
USSNP12	1 3/8	0.758	1.437
USSNP13	1 1/2	0.825	1.562

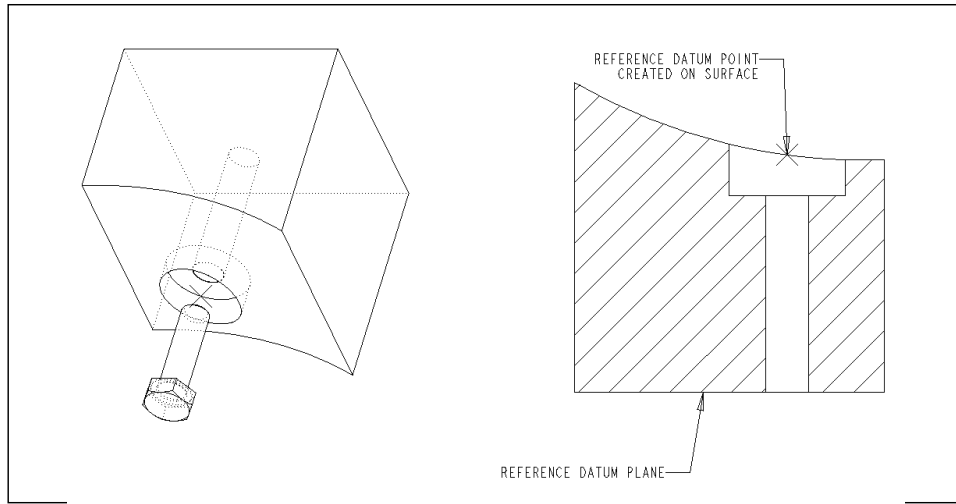
Hexagon Head Screws

Example of Hole for Hexagon Head Screw- USHN



Name	NOM_BOLT_DIA	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
GENERIC	1/4	0.281	0.832	0.208	0.341
USHN01	1/4	0.281	0.832	0.208	0.341
USHN02	5/16	0.344	0.933	0.255	0.404
USHN03	3/8	0.406	1.113	0.288	0.466
USHN04	7/16	0.469	1.195	0.336	0.529
USHN05	1/2	0.531	1.341	0.384	0.591
USHN06	5/8	0.656	1.568	0.464	0.776
USHN07	3/4	0.781	2.125	0.544	0.901
USHN08	7/8	0.906	2.414	0.624	1.026
USHN09	1.0	1.031	2.484	0.720	1.211
USHN10	1 1/8	1.171	2.688	0.800	1.351
USHN11	1 1/4	1.312	2.875	0.896	1.492
USHN12	1 3/8	1.437	3.062	0.960	1.617
USHN13	1 1/2	1.562	3.250	1.056	1.742
USHN14	1 3/4	1.812	3.625	1.216	2.052
USHN15	2.0	2.062	4.000	1.408	2.302

Example of Hole Normal to Plane for a Hexagon Head Screw - USHNP

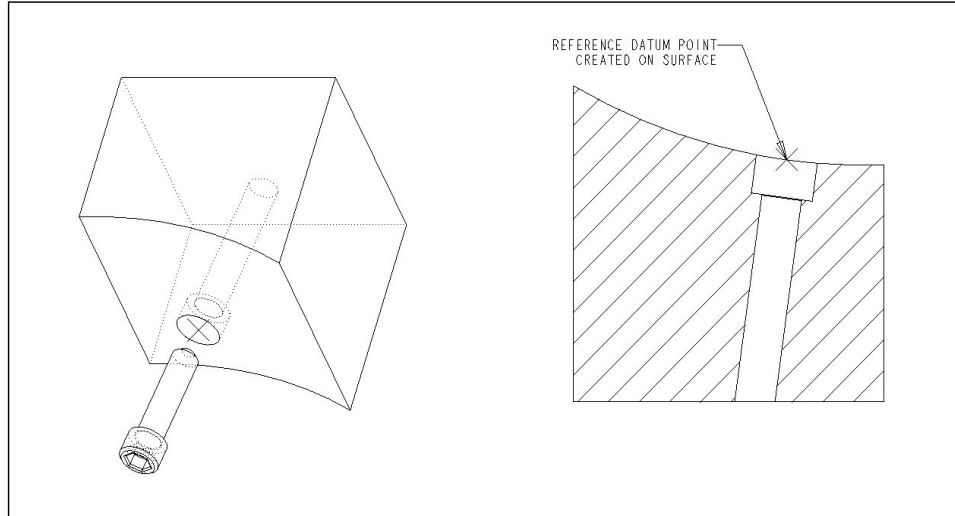


Design Features

Name	NOM_BOLT_DIA	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
GENERIC	1/4	0.281	0.832	0.208	0.341
USHNP01	1/4	0.281	0.832	0.208	0.341
USHNP02	5/16	0.344	0.933	0.255	0.404
USHNP03	3/8	0.406	1.113	0.288	0.466
USHNP04	7/16	0.469	1.195	0.336	0.529
USHNP05	1/2	0.531	1.341	0.384	0.591
USHNP06	5/8	0.656	1.568	0.464	0.776
USHNP07	3/4	0.781	2.125	0.544	0.901
USHNP08	7/8	0.906	2.414	0.624	1.026
USHNP09	1.0	1.031	2.484	0.720	1.211
USHNP10	1 1/8	1.171	2.688	0.800	1.351
USHNP11	1 1/4	1.312	2.875	0.896	1.492
USHNP12	1 3/8	1.437	3.062	0.960	1.617
USHNP13	1 1/2	1.562	3.250	1.056	1.742
USHNP14	1 3/4	1.812	3.625	1.216	2.052
USHNP15	2.0	2.062	4.000	1.408	2.302

Socket Head Screws

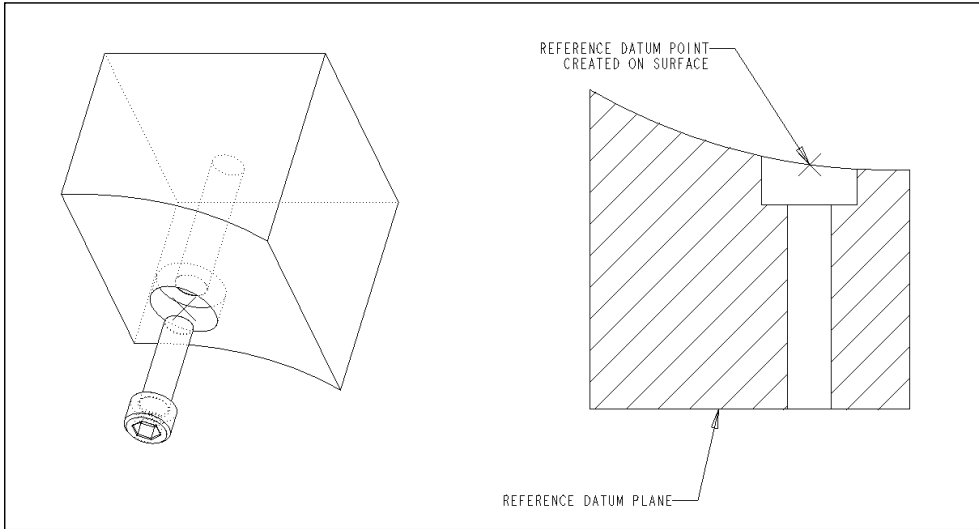
Example of Hole for Socket Head Screw - USCN



Name	NOM_SCREW_DIA	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
GENERIC	NO.0	0.073	0.125	0.060	0.074
USCN01	NO.0	0.073	0.125	0.060	0.074
USCN02	NO.1	0.081	0.156	0.073	0.087
USCN03	NO.2	0.094	0.188	0.086	0.102
USCN04	NO.3	0.106	0.219	0.099	0.115
USCN05	NO.4	0.125	0.219	0.112	0.130
USCN06	NO.5	0.141	0.250	0.125	0.145
USCN07	NO.6	0.154	0.281	0.138	0.158
USCN08	NO.8	0.180	0.313	0.164	0.188
USCN09	NO.10	0.206	0.375	0.190	0.218
USCN10	1/4	0.266	0.438	0.250	0.278
USCN11	5/16	0.344	0.531	0.312	0.346
USCN12	3/8	0.406	0.625	0.375	0.415
USCN13	7/16	0.469	0.719	0.438	0.483

Name	NOM_SCREW_DIA	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
USCN14	1/2	0.531	0.813	0.500	0.552
USCN15	5/8	0.656	1.000	0.625	0.689
USCN16	3/4	0.781	1.188	0.750	0.828
USCN17	7/8	0.906	1.375	0.875	0.963
USCN18	1	1.031	1.625	1.000	1.100
USCN19	1 1/4	1.312	2.000	1.250	1.370
USCN20	1 1/2	1.562	2.375	1.500	1.640
USCN21	1 3/4	1.812	2.750	1.750	1.910
USCN22	2	2.062	3.125	2.000	2.180

Example of Hole for Socket Head Screw Normal to Plane - USCNP



Name	NOM_SCREW_DIA	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
GENERIC	NO.0	0.073	0.125	0.060	0.074
USCNP01	NO.0	0.073	0.125	0.060	0.074
USCNP02	NO.1	0.081	0.156	0.073	0.087
USCNP03	NO.2	0.094	0.188	0.086	0.102

Name	NOM_SCREW_DIA	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
USCNP04	NO.3	0.106	0.219	0.099	0.115
USCNP05	NO.4	0.125	0.219	0.112	0.130
USCNP06	NO.5	0.141	0.250	0.125	0.145
USCNP07	NO.6	0.154	0.281	0.138	0.158
USCNP08	NO.8	0.180	0.313	0.164	0.188
USCNP09	NO.10	0.206	0.375	0.190	0.218
USCNP10	1/4	0.266	0.438	0.250	0.278
USCNP11	5/16	0.344	0.531	0.312	0.346
USCNP12	3/8	0.406	0.625	0.375	0.415
USCNP13	7/16	0.469	0.719	0.438	0.483
USCNP14	1/2	0.531	0.813	0.500	0.552
USCNP15	5/8	0.656	1.000	0.625	0.689
USCNP16	3/4	0.781	1.188	0.750	0.828
USCNP17	7/8	0.906	1.375	0.875	0.963
USCNP18	1	1.031	1.625	1.000	1.100
USCNP19	1 1/4	1.312	2.000	1.250	1.370
USCNP20	1 1/2	1.562	2.375	1.500	1.640
USCNP21	1 3/4	1.812	2.750	1.750	1.910
USCNP22	2	2.062	3.125	2.000	2.180

Metric Design Features

The metric design features are grouped under the structure UMxx. The naming convention is as follows:

- xx - Identifies the type of hole or thread. The possible values are as follows:
 - TC - Course Pitch Metric Threaded Holes
 - TF - Fine Pitch Metric Threaded Holes
 - SN - Holes for Metric Countersunk Head Screws
 - HN - Holes for Metric Hexagon Head Screws
 - CN - Holes for Metric Socket Head Screws

- LH - Hole Grooves for Metric Retaining Rings
- LS - Shaft Grooves for Metric Retaining Rings
- A *p* at the end of the part name indicates that the feature is normal to a plane rather than to the surface of the part.

Prompts

When you use a metric design feature in your part, you must have already defined a datum point on the surface of the part for the center of the feature, and a reference plane for the direction. The system prompts you to do the following:

1. Select placement and scaling options for the feature.
2. Enter the dimensions of the feature section. *See Hole Types and Family Tables for the information needed.* The height value you enter here will be measured from the surface datum point.
3. Select the center of the feature. This is a predefined datum point.
4. Select the reference plane which defines the direction of the feature. This is a datum plane or planar surface.
5. Indicate the reference direction.
6. If you have entered all valid points, the group will automatically regenerate in your drawing box.

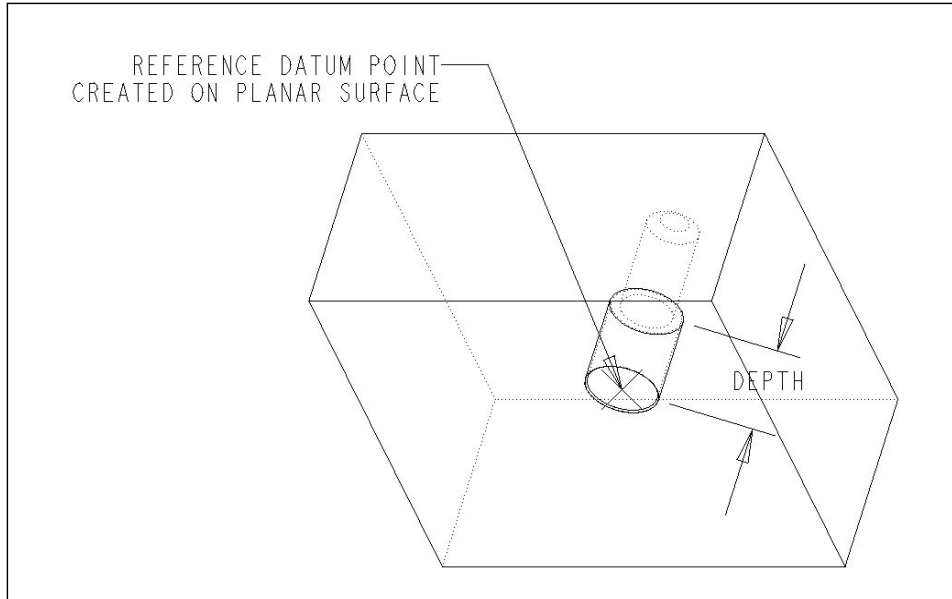
You can edit the values for the feature before you close creation of the group.

Hole Types and Family Tables

Following are examples of each of the metric design features. Included in the drawings are the dimensions and references you should supply. Holes for screws have associated family tables, which are listed in this section.

Threaded Holes

Example of Coarse Pitch Threaded Hole - UMTC

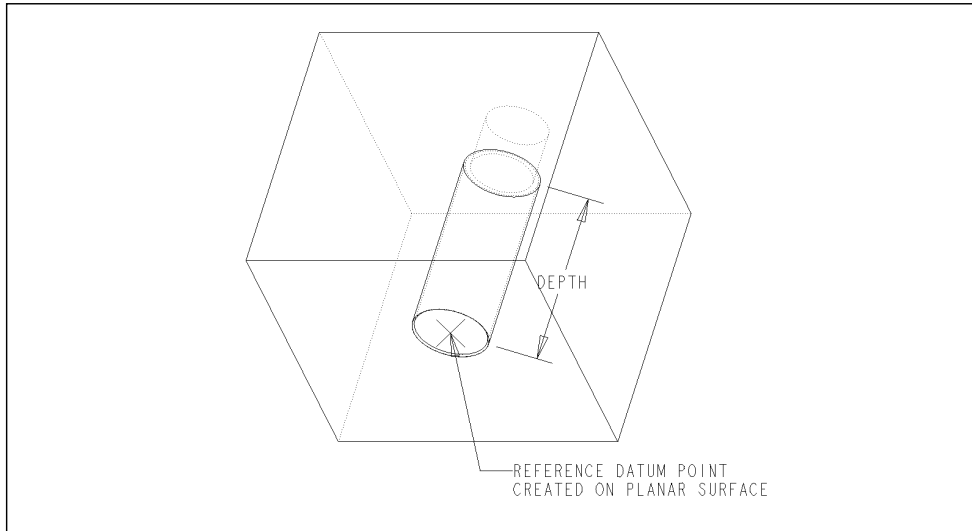


Name	NOM_THREAD_DIA	THREAD_DIA	CS_DIA	MAX_THREAD_DIA	DRILL_DIA
GENERIC	M1.0	1.00	1.05	1.05	0.75
UMTC01	M1.1	1.10	1.16	1.16	0.85
UMTC02	M1.2	1.20	1.26	1.26	0.95
UMTC03	M1.4	1.40	1.47	1.47	1.10
UMTC04	M1.6	1.60	1.68	1.68	1.25
UMTC05	M1.8	1.80	1.89	1.89	1.45
UMTC06	M2.0	2.00	2.10	2.10	1.60
UMTC07	M2.2	2.20	2.31	2.31	1.75
UMTC08	M2.5	2.50	2.63	2.63	2.05
UMTC09	M3.0	3.00	3.15	3.15	2.50
UMTC10	M3.5	3.50	3.68	3.68	2.90
UMTC11	M4.0	4.00	4.20	4.20	3.30
UMTC12	M4.5	4.50	4.73	4.73	3.70

Name	NOM_ THREAD_ DIA	THREAD_ DIA	CS_DIA	MAX_ THREAD_ DIA	DRILL_ DIA
UMTC13	M5.0	5.00	5.25	5.25	4.20
UMTC14	M6.0	6.00	5.30	5.30	5.00
UMTC15	M7.0	7.00	7.35	7.35	6.00
UMTC16	M8.0	8.00	8.40	8.40	6.80
UMTC17	M9.0	9.00	9.45	9.45	7.80
UMTC18	M10.0	10.00	10.50	10.50	8.50
UMTC19	M11.0	11.00	11.55	11.55	9.50
UMTC20	M12.0	12.00	12.60	12.60	10.20
UMTC21	M14.0	14.00	14.70	14.70	12.00
UMTC22	M16.0	16.00	16.80	16.80	14.00
UMTC23	M18.0	18.00	18.90	18.90	15.50
UMTC24	M20.0	20.00	21.00	21.00	17.50
UMTC25	M22.0	22.00	23.10	23.10	19.50
UMTC26	M24.0	24.00	25.20	25.20	21.00
UMTC27	M27.0	27.00	28.35	28.35	24.00
UMTC28	M30.0	30.00	31.50	31.50	26.50
UMTC29	M33.0	33.00	34.65	34.65	29.50
UMTC30	M36.0	36.00	37.80	37.80	32.00
UMTC31	M39.0	39.00	40.95	40.95	35.00
UMTC32	M42.0	42.00	44.10	44.10	37.50
UMTC33	M45.0	45.00	47.25	47.25	40.50
UMTC34	M48.0	48.00	50.40	50.40	43.00
UMTC35	M52.0	52.00	54.60	54.60	47.00
UMTC36	M56.0	56.00	58.80	58.80	50.50

Design Features

Example of Fine Pitch Metric Threaded Hole - UMTF



Name	NOM_ THREAD_ DIA	THREAD_ DIA	MAX_ THREAD_ DIA	CS_ DIA	DRILL_ DIA
GENERIC	m2.5x0.35	2.50	2.625	2.625	2.15
UMTF01	M3.0X0.35	3.00	3.150	3.150	2.65
UMTF02	M3.5X0.35	3.50	3.675	3.675	3.15
UMTF03	M4.0X0.50	4.00	4.200	4.200	3.50
UMTF04	M4.5X0.50	4.50	4.725	4.725	4.00
UMTF05	M5.0X0.50	5.00	5.250	5.250	4.50
UMTF06	M5.5X0.50	5.50	5.775	5.775	5.00
UMTF07	M6.0X0.75	6.00	6.300	6.300	5.20
UMTF08	M7.0X0.75	7.00	7.350	7.350	6.20
UMTF09	M8.0X0.75	8.00	8.400	8.400	7.20
UMTF10	M9.0X0.75	9.00	9.450	9.450	8.20
UMTF11	M10.0X0.75	10.00	10.500	10.500	9.20
UMTF12	M11.0X0.75	11.00	11.550	11.550	10.20
UMTF13	M8.0X1.0	8.00	8.400	8.400	7.00
UMTF14	M9.0X1.0	9.00	9.450	9.450	8.00

Name	NOM_ THREAD_DIA	THREAD_ DIA	MAX_ THREAD_ DIA	CS_DIA	DRILL_ DIA
UMTF15	M10.0X1.0	10.00	10.500	10.500	9.00
UMTF16	M11.0X1.0	11.00	11.550	11.550	10.00
UMTF17	M12.0X1.0	12.00	12.600	12.600	11.00
UMTF18	M14.0X1.0	14.00	14.700	14.700	13.00
UMTF19	M15.0X1.0	15.00	15.750	15.750	14.00
UMTF20	M16.0X1.0	16.00	16.800	16.800	15.00
UMTF21	M17.0X1.0	17.00	17.850	17.850	16.00
UMTF22	M18.0X1.0	18.00	18.900	18.900	17.00
UMTF23	M20.0X1.0	20.00	21.000	21.000	19.00
UMTF24	M22.0X1.0	22.00	23.100	23.100	21.00
UMTF25	M24.0X1.0	24.00	25.200	25.200	23.00
UMTF26	M25.0X1.0	25.00	26.250	26.250	24.00
UMTF27	M27.0X1.0	27.00	28.350	28.350	26.00
UMTF28	M28.0X1.0	28.00	29.400	29.400	27.00
UMTF29	M30.0X1.0	30.00	31.500	31.500	29.00
UMTF30	M10.0X1.25	10.00	10.500	10.500	8.80
UMTF31	M12.0X1.25	12.00	12.600	12.600	10.80
UMTF32	M14.0X1.25	14.00	14.700	14.700	12.80
UMTF33	M12.0X1.50	12.00	12.600	12.600	10.50
UMTF34	M14.0X1.50	14.00	14.700	14.700	12.50
UMTF35	M15.0X1.50	15.00	15.750	15.750	13.50
UMTF36	M16.0X1.50	16.00	16.800	16.800	14.50
UMTF37	M17.0X1.50	17.00	17.850	17.850	15.50
UMTF38	M18.0X1.50	18.00	18.900	18.900	16.50
UMTF39	M20.0X1.50	20.00	21.000	21.000	18.50
UMTF40	M22.0X1.50	22.00	23.100	23.100	20.50
UMTF41	M24.0X1.50	24.00	25.200	25.200	22.50
UMTF42	M25.0X1.50	25.00	26.250	26.250	23.50
UMTF43	M26.0X1.50	26.00	27.300	27.300	24.50
UMTF44	M27.0X1.50	27.00	28.350	28.350	25.50

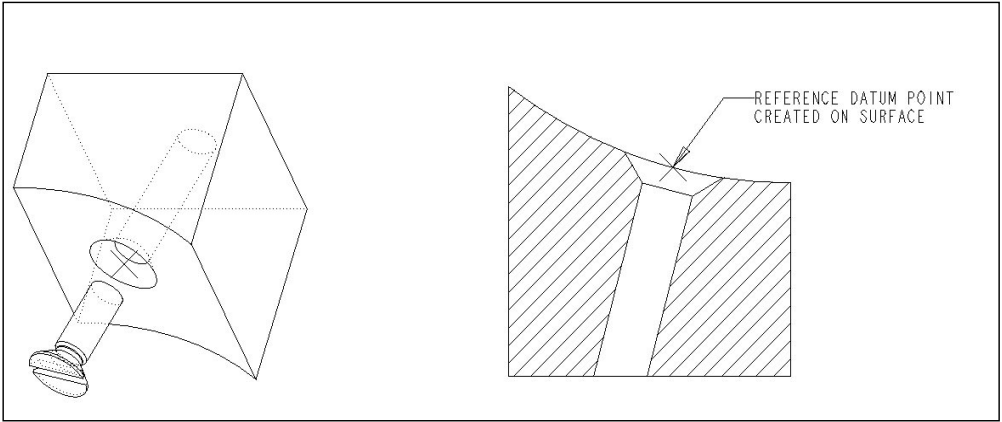
Design Features

Name	NOM_ THREAD_DIA	THREAD_ DIA	MAX_ THREAD_ DIA	CS_DIA	DRILL_ DIA
UMTF45	M28.0X1.50	28.00	29.400	29.400	26.50
UMTF46	M30.0X1.50	30.00	31.500	31.500	28.50
UMTF47	M32.0X1.50	32.00	33.600	33.600	30.50
UMTF48	M33.0X1.50	33.00	34.650	34.650	31.50
UMTF49	M35.0X1.50	35.00	36.750	36.750	33.50
UMTF50	M36.0X1.50	36.00	37.800	37.800	34.50
UMTF51	M38.0X1.50	38.00	39.900	39.900	36.50
UMTF52	M39.0X1.50	39.00	40.950	40.950	37.50
UMTF53	M40.0X1.50	40.00	42.000	42.000	38.50
UMTF54	M42.0X1.50	42.00	44.100	44.100	40.50
UMTF55	M45.0X1.50	45.00	47.250	47.250	43.50
UMTF56	M48.0X1.50	48.00	50.400	50.400	46.50
UMTF57	M50.0X1.50	50.00	52.500	52.500	48.50
UMTF58	M52.0X1.50	52.00	54.600	54.600	50.50
UMTF59	M18.0X2.0	18.00	18.900	18.900	16.00
UMTF60	M20.0X2.0	20.00	21.000	21.000	18.00
UMTF61	M22.0X2.0	22.00	23.100	23.100	20.00
UMTF62	M24.0X2.0	24.00	25.200	25.200	22.00
UMTF63	M25.0X2.0	25.00	26.250	26.250	23.00
UMTF64	M27.0X2.0	27.00	28.350	28.350	25.00
UMTF65	M28.0X2.0	28.00	29.400	29.400	26.00
UMTF66	M30.0X2.0	30.00	31.500	31.500	28.00
UMTF67	M32.0X2.0	32.00	33.600	33.600	30.00
UMTF68	M33.0X2.0	33.00	34.650	34.650	31.00
UMTF69	M36.0X2.0	36.00	37.800	37.800	34.00
UMTF70	M39.0X2.0	39.00	40.950	40.950	37.00
UMTF71	M40.0X2.0	40.00	42.000	42.000	38.00
UMTF72	M42.0X2.0	42.00	44.100	44.100	40.00
UMTF73	M45.0X2.0	45.00	47.250	47.250	43.00
UMTF74	M48.0X2.0	48.00	50.400	50.400	46.00

Name	NOM_THREAD_DIA	THREAD_DIA	MAX_THREAD_DIA	CS_DIA	DRILL_DIA
UMTF75	M50.0X2.0	50.00	52.500	52.500	48.00
UMTF76	M52.0X2.0	52.00	54.600	54.600	50.00
UMTF77	M30.0X3.0	30.00	31.500	31.500	27.00
UMTF78	M33.0X3.0	33.00	34.650	34.650	30.00
UMTF79	M36.0X3.0	36.00	37.800	37.800	33.00
UMTF80	M39.0X3.0	39.00	40.950	40.950	36.00
UMTF81	M40.0X3.0	40.00	42.000	42.000	37.00
UMTF82	M42.0X3.0	42.00	44.100	44.100	39.00
UMTF83	M45.0X3.0	45.00	47.250	47.250	42.00
UMTF84	M48.0X3.0	48.00	50.400	50.400	45.00
UMTF85	M50.0X3.0	50.00	52.500	52.500	47.00
UMTF86	M52.0X3.0	52.00	54.600	54.600	49.00
UMTF87	M42.0X4.0	42.00	44.100	44.100	38.00
UMTF88	M45.0X4.0	45.00	47.250	47.250	41.00
UMTF89	M48.0X4.0	48.00	50.400	50.400	44.00
UMTF90	M52.0X4.0	52.00	54.600	54.600	48.00

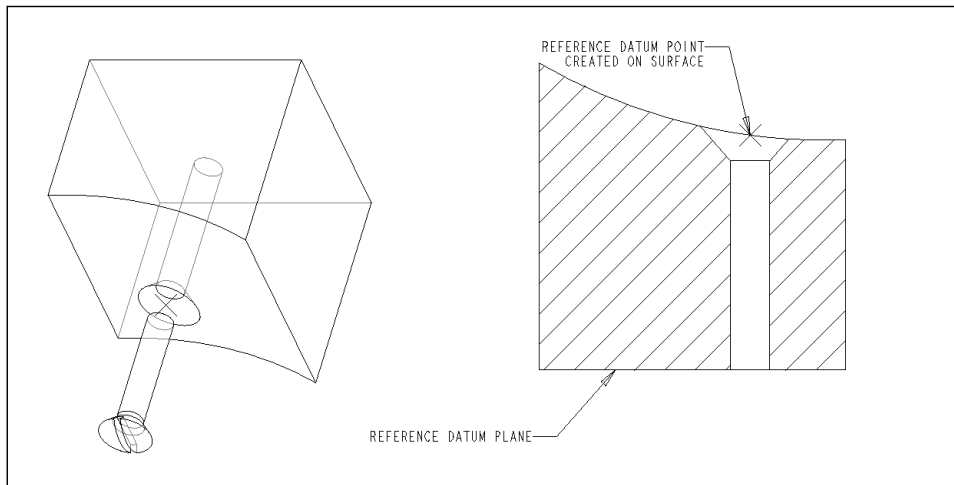
Metric Countersunk Head Screws

Example of Hole for Metric Countersunk Head Screw- UMSN



Name	NOM_SCREW_DIA	HEAD_HEIGHT	HOLE_DIA
GENERIC	M1.6	0.950	1.800
UMSN01	M2.0	1.100	2.400
UMSN02	M2.5	1.400	2.900
UMSN03	M3.0	1.550	3.400
UMSN04	M3.5	2.300	3.900
UMSN05	M4.0	2.600	4.500
UMSN06	M5.0	2.600	5.500
UMSN07	M6.0	3.150	6.600
UMSN08	M8.0	4.350	9.000
UMSN09	M10.0	4.700	11.000
UMSN10	M12.0	5.250	13.500
UMSN11	M14.0	6.250	15.500
UMSN12	M16.0	7.250	17.500
UMSN13	M18.0	8.000	20.000
UMSN14	M20.0	9.000	22.000
UMSN15	M22.0	10.000	24.000
UMSN16	M24.0	11.000	26.000

Example of Hole Normal to Plane for Countersunk Head Screw - UMSNP

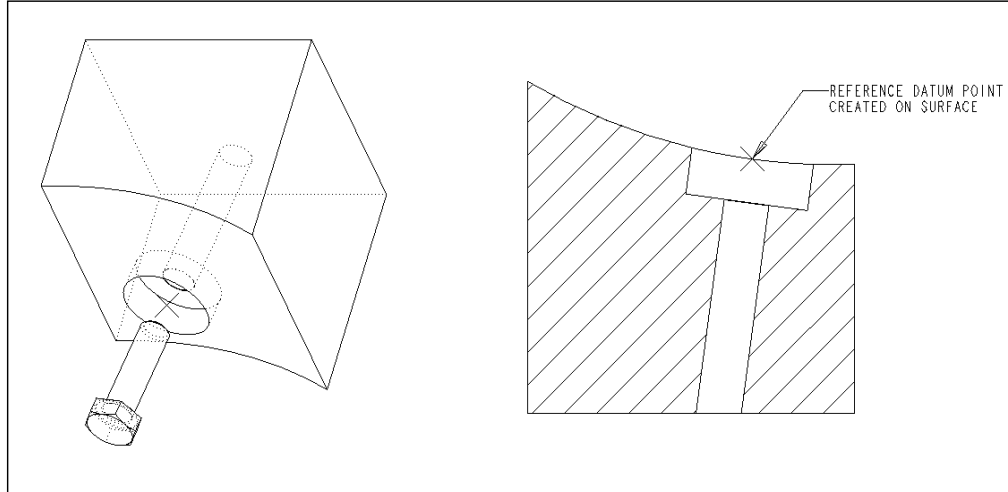


Name	NOM_SCREW_DIA	HEAD_HEIGHT	HOLE_DIA
GENERIC	M1.6	0.950	1.800
UMSNP01	M2.0	1.100	2.400
UMSNP02	M2.5	1.400	2.900
UMSNP03	M3.0	1.550	3.400
UMSNP04	M3.5	2.300	3.900
UMSNP05	M4.0	2.600	4.500
UMSNP06	M5.0	2.600	5.500
UMSNP07	M6.0	3.150	6.600
UMSNP08	M8.0	4.350	9.000
UMSNP09	M10.0	4.700	11.000
UMSNP10	M12.0	5.250	13.500
UMSNP11	M14.0	6.250	15.500
UMSNP12	M16.0	7.250	17.500
UMSNP13	M18.0	8.000	20.000
UMSNP14	M20.0	9.000	22.000
UMSNP15	M22.0	10.000	24.000
UMSNP16	M24.0	11.000	26.000

Design Features

Metric Hexagon Head Screws

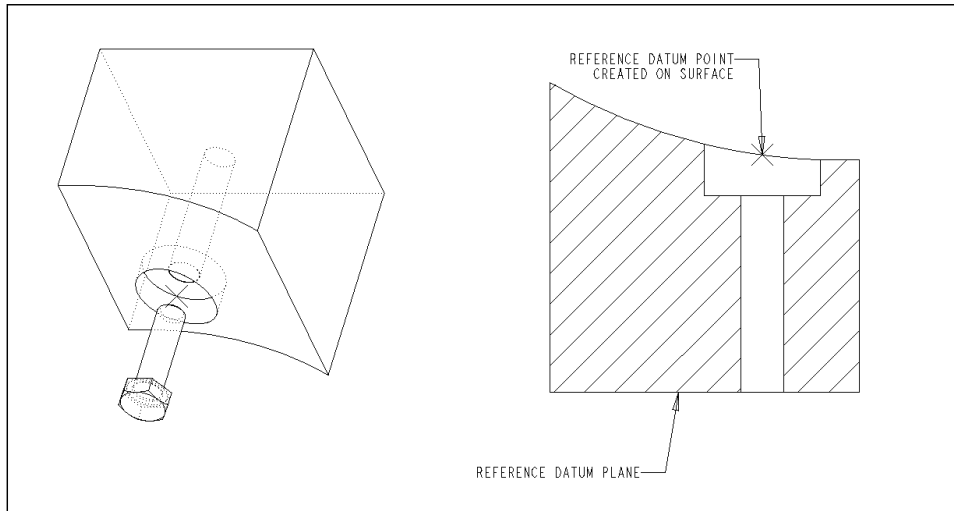
Example of Hole for Metric Hexagon Head Screw- UMHN



Name	NOM_BOLT_DIA	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
GENERIC	M1.6	1.800	8.000	1.900	2.000
UMHN01	M2.0	2.400	8.000	2.300	2.600
UMHN02	M2.5	2.900	10.000	2.800	3.100
UMHN03	M3.0	3.400	10.000	3.300	3.600
UMHN04	M3.5	3.900	13.000	3.800	4.100
UMHN05	M4.0	4.500	15.000	4.400	4.700
UMHN06	M5.0	5.500	18.000	5.500	5.700
UMHN07	M6.0	6.600	20.000	6.500	6.800
UMHN08	M8.0	9.000	24.000	8.500	9.200
UMHN09	M10.0	11.000	30.000	10.500	11.200
UMHN10	M12.0	13.500	33.000	12.000	13.700
UMHN11	M14.0	15.500	36.000	13.500	15.700
UMHN12	M16.0	17.500	40.000	15.000	17.700
UMHN13	M18.0	20.000	53.000	17.000	20.200
UMHN14	M20.0	22.000	53.000	18.500	22.200

Name	NOM_BOLT_DIA	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
UMHN15	M22.0	24.000	61.000	19.500	24.200
UMHN16	M24.0	26.000	61.000	21.500	26.200

Example of Hole Normal to Plane for Metric Hexagon Head Screw- UMHNP



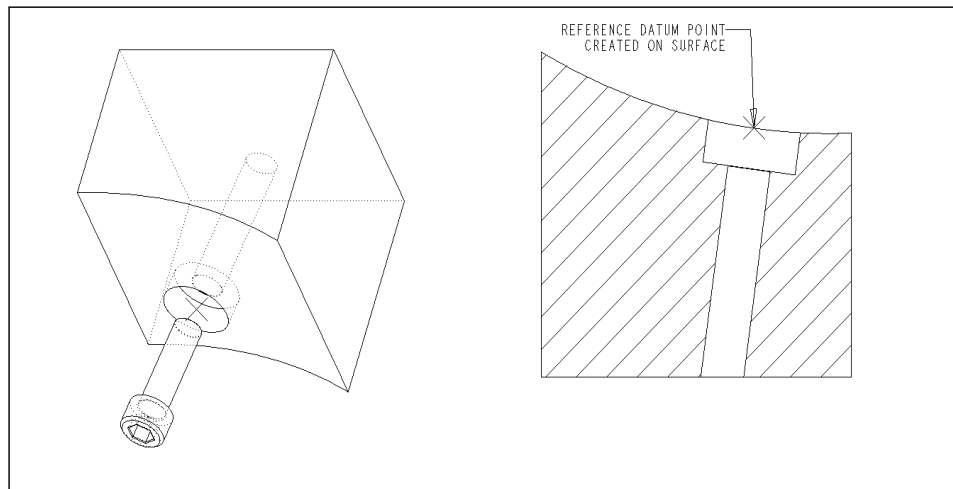
Design Features

Name	NOM_BOLT_DIA	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
GENERIC	M1.6	1.800	8.000	1.900	2.000
UMHNP01	M2.0	2.400	8.000	2.300	2.600
UMHNP02	M2.5	2.900	10.000	2.800	3.100
UMHNP03	M3.0	3.400	10.000	3.300	3.600
UMHNP04	M3.5	3.900	13.000	3.800	4.100
UMHNP05	M4.0	4.500	15.000	4.400	4.700
UMHNP06	M5.0	5.500	18.000	5.500	5.700
UMHNP07	M6.0	6.600	20.000	6.500	6.800
UMHNP08	M8.0	9.000	24.000	8.500	9.200
UMHNP09	M10.0	11.000	30.000	10.500	11.200
UMHNP10	M12.0	13.500	33.000	12.000	13.700

Name	NOM_BOLT_DIA	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
UMHNP11	M14.0	15.500	36.000	13.500	15.700
UMHNP12	M16.0	17.500	40.000	15.000	17.700
UMHNP13	M18.0	20.000	53.000	17.000	20.200
UMHNP14	M20.0	22.000	53.000	18.500	22.200
UMHNP15	M22.0	24.000	61.000	19.500	24.200
UMHNP16	M24.0	26.000	61.000	21.500	26.200

Socket Head Screws

Example of Hole for Metric Socket Head Screw - UMCN

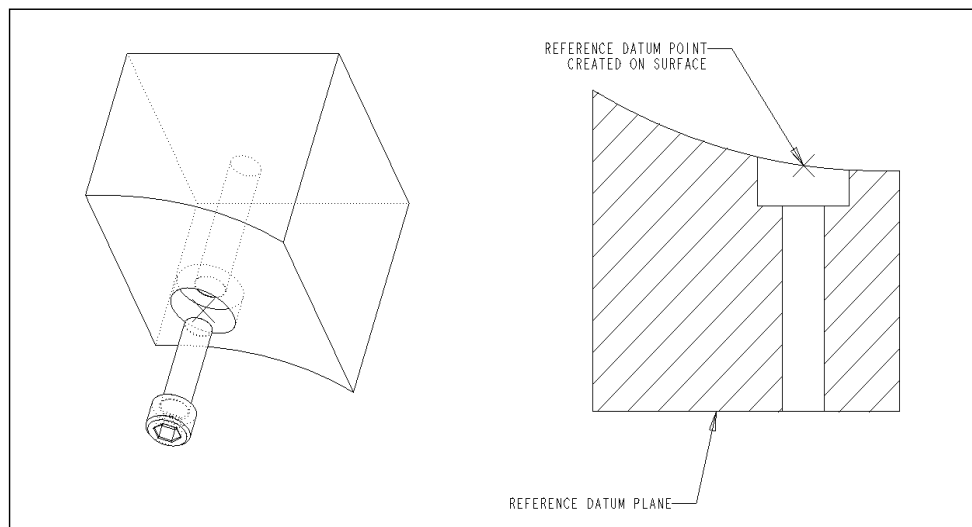


Name	NOM_DIA_BOLT	HOLE_DIA	COUNTER-BORE_DIA	COUNTER-BORE_DEPTH	CS_DIA
GENERIC	m1.0	1.20	3.00	1.00	1.40
UMCN01	M1.2	1.40	4.00	1.20	1.60
UMCN02	M1.4	1.60	4.00	1.40	1.80
UMCN03	M1.6	1.80	5.00	1.60	2.00
UMCN04	M1.8	2.10	5.00	1.80	2.20

Name	NOM_DIA_ BOLT	HOLE_ DIA	COUNTER- BORE_ DIA	COUNTER- BORE_ DEPTH	CS_DIA
UMCN05	M2.0	2.40	7.00	2.00	2.60
UMCN06	M2.5	2.90	8.00	2.50	3.10
UMCN07	M3.0	3.40	9.00	3.00	3.60
UMCN08	M3.5	3.90	10.00	3.50	4.10
UMCN09	M4.0	4.50	11.00	4.00	4.70
UMCN10	M4.5	5.00	13.00	4.50	5.20
UMCN11	M5.0	5.50	13.00	5.00	5.70
UMCN12	M6.0	6.60	15.00	6.00	6.80
UMCN13	M7.0	7.60	18.00	7.00	7.80
UMCN14	M8.0	9.00	20.00	8.00	9.20
UMCN15	M10.0	11.00	24.00	10.00	11.20
UMCN16	M12.0	13.50	28.00	12.00	14.20
UMCN17	M14.0	15.50	32.00	14.00	16.20
UMCN18	M16.0	17.50	35.00	16.00	18.20
UMCN19	M18.0	20.00	39.00	18.00	20.20
UMCN20	M20.0	22.00	43.00	20.00	22.40
UMCN21	M22.0	24.00	46.00	22.00	24.40
UMCN22	M24.0	26.00	50.00	24.00	26.40
UMCN23	M27.0	30.00	55.00	27.00	30.40
UMCN24	M30.0	33.00	62.00	30.00	33.40
UMCN25	M33.0	36.00	66.00	33.00	36.40
UMCN26	M36.0	39.00	72.00	36.00	39.40
UMCN27	M39.0	42.00	76.00	39.00	42.40
UMCN28	M42.0	45.00	82.00	42.00	45.60
UMCN29	M45.0	48.00	87.00	45.00	48.60
UMCN30	M48.0	52.00	93.00	48.00	52.60
UMCN31	M52.0	56.00	100.00	52.00	56.60
UMCN32	M56.0	62.00	110.00	56.00	63.00
UMCN33	M60.0	66.00	115.00	60.00	67.00
UMCN34	M64.0	70.00	122.00	64.00	71.00

Name	NOM_DIA_ BOLT	HOLE_ DIA	COUNTER- BORE_ DIA	COUNTER- BORE_ DEPTH	CS_DIA
UMCN35	M68.0	74.00	127.00	68.00	75.00
UMCN36	M72.0	78.00	133.00	72.00	79.00
UMCN37	M76.0	82.00	143.00	76.00	83.00
UMCN38	M80.0	86.00	148.00	80.00	87.00
UMCN39	M85.0	91.00	158.00	85.00	92.00
UMCN40	M90.0	96.00	167.00	90.00	97.00
UMCN41	M95.0	101.00	176.00	95.00	102.00
UMCN42	M100.0	107.00	185.00	100.00	108.00
UMCN43	M105.0	112.00	195.00	105.00	113.00
UMCN44	M110.0	117.00	204.00	110.00	118.00
UMCN45	M115.0	122.00	213.00	115.00	123.00
UMCN46	M120.0	127.00	222.00	120.00	128.00
UMCN47	M125.0	132.00	232.00	125.00	133.00
UMCN48	M130.0	137.00	241.00	130.00	138.00
UMCN49	M140.0	147.00	259.00	140.00	148.00
UMCN50	M150.0	158.00	278.00	150.00	159.00

Example of Hole Normal to Plane for Metric Socket Head Screw - UMCNP

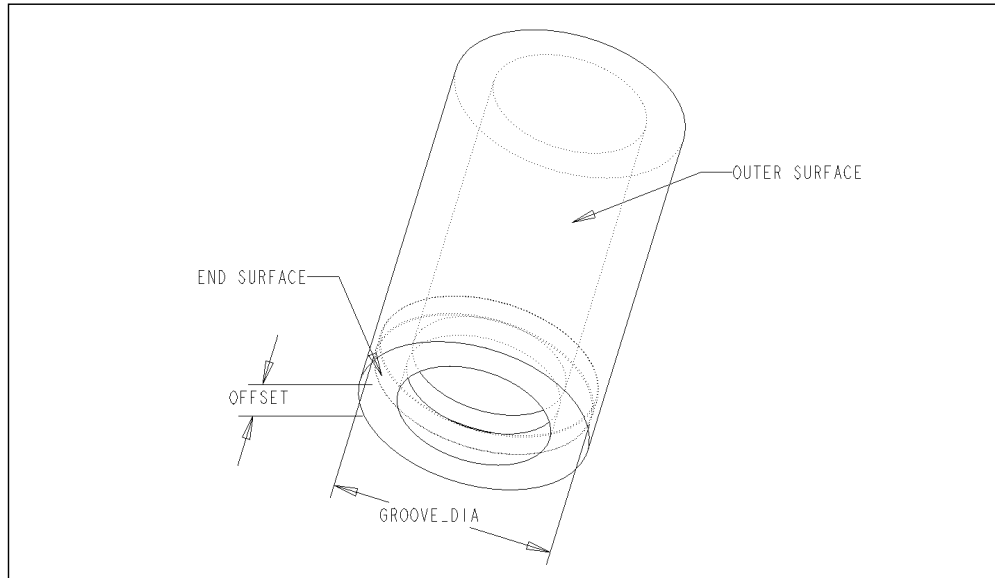


Name	NOM_DIA_ BOLT	HOLE_ DIA	COUNTER- BORE_ DIA	COUNTER- BORE_ DEPTH	CS_DIA
GENERIC	m1.0	1.20	3.00	1.00	1.40
UMCNP01	M1.2	1.40	4.00	1.20	1.60
UMCNP02	M1.4	1.60	4.00	1.40	1.80
UMCNP03	M1.6	1.80	5.00	1.60	2.00
UMCNP04	M1.8	2.10	5.00	1.80	2.20
UMCNP05	M2.0	2.40	7.00	2.00	2.60
UMCNP06	M2.5	2.90	8.00	2.50	3.10
UMCNP07	M3.0	3.40	9.00	3.00	3.60
UMCNP08	M3.5	3.90	10.00	3.50	4.10
UMCNP09	M4.0	4.50	11.00	4.00	4.70
UMCNP10	M4.5	5.00	13.00	4.50	5.20
UMCNP11	M5.0	5.50	13.00	5.00	5.70
UMCNP12	M6.0	6.60	15.00	6.00	6.80
UMCNP13	M7.0	7.60	18.00	7.00	7.80
UMCNP14	M8.0	9.00	20.00	8.00	9.20
UMCNP15	M10.0	11.00	24.00	10.00	11.20
UMCNP16	M12.0	13.50	28.00	12.00	14.20
UMCNP17	M14.0	15.50	32.00	14.00	16.20
UMCNP18	M16.0	17.50	35.00	16.00	18.20
UMCNP19	M18.0	20.00	39.00	18.00	20.20
UMCNP20	M20.0	22.00	43.00	20.00	22.40
UMCNP21	M22.0	24.00	46.00	22.00	24.40
UMCNP22	M24.0	26.00	50.00	24.00	26.40
UMCNP23	M27.0	30.00	55.00	27.00	30.40
UMCNP24	M30.0	33.00	62.00	30.00	33.40
UMCNP25	M33.0	36.00	66.00	33.00	36.40
UMCNP26	M36.0	39.00	72.00	36.00	39.40
UMCNP27	M39.0	42.00	76.00	39.00	42.40
UMCNP28	M42.0	45.00	82.00	42.00	45.60

Name	NOM_DIA_ BOLT	HOLE_ DIA	COUNTER- BORE_ DIA	COUNTER- BORE_ DEPTH	CS_DIA
UMCNP29	M45.0	48.00	87.00	45.00	48.60
UMCNP30	M48.0	52.00	93.00	48.00	52.60
UMCNP31	M52.0	56.00	100.00	52.00	56.60
UMCNP32	M56.0	62.00	110.00	56.00	63.00
UMCNP33	M60.0	66.00	115.00	60.00	67.00
UMCNP34	M64.0	70.00	122.00	64.00	71.00
UMCNP35	M68.0	74.00	127.00	68.00	75.00
UMCNP36	M72.0	78.00	133.00	72.00	79.00
UMCNP37	M76.0	82.00	143.00	76.00	83.00
UMCNP38	M80.0	86.00	148.00	80.00	87.00
UMCNP39	M85.0	91.00	158.00	85.00	92.00
UMCNP40	M90.0	96.00	167.00	90.00	97.00
UMCNP41	M95.0	101.00	176.00	95.00	102.00
UMCNP42	M100.0	107.00	185.00	100.00	108.00
UMCNP43	M105.0	112.00	195.00	105.00	113.00
UMCNP44	M110.0	117.00	204.00	110.00	118.00
UMCNP45	M115.0	122.00	213.00	115.00	123.00
UMCNP46	M120.0	127.00	222.00	120.00	128.00
UMCNP47	M125.0	132.00	232.00	125.00	133.00
UMCNP48	M130.0	137.00	241.00	130.00	138.00
UMCNP49	M140.0	147.00	259.00	140.00	148.00
UMCNP50	M150.0	158.00	278.00	150.00	159.00

Grooves for Metric Retaining Rings

Example of Hole Groove for Metric Retaining Ring - UMLH

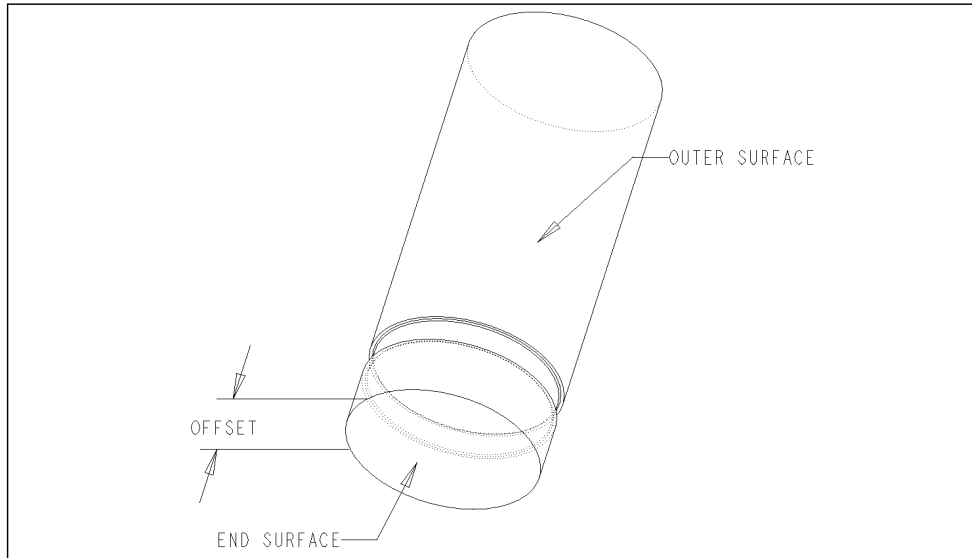


Design Features

Name	HOLE_DIA	GRV_DIA	GRV_WIDTH
GENERIC	M10.0	10.400	1.200
UMLH01	M11.0	11.400	1.200
UMLH02	M15.0	15.700	1.200
UMLH03	M16.0	16.800	1.200
UMLH04	M19.0	20.000	1.200
UMLH05	M20.0	21.000	1.200
UMLH06	M22.0	23.000	1.200
UMLH07	M25.0	26.200	1.400
UMLH08	M28.0	29.400	1.400
UMLH09	M30.0	31.400	1.400
UMLH10	M32.0	33.700	1.400
UMLH11	M35.0	37.000	1.700
UMLH12	M40.0	42.500	2.000
UMLH13	M42.0	44.500	2.000
UMLH14	M47.0	49.500	2.000

Name	HOLE_DIA	GRV_DIA	GRV_WIDTH
UMLH15	M50.0	53.000	2.300
UMLH16	M52.0	55.000	2.300
UMLH17	M55.0	58.000	2.300
UMLH18	M60.0	63.000	2.300
UMLH19	M65.0	68.000	2.800
UMLH20	M70.0	73.000	2.800
UMLH21	M75.0	78.000	2.800
UMLH22	M100.0	103.500	3.300

Example of Shaft Groove for Metric Retaining Rings - UMLS



Name	ROD_DIA	GRV_DIA	GRV_WIDTH
GENERIC	M6.0	5.700	0.900
UMLS01	6.0	5.700	0.900
UMLS02	7.0	6.700	1.000
UMLS03	8.0	7.600	1.000
UMLS04	10.0	9.600	1.200
UMLS05	11.0	10.500	1.200

Name	ROD_DIA	GRV_DIA	GRV_WIDTH
UMLS06	12.0	11.500	1.200
UMLS07	13.0	12.400	1.200
UMLS08	14.0	13.400	1.200
UMLS09	15.0	14.300	1.200
UMLS10	16.0	15.200	1.200
UMLS11	17.0	16.200	1.200
UMLS12	18.0	17.000	1.400
UMLS13	19.0	18.000	1.400
UMLS14	20.0	19.000	1.400
UMLS15	22.0	21.000	1.400
UMLS16	24.0	22.900	1.400
UMLS17	25.0	23.900	1.400
UMLS18	30.0	28.600	1.700
UMLS19	32.0	30.300	1.700
UMLS20	34.0	32.300	1.700
UMLS21	35.0	33.000	1.700
UMLS22	38.0	36.000	2.000
UMLS23	40.0	37.500	2.000
UMLS24	50.0	47.000	2.300
UMLS25	52.0	49.000	2.300
UMLS26	55.0	52.000	2.300
UMLS27	56.0	53.000	2.300
UMLS28	60.0	57.000	2.300
UMLS29	65.0	62.000	2.800
UMLS30	70.0	67.000	2.800
UMLS31	75.0	72.000	2.800

Design Features

3

Tube Forming Features

Tube forming features are designed for piping and tube parts, adding such features as flared and crimped ends to the parts.

Pro/LIBRARY contains the following tube forming feature types:

- TFB - Beaded
- TFF - Flared
- TFN - Necked
- TFL - Flattened
- TFE - Expanded

Placement

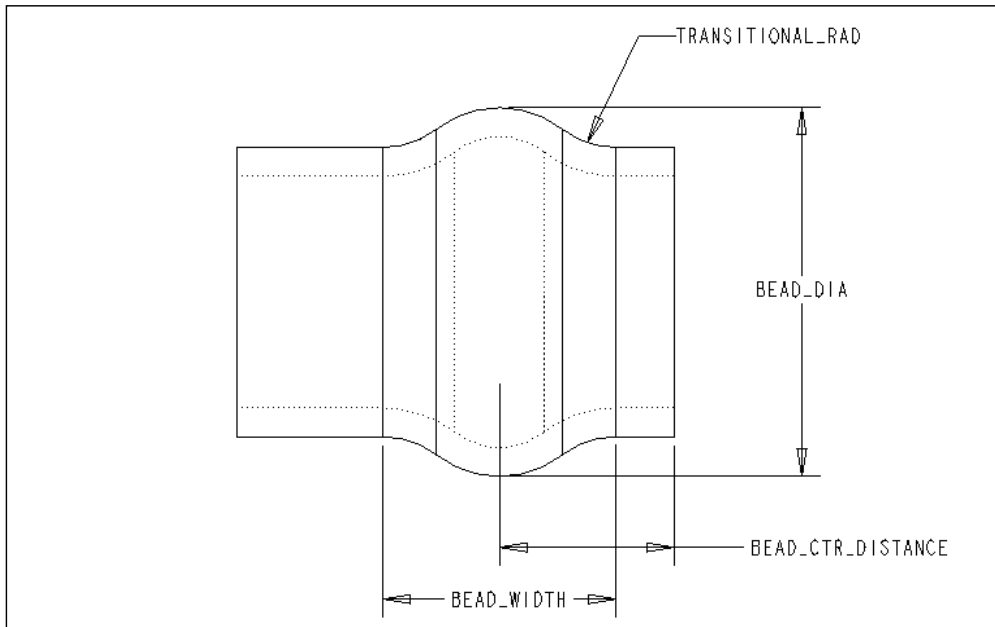
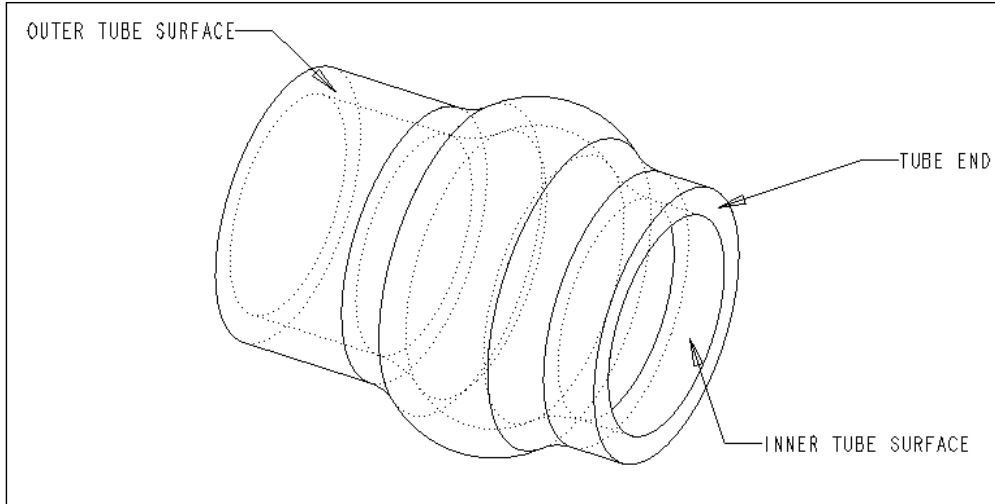
All tube features are created and placed the same; they are placed coaxially and you have to match the diameter of the feature to the diameter of your cylinder to align the two. You need an axis and a reference to place these features.

When you use a tube forming feature group in your part, the system prompts you to do the following:

1. Select the placement and scaling options.
2. Enter the dimensions of the feature, including the offset from edge (see the appropriate figures for the desired feature).
3. Select the outer tube surface.
4. Select the attachment surface for the tube feature.
5. Select the reference datum plane.
6. Select the inner tube surface.
7. Select the direction for viewing the sketching plane. For all tube features, with the exception of the Flattened feature (TFL), the arrow can point in either direction. For the TFL group, flip the arrow to point away from the tube face.
8. Select the upward direction of the horizontal plane for the tube forming feature. Flip the arrow to point towards where the feature is to be created.

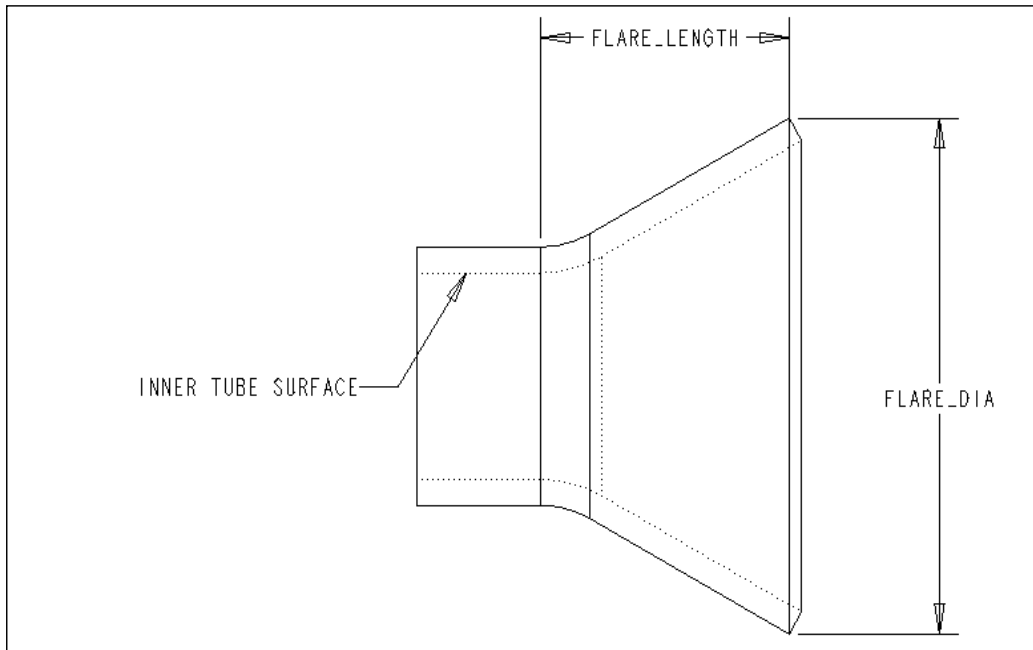
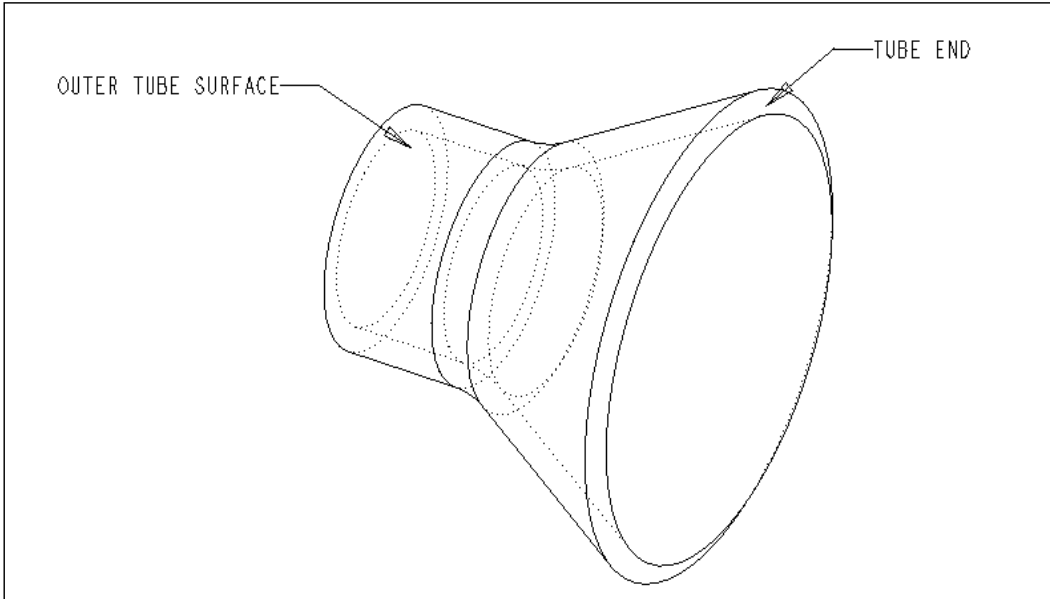
Shapes

Beaded Tube Forming Feature - UTFB

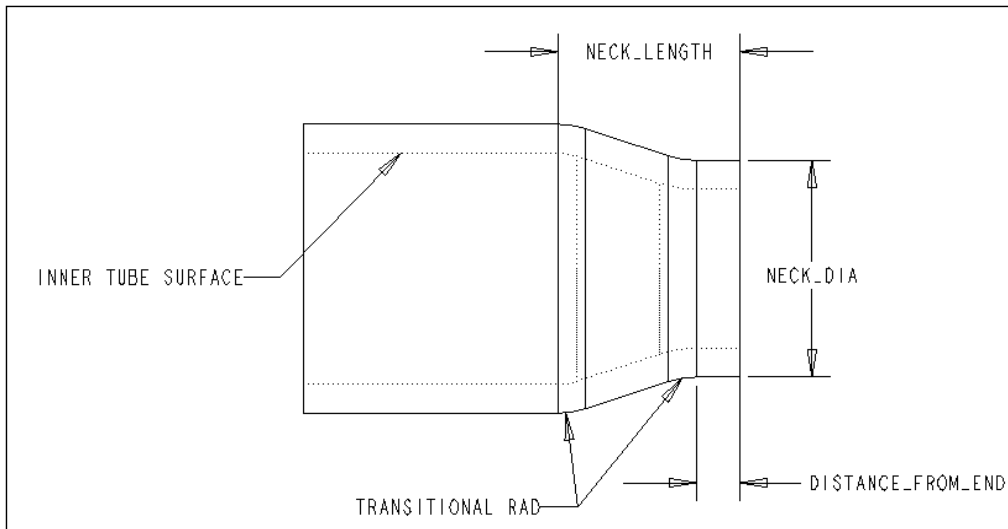
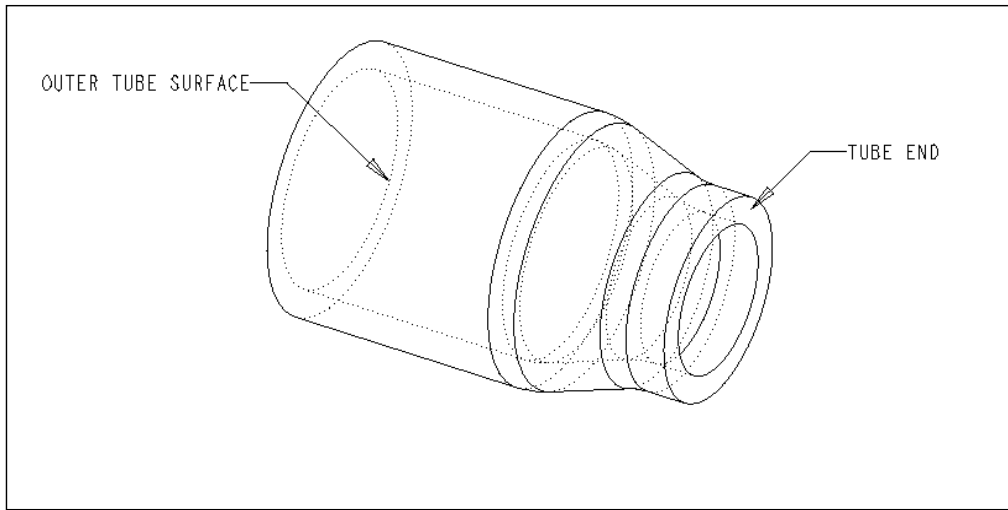


Tube Forming
Features

Flared Tube Forming Feature - UTF

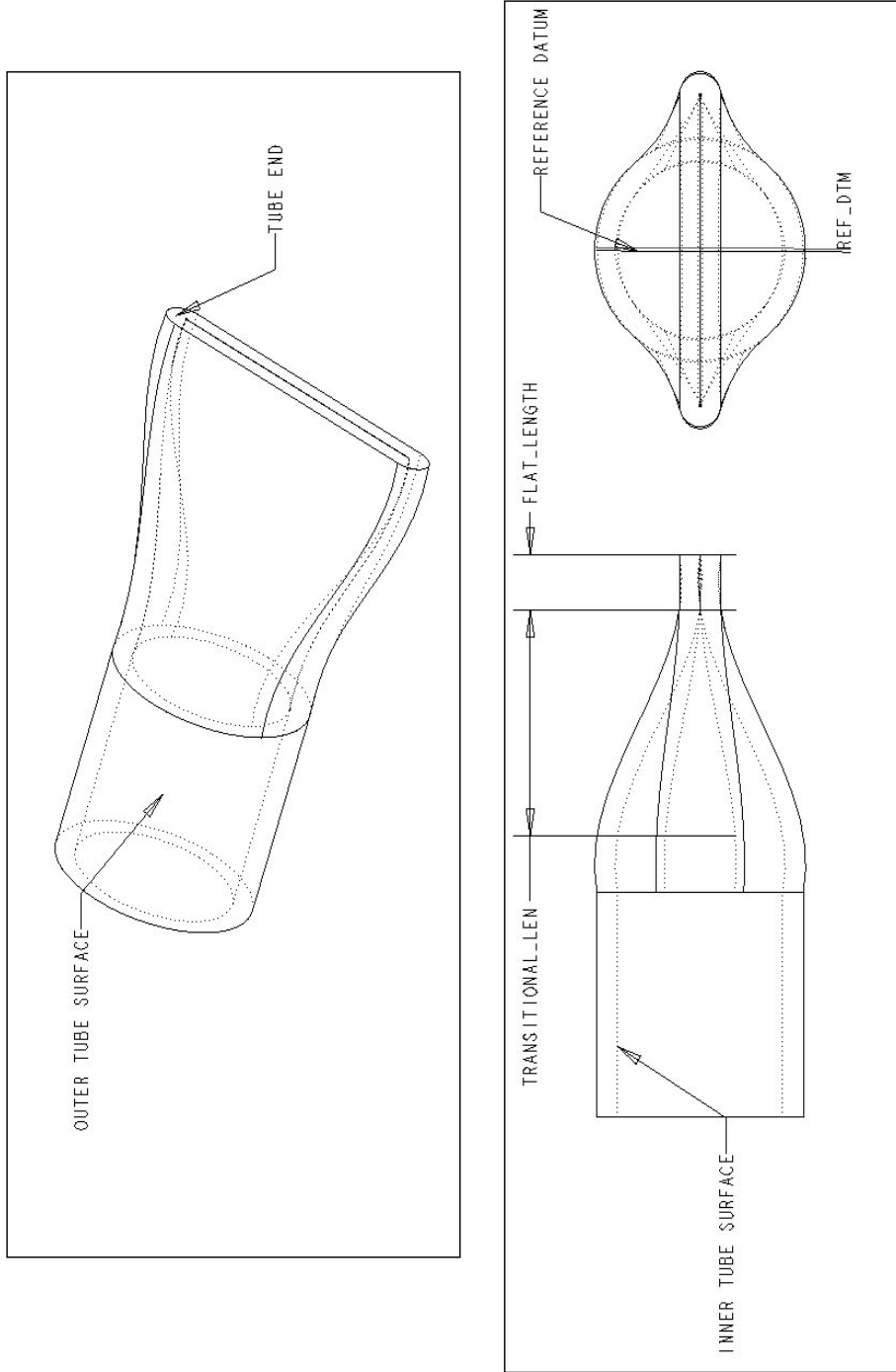


Necked Tube Forming Feature - UTFN

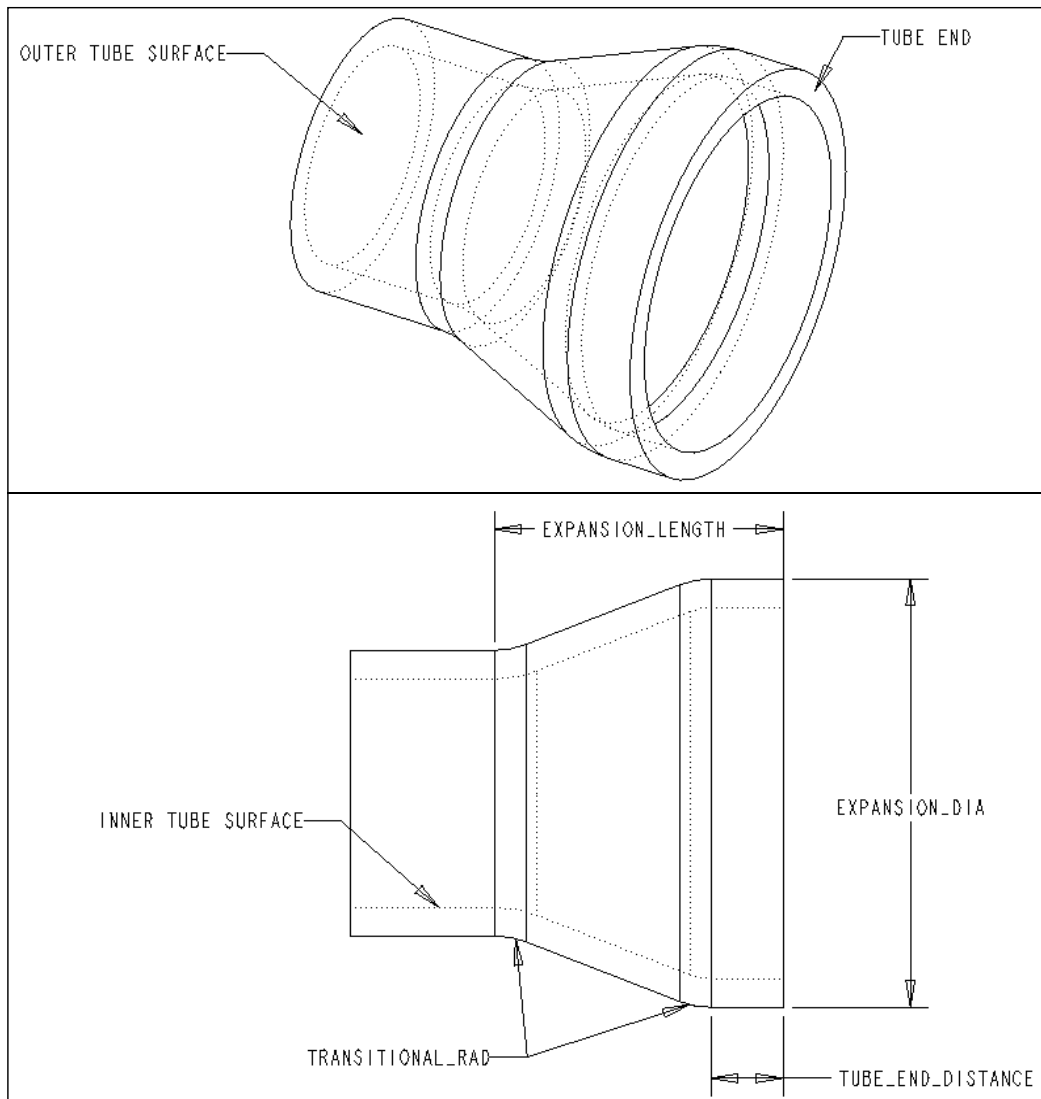


Tube Forming
Features

Flattened Tube Forming Feature - UTFL



Expanded Tube Forming Feature - UTFE



Tube Forming
Features

4

Molding Features

The Pro/LIBRARY directory *featurelib/mold_udf* contains runners and gates in standardized shapes. These are useful in mold design.

Runners

Pro/LIBRARY contains runners in the subdirectory *runners*. There are four basic shapes of runners, as demonstrated in this section. Identify a reference curve and reference plane in your part before you add a runner.

Prompts

When you use a runner in your part, you must have already defined a reference curve somewhere in the part for the path of the runner, and a reference plane for the center or top of the feature. For a cylindrical or a hexagonal runner, a reference plane on the surface will create a semi-circular or semi-hexagonal trough. The reference plane allows you to determine the depth of the runner in the part.

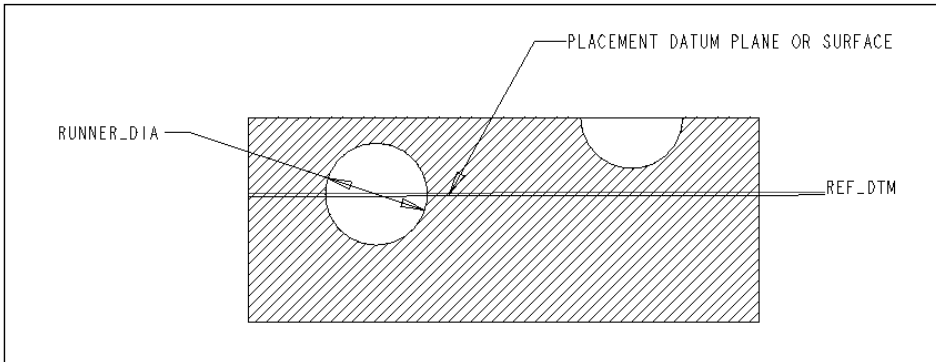
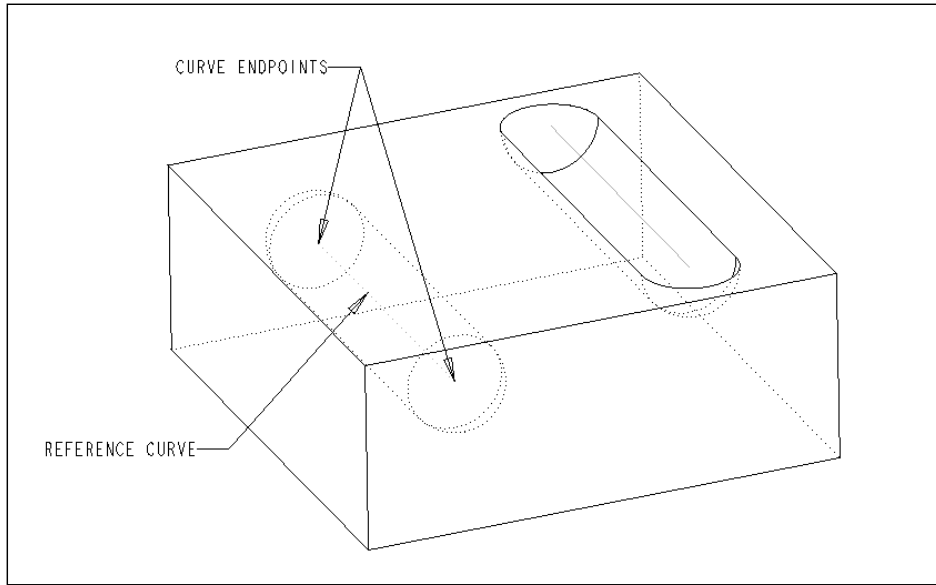
The system prompts you to do the following:

1. Select placement and scaling options for the runner.
2. Enter the height or diameter for the feature, as indicated in the examples.
3. Determine the display options for invariable dimensions.
4. Select the reference curve endpoints.
5. Select the reference plane.

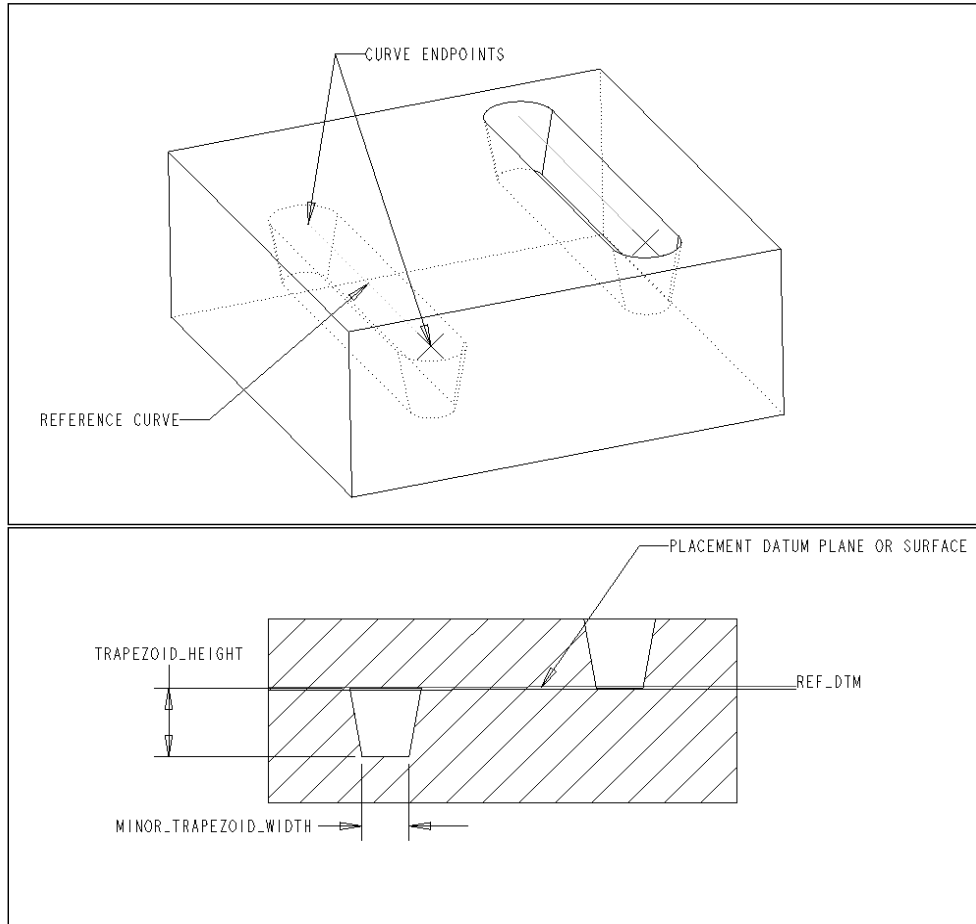
Shapes

There are four basic shapes for runners, as demonstrated in the following figures. The examples given indicate the information you will need to provide.

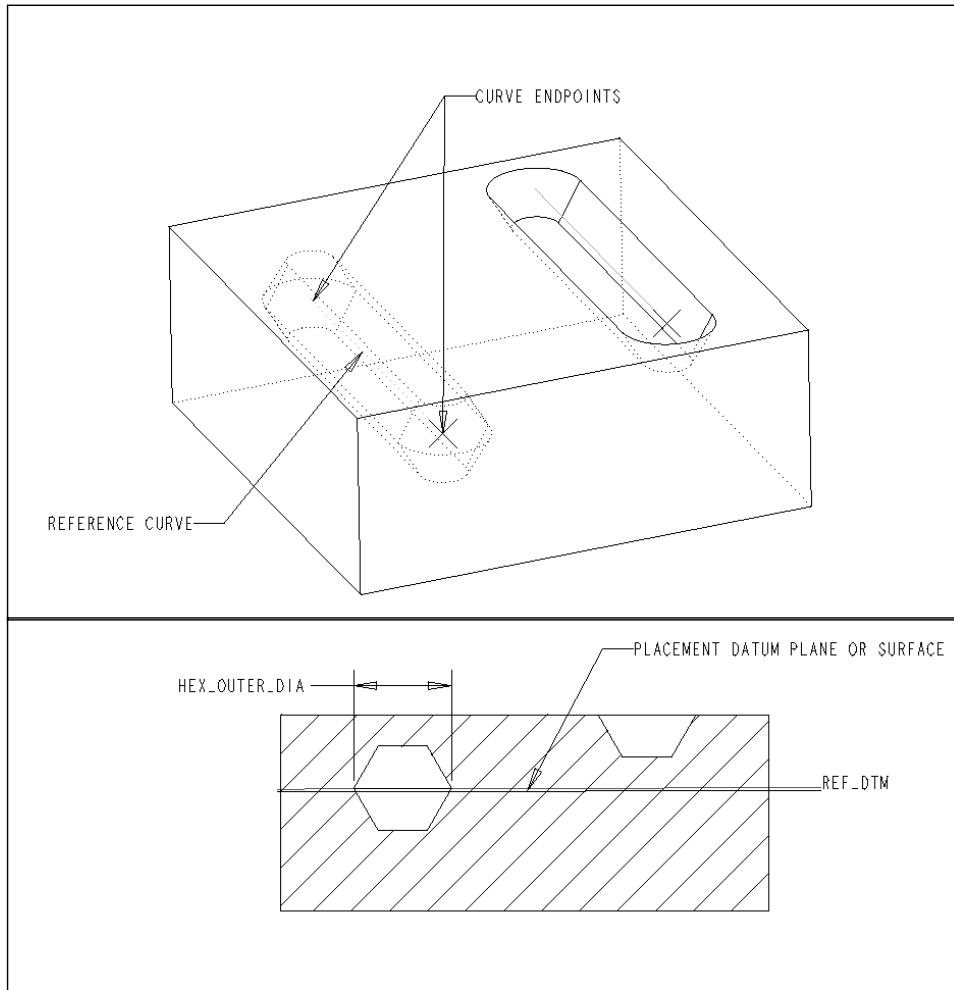
Example of Cylindrical Runner - RUN_CYL



Example of Trapezoidal Runner - RUN_TRAP

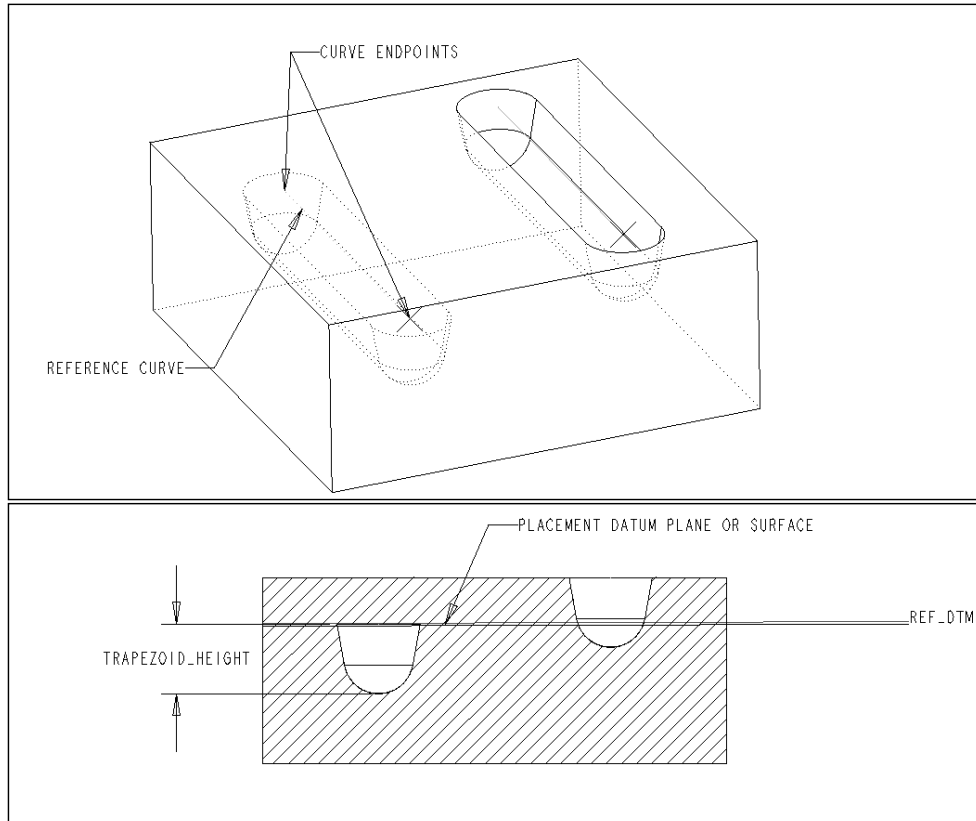


Example of Hexagonal Runner - RUN_HEX



Molding Features

Example of Rounded Trapezoidal Runner - ROUND_TRAP



Gates

Pro/LIBRARY contains gates in the subdirectory *gates*. There are four basic types of gates, as demonstrated in this section. Identify a runner and reference plane in your part before you add a gate.

Prompts

When you use a gate in your part, you must have already defined a runner and a reference plane.

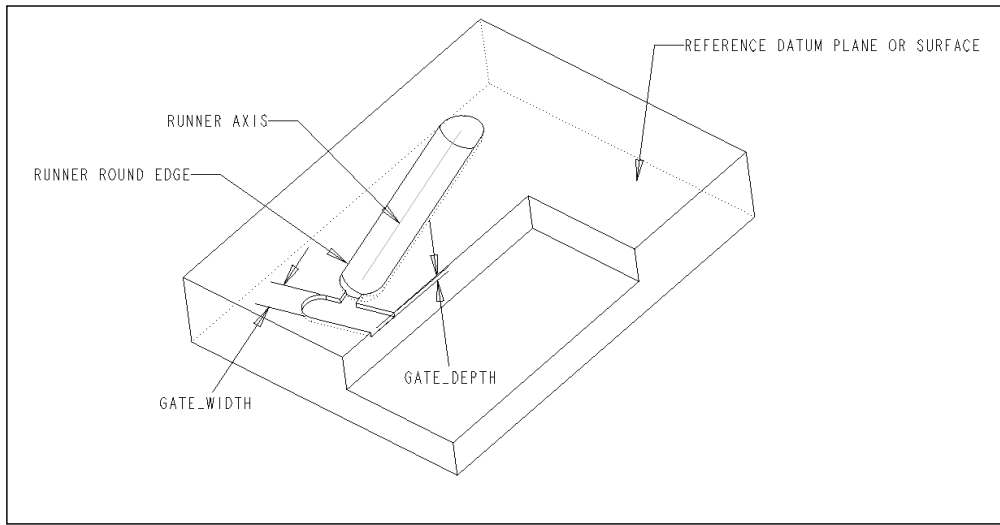
The system prompts you to do the following:

1. Select placement and scaling options for the gate.
2. Enter the dimensions of the gate, as indicated in the examples.
3. Select the reference curve end-point and other reference information, as indicated in the examples.
4. Determine the display options for invariable dimensions.
5. Select the other information.

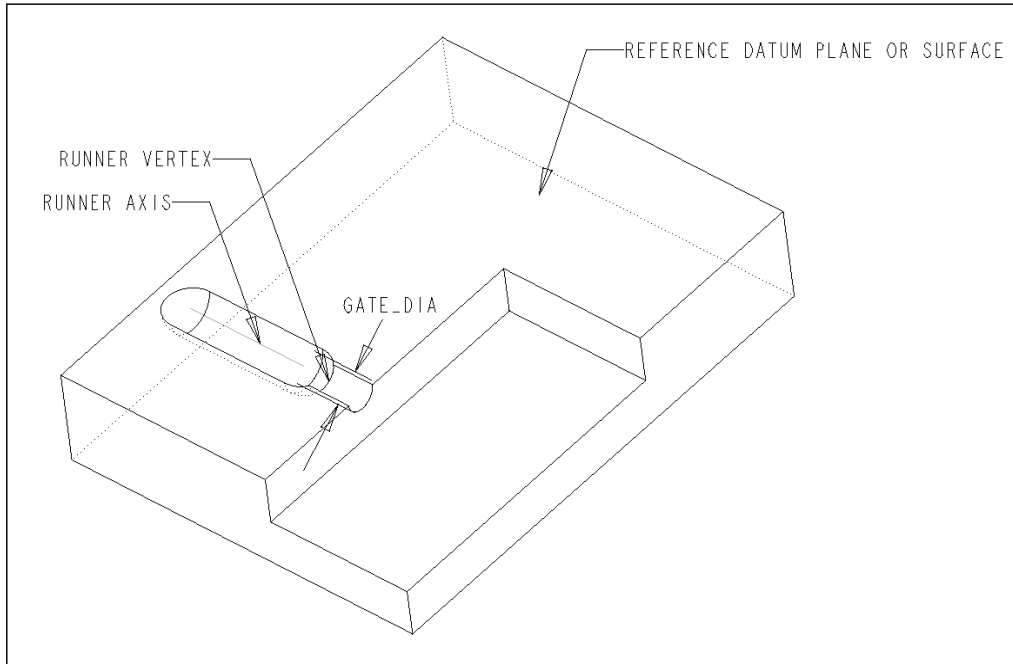
Shapes

There are four basic shapes for gates, as demonstrated in the following figures. The examples given indicate the information you will need to provide.

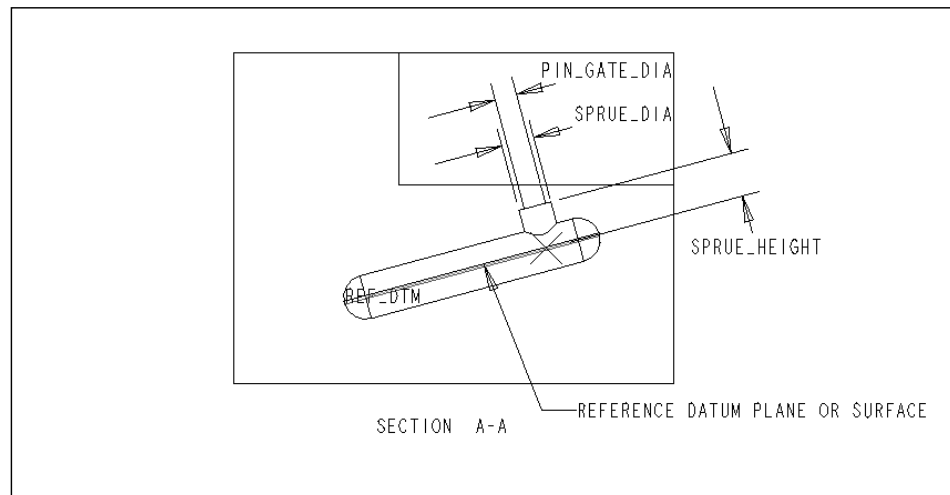
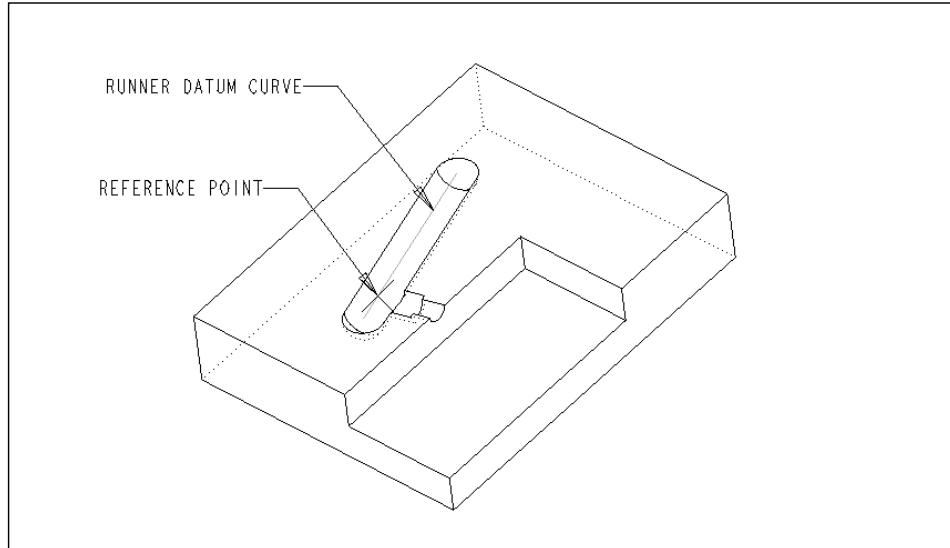
Example of Tab Gate - TAB_GATE



Example of Round Edge Gate- ROUND_EDGE_GATE

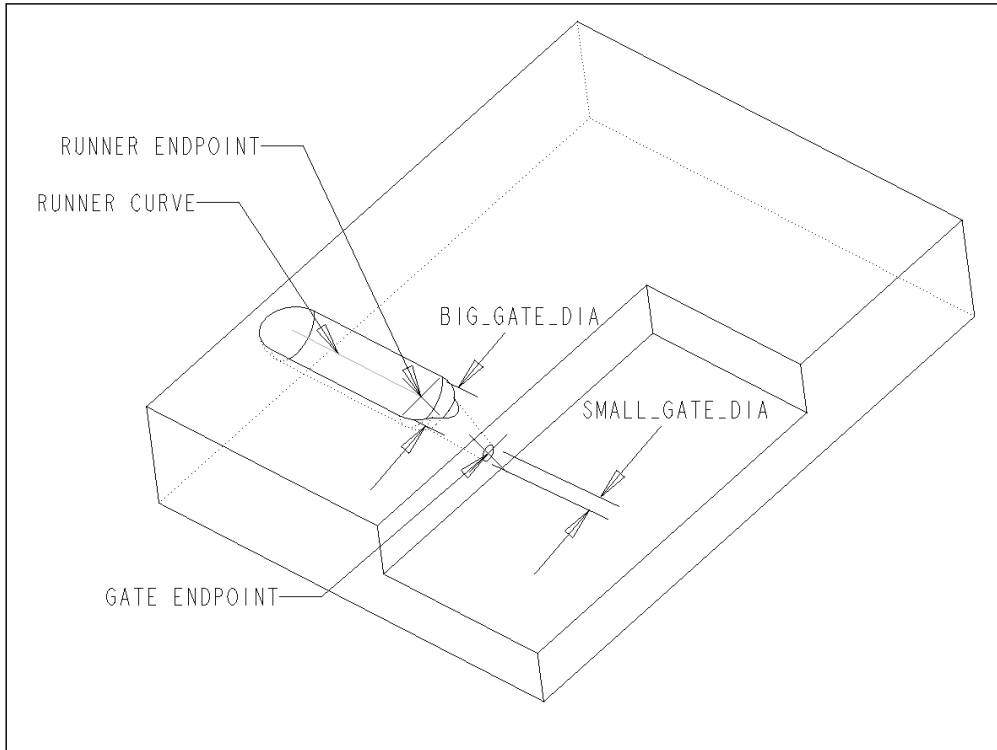


Example of Pin Gate- PIN_GATE



Molding Features

Example of Subsurface Gate - SUBSURFACE_GATE



5

Sheet Metal Design Features

The Pro/LIBRARY directory *featurelib/stm_udf* contains louvers, beads, and offsets in standardized shapes. These parts are useful in sheet metal design. You add these features as parts in a group or assembly.

Louvers

There are three basic shapes of louvers that you can use in your parts, as demonstrated in this section. Louvers are located in the subdirectory */louvers*.

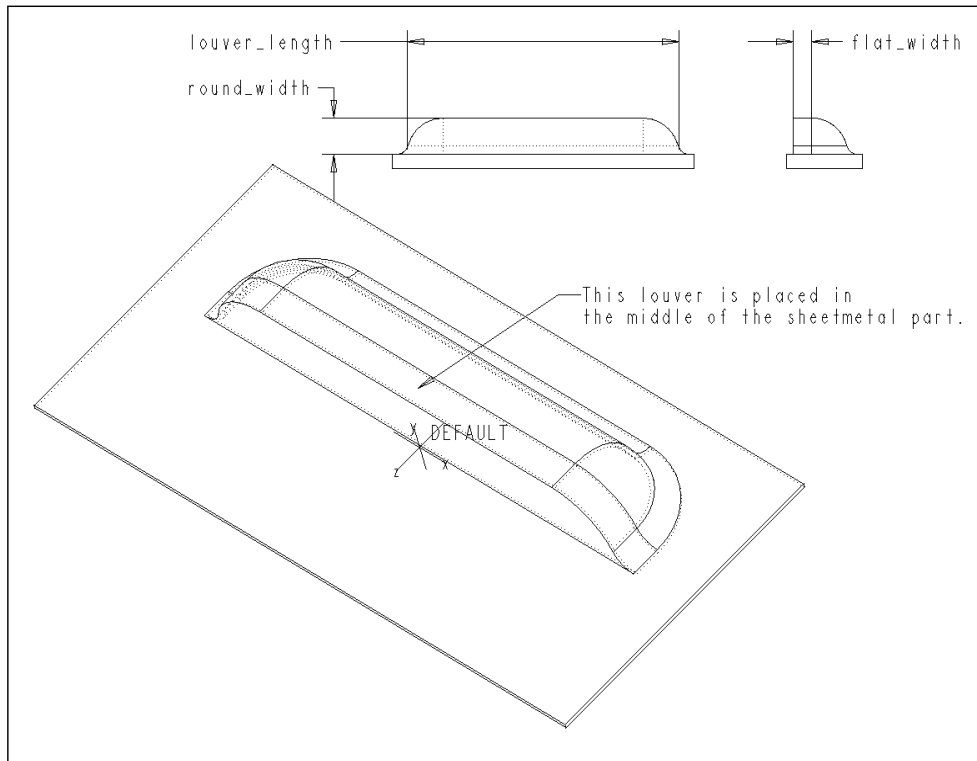
Louver Placement

When you use a louver in your assembly, you should do the following:

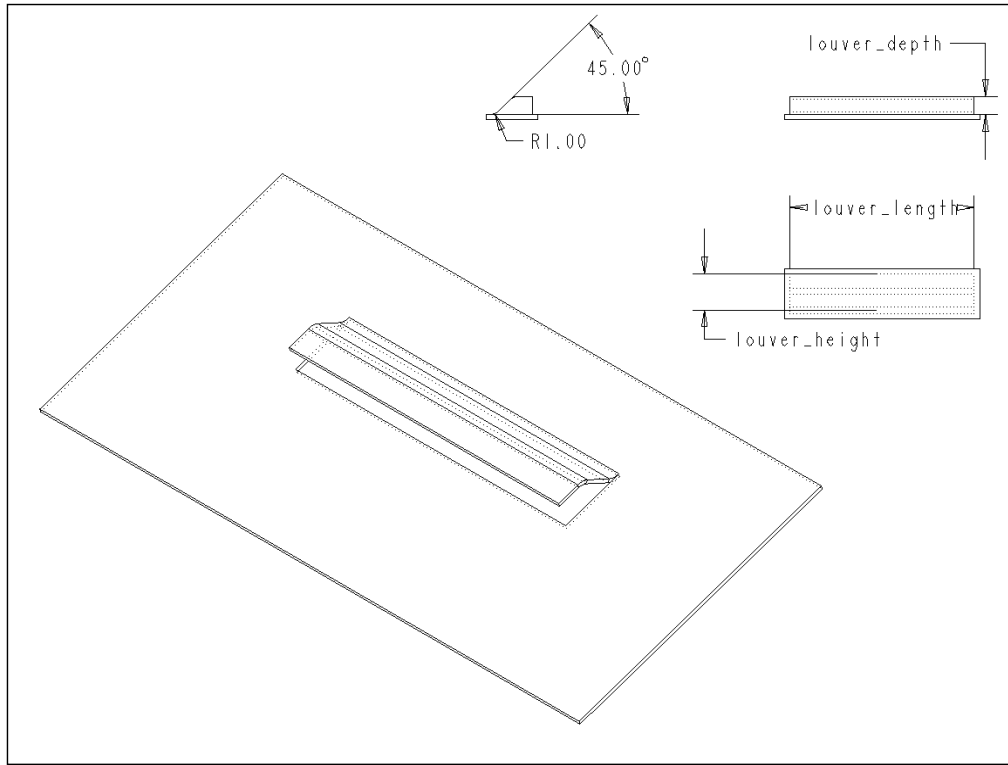
1. Retrieve the louver as a part.
2. Change the dimensions.
3. Assemble the part.

Shapes

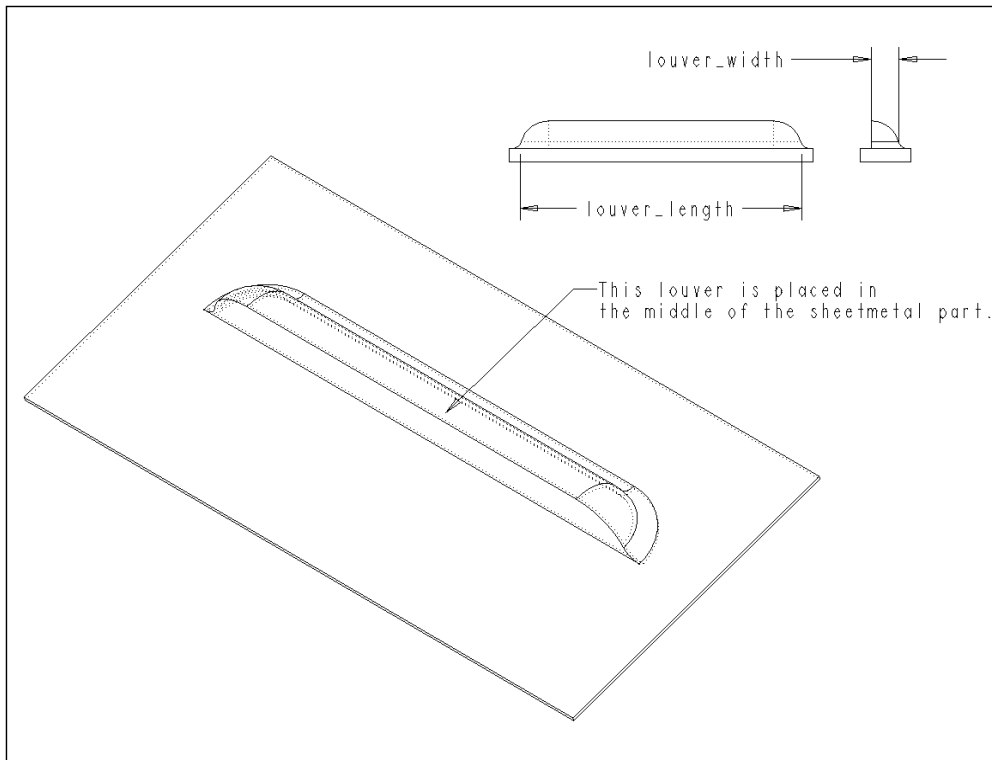
Example of Closed Flat Louver - CLOSE_FLAT_LOUVER



Example of Open Flat Louver - OPEN_FLAT_LOUVER



Example of Closed Round Louver- CLOSE_ROUND_LOUVER



Offsets

There are four kinds of offsets that you can use in your parts, as demonstrated on the following pages. Offsets are located in the subdirectory */offsets*.

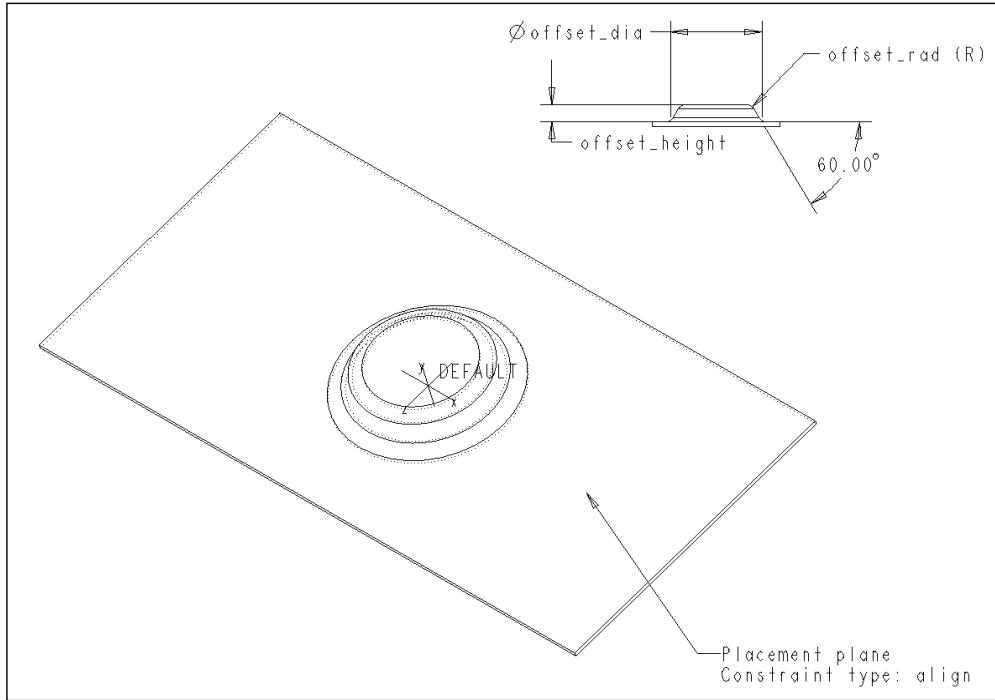
Offset Placement

When you use an offset in your part, you should do the following:

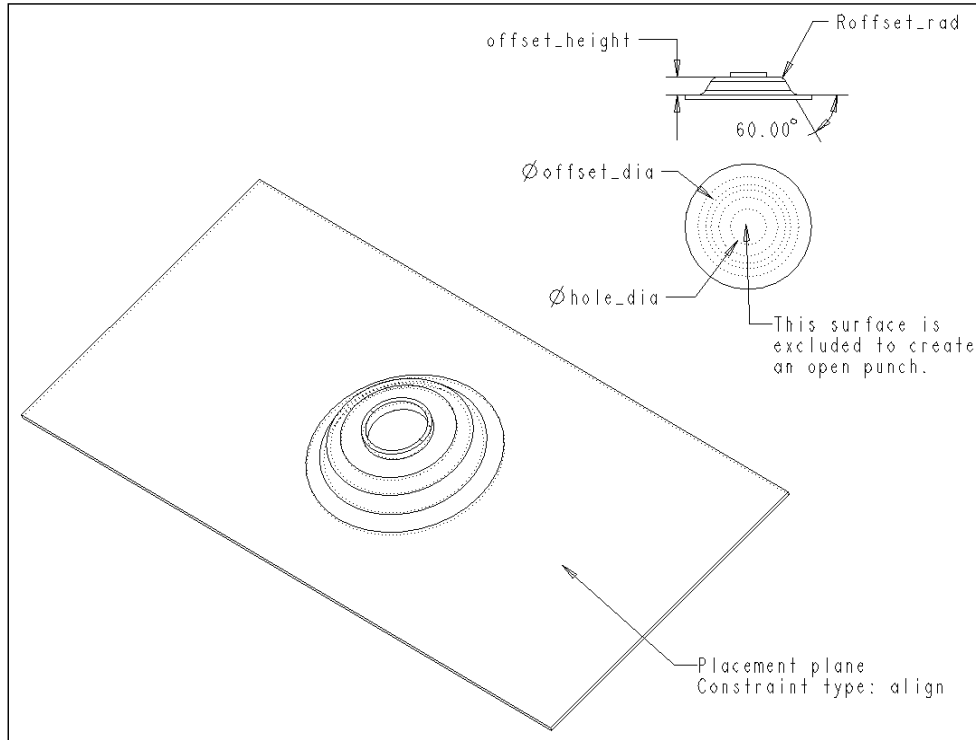
1. Retrieve the offset as a part.
2. Change the dimensions.
3. Assemble the part.

Shapes

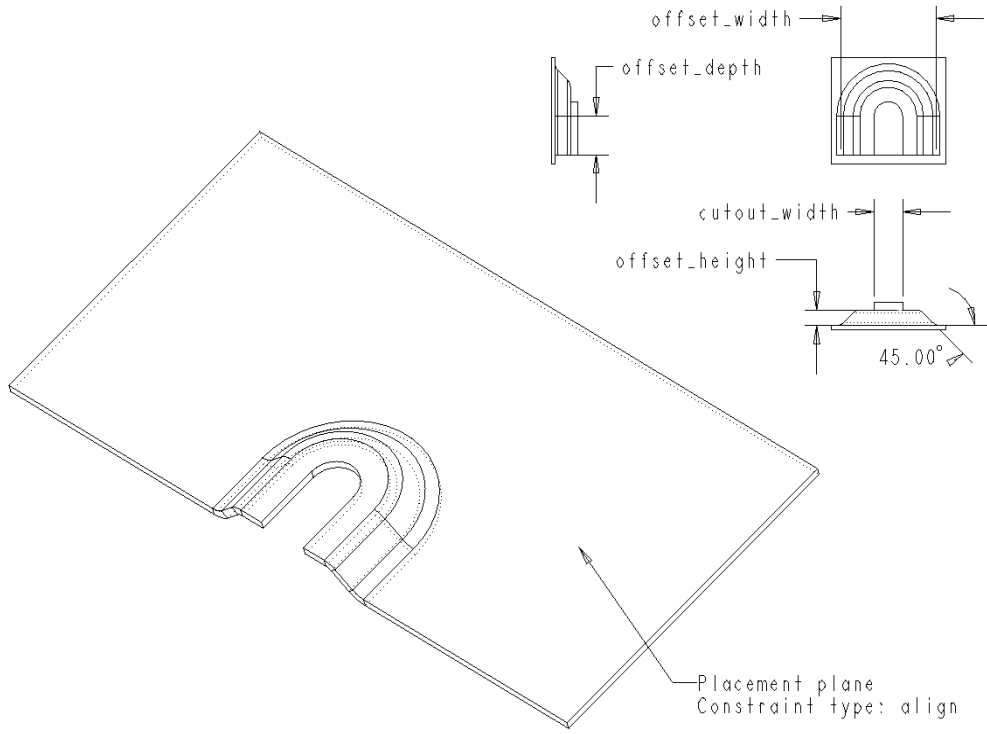
Example of Closed Offset - CLOSE_OFFSET



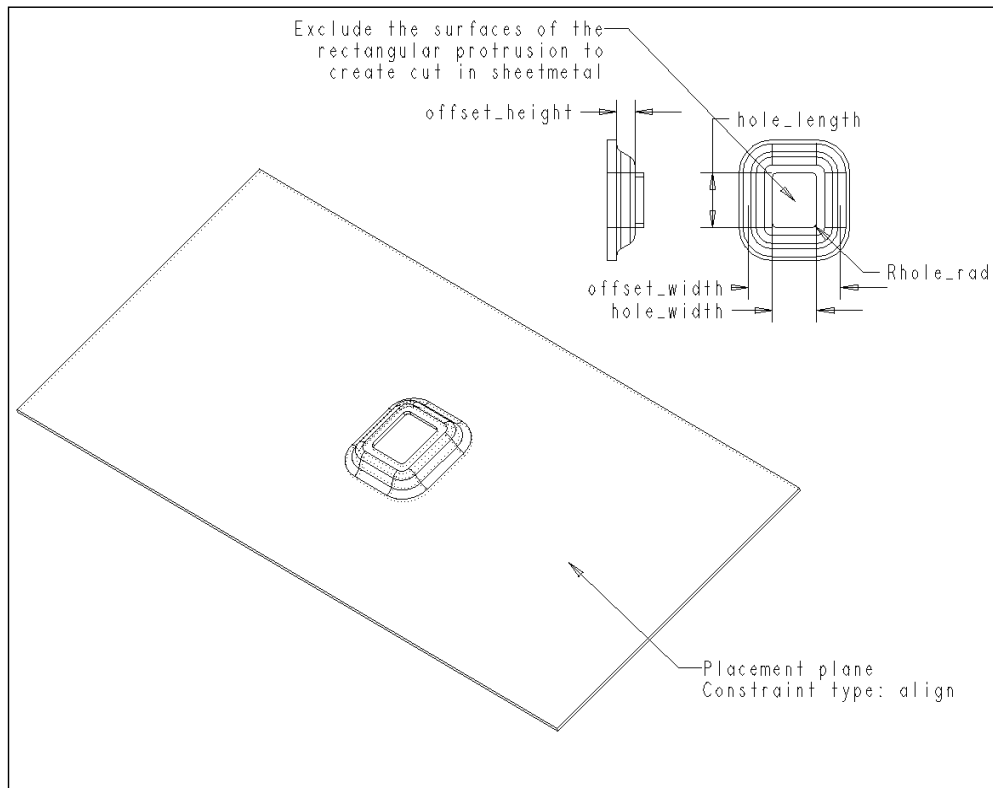
Example of Open Offset - OPEN_OFFSET



Example of Cutout with Offset - CUTOUT



Example of Rectangular Offset - RECTANG_OFFSET



Beads

There are three kinds of beads that you can use in your parts, as demonstrated in the following pages. Beads are located in the subdirectory */beads*.

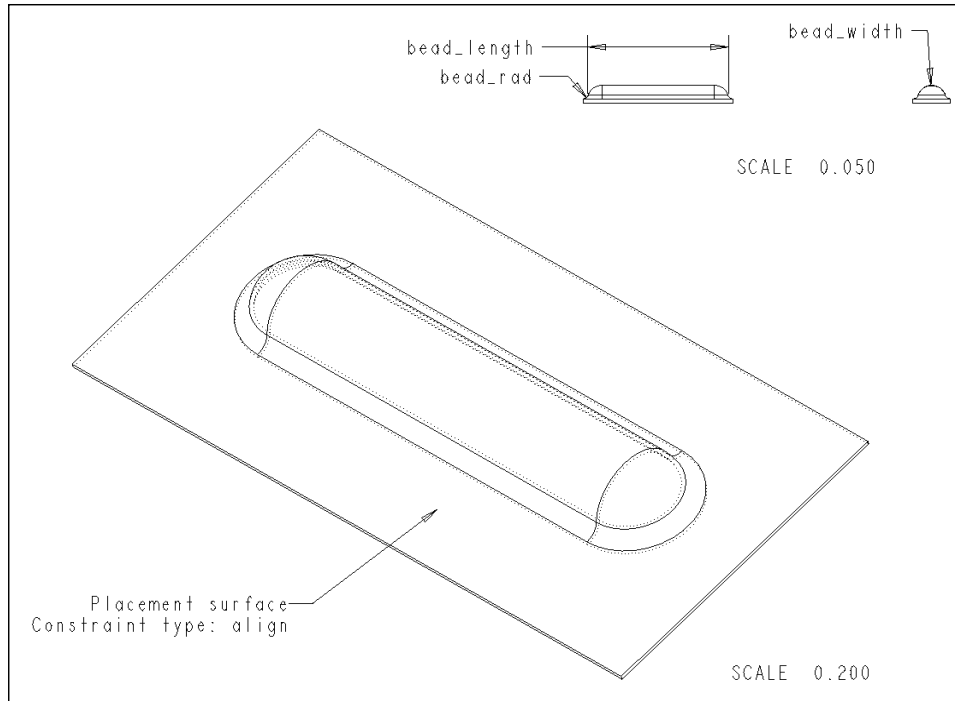
Bead Placement

When you use a bead in your part, you should do the following:

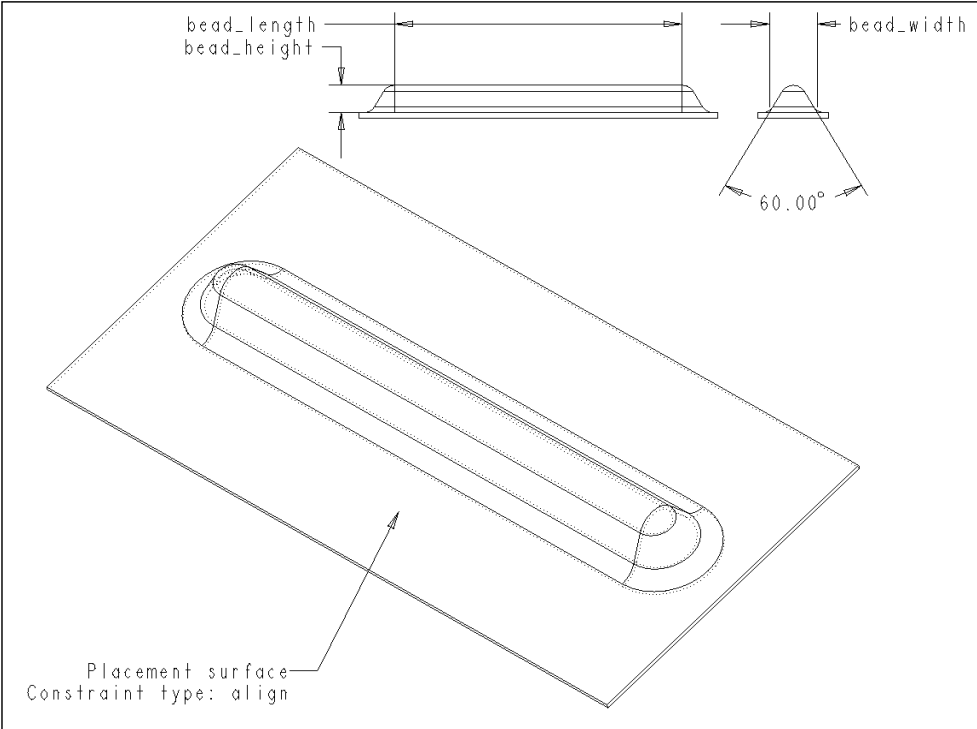
1. Retrieve the bead as a part.
2. Change the dimensions.
3. Assemble the part.

Shapes

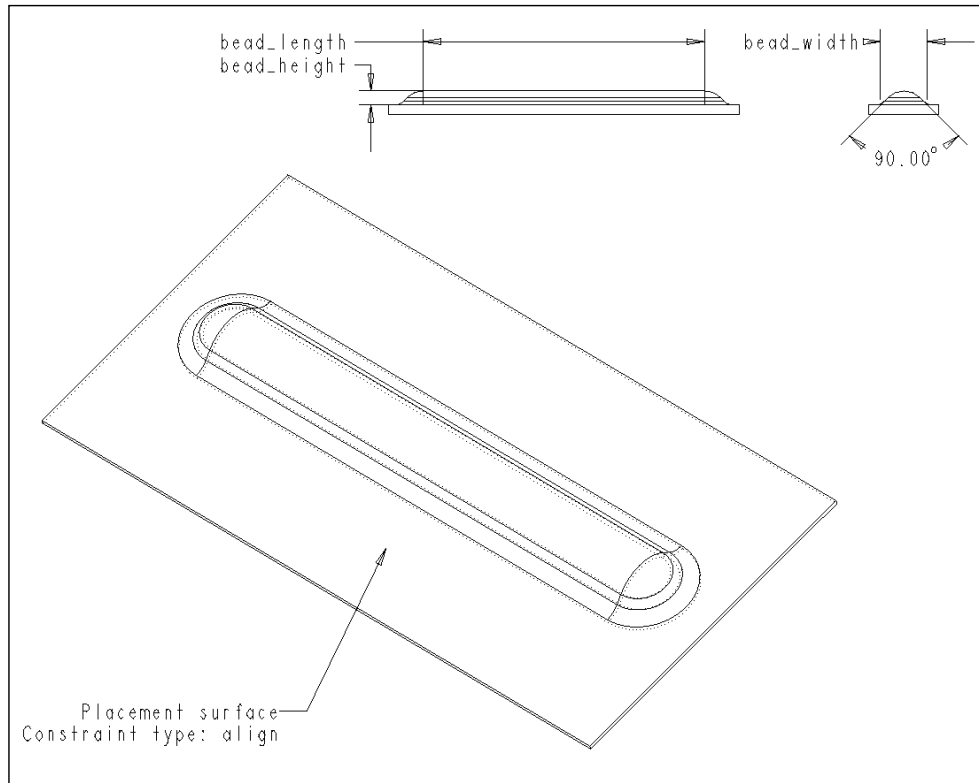
Example of Round Bead - ROUND_BEAD



Example of 60 Degree V-Shape Bead - V60_BEAD



Example of 90 Degree Shaped Bead - V90_BEAD



Section 2

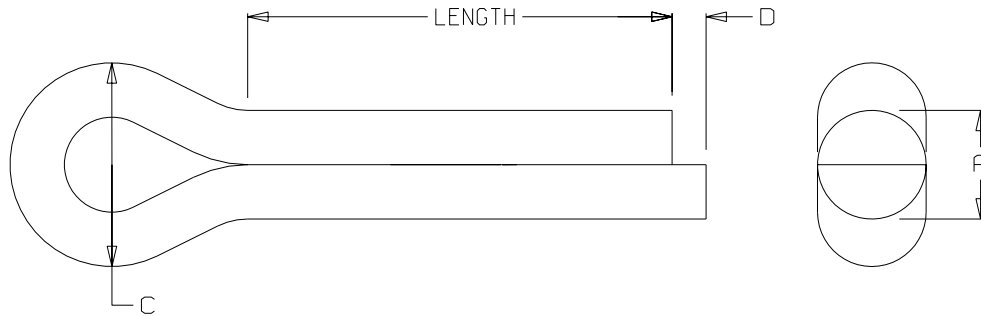
ANSI Inch Series Parts Library

Section 2 of the BASIC LIBRARY catalog contains standardized parts ready for you to use in your assemblies. BASIC LIBRARY standardized parts correspond to ANSI, USAS, and other standards. The corresponding standard is noted with each part.

6

ANSI Inch Pins

Cotter Pin



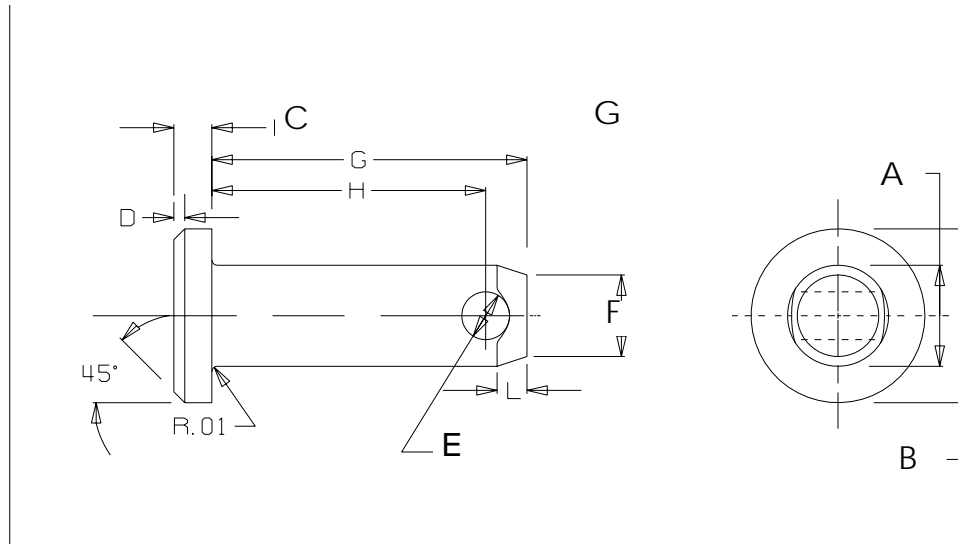
Generic part name: PINA

Notes:

- Corresponds to ANSI B18.8.1-1972 (R1977).
- Lengths given as: from - to, incremented by.
- Enter the NOM_SIZE value exactly as shown.

NOM_SIZE	A Dia.	C Head Dia.	D Prong Length	LENGTHS
.03125	0.032	0.060	0.010	0.125 - 3, 1/8
.046875	0.048	0.090	0.020	0.125 - 3, 1/8
.0625	0.060	0.120	0.030	0.25 - 3, 1/8
.078125	0.076	0.160	0.040	0.25 - 3, 1/8
.09375	0.090	0.190	0.040	0.375 - 3, 1/8
.109375	0.104	0.220	0.050	0.375 - 3, 1/8
.125	0.120	0.250	0.060	0.5 - 3, 1/8
.140625	0.134	0.280	0.060	0.5 - 3, 1/8
.15625	0.150	0.310	0.070	0.625 - 3, 1/8

Clevis Pin



Generic part name: PINB

Notes:

- Corresponds to ANSI B18.8.1-1972 (R1977).
- Enter the BASIC DIA value exactly as shown.

BASIC DIA	A Shank	B Head Dia.	C Head Height	D Head Chamf	F Point Dia.	G Pin Length	E Hole Dia.	H Head to Hole Ctr.	L Point Length
.1875	0.1860	0.3200	0.0700	0.0200	0.1500	0.5800	0.0880	0.5040	0.0550
.25	0.2480	0.3800	0.1000	0.0300	0.2100	0.7700	0.0880	0.6920	0.0880
.3125	0.3110	0.4400	0.1000	0.0300	0.2600	0.9400	0.1190	0.8320	0.0710
.375	0.3730	0.5100	0.1300	0.0300	0.3300	1.0600	0.1190	0.9580	0.0710
.4375	0.4360	0.5700	0.1600	0.0400	0.3900	1.1900	0.1190	1.0820	0.0710
.5	0.4960	0.6300	0.1600	0.0400	0.4400	1.3600	0.1510	1.2230	0.0890
.625	0.6210	0.8200	0.2100	0.0600	0.5600	1.6100	0.1510	1.4730	0.0890
.75	0.7460	0.9400	0.2600	0.0700	0.6800	1.9100	0.1820	1.7390	0.1100

ANSI Inch Pins

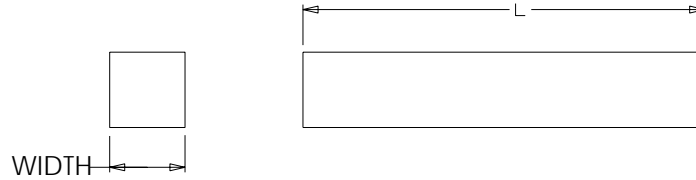
BASIC DIA	A Shank	B Head Dia.	C Head Height	D Head Chamf	F Point Dia.	G Pin Length	E Hole Dia.	H Head to Hole Ctr.	L Point Length
.875	0.8710	1.0400	0.3200	0.0900	0.8000	2.1600	0.1820	1.9890	0.1100
1	0.9960	1.1900	0.3500	0.1000	0.9300	2.4100	0.1820	2.2390	0.1100



7

ANSI Inch Keys

Square Parallel Key



Generic Name: KAA

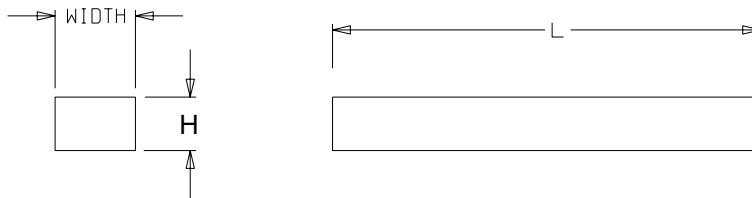
Notes:

- Corresponds to standard USAS B17.1-1967.
- Lengths given as: from - to, incremented by.
- Enter the WIDTH value exactly as shown.

WIDTH	L Lengths
.0938	0.5 - 1.5, 0.25
.125	0.5 - 2.0, 0.25
.1875	0.75 - 2.5, 0.25
.25	0.75 - 3.0, 0.25
.3125	0.75 - 3.5, 0.25
.375	1.0 - 4.0, 0.25
.5	1.5 - 5.0, 0.25
.625	2.0 - 6.0, 0.5
.75	3.0 - 10.0, 0.5
.875	4.0 - 12.0, 1.0
1	4.0 - 16.0, 1.0
1.25	5.0 - 16.0, 1.0
1.5	5.0 - 20.0, 1.25
1.75	6.0 - 21.0, 1.5
2	6.0 - 24.0, 2.0

WIDTH	L Lengths
2.5	6.0 - 24.0, 2.0
3	8.0 - 24.0, 2.0
3.5	8.0 - 24.0, 2.0

Rectangular Parallel Key



Generic Name: KBB

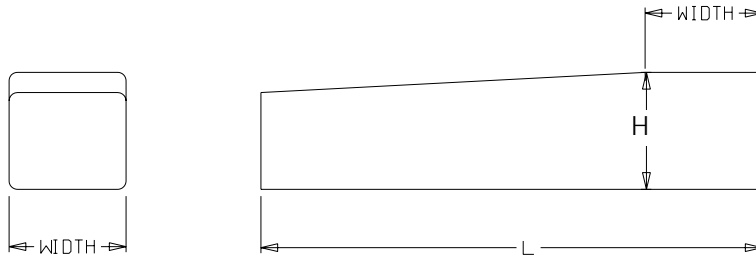
Notes:

- Corresponds to standard USAS B17.1-1967.
- Lengths given as: from - to, incremented by.
- Enter the WIDTH value exactly as shown.

WIDTH	H Height	L Lengths
.125	0.0938	0.5 - 1.5, 0.25
.1875	0.1250	0.5 - 2.0, 0.25
.25	0.1875	0.75 - 2.5, 0.25
.3125	0.2500	0.75 - 3.0, 0.25
.375	0.2500	1.0 - 4.0, 0.25
.5	0.3750	2.5 - 6.0, 0.5
.625	0.4375	3.0 - 7.0, 0.5
.75	0.5000	3.5 - 8.0, 0.5
.875	0.6250	3.5 - 8.0, 0.5

WIDTH	H Height	L Lengths
1	0.7500	4.0 - 10.0, 0.5
1.25	0.8750	4.0 - 12.0, 0.5
1.5	1.0000	4.0 - 14.0, 1.0
1.75	1.5000	4.0 - 14.0, 1.0
2	1.5000	5.0 - 15.0, 1.0
2.5	1.7500	5.0 - 15.0, 1.0
3	2.0000	6.0 - 16.0, 1.0
3.5	2.5000	6.0 - 16.0, 1.0
4	3.0000	10.0 - 28.0, 2.0
5	3.5000	10.0 - 30.0, 2.0
6	4.0000	10.0 - 30.0, 2.0
7	5.0000	10.0 - 30.0, 2.0

Square Plain Tapered Key



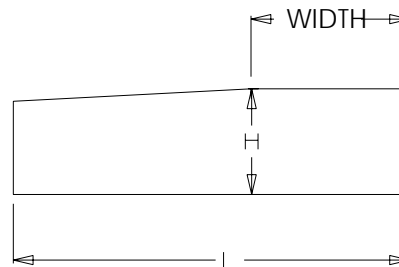
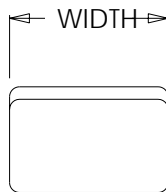
Generic Name: KCC

Notes:

- Corresponds to standard USAS B17.1-1967.
- Lengths given as: from - to, incremented by.
- Key height (H) is equal to its width.
- Enter the WIDTH value exactly as shown.

WIDTH	L Lengths
.0938	0.5 - 1.5, 0.25
.125	0.5 - 2.0, 0.25
.1875	0.75 - 2.5, 0.25
.25	0.75 - 3.0, 0.25
.3125	0.75 - 3.5, 0.25
.375	1.0 - 4.0, 0.25
.5	1.5 - 5.0, 0.25
.625	2.0 - 6.0, 0.5
.75	3.0 - 10.0, 0.5
.875	4.0 - 12.0, 1.0
1	4.0 - 16.0, 1.0
1.25	5.0 - 16.0, 1.0
1.5	5.0 - 22.5, 1.25
1.75	6.0 - 21.0, 1.5
2	6.0 - 24.0, 2.0
2.5	6.0 - 24.0, 2.0
3	8.0 - 24.0, 2.0
3.5	8.0 - 24.0, 2.0

Rectangular Plain Tapered Key



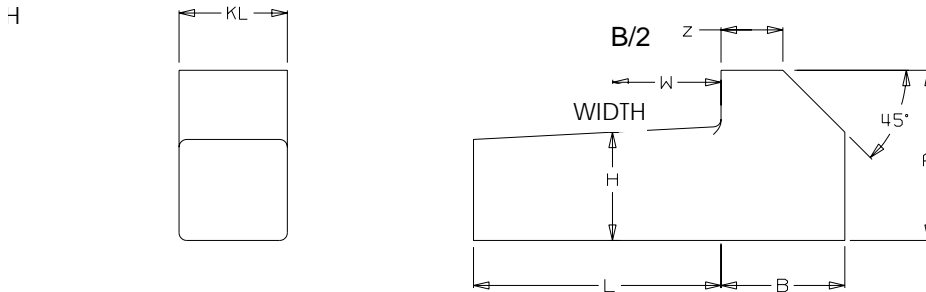
Generic Name: KDD

Notes:

- Corresponds to standard USAS B17.1-1967.
- Lengths given as: from - to, incremented by.
- Enter the WIDTH value exactly as shown.

WIDTH	H Height	L Lengths
.125	0.0938	0.5 - 1.5, 0.25
.1875	0.1250	0.5 - 2.0, 0.25
.25	0.1875	0.75 - 2.5, 0.25
.3125	0.2500	0.75 - 3.0, 0.25
.375	0.2500	1.0 - 4.0, 0.25
.5	0.3750	2.5 - 6.0, 0.5
.625	0.4375	3.0 - 7.0, 0.5
.75	0.5000	3.5 - 8.0, 0.5
.875	0.6250	3.5 - 8.5, 0.5
1	0.7500	4.0 - 10.0, 0.5
1.25	0.8750	4.0 - 12.0, 0.5
1.5	1.0000	4.0 - 14.0, 1.0
1.75	1.5000	4.0 - 14.0, 1.0
2	1.5000	5.0 - 15.0, 1.0
2.5	1.7500	5.0 - 15.0, 1.0
3	2.0000	6.0 - 16.0, 1.0
3.5	2.5000	6.0 - 16.0, 1.0
4	3.0000	10.0 - 28.0, 2.0
5	3.5000	10.0 - 30.0, 2.0
6	4.0000	10.0 - 30.0, 2.0
7	5.0000	10.0 - 30.0, 2.0

Square Gib-Head Taper Key



Generic Name: KEE

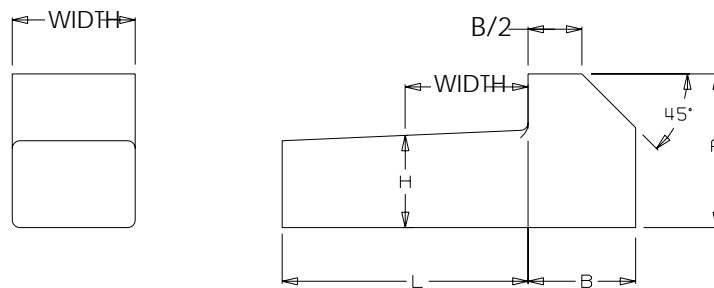
Notes:

- Corresponds to standard USAS B17.1-1967.
- Lengths given as: from - to, incremented by.
- Enter the WIDTH value exactly as shown.

WIDTH	H Height	A	B	L Lengths
.125	0.1250	0.2500	0.2500	0.75 - 3.0, 0.25
.1875	0.1875	0.3125	0.3125	1.0 - 3.5, 0.25
.25	0.2500	0.4375	0.3750	1.0 - 4.0, 0.25
.3125	0.3125	0.5000	0.4375	1.5 - 4.5, 0.25
.375	0.3750	0.6250	0.5000	2.0 - 6.0, 0.5
.5	0.5000	0.8750	0.6250	2.5 - 7.0, 0.5
.625	0.6250	1.0000	0.7500	3.0 - 7.5, 0.5
.75	0.7500	1.2500	0.8750	3.5 - 8.0, 0.5
.875	0.8750	1.3750	1.0000	4.5 - 10.0, 0.5
1	1.0000	1.6250	1.1250	5.0 - 10.0, 0.5
1.25	1.2500	2.0000	1.4375	5.0 - 12.0, 0.5
1.5	1.5000	2.3750	1.7500	5.0 - 14.0, 1.0
1.75	1.7500	2.7500	2.0000	5.0 - 14.0, 1.0
2	2.0000	3.5000	2.2500	5.0 - 15.0, 1.0

WIDTH	H Height	A	B	L Lengths
2.5	2.5000	4.0000	3.0000	5.0 - 15.0, 1.0
3	3.0000	5.0000	3.5000	6.0 - 16.0, 1.0
3.5	3.5000	6.0000	4.0000	6.0 - 16.0, 1.0

Rectangular Gib-Head Taper Key



Generic Name: KFF

Notes:

- Corresponds to standard USAS B17.1-1967.
- Lengths given as: from - to, incremented by.
- Enter the WIDTH values exactly as shown.

WIDTH	H Height	A	B	L Lengths
.125	0.0938	0.1875	0.1250	0.75 - 3.0, 0.25
.1875	0.2500	0.2500	0.2500	1.0 - 3.5, 0.25
.25	0.1875	0.3125	0.3125	1.0 - 4.0, 0.25
.3125	0.2500	0.4375	0.3750	1.5 - 4.5, 0.25
.375	0.2500	0.4375	0.3750	2.0 - 6.0, 0.5
.5	0.3750	0.6250	0.5000	2.5 - 7.0, 0.5
.625	0.4375	0.7500	0.5625	3.0 - 7.5, 0.5

WIDTH	H Height	A	B	L Lengths
.75	0.5000	0.8750	0.6250	3.5 - 8.0, 0.5
.875	0.6250	1.0000	0.7500	4.5 - 10.0, 0.5
1	0.7500	1.2500	0.8750	5.0 - 10.0, 0.5
1.25	0.8750	1.3750	1.0000	5.0 - 12.0, 0.5
1.5	1.0000	1.6250	1.1250	5.0 - 14.0, 1.0
1.75	1.5000	2.3750	1.7500	5.0 - 14.0, 1.0
2	1.5000	2.3750	1.7500	5.0 - 15.0, 1.0
2.5	1.7500	2.7500	2.0000	5.0 - 15.0, 1.0
3	2.0000	3.5000	2.2500	6.0 - 16.0, 1.0
3.5	2.5000	4.0000	3.0000	6.0 - 16.0, 1.0

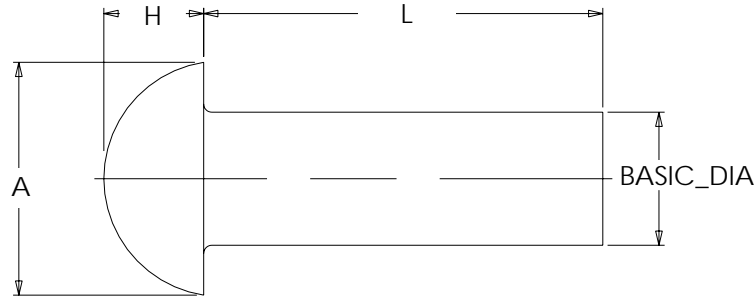
ANSI Inch Keys



8

ANSI Inch Large Rivets

Button Head Rivet



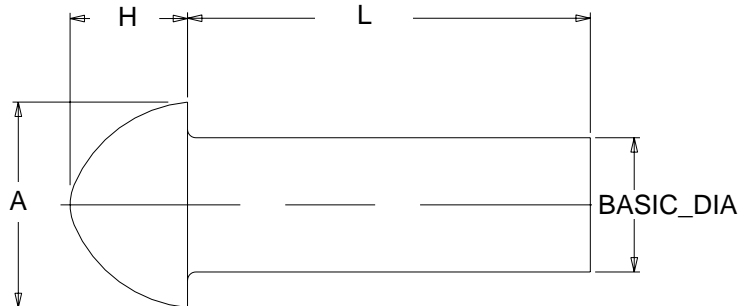
Generic part name: RAA

Notes:

- Corresponds to standard ANSI B18.1.2-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Head Dia	H Head Height	L Lengths
.5	0.8750	0.3750	1.0 - 1.75, 0.125; 1.75 - 2.25, 0.25; 2.25 - 2.5, 0.125; 2.5 - 4.75, 0.25
.625	1.0940	0.4690	1.0 - 5.75, 0.25
.75	1.3120	0.5620	1.25 - 6.75, 0.25
.875	1.5310	0.6560	1.25 - 8.25, 0.25
1	1.7500	0.7500	1.25 - 8.25, 0.25
1.125	1.9690	0.8440	2.0 - 8.25, 0.25
1.25	2.1880	0.9380	2.0 - 8.5, 0.25
1.375	2.4060	1.0310	2.0 - 8.5, 0.25
1.5	2.6250	1.1250	2.0 - 8.5, 0.25
1.625	2.8440	1.2190	2.0 - 8.5, 0.25
1.75	3.0620	1.3120	2.0 - 8.5, 0.25

High Button Head (Acorn) Rivet



ANSI Inch Large Rivets

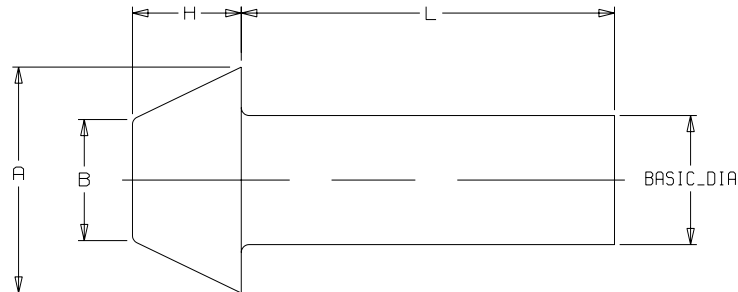
Generic part name: RBB

Notes:

- Corresponds to standard ANSI B18.1.2-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Head Dia	H Head Height	L Lengths
.5	0.7810	0.5000	1.0 - 1.75, 0.125; 1.75 - 2.25, 0.25; 2.25 - 2.5, 0.125; 2.5 - 4.75, 0.25
.625	0.9690	0.5940	1.0 - 5.75, 0.25
.75	1.1560	0.6880	1.25 - 6.75, 0.25
.875	1.3440	0.7810	1.25 - 8.25, 0.25
1	1.5310	0.8750	1.25 - 8.25, 0.25
1.125	1.7190	1.9690	2.0 - 8.25, 0.25
1.25	1.9060	1.0620	2.0 - 8.5, 0.25
1.375	2.0940	1.1560	2.0 - 8.5, 0.25
1.5	2.2810	1.2500	2.0 - 8.5, 0.25
1.625	2.4690	1.3440	2.0 - 8.5, 0.25
1.75	2.6560	1.4380	2.0 - 8.5, 0.25

Cone Head Rivet



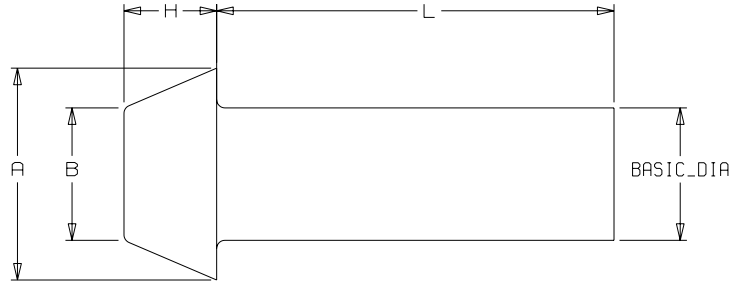
Generic part name: **RCC**

Notes:

- Corresponds to standard ANSI B18.1.2-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Major Head Dia	B Minor Head Dia	H Head Height	L Lengths
.5	0.8750	0.4690	0.4380	1.0 - 1.75, 0.125 1.75 - 2.25, 0.25 2.25 - 4.75, 0.25
.625	1.0940	0.5860	0.5470	1.0 - 5.75, 0.25
.75	1.3120	0.7030	0.6560	1.25 - 6.75, 0.25
.875	1.5310	0.8200	0.7660	1.25 - 8.25, 0.25
1	1.7500	0.9380	0.8750	1.25 - 8.25, 0.25
1.125	1.9690	1.0550	0.9840	2.0 - 8.25, 0.25
1.25	2.1880	1.1720	1.0940	2.0 - 8.5, 0.25
1.375	2.4060	1.2900	1.2030	2.0 - 8.5, 0.25
1.5	2.6250	1.4060	1.3120	2.0 - 8.5, 0.25
1.625	2.8440	1.5240	1.4220	2.0 - 8.5, 0.25
1.75	3.0620	1.6410	1.5310	2.0 - 8.5, 0.25

Pan Head Rivet



ANSI Inch Large Rivets

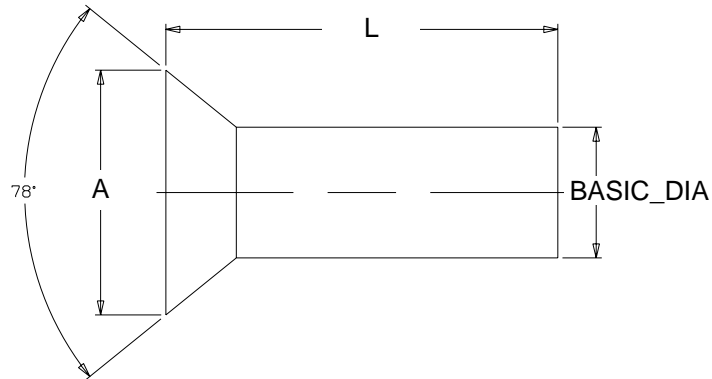
Generic part name: RDD

Notes:

- Corresponds to standard ANSI B18.1.2-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Major Head Dia	B Minor Head Dia	H Head Height	L Lengths
.5	0.8000	0.5000	0.3500	1.0 - 1.75, 0.125 1.75 - 2.25, 0.25 2.25 - 4.75, 0.25
.625	1.0000	0.6250	0.4380	1.0 - 5.75, 0.25
.75	1.2000	0.7500	0.5250	1.25 - 6.75, 0.25
.875	1.4000	0.8750	0.6120	1.25 - 8.25, 0.25
1	1.6000	1.0000	0.7000	1.25 - 8.25, 0.25
1.125	1.8000	1.1250	0.7880	2.0 - 8.25, 0.25
1.25	2.0000	1.2500	0.8750	2.0 - 8.5, 0.25
1.375	2.2000	1.3750	0.9620	2.0 - 8.5, 0.25
1.5	2.4000	1.5000	1.0500	2.0 - 8.5, 0.25
1.625	2.6000	1.6250	1.1380	2.0 - 8.5, 0.25
1.75	2.8000	1.7500	1.2250	2.0 - 8.5, 0.25

Flat Countersunk Head Rivet



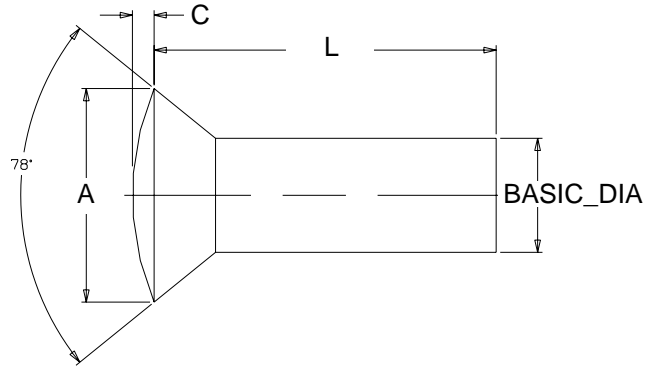
Generic part name: REE

Notes:

- Corresponds to standard ANSI B18.1.2-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Head Dia	L Lengths
.5	0.9360	1.0 - 1.75, 0.125; 1.75 - 2.25, 0.25; 2.25 - 4.75, 0.25
.625	1.1940	1.0 - 5.75, 0.25
.75	1.4210	1.25 - 6.75, 0.25
.875	1.6470	1.25 - 8.25, 0.25
1	1.8730	1.25 - 8.25, 0.25
1.125	2.1140	2.0 - 8.25, 0.25
1.25	2.3400	2.0 - 8.5, 0.25
1.375	2.5670	2.0 - 8.5, 0.25
1.5	2.7930	2.0 - 8.5, 0.25
1.625	3.0190	2.0 - 8.5, 0.25
1.75	3.2620	2.0 - 8.5, 0.25

Oval Countersunk Head Rivet



ANSI Inch Large Rivets

Generic part name: RFF

Notes:

- Corresponds to standard ANSI B18.1.2-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Head Dia	C Crown Height	L Lengths
.5	0.9360	0.0950	1.0 - 1.75, 0.125; 1.75 - 2.25, 0.25; 2.25 - 4.75, 0.25
.625	1.1940	0.1190	1.0 - 5.75, 0.25
.75	1.4210	0.1420	1.25 - 6.75, 0.25
.875	1.6470	0.1660	1.25 - 8.25, 0.25
1	1.8730	0.1900	1.25 - 8.25, 0.25
1.125	2.1140	0.2140	2.0 - 8.25, 0.25
1.25	2.3400	0.2380	2.0 - 8.5, 0.25
1.375	2.5670	0.2610	2.0 - 8.5, 0.25
1.5	2.7930	0.2850	2.0 - 8.5, 0.25
1.625	3.0190	0.3090	2.0 - 8.5, 0.25
1.75	3.2620	0.3320	2.0 - 8.5, 0.25

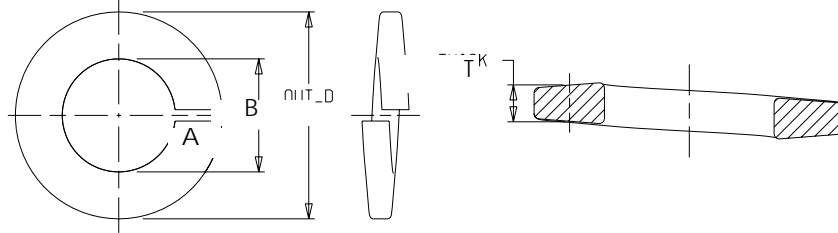
9

ANSI Inch Lock Washers

The BASIC_DIA values used in callouts usually correspond to the decimal value of the nominal diameter of the part (for example, “.25”). In some cases, however, the parts are called out by a number, such as “NO.1”. Those numbers correspond to the following values of the nominal diameter:

BASIC_DIA	Nominal Diameter
NO.0000	0.0210
NO.000	0.0340
NO.00	0.0470
NO.0	0.0600
NO.1	0.0730
NO.2	0.0860
NO.3	0.0990
NO.4	0.1120
NO.5	0.1250
NO.6	0.1380
NO.8	0.1640
NO.10	0.1900
NO.12	0.2160

Regular Helical Spring Lock Washer



Generic part name: WHS

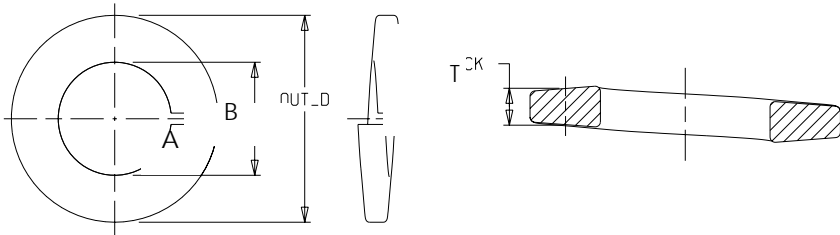
Notes:

- Corresponds to ANSI B18.21.1-1972.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Inside Dia.	B Outside Dia.	T Thickness
NO.2	0.0940	0.1720	0.0200
NO.3	0.1070	0.1950	0.0250
NO.4	0.1200	0.2090	0.0250
NO.5	0.1330	0.2360	0.0310
NO.6	0.1480	0.2500	0.0310
NO.8	0.1740	0.2930	0.0400
NO.10	0.2000	0.3340	0.0470
NO.12	0.2270	0.3770	0.0560
.25	0.2620	0.4890	0.0620
.3125	0.3260	0.5860	0.0780
.375	0.3900	0.6830	0.0940
.4375	0.4550	0.7790	0.1090
.5	0.5180	0.8730	0.1250
.5625	0.5820	0.9710	0.1410
.625	0.6500	1.0790	0.1560

BASIC_DIA	A Inside Dia.	B Outside Dia.	T Thickness
.6875	0.7130	1.1760	0.1720
.75	0.7750	1.2710	0.1880
.875	0.9050	1.4640	0.2190
.9375	0.9700	1.5600	0.2340
1	1.0420	1.6610	0.2500
1.0625	1.1070	1.7560	0.2660
1.125	1.1720	1.8530	0.2810
1.1875	1.2370	1.9500	0.2970
1.25	1.3020	2.0450	0.3120
1.3125	1.3660	2.1410	0.3280
1.375	1.4320	2.2390	0.3440
1.4375	1.4970	2.3340	0.3590
1.5	1.5610	2.4300	0.3750

Extra Duty Helical Spring Lock Washer



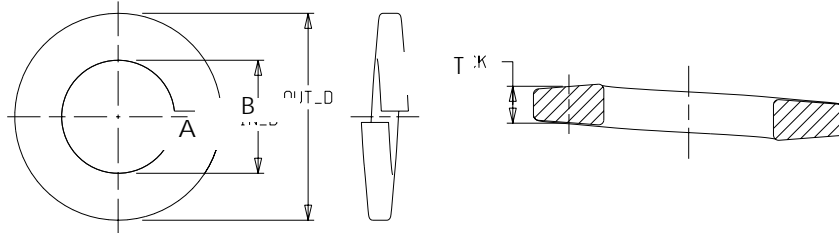
Generic part name: WED

Notes:

- Corresponds to ANSI B18.21.1-1972.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Inside Dia.	B Outside Dia.	T Thickness
NO.2	0.0940	0.2080	0.0270
NO.3	0.1070	0.2390	0.0340
NO.4	0.1200	0.2530	0.0340
NO.5	0.1330	0.3000	0.0450
NO.6	0.1480	0.3140	0.0450
NO.8	0.1740	0.3750	0.0570
NO.10	0.2000	0.4340	0.0680
NO.12	0.2270	0.4970	0.0800
.25	0.2620	0.5350	0.0840
.3125	0.3260	0.6220	0.1080
.375	0.3900	0.7410	0.1230
.4375	0.4550	0.8390	0.1430
.5	0.5180	0.9390	0.1620
.5625	0.5820	1.0410	0.1820
.625	0.6500	1.1570	0.2020
.6875	0.7130	1.2580	0.2210
.75	0.7750	1.3610	0.2410
.8125	0.8430	1.4630	0.2610
.875	0.9050	1.5760	0.2850
.9375	0.9700	1.6880	0.3080
1	1.0420	1.7990	0.3300
1.0625	1.1070	1.9100	0.3520
1.125	1.1720	2.0190	0.3750
1.1875	1.2370	2.1240	0.3960
1.25	1.3020	2.2310	0.4170
1.3125	1.3660	2.3350	0.4380
1.375	1.4320	2.4390	0.4580
1.4375	1.4970	2.5400	0.4780
1.5	1.5610	2.6380	0.4960

Hi-Collar Helical Spring Lock Washer



Generic part name: WHC

Notes:

- Corresponds to ANSI B18.21.1-1972.
- Enter the BASIC_DIA value exactly as shown.

ANSI Inch Lock Washers

BASIC_DIA	A Inside Dia.	B Outside Dia.	T Thickness
NO.4	0.1200	0.1730	0.0220
NO.5	0.1330	0.2020	0.0300
NO.6	0.1480	0.2160	0.0300
NO.8	0.1740	0.2670	0.0470
NO.10	0.2000	0.2940	0.0470
.25	0.2620	0.3650	0.0780
.3125	0.3260	0.4600	0.0930
.375	0.3900	0.5530	0.1250
.4375	0.4550	0.6470	0.1400
.5	0.5180	0.7370	0.1720
.625	0.6500	0.9230	0.2030
.75	0.7750	1.1110	0.2180
.875	0.9050	1.2960	0.2340
1	1.0420	1.4830	0.2500
1.125	1.1720	1.6690	0.3130

BASIC_DIA	A Inside Dia.	B Outside Dia.	T Thickness
1.25	1.3020	1.7990	0.3130
1.375	1.4320	2.0410	0.3750
1.5	1.5610	2.1700	0.3750
1.75	1.8110	2.6020	0.4690
2	2.0610	2.8520	0.4690
2.25	2.3110	3.3520	0.5080
2.5	2.5610	3.6020	0.5080
2.75	2.8110	4.1020	0.6330
3	3.0610	4.3520	0.6330

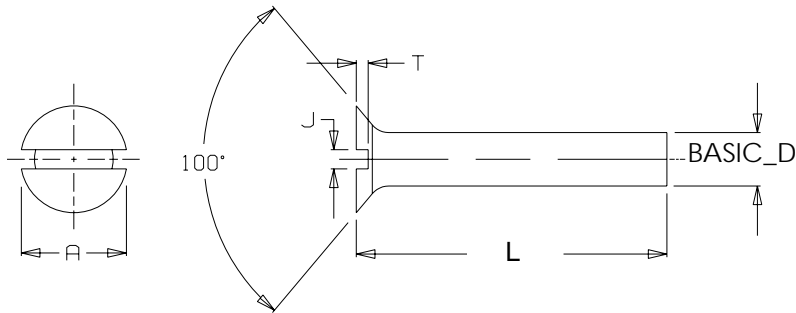
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ANSI Inch Machine Screws and Nuts

The BASIC DIA values used in callouts usually correspond to the decimal values of the nominal diameter of the part. In some cases, however, the callouts are numbers, such as “NO.1”. Those numbers correspond to the following values of the nominal diameter:

BASIC_DIA	Nominal Diameter
NO.0000	0.0210
NO.000	0.0340
NO.00	0.0470
NO.0	0.0600
NO.1	0.0730
NO.2	0.0860
NO.3	0.0990
NO.4	0.1120
NO.5	0.1250
NO.6	0.1380
NO.8	0.1640
NO.10	0.1900
NO.12	0.2160

Slotted 100 Degree Flat Countersunk Head



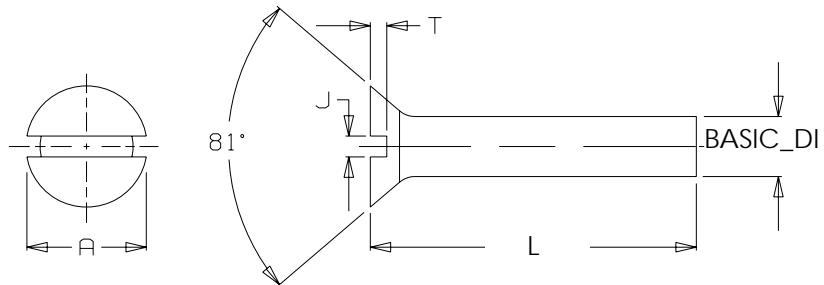
Generic part name: MSAA

Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	J Slot Width	T Slot Depth	L Lengths
NO.0000	0.043	0.008	0.008	.0625 - .5, .0625
NO.000	0.064	0.012	0.011	.0625 - .5, .0625
NO.00	0.093	0.017	0.013	.0625 - .5, .0625
NO.0	0.119	0.023	0.013	.125 - 1, .0625
NO.1	0.146	0.026	0.016	.125 - 1, .0625
NO.2	0.172	0.031	0.019	.125 - 1, .0625
NO.3	0.199	0.035	0.022	.1875 - 1.5, .0625
NO.4	0.225	0.039	0.024	.25 - 1.5, .125
NO.6	0.279	0.048	0.030	.375 - 2, .125
NO.8	0.332	0.054	0.036	.375 - 2, .125
NO.10	0.385	0.060	0.042	.375 - 2, .125
.25	0.507	0.075	0.055	.5 - 3, up to 1.5; .5 to end
.3125	0.635	0.084	0.069	.5 - 3, up to 1.5; .5 to end
.375	0.762	0.094	0.083	.5 - 3, up to 1.5; .5 to end

Slotted Flat Countersunk Head



Generic part name: MSBB

Notes:

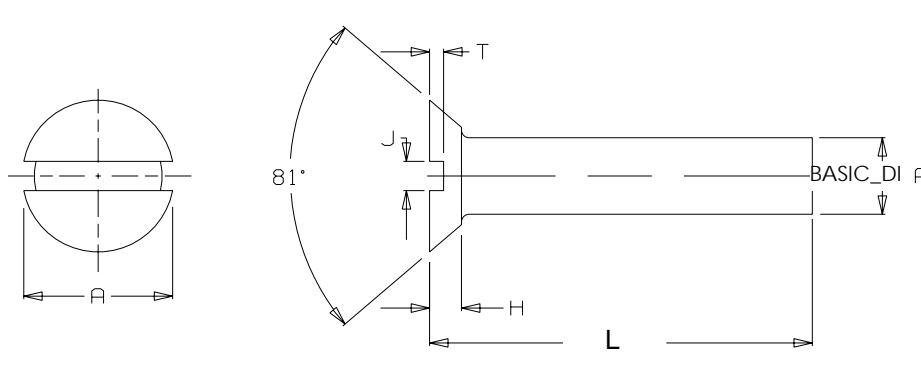
- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	J Slot Width	T Slot Depth	L Lengths
NO.0000	0.043	0.008	0.007	.0625 - .5, .0625
NO.000	0.064	0.011	0.009	.0625 - .5, .0625
NO.00	0.093	0.017	0.014	.0625 - .5, .0625
NO.0	0.119	0.023	0.015	.125 - 1, .0625
NO.1	0.146	0.026	0.019	.125 - 1, .0625
NO.2	0.172	0.031	0.023	.125 - 1, .0625
NO.3	0.199	0.035	0.027	.1875 - 1.5, .0625
NO.4	0.225	0.039	0.030	.25 - 1.5, .125
NO.5	0.252	0.043	0.034	.25 - 1.5, .125
NO.6	0.279	0.048	0.038	.375 - 2, .125
NO.8	0.332	0.054	0.045	.375 - 2, .125
NO.10	0.385	0.060	0.053	.375 - 2, .125
NO.12	0.438	0.067	0.060	.375 - 2, .125

ANSI Inch Machine
Screws and Nuts

BASIC DIA.	A Head Dia.	J Slot Width	T Slot Depth	L Lengths
.25	0.507	0.075	0.070	.5 - 3, .25 up to 1.5 .5 to end
.3125	0.635	0.084	0.088	.5 - 4, .25 up to 1.5 .5 to end
.375	0.762	0.094	0.106	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.812	0.094	0.103	.75 - 5, .25 up to 1.5 .5 to end
.5	0.875	0.106	0.103	1 - 6, .5
.5625	1.000	0.118	0.120	1 - 7, .5
.625	1.125	0.133	0.137	1.5 - 8, .5
.75	1.375	0.149	0.171	1.5 - 9, .5

Slotted Undercut Flat Countersunk Head



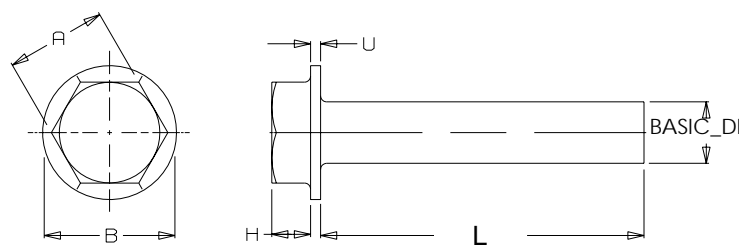
Generic part name: MSDD

Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Height	J Slot Width	T Slot Depth	L Lengths
NO.0	0.119	0.025	0.023	0.011	.125 - 1, .0625
NO.1	0.146	0.031	0.026	0.014	.125 - 1, .0625
NO.2	0.172	0.036	0.031	0.016	.125 - 1, .0625
NO.3	0.199	0.042	0.035	0.019	.1875 - 1.5, .0625
NO.4	0.225	0.047	0.039	0.022	.25 - 1.5, .125
NO.5	0.252	0.053	0.043	0.024	.25 - 1.5, .125
NO.6	0.279	0.059	0.048	0.027	.375 - 2, .125
NO.8	0.332	0.070	0.054	0.032	.375 - 2, .125
NO.10	0.385	0.081	0.060	0.037	.375 - 2, .125
NO.12	0.438	0.092	0.067	0.043	.375 - 2, .125
.25	0.507	0.107	0.075	0.050	.25 up to 1.5; .5 to end
.3125	0.635	0.134	0.084	0.062	.25 up to 1.5; .5 to end
.375	0.762	0.161	0.094	0.075	.25 up to 1.5; .5 to end
.4375	0.812	0.156	0.094	0.072	.25 up to 1.5; .5 to end
.5	0.875	0.156	0.106	0.072	1 - 6, .5

Plain Hex Washer Head



Generic part name: MSEE

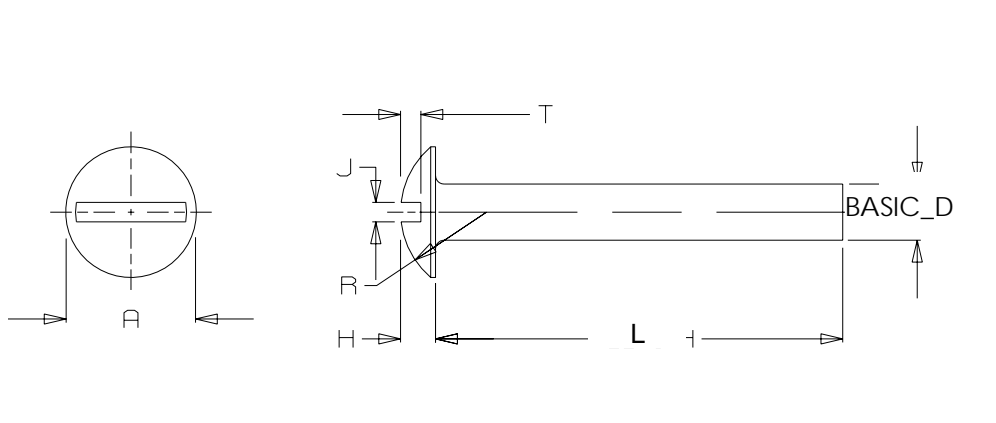
Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.

- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Flat Width	H Head Height	B Washer Dia.	U Washer Thick.	L Lengths
NO.2	0.1250	0.0440	0.1660	0.0160	.125 - 1, .0625
NO.3	0.1250	0.0550	0.1770	0.0160	.1875 - 1.5, .0625
NO.4	0.1880	0.0600	0.2430	0.0190	.25 - 1.5, .125
NO.5	0.1880	0.0700	0.2600	0.0250	.25 - 1.5, .125
NO.6	0.2500	0.0930	0.3280	0.0250	.375 - 2, .125
NO.8	0.2500	0.1100	0.3480	0.0310	.375 - 2, .125
NO.10	0.3120	0.1200	0.4140	0.0310	.375 - 2, .125
NO.12	0.3120	0.1550	0.4320	0.0390	.375 - 2, .125
.25	0.3750	0.1900	0.5200	0.0500	.5 - 3, .25 up to 1.5; .5 to end
.3125	0.5000	0.2300	0.6760	0.0550	.625 - 4, .25 up to 1.5; .5 to end
.375	0.5620	0.2950	0.7800	0.0630	.75 - 5, .25 up to 1.5; .5 to end

Slotted Truss Head



Generic part name: MSFF

Notes:

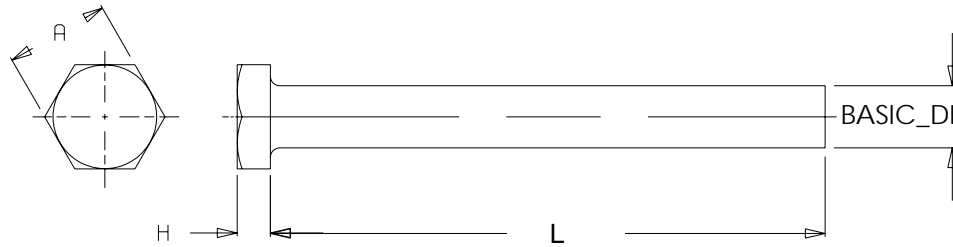
- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia	H Head Height	R Head Radius	J Slot Width	T Slot Depth	L Lengths
NO.0000	0.049	0.014	0.032	0.009	0.009	.0625 - .5, .0625
NO.000	0.077	0.022	0.051	0.013	0.013	.0625 - .5, .0625
NO.00	0.106	0.030	0.070	0.017	0.018	.0625 - .5, .0625
NO.0	0.131	0.037	0.087	0.023	0.022	.125 - 1, .0625
NO.1	0.164	0.045	0.107	0.026	0.027	.125 - 1, .0625
NO.2	0.194	0.053	0.129	0.031	0.031	.125 - 1, .0625
NO.3	0.226	0.061	0.151	0.035	0.036	.1875 - 1.5, .0625
NO.4	0.257	0.069	0.169	0.039	0.040	.25 - 1.5, .125
NO.5	0.289	0.078	0.191	0.043	0.045	.25 - 1.5, .125
NO.6	0.321	0.086	0.211	0.048	0.050	.375 - 2, .125
NO.8	0.384	0.102	0.254	0.054	0.058	.375 - 2, .125
NO.10	0.448	0.118	0.283	0.060	0.068	.375 - 2, .125
NO.12	0.511	0.134	0.336	0.067	0.077	.375 - 2, .125
.25	0.573	0.150	0.375	0.075	0.087	.5 - 3, .25 up to 1.5 .5 to end
.3125	0.698	0.183	0.457	0.084	0.106	.625 - 4, .25 up to 1.5 .5 to end
.375	0.823	0.215	0.538	0.094	0.124	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.948	0.248	0.619	0.094	0.142	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.948	0.248	0.619	0.094	0.142	.75 - 5, .25 up to 1.5; .5 to end
.5	1.073	0.280	0.701	0.106	0.161	1 - 6, .5
.5625	1.198	0.312	0.783	0.118	0.179	1 - 7, .5

ANSI Inch Machine
Screws and Nuts

BASIC DIA.	A Head Dia	H Head Height	R Head Radius	J Slot Width	T Slot Depth	L Lengths
.625	1.323	0.345	0.863	0.133	0.196	1.5 - 8, .5
.75	1.573	0.410	1.024	0.149	0.234	1.5 - 9, .5

Plain Regular Hex Head



Generic part name: MSGG

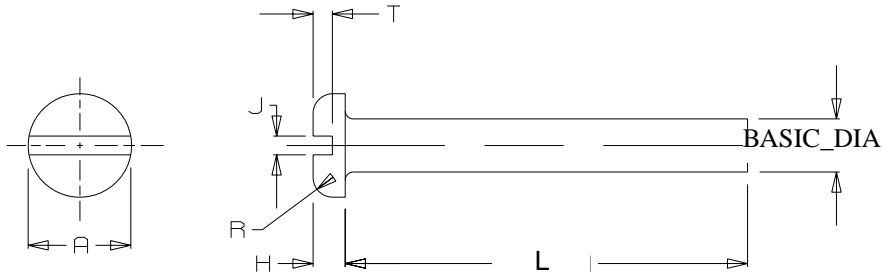
Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC_ DIA.	A Flat Width	H Head Height	L Lengths
NO.1	0.1250	0.0440	.125 - 1, .0625
NO.2	0.1250	0.0500	.125 - 1, .0625
NO.3	0.1880	0.0550	.1875 - 1.5, .0625
NO.4	0.1880	0.0600	.25 - 1.5, .125
NO.5	0.1880	0.0700	.25 - 1.5, .125
NO.6	0.2500	0.0930	.375 - 2, .125
NO.8	0.2500	0.1100	.375 - 2, .125
NO.10	0.3120	0.1200	.375 - 2, .125

BASIC_ DIA.	A Flat Width	H Head Height	L Lengths
NO.12	0.3120	0.1550	.375 - 2, .125
.25	0.3750	0.1900	.5 - 3, .25 up to 1.5; .5 to end
.3125	0.5000	0.2300	.625 - 4, .25 up to 1.5; .5 to end
.375	0.5620	0.2950	.75 - 5, .25 up to 1.5; .5 to end

Slotted Pan Head



ANSI Inch Machine
Screws and Nuts

Generic part name: MSHH

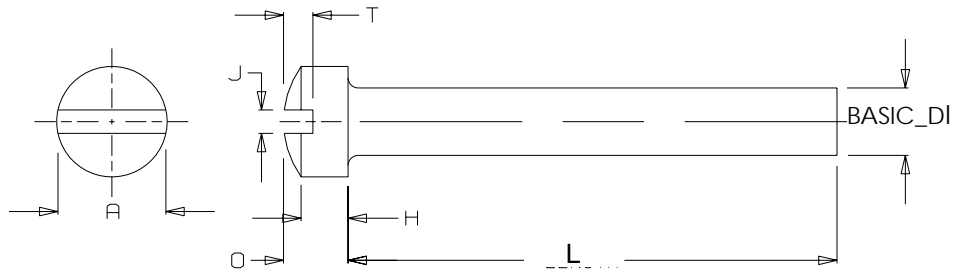
Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Height	R Head Radius	J Slot Width	T Slot Depth	L Lengths
NO.0000	0.042	0.016	0.007	0.008	0.008	.0625 - .5, .0625
NO.000	0.066	0.023	0.010	0.012	0.012	.0625 - .5, .0625
NO.00	0.090	0.032	0.015	0.017	0.016	.0625 - .5, .0625
NO.0	0.116	0.039	0.020	0.023	0.022	.125 - 1, .0625

BASIC DIA.	A Head Dia.	H Head Height	R Head Radius	J Slot Width	T Slot Depth	L Lengths
NO.1	0.142	0.046	0.025	0.026	0.027	.125 - 1, .0625
NO.2	0.167	0.053	0.035	0.031	0.031	.125 - 1, .0625
NO.3	0.193	0.060	0.037	0.035	0.036	.1875 - 1.5, .0625
NO.4	0.219	0.068	0.042	0.039	0.040	.25 - 1.5, .125
NO.5	0.245	0.075	0.044	0.043	0.045	.25 - 1.5, .125
NO.6	0.270	0.082	0.046	0.048	0.050	.375 - 2, .125
NO.8	0.322	0.096	0.052	0.054	0.058	.375 - 2, .125
NO.10	0.373	0.110	0.061	0.060	0.068	.375 - 2, .125
NO.12	0.425	0.125	0.078	0.067	0.077	.375 - 2, .125
.25	0.492	0.144	0.087	0.075	0.087	.5 - 3, .25 up to 1.5 .5 to end
.3125	0.615	0.178	0.099	0.084	0.106	.5 - 4, .25 up to 1.5 .5 to end
.375	0.740	0.212	0.143	0.094	0.124	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.863	0.247	0.153	0.094	0.142	.75 - 5, .25 up to 1.5 .5 to end
.5	0.987	0.281	0.175	0.106	0.161	1 - 6, .5
.5635	1.041	0.315	0.197	0.118	0.179	1 - 7, .5
.625	1.172	0.350	0.219	0.133	0.197	1.5 - 8, .5
.75	1.435	0.419	0.263	0.149	0.234	1.5 - 9, .5

Slotted Fillister Head



Generic part name: MSII

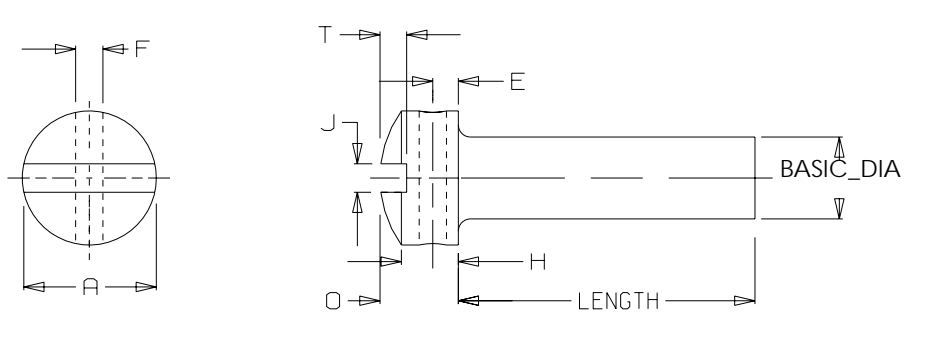
Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Side Hgt.	O Total Head Hgt.	J Slot Width	T Slot Depth	L Lengths
NO.0000	0.038	0.019	0.025	0.008	0.012	.0625 - .5, .0625
NO.000	0.059	0.029	0.035	0.012	0.017	.0625 - .5, .0625
NO.00	0.082	0.037	0.047	0.017	0.022	.0625 - .5, .0625
NO.0	0.096	0.043	0.055	0.023	0.025	.125 - 1, .0625
NO.1	0.118	0.053	0.066	0.026	0.031	.125 - 1, .0625
NO.2	0.140	0.062	0.083	0.031	0.037	.125 - 1, .0625
NO.3	0.161	0.070	0.095	0.035	0.043	.1875 - 1.5, .0625
NO.4	0.183	0.079	0.107	0.039	0.048	.25 - 1.5, .125
NO.5	0.205	0.088	0.120	0.043	0.054	.25 - 1.5, .125
NO.6	0.226	0.096	0.132	0.048	0.060	.375 - 2, .125
NO.8	0.270	0.113	0.156	0.540	0.071	.375 - 2, .125
NO.10	0.313	0.130	0.180	0.060	0.083	.375 - 2, .125

BASIC DIA.	A Head Dia.	H Head Side Hgt.	O Total Head Hgt.	J Slot Width	T Slot Depth	L Lengths
NO.12	0.357	0.148	0.205	0.067	0.094	.375 - 2, .125
.25	0.414	0.170	0.237	0.075	0.109	.5 - 3, .25 up to 1.5 .5 to end
.3125	0.518	0.211	0.295	0.084	0.137	.625 - 4, .25 up to 1.5 .5 to end
.375	0.622	0.253	0.355	0.094	0.164	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.625	0.265	0.368	0.094	0.170	.75 - 5, .25 up to 1.5 .5 to end
.5	0.750	0.297	0.412	0.106	0.190	1 - 6, .5
.5625	0.812	0.336	0.466	0.118	0.214	1 - 7, .5
.625	0.875	0.375	0.521	0.133	0.240	1.5 - 8, .5
.75	1.000	0.441	0.612	0.149	0.281	1.5 - 9, .5

Slotted Drilled Fillister Head



Generic part name: MSJJ

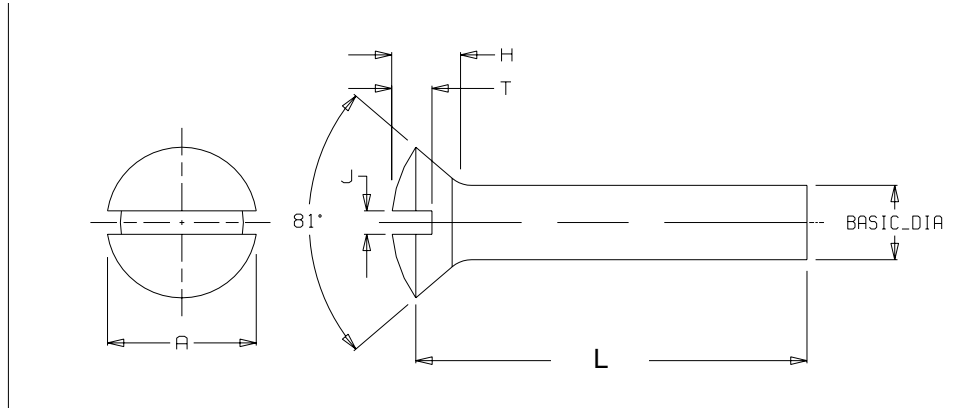
Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Side Hgt.	O Total Head Hgt.	J Slot Width	T Slot Depth	E Hole Loc.	F Hole Dia.	L Lengths
NO.2	0.140	0.062	0.083	0.031	0.030	0.026	0.031	.125 - 1, .0625
NO.3	0.161	0.070	0.095	0.035	0.034	0.030	0.037	.1875 - 1.5, .0625
NO.4	0.183	0.079	0.107	0.039	0.038	0.035	0.037	.25 - 1.5, .125
NO.5	0.205	0.088	0.120	0.043	0.042	0.038	0.046	.25 - 1.5, .125
NO.6	0.226	0.096	0.132	0.048	0.045	0.043	0.046	.375 - 2, .125
NO.8	0.270	0.113	0.156	0.054	0.065	0.043	0.046	.375 - 2, .125
NO.10	0.313	0.130	0.180	0.060	0.075	0.043	0.046	.375 - 2, .125
NO.12	0.357	0.148	0.205	0.067	0.087	0.053	0.046	.375 - 2, .125
.25	0.414	0.170	0.237	0.075	0.102	0.062	0.062	.5 - 3, .25 up to 1.5; .5 to end
.3125	0.518	0.211	0.295	0.084	0.130	0.078	0.070	.625 - 4, .25 up to 1.5; .5 to end
.375	0.622	0.253	0.355	0.094	0.154	0.094	0.070	.75 - 5, .25 up to 1.5; .5 to end

ANSI Inch Machine
Screws and Nuts

Slotted Oval Countersunk Head



Generic part name: MSKK

Notes:

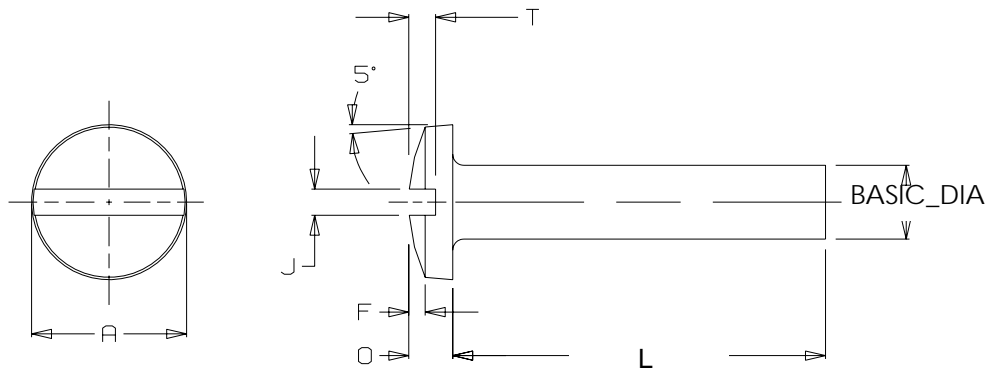
- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Height	J Slot Width	T Slot Depth	L Lengths
NO.00	0.093	0.042	0.017	0.023	.0625 - .5, .0625
NO.0	0.119	0.056	0.023	0.030	.125 - 1, .0625
NO.1	0.146	0.068	0.026	0.038	.125 - 1, .0625
NO.2	0.172	0.080	0.031	0.045	.125 - 1, .0625
NO.3	0.199	0.092	0.035	0.052	.1875 - 1.5, .0625
NO.4	0.225	0.104	0.039	0.059	.25 - 1.5, .125
NO.5	0.252	0.116	0.043	0.067	.25 - 1.5, .125
NO.6	0.279	0.128	0.048	0.074	.375 - 2, .125
NO.8	0.332	0.152	0.054	0.088	.375 - 2, .125
NO.10	0.385	0.176	0.060	0.103	.375 - 2, .125
NO.12	0.438	0.200	0.067	0.117	.375 - 2, .125

BASIC DIA.	A Head Dia.	H Head Height	J Slot Width	T Slot Depth	L Lengths
.25	0.507	0.232	0.075	0.136	.5 - 3, .25 up to 1.5 .5 to end
.3125	0.635	0.290	0.084	0.171	.5 - 4, .25 up to 1.5 .5 to end
.375	0.762	0.347	0.094	0.206	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.812	0.345	0.094	0.210	.75 - 5, .25 up to 1.5 .5 to end
.5	0.875	0.354	0.106	0.216	1 - 6, .5
.5625	1.000	0.410	0.118	0.250	1 - 7, .5
.625	1.125	0.467	0.133	0.285	1.5 - 8, .5
.75	1.375	0.578	0.149	0.353	1.5 - 9, .5

ANSI Inch Machine
Screws and Nuts

Slotted Binding Head



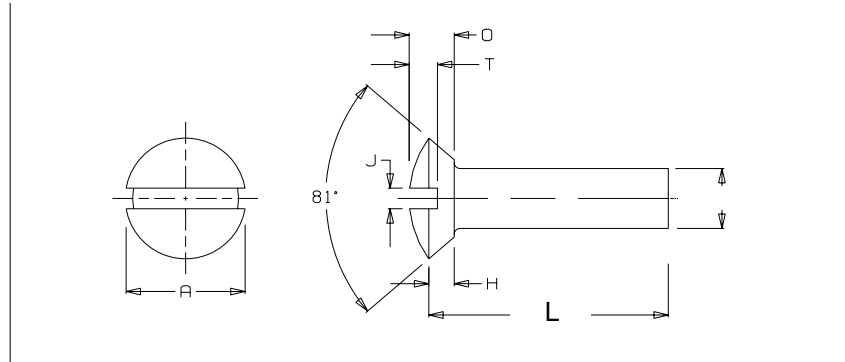
Generic part name: MSL

Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	O Total Head Hgt.	F Head Oval Hgt.	J Slot Width	T Slot Depth	L Lengths
NO.0000	0.046	0.014	0.006	0.008	0.009	.0625 - .5, .0625
NO.000	0.073	0.021	0.008	0.012	0.013	.0625 - .5, .0625
NO.00	0.098	0.028	0.011	0.017	0.018	.0625 - .5, .0625
NO.0	0.126	0.032	0.012	0.023	0.018	.125 - 1, .0625
NO.1	0.153	0.041	0.015	0.026	0.024	.125 - 1, .0625
NO.2	0.181	0.050	0.018	0.031	0.030	.125 - 1, .0625
NO.3	0.208	0.059	0.022	0.035	0.036	.1875 - 1.5, .0625
NO.4	0.235	0.068	0.025	0.039	0.042	.25 - 1.5, .125
NO.5	0.263	0.078	0.029	0.043	0.048	.25 - 1.5, .125
NO.6	0.290	0.087	0.032	0.048	0.053	.375 - 2, .125
NO.8	0.344	0.105	0.039	0.054	0.065	.375 - 2, .125
NO.10	0.399	0.123	0.045	0.060	0.077	.375 - 2, .125
NO.12	0.454	0.141	0.052	0.067	0.089	.375 - 2, .125
.25	0.525	0.165	0.061	0.075	0.105	.5 - 3, .25 up to 1.5 .5 to end
.3125	0.656	0.209	0.077	0.084	0.134	.5 - 4, .25 up to 1.5 .5 to end
.375	0.788	0.253	0.094	0.094	0.163	.75 - 5, .25 up to 1.5 .5 to end

Slotted Undercut Oval Countersunk Head



Generic part name: MSMM

Notes:

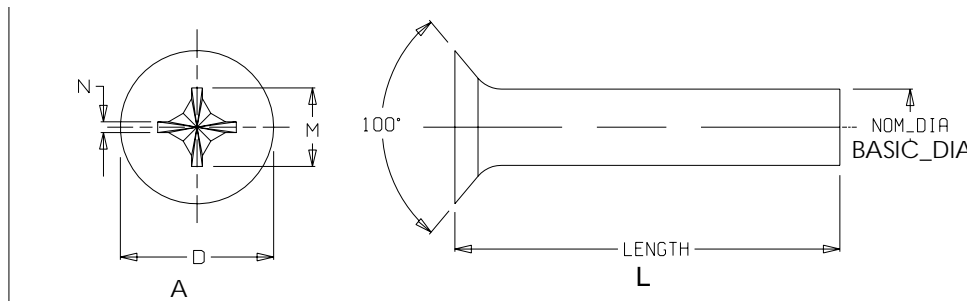
- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Side Hgt.	O Total Head Hgt	J Slot Width	T Slot Depth	L Lengths
NO.0	0.1190	0.0250	0.0460	0.0230	0.0280	.125 - 1, .0625
NO.1	0.1460	0.0310	0.0560	0.0260	0.0340	.125 - 1, .0625
NO.2	0.1720	0.0360	0.0650	0.0310	0.0400	.125 - 1, .0625
NO.3	0.1990	0.0420	0.0750	0.0350	0.0470	.1875 - 1.5, .0625
NO.4	0.2250	0.0470	0.0840	0.0390	0.0530	.25 - 1.5, .125
NO.5	0.2520	0.0530	0.0940	0.0430	0.0590	.25 - 1.5, .125
NO.6	0.2790	0.0590	0.1040	0.0480	0.0650	.375 - 2, .125
NO.8	0.3320	0.0700	0.1230	0.0540	0.0780	.375 - 2, .125
NO.10	0.3850	0.0810	0.1420	0.0600	0.0900	.375 - 2, .125
NO.12	0.4380	0.0920	0.1610	0.0670	0.1030	.375 - 2, .125
.25	0.5070	0.1070	0.1860	0.0750	0.1190	.5 - 3, .25 up to 1.5 .5 to end

ANSI Inch Machine
Screws and Nuts

BASIC DIA.	A Head Dia.	H Head Side Hgt.	O Total Head Hgt	J Slot Width	T Slot Depth	L Lengths
.3125	0.6350	0.1340	0.2320	0.0840	0.1490	.5 - 4, .25 up to 1.5, .5 to end
.375	0.7620	0.1610	0.2780	0.0940	0.1790	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.8120	0.1560	0.2790	0.0940	0.1840	.75 - 5, .25 up to 1.5 .5 to end
.5	0.8750	0.1560	0.2880	0.1060	0.2040	1 - 6, .5

Type I Cross Recessed 100 Degree Countersunk



Generic part name: MSAX

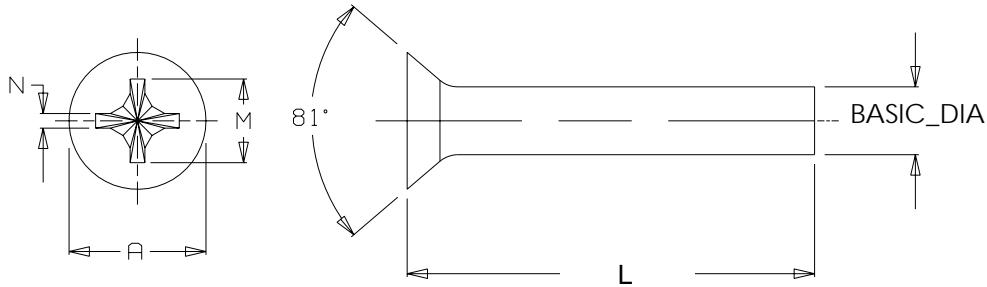
Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	M Recess Dia.	N Recess Width	L Lengths
NO.0	0.119	0.061	0.012	.125 - 1, .0625
NO.1	0.146	0.069	0.014	.125 - 1, .0625

BASIC DIA.	A Head Dia.	M Recess Dia.	N Recess Width	L Lengths
NO.2	0.172	0.095	0.012	.125 - 1, .0625
NO.3	0.199	0.102	0.014	.1875 - 1.5, .0625
NO.4	0.225	0.117	0.018	.25 - 1.5, .125
NO.6	0.279	0.154	0.027	.375 - 2, .125
NO.8	0.332	0.169	0.028	.375 - 2, .125
NO.10	0.385	0.184	0.030	.375 - 2, .125
.25	0.507	0.247	0.033	.5 - 3, .25 up to 1.5; .5 to end
.3125	0.635	0.317	0.053	.5 - 4, .25 up to 1.5; .5 to end
.375	0.762	0.342	0.056	.75 - 5, .25 up to 1.5; .5 to end

Type I Cross Recessed Flat Countersunk Head



ANSI Inch Machine
Screws and Nuts

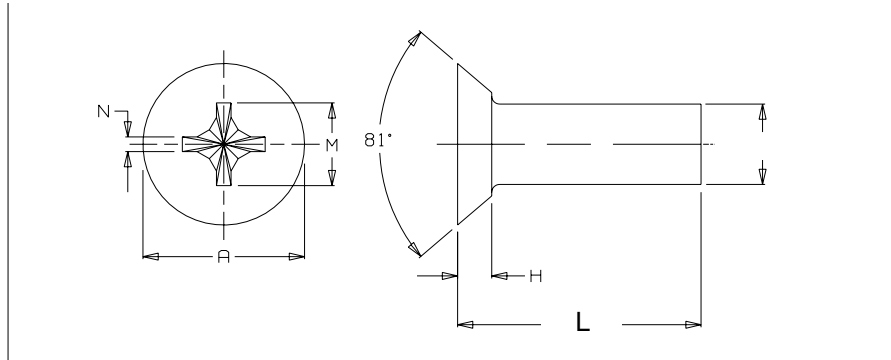
Generic part name: MSBX

Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	M Recess Dia.	N Recess Width	L Lengths
NO.0	0.119	0.069	0.014	.125 - 1, .0625
NO.1	0.146	0.077	0.015	.125 - 1, .0625
NO.2	0.172	0.102	0.017	.125 - 1, .0625
NO.3	0.199	0.107	0.018	.1875 - 1.5, .0625
NO.4	0.225	0.128	0.018	.25 - 1.5, .125
NO.5	0.252	0.154	0.027	.25 - 1.5, .125
NO.6	0.279	0.174	0.029	.375 - 2, .125
NO.8	0.332	0.189	0.030	.375 - 2, .125
NO.10	0.385	0.204	0.032	.375 - 2, .125
NO.12	0.438	0.268	0.035	.375 - 2, .125
.25	0.507	0.283	0.036	.5 - 3, .25 up to 1.5; .5 to end
.3125	0.635	0.365	0.061	.625 - 4, .25 up to 1.5; .5 to end
.375	0.762	0.393	0.065	.75 - 5, .25 up to 1.5; .5 to end
.4375	0.812	0.409	0.068	.75 - 5, .25 up to 1.5; .5 to end
.5	0.875	0.424	0.069	1 - 6, .5
.5625	1.000	0.454	0.073	1 - 7, .5
.625	1.125	0.576	0.079	1.5 - 8, .5
.75	1.375	0.640	0.087	1.5 - 9, .5

Type I Cross Recessed Undercut Flat Countersunk



Generic part name: MSDX

Notes:

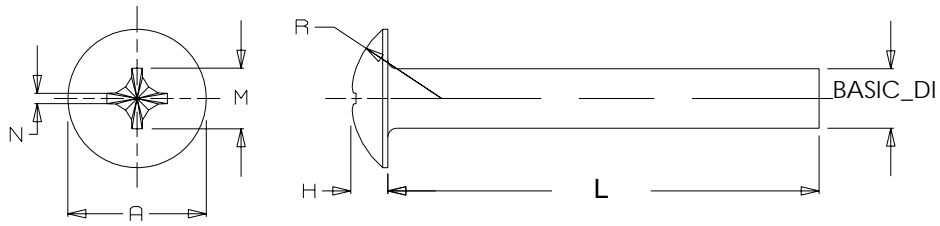
- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

ANSI Inch Machine
Screws and Nuts

BASIC DIA.	A Head Dia.	H Head Height	M Recess Dia	N Recess Width	L Lengths
NO.0	0.119	0.025	0.069	0.014	.125 - 1, .0625
NO.1	0.146	0.031	0.077	0.015	.125 - 1, .0625
NO.2	0.172	0.036	0.095	0.017	.125 - 1, .0625
NO.3	0.199	0.042	0.102	0.018	.1875 - 1.5, .0625
NO.4	0.225	0.047	0.117	0.018	.25 - 1.5, .125
NO.5	0.252	0.053	0.128	0.018	.25 - 1.5, .125
NO.6	0.279	0.059	0.146	0.025	.375 - 2, .125
NO.8	0.332	0.070	0.174	0.029	.375 - 2, .125
NO.10	0.385	0.081	0.189	0.030	.375 - 2, .125
NO.12	0.438	0.092	0.233	0.030	.375 - 2, .125
.25	0.507	0.107	0.250	0.032	.5 - 3, .25 up to 1.5 .5 to end

BASIC DIA.	A Head Dia.	H Head Height	M Recess Dia	N Recess Width	L Lengths
.3125	0.635	0.134	0.317	0.053	.625 - 4, .25 up to 1.5 .5 to end
.375	0.762	0.161	0.365	0.061	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.812	0.156	0.393	0.065	.75 - 5, .25 up to 1.5 .5 to end
.5	0.875	0.156	0.409	0.068	1 - 6, .5

Type I Cross Recessed Truss Head



Generic part name: MSFX

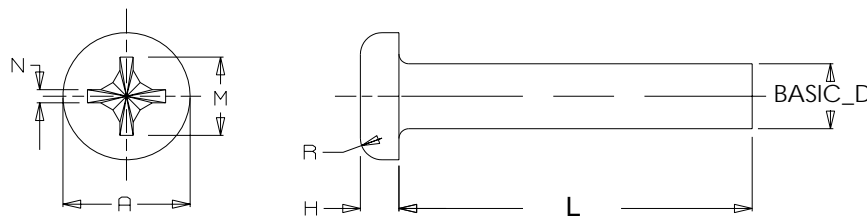
Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Height	R Head Radius	M Recess Dia.	N Recess Width	L Lengths
NO.0	0.131	0.037	0.087	0.063	0.013	.125 - 1, .0625
NO.1	0.164	0.045	0.107	0.071	0.014	.125 - 1, .0625
NO.2	0.194	0.053	0.129	0.104	0.018	.125 - 1, .0625
NO.3	0.226	0.061	0.151	0.110	0.018	.1875 - 1.5, .0625

BASIC DIA.	A Head Dia.	H Head Height	R Head Radius	M Recess Dia.	N Recess Width	L Lengths
NO.4	0.257	0.069	0.169	0.112	0.018	.25 - 1.5, .125
NO.5	0.289	0.078	0.191	0.128	0.019	.25 - 1.5, .125
NO.6	0.321	0.086	0.211	0.158	0.027	.375 - 2, .125
NO.8	0.384	0.102	0.254	0.173	0.029	.375 - 2, .125
NO.10	0.448	0.118	0.283	0.188	0.030	.375 - 2, .125
NO.12	0.511	0.134	0.336	0.248	0.032	.375 - 2, .125
.25	0.573	0.150	0.375	0.263	0.033	.5 - 3, .25 up to 1.5 .5 to end
.3125	0.698	0.183	0.457	0.352	0.059	.625 - 4, .25 up to 1.5 .5 to end
.375	0.823	0.215	0.538	0.383	0.063	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.948	0.248	0.619	0.414	0.068	.75 - 5, .25 up to 1.5 .5 to end
.5	1.073	0.280	0.701	0.444	0.072	1 - 6, .5
.5625	1.198	0.312	0.783	0.451	0.074	1 - 7, .5
.625	1.323	0.345	0.863	0.559	0.077	1.5 - 8, .5
.75	1.573	0.410	1.024	0.620	0.085	1.5 - 9, .5

Type I Cross Recessed Pan Head



Generic part name: MSHX

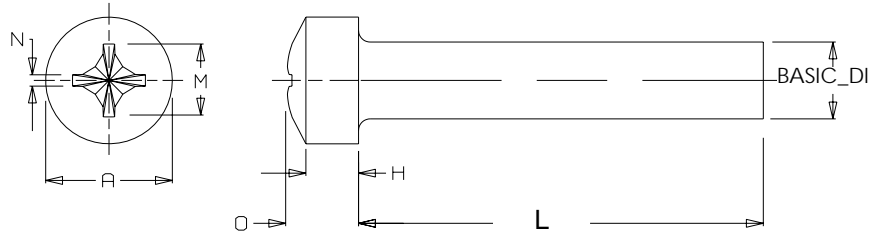
Notes:

- Corresponds to ANSI B18.6.3-1972.

- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Height	R Head Radius	M Recess Dia.	N Recess Width	L Lengths
NO.0	0.116	0.039	0.020	0.067	0.013	.125 - 1, .0625
NO.1	0.142	0.046	0.025	0.074	0.014	.125 - 1, .0625
NO.2	0.167	0.053	0.035	0.104	0.017	.125 - 1, .0625
NO.3	0.193	0.060	0.037	0.112	0.019	.1875 - 1.5, .0625
NO.4	0.219	0.068	0.042	0.122	0.019	.25 - 1.5, .125
NO.5	0.245	0.075	0.044	0.158	0.028	.25 - 1.5, .125
NO.6	0.270	0.082	0.046	0.166	0.028	.375 - 2, .125
NO.8	0.322	0.096	0.052	0.182	0.030	.375 - 2, .125
NO.10	0.373	0.110	0.061	0.199	0.031	.375 - 2, .125
NO.12	0.425	0.125	0.078	0.259	0.034	.375 - 2, .125
.25	0.492	0.144	0.087	0.281	0.036	.5 - 3, .25 up to 1.5 .5 to end
.3125	0.615	0.178	0.099	0.350	0.059	.625 - 4, .25 up to 1.5 .5 to end
.375	0.740	0.212	0.143	0.389	0.065	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.863	0.247	0.153	0.413	0.068	.75 - 5, .25 up to 1.5 .5 to end
.5	0.987	0.281	0.175	0.435	0.071	1 - 6, .5
.5625	1.041	0.315	0.197	0.470	0.076	1 - 7, .5
.625	1.172	0.350	0.219	0.587	0.081	1.5 - 8, .5
.75	1.435	0.419	0.263	0.633	0.086	1.5 - 9, .5

Type I Cross Recessed Fillister Head



Generic part name: MSIX

Notes:

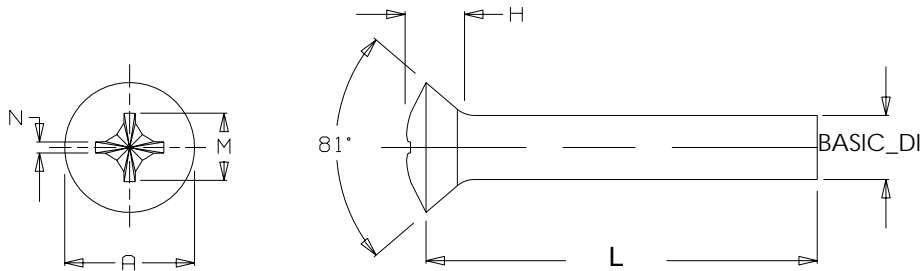
- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Side Hgt.	O Total Head Hgt	M Recess Dia.	N Recess Width	L Lengths
NO.0	0.096	0.043	0.055	0.067	0.013	.125 - 1, .0625
NO.1	0.118	0.053	0.066	0.074	0.014	.125 - 1, .0625
NO.2	0.140	0.062	0.083	0.104	0.017	.125 - 1, .0625
NO.3	0.161	0.070	0.095	0.112	0.019	.1875 - 1.5, .0625
NO.4	0.183	0.079	0.107	0.122	0.019	.25 - 1.5, .125
NO.5	0.205	0.088	0.120	0.143	0.027	.25 - 1.5, .125
NO.6	0.226	0.096	0.132	0.166	0.028	.375 - 2, .125
NO.8	0.270	0.113	0.156	0.182	0.030	.375 - 2, .125
NO.10	0.313	0.130	0.180	0.199	0.031	.375 - 2, .125
NO.12	0.357	0.148	0.205	0.259	0.034	.375 - 2, .125
.25	0.414	0.170	0.237	0.281	0.036	.5 - 3, .25 up to 1.5 .5 to end

ANSI Inch Machine
Screws and Nuts

BASIC DIA.	A Head Dia.	H Head Side Hgt.	O Total Head Hgt	M Recess Dia.	N Recess Width	L Lengths
.3125	0.518	0.211	0.295	0.322	0.042	.5 - 4, .25 up to 1.5 .5 to end
.375	0.622	0.253	0.355	0.389	0.065	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.625	0.265	0.368	0.413	0.068	.75 - 5, .25 up to 1.5 .5 to end
.5	0.750	0.297	0.412	0.435	0.071	1 - 6, .5
.5625	0.812	0.336	0.466	0.470	0.076	1 - 7, .5
.625	0.875	0.375	0.521	0.587	0.081	1.5 - 8, .5
.75	1.000	0.441	0.612	0.633	0.086	1.5 - 9, .5

Type I Cross Recessed Oval Countersunk



Generic part name: MSKX

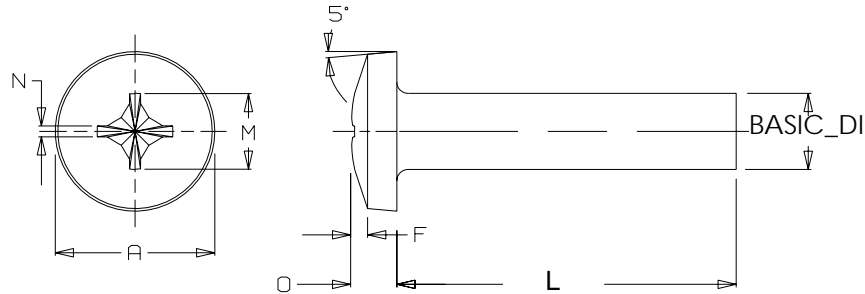
Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Height	M Recess Dia.	N Recess Width	L Lengths
NO.0	0.119	0.056	0.074	0.014	.125 - 1, .0625
NO.1	0.146	0.068	0.077	0.015	.125 - 1, .0625
NO.2	0.172	0.080	0.112	0.018	.125 - 1, .0625
NO.3	0.199	0.092	0.124	0.019	.1875 - 1.5, .0625
NO.4	0.225	0.104	0.136	0.019	.25 - 1.5, .125
NO.5	0.252	0.116	0.158	0.028	.25 - 1.5, .125
NO.6	0.279	0.128	0.178	0.030	.375 - 2, .125
NO.8	0.332	0.152	0.192	0.031	.375 - 2, .125
NO.10	0.385	0.176	0.209	0.033	.375 - 2, .125
NO.12	0.438	0.200	0.270	0.038	.375 - 2, .125
.25	0.507	0.232	0.290	0.040	.5 - 3, .25 up to 1.5 .5 to end
.3125	0.635	0.290	0.390	0.065	.625 - 4, .25 up to 1.5 .5 to end
.375	0.762	0.347	0.410	0.068	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.812	0.345	0.422	0.070	.75 - 5, .25 up to 1.5 .5 to end
.5	0.875	0.354	0.437	0.071	1 - 6, .5
.5625	1.000	0.410	0.473	0.075	1 - 7, .5
.625	1.125	0.467	0.591	0.081	1.5 - 8, .5
.75	1.375	0.578	0.653	0.088	1.5 - 9, .5

ANSI Inch Machine
Screws and Nuts

Type I Cross Recessed Binding Head



Generic part name: MSLX

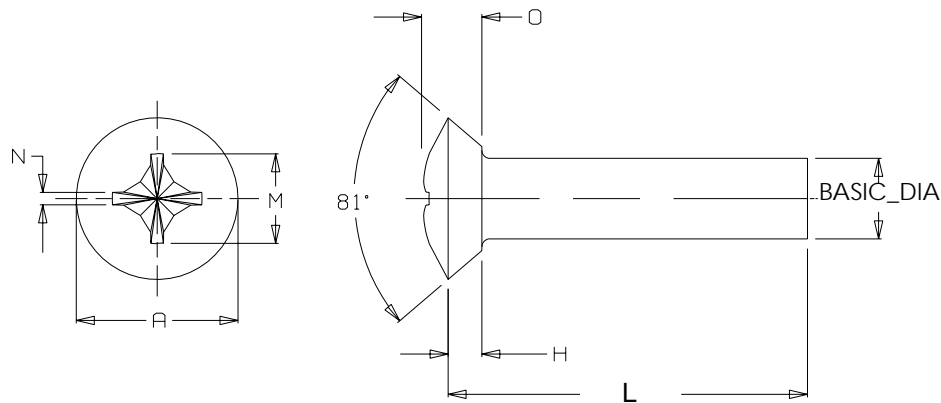
Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC	A Head Dia.	O Total Head Hgt.	F Oval Head Hgt.	M Recess Dia.	N Recess Width	L Lengths
NO.0	0.126	0.032	0.012	0.067	0.013	.125 - 1, .0625
NO.1	0.153	0.041	0.015	0.074	0.014	.125 - 1, .0625
NO.2	0.181	0.050	0.018	0.100	0.017	.125 - 1, .0625
NO.3	0.208	0.059	0.022	0.110	0.017	.1875 - 1.5, .0625
NO.4	0.235	0.068	0.025	0.118	0.017	.25 - 1.5, .125
NO.5	0.263	0.078	0.029	0.148	0.025	.25 - 1.5, .125
NO.6	0.290	0.087	0.032	0.160	0.026	.375 - 2, .125
NO.8	0.344	0.105	0.039	0.186	0.028	.375 - 2, .125
NO.10	0.399	0.123	0.045	0.205	0.029	.375 - 2, .125
NO.12	0.454	0.141	0.052	0.267	0.032	.375 - 2, .125
.25	0.525	0.165	0.061	0.281	0.046	.5 - 3, .25 up to 1.5 .5 to end

BASIC	A Head Dia.	O Total Head Hgt.	F Oval Head Hgt.	M Recess Dia.	N Recess Width	L Lengths
.3125	0.656	0.209	0.077	0.350	0.068	.5 - 4, .25 up to 1.5 .5 to end
.375	0.788	0.253	0.094	0.400	0.076	.75 - 5, .25 up to 1.5 .5 to end

Type I Cross Recessed Undercut Oval Countersunk



ANSI Inch Machine
Screws and Nuts

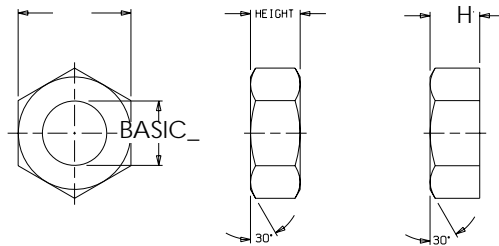
Generic part name: MSMX

Notes:

- Corresponds to ANSI B18.6.3-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	A Head Dia.	H Head Side Hgt.	O Total Head Hgt.	M Recess Dia.	N Recess Width	L Lengths
NO.0	0.1190	0.0250	0.0460	0.074	0.014	.125 - 1, .0625
NO.1	0.1460	0.0310	0.0560	0.077	0.015	.125 - 1, .0625
NO.2	0.1720	0.0360	0.0650	0.112	0.018	.125 - 1, .0625
NO.3	0.1990	0.0420	0.0750	0.124	0.019	.1875 - 1.5, .0625
NO.4	0.2250	0.0470	0.0840	0.136	0.019	.25 - 1.5, .125
NO.5	0.2520	0.0530	0.0940	0.158	0.028	.25 - 1.5, .125
NO.6	0.2790	0.0590	0.1040	0.178	0.030	.375 - 2, .125
NO.8	0.3320	0.0700	0.1230	0.192	0.031	.375 - 2, .125
NO.10	0.3850	0.0810	0.1420	0.209	0.033	.375 - 2, .125
NO.12	0.4380	0.0920	0.1610	0.270	0.038	.375 - 2, .125
.25	0.5070	0.1070	0.1860	0.290	0.040	.5 - 3, .25 up to 1.5 .5 to end
.3125	0.6350	0.1340	0.2320	0.381	0.064	.625 - 4, .25 up to 1.5 .5 to end
.375	0.7620	0.1610	0.2780	0.400	0.066	.75 - 5, .25 up to 1.5 .5 to end
.4375	0.8120	0.1560	0.2790	0.410	0.068	.75 - 5, .25 up to 1.5 .5 to end
.5	0.8750	0.1560	0.2880	0.422	0.070	1 - 6, .5

Hex Machine Screw Nut



Generic part name: HMSN

Notes:

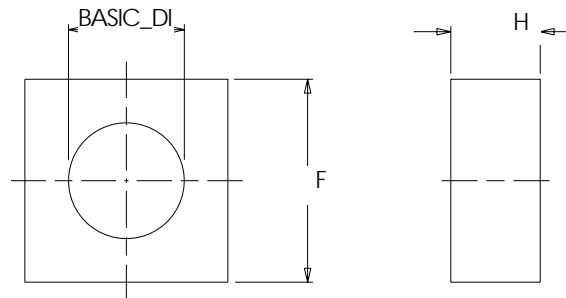
- Corresponds to ANSI B18.6.3-1972.
- Enter the BASIC DIA. value exactly as shown.

Double Chamfer		
BASIC DIA.	F Flat Width	H Height
NO.0	0.1560	0.0500
NO.1	0.1560	0.0500
NO.2	0.1880	0.0660
NO.3	0.1880	0.0660
NO.4	0.2500	0.0980
NO.5	0.3120	0.1140
NO.6	0.3120	0.1140
NO.8	0.3440	0.1300
NO.10	0.3750	0.1300
NO.12	0.4380	0.1610
.25	0.4380	0.1930
.3125	0.5620	0.2250
.375	0.6250	0.2570

Flat Bottom		
BASIC DIA.	F Flat Width	H Height
NO.0	0.1560	0.0500
NO.1	0.1560	0.0500
NO.2	0.1880	0.0660
NO.3	0.1880	0.0660
NO.4	0.2500	0.0980
NO.5	0.3120	0.1140
NO.6	0.3120	0.1140
NO.8	0.3440	0.1300
NO.10	0.3750	0.1300
NO.12	0.4380	0.1610
.25	0.4380	0.1930
.3125	0.5620	0.2250
.375	0.6250	0.2570

ANSI Inch Machine
Screws and Nuts

Square Machine Screw Nut



Generic part name: SQMSN

Notes:

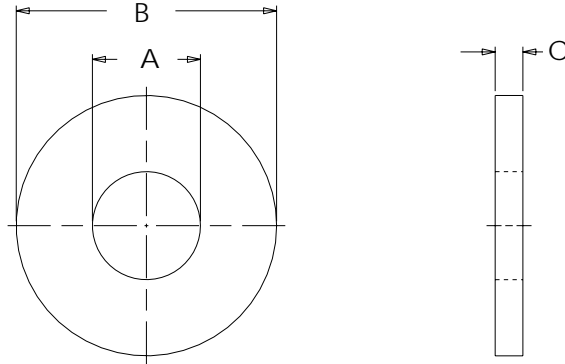
- Corresponds to ANSI B18.6.3-1972.
- Enter the BASIC DIA. value exactly as shown.

BASIC DIA.	F Flat Width	H Height
NO.0	0.1562	0.0500
NO.1	0.1562	0.0500
NO.2	0.1880	0.0660
NO.3	0.1880	0.0660
NO.4	0.2500	0.0980
NO.5	0.3120	0.1140
NO.6	0.3120	0.1140
NO.8	0.3440	0.1300
NO.10	0.3750	0.1300
NO.12	0.4380	0.1610
.25	0.4380	0.1930
.3125	0.5620	0.2250
.375	0.6250	0.2570

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ANSI Inch Plain Washers

Plain Washer (Preferred Sizes)



Generic part name: **WA**

Notes:

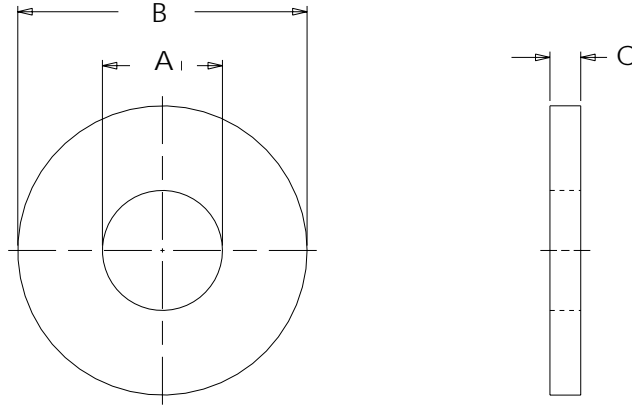
- Corresponds to ANSI18.22.1-1965 (R1975).
- Enter the NOM_SIZE and SERIES values exactly as shown.

NOM_SIZE	SERIES	A Inside Dia	B Outside Dia	C Thickness
---		0.0780	0.1880	0.0200
---		0.0940	0.2500	0.0200
---		0.1250	0.3120	0.0320
NO.6		0.1560	0.3750	0.0490
NO.8		0.1880	0.4380	0.0490
NO.10		0.2190	0.5000	0.0490
.1875		0.2500	0.5620	0.0490
NO.12		0.2500	0.5620	0.0650
.25	NARROW	0.2810	0.6250	0.0650
.25	WIDE	0.3120	0.7340	0.0650
.3125	NARROW	0.3440	0.6880	0.0650
.3125	WIDE	0.3750	0.8750	0.0830
.375	NARROW	0.4060	0.8120	0.0650

NOM_SIZE	SERIES	A Inside Dia	B Outside Dia	C Thickness
.375	WIDE	0.4380	1.0000	0.0830
.4375	NARROW	0.4690	0.9220	0.0650
.4375	WIDE	0.5000	1.2500	0.0830
.5	NARROW	0.5310	1.0620	0.0950
.5	WIDE	0.5620	1.3750	0.1090
.5625	NARROW	0.5940	1.1560	0.0950
.5625	WIDE	0.6250	1.4690	0.1090
.625	NARROW	0.6560	1.3120	0.9500
.625	WIDE	0.6880	1.7500	0.1340
.75	NARROW	0.8120	1.4690	0.1340
.75	WIDE	0.8120	2.0000	0.1480
.875	NARROW	0.9380	1.7500	0.1340
.875	WIDE	0.9380	2.2500	0.1650
1	NARROW	1.0620	2.0000	0.1340
1	WIDE	1.0620	2.5000	0.1650
1.125	NARROW	1.2500	2.2500	0.1340
1.125	WIDE	1.2500	2.7500	0.1650
1.25	NARROW	1.3750	2.5000	0.1650
1.25	WIDE	1.3750	3.0000	0.1650
1.375	NARROW	1.5000	2.7500	0.1650
1.375	WIDE	1.5000	3.2500	0.1800
1.5	NARROW	1.6250	3.0000	0.1650
1.5	WIDE	1.6250	3.5000	0.1800
1.625		1.7500	3.7500	0.1800
1.75		1.8750	4.0000	0.1800
1.875		2.0000	4.2500	0.1800
2		2.1250	4.5000	0.1800
2.25		2.3750	4.7500	0.2200
2.5		2.6250	5.0000	0.2380
2.75		2.8750	5.2500	0.2590
3		3.1250	5.5000	0.2840

ANSI Inch Plain Washers

Type B Plain Washer



Generic part name: WB

Notes:

- Corresponds to ANSI B18.22.1-1965 (R1975).
- Enter the NOM_SIZE and SERIES values exactly as shown.

NOM_SIZE	SERIES	A Inside Dia	B Outside Dia	C Thickness
NO.0	NARROW	0.0680	0.1250	0.0250
NO.0	REGULAR	0.0680	0.1880	0.0250
NO.0	WIDE	0.0680	0.2500	0.0250
NO.1	NARROW	0.0840	0.1560	0.0250
NO.1	REGULAR	0.0840	0.2190	0.0250
NO.1	WIDE	0.0840	0.2810	0.0320
NO.2	NARROW	0.0940	0.1880	0.0250
NO.2	REGULAR	0.0940	0.2500	0.0320
NO.2	WIDE	0.0940	0.3440	0.0320
NO.3	NARROW	0.1090	0.2190	0.0250
NO.3	REGULAR	0.1090	0.3120	0.0320
NO.3	WIDE	0.1090	0.4060	0.0400

NOM_SIZE	SERIES	A Inside Dia	B Outside Dia	C Thickness
NO.4	NARROW	0.1250	0.2500	0.0320
NO.4	REGULAR	0.1250	0.3750	0.0400
NO.5	NARROW	0.1410	0.2810	0.0320
NO.5	REGULAR	0.1410	0.4060	0.0400
NO.5	WIDE	0.1410	0.5000	0.0400
NO.6	NARROW	0.1560	0.3120	0.0320
NO.6	REGULAR	0.1560	0.4380	0.0400
NO.6	WIDE	0.1560	0.5620	0.0400
NO.8	NARROW	0.1880	0.3750	0.0400
NO.8	REGULAR	0.1880	0.5000	0.0400
NO.8	WIDE	0.1880	0.6250	0.0630
NO.10	NARROW	0.2030	0.4060	0.0400
NO.10	REGULAR	0.2030	0.5620	0.0400
NO.10	WIDE	0.2030	0.7340	0.0630
NO.12	NARROW	0.2340	0.4380	0.0400
NO.12	REGULAR	0.2340	0.6250	0.0630
NO.12	WIDE	0.2340	0.8750	0.0630
.25	NARROW	0.2810	0.5000	0.0630
.25	REGULAR	0.2810	0.7340	0.0630
.25	WIDE	0.2810	1.0000	0.0630
.3125	NARROW	0.3440	0.6250	0.0630
.3125	REGULAR	0.3440	0.8750	0.0630
.3125	WIDE	0.3440	1.1250	0.0630
.375	NARROW	0.4060	0.7340	0.0630
.375	REGULAR	0.4060	1.0000	0.0630
.375	WIDE	0.4060	1.2500	0.1000
.4375	NARROW	0.4690	0.8750	0.0630
.4375	REGULAR	0.4690	1.1250	0.0630
.4375	WIDE	0.4690	1.4690	0.1000
.5	NARROW	0.5310	1.0000	0.0630
.5	REGULAR	0.5310	1.2500	0.1000

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NOM_SIZE	SERIES	A Inside Dia	B Outside Dia	C Thickness
.5	WIDE	0.5310	1.7500	0.1000
.5625	NARROW	0.5940	1.1250	0.0630
.625	NARROW	0.6560	1.2500	0.1000
.625	REGULAR	0.6560	1.7500	0.1000
.625	WIDE	0.6560	2.2500	0.1600
.75	NARROW	0.8120	1.3750	0.1000
.75	REGULAR	0.8120	2.0000	0.1000
.75	WIDE	0.8120	2.5000	0.1600
.875	NARROW	0.9380	1.4690	0.1000
.875	REGULAR	0.9380	2.2500	0.1600
.875	WIDE	0.9380	2.7500	0.1600
1	NARROW	1.0620	1.7500	0.1000
1	REGULAR	1.0620	2.5000	0.1600
1	WIDE	1.0620	3.0000	0.1600
1.125	NARROW	1.1880	2.0000	0.1000
1.125	REGULAR	1.1880	2.7500	0.1600
1.125	WIDE	1.1880	3.2500	0.1600
1.25	NARROW	1.3120	2.2500	0.1600
1.25	REGULAR	1.3120	3.0000	0.1600
1.25	WIDE	1.3120	3.5000	0.2500
1.375	NARROW	1.4380	2.5000	0.1600
1.375	REGULAR	1.4380	3.2500	0.1600
1.375	WIDE	1.4380	3.7500	0.2500
1.5	NARROW	1.5620	2.7500	0.1600
1.5	REGULAR	1.5620	3.5000	0.2500
1.5	WIDE	1.5620	4.0000	0.2500
1.625	NARROW	1.7500	3.0000	0.1600
1.625	REGULAR	1.7500	3.7500	0.2500
1.625	WIDE	1.7500	4.2500	0.2500
1.75	NARROW	1.8750	3.2500	0.1600
1.75	REGULAR	1.8750	4.0000	0.2500

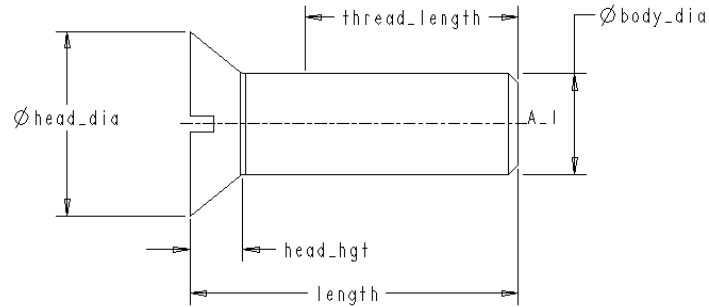
NOM_SIZE	SERIES	A Inside Dia	B Outside Dia	C Thickness
1.75	WIDE	1.8750	4.5000	0.2500
1.875	NARROW	2.0000	3.5000	0.2500
1.875	REGULAR	2.0000	4.2500	0.2500
2	NARROW	2.1250	3.7500	0.2500
2	REGULAR	2.1250	4.5000	0.2500
2	WIDE	2.1250	5.0000	0.2500
2.25	NARROW	2.3750	4.0000	0.2500
2.25	REGULAR	2.3750	5.0000	0.2500
2.25	WIDE	2.3750	5.5000	0.3750
2.5	NARROW	2.6250	4.5000	0.2500
2.5	REGULAR	2.6250	5.5000	0.3750
2.5	WIDE	2.6250	6.0000	0.3750
2.75	NARROW	2.8750	5.0000	0.2500
2.75	REGULAR	2.8750	6.0000	0.3750
2.75	WIDE	2.8750	6.5000	0.3750
3	NARROW	3.1250	5.5000	0.3750
3	REGULAR	3.1250	6.5000	0.3750
3	WIDE	3.1250	7.0000	0.3750

ANSI Inch Plain Washers

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ANSI Inch Round Head Bolts

Countersunk and Slotted Countersunk Bolts



Generic Part Name: ACSB

Notes:

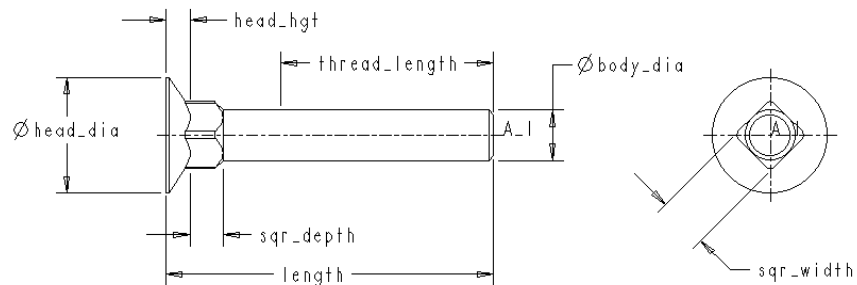
- Corresponds to standard ANSI B18.5 - 1978 (R 1971).
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

NAME	Basic Dia	Frac-Tion	body dia	head dia	head hgt	length	thread length
ACSB01	0.2500	1/4	0.26000	0.49300	0.15000	1 to 7.5 by 0.25	0.75, 1
ACSB02	0.3125	5/16	0.32400	0.61800	0.18900	1.25 to 8 by 0.25, 8.5, 9	0.875, 1.125
ACSB03	0.3750	3/8	0.38800	0.74000	0.22500	1.25 to 8 by 0.25, 8.5 to 11 by 0.5	1, 1.25
ACSB04	0.4375	7/16	0.45200	0.80300	0.22600	1.5 to 8 by 0.25, 8.5 to 13 by 0.5	1.125, 1.375
ACSB05	0.5000	1/2	0.51500	0.93500	0.26900	1.5 to 8 by 0.25, 8.5 to 15 by 0.5	1.25, 1.5

NAME	Basic Dia	Frac-Tion	body dia	head dia	head hgt	length	thread length
ACSB06	0.6250	5/8	0.64200	1.16900	0.33600	1.75 to 8 by 0.25, 8.5 to 18 by 0.5	1.5, 1.75
ACSB07	0.7500	3/4	0.76800	1.40200	0.40300	2 to 8 by 0.25, 8.5 to 20 by 0.5, 21, 22	1.75, 2
ACSB08	0.8750	7/8	0.89500	1.63700	0.47000	2.25 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2, 2.25
ACSB09	1.0000	1	1.02200	1.86900	0.53700	2.5 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2.25, 2.5
ACSB10	1.1250	1-1/8	1.14900	2.10400	0.60400	2.75 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2.5, 2.75
ACSB11	1.2500	1-1/4	1.27700	2.33700	0.67100	3 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2.75, 3
ACSB12	1.3750	1-3/8	1.40400	2.57100	0.73800	3.25 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	3, 3.25
ACSB13	1.5000	1-1/2	1.53100	2.80400	0.80500	3.5 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	3.25, 3.5

ANSI Inch Round Head Bolts

114 Degree Countersunk Square Neck Bolts



Generic Part Name: ACSN

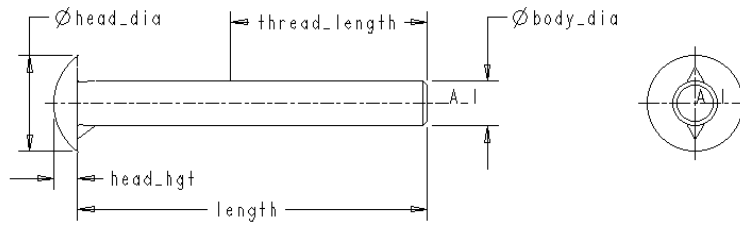
Notes:

- Corresponds to standard ANSI B18.5 - 1978 (R 1971).
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

NAME	Basic Dia	Fraction	body dia	head dia	head hgt	sqr width	sqr depth	length	thread length
ACSN01	0.1900	No. 10	0.1990	0.5480	0.1310	0.1990	0.1250	0.75 to 7 by 0.25	0.5, 0.625, 0.875
ACSN02	0.2500	1/4	0.2600	0.6820	0.1540	0.2600	0.1560	1 to 7.5 by 0.25	0.75, 1
ACSN03	0.3125	5/16	0.3240	0.8210	0.1840	0.3240	0.2190	1.25 to 8 by 0.25, 8.5, 9	0.875, 1.125
ACSN04	0.3750	3/8	0.3880	0.9600	0.2120	0.3880	0.2500	1.25 to 8 by 0.25, 8.5 to 11 by 0.5	1, 1.25
ACSN05	0.4375	7/16	0.4520	1.0930	0.2350	0.4520	0.2810	1.5 to 8 by 0.25, 8.5 to 13 by 0.5	1.125, 1.375
ACSN06	0.5000	1/2	0.5150	1.2330	0.2650	0.5150	0.3120	1.5 to 8 by 0.25, 8.5 to 15 by 0.5	1.25, 1.5

NAME	Basic Dia	Fraction	body dia	head dia	head hgt	sqr width	sqr depth	length	thread length
ACSN07	0.6250	5/8	0.6420	1.4950	0.3160	0.6420	0.4060	1.75 to 8 by 0.25, 8.5 to 18 by 0.5	1.5, 1.75
ACSN08	0.7500	3/4	0.7680	1.7540	0.3680	0.7680	0.5000	2 to 8 by 0.25, 8.5 to 20 by 0.5, 21, 22	1.75, 2

Round Head Fin Neck Bolts



Generic Part Name: AFNB

Notes:

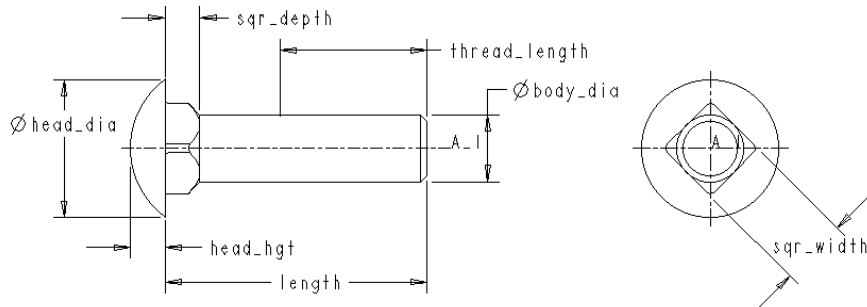
- Corresponds to standard ANSI B18.5 - 1978 (R 1971).
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

NAME	BASIC DIA	FRAC-TION	body_ dia	head_ dia	head_ hgt	length	thread_ length
AFNB01	0.1900	No. 10	0.1990	0.46900	0.11400	0.75 to 7 by 0.25	0.625, 0.875
AFNB02	0.2500	1/4	0.2600	0.59400	0.14500	1 to 7.5 by 0.25	0.75, 1
AFNB03	0.3120	5/16	0.3240	0.71900	0.17600	1.25 to 8 by 0.25, 8.5, 9	0.875, 1.125

ANSI Inch Round Head Bolts

NAME	BASIC DIA	FRAC-TION	body_dia	head_dia	head_hgt	length	thread_length
AFNB04	0.3750	3/8	0.3880	0.84400	0.20800	1.25 to 8 by 0.25, 8.5 to 11 by 0.5	1, 1.25
AFNB05	0.4380	7/16	0.4520	0.96900	0.23900	1.5 to 8 by 0.25, 8.5 to 13 by 0.5	1.125, 1.375
AFNB06	0.5000	1/2	0.5150	1.09400	0.27000	1.5 to 8 by 0.25, 8.5 to 15 by 0.5	1.25, 1.5

Round Head Square Neck Bolts



Generic Part Name: ALSN

Notes:

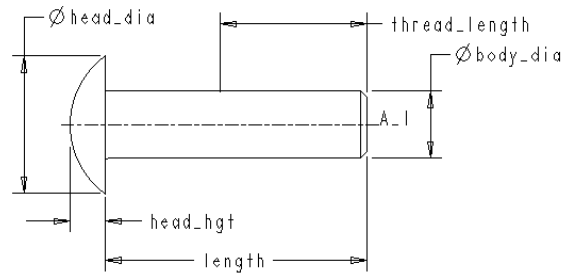
- Corresponds to standard ANSI B18.5 - 1978 (R 1971).
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

NAME	BASIC DIA	FRAC-TION	body_dia	head_dia	head_hgt	sqr_width	sqr_depth	length	thread length
ALSN01	0.1900	No. 10	0.1990	0.4690	0.1140	0.1990	0.1250	0.75 to 7 by 0.25	0.5, 0.625, 0.875
ALSN02	0.2500	1/4	0.2600	0.5940	0.1450	0.2600	0.1560	1 to 7.5 by 0.25	0.75, 1

NAME	BASIC DIA	FRAC-TION	body_dia	head_dia	head_hgt	sqr_width	sqr_depth	length	thread length
ALSN03	0.3125	5/16	0.3240	0.7190	0.1760	0.3240	0.1870	1.25 to 8 by 0.25, 8.5, 9	0.875, 1.125
ALSN04	0.3750	3/8	0.3880	0.8440	0.2080	0.3880	0.2190	1.25 to 8 by 0.25, 8.5 to 11 by 0.5	1, 1.25
ALSN05	0.4375	7/16	0.4520	0.9690	0.2390	0.4520	0.2500	1.5 to 8 by 0.25, 8.5 to 13 by 0.5	1.125, 1.375
ALSN06	0.5000	1/2	0.5150	1.0940	0.2700	0.5150	0.2810	1.5 to 8 by 0.25, 8.5 to 15 by 0.5	1.25, 1.5
ALSN07	0.6250	5/8	0.6420	1.3440	0.3440	0.6420	0.3440	1.75 to 8 by 0.25, 8.5 to 18 by 0.5	1.5, 1.75
ALSN08	0.7500	3/4	0.7680	1.5940	0.4060	0.7680	0.4060	2 to 8 by 0.25, 8.5 to 20 by 0.5, 21, 22	1.75, 2
ALSN09	0.8750	7/8	0.8950	1.8440	0.4690	0.8950	0.4690	2.25 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2, 2.25
ALSN10	1.0000	1	1.022	2.0940	0.5310	1.0220	0.5310	2.5 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2.25, 2.5

ANSI Inch Round
Head Bolts

Round Head Bolts



Generic Part Name: ARHB

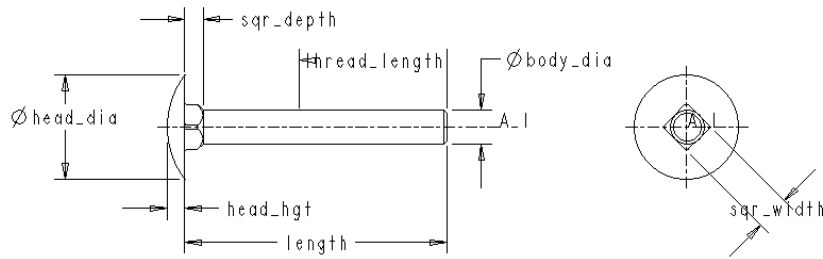
Notes:

- Corresponds to standard ANSI B18.5 - 1978 (R 1971).
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

NAME	BASIC_DIA	FRAC-TION	body_dia	head_dia	head_hgt	length	thread_length
ARHB01	0.19000	No. 10	0.19900	0.46900	0.11400	0.75 to 7 by 0.25	0.625, 0.875
ARHB02	0.25000	1/4	0.26000	0.59400	0.14500	1 to 7.5 by 0.25	0.75, 1
ARHB03	0.31200	5/16	0.32400	0.71900	0.17600	1.25 to 8 by 0.25, 8.5, 9	0.875, 1.125
ARHB04	0.37500	3/8	0.38800	0.84400	0.20800	1.25 to 8 by 0.25, 8.5 to 11 by 0.5	1, 1.25
ARHB05	0.43800	7/16	0.45200	0.96900	0.23900	1.5 to 8 by 0.25, 8.5 to 13 by 0.5	1.125, 1.375
ARHB06	0.50000	1/2	0.51500	1.09400	0.27000	1.5 to 8 by 0.25, 8.5 to 15 by 0.5	1.25, 1.5
ARHB07	0.62500	5/8	0.64200	1.34400	0.34400	1.75 to 8 by 0.25, 8.5 to 18 by 0.5	1.5, 1.75

NAME	BASIC DIA	FRAC-TION	body_dia	head_dia	head_hgt	length	thread_length
ARHB08	0.75000	3/4	0.76800	1.59400	0.40600	2 to 8 by 0.25, 8.5 to 20 by 0.5, 21, 22	1.75, 2
ARHB09	0.87500	7/8	0.89500	1.84400	0.46900	2.25 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2, 2.25
ARHB10	1.00000	1	1.02200	2.09400	0.53100	2.5 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2.25, 2.5

Step Bolts



Generic Part Name: ARSB

Notes:

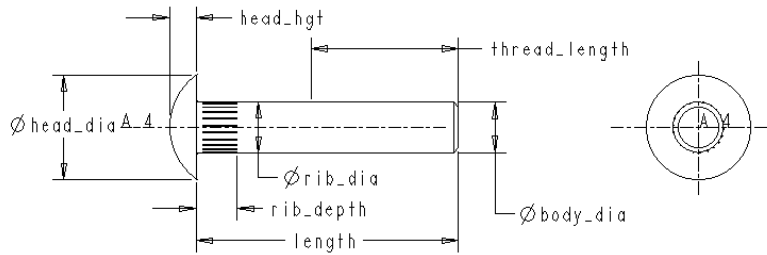
- Corresponds to standard ANSI B18.5 - 1978 (R 1971).
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

NAME	BASIC DIA	FRAC-TION	body_dia	head_dia	head_hgt	sq_r_width	sq_r_depth	length	thread length
ARSB01	0.1900	No. 10	0.1990	0.6560	0.1140	0.1990	0.1250	0.75 to 7 by 0.25	0.5, 0.625, 0.875
ARSB02	0.2500	1/4	0.2600	0.8440	0.1450	0.2600	0.1560	1 to 7.5 by 0.25	0.75, 1

ANSI Inch Round
Head Bolts

NAME	BASIC DIA	FRAC-TION	body_dia	head_dia	head_hgt	sqr_width	sqr_depth	length	thread length
ARSB03	0.3120	5/16	0.3240	1.0310	0.1760	0.3240	0.1870	1.25 to 8 by 0.25, 8.5, 9	0.875, 1.125
ARSB04	0.3750	3/8	0.3880	1.2190	0.2080	0.3880	0.2190	1.25 to 8 by 0.25, 8.5 to 11 by 0.5	1, 1.25
ARSB05	0.4380	7/16	0.4520	1.4060	0.2390	0.4520	0.2500	1.5 to 8 by 0.25, 8.5 to 13 by 0.5	1.125, 1.375
ARSB06	0.5000	1/2	0.5150	1.5940	0.2700	0.5150	0.2810	1.5 to 8 by 0.25, 8.5 to 15 by 0.5	1.25, 1.5

Round Head Ribbed Neck Bolts



Generic Part Name: ARSN

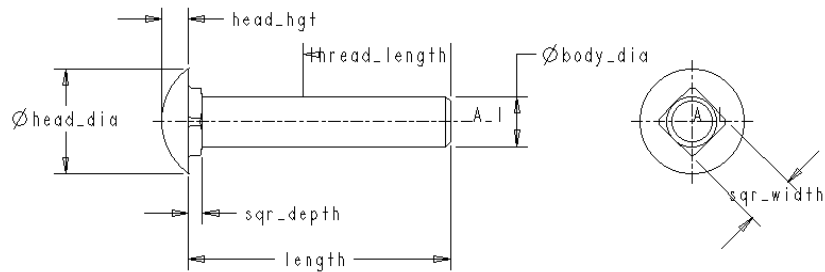
Notes:

- Corresponds to standard ANSI B18.5 - 1978 (R 1971).
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

NAME	BASIC DIA	FRAC-TION	body_dia	head_dia	head_hgt	rib_dia	rib_depth	length	thread length
ARSN01	0.1900	No. 10	0.1990	0.469	0.1140	0.2100	0.250, 0.407, 0.594	0.75 to 7 by 0.25	0.625, 0.875
ARSN02	0.2500	1/4	0.260	0.594	0.1450	0.2740	0.407, 0.594	1 to 7.5 by 0.25	0.5, 0.75, 1
ARSN03	0.3125	5/16	0.3240	0.719	0.1760	0.0310	0.594	1.25 to 8 by 0.25, 8.5, 9	0.5, 0.875, 1.125
ARSN04	0.3750	3/8	0.3880	0.844	0.2080	0.4050	0.594	1.25 to 8 by 0.25, 8.5 to 11 by 0.5	0.625, 0.875, 1, 1.25
ARSN05	0.4375	7/16	0.4520	0.969	0.2390	0.0310	0.594	1.5 to 8 by 0.25, 8.5 to 13 by 0.5	0.875, 1.125, 1.375
ARSN06	0.5000	1/2	0.5150	1.094	0.2700	0.5340	0.594	1.5 to 8 by 0.25, 8.5 to 15 by 0.5	0.75, 1, 1.25, 1.5
ARSN07	0.6250	5/8	0.6420	1.344	0.3440	0.6600	0.625	1.75 to 8 by 0.25, 8.5 to 18 by 0.5	1, 1.125, 1.5, 1.75
ARSN08	0.7500	3/4	0.7680	1.594	0.4060	0.7850	0.625	2 to 8 by 0.25, 8.5 to 20 by 0.5, 21, 22	1.25, 1.375, 1.75, 2

ANSI Inch Round Head Bolts

Round Head Short Square Neck Bolts



Generic Part Name: ASSN

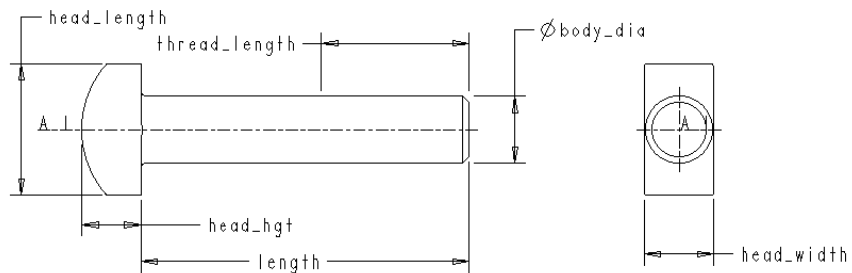
Notes:

- Corresponds to standard ANSI B18.5 - 1978 (R 1971).
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

NAME	BASIC DIA	FRAC-TION	body_dia	head_dia	head_hgt	sqr_width	sqr_depth	length	thread length
ASSN01	0.2500	1/4	0.2600	0.5940	0.1450	0.2600	0.1240	1 to 7.5 by 0.25	0.75, 1
ASSN02	0.3120	5/16	0.3240	0.7190	0.1760	0.3240	0.1240	1.25 to 8 by 0.25, 8.5, 9	0.875, 1.125
ASSN03	0.3750	3/8	0.3880	0.8440	0.2080	0.3880	0.1560	1.25 to 8 by 0.25, 8.5 to 11 by 0.5	1, 1.25
ASSN04	0.4380	7/16	0.4520	0.9690	0.2390	0.4520	0.1560	1.5 to 8 by 0.25, 8.5 to 13 by 0.5	1.125, 1.375

NAME	BASIC DIA	FRAC-TION	body_dia	head_dia	head_hgt	sqr_width	sqr_depth	length	thread length
ASSN05	0.5000	1/2	0.5150	1.0940	0.2700	0.5150	0.1560	1.5 to 8 by 0.25, 8.5 to 15 by 0.5	1.25, 1.5
ASSN06	0.6250	5/8	0.6420	1.3440	0.3440	0.6420	0.2180	1.75 to 8 by 0.25, 8.5 to 18 by 0.5	1.5, 1.75
ASSN07	0.7500	3/4	0.7680	1.5940	0.4060	0.7680	0.2180	2 to 8 by 0.25, 8.5 to 20 by 0.5, 21, 22	1.75, 2

T-Head Bolts



Generic Part Name: ATHB

Notes:

- Corresponds to standard ANSI B18.5 - 1978 (R 1971).
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

ANSI Inch Round Head Bolts

NAME	BASIC DIA	FRAC- TION	body_ dia	head_ length	head_ width	head_ hgt	length	thread_ length
ATHB01	0.2500	1/4	0.2600	0.50000	0.28000	0.20000	1 to 7.5 by 0.25	0.75, 1
ATHB02	0.3125	5/16	0.3200	0.63000	0.34000	0.27000	1.25 to 8 by 0.25, 8.5, 9	0.875, 1.125
ATHB03	0.3750	3/8	0.3900	0.75000	0.41000	0.33000	1.25 to 8 by 0.25, 8.5 to 11 by 0.5	1, 1.25
ATHB04	0.4375	7/16	0.4500	0.88000	0.47000	0.39000	1.5 to 8 by 0.25, 8.5 to 13 by 0.5	1.125, 1.375
ATHB05	0.5000	1/2	0.5200	1.00000	0.53000	0.46000	1.5 to 8 by 0.25, 8.5 to 15 by 0.5	1.25, 1.5
ATHB06	0.6250	5/8	0.6400	1.25000	0.68000	0.59000	1.75 to 8 by 0.25, 8.5 to 18 by 0.5	1.5, 1.75
ATHB07	0.7500	3/4	0.7700	1.50000	0.80000	0.65000	2 to 8 by 0.25, 8.5 to 20 by 0.5, 21, 22	1.75, 2
ATHB08	0.8750	7/8	0.9000	1.75000	0.94000	0.78000	2.25 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2, 2.25
ATHB09	1.0000	1	1.0200	2.00000	1.06000	0.90000	2.5 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2.25, 2.5

13

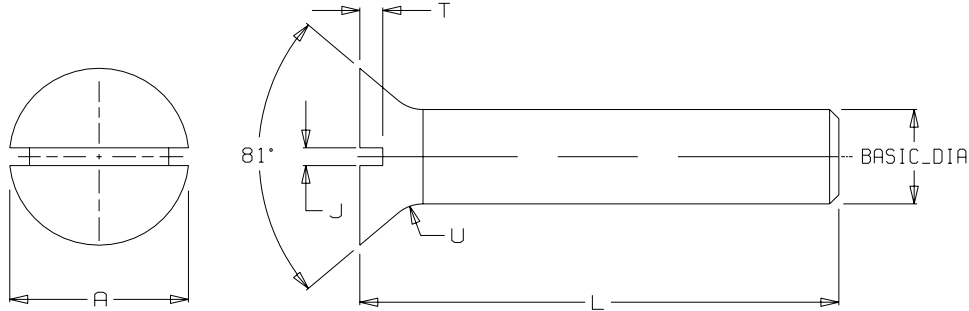
ANSI Inch Slotted Head Cap, Square Head Set, and Slotted Headless Set Screws

The BASIC_DIA values used in callouts usually correspond to the decimal value of the nominal diameter of the part. In some cases, however, the callouts are numbers. Those numbers correspond to the following values of the nominal diameter:

BASIC_DIA	Nominal Diameter
NO.0000	0.0210
NO.000	0.0340
NO.00	0.0470
NO.0	0.0600
NO.1	0.0730
NO.2	0.0860
NO.3	0.0990
NO.4	0.1120
NO.5	0.1250
NO.6	0.1380
NO.8	0.1640
NO.10	0.1900

BASIC_DIA	Nominal Diameter
NO.12	0.2160

Slotted Flat Countersunk Head Cap Screw



Generic part name: CSAA

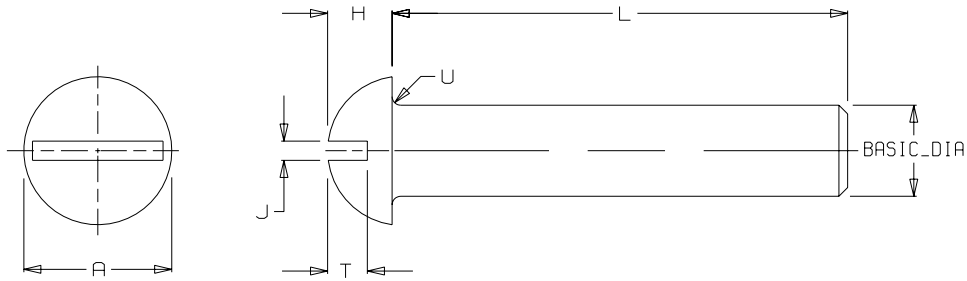
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Length given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Head Diameter	J Slot Width	T Slot Depth	U Fillet Radius	L Lengths
.25	0.500	0.075	0.068	0.100	0.25-1.0, .125; 1.0-3.0, .25
.3125	0.625	0.084	0.086	0.125	0.375-1.0, .125; 1.0-3.25, .25
.375	0.750	0.094	0.103	0.150	0.5-1.0, .125; 1.0-4.0, .25
.4375	0.812	0.094	0.103	0.175	0.5-1.0, .125; 1.0-4.0, .25

BASIC_ DIA	A Head Diameter	J Slot Width	T Slot Depth	U Fillet Radius	L Lengths
.5	0.875	0.106	0.103	0.200	0.625-1.0, .125; 1.0-4.0, .25
.5625	1.000	0.118	0.120	0.225	0.75-4.0, .25
.625	1.125	0.133	0.137	0.250	0.75-4.0, .25
.75	1.375	0.149	0.171	0.300	1.0-3.0, .25; 3.0-5.0, .5
.875	1.625	0.167	0.206	0.350	1.0-3.0, .25; 3.0-5.0, .5
1	1.875	0.188	0.240	0.400	1.0-3.0, .25; 3.0-6.0, .5
1.125	2.062	0.196	0.257	0.450	1.0-3.0, .25; 3.0-6.0, .5
1.25	2.312	0.211	0.291	0.500	1.0-3.0, .25; 3.0-6.0, .5
1.375	2.562	0.226	0.326	0.550	1.5-3.0, .25; 3.0-6.0, .5
1.5	2.812	0.258	0.360	0.600	1.5-3.0, .25; 3.0-6.0, .5

Slotted Round Head Cap Screw



ANSI Inch Slotted
Head Cap, Square

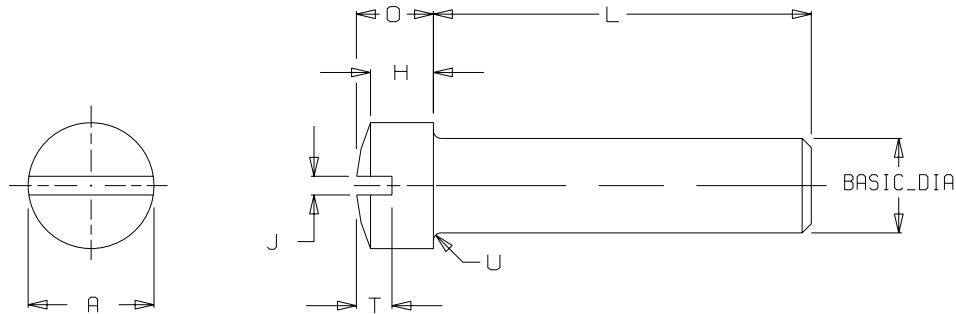
Generic part name: CSBB

Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Head Diam	H Head Height	J Slot Width	T Slot Depth	U Fillet Radius	L Lengths
.25	0.437	0.191	0.075	0.117	0.031	0.25-1.0, .125; 1.0-3.0, .25
.3125	0.562	0.245	0.084	0.151	0.031	0.375-1.0, .125; 1.0-3.25, .25
.375	0.625	0.273	0.094	0.168	0.031	0.5-1.0, .125; 1.0-4.0, .25
.4375	0.750	0.328	0.094	0.202	0.047	0.5-1.0, .125; 1.0-4.0, .25
.5	0.812	0.354	0.106	0.218	0.047	0.625-1.0, .125; 1.0-4.0, .25
.5625	0.937	0.409	0.118	0.252	0.047	0.75-4.0, .25
.625	1.000	0.437	0.133	0.270	0.062	0.75-4.0, .25
.75	1.250	0.546	0.149	0.338	0.062	1.0-3.0, .25; 3.0-5.0, .5

Slotted Fillister Head Cap Screw



Generic part name: CSCC

Notes:

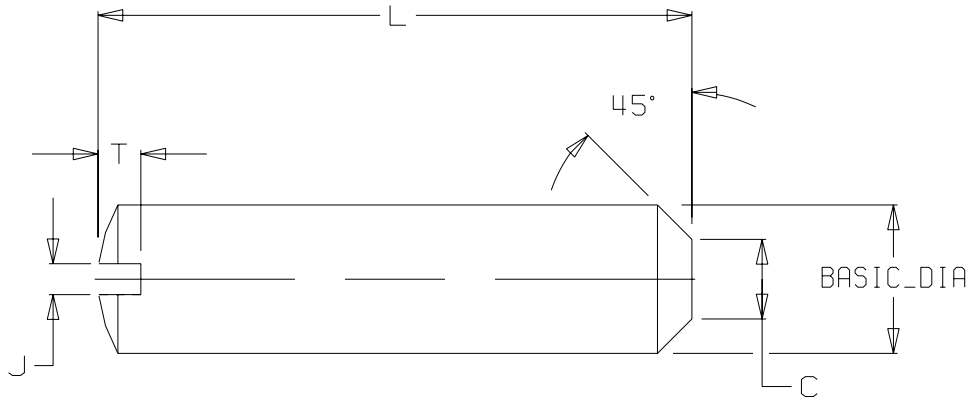
- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Head Diam	H Head Side Hgt	O Total Head Hgt	J Slot Width	T Slot Depth	U Fillet Rad	L Lengths
.25	0.375	0.172	0.216	0.075	0.097	0.031	0.25-1.0, .125; 1.0-3.0, .25
.3125	0.437	0.203	0.253	0.084	0.115	0.031	0.375-1.0, .125; 1.0-3.25, .25
.375	0.562	0.250	0.314	0.094	0.142	0.031	0.5-1.0, .125; 1.0-4.0, .25
.4375	0.625	0.297	0.368	0.094	0.168	0.047	0.5-1.0, .125; 1.0-4.0, .25
.5	0.750	0.328	0.413	0.106	0.193	0.047	0.625-1.0, .125; 1.0-4.0, .25
.5625	0.812	0.375	0.467	0.118	0.213	0.047	0.75-4.0, .25
.625	0.875	0.422	0.521	0.133	0.239	0.062	0.75-4.0, .25

ANSI Inch Slotted Head Cap, Square

BASIC_DIA	A Head Diam	H Head Side Hgt	O Total Head Hgt	J Slot Width	T Slot Depth	U Fillet Rad	L Lengths
.75	1.000	0.500	0.612	0.149	0.283	0.062	1.0-3.0, .25; 3.0-5.0, .5
.875	1.125	0.594	0.720	0.167	0.334	0.062	1.0-3.0, .25; 3.0-5.0, .5
1	1.312	0.656	0.803	0.188	0.371	0.062	1.0-3.0, .25; 3.0-6.0, .5

Slotted Headless Set Screw, Flat Point



Generic part name: SSAA

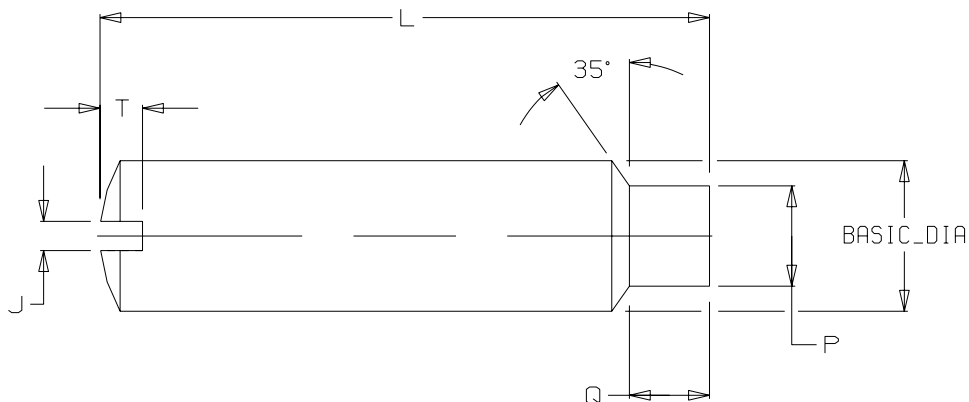
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	J Slot Width	T Slot Depth	C Flat Point Diameter	L Lengths
NO.0	0.014	0.020	0.033	0.0625-0.375, .0625

BASIC_DIA	J Slot Width	T Slot Depth	C Flat Point Diameter	L Lengths
NO.1	0.016	0.020	0.040	0.0625-0.375, .0625
NO.2	0.018	0.025	0.047	0.0625-0.5, .0625
NO.3	0.020	0.028	0.054	0.125-0.5, .0625
NO.4	0.024	0.031	0.061	0.125-0.5, .0625
NO.5	0.026	0.036	0.067	0.125-0.625, .0625
NO.6	0.028	0.040	0.074	0.125-0.625, .0625
NO.8	0.032	0.046	0.087	0.125-0.75, .0625
NO.10	0.035	0.053	0.102	0.125-0.875, .0625
NO.12	0.042	0.061	0.115	0.125-1.0, .0625
.25	0.049	0.068	0.132	0.1875-1.25, .0625
.3125	0.055	0.083	0.172	0.25-1.5, .125
.375	0.068	0.099	0.212	0.375-1.75, .125
.4375	0.076	0.114	0.252	0.375-2.0, .125
.5	0.086	0.130	0.291	0.375-2.25, .125
.5625	0.096	0.146	0.332	0.375-2.5, .125
.625	0.107	0.161	0.371	0.375-2.5, .125
.75	0.134	0.193	0.450	0.5-2.5, .125

Slotted Headless Set Screw, Dog Point



ANSI Inch Slotted
Head Cap, Square
Head Set

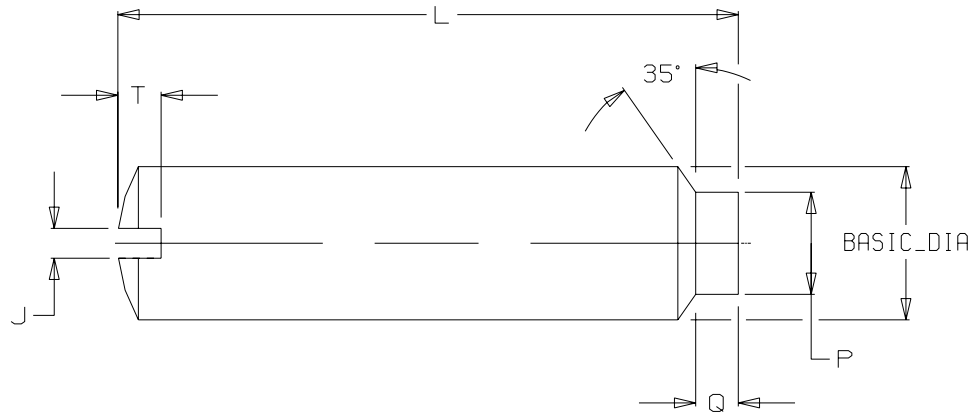
Generic part name: SSBB

Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	J Slot Width	T Slot Depth	P Point Diameter	Q Point Length	L Lengths
NO.0	0.014	0.020	0.040	0.032	0.0625-0.375, .0625
NO.1	0.016	0.020	0.049	0.040	0.0625-0.375, .0625
NO.2	0.018	0.025	0.057	0.046	0.0625-0.5, .0625
NO.3	0.020	0.028	0.066	0.052	0.125-0.5, .0625
NO.4	0.024	0.031	0.075	0.058	0.125-0.5, .0625
NO.5	0.026	0.036	0.083	0.063	0.125-0.625, .0625
NO.6	0.028	0.040	0.092	0.073	0.125-0.625, .0625
NO.8	0.032	0.046	0.109	0.083	0.125-0.75, .0625
NO.10	0.035	0.053	0.127	0.095	0.125-0.875, .0625
NO.12	0.042	0.061	0.144	0.115	0.125-1.0, .0625
.25	0.049	0.068	0.156	0.130	0.1875-1.25, .0625
.3125	0.055	0.083	0.203	0.161	0.25-1.5, .125
.375	0.068	0.099	0.250	0.193	0.375-1.75, .125
.4375	0.076	0.114	0.297	0.224	0.375-2.0, .125
.5	0.086	0.130	0.344	0.255	0.375-2.25, .125
.5625	0.096	0.146	0.391	0.287	0.375-2.5, .125
.625	0.107	0.161	0.469	0.321	0.375-2.5, .125
.75	0.134	0.193	0.562	0.383	0.5-2.5, .125

Slotted Headless Set Screw, Half Dog Point



Generic part name: SSCC

Notes:

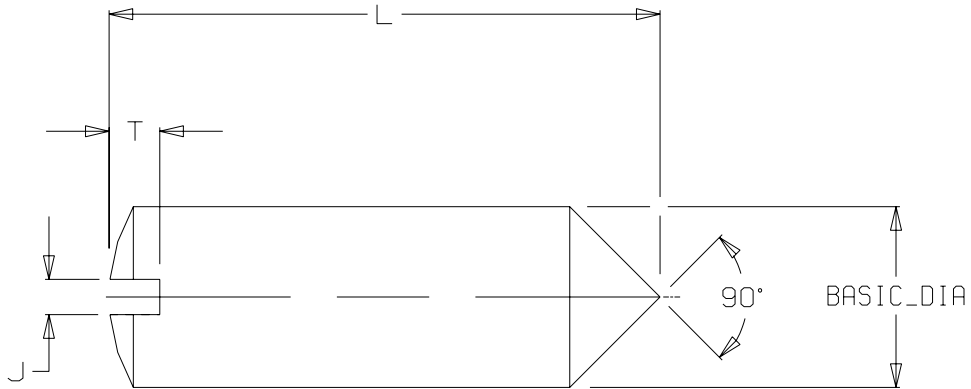
- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	J Slot Width	T Slot Depth	P Point Diameter	Q Point Length	L Lengths
NO.0	0.014	0.020	0.040	0.017	0.0625-0.375, .0625
NO.1	0.016	0.020	0.049	0.021	0.0625-0.375, .0625
NO.2	0.018	0.025	0.057	0.024	0.0625-0.5, .0625
NO.3	0.020	0.028	0.066	0.027	0.125-0.5, .0625
NO.4	0.024	0.031	0.075	0.030	0.125-0.5, .0625
NO.5	0.026	0.036	0.083	0.033	0.125-0.625, .0625
NO.6	0.028	0.040	0.092	0.038	0.125-0.625, .0625
NO.8	0.032	0.046	0.109	0.043	0.125-0.75, .0625
NO.10	0.035	0.053	0.127	0.050	0.125-0.875, .0625
NO.12	0.042	0.061	0.144	0.060	0.125-1.0, .0625

ANSI Inch Slotted Head Cap, Square

BASIC_DIA	J Slot Width	T Slot Depth	P Point Diameter	Q Point Length	L Lengths
.25	0.049	0.068	0.156	0.068	0.1875-1.25, .0625
.3125	0.055	0.083	0.203	0.083	0.25-1.5, .125
.375	0.068	0.099	0.250	0.099	0.375-1.75, .125
.4375	0.076	0.114	0.297	0.114	0.375-2.0, .125
.5	0.086	0.130	0.344	0.130	0.375-2.25, .125
.5625	0.096	0.146	0.391	0.146	0.375-2.5, .125
.625	0.107	0.161	0.469	0.164	0.375-2.5, .125
.75	0.134	0.193	0.562	0.196	0.5-2.5, .125

Slotted Headless Set Screw, Cone Point



Generic part name: SSDD

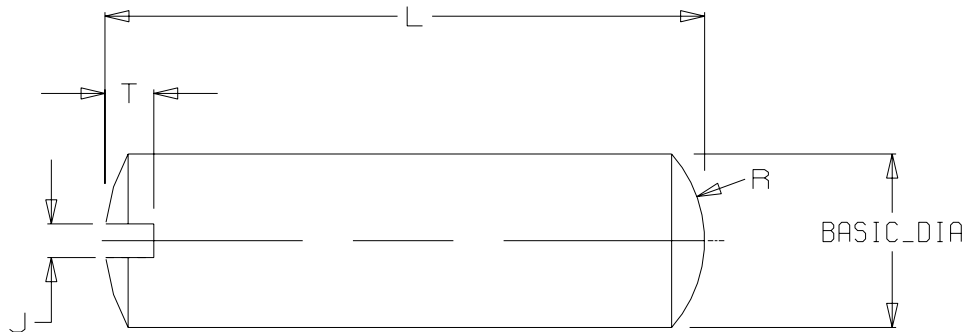
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	J Slot Width	T Slot Depth	L Lengths
NO.0	0.014	0.020	0.0625-0.375, .0625
NO.1	0.016	0.020	0.0625-0.375, .0625
NO.2	0.018	0.025	0.0625-0.5, .0625
NO.3	0.020	0.028	0.125-0.5, .0625
NO.4	0.024	0.031	0.125-0.5, .0625
NO.5	0.026	0.036	0.125-0.625, .0625
NO.6	0.028	0.040	0.125-0.625, .0625
NO.8	0.032	0.046	0.125-0.75, .0625
NO.10	0.035	0.053	0.125-0.875, .0625
NO.12	0.042	0.061	0.125-1.0, .0625
.25	0.049	0.068	0.1875-1.25, .0625
.3125	0.055	0.083	0.25-1.5, .125
.375	0.068	0.099	0.25-1.75, .125
.4375	0.076	0.114	0.375-2.0, .125
.5	0.086	0.130	0.375-2.25, .125
.5625	0.096	0.146	0.375-2.5, .125
.625	0.107	0.161	0.375-2.5, .125
.75	0.134	0.193	0.5-2.5, .125

ANSI Inch Slotted
Head Cap, Square

Slotted Headless Set Screw, Oval Point



Generic part name: SSEE

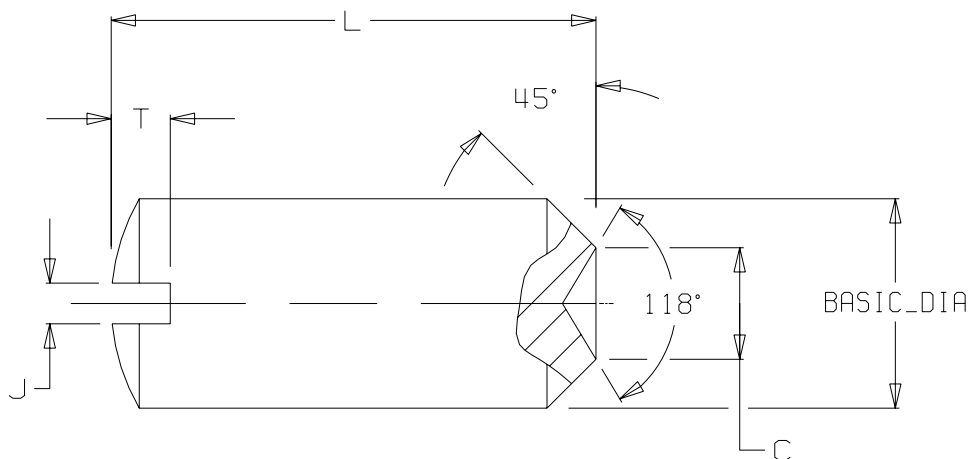
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	J Slot Width	T Slot Depth	R Point Radius	L Lengths
NO.0	0.0140	0.0200	0.0450	0.0625-0.375, .0625
NO.1	0.0160	0.0200	0.0550	0.0625-0.375, .0625
NO.2	0.0180	0.0250	0.0640	0.0625-0.5, .0625
NO.3	0.0200	0.0280	0.0740	0.125-0.5, .0625
NO.4	0.0240	0.0310	0.0840	0.125-0.5, .0625
NO.5	0.0260	0.0360	0.0940	0.125-0.625, .0625
NO.6	0.0280	0.0400	0.1040	0.125-0.625, .0625
NO.8	0.0320	0.0460	0.1230	0.125-0.75, .0625
NO.10	0.0350	0.0530	0.1420	0.125-0.875, .0625
NO.12	0.0420	0.0610	0.1620	0.125-1.0, .0625
.25	0.0490	0.0680	0.1880	0.1875-1.25, .0625
.3125	0.0550	0.0830	0.2340	0.25-1.5, .125

BASIC_DIA	J Slot Width	T Slot Depth	R Point Radius	L Lengths
.375	0.0680	0.0990	0.2810	0.375-1.75, .125
.4375	0.0760	0.1140	0.3280	0.375-2.0, .125
.5	0.0860	0.1300	0.3750	0.375-2.25, .125
.5625	0.0960	0.1460	0.4220	0.375-2.5, .125
.625	0.1070	0.1610	0.4690	0.375-2.5, .125
.75	0.1340	0.1930	0.5620	0.5-2.5, .125

Slotted Headless Set Screw, Cup Point



Generic part name: SSFF

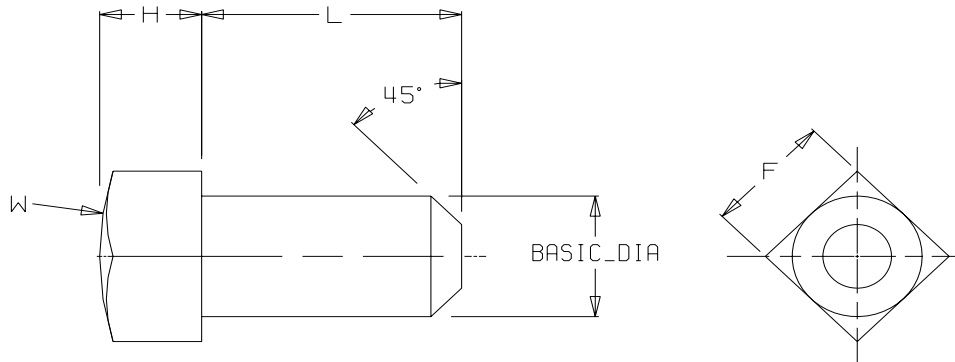
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

ANSI Inch Slotted
Head Cap, Square

BASIC_DIA	J Slot Width	T Slot Depth	C Point Diameter	L Lengths
NO.0	0.014	0.020	0.033	0.0625-0.375, .0625
NO.1	0.016	0.020	0.040	0.0625-0.375, .0625
NO.2	0.018	0.025	0.047	0.0625-0.5, .0625
NO.3	0.020	0.028	0.054	0.125-0.5, .0625
NO.4	0.024	0.031	0.061	0.125-0.5, .0625
NO.5	0.026	0.036	0.067	0.125-0.625, .0625
NO.6	0.028	0.040	0.074	0.125-0.625, .0625
NO.8	0.032	0.046	0.087	0.125-0.75, .0625
NO.10	0.035	0.053	0.102	0.125-0.875, .0625
NO.12	0.042	0.061	0.115	0.125-1.0, .0625
.25	0.049	0.068	0.132	0.1875-1.25, .0625
.3125	0.055	0.083	0.172	0.25-1.5, .125
.375	0.068	0.099	0.212	0.375-1.75, .125
.4375	0.076	0.114	0.252	0.375-2.0, .125
.5	0.086	0.130	0.291	0.375-2.25, .125
.5625	0.096	0.146	0.332	0.375-2.5, .125
.625	0.107	0.161	0.371	0.375-2.5, .125
.75	0.134	0.193	0.450	0.5-2.5, .125

Square Head Set Screw (Flat Head Type), Flat Point



Generic part name: SSGG

Notes:

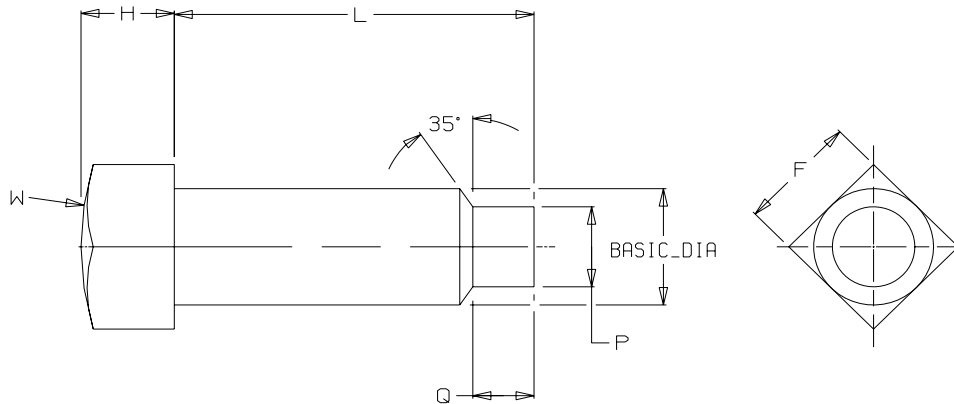
- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	F Flat Width	H Head Height	W Head Radius	L Lengths
.19	0.1900	0.1480	0.4800	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.375-0.75, .0625; 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.375-0.75, .0625; 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.75-4.0, .25
.5625	0.5625	0.4370	1.4100	0.75-4.5, .25

ANSI Inch Slotted
Head Cap, Square

BASIC_DIA	F Flat Width	H Head Height	W Head Radius	L Lengths
.625	0.6250	0.4850	1.5600	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	1.25-6.0, .25
1	1.0000	0.7740	2.5000	1.25-6.0, .25
1.125	1.1250	0.8700	2.8100	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	2.0-8.0, .5

Square Head Set Screw (Flat Head Type), Dog Point



Generic part name: SSHH

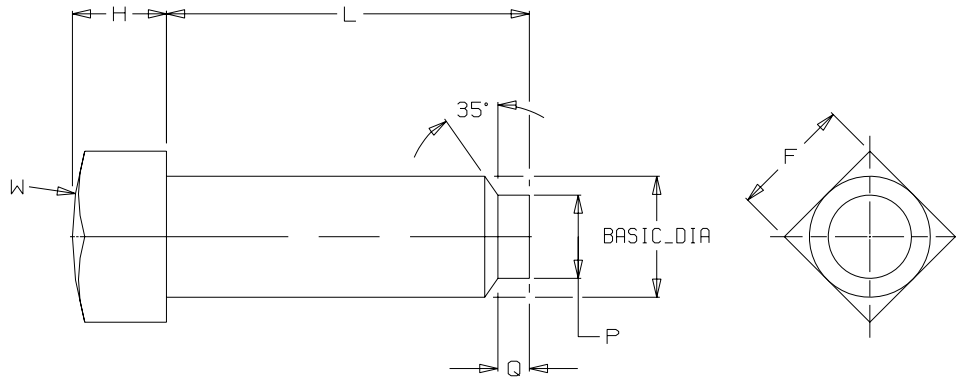
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_ DIA	F Flat Width	H Head Height	W Head Radius	P Point Diameter	Q Point Length	L Lengths
.19	0.1900	0.1480	0.4800	0.1270	0.0950	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.1560	0.1300	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.2030	0.1610	0.375-0.75, .0625 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.2500	0.1930	0.375-0.75, .0625 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.2970	0.2240	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.3440	0.2550	0.75-4.0, .25
.5625	0.5625	0.4370	1.4100	0.3910	0.2870	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.4690	0.3210	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	0.5620	0.3830	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	0.6560	0.4460	1.25-6.0, .25
1	1.0000	0.7740	2.5000	0.7500	0.5100	1.25-6.0, .25
1.125	1.1250	0.8700	2.8100	0.8440	0.5720	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	0.9380	0.6350	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	1.0310	0.6980	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	1.1250	0.7600	2.0-8.0, .5

ANSI Inch Slotted
Head Cap, Square

Square Head Set Screw (Flat Head Type), Half Dog Point



Generic part name: SSII

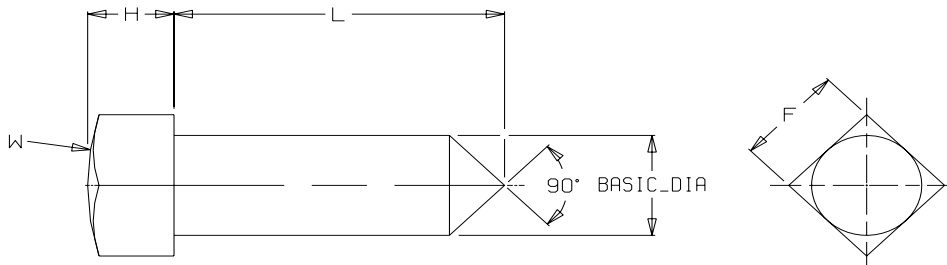
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BA SIC_ DIA	F Flat Width	H Head Height	W Head Radius	P Point Diameter	Q Point Length	L Lengths
.19	0.1900	0.1480	0.4800	0.1270	0.0500	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.1560	0.0680	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.2030	0.0830	0.375-0.75, .0625; 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.2500	0.0990	0.375-0.75, .0625; 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.2970	0.1140	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.3440	0.1300	0.75-4.0, .25

BA SIC_ DIA	F Flat Width	H Head Height	W Head Radius	P Point Diameter	Q Point Length	L Lengths
.5625	0.5625	0.4370	1.4100	0.3910	0.1460	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.4690	0.1640	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	0.5620	0.1960	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	0.6560	0.2270	1.25-6.0, .25
1	1.0000	0.7740	2.5000	0.7500	0.2600	1.25-6.0, .25
1.125	1.1250	0.8700	2.8100	0.8440	0.2910	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	0.9380	0.3230	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	1.0310	0.3540	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	1.1250	0.3850	2.0-8.0, .5

Square Head Set Screw (Flat Head Type), Cone Point



Generic part name: SSJJ

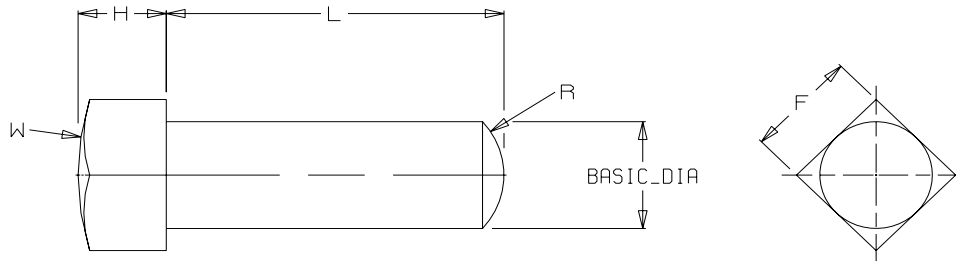
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

ANSI Inch Slotted
Head Cap, Square

BASIC_ DIA	F Flat Width	H Head Height	W Head Radius	L Lengths
.19	0.1900	0.1480	0.4800	0.1875-0.5, .0625 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.25-0.5, .0625 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.375-0.75, .0625 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.375-0.75, .0625 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.75-4.0, .25
.5625	0.5625	0.4370	1.4100	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	1.25-6.0, .25
1	1.0000	0.7740	2.5000	1.25-6.0, .25
1.12	1.1250	0.8700	2.8100	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	2.0-8.0, .5

Square Head Set Screw (Flat Head Type), Oval Point



Generic part name: SSKK

Notes:

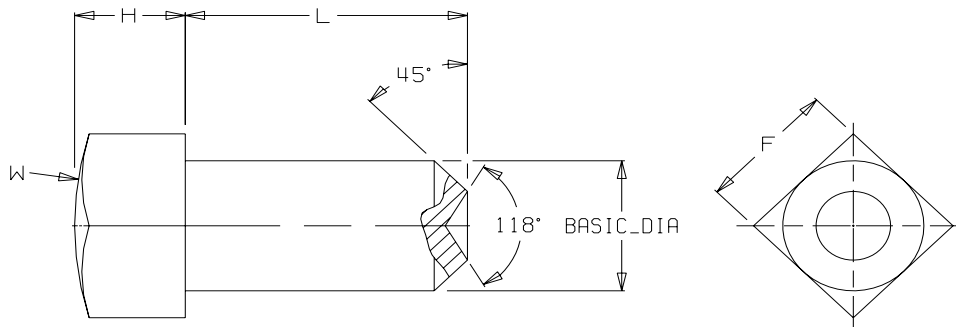
- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	F Flat Width	H Head Height	W Head Radius	R Point Radius	L Lengths
.19	0.1900	0.1480	0.4800	0.1420	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.1880	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.2340	0.375-0.75, .0625; 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.2810	0.375-0.75, .0625; 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.3280	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.3750	0.75-4.0, .25
.5625	0.5625	0.4370	1.4100	0.4220	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.4690	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	0.5620	1.0-6.0, .25

ANSI Inch Slotted
Head Cap, Square

BASIC_DIA	F Flat Width	H Head Height	W Head Radius	R Point Radius	L Lengths
.875	0.8750	0.6780	2.1900	0.6560	1.25-6.0, .25
1	1.0000	0.7740	2.5000	0.7500	1.25-6.0, .25
1.125	1.1250	0.8700	2.8100	0.8440	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	0.9380	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	1.0310	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	1.1250	2.0-8.0, .5

Square Head Set Screw (Flat Head Type), Cup Point



Generic part name: SLL

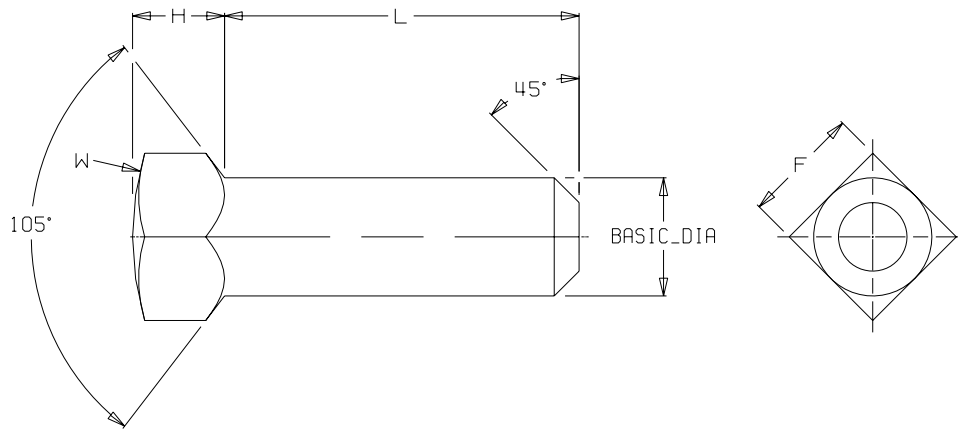
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_ DIA	F Flat Width	H Head Height	W Head Radius	L Lengths
.19	0.1900	0.1480	0.4800	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.375-0.75, .0625; 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.375-0.75, .0625; 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.75-4.0, .25
.5625	0.5625	0.4370	1.4100	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	1.25-6.0, .25
1	1.0000	0.7740	2.5000	1.25-6.0, .25
1.125	1.1250	0.8700	2.8100	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	2.0-8.0, .5

ANSI Inch Slotted
Head Cap, Square

Square Head Set Screw (Cone Head Type), Flat Point



Generic part name: SSSS

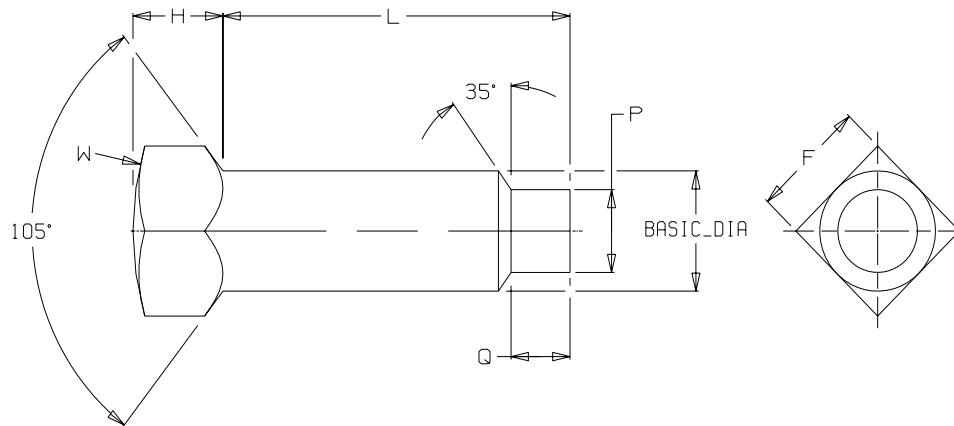
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	F Flat Width	H Head Height	W Head Radius	L Lengths
.19	0.1900	0.1480	0.4800	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.375-0.75, .0625; 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.375-0.75, .0625; 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.75-4.0, .25

BASIC_ DIA	F Flat Width	H Head Height	W Head Radius	L Lengths
.5625	0.5625	0.4370	1.4100	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	1.25-6.0, .25
1	1.0000	0.7740	2.5000	1.25-6.0, .25
1.125	1.1250	0.8700	2.8100	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	2.0-8.0, .5

Square Head Set Screw (Cone Head Type), Dog Point



Generic part name: SSTT

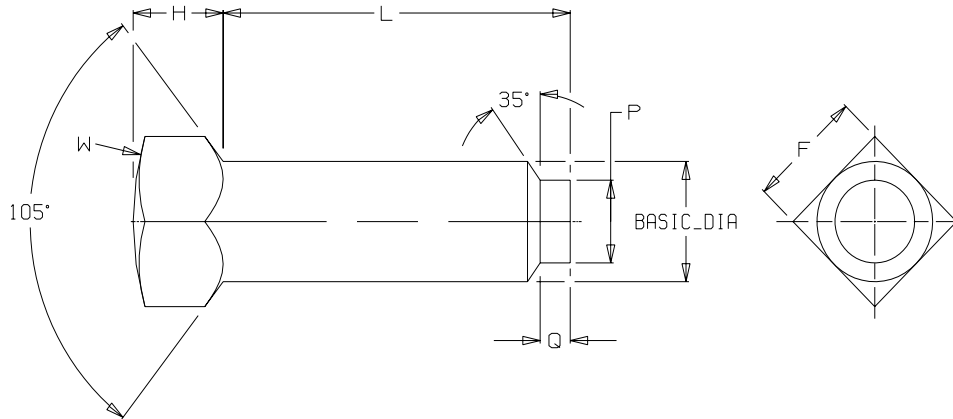
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

ANSI Inch Slotted
Head Cap, Square

BASIC_ DIA	F Flat Width	H Head Height	W Head Radius	P Point Diameter	Q Point Length	L Lengths
.19	0.1900	0.1480	0.4800	0.1270	0.0950	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.1560	0.1300	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.2030	0.1610	0.375-0.75, .0625; 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.2500	0.1930	0.375-0.75, .0625; 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.2970	0.2240	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.3440	0.2550	0.75-4.0, .25
.5625	0.5625	0.4370	1.4100	0.3910	0.2870	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.4690	0.3210	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	0.5620	0.3830	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	0.6560	0.4460	1.25-6.0, .25
1	1.0000	0.7740	2.5000	0.7500	0.5100	1.25-6.0, .25
1.125	1.1250	0.8700	2.8100	0.8440	0.5720	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	0.9380	0.6350	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	1.0310	0.6980	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	1.1250	0.7600	2.0-8.0, .5

Square Head Set Screw (Cone Head Type), Half Dog Point



Generic part name: SSUU

Notes:

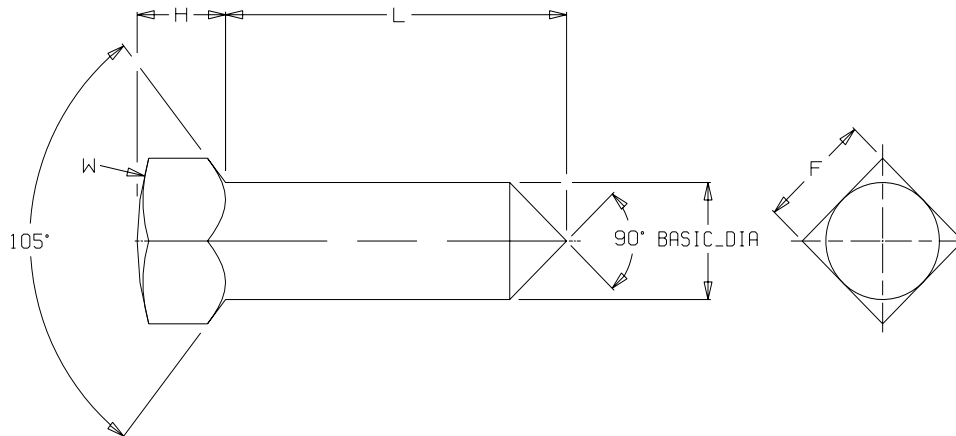
- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	F Flat Width	H Head Height	W Head Radius	P Point Diameter	Q Point Length	L Lengths
.19	0.1900	0.1480	0.4800	0.1270	0.0500	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.1560	0.0680	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.2030	0.0830	0.375-0.75, .0625; 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.2500	0.0990	0.375-0.75, .0625; 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.2970	0.1140	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.3440	0.1300	0.75-4.0, .25

ANSI Inch Slotted
Head Cap, Square

BASIC_DIA	F Flat Width	H Head Height	W Head Radius	P Point Diameter	Q Point Length	L Lengths
.5625	0.5625	0.4370	1.4100	0.3910	0.1460	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.4690	0.1640	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	0.5620	0.1960	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	0.6560	0.2270	1.25-6.0, .25
1	1.0000	0.7740	2.5000	0.7500	0.2600	1.25-6.0, .25
1.125	1.1250	0.8700	2.8100	0.8440	0.2910	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	0.9380	0.3230	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	1.0310	0.3540	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	1.1250	0.3850	2.0-8.0, .5

Square Head Set Screw (Cone Head Type), Cone Point



Generic part name: SSVV

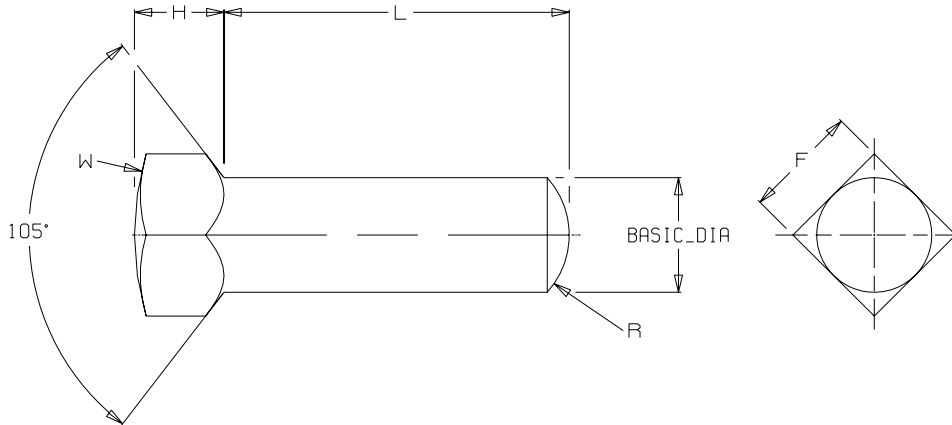
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_ DIA	F Flat Width	H Head Height	W Head Radius	L Lengths
.19	0.1900	0.1480	0.4800	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.375-0.75, .0625; 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.375-0.75, .0625; 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.75-4.0, .25
.5625	0.5625	0.4370	1.4100	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	1.25-6.0, .25
1	1.0000	0.7740	2.5000	1.25-6.0, .25
1.12	1.1250	0.8700	2.8100	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	2.0-8.0, .5

ANSI Inch Slotted
Head Cap, Square

Square Head Set Screw (Cone Head Type), Oval Point



Generic part name: SSWW

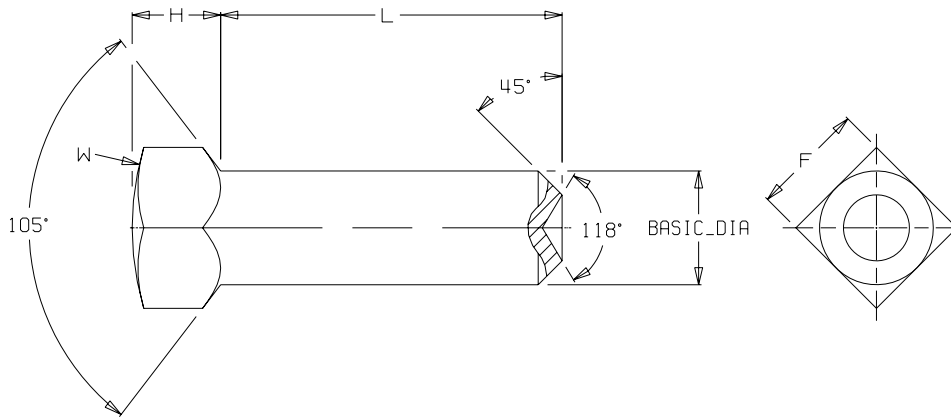
Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	F Flat Width	H Head Height	W Head Radius	R Point Radius	L Lengths
.19	0.1900	0.1480	0.4800	0.1420	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.1880	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.2340	0.375-0.75, .0625; 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.2810	0.375-0.75, .0625; 0.75-3.0, .25
.5	0.5000	0.3890	1.2500	0.3750	0.75-4.0, .25

BASIC_DIA_ DIA	F Flat Width	H Head Height	W Head Radius	R Point Radius	L Lengths
.5625	0.5625	0.4370	1.4100	0.4220	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.4690	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	0.5620	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	0.6560	1.25-6.0, .25
1	1.0000	0.7740	2.5000	0.7500	1.25-6.0, .25
1.125	1.1250	0.8700	2.8100	0.8440	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	0.9380	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	1.0310	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	1.1250	2.0-8.0, .5

Square Head Set Screw (Cone Head Type), Cup Point



Generic part name: SSXX

Notes:

- Corresponds to standard ANSI B18.6.2-1972
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

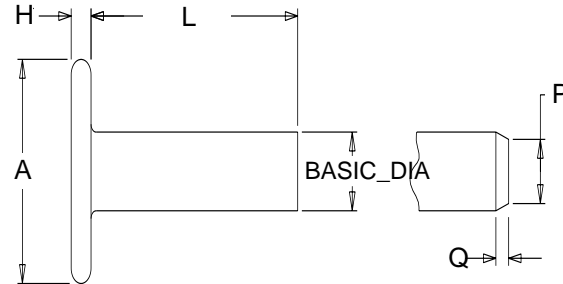
ANSI Inch Slotted
Head Cap, Square

BASIC_ DIA	F Flat Width	H Head Height	W Head Radius	L Lengths
.19	0.1900	0.1480	0.4800	0.1875-0.5, .0625; 0.5-2.0, .125
.25	0.2500	0.1960	0.6200	0.25-0.5, .0625; 0.5-2.0, .125
.3125	0.3125	0.2450	0.7800	0.375-0.75, .0625; 0.75-3.0, .25
.375	0.3750	0.2930	0.9400	0.375-0.75, .0625; 0.75-3.0, .25
.4375	0.4375	0.3410	1.0900	0.75-4.0, .25
.5	0.5000	0.3890	1.2500	0.75-4.0, .25
.5625	0.5625	0.4370	1.4100	0.75-4.5, .25
.625	0.6250	0.4850	1.5600	0.75-5.0, .25
.75	0.7500	0.5820	1.8800	1.0-6.0, .25
.875	0.8750	0.6780	2.1900	1.25-6.0, .25
1	1.0000	0.7740	2.5000	1.25-6.0, .25
1.125	1.1250	0.8700	2.8100	1.25-6.0, .25
1.25	1.2500	0.9660	3.1200	1.25-6.0, .25
1.375	1.3750	1.0630	3.4400	2.0-7.0, .5
1.5	1.5000	1.1590	3.7500	2.0-8.0, .5

14

ANSI Inch Small Solid Rivets

Flat Head Rivet



Generic part name: RGG

Notes:

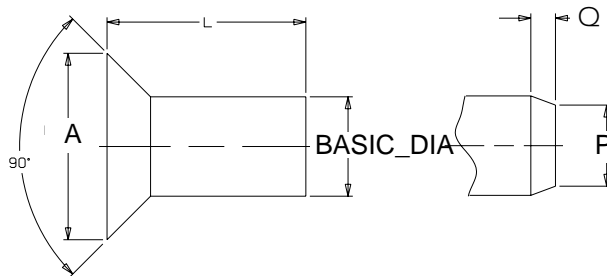
- Corresponds to standard ANSI B18.1.1-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA and POINTED values exactly as shown.

Flat Head Rivet without Point				
BASIC_DIA	POINTED	A Head Dia	H Head Height	L Lengths
.062	NO	0.1400	0.0270	0.125 - 0.25, 0.025; 0.25 - 1.0, 0.05
.094	NO	0.2000	0.0380	0.125 - 0.25, 0.025; 0.25 - 1.0, 0.05
.125	NO	0.2600	0.0480	0.15 - 1.0, 0.05
.156	NO	0.3230	0.0590	0.25 - 1.0, 0.05
.188	NO	0.3870	0.0690	0.25 - 1.25, 0.1
.219	NO	0.4530	0.0800	0.25 - 1.75, 0.1
.25	NO	0.5150	0.0910	0.25 - 1.75, 0.1
.281	NO	0.5790	0.1030	0.4 - 2.0, 0.1
.312	NO	0.6410	0.1130	0.4 - 2.0, 0.1
.344	NO	0.7050	0.1240	0.4 - 2.0, 0.1
.375	NO	0.7690	0.1350	0.5 - 2.0, 0.1
.406	NO	0.8340	0.1460	0.5 - 2.0, 0.1

Flat Head Rivet without Point				
BASIC_DIA	POINTED	A Head Dia	H Head Height	L Lengths
.438	NO	0.8960	0.1570	0.5 - 2.0, 0.1

Flat Head Rivet with Point						
BASIC_DIA	POINTED	A Head Dia	H Head Height	P Point Dia	Q Point Length	L Lengths
.094	YES	0.2000	0.0380	0.0770	0.0230	0.125 - 0.25, 0.025 0.25 - 1.0, 0.0
.125	YES	0.2600	0.0480	0.1020	0.0310	0.15 - 1.0, 0.05
.156	YES	0.3230	0.0590	0.1270	0.0390	0.25 - 1.0, 0.05
.188	YES	0.3870	0.0690	0.1540	0.0470	0.25 - 1.25, 0.1
.219	YES	0.4530	0.0800	0.1790	0.0550	0.25 - 1.75, 0.1
.25	YES	0.5150	0.0910	0.2040	0.0620	0.25 - 1.75, 0.1
.281	YES	0.5790	0.1030	0.2300	0.0700	0.4 - 2.0, 0.1
.312	YES	0.6410	0.1130	0.2550	0.0780	0.4 - 2.0, 0.1
.344	YES	0.7050	0.1240	0.2810	0.0860	0.4 - 2.0, 0.1
.375	YES	0.7690	0.1350	0.3070	0.0940	0.5 - 2.0, 0.1
.438	YES	0.8960	0.1570	0.3580	0.1100	0.5 - 2.0, 0.1

Flat Countersunk Head Rivet



Generic part name: RHH

Notes:

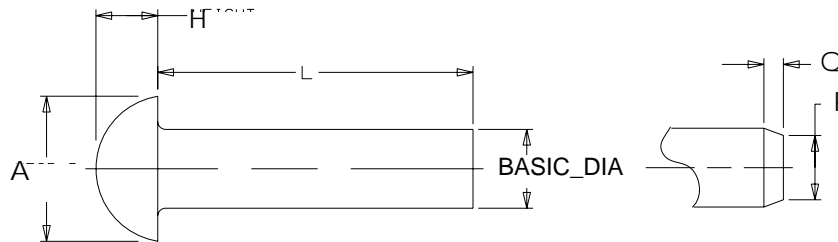
- Corresponds to standard ANSI B18.1.1-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA and POINTED values exactly as shown.

Flat Countersunk Head Rivet without Point			
BASIC_DIA	POINTED	A Head Dia	L Lengths
.062	NO	0.1180	0.125 - 0.25, 0.025; 0.25 - 1.0, 0.05
.094	NO	0.1760	0.125 - 0.25, 0.025; 0.25 - 1.0, 0.05
.125	NO	0.2350	0.15 - 1.0, 0.05
.156	NO	0.2930	0.25 - 1.0, 0.05
.188	NO	0.3510	0.25 - 1.25, 0.1
.219	NO	0.4130	0.25 - 1.75, 0.1
.25	NO	0.4690	0.25 - 1.75, 0.1
.281	NO	0.5280	0.4 - 2.0, 0.1
.312	NO	0.5880	0.4 - 2.0, 0.1
.344	NO	0.6460	0.4 - 2.0, 0.1
.375	NO	0.7040	0.5 - 2.0, 0.1
.406	NO	0.7630	0.5 - 2.0, 0.1
.438	NO	0.8230	0.5 - 2.0, 0.1

Flat Countersunk Head Rivet with Point					
BASIC_DIA	POINTED	A Head Dia	P Point Dia	Q Point Height	L Lengths
.094	YES	0.1760	0.0770	0.0230	0.125 - 0.25, 0.025 0.25 - 1.0, 0.05
.125	YES	0.2350	0.1020	0.0310	0.15 - 1.0, 0.05

Flat Countersunk Head Rivet with Point					
BASIC_DIA	POINTED	A Head Dia	P Point Dia	Q Point Height	L Lengths
.156	YES	0.2930	0.1270	0.0390	0.25 - 1.0, 0.05
.188	YES	0.3510	0.1540	0.0470	0.25 - 1.25, 0.1
.219	YES	0.4130	0.1790	0.0550	0.25 - 1.75, 0.1
.25	YES	0.4690	0.2040	0.0620	0.25 - 1.75, 0.1
.281	YES	0.5280	0.2300	0.0700	0.4 - 2.0, 0.1
.312	YES	0.5880	0.2550	0.0780	0.4 - 2.0, 0.1
.344	YES	0.6460	0.2810	0.0860	0.4 - 2.0, 0.1
.375	YES	0.7040	0.3070	0.0940	0.5 - 2.0, 0.1
.438	YES	0.8230	0.3580	0.1100	0.5 - 2.0, 0.1

Button Head Rivet



Generic part name: RII

Notes:

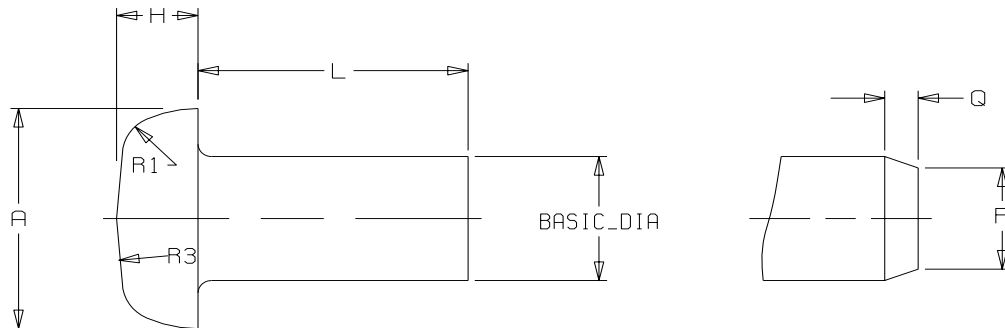
- Corresponds to standard ANSI B18.1.1-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA and POINTED values exactly as shown.

Button Head Rivet without Point				
BASIC_ DIA	POINTED	A Head Dia	H Head Height	L Lengths
.062	NO	0.1220	0.0520	0.125 - 0.25, 0.025 0.25 - 1.0, 0.05
.094	NO	0.1820	0.0770	0.125 - 0.25, 0.025 0.25 - 1.0, 0.05
.125	NO	0.2350	0.1000	0.15 - 1.0, 0.05
.156	NO	0.2900	0.1240	0.025 - 1.0, 0.05
.188	NO	0.3480	0.1470	0.25 - 1.25, 0.1
.219	NO	0.4050	0.1720	0.25 - 1.75, 0.1
.25	NO	0.4600	0.1960	0.25 - 1.75, 0.1
.281	NO	0.5180	0.2200	0.4 - 2.0, 0.1
.312	NO	0.5720	0.2430	0.4 - 2.0, 0.1
.344	NO	0.6300	0.2670	0.4 - 2.0, 0.1
.375	NO	0.6840	0.2910	0.5 - 2.0, 0.1
.406	NO	0.7430	0.3160	0.5 - 2.0, 0.1
.438	NO	0.7980	0.3390	0.5 - 2.0, 0.1

Button Head Rivet with Point						
BASIC DIA	POINTED	A Head Dia	H Head Height	P Point Dia	Q Point Length	L Lengths
.094	YES	0.1820	0.0770	0.0770	0.0230	0.125 - 0.25, 0.025; 0.25 - 1.0, 0.05
.125	YES	0.2350	0.1000	0.1020	0.0310	0.15 - 1.0, 0.05
.156	YES	0.2900	0.1240	0.1270	0.0390	0.25 - 2.0, 0.05
.188	YES	0.3480	0.1470	0.1540	0.0470	0.25 - 1.25, 0.1
.219	YES	0.4050	0.1720	0.1790	0.0550	0.25 - 1.75, 0.1
.25	YES	0.4600	0.1960	0.2040	0.0620	0.25 - 1.75, 0.1
.281	YES	0.5180	0.2200	0.2300	0.0700	0.4 - 2.0, 0.1
.312	YES	0.5720	0.2430	0.2550	0.0780	0.4 - 2.0, 0.1

Button Head Rivet with Point						
BASIC DIA	POINTED	A Head Dia	H Head Height	P Point Dia	Q Point Length	L Lengths
.344	YES	0.6300	0.2670	0.2810	0.0860	0.4 - 2.0, 0.1
.375	YES	0.6840	0.2910	0.3070	0.0940	0.5 - 2.0, 0.1
.438	YES	0.7980	0.3390	0.3580	0.1100	0.5 - 2.0, 0.1

Pan Head Rivet



Generic part name: RJJ

Notes:

- Corresponds to standard ANSI B18.1.1-1972.
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA and POINTED values exactly as shown.

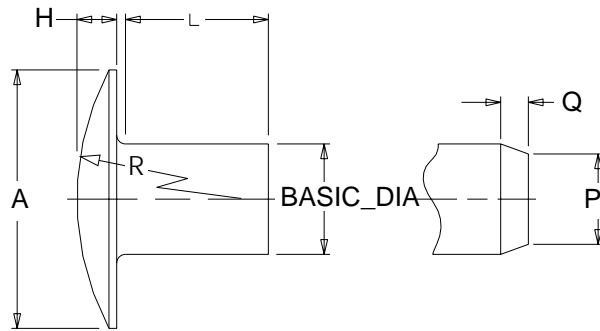
Pan Head Rivet without Point						
Basic Dia	Pointed	A Head Dia	H Head Height	R1 Head Corner Radius	R3 Head Crown Radius	L Lengths
.062	NO	0.1180	0.0400	0.0190	0.2170	0.125 - 0.25, 0.025; 0.25 - 1.0, 0.05

Pan Head Rivet without Point						
Basic_ Dia	Pointed	A Head Dia	H Head Height	R1 Head Corner Radius	R3 Head Crown Radius	L Lengths
.094	NO	0.1730	0.0600	0.0300	0.3260	0.125 - 0.25, 0.025; 0.25 - 1.0, 0.-5
.125	NO	0.2250	0.0780	0.0390	0.4290	0.15 - 1.0, 0.05
.156	NO	0.2790	0.0960	0.0490	0.5350	0.25 - 1.0, 0.05
.188	NO	0.3340	0.1140	0.0590	0.6410	0.25 - 1.25, 0.1
.219	NO	0.3910	0.1330	0.0690	0.7540	0.25 - 1.75, 0.1
.25	NO	0.4440	0.1510	0.0790	0.8580	0.25 - 1.75, 0.1
.281	NO	0.4990	0.1700	0.0880	0.9630	0.4 - 2.0, 0.1
.312	NO	0.5520	0.1870	0.0980	1.0700	0.4 - 2.0, 0.1
.344	NO	0.6080	0.2060	0.0180	1.1760	0.4 - 2.0, 0.1
.375	NO	0.6630	0.2250	0.1180	1.2860	0.5 - 2.0, 0.1
.406	NO	0.7190	0.2430	0.1270	1.3920	0.5 - 2.0, 0.1
.438	NO	0.7720	0.2610	0.1370	1.5000	0.5 - 2.0, 0.1

Pan Head Rivet with Point								
Basic Dia	Poin- Ted	A Head Dia	H Head Height	R1 Head Corner Radius	R3 Head Crown Radius	P Point Dia	Q Point Length	L Lengths
.094	YES	0.1730	0.0600	0.0300	0.3260	0.0770	0.0230	0.125 - 0.25, 0.025; 0.25 - 1.0, 0.05
.125	YES	0.2250	0.0780	0.0390	0.4290	0.1020	0.0310	0.15 - 1.0, 0.05
.156	YES	0.2790	0.0960	0.0490	0.5350	0.1270	0.0390	0.25 - 1.0, 0.05
.188	YES	0.3340	0.1140	0.0590	0.6410	0.1540	0.0470	0.25 - 1.25, 0.1
.219	YES	0.3910	0.1330	0.0690	0.7540	0.1790	0.0550	0.25 - 1.75, 0.1

Pan Head Rivet with Point								
Basic Dia	Poin-Ted	A Head Dia	H Head Height	R1 Head Corner Radius	R3 Head Crown Radius	P Point Dia	Q Point Length	L Lengths
.25	YES	0.4440	0.1510	0.0790	0.8580	0.2040	0.0620	0.25 - 1.75, 0.1
.281	YES	0.4990	0.1700	0.0880	0.9630	0.2300	0.0700	0.4 - 2.0, 0.1
.312	YES	0.5520	0.1870	0.0980	1.0700	0.2550	0.0780	0.4 - 2.0, 0.1
.344	YES	0.6080	0.2060	0.1080	1.1760	0.2810	0.0860	0.4 - 2.0, 0.1
.375	YES	0.6630	0.2250	0.1180	1.2860	0.3070	0.0940	0.5 - 2.0, 0.1
.438	YES	0.7720	0.2610	0.1370	1.5000	0.3580	0.1100	0.5 - 2.0, 0.1

Truss Head Rivet



Generic part name: RKK

Notes:

- Corresponds to standard ANSI B18.1.1-1972.
- Lengths given as: from - to, incremented by.

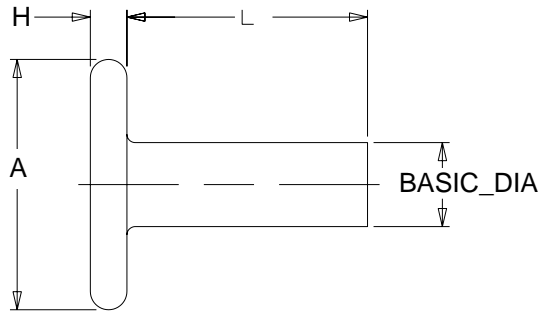
- Enter the BASIC_DIA and POINTED values exactly as shown.

Truss Head Rivet without Point					
BASIC_DIA	POINTED	A Head Dia	H Head Height	R Head Radius	L Lengths
.094	NO	0.2260	0.0380	0.2390	0.125 - 0.25, 0.025; 0.25 - 1.0, 0.05
.125	NO	0.2970	0.0480	0.3140	0.15 - 1.0, 0.05
.156	NO	0.3680	0.0590	0.3920	0.25 - 1.0, 0.05
.188	NO	0.4420	0.0690	0.4700	0.25 - 1.25, 0.1
.219	NO	0.5150	0.0800	0.5550	0.25 - 1.75, 0.1
.25	NO	0.5900	0.0910	0.6280	0.25 - 1.75, 0.1
.281	NO	0.6610	0.1030	0.7060	0.4 - 2.0, 0.1
.312	NO	0.7320	0.1130	0.7840	0.4 - 2.0, 0.1
.344	NO	0.8060	0.1240	0.8620	0.4 - 2.0, 0.1
.375	NO	0.8780	0.1350	0.9420	0.5 - 2.0, 0.1
.406	NO	0.9490	0.1450	1.0280	0.5 - 2.0, 0.1
.438	NO	1.0200	0.1570	1.0980	0.5 - 2.0, 0.1

Truss Head Rivet with Point							
Basic Dia	Poin-Ted	A Head Dia	H Head Height	R Head Radius	P Point Dia	Q Point Length	L Lengths
.094	YES	0.2260	0.0380	0.2390	0.0770	0.0230	0.125 - 2.5, 0.025 0.25 - 1.0, 0.05
.125	YES	0.2970	0.0480	0.3140	0.1020	0.0310	0.15 - 1.0, 0.05
.156	YES	0.3680	0.0590	0.3920	0.1270	0.0390	0.25 - 1.0, 0.05
.188	YES	0.4420	0.0690	0.4700	0.1540	0.0470	0.25 - 1.25, 0.1
.219	YES	0.5150	0.0800	0.5550	0.1790	0.0550	0.25 - 1.75, 0.1
.25	YES	0.5900	0.0910	0.6280	0.2040	0.0620	0.25 - 1.75, 0.1
.281	YES	0.6610	0.1030	0.7060	0.2300	0.0700	0.4 - 2.0, 0.1
.312	YES	0.7320	0.1130	0.7840	0.2550	0.0780	0.4 - 2.0, 0.1

Truss Head Rivet with Point							
.344	YES	0.8060	0.1240	0.8620	0.2810	0.0860	0.4 - 2.0, 0.1
.375	YES	0.8780	0.1350	0.9420	0.3070	0.0940	0.5 - 2.0, 0.1
.438	YES	1.0200	0.1570	1.0980	0.3580	0.1100	0.5 - 2.0, 0.1

Tinners Rivet



Generic part name: RLL

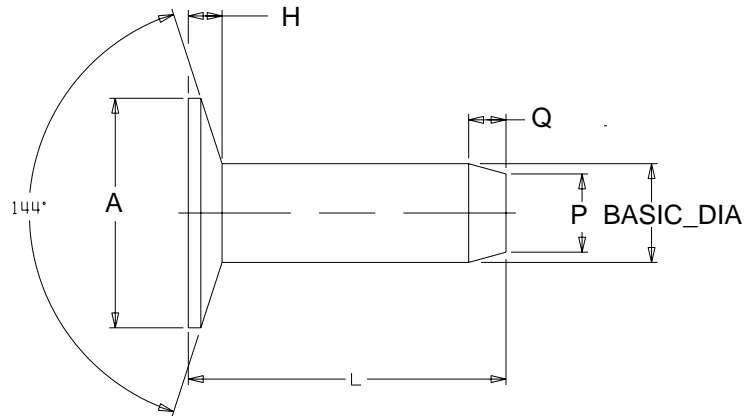
Notes:

- Corresponds to standard ANSI B18.1.1-1972.
- Lengths given as: from - to, incremented by.
- Enter the RIVET_SIZE value exactly as shown.

RIVET_SIZE	BASIC DIA	A Head Dia	H Head Height	L Lengths
6OZ	0.0780	0.2130	0.0280	0.1350
8OZ	0.0880	0.2250	0.0360	0.1660
10OZ	0.0940	0.2500	0.0370	0.1820
12OZ	0.1040	0.2650	0.0370	0.1980
14OZ	0.1080	0.2750	0.0380	0.1980
1LB	0.1100	0.2850	0.0400	0.2130

RIVET_SIZE	BASIC DIA	A Head Dia	H Head Height	L Lengths
1.25LB	0.1190	0.2950	0.0450	0.2290
1.5LB	0.1290	0.3160	0.0460	0.2440
1.75LB	0.1330	0.3310	0.0490	0.2600
2LB	0.1430	0.3410	0.0500	0.2760
2.5LB	0.1470	0.3110	0.0690	0.2910
3LB	0.1585	0.3290	0.0730	0.3230
3.5LB	0.1635	0.3480	0.0740	0.3380
4LB	0.1745	0.3680	0.0760	0.3540
5LB	0.1855	0.3880	0.0840	0.3850
6LB	0.2015	0.4190	0.0900	0.4010
7LB	0.2185	0.4310	0.0940	0.4160
8LB	0.2225	0.4750	0.1010	0.4480
9LB	0.2365	0.4900	0.1030	0.4630
10LB	0.2365	0.5050	0.1040	0.4790
12LB	0.2570	0.5320	0.1080	0.5100
14LB	0.2820	0.5770	0.1130	0.5250
16LB	0.2980	0.5970	0.1280	0.5410
18LB	0.3410	0.7060	0.1560	0.6030

Coopers Rivet



Generic part name: RMM

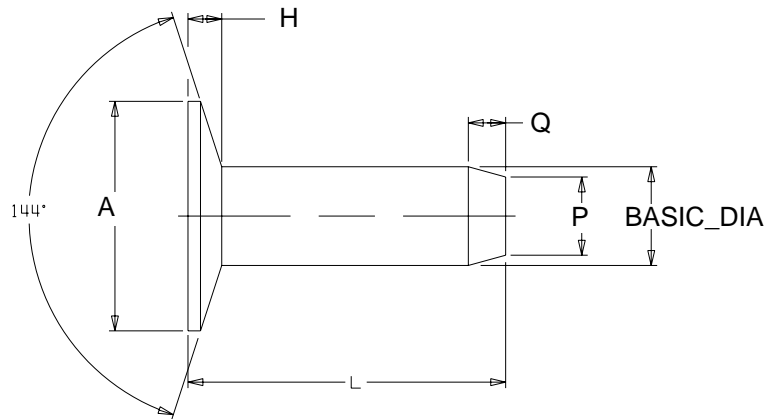
Notes:

- Corresponds to standard ANSI B18.1.1-1972.
- Lengths given as: from - to, incremented by.
- Enter the RIVET_SIZE value exactly as shown.

RIVET_SIZE	BASIC_DIA	A Head Dia	H Head Height	P Point Dia	Q Point Height	L Lengths
1LB	0.1080	0.2910	0.0450			0.2490
1.25LB	0.1190	0.3240	0.0500			0.2850
1.5LB	0.1290	0.3240	0.0500			0.2850
1.75LB	0.1330	0.3240	0.0520			0.3180
2LB	0.1390	0.3550	0.0560			0.3220
3LB	0.1550	0.3860	0.0580	0.1230	0.0620	0.3870
4LB	0.1635	0.3880	0.0580	0.1300	0.0620	0.4180
5LB	0.1785	0.4190	0.0630	0.1440	0.0620	0.4540
6LB	0.2015	0.4820	0.0730	0.1600	0.0940	0.4980
7LB	0.2185	0.5130	0.0760	0.1750	0.0940	0.5610

RIVET_ SIZE	BASIC_ DIA	A Head Dia	H Head Height	P Point Dia	Q Point Height	L Lengths
8LB	0.2365	0.5460	0.0810	0.1820	0.0940	0.5970
9LB	0.2435	0.5780	0.0850	0.1970	0.0940	0.6010
10LB	0.2485	0.5780	0.0850	0.1970	0.0940	0.6320
12LB	0.2570	0.5800	0.0860	0.2140	0.0940	0.6330
14LB	0.2690	0.6110	0.0910	0.2230	0.0940	0.6700
16LB	0.2790	0.6110	0.0890	0.2230	0.0940	0.6990
18LB	0.2790	0.6420	0.1080	0.2300	0.1250	0.7490
20LB	0.3100	0.7050	0.1280	0.2500	0.1250	0.7690
.375IN	0.3725	0.8000	0.1360	0.3120	0.1250	0.8400

Belt Rivet



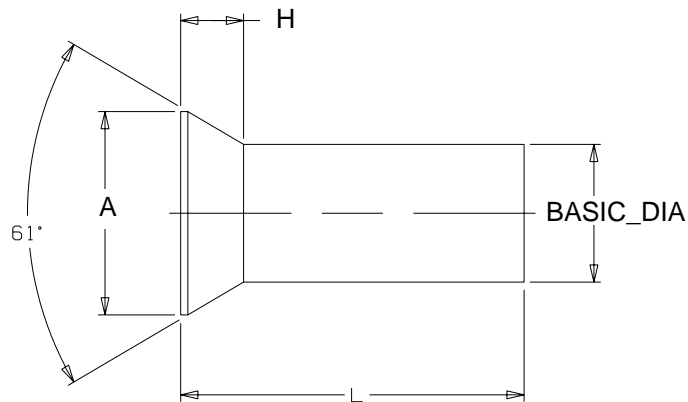
Generic part name: RNN

Notes:

- Corresponds to standard ANSI B18.1.1-1972.
- Lengths given as: from - to, incremented by.
- Enter the RIVET_SIZE value exactly as shown.

Rivet Size	Basic Dia	A Head Dia	H Head Height	P Point Dia	Q Point Height	L Lengths
14	0.0820	0.2600	0.0420	0.0650	0.0780	0.1875 - 0.25, 0.03125; 0.25 - 1.0, 0.0625
13	0.0940	0.3220	0.0510	0.0730	0.0780	0.1875 - 0.25, 0.03125; 0.25 - 1.0, 0.0625
12	0.1080	0.3530	0.0540	0.0830	0.0780	0.25 - 1.0, 0.0625
11	0.1190	0.3830	0.0590	0.0970	0.0780	0.25 - 1.0, 0.0625
10	0.1330	0.4170	0.0650	0.1090	0.0940	0.25 - 1.0, 0.0625
9	0.1470	0.4480	0.0690	0.1220	0.0940	0.3125 - 1.0, 0.0625
8	0.1640	0.4810	0.0720	0.1350	0.0940	0.3125 - 1.0, 0.0625
7	0.1785	0.5130	0.0750	0.1510	0.1250	0.3125 - 0.75, 0.0625; 0.75 - 1.5, 0.125
6	0.2015	0.6060	0.0900	0.1650	0.1250	0.375 - 0.75, 0.0625; 0.75 - 1.5, 0.125
5	0.2185	0.7000	0.1050	0.1850	0.1250	0.5 - 0.75, 0.0625; 0.75 - 1.5, 0.125
4	0.2365	0.9210	0.1380	0.2040	0.1410	0.5 - 0.75, 0.0625; 0.75 - 1.5, 0.125

60° Flat Countersunk Head Rivet



Generic part name: ROO

Notes:

- Corresponds to standard ANSI B18.1.1-1972.
- Lengths given as: from - to, incremented by.
- Enter the RIVET_SIZE value exactly as shown.

RIVET_SIZE	BASIC_DIA	A Head Dia	H Head Height	L Lengths
6	0.2005	0.2960	0.0915	0.1875 - 0.75, 0.0625; 0.75 - 1.5, 0.25
5.5	0.2085	0.2960	0.0835	0.1875 - 0.75, 0.0625; 0.75 - 1.75, 0.25

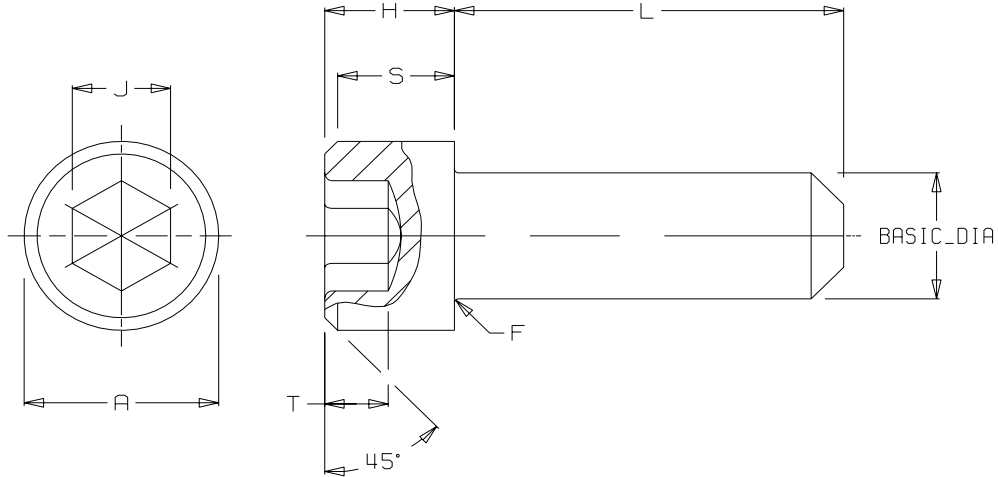
15

ANSI Inch Socket Cap, Shoulder and Set Screws

The BASIC_DIA values used in callouts usually correspond to the decimal value of the nominal diameter of the part. In some cases, however, the callouts are numbers. Those numbers correspond to the following values of the nominal diameter:

BASIC_DIA	Nominal Diameter
NO.0000	0.0210
NO.000	0.0340
NO.00	0.0470
NO.0	0.0600
NO.1	0.0730
NO.2	0.0860
NO.3	0.0990
NO.4	0.1120
NO.5	0.1250
NO.6	0.1380
NO.8	0.1640
NO.10	0.1900
NO.12	0.2160

Hex Socket Head Cap Screw



Generic part name: CSDD

Notes:

- Corresponds to standard ANSI B18.3-1976
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

Basic Dia	A Head Dia-meter	H Head Height	S Side Height	J Hex Size	T Key Engag-ment	F Fillet Rad	L Length
NO.0	0.0960	0.0600	0.0540	0.0510	0.0250	0.0020	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0

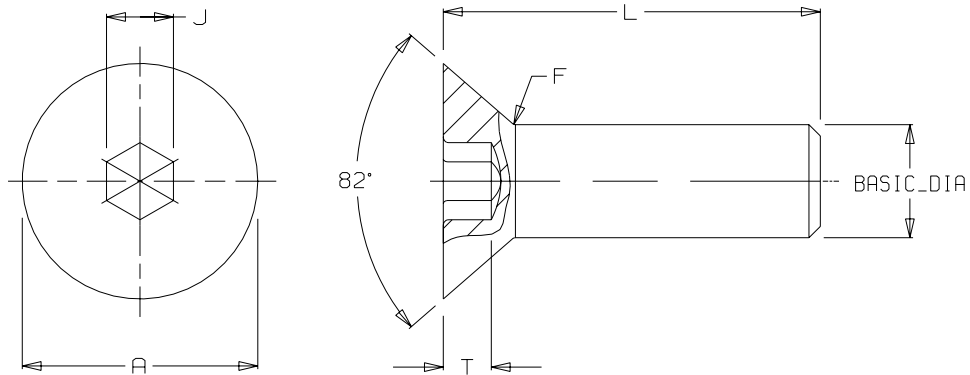
Basic Dia	A Head Dia-meter	H Head Height	S Side Height	J Hex Size	T Key Engag- mnt	F Fillet Rad	L Length
NO.1	0.1180	0.0730	0.0660	0.0635	0.0310	0.0030	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.2	0.1400	0.0860	0.0770	0.0791	0.0380	0.0030	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.3	0.1610	0.0990	0.0890	0.0791	0.0440	0.0040	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.4	0.1830	0.1120	0.1010	0.0952	0.0510	0.0040	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.5	0.2050	0.1250	0.1120	0.0952	0.0570	0.0050	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.6	0.2260	0.1380	0.1240	0.1111	0.0640	0.0050	0.1875-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0

Basic Dia	A Head Diameter	H Head Height	S Side Height	J Hex Size	T Key Engag- mnt	F Fillet Rad	L Length
NO.8	0.2700	0.1640	0.1480	0.1426	0.0770	0.0060	0.1875-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.10	0.3120	0.1900	0.1710	0.1587	0.0900	0.0060	0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.25	0.3750	0.2500	0.2250	0.1900	0.1200	0.0070	0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.3125	0.4690	0.3125	0.2810	0.2530	0.1510	0.0090	0.375-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.375	0.5620	0.3750	0.3370	0.3160	0.1820	0.0120	0.375-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.4375	0.6560	0.4375	0.3940	0.3790	0.2130	0.0140	0.5-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.5	0.7500	0.5000	0.4500	0.3790	0.2450	0.0160	0.5-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0

Basic Dia	A Head Dia-meter	H Head Height	S Side Height	J Hex Size	T Key Engag-ment	F Fillet Rad	L Length
.625	0.9380	0.6250	0.5620	0.5050	0.3070	0.0210	0.625-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.75	1.1250	0.7500	0.6750	0.6310	0.3700	0.0250	0.75-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.875	1.3120	0.8750	0.7870	0.7570	0.4320	0.0310	0.875-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
1	1.5000	1.0000	0.9000	0.7570	0.4950	0.0340	1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
1.125	1.6880	1.1250	1.0120	0.8850	0.5570	0.0390	1.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
1.25	1.8750	1.2500	1.1250	0.8850	0.6200	0.0440	1.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
1.375	2.0620	1.3750	1.2370	1.0100	0.6820	0.0480	1.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
1.5	2.2500	1.5000	1.3500	1.0100	0.7450	0.0520	1.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
1.75	2.6250	1.7500	1.5750	1.2650	0.8700	0.0620	2.0-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0

Basic Dia	A Head Diameter	H Head Height	S Side Height	J Hex Size	T Key Engag- mnt	F Fillet Rad	L Length
2	3.0000	2.0000	1.8000	1.5150	0.9950	0.0710	2.0-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
2.25	3.3750	2.2500	2.0250	1.7650	1.1200	0.0800	2.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
2.5	3.7500	2.5000	2.2500	1.7650	1.2450	0.0880	2.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
2.75	4.1250	2.7500	2.4750	2.0150	1.3700	0.0970	3.0-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
3	4.5000	3.0000	2.7000	2.2650	1.4950	0.1060	3.0-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
3.25	4.8750	3.2500	2.9250	2.2650	1.6200	0.1140	3.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
3.5	5.2500	3.5000	3.1500	2.7650	1.7450	0.1240	3.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
3.75	5.6250	3.7500	3.3750	2.7650	1.8700	0.1340	4.0-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0
4	6.0000	4.0000	3.6000	3.0150	1.9950	0.1430	4.0-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2.0

Hex Socket Flat Countersunk Head Cap Screw



ANSI Inch Socket
Cap, Shoulder and

Generic part name: CSEE

Notes:

- Corresponds to standard ANSI B18.3-1976
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

Basic Dia	A Head Diameter	T Key Engagmnt	F Fillet Rad	J Hex Size	L Length
NO.0	0.1380	0.0250	0.0060	0.0355	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.1	0.1680	0.0310	0.0080	0.0510	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0

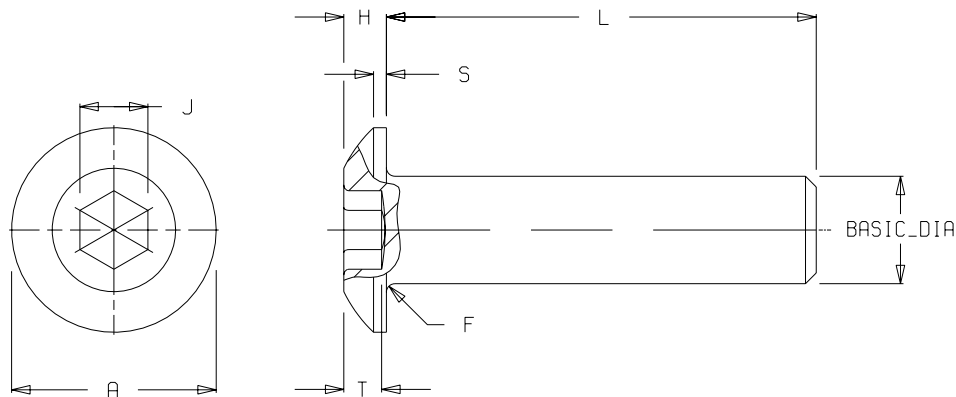
Basic Dia	A Head Diameter	T Key Engagmnt	F Fillet Rad	J Hex Size	L Length
NO.2	0.1970	0.0380	0.0100	0.0510	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.3	0.2260	0.0440	0.0100	0.0635	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.4	0.2550	0.0550	0.0120	0.0635	0.125-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.5	0.2810	0.0610	0.0140	0.0791	0.1875-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.6	0.3070	0.0660	0.0150	0.0791	0.1875-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.8	0.3590	0.0760	0.0150	0.0952	0.1875-0.25, .0625; 0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
NO.10	0.4110	0.0870	0.0150	0.1270	0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0

ANSI Inch Socket
Cap, Shoulder and

Basic Dia	A Head Diameter	T Key Engagmnt	F Fillet Rad	J Hex Size	L Length
.25	0.5310	0.1110	0.0150	0.1587	0.25-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.3125	0.6560	0.1350	0.0150	0.1900	0.375-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.375	0.7810	0.1590	0.0150	0.2217	0.375-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.4375	0.8440	0.1590	0.0150	0.2530	0.5-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.5	0.9380	0.1720	0.0150	0.3160	0.5-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.625	1.1880	0.2200	0.0150	0.3790	0.625-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.75	1.4380	0.2200	0.0150	0.5050	0.75-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
.875	1.6880	0.2480	0.0150	0.5680	0.875-1.0, .125; 1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0
1	1.9380	0.2970	0.0150	0.6310	1.0-3.5, .25; 3.5-7.0, .5; 7.0-10.0, 1.0

Basic Dia	A Head Diameter	T Key Engagmnt	F Fillet Rad	J Hex Size	L Length
1.125	2.1880	0.3250	0.0310	0.7570	1.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2
1.25	2.4380	0.3580	0.0310	0.8850	1.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2
1.375	2.6880	0.4020	0.0310	0.8850	1.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2
1.5	2.9380	0.4350	0.0310	1.0200	1.5-7.0, .5; 7.0-10.0, 1.0; 10.0-14.0, 2

Hex Socket Button Head Cap Screw



Generic part name: CSFF

Notes:

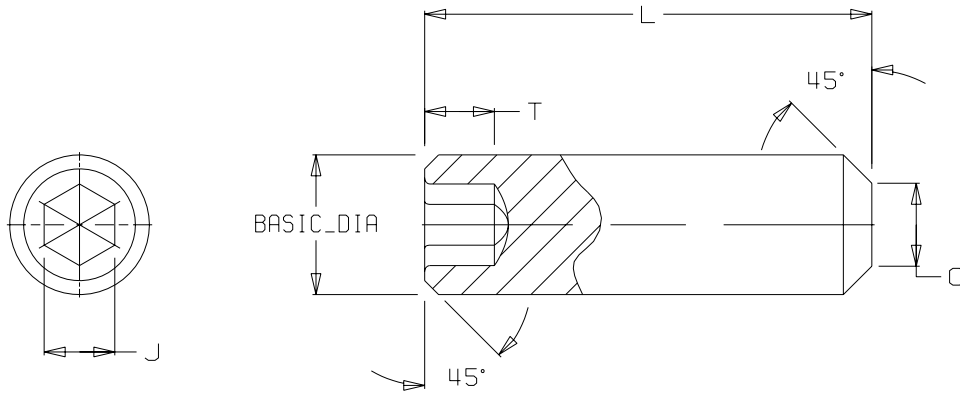
- Corresponds to standard ANSI B18.3-1976
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

**ANSI Inch Socket
Cap, Shoulder and**

Basic_ Dia	A Head Dia- meter	H Head Height	S Side Height	F Fillet Rad	T Key Engag- mnt	J Hex Size	L Length
NO.0	0.1140	0.0320	0.0100	0.0100	0.0200	0.0355	0.125-0.25, .0625; 0.25-0.5, .125
NO.1	0.1390	0.0390	0.0100	0.0100	0.0280	0.0510	0.125-0.25, .0625; 0.25-0.5, .125
NO.2	0.1640	0.0460	0.0100	0.0100	0.0280	0.0510	0.125-0.25, .0625; 0.25-0.5, .125
NO.3	0.1880	0.0520	0.0100	0.0100	0.0350	0.0635	0.125-0.25, .0625; 0.25-0.5, .125
NO.4	0.2130	0.0590	0.0150	0.0100	0.0350	0.0635	0.125-0.25, .0625; 0.25-0.5, .125
NO.5	0.2380	0.0660	0.0150	0.0100	0.0440	0.0791	0.125-0.25, .0625; 0.25-0.5, .125
NO.6	0.2620	0.0730	0.0150	0.0100	0.0440	0.0791	0.1875-0.25, .0625; 0.25-0.625, .125
NO.8	0.3120	0.0870	0.0150	0.0150	0.0520	0.0952	0.1875-0.25, .0625; 0.25-0.75, .125
NO.10	0.3610	0.1010	0.0200	0.0150	0.0700	0.1270	0.25-1.0, .125
.25	0.4370	0.1320	0.0310	0.0200	0.0870	0.1587	0.25-1.0, .125
.3125	0.5470	0.1660	0.0310	0.0200	0.1050	0.1900	0.375-1.0, .125
.375	0.6560	0.1990	0.0310	0.0200	0.1220	0.2217	0.375-1.0, .125; 1.0-1.24, .25

Basic_Dia	A Head Diameter	H Head Height	S Side Height	F Fillet Rad	T Key Engagmnt	J Hex Size	L Length
.5	0.8750	0.2650	0.0460	0.0300	0.1750	0.3160	0.5-1.0, .125; 1.0-2.0, .25
.625	1.0000	0.3310	0.0620	0.0300	0.2100	0.3790	0.625-1.0, .125; 1.0-2.0, .25

Hex Socket Set Screw, Flat Point



Generic part name: **SSYA**

Notes:

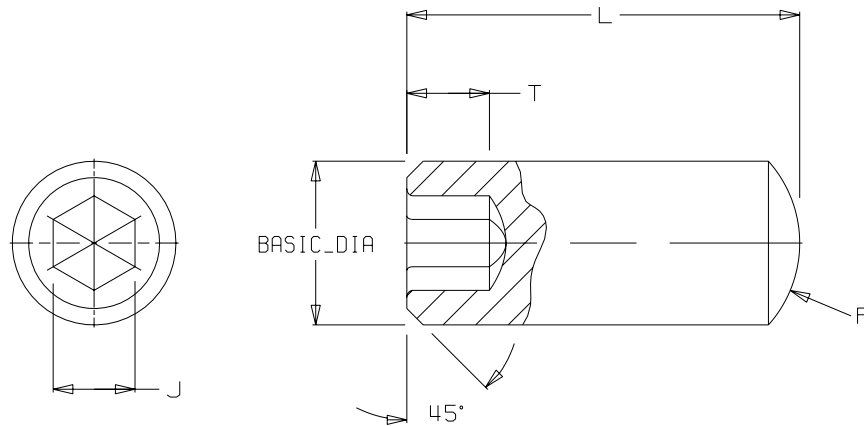
- Corresponds to standard ANSI B18.3-1976
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	J Hex Size	C Point Diameter	T Key Engagmnt	L Length
NO.0	0.0285	0.0330	0.0500	0.125-0.25, .06Z25; 0.25-0.625, .125

BASIC_ DIA	J Hex Size	C Point Diameter	T Key Engagmnt	L Length
NO.1	0.0355	0.0400	0.0600	0.125-0.25, .0625; 0.25-0.75, .125
NO.2	0.0355	0.0470	0.0600	0.125-0.25, .0625; 0.25-0.75, .125
NO.3	0.0510	0.0540	0.0700	0.125-0.25, .0625; 0.25-0.75, .125
NO.4	0.0510	0.0610	0.0700	0.125-1.25, .125
NO.5	0.0635	0.0670	0.0800	0.125-1.25, .125
NO.6	0.0635	0.0740	0.0800	0.125-1.50, .125
NO.8	0.0780	0.0870	0.0900	0.25-1.0, .125; 1.0-1.75, .25
NO.10	0.0952	0.1020	0.1000	0.25-1.0, .125; 1.0-2.0, .25
.25	0.1270	0.1320	0.1250	0.25-1.0, .125; 1.0-2.5, .25
.3125	0.1587	0.1720	0.1560	0.375-1.0, .125; 1.0-3.0, .25
.375	0.1900	0.2120	0.1880	0.375-1.0, .125; 1.0-3.0, .25
.4375	0.2217	0.2520	0.2190	0.5-1.0, .125; 1.0-3.5, .25
.5	0.2530	0.2910	0.2500	0.5-1.0, .125; 1.0-4.0, .25
.625	0.3160	0.3710	0.3120	0.75-2.0, .25; 2.0-6.0, .5
.75	0.3790	0.4500	0.3750	0.75-2.0, .25; 2.0-7.0, .5
.875	0.5050	0.5300	0.5000	1.0-2.0, .25; 2.0-3.0, .5
1	0.5680	0.6090	0.5620	1.25-2.0, .25; 2.0-8.0, .5
1.125	0.5680	0.6890	0.5620	1.5-10.0, .5
1.25	0.6310	0.7670	0.6250	1.5-10.0, .5

BASIC_DIA	J Hex Size	C Point Diameter	T Key Engagmnt	L Length
1.375	0.6310	0.8480	0.6250	2.0-10.0, .5
1.5	0.7570	0.9260	0.7500	2.0-6.0, .5; 6.0-12.0, 1.0
1.74	1.0100	1.0680	1.0000	2.0-6.0, .5; 6.0-12.0, 1.0
2	1.0100	1.2440	1.0000	2.0-6.0, .5; 6.0-12.0, 1.0

Hex Socket Set Screw, Oval Point



Generic part name: SSYB

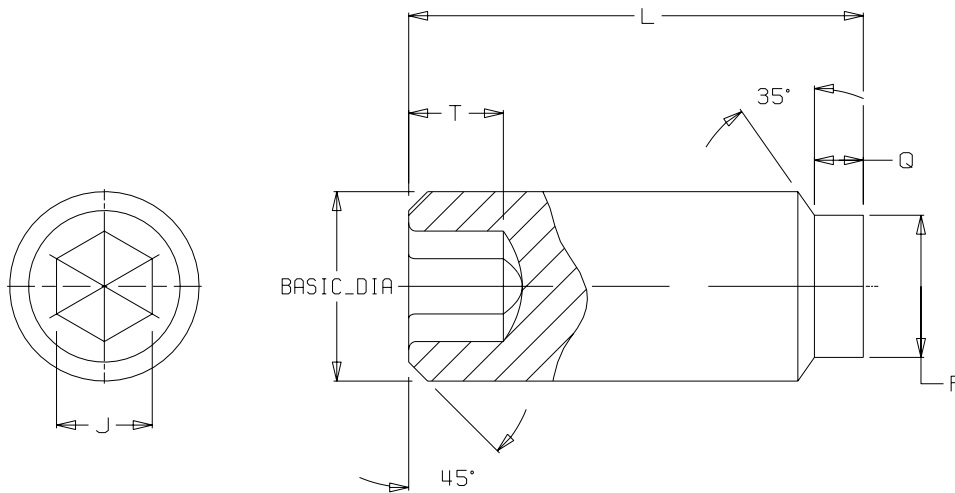
Notes:

- Corresponds to standard ANSI B18.3-1976
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_ DIA	T Key Engagmnt	J Hex Size	R Point Radius	L Length
NO.0	0.0500	0.0285	0.0450	0.125-0.25, .0625; 0.25-0.625, .125
NO.1	0.0355	0.0600	0.0550	0.125-0.25, .0625; 0.25-0.75, .125
NO.2	0.0355	0.0600	0.0640	0.125-0.25, .0625; 0.25-1.0, .125
NO.3	0.0510	0.0700	0.0740	0.125-0.25, .0625; 0.25-1.25, .125
NO.4	0.0510	0.0700	0.0840	0.125-1.25, .125
NO.5	0.0635	0.0800	0.0940	0.125-1.25, .125
NO.6	0.0635	0.0800	0.1040	0.125-1.50, .125
NO.8	0.0780	0.0900	0.1230	0.25-1.0, .125; 1.0-1.75, .25
NO.10	0.0952	0.1000	0.1420	0.25-1.0, .125; 1.0-2.0, .25
.25	0.1270	0.1250	0.1880	0.25-1.0, .125; 1.0-2.5, .25
.3125	0.1587	0.1560	0.2340	0.375-1.0, .125; 1.0-3.0, .25
.375	0.1900	0.1880	0.2810	0.375-1.0, .125; 1.0-3.0, .25
.4375	0.2217	0.2190	0.3280	0.375-1.0, .125; 1.0-3.5, .25
.5	0.2530	0.2500	0.3750	0.5-1.0, .125; 1.0-4.0, .25
.625	0.3160	0.3120	0.4690	0.75-2.0, .25; 2.0-6.0, .5
.75	0.3790	0.3750	0.5620	0.75-2.0, .25; 2.0-7.0, .5
.875	0.5050	0.5000	0.6560	1.0-2.0, .25; 2.0-3.0, .5

BASIC_DIA	T Key Engagmnt	J Hex Size	R Point Radius	L Length
1	0.5680	0.5620	0.7500	1.25-2.0, .25; 2.0-8.0, .5
1.125	0.5680	0.5620	0.8440	1.5-10.0, .5
1.25	0.6310	0.6250	0.9380	1.5-10.0, .5
1.375	0.6310	0.6250	1.0310	2.0-10.0, .5
1.5	0.7570	0.7500	1.1250	2.0-6.0, .5; 6.0-12.0, 1.0
1.75	1.0100	1.0000	1.3120	2.0-6.0, .5; 6.0-12.0, 1.0
2	1.0100	1.0000	1.5000	2.0-6.0, .5; 6.0-12.0, 1.0

Hex Socket Set Screw, Half Dog Point



Generic part name: SSYC

Notes:

- Corresponds to standard ANSI B18.3-1976
- Lengths given as: from - to, incremented by.

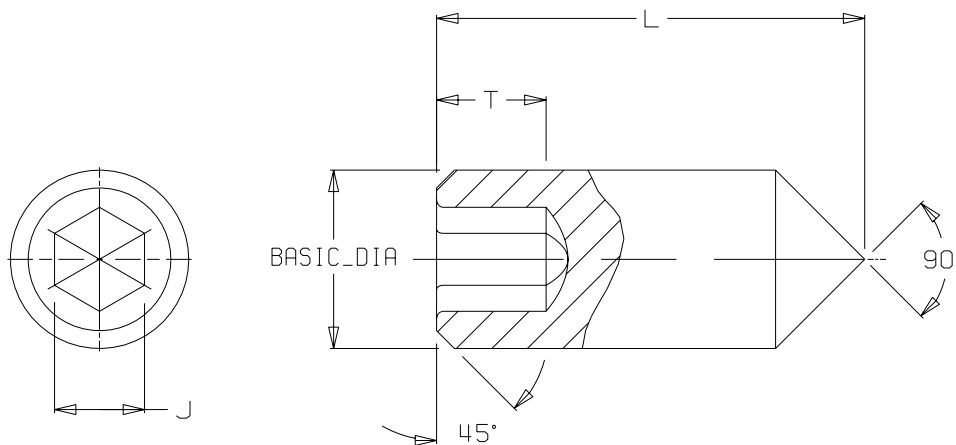
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	J Hex Size	T Key Engagmnt	P Point Diameter	Q Point Length	L Length
NO.0	0.0285	0.0500	0.0400	0.0170	0.125-0.25, .0625; 0.25-0.625, .125
NO.1	0.0355	0.0600	0.0490	0.0210	0.125-0.25, .0625; 0.25-0.75, .125
NO.2	0.0355	0.0600	0.0570	0.0240	0.125-0.25, .0625; 0.25-1.0, .125
NO.3	0.0510	0.0700	0.0660	0.0270	0.125-0.25, .0625; 0.25-1.25, .125
NO.4	0.0510	0.0700	0.0750	0.0300	0.125-1.25, .125
NO.5	0.0635	0.0800	0.0830	0.0330	0.125-1.25, .125
NO.6	0.0635	0.0800	0.0920	0.0380	0.125-1.50, .125
NO.8	0.0780	0.0900	0.1090	0.0430	0.25-1.0, .125; 1.0-1.75, .25
NO.10	0.0952	0.1000	0.1270	0.0490	0.25-1.0, .125; 1.0-2.0, .25
.25	0.1270	0.1250	0.1560	0.0670	0.25-1.0, .125; 1.0-2.5, .25
.3125	0.1587	0.1560	0.2030	0.0820	0.375-1.0, .125; 1.0-3.0, .25
.375	0.1900	0.1880	0.2500	0.0990	0.375-1.0, .125; 1.0-3.0, .25
.4375	0.2217	0.2190	0.2970	0.1140	0.5-1.0, .125; 1.0-3.5, .25
.5	0.2530	0.2500	0.3440	0.1300	0.5-1.0, .125; 1.0-4.0, .25
.625	0.3160	0.3120	0.4690	0.1640	0.75-2.0, .25; 2.0-6.0, .5
.75	0.3790	0.3750	0.5620	0.1960	0.75-2.0, .25; 2.0-7.0, .5
.875	0.5050	0.5000	0.6560	0.2270	1.0-2.0, .25; 2.0-8.0, .5

ANSI Inch Socket
Cap, Shoulder and

BASIC_DIA	J Hex Size	T Key Engagmnt	P Point Diameter	Q Point Length	L Length
1	0.5680	0.5620	0.7500	0.2600	1.25-2.0, .25; 2.0-8.0, .5
1.125	0.5680	0.5620	0.8440	0.2910	1.5-10.0, .5
1.25	0.6310	0.6250	0.9380	0.3230	1.5-10.0, .5
1.375	0.6310	0.6250	1.0310	0.3540	2.0-10.0, .5
1.5	0.7570	0.7500	1.1250	0.3850	2.0-6.0, .5; 6.0-12.0, 1.0
1.75	1.0100	1.0000	1.3120	0.4480	2.0-6.0, .5; 6.0-12.0, 1.0
2	1.0100	1.0000	1.5000	0.5100	2.0-6.0, .5; 6.0-12.0, 1.0

Hex Socket Set Screw, Conic Point



Generic part name: SSYD

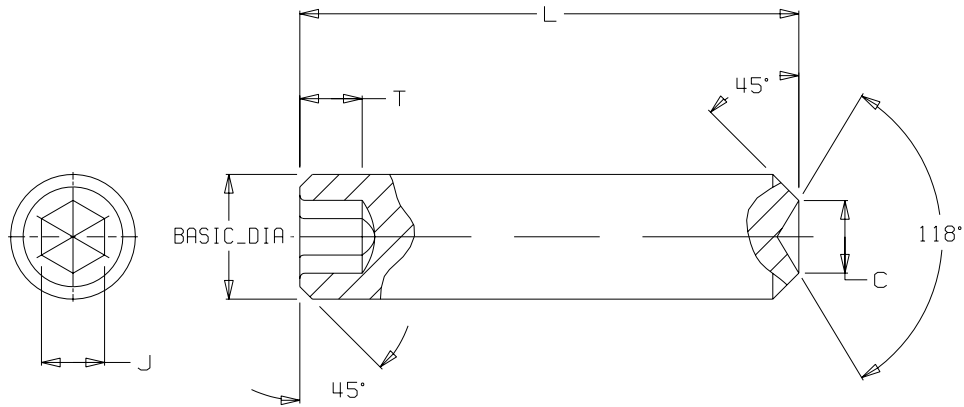
Notes:

- Corresponds to standard ANSI B18.3-1976
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	J Hex Size	T Key Engagement	L Length
NO.0	0.0285	0.0500	0.125-0.25, .0625; 0.25-0.625, .125
NO.1	0.0355	0.0400	0.125-0.25, .0625; 0.25-0.75, .125
NO.2	0.0355	0.0470	0.125-0.25, .0625; 0.25-1.0, .125
NO.3	0.0510	0.0540	0.125-0.25, .0625; 0.25-1.25, .125
NO.4	0.0510	0.0610	0.125-1.25, .125
NO.5	0.0635	0.0670	0.125-1.25, .125
NO.6	0.0635	0.0740	0.125-1.50, .125
NO.8	0.0780	0.0870	0.25-1.0, .125; 1.0-1.75, .25
NO.10	0.0952	0.1020	0.25-1.0, .125; 1.0-2.0, .25
.25	0.1270	0.1320	0.25-1.0, .125; 1.0-2.5, .25
.3125	0.1587	0.1720	0.375-1.0, .125; 1.0-3.0, .25
.375	0.1900	0.2120	0.375-1.0, .125; 1.0-3.0, .25
.4375	0.2217	0.2520	0.5-1.0, .125; 1.0-3.5, .25
.5	0.2530	0.2910	0.5-1.0, .125; 1.0-4.0, .25
.625	0.3160	0.3710	0.75-2.0, .25; 2.0-6.0, .5
.75	0.3790	0.4500	0.75-2.0, .25; 2.0-7.0, .5
.875	0.5050	0.5300	1.0-2.0, .25; 2.0-8.0, .5

BASIC_DIA	J Hex Size	T Key Engagement	L Length
1	0.5680	0.6090	1.25-2.0, .25; 2.0-8.0, .5
1.125	0.5680	0.6890	1.5-10.0, .5
1.25	0.6310	0.7670	1.5-10.0, .5
1.375	0.6310	0.8480	2.0-10.0, .5
1.5	0.7570	0.9260	2.0-6.0, .5; 6.0-12.0, 1.0
1.75	1.0100	1.0680	2.0-6.0, .5; 6.0-12.0, 1.0
2	1.0100	1.2440	2.0-6.0, .5; 6.0-12.0, 1.0

Hex Socket Set Screw, Cup Point



Generic part name: SSYE

Notes:

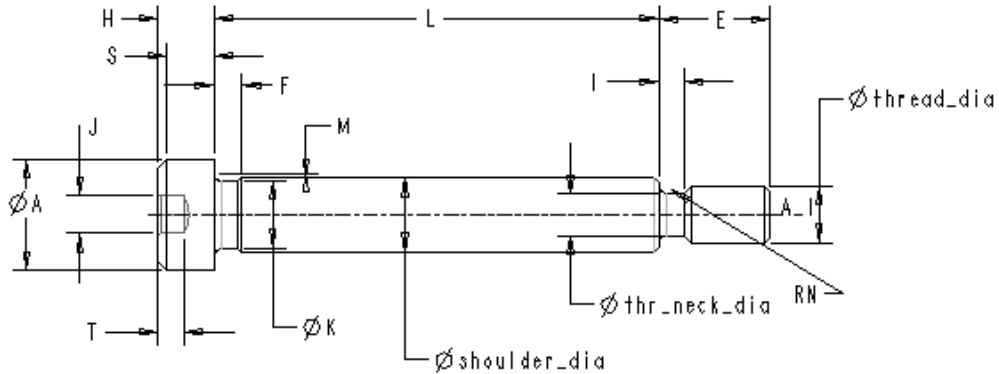
- Corresponds to standard ANSI B18.3-1976
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

ANSI Inch Socket
Cap, Shoulder and

BASIC_ DIA	J Hex Size	C Point Diameter	T Key Engagmnt	L Length
NO.0	0.0285	0.0330	0.0500	0.125-0.25, .0625; 0.25-0.625, .125
NO.1	0.0355	0.0400	0.0600	0.125-0.25, .0625; 0.25-0.75, .125
NO.2	0.0355	0.0470	0.0600	0.125-0.25, .0625; 0.25-1.0, .125
NO.3	0.0510	0.0540	0.0700	0.125-0.25, .0625; 0.25-1.25, .125
NO.4	0.0510	0.0610	0.0700	0.125-1.25, .125
NO.5	0.0635	0.0670	0.0800	0.125-1.25, .125
NO.6	0.0635	0.0740	0.0800	0.125-1.50, .125
NO.8	0.0780	0.0870	0.0900	0.25-1.0, .125; 1.0-1.75, .25
NO.10	0.0952	0.1020	0.1000	0.25-1.0, .125; 1.0-2.0, .25
.25	0.1270	0.1320	0.1250	0.25-1.0, .125; 1.0-2.5, .25
.3125	0.1587	0.1720	0.1560	0.375-1.0, .125; 1.0-3.0, .25
.375	0.1900	0.2120	0.1880	0.375-1.0, .125; 1.0-3.0, .25
.4375	0.2217	0.2520	0.2190	0.5-1.0, .125; 1.0-3.5, .25
.5	0.2530	0.2910	0.2500	0.5-1.0, .125; 1.0-4.0, .25
.625	0.3160	0.3710	0.3120	0.75-2.0, .25; 2.0-6.0, .5
.75	0.3790	0.4500	0.3750	0.75-2.0, .25; 2.0-7.0, .5
.875	0.5050	0.5300	0.5000	1.0-2.0, .25; 2.0-8.0, .5

BASIC_ DIA	J Hex Size	C Point Diameter	T Key Engagmnt	L Length
1	0.5680	0.6090	0.5620	1.25-2.0, .25; 2.0-8.0, .5
1.125	0.5680	0.6890	0.5620	1.5-10.0, .5
1.25	0.6310	0.7670	0.6250	1.5-10.0, .5
1.375	0.6310	0.8480	0.6250	2.0-10.0, .5
1.5	0.7570	0.9260	0.7500	2.0-6.0, .5; 6.0-12.0, 1.0
1.75	1.0100	1.0680	1.0000	2.0-6.0, .5; 6.0-12.0, 1.0
2	1.0100	1.2440	1.0000	2.0-6.0, .5; 6.0-12.0, 1.0

Hex Socket Head Shoulder Screws



Generic part name: CSSD

Notes:

- Corresponds to standard ANSI B18.3-1976
- Lengths given as: from - to, incremented by.

CSSD, Part 1

Name	Nom. Size	shoulder dia	A	H	S	J	T	Nom Thread Size
GENERIC	1/4"	0.24800	0.37500	0.18800	0.15700	0.12500	0.08700	10-24"
CSSD01	1/4"	0.24800	0.37500	0.18800	0.15700	0.12500	0.08700	10-24"
CSSD02	5/16"	0.31050	0.43750	0.21900	0.18300	0.15625	0.11100	1/4-20"
CSSD03	3/8"	0.37300	0.56250	0.25000	0.20900	0.18750	0.13500	5/16-18"
CSSD04	1/2"	0.49800	0.75000	0.31250	0.26200	0.25000	0.15900	3/8-16"
CSSD05	5/8"	0.62300	0.87500	0.37500	0.31500	0.31250	0.17200	1/2-13"
CSSD06	3/4"	0.74800	1.00000	0.50000	0.42100	0.37500	0.22000	5/8-11"
CSSD07	1"	0.99800	1.31250	0.62500	0.52700	0.50000	0.22000	3/4-10"
CSSD08	1-1/4"	1.24800	1.75000	0.75000	0.63300	0.62500	0.29700	7/8-9"
CSSD09	1-1/2"	1.49800	2.12500	1.00000	0.84200	0.87500	0.35800	1-1/8-7"
CSSD10	1-3/4"	1.74800	2.37500	1.12500	0.94800	1.00000	0.43500	1-1/4-7"
CSSD11	2"	1.99800	2.75000	1.25000	1.05400	1.25000	0.43500	1-1/2-6"

ANSI Inch Socket Cap, Shoulder and

CCSD, Part 2

Name	thread dia	E	thr neck dia	I	K	F	N	M
GENERIC	0.19000	0.37500	0.14200	0.08300	0.22700	0.09300	0.02300	0.01400
CSSD01	0.19000	0.37500	0.14200	0.08300	0.22700	0.09300	0.02300	0.01400
CSSD02	0.25000	0.43800	0.19300	0.10000	0.28900	0.09300	0.02800	0.01700
CSSD03	0.31250	0.50000	0.24900	0.11100	0.35200	0.09300	0.03100	0.02000
CSSD04	0.37500	0.62500	0.30400	0.12500	0.47700	0.09300	0.03500	0.02600
CSSD05	0.50000	0.75000	0.41400	0.15400	0.60200	0.09300	0.04200	0.03200
CSSD06	0.62500	0.87500	0.52100	0.18200	0.72700	0.09300	0.05100	0.03900
CSSD07	0.75000	1.00000	0.63800	0.20000	0.97700	0.12500	0.05500	0.05000
CSSD08	0.87500	1.12500	0.75000	0.22200	1.22700	0.12500	0.06200	0.06000
CSSD09	1.12500	1.50000	0.96400	0.28600	1.47800	0.12500	0.07200	0.07000
CSSD10	1.25000	1.75000	1.08900	0.28600	1.72800	0.12500	0.07200	0.08000
CSSD11	1.50000	2.00000	1.30700	0.33300	1.97800	0.12500	0.10200	0.09000

CCSD, Part 3

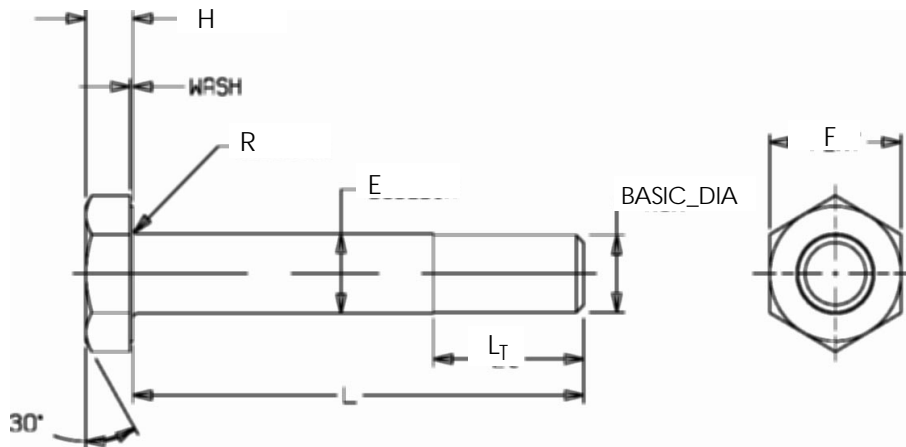
Name	Lengths
CSSD01	0.25-1.25, 0.125; 1.25-2.00, 0.25

Name	Lengths
CSSD02	0.25-1.0, 0.125; 1.0-2.0, 0.25
CSSD03	0.25-1.25, 0.125; 1.25-4.0, 0.25
CSSD04	0.5-1.5, 0.125; 1.5-5.0, 0.25
CSSD05	1.0-5.0, 0.25
CSSD06	1.5-5.0, 0.25
CSSD07	1.5-5.0, 0.25
CSSD08	2.0-5.0, 0.25
CSSD09	2.0-5.5, 0.25
CSSD10	2.0-5.5, 0.25
CSSD11	2.0-6.0, 0.25

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ANSI Inch Square and Hex Bolts and Screws

Heavy Hex Structural Bolt



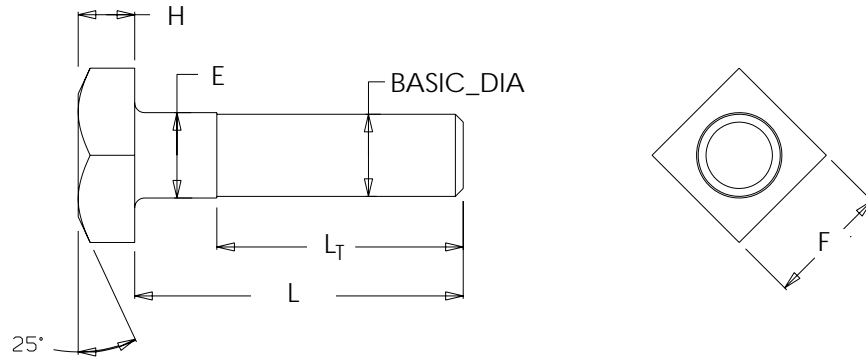
Generic part name: SHB

Notes:

- Corresponds to standard ANSI B18.2.1-1981.
- Enter the BASIC_DIA value exactly as shown.

BASIC _DIA	E Body Dia	F Width Across Flats	H Height	WASH Washer Face Thick- ness	R Round Radius	L_T Thread Length	L Lengths
.5	0.5150	0.8750	0.3125	0.0200	0.0310	1.0000	1.25 - 8, 0.25; 8 - 15, 0.5
.625	0.6420	1.0620	0.3910	0.0200	0.0620	1.2500	1.5 - 8, 0.25; 8 - 18.5, 0.5
.75	0.7680	1.2500	0.4690	0.0200	0.0620	1.3800	1.5 - 8, 0.25; 8 - 22.5, 0.5
.875	0.8950	1.4380	0.5470	0.0250	0.0620	1.5000	1.75 - 8, 0.25; 8 - 24, 0.5
1	1.0220	1.6250	0.6090	0.0250	0.0620	1.7500	2 - 8, 0.25 8 - 24, 0.5
1.125	1.1490	1.8120	0.6880	0.0250	0.0620	2.0000	2.25 - 8, 0.25; 8 - 24, 0.5
1.25	1.2770	2.0000	0.7810	0.0250	0.0620	2.0000	2.25 - 8, 0.25; 8 - 24, 0.5
1.375	1.4040	2.1880	0.8440	0.0250	0.0620	2.2500	2.5 - 8, 0.25; 8 - 24, 0.5
1.5	1.5310	2.3750	0.9380	0.0250	0.0620	2.2500	2.5 - 8, 0.25; 8 - 24, 0.5

Square Bolt



Generic part name: SQB

Notes:

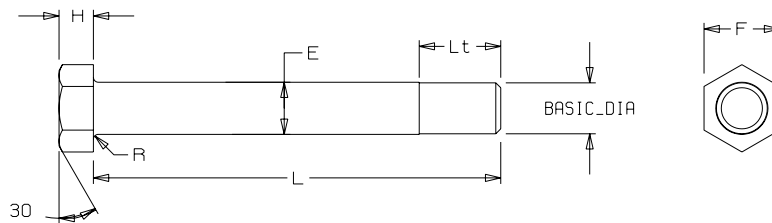
- Corresponds to standard ANSI B18.2.1-1981.
- Enter the BASIC_DIA value exactly as shown.

ANSI Inch Square and Hex Bolts and

BASIC_DIA	F Width Across Flats	H Height	E Body Dia	L Lengths
.25	0.3750	0.1720	0.2600	1.0 - 5.0, 0.25
.3125	0.5000	0.2030	0.3240	1.25 - 5.0, 0.25; 5.0 - 9.0, 0.5
.375	0.5620	0.2500	0.3880	1.25 - 5.0, 0.25; 5.0 - 11.0, 0.5
.4375	0.6250	0.2970	0.4520	1.5 - 5.0, 0.25; 5.0 - 12.0, 0.5; 12.0 - 13.0, 1
.5	0.7500	0.3280	0.5150	1.5 - 5.0, 0.25; 5.0 - 12.0, 0.5; 12.0 - 15.0, 1
.625	0.9380	0.4220	0.6420	1.75 - 5.0, 0.25; 5.0 - 12.0, 0.5; 12.0 - 18.0, 1

BASIC_DIA	F Width Across Flats	H Height	E Body Dia	L Lengths
.75	1.1250	0.5000	0.7680	2.0 - 5.0, 0.25; 5.0 - 12.0, 0.5; 12.0 - 22.0, 1
.875	1.3120	0.5940	0.8950	2.25 - 5.5, 0.25; 5.0 - 12.0, 0.5; 12.0 - 24.0, 1
1	1.5000	0.6560	1.0220	2.5 - 5.0, 0.25; 5.0 - 12.0, 0.5; 12.0 - 24.0, 1
1.125	1.6880	0.7500	1.1490	2.75 - 5.0, 0.25; 5.0 - 12.0, 0.5; 12.0 - 24.0, 1
1.25	1.8750	0.8440	1.2770	3.0 - 5.0, 0.25; 5.0 - 12.0, 0.5; 12.0 - 24.0, 1
1.375	2.0620	0.9060	1.4040	3.25 - 5.0, 0.25; 5.0 - 12.0, 0.5; 12.0 - 24.0, 1
1.5	2.2500	1.0000	1.5310	3.5 - 5.0, 0.25; 5.0 - 12.0, 0.5; 12.0 - 24.0, 1

Hex Bolt



Generic part name: RHB

Notes:

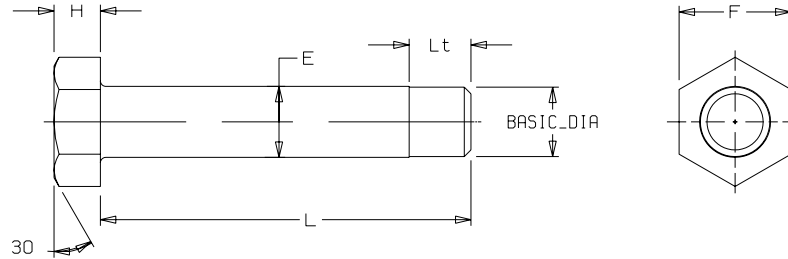
- Corresponds to standard ANSI B18.2.1-1981.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	E Body Dia	F Width Across Flats	H Height	R Round Radius	L Lengths
.25	0.2600	0.4380	0.1720	0.0300	1 - 7.25, 0.25
.3125	0.3400	0.5000	0.2190	0.0300	1.25 - 8, 0.25; 8 - 9, 0.5
.375	0.3880	0.5620	0.2500	0.0300	1.25 - 8, 0.25; 8 - 11, 0.5
.4375	0.4520	0.6250	0.2970	0.0300	1.5 - 8, 0.25; 8 - 13, 0.5
.5	0.5150	0.7500	0.3440	0.0300	1.5 - 8, 0.25; 8 - 15, 0.5
.625	0.6400	0.9280	0.4220	0.0600	1.75 - 8, 0.25; 8 - 18, 0.5
.75	0.6800	1.1250	0.5000	0.0600	2 - 8, 0.25; 8 - 20, 0.5; 20 - 22, 1
.875	0.8950	1.3120	0.5780	0.0600	2.25 - 8, 0.25; 8 - 20, 0.5; 20 - 24, 1
1	1.0220	1.5000	0.6720	0.0900	2.5 - 8, 0.25; 8 - 20, 0.5; 20 - 24, 1
1.125	1.1490	1.6880	0.7500	0.0900	2.75 - 8, 0.25; 8 - 20, 0.5; 20 - 24, 1
1.25	1.2770	1.8750	0.8440	0.0900	3 - 8, 0.25; 8 - 20, 0.5; 20 - 24, 1

ANSI Inch Square
and Hex Bolts and
Screws

BASIC_ DIA	E Body Dia	F Width Across Flats	H Height	R Round Radius	L Lengths
1.375	1.4040	2.0620	0.9060	0.0900	3.25 - 8, 0.25; 8 - 20, 0.5; 20 - 24, 1
1.5	1.5310	2.2500	1.0000	0.0900	3.5 - 8, 0.25; 8 - 20, 0.5; 20 - 24, 1
1.75	1.7850	2.6250	1.1560	0.1200	4 - 8, 0.25; 8 - 20, 0.5; 20 - 24, 1
2	2.0390	3.0000	1.3440	0.1200	4.5 - 8, 0.25; 8 - 20, 0.5; 20 - 24, 1
2.25	2.3050	3.3750	1.5000	0.1900	5 - 8, 0.25; 8 - 20, 0.5; 20 - 24, 1
2.5	2.5590	3.7500	1.6560	0.1900	5.5 - 8, 0.25; 8 - 20, 0.5; 20 - 24, 1
2.75	2.8270	4.1250	1.8130	0.1900	6 - 8, 0.25 8 - 20, 0.5 20 - 24, 1
3	3.0810	4.5000	2.0000	0.1900	6.75 - 8, 0.25 8 - 20, 0.5 20 - 24, 1
3.25	3.3350	4.8750	2.1880	0.1900	7.25 - 8, 0.25 8 - 20, 0.5 20 - 24, 1
3.5	3.5890	5.2500	2.3130	0.1900	7.75 - 8, 0.25 8 - 20, 0.5 20 - 24, 1
3.75	3.8580	5.6250	2.5000	0.1900	8.5 - 20, 0.5 20 - 24, 1
4	4.1110	6.0000	2.6880	0.1900	9 - 20, 0.5 20 - 24, 1

Heavy Hex Bolt



Generic part name: HHB

Notes:

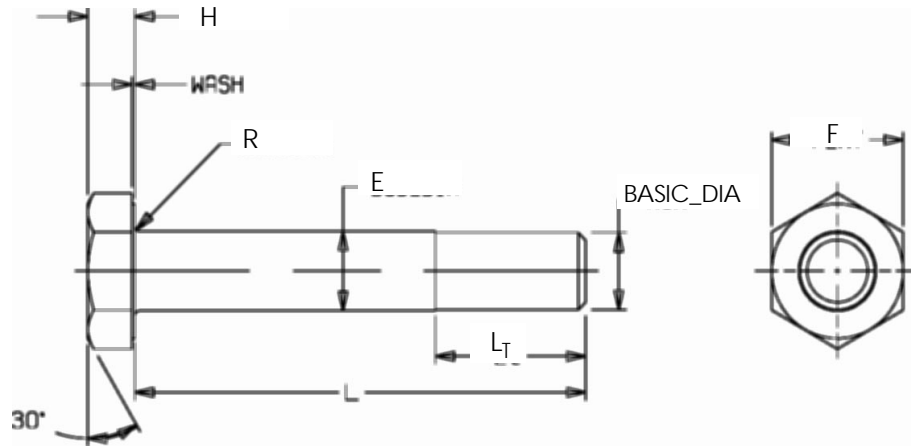
- Corresponds to standard ANSI B18.2.1-1981.
- Enter the BASIC_DIA value exactly as shown.

ANSI Inch Square and Hex Bolts and

BASIC_DIA	E Body Dia	F Width Across Flats	H Height	L Lengths
.5	0.5150	0.8750	0.3440	1.5 - 8.0, 0.25; 8.0 - 15.0, 0.5
.625	0.6420	1.0620	0.4220	1.75 - 8.0, 0.25; 8.0 - 18.5, 0.5
.875	0.8950	1.4380	0.5780	2.25 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 22.0, 1
1	1.0020	1.6250	0.6720	2.5 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 22.0, 1
1.125	1.1490	1.8120	0.7500	2.75 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 22.0, 1
1.25	1.2770	2.0000	0.8440	3.0 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 22.0, 1

BASIC_DIA	E Body Dia	F Width Across Flats	H Height	L Lengths
1.375	1.4040	2.1880	0.9060	3.25 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 23.0, 1
1.5	1.5310	2.3750	1.0000	3.5 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1.75	1.7850	2.7500	1.1560	4.0 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
2	2.0390	3.1250	1.3440	4.5 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
2.25	2.3050	3.5000	1.5000	5.0 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
2.5	2.5590	3.8750	1.6560	5.25 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
2.75	2.8270	4.2500	1.8130	6.25 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
3	3.0810	4.6250	2.0000	6.75 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1

Hex Cap Screw (Finished Hex Bolt)



Generic part name: HCS

Notes:

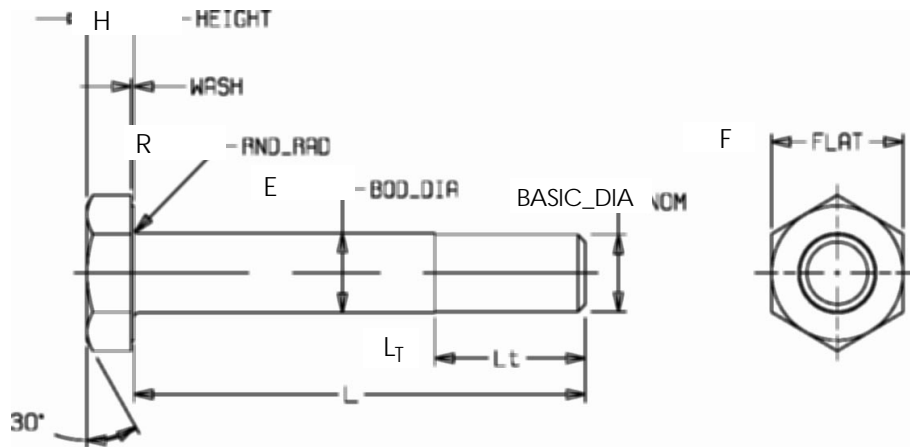
- Corresponds to standard ANSI B18.2.1-1981.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	F Width Across Flats	H Height	WASH Washer Face Thickness	E Body Dia	L Lengths
.25	0.4380	0.1560	0.0200	0.2500	1.0 - 7.0, 0.25
.3125	0.5000	0.2030 *	0.3125	0.2500	1.25 - 8.0, 0.25; 8.0 - 9.0, 0.5
.375	0.5620	0.2340 *	0.3750	0.2500	1.25 - 8.0, 0.25; 8.0 - 11.0, 0.5
.4375	0.6250	0.2810 *	0.4375	0.2500	1.5 - 8.0, 0.25; 8.0 - 13.0, 0.5
.5	0.7500	0.3130 *	0.5000	0.2500	1.5 - 8.0, 0.25; 8.0 - 15.0, 0.5
.5625	0.8120	0.3590	0.0250	0.5625	1.75 - 8.0, 0.25; 8.0 - 16.5, 0.5

BASIC_ DIA	F Width Across Flats	H Height	WASH Washer Face Thickness	E Body Dia	L Lengths
.625	0.9380	0.3910	0.0250	0.6250	1.75 - 8.0, 0.25; 8.0 - 18.5, 0.5
.75	1.1250	0.4690	0.0250	0.7500	2.0 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 22.0, 1
.875	1.3120	0.5470	0.0250	0.8750	2.25 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1	1.5000	0.6090	0.0250	1.0000	2.5 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1.125	1.6880	0.6880	0.0250	1.1250	2.75 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1.25	1.8750	0.7810	0.0250	1.2500	3.0 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1.375	2.0620	0.8440	0.0250	1.3750	3.25 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1.5	2.2300	1.3130	0.0250	1.5000	3.5 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1.75	2.6520	1.0940	0.0250	1.7500	4.0 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
2	3.0000	1.2190	0.0250	2.0000	4.5 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
2.25	3.3750	1.3750	0.0250	2.2500	5.0 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
2.5	3.7500	1.5310	0.0250	2.5000	5.5 - 8.0, 0.25 8.0 - 20.0, 0.5 20.0 - 24.0, 1

BASIC_DIA	F Width Across Flats	H Height	WASH Washer Face Thickness	E Body Dia	L Lengths
2.75	4.1250	1.6880	0.0250	2.7500	6.25 - 8.0, 0.25 8.0 - 20.0, 0.5 20.0 - 24.0, 1
3	4.5000	1.8750	0.0250	3.0000	6.75 - 8.0, 0.25 8.0 - 20.0, 0.5 20.0 - 24.0, 1

Heavy Hex Screw



Generic part name: HHS

Notes:

- Corresponds to standard ANSI B18.2.1-1981.
- Enter the BASIC_DIA value exactly as shown.

ANSI Inch Square
and Hex Bolts and
Screws

BASIC_ DIA	F Width Across Flats	H Height	WASH Washer Face Thickness	E Body Dia	L Lengths
.5	0.8750	0.3130	0.0200	0.5000	1.5 - 8.0, 0.25; 8.0 - 15.0, 0.5
.625	1.0620	0.3910	0.0200	0.6250	1.75 - 8.0, 0.25; 8.0 - 18.5, 0.5
.75	1.2500	0.4690	0.0200	0.7500	2.0 - 8.0, 0.25; 8.0 - 22.0, 0.5
.875	1.4380	0.5470	0.0250	0.8750	2.25 - 8.0, 0.25; 8.0 - 24.0, 0.5
1	1.6250	0.6090	0.0250	1.0000	2.5 - 8.0, 0.25; 8.0 - 19.0, 0.5; 19.0 - 24.0, 1
1.125	1.8120	0.6880	0.0250	1.1250	2.75 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1.25	2.0000	0.7810	0.0250	1.2500	3.0 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1.375	2.1880	0.8440	0.0250	1.3750	3.25 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1.5	2.3750	0.9380	0.0250	1.5000	3.5 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
1.75	2.7500	1.0940	0.0250	1.7500	4.0 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
2	3.1250	1.2190	0.0250	2.0000	4.5 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
2.25	3.5000	1.3750	0.0250	2.2500	5.0 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1

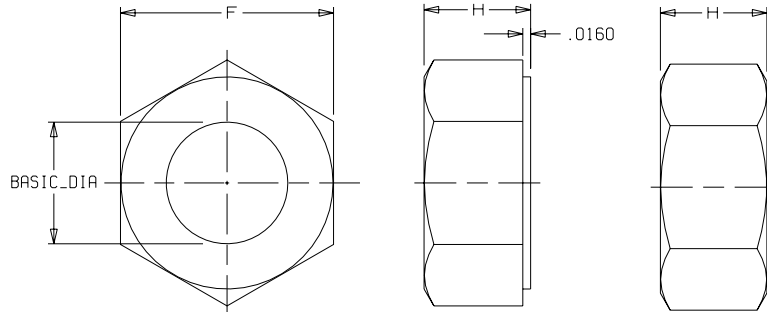
BASIC_ DIA	F Width Across Flats	H Height	WASH Washer Face Thickness	E Body Dia	L Lengths
2.5	3.8750	1.5310	0.0250	2.5000	5.5 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
2.75	4.2500	1.6850	0.0250	2.7500	6.25 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1
3	4.6250	1.8750	0.0250	3.0000	6.75 - 8.0, 0.25; 8.0 - 20.0, 0.5; 20.0 - 24.0, 1

**ANSI Inch Square
and Hex Bolts and
Screws**

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ANSI Inch Square and Hex Nuts

Hex Nut



Generic Part Name: RHN

Notes:

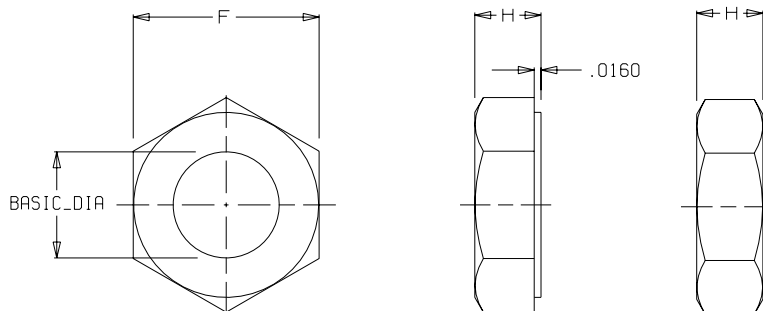
- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

Washer Faced Bearing Surface		
BASIC_DIA	F Flat Width	H Thickness
.25	0.4380	0.2190
.75	1.1250	0.6410
.875	1.3120	0.7500
1	1.5000	0.8590
1.125	1.6880	0.9690
1.25	1.8750	1.0630
1.375	2.0620	1.1720
1.5	2.2500	1.2810

Double Chamfered		
BASIC_DIA	F Flat Width	H Thickness
.25	0.4380	0.2190
.3125	0.5000	0.2660
.375	0.5620	0.3280
.4375	0.6880	0.3750
.5	0.7500	0.4380
.5625	0.8750	0.4840
.625	0.9380	0.5470
.75	1.1250	0.6410
.875	1.3120	0.7500
1	1.5000	0.8590
1.125	1.6880	0.9690
1.25	1.8750	1.0630
1.375	2.0620	1.1720
1.5	2.2500	1.2810

ANSI Inch Square
and Hex Nuts

Hex Jam Nut



Generic part name: HJN

Notes:

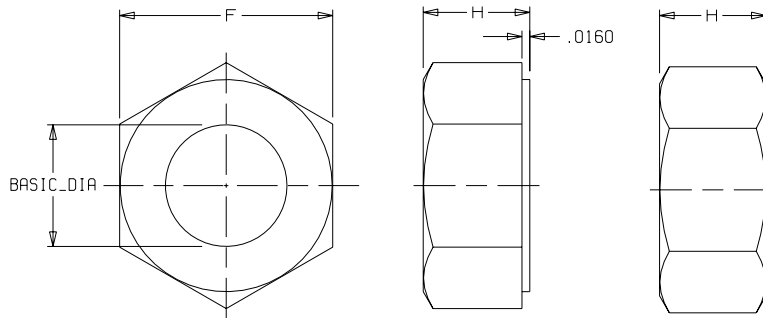
- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

Washer Faced Bearing Surface		
BASIC_DIA	F Flat Width	H Thickness
.25	0.4380	0.1560
.75	1.1250	0.4220
.875	1.3120	0.4840
1	1.5000	0.5470
1.125	1.6880	0.6090
1.25	1.8750	0.7190
1.375	2.0620	0.7810
1.5	2.2500	0.8440

Double Chamfered		
BASIC_DIA	F Flat Width	H Thickness
.25	0.4380	0.1560
.3125	0.5000	0.1880
.375	0.5620	0.2190
.4375	0.6880	0.2500
.5	0.7500	0.3130
.5625	0.8750	0.3130
.625	0.9380	0.3750
.75	1.1250	0.4220
.875	1.3120	0.4840
1	1.5000	0.5470

Double Chamfered		
BASIC_DIA	F Flat Width	H Thickness
1.125	1.6880	0.6090
1.25	1.8750	0.7190
1.375	2.0620	0.7810
1.5	2.2500	0.8440

Heavy Hex Nut



ANSI Inch Square
and Hex Nuts

Generic Name: HHN

Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

Washer Faced Bearing Surface		
BASIC_DIA	F Flat Width	H Thickness
.25	0.5000	0.2340
.5	0.8750	0.4840
.5625	0.9380	0.5470

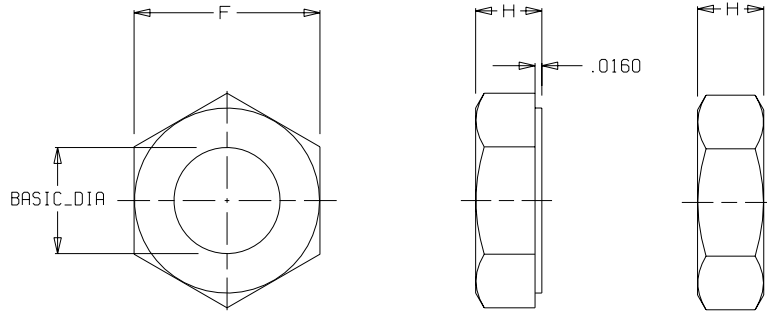
Washer Faced Bearing Surface		
BASIC_DIA	F Flat Width	H Thickness
.625	1.0620	0.6090
.75	1.2500	0.7340
.875	1.4380	0.8590
1	1.6250	0.9840
1.125	1.8120	1.1090
1.25	2.0000	1.2190
1.375	2.1880	1.3430
1.5	2.3750	1.4690
1.625	2.5620	1.5940
1.75	2.7500	1.7190
1.875	2.9380	1.8440
2	3.1250	1.9690
2.25	3.5000	2.2030
2.5	3.8750	2.4530
2.75	4.2500	2.7030
3	4.6250	2.9530
3.25	5.0000	3.1880
3.5	5.3750	3.4380
3.75	5.7500	3.6880
4	6.1250	3.9380

Double Chamfered		
BASIC_DIA	F Flat Width	H Thickness
.25	0.5000	0.2340
.3125	0.5620	0.2970
.375	0.6880	0.3590
.4375	0.7500	0.4220

Double Chamfered		
BASIC_DIA	F Flat Width	H Thickness
.5	0.8750	0.4840
.5625	0.9380	0.5470
.625	1.0620	0.6090
.75	1.2500	0.7340
.875	1.4380	0.8590
1	1.6250	0.9840
1.125	1.8120	1.1090
1.25	2.0000	1.2190
1.375	2.1880	1.3430
1.5	2.3750	1.4690
1.625	2.5620	1.5940
1.75	2.7500	1.7190
1.875	2.9380	1.8440
2	3.1250	1.9690
2.25	3.5000	2.2030
2.5	3.8750	2.4530
2.75	4.2500	2.7030
3	4.6250	2.9530
3.25	5.0000	3.1880
3.5	5.3750	3.4380
3.75	5.7500	3.6880
4	6.1250	3.9380

ANSI Inch Square
and Hex Nuts

Heavy Hex Jam Nut



Generic Name: HHJN

Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

Washer Faced Bearing Surface		
BASIC_DIA	F Flat Width	H Thickness
.25	0.5000	0.1720
.5	0.8750	0.2970
.5625	0.9380	0.3280
.625	1.0620	0.3590
.75	1.2500	0.4210
.875	1.4380	0.4840
1	1.6250	0.5470
1.125	1.8120	0.6090
1.25	2.0000	0.7190
1.375	2.1880	0.7810
1.5	2.3750	0.8440
1.625	2.5620	0.9060

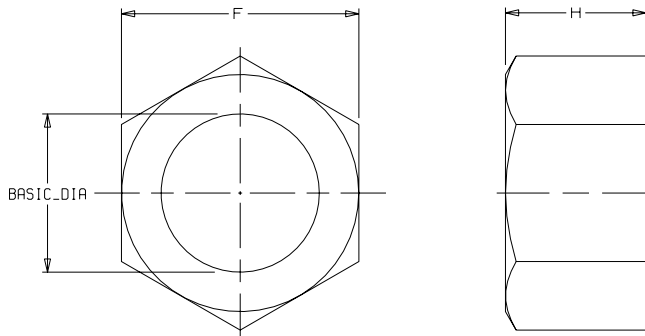
Washer Faced Bearing Surface		
BASIC_DIA	F Flat Width	H Thickness
1.75	2.7500	0.9690
1.875	2.9380	1.0310
2	3.1250	1.0940
2.25	3.5000	1.2030
2.5	3.8750	1.4530
2.75	4.2500	1.5780
3	4.6250	1.7030
3.25	5.0000	1.8130
3.5	5.3750	1.9380
3.75	5.7500	2.0630
4	6.1250	2.1880

Double Chamfered		
BASIC_DIA	F Flat Width	H Thickness
.25	0.5000	0.1720
.3125	0.5620	0.2030
.375	0.6880	0.2340
.4375	0.7500	0.2660
.5	0.8750	0.2970
.5625	0.9380	0.3280
.625	1.0620	0.3590
.75	1.2500	0.4210
.875	1.4380	0.4840
1	1.6250	0.5470
1.125	1.8120	0.6090
1.25	2.0000	0.7190
1.375	2.1880	0.7810

ANSI Inch Square
and Hex Nuts

Double Chamfered		
BASIC_DIA	F Flat Width	H Thickness
1.5	2.3750	0.8440
1.625	2.5620	0.9060
1.75	2.7500	0.9690
1.875	2.9380	1.0310
2	3.1250	1.0940
2.25	3.5000	1.2030
2.5	3.8750	1.4530
2.75	4.2500	1.5780
3	4.6250	1.7030
3.25	5.0000	1.8130
3.5	5.3750	1.9380
3.75	5.7500	2.0630
4	6.1250	2.1880

Hex Flat Nut



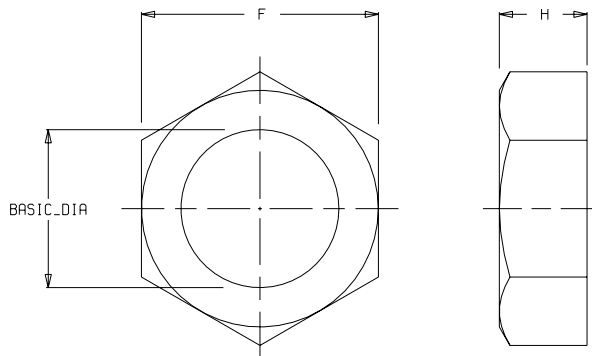
Generic part name: HFN

Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	F Flat Width	H Thickness
1.125	1.6880	1.0000
1.25	1.8750	1.0940
1.375	2.0620	1.2030
1.5	2.2500	1.3130

Hex Flat Jam Nut



Generic part name: HFJN

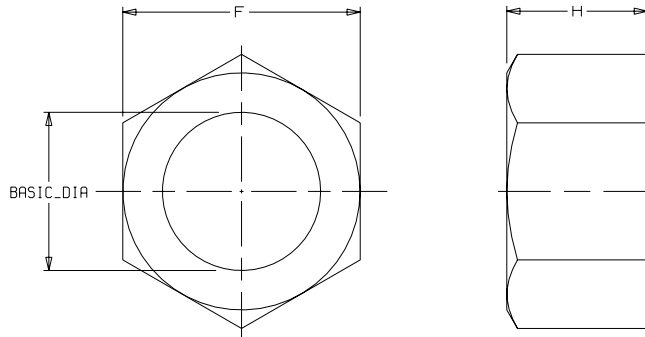
Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

ANSI Inch Square
and Hex Nuts

BASIC_DIA	F Flat Width	H Thickness
1.125	1.6880	0.6250
1.25	1.8750	0.7500
1.375	2.0620	0.8130
1.5	2.2500	0.8750

Heavy Hex Flat Nut



Generic part name: HHFN

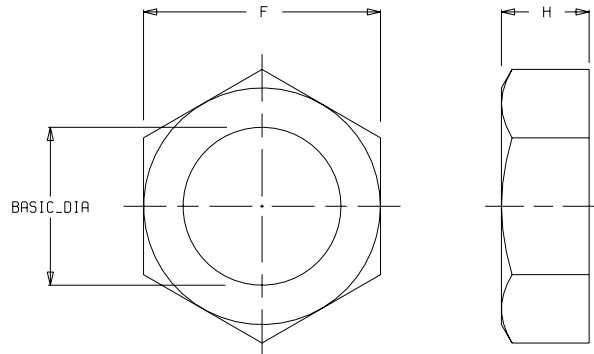
Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	F Flat Width	H Thickness
1.125	1.8120	1.1250
1.25	2.0000	1.2500
1.375	2.1880	1.3750
1.5	2.3750	1.5000

BASIC_DIA	F Flat Width	H Thickness
1.75	2.7500	1.7500
2	3.1250	2.0000
2.25	3.5000	2.2500
2.5	3.8750	2.5000
2.75	4.2500	2.7500
3	4.6250	3.0000
3.25	5.0000	3.2500
3.5	5.3750	3.5000
3.75	5.7500	3.7500
4	6.1250	4.0000

Heavy Hex Flat Jam Nut



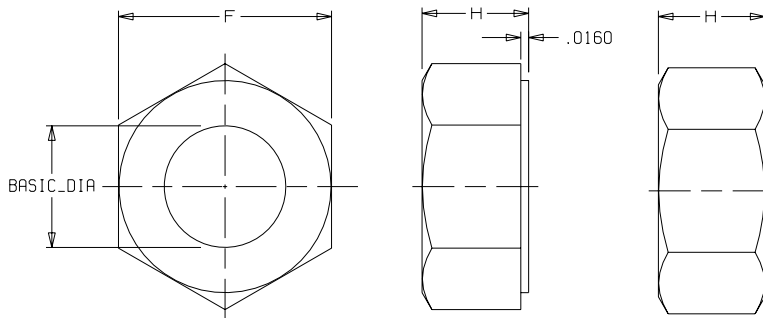
Generic part name: HHFJN

Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	F Flat Width	H Thickness
1.125	1.8120	0.6250
1.25	2.0000	0.7500
1.375	2.1880	0.8130
1.5	2.3750	0.8750
1.75	2.7500	1.0000
2	3.1250	1.1250
2.25	3.5000	1.2500
2.5	3.8750	1.5000
2.75	4.2500	1.6250
3	4.6250	1.7500
3.25	5.0000	1.8750
3.5	5.3750	2.0000
3.75	5.7500	2.1250
4	6.1250	2.2500

Hex Thick Nut



Generic part name: HTN

Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

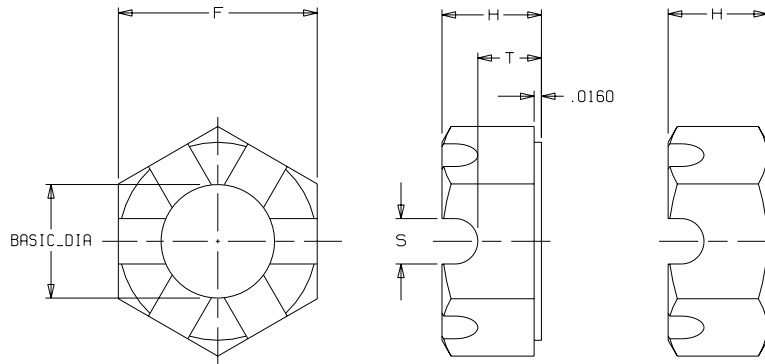
Washer Faced Bearing Surface		
BASIC_DIA	F Flat Width	H Thickness
.25	0.4380	0.2810
.75	1.1250	0.8130
.875	1.3120	0.9060
1	1.5000	1.0000
1.125	1.6880	1.1560
1.25	1.8750	1.2500
1.375	2.0620	1.3750
1.5	2.2500	1.5000

Double Chamfered		
BASIC_DIA	F Flat Width	H Thickness
.25	0.4380	0.2810
.3125	0.5000	0.3280
.375	0.5620	0.4060
.4375	0.6880	0.4530
.5	0.7500	0.5630
.5625	0.8750	0.6090
.625	0.9380	0.7190
.75	1.1250	0.8130
.875	1.3120	0.9060
1	1.5000	1.0000

ANSI Inch Square
and Hex Nuts

Double Chamfered		
BASIC_DIA	F Flat Width	H Thickness
1.125	1.6880	1.1560
1.25	1.8750	1.2500
1.375	2.0620	1.3750
1.5	2.2500	1.5000

Hex Slotted Nut



Generic part name: HSN

Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

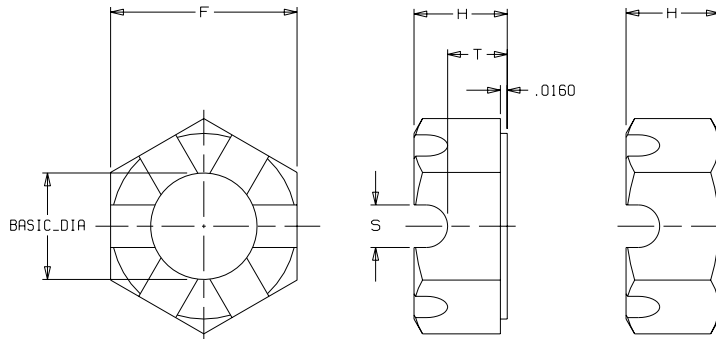
Washer Faced Bearing Surface				
BASIC_DIA	F Flat Width	H Thickness	T Unslotted Thickness	S Slot Width
.25	0.4380	0.2190	0.1400	0.1000
.75	1.1250	0.6410	0.4000	0.2400

Washer Faced Bearing Surface				
BASIC_DIA	F Flat Width	H Thickness	T Unslotted Thickness	S Slot Width
.875	1.3120	0.7500	0.5200	0.2400
1	1.5000	0.8590	0.5900	0.3000
1.125	1.6880	0.9690	0.6400	0.3300
1.25	1.8750	1.0630	0.7000	0.4000
1.375	2.0620	1.1720	0.8200	0.4000
1.5	2.2500	1.2810	0.8600	0.4600

Double Chamfered				
BASIC_DIA	F Flat Width	H Thickness	T Unslotted Thickness	S Slot Width
.25	0.4380	0.2190	0.1400	0.1000
.3125	0.5000	0.2660	0.1800	0.1200
.375	0.5620	0.3280	0.2100	0.1500
.4375	0.6880	0.3750	0.2300	0.1500
.5	0.7500	0.4380	0.2900	0.1800
.5625	0.8750	0.4840	0.3100	0.1800
.625	0.9380	0.5470	0.3400	0.2400
.75	1.1250	0.6410	0.4000	0.2400
.875	1.3120	0.7500	0.5200	0.2400
1	1.5000	0.8590	0.5900	0.3000
1.125	1.6880	0.9690	0.6400	0.3300
1.25	1.8750	1.0630	0.7000	0.4000
1.375	2.0620	1.1720	0.8200	0.4000
1.5	2.2500	1.2810	0.8600	0.4600

ANSI Inch Square
and Hex Nuts

Heavy Hex Slotted Nut



Generic part name: HHSN

Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

Washer Faced Bearing Surface				
BASIC_DIA	F Flat Width	H Thickness	T Unslotted Thickness	S Slot Width
.25	0.5000	0.2340	0.1500	0.1000
.5	0.8750	0.4840	0.3400	0.1800
.5625	0.9380	0.5470	0.3700	0.1800
.625	1.0620	0.6090	0.4000	0.2400
.75	1.2500	0.7340	0.4900	0.2400
.875	1.4380	0.8590	0.6200	0.2400
1	1.6250	0.9840	0.7200	0.3000
1.125	1.8120	1.1090	0.7800	0.3300
1.25	2.0000	1.2190	0.8600	0.4000
1.375	2.1880	1.3440	0.9900	0.4000
1.5	2.3750	1.4690	1.0500	0.4600

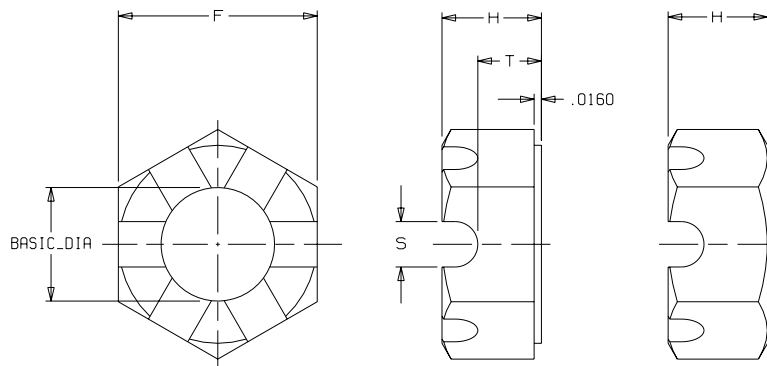
Washer Faced Bearing Surface				
BASIC_DIA	F Flat Width	H Thickness	T Unslotted Thickness	S Slot Width
1.75	2.7500	1.7190	1.2400	0.5200
2	3.1250	1.9690	1.4300	0.5200
2.25	3.5000	2.2030	1.6700	0.5200
2.5	3.8750	2.4530	1.7900	0.6400
2.75	4.2500	2.7030	2.0500	0.6400
3	4.6250	2.9530	2.2300	0.7100
3.25	5.0000	3.1880	2.4700	0.7100
3.5	5.3750	3.4380	2.7200	0.7100
3.75	5.7500	3.6880	2.9700	0.7100
4	6.1250	3.9380	3.2200	0.7100

Double Chamfered				
BASIC_DIA	F Flat Width	H Thickness	T Unslotted Thickness	S Slot Width
.25	0.5000	0.2340	0.1500	0.1000
.3125	0.5620	0.2970	0.2100	0.1200
.375	0.6880	0.3590	0.2400	0.1500
.4375	0.7500	0.4220	0.2800	0.1500
.5	0.8750	0.4840	0.3400	0.1800
.5625	0.9380	0.5470	0.3700	0.1800
.625	1.0620	0.6090	0.4000	0.2400
.75	1.2500	0.7340	0.4900	0.2400
.875	1.4380	0.8590	0.6200	0.2400
1	1.6250	0.9840	0.7200	0.3000
1.125	1.8120	1.1090	0.7800	0.3300
1.25	2.0000	1.2190	0.8600	0.4000
1.375	2.1880	1.3440	0.9900	0.4000
1.5	2.3750	1.4690	1.0500	0.4600

ANSI Inch Square
and Hex Nuts

Double Chamfered				
BASIC_DIA	F Flat Width	H Thickness	T Unslotted Thickness	S Slot Width
1.75	2.7500	1.7190	1.2400	0.5200
2	3.1250	1.9690	1.4300	0.5200
2.25	3.5000	2.2030	1.6700	0.5200
2.5	3.8750	2.4530	1.7900	0.6400
2.75	4.2500	2.7030	2.0500	0.6400
3	4.6250	2.9530	2.2300	0.7100
3.25	5.0000	3.1880	2.4700	0.7100
3.5	5.3750	3.4380	2.7200	0.7100
3.75	5.7500	3.6880	2.9700	0.7100
4	6.1250	3.9380	3.2200	0.7100

Hex Thick Slotted Nut



Generic part name: HSTN

Notes:

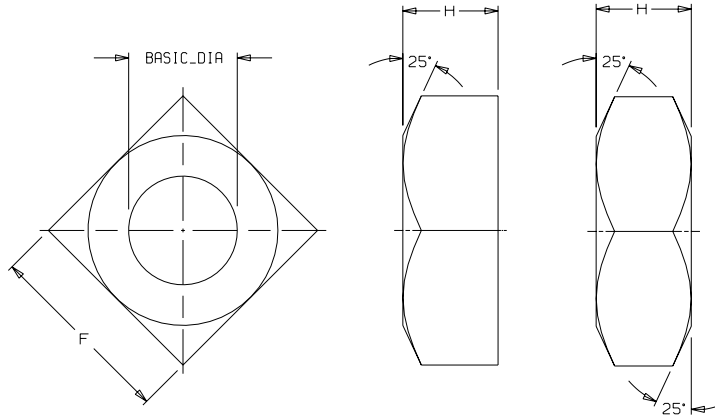
- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

Washer Faced Bearing Surface				
BASIC_DIA	F Flat Width	H Thickness	T Unslotted Thickness	S Slot Width
.25	0.4380	0.2810	0.2000	0.1000
.75	1.1250	0.8130	0.5700	0.2400
.875	1.3120	0.9060	0.6700	0.2400
1	1.5000	1.0000	0.7300	0.3000
1.125	1.6880	1.1560	0.8300	0.3300
1.25	1.8750	1.2500	0.8900	0.4000
1.375	2.0620	1.3750	1.0200	0.4000
1.5	2.2500	1.5000	1.0800	0.4600

Double Chamfered				
BASIC_DIA	F Flat Width	H Thickness	T Unslotted Thickness	S Slot Width
.25	0.4380	0.2810	0.2000	0.1000
.3125	0.5000	0.3280	0.2400	0.1200
.375	0.5620	0.4060	0.2900	0.1500
.4375	0.6880	0.4530	0.3100	0.1500
.5	0.7500	0.5630	0.4200	0.1800
.5625	0.8750	0.6090	0.4300	0.1800
.625	0.9380	0.7190	0.5100	0.2400
.75	1.1250	0.8130	0.5700	0.2400
.875	1.3120	0.9060	0.6700	0.2400
1	1.5000	1.0000	0.7300	0.3000
1.125	1.6880	1.1560	0.8300	0.3300
1.25	1.8750	1.2500	0.8900	0.4000
1.375	2.0620	1.3750	1.0200	0.4000
1.5	2.2500	1.5000	1.0800	0.4600

ANSI Inch Square
and Hex Nuts

Square Nut



Generic part name: SQN

Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

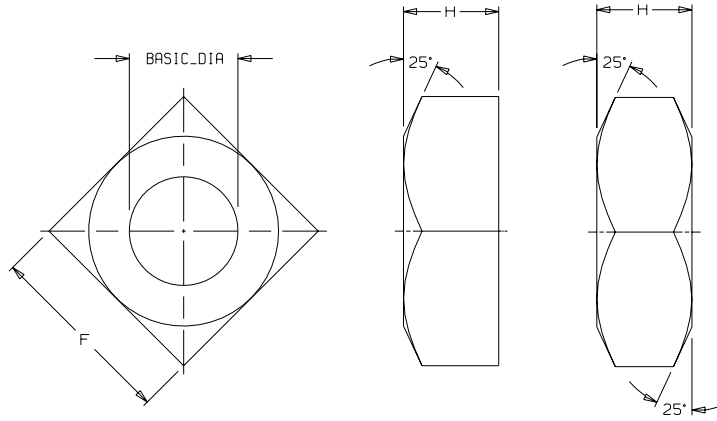
Flat Bottom		
BASIC_DIA	F Flat Width	H Thickness
.25	0.4380	0.219
.3125	0.5620	0.266
.375	0.6250	0.328
.4375	0.7500	0.375
.5	0.8120	0.438
.625	1.0000	0.547
.75	1.1250	0.656
.875	1.3120	0.766
1	1.5000	0.875
1.125	1.6880	1.000
1.25	1.8750	1.094
1.375	2.0620	1.203

Flat Bottom		
BASIC_DIA	F Flat Width	H Thickness
1.5	2.2500	1.313

Chamfered Bottom		
BASIC_DIA	F Flat Width	H Thickness
.25	0.4380	0.219
.3125	0.5620	0.266
.375	0.6250	0.328
.4375	0.7500	0.375
.5	0.8120	0.438
.625	1.0000	0.547
.75	1.1250	0.656
.875	1.3120	0.766
1	1.5000	0.875
1.125	1.6880	1.000
1.25	1.8750	1.094
1.375	2.0620	1.203
1.5	2.2500	1.313

ANSI Inch Square
and Hex Nuts

Heavy Square Nut



Generic part name: HSQN

Notes:

- Corresponds to standard ASME/ANSI B18.2.2-1987.
- Enter the BASIC_DIA value exactly as shown.

Flat Bottom		
BASIC_DIA	F Flat Width	H Thickness
.25	0.5000	0.250
.3125	0.5620	0.313
.375	0.6880	0.375
.4375	0.7500	0.438
.5	0.8750	0.500
.625	1.0620	0.625
.75	1.2500	0.750
.875	1.4380	0.875
1	1.6250	1.000
1.125	1.8120	1.125
1.25	2.0000	1.250
1.375	2.1880	1.375

Flat Bottom		
BASIC_DIA	F Flat Width	H Thickness
1.5	2.3750	1.500

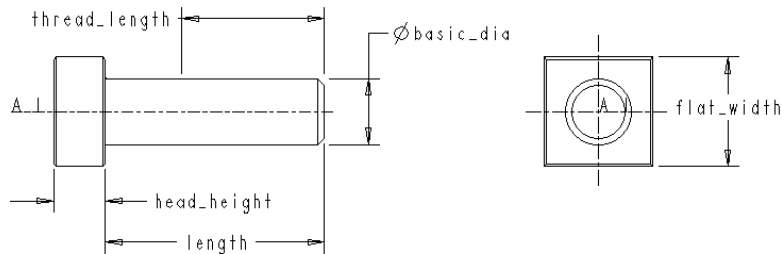
Chamfered Bottom		
BASIC_DIA	F Flat Width	H Thickness
.25	0.5000	0.250
.3125	0.5620	0.313
.375	0.6880	0.375
.4375	0.7500	0.438
.5	0.8750	0.500
.625	1.0620	0.625
.75	1.2500	0.750
.875	1.4380	0.875
1	1.6250	1.000
1.125	1.8120	1.125
1.25	2.0000	1.250
1.375	2.1880	1.375
1.5	2.3750	1.500

ANSI Inch Square
and Hex Nuts

18

ANSI Inch T-Bolts and T-Nuts

Standard T-Bolts



Generic Part Name: ASTB

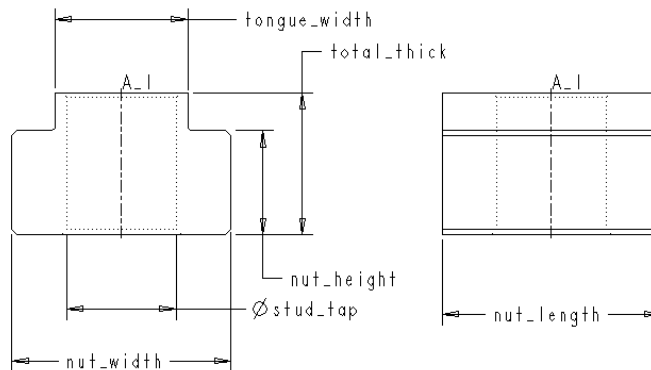
Notes:

- Corresponds to standard ISO 12345.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

NAME	NOMINAL_DIA_THR_PITCH	basic_dia	flat_width	head_height	length	thread_length
ASTB01	0.250-20	0.25000	0.46900	0.15600	1.0 to 7.5 by 0.25	0.75, 1.0
ASTB02	0.312-18	0.31200	0.56200	0.18800	1.25 to 8 by 0.25, 8.5, 9	0.875, 1.125
ASTB03	0.375-16	0.37500	0.68800	0.25000	1.25 to 8 by 0.25, 8.50 to 11 by 0.5	1, 1.25
ASTB04	0.500-13	0.50000	0.87500	0.31200	1.5 to 8 by 0.25, 8.5 to 15 by 0.5	1.25, 1.5
ASTB05	0.625-11	0.62500	1.12500	0.40600	1.75 to 8 by 0.25, 8.5 to 18 by 0.5	1.5, 1.75

NAME	NOMINAL_DIA_THR_PITCH	basic_dia	flat_width	head_height	length	thread_length
ASTB06	0.750-10	0.75000	1.31200	0.53100	2 to 8 by 0.25, 8.5 to 20 by 0.5, 21, 22	1.75, 2
ASTB07	1.000-8	1.00000	1.68800	0.68800	2.5 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2.25, 2.5
ASTB08	1.250-7	1.25000	2.06200	0.93800	3 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	2.75, 3
ASTB09	1.500-6	1.50000	2.50000	1.18800	3.5 to 8 by 0.25, 8.5 to 20 by 0.5, 21 to 24 by 1	3.25, 3.5

Standard T-Nuts



Generic Part Name: ASTN

Notes:

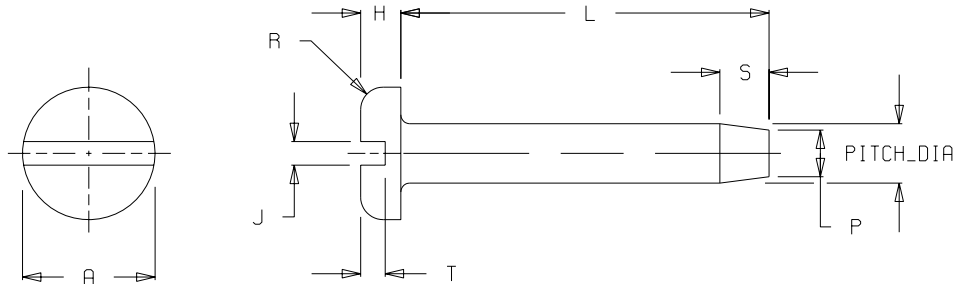
- Corresponds to standard ISO 123.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

NAME	BASIC DIA	NOMINAL DIA THR PITCH	tongue width	stud_ tap	nut_ width	nut_ height	total_ thick	nut_ length
ASTN01	0.312	0.250-20	0.33000	0.25000	0.56200	0.18800	0.28100	0.56200
ASTN02	0.375	0.312-18	0.41800	0.31200	0.68800	0.25000	0.37500	0.68800
ASTN03	0.500	0.375-16	0.54300	0.37500	0.87500	0.31200	0.53100	0.87500
ASTN04	0.625	0.500-13	0.66800	0.50000	1.12500	0.40600	0.62500	1.12500
ASTN05	0.750	0.625-11	0.78300	0.62500	1.31200	0.53100	0.78100	1.31200
ASTN06	1.000	0.750-10	1.03300	0.75000	1.68800	0.68800	1.00000	1.68800
ASTN07	1.250	1.000-8	1.27300	1.00000	2.06200	0.93800	1.31200	2.06200
ASTN08	1.500	1.250-7	1.52300	1.25000	2.50000	1.18800	1.62500	2.50000

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ANSI Inch Tapping Screws

Type B Slotted Pan Head Tapping Screw



Generic part name: TSAA

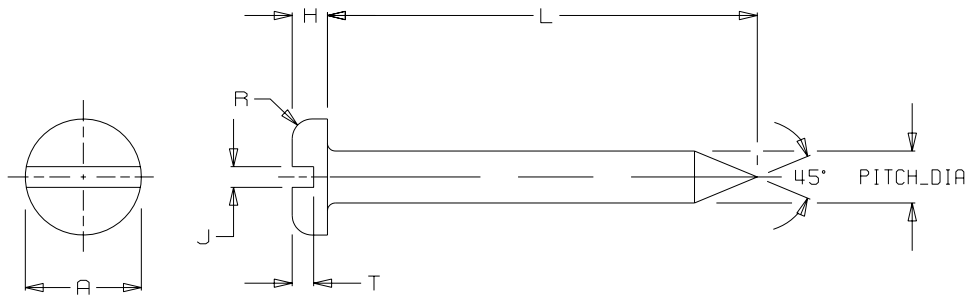
Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA value exactly as shown.

BASIC DIA	PITCH DIA	A Head Dia	H Head Height	R Head Radius	J Slot Width	T Slot Depth	P Point Dia	S Point Length	L Lengths
NO.0	0.0480	0.116	0.039	0.020	0.023	0.022	0.0310	0.0420	0.125-1.25, .0625
NO.1	0.0620	0.142	0.046	0.025	0.026	0.027	0.0440	0.0480	0.125-1.25, .0625
NO.2	0.0760	0.167	0.053	0.035	0.031	0.031	0.0580	0.0620	0.125-1.25, .0625
NO.3	0.0880	0.193	0.060	0.037	0.035	0.036	0.0680	0.0710	0.1875-1.25, .0625
NO.4	0.1000	0.219	0.068	0.042	0.039	0.040	0.0790	0.0830	0.1875-1.5, .0625
NO.5	0.1120	0.245	0.075	0.044	0.043	0.045	0.0870	0.1000	0.1875-1.5, .0625
NO.6	0.1210	0.270	0.082	0.046	0.048	0.050	0.0950	0.1000	0.25-2.5, .0625
NO.8	0.1440	0.322	0.096	0.052	0.054	0.058	0.1120	0.1110	0.25-2.5.. 0625
NO.10	0.1650	0.373	0.110	0.061	0.060	0.068	0.1300	0.1250	0.3125-3.0, .0625

BASIC DIA	PITCH DIA	A Head Dia	H Head Height	R Head Radius	J Slot Width	T Slot Depth	P Point Dia	S Point Length	L Lengths
NO.12	0.1895	0.425	0.125	0.078	0.067	0.077	0.1520	0.1430	0.3125-3.0, .0625
.25	0.2190	0.492	0.144	0.087	0.075	0.087	0.1790	0.1430	0.375-3.0, .0625
.3125	0.2795	0.615	0.178	0.099	0.084	0.106	0.2300	0.1670	0.4375-3.0, .0625
.375	0.3445	0.740	0.212	0.143	0.094	0.124	0.2930	0.1670	0.5-3.0, .0625
.4375	0.3995	0.863	0.247	0.153	0.094	0.142	0.3430	0.2000	0.5625-3.0, .0625
.5	0.4635	0.987	0.281	0.175	0.106	0.161	0.4070	0.2000	0.75-3.0, .0625

Type AB Slotted Pan Head Tapping Screw



Generic part name: TSBB

Notes:

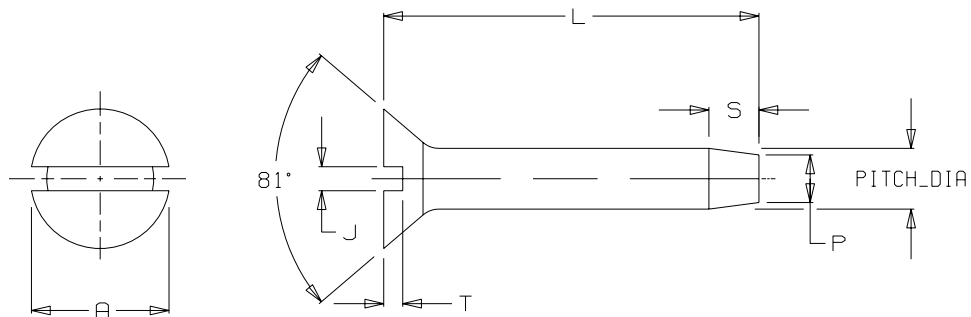
- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

ANSI Inch Tapping
Screws

BASIC DIA	PITCH DIA	A Head Dia	H Head Height	R Head Radius	J Slot Width	T Slot Depth	L Lengths
NO.0	0.0480	0.116	0.039	0.020	0.023	0.022	0.125-1.0,.0625

BASIC _DIA	PITCH DIA	A Head Dia	H Head Height	R Head Radius	J Slot Width	T Slot Depth	L Lengths
NO.1	0.0620	0.142	0.046	0.025	0.026	0.027	0.125-1.0,.0625
NO.2	0.0760	0.167	0.053	0.035	0.031	0.031	0.1875-1.25,.0625
NO.3	0.0880	0.193	0.060	0.037	0.035	0.036	0.1875-1.5,.0625
NO.4	0.1000	0.219	0.068	0.042	0.039	0.040	0.1875-1.5,.0625
NO.5	0.1120	0.245	0.075	0.044	0.043	0.045	0.25-1.5,.0625
NO.6	0.1210	0.270	0.082	0.046	0.048	0.050	0.25-2.0,.0625
NO.8	0.1440	0.322	0.096	0.052	0.054	0.058	0.3125-2.0,.0625
NO.10	0.1650	0.373	0.110	0.061	0.060	0.068	0.3125-3.0,.0625
NO.12	0.1895	0.425	0.125	0.078	0.067	0.077	0.375-3.0,.0625
.25	0.2190	0.492	0.144	0.087	0.075	0.087	0.375-3.0,.0625
.3125	0.2795	0.615	0.178	0.099	0.084	0.106	0.4375-3.0,.0625
.375	0.3445	0.740	0.212	0.143	0.094	0.124	0.5-3.0,.0625
.4375	0.3995	0.863	0.247	0.153	0.094	0.142	0.75-3.0,.0625
.5	0.4635	0.987	0.281	0.175	0.106	0.161	0.75-3.0,.0625

Type B Slotted Flat Countersunk Head Tapping Screw



Generic part name: TSCC

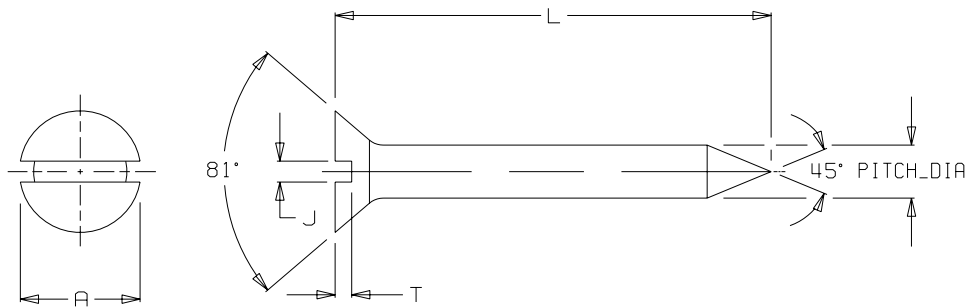
Notes:

- Corresponds to standard ANSI B18.6.4-1981

- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	PITCH_DIA	A Head Dia	J Slot Width	T Slot Depth	P Point Dia	S Point Length	L Lengths
NO.0	0.0480	0.119	0.023	0.015	0.0310	0.0420	0.125-1.0,.0625
NO.1	0.0620	0.146	0.026	0.019	0.0440	0.0480	0.125-1.0,.0625
NO.2	0.0760	0.172	0.031	0.023	0.0580	0.0620	0.1875-1.25,.0625
NO.3	0.0880	0.199	0.035	0.027	0.0680	0.0710	0.1875-1.5,.0625
NO.4	0.1000	0.225	0.039	0.030	0.0790	0.0830	0.1875-1.5,.0625
NO.5	0.1120	0.252	0.043	0.034	0.0870	0.1000	0.25-1.5,.0625
NO.6	0.1215	0.279	0.048	0.038	0.0950	0.1000	0.25-2.0,.0625
NO.8	0.1440	0.332	0.054	0.045	0.1120	0.1110	0.3125-2.0,.0625
NO.10	0.1650	0.385	0.060	0.053	0.1300	0.1250	0.3125-3.0,.0625
NO.12	0.1895	0.438	0.067	0.060	0.1520	0.1430	0.375-3.0,.0625
.25	0.2190	0.507	0.075	0.070	0.1790	0.1430	0.375-3.0,.0625
.3125	0.2795	0.635	0.084	0.088	0.2300	0.1670	0.4375-3.0,.0625
.375	0.3445	0.762	0.094	0.106	0.2930	0.1670	0.5-3.0,.0625
.4375	0.3995	0.812	0.094	0.103	0.3430	0.2000	0.75-3.0,.0625
.5	0.4635	0.875	0.106	0.103	0.4070	0.2000	0.75-3.0,.0625

Type AB Slotted Flat Countersunk Head Tapping Screw



ANSI Inch Tapping
Screws

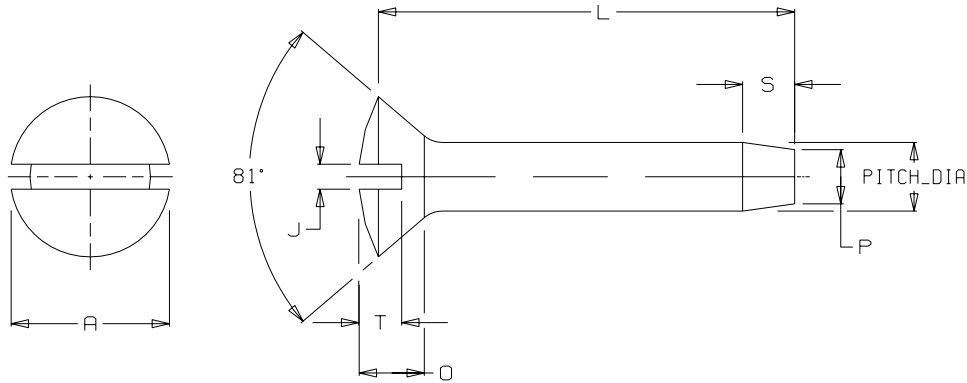
Generic part name: TSDD

Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	PITCH DIA	A Head Dia	J Slot Width	T Slot Depth	L Lengths
NO.0	0.0480	0.119	0.023	0.015	0.125-1.0,.0625
NO.1	0.0620	0.146	0.026	0.019	0.1875-1.0,.0625
NO.2	0.0760	0.172	0.031	0.023	0.1875-1.25,.0625
NO.3	0.0880	0.199	0.035	0.027	0.1875-1.5,.0625
NO.4	0.1000	0.225	0.039	0.030	0.25-1.5,.0625
NO.5	0.1120	0.252	0.043	0.034	0.25-1.5,.0625
NO.6	0.1215	0.279	0.048	0.038	0.3125-2.0,.0625
NO.8	0.1440	0.332	0.054	0.045	0.3125-2.0,.0625
NO.10	0.1650	0.385	0.060	0.053	0.375-3.0,.0625
NO.12	0.1895	0.438	0.067	0.060	0.4375-3.0,.0625
.25	0.2190	0.507	0.075	0.070	0.5-3.0,.0625
.3125	0.2795	0.635	0.084	0.088	0.625-3.0,.0625
.375	0.3445	0.762	0.094	0.106	0.75-3.0,.0625
.4375	0.3995	0.812	0.094	0.103	0.8125-3.0,.0625
.5	0.4635	0.875	0.106	0.103	0.9375-3.0,.0625

Type B Slotted Oval Countersunk Head Tapping Screw



Generic part name: TSEE

Notes:

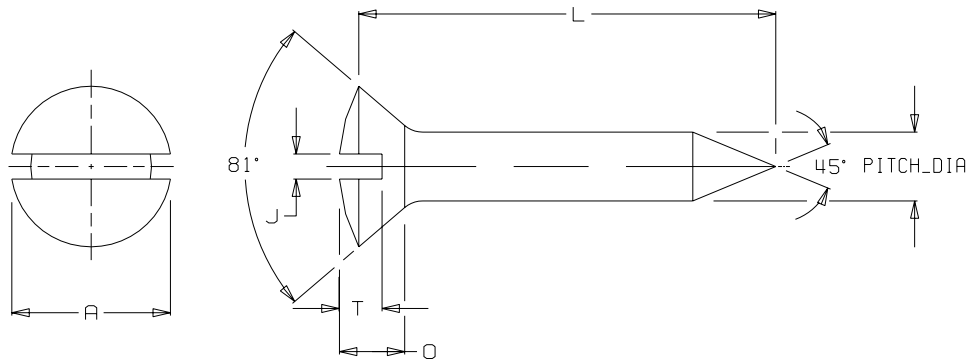
- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	PITCH_DIA	A Head Dia	O Total Height	J Slot Width	T Slot Depth	P Point Dia	S Point Length	L Lengths
NO.0	0.0480	0.119	0.056	0.023	0.030	0.0310	0.0420	0.125-1.0,.0625
NO.1	0.0620	0.146	0.068	0.026	0.038	0.0440	0.0480	0.125-1.0,.0625
NO.2	0.0760	0.172	0.080	0.031	0.045	0.0580	0.0620	0.1875-1.25,.0625
NO.3	0.0880	0.199	0.092	0.035	0.052	0.0680	0.0710	0.1875-1.5,.0625
NO.4	0.1000	0.225	0.104	0.039	0.059	0.0790	0.0830	0.1875-1.5,.0625
NO.5	0.1120	0.252	0.116	0.043	0.067	0.0870	0.1000	0.25-1.5,.0625
NO.6	0.1215	0.279	0.128	0.048	0.074	0.0950	0.1000	0.25-2.0,.0625
NO.8	0.1440	0.332	0.152	0.054	0.088	0.1120	0.1110	0.3125-2.0,.0625
NO.10	0.1650	0.385	0.176	0.060	0.103	0.1300	0.1250	0.3125-3.0,.0625
NO.12	0.1895	0.438	0.200	0.067	0.117	0.1520	0.1430	0.375-3.0,.0625
.25	0.2190	0.507	0.232	0.075	0.136	0.1790	0.1430	0.375-3.0,.0625
.3125	0.2795	0.635	0.290	0.084	0.171	0.2300	0.1670	0.4375-3.0,.0625

ANSI Inch Tapping Screws

BASIC_DIA	PITCH_DIA	A Head Dia	O Total Height	J Slot Width	T Slot Depth	P Point Dia	S Point Length	L Lengths
.375	0.3445	0.762	0.347	0.094	0.206	0.2930	0.1670	0.5-3.0,.0625
.4375	0.3995	0.812	0.345	0.094	0.210	0.3430	0.2000	0.75-3.0,.0625
.5	0.4635	0.875	0.354	0.106	0.216	0.4070	0.2000	0.75-3.0,.0625

Type AB Slotted Oval Countersunk Head Tapping Screw



Generic part name: TSFF

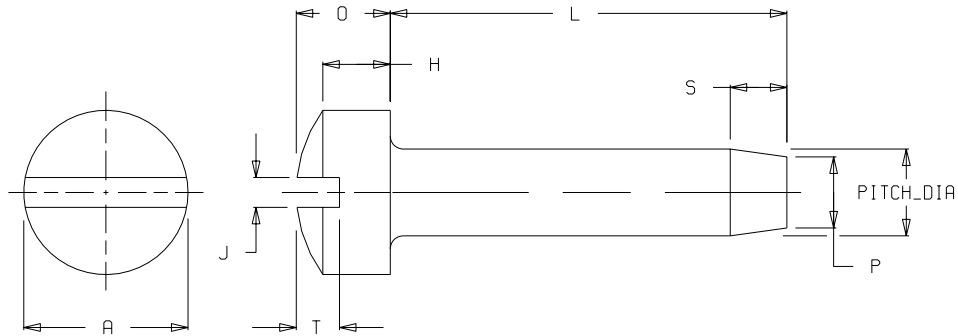
Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	PITCH_DIA	A Head Dia	O Total Height	J Slot Width	T Slot Depth	L Lengths
NO.0	0.0480	0.119	0.056	0.023	0.030	0.125-1.0,.0625
NO.1	0.0620	0.146	0.068	0.026	0.038	0.1875-1.0,.0625
NO.2	0.0760	0.172	0.080	0.031	0.045	0.1875-1.25,.0625
NO.3	0.0880	0.199	0.092	0.035	0.052	0.1875-1.5,.0625

BASIC_DIA	PITCH_DIA	A Head Dia	O Total Height	J Slot Width	T Slot Depth	L Lengths
NO.4	0.1000	0.225	0.104	0.039	0.059	0.25-1.5,.0625
NO.5	0.1120	0.252	0.116	0.043	0.067	0.25-1.5,.0625
NO.6	0.1215	0.279	0.128	0.048	0.074	0.3125-2.0,.0625
NO.8	0.1440	0.332	0.152	0.054	0.088	0.3125-2.0,.0625
NO.10	0.1650	0.385	0.176	0.060	0.103	0.375-3.0,.0625
NO.12	0.1895	0.438	0.200	0.067	0.117	0.4375-3.0,.0625
.25	0.2190	0.507	0.232	0.075	0.136	0.5-3.0,.0625
.3125	0.2795	0.635	0.290	0.084	0.171	0.625-3.0,.0625
.375	0.3445	0.762	0.347	0.094	0.206	0.75-3.0,.0625
.4375	0.3995	0.812	0.345	0.094	0.210	0.8125-3.0,.0625
.5	0.4635	0.875	0.354	0.106	0.216	1.0-3.0,.0625

Type B Slotted Fillister Head Tapping Screw



Generic part name: TSGG

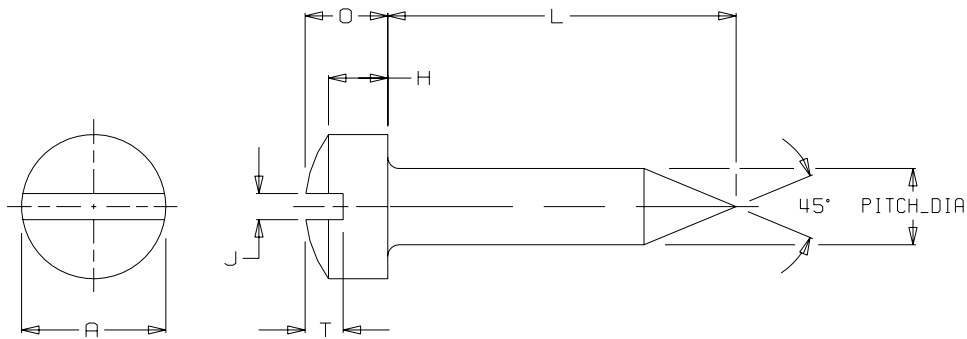
Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA value exactly as shown.

ANSI Inch Tapping
Screws

BASIC DIA	PITCH DIA	A Head Dia	H Side Height	O Total Height	J Slot Width	T Slot Depth	P Point Dia	S Point Length	L Lengths
NO.0	0.0480	0.096	0.043	0.055	0.023	0.025	0.0310	0.0420	0.125-1.0,.0625
NO.1	0.0620	0.118	0.053	0.066	0.026	0.031	0.0440	0.0480	0.125-1.0,.0625
NO.2	0.0760	0.140	0.062	0.083	0.031	0.037	0.0580	0.0620	0.1875-1.25,.0625
NO.3	0.0880	0.161	0.070	0.095	0.035	0.043	0.0680	0.0710	0.1875-1.5,.0625
NO.4	0.1000	0.183	0.079	0.107	0.039	0.048	0.0790	0.0830	0.1875-1.5,.0625
NO.5	0.1120	0.205	0.088	0.120	0.043	0.054	0.0870	0.1000	0.25-1.5,.0625
NO.6	0.1215	0.226	0.096	0.132	0.048	0.060	0.0950	0.1000	0.25-2.0,.0625
NO.8	0.1440	0.270	0.113	0.156	0.540	0.071	0.1120	0.1110	0.3125-2.0,.0625
NO.10	0.1650	0.313	0.130	0.180	0.060	0.083	0.1300	0.1250	0.3125-3.0,.0625
NO.12	0.1895	0.357	0.148	0.205	0.067	0.094	0.1520	0.1430	0.375-3.0,.0625
.25	0.2190	0.414	0.170	0.237	0.075	0.109	0.1790	0.1430	0.375-3.0,.0625
.3125	0.2795	0.518	0.211	0.295	0.084	0.137	0.2300	0.1670	0.4375-3.0,.0625
.375	0.3445	0.622	0.253	0.355	0.094	0.164	0.2930	0.1670	0.5-3.0,.0625
.4375	0.3995	0.625	0.265	0.368	0.094	0.170	0.3430	0.2000	0.75-3.0,.0625
.5	0.4635	0.750	0.297	0.412	0.106	0.190	0.4070	0.2000	0.75-3.0,.0625

Type AB Slotted Fillister Head Tapping Screw



Generic part name: TSHH

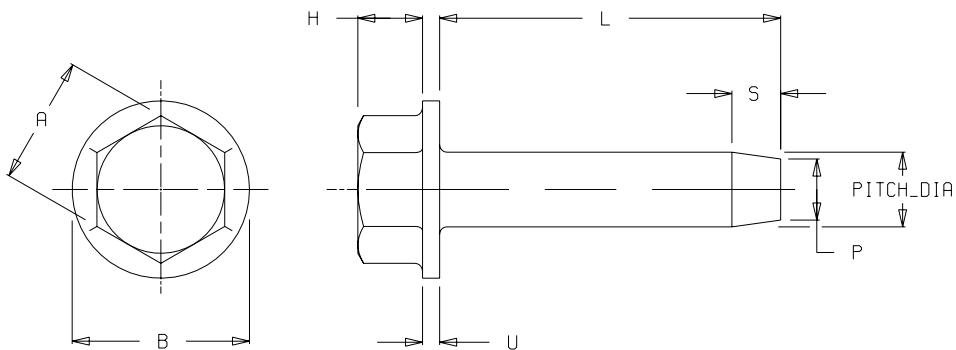
Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.

- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	PITCH_DIA	A Head Dia	H Side Height	O Total Height	J Slot Width	T Slot Depth	L Lengths
NO.0	0.0480	0.096	0.043	0.055	0.023	0.025	0.125-1.0,.0625
NO.1	0.0620	0.118	0.053	0.066	0.026	0.031	0.125-1.0,.0625
NO.2	0.0760	0.140	0.062	0.083	0.031	0.037	0.1875-1.25,.0625
NO.3	0.0880	0.161	0.070	0.095	0.035	0.043	0.1875-1.5,.0625
NO.4	0.1000	0.183	0.079	0.107	0.039	0.048	0.1875-1.5,.0625
NO.5	0.1120	0.205	0.088	0.120	0.043	0.054	0.25-1.5,.0625
NO.6	0.1215	0.226	0.096	0.132	0.048	0.060	0.25-2.0,.0625
NO.8	0.1440	0.270	0.113	0.156	0.540	0.071	0.3125-2.0,.0625
NO.10	0.1650	0.313	0.130	0.180	0.060	0.083	0.3125-3.0,.0625
NO.12	0.1895	0.357	0.148	0.205	0.067	0.094	0.375-3.0,.0625
.25	0.2190	0.414	0.170	0.237	0.075	0.109	0.375-3.0,.0625
.3125	0.2795	0.518	0.211	0.295	0.084	0.137	0.4375-3.0,.0625
.375	0.3445	0.622	0.253	0.355	0.094	0.164	0.5-3.0,.0625
.4375	0.3995	0.625	0.265	0.368	0.094	0.170	0.75-3.0,.0625
.5	0.4635	0.750	0.297	0.412	0.106	0.190	0.75-3.0,.0625

Type B Plain Hex Washer Head Tapping Screw



ANSI Inch Tapping
Screws

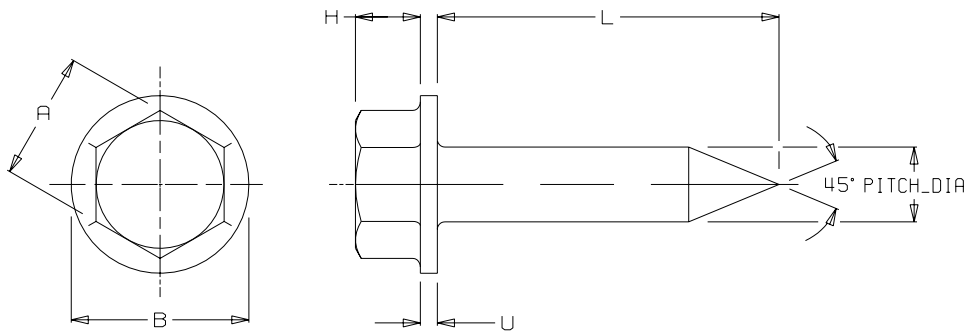
Generic part name: TSII

Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Flat Width	H Head Height	PITCH DIA	B Washer Dia	U Washer Thickness	P Point Dia	S Point Length	L Lengths
NO.2	0.1250	0.0440	0.0760	0.1660	0.0160	0.0580	0.0620	0.125-1.25,.0625
NO.3	0.1250	0.0550	0.0880	0.1770	0.0160	0.0680	0.0710	0.1875-1.25,.0625
NO.4	0.1880	0.0600	0.1000	0.2430	0.0190	0.0790	0.0830	0.1875-1.5,.0625
NO.5	0.1880	0.0700	0.1120	0.2600	0.0250	0.0870	0.1000	0.1875-1.5,.0625
NO.6	0.2500	0.0930	0.1215	0.3280	0.0250	0.0950	0.1000	0.25-2.5,.0625
NO.8	0.2500	0.1100	0.1440	0.3480	0.0310	0.1120	0.1110	0.25-2.5,.0625
NO.10	0.3120	0.1200	0.1650	0.4140	0.0310	0.1300	0.1250	0.3125-3.0,.0625
NO.12	0.3120	0.1550	0.1895	0.4320	0.0390	0.1520	0.1430	0.3125-3.0,.0625
.25	0.3750	0.1900	0.2190	0.5200	0.0500	0.1790	0.1430	0.375-3.0,.0625
.3125	0.5000	0.2300	0.2795	0.6760	0.0550	0.2300	0.1670	0.4375-3.0,.0625
.375	0.5620	0.2950	0.3445	0.7800	0.0630	0.2930	0.1670	0.5-3.0,.0625

Type AB Plain Hex Washer Head Tapping Screw



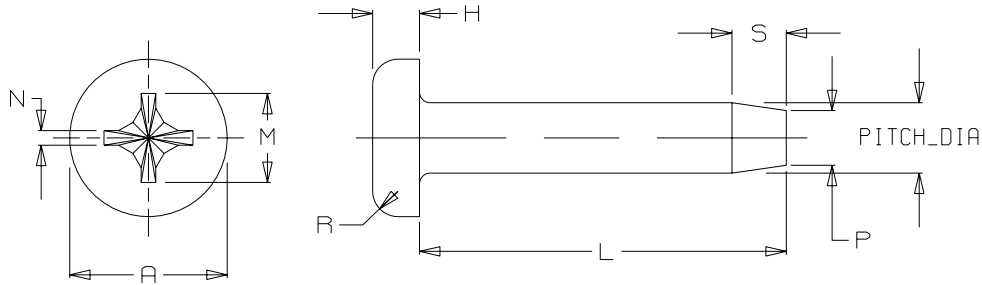
Generic part name: TSJJ

Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	A Flat Width	H Head Height	PITCH DIA	B Washer Dia	U Washer Thickns	L Lengths
NO.2	0.1250	0.0440	0.0760	0.1660	0.0160	0.125-1.25,.0625
NO.3	0.1250	0.0550	0.0880	0.1770	0.0160	0.1875-1.25,.0625
NO.4	0.1880	0.0600	0.1000	0.2430	0.0190	0.1875-1.5,.0625
NO.5	0.1880	0.0700	0.1120	0.2600	0.0250	0.1875-1.5,.0625
NO.6	0.2500	0.0930	0.1215	0.3280	0.0250	0.25-2.5,.0625
NO.8	0.2500	0.1100	0.1440	0.3480	0.0310	0.25-2.5,.0625
NO.10	0.3120	0.1200	0.1650	0.4140	0.0310	0.3125-3.0,.0625
NO.12	0.3120	0.1550	0.1895	0.4320	0.0390	0.3125-3.0,.0625
.25	0.3750	0.1900	0.2190	0.5200	0.0500	0.375-3.0,.0625
.3125	0.5000	0.2300	0.2795	0.6760	0.0550	0.4375-3.0,.0625
.375	0.5620	0.2950	0.3445	0.7800	0.0630	0.5-3.0,.0625

Type B, Type I Cross Recessed Pan Head Tapping Screw



Generic part name: TSKK

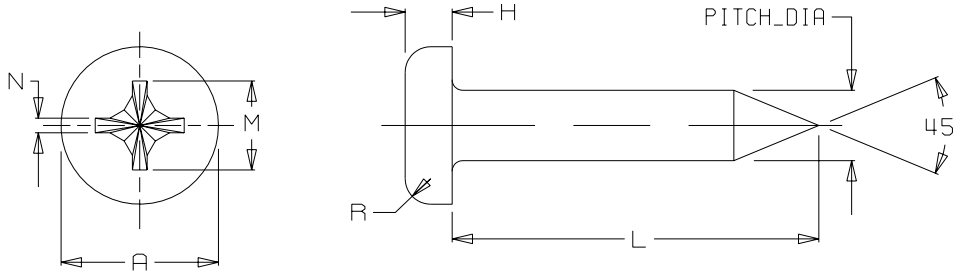
Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA value exactly as shown.

BASIC DIA	PITCH DIA	A Head Dia	H Head Height	R Head Radius	M Recess Dia	N Recess Width	P Point Dia	S Point Length	L Lengths
NO.0	0.0480	0.116	0.039	0.020	0.067	0.013	0.0310	0.0420	.125 - 1.25, .0625
NO.1	0.0620	0.142	0.046	0.025	0.074	0.014	0.0440	0.0480	.125 - 1.25, .0625
NO.2	0.0760	0.167	0.053	0.035	0.104	0.017	0.0580	0.0620	.125 - 1.25, .0625
NO.3	0.0880	0.193	0.060	0.037	0.112	0.019	0.0680	0.0710	.1875 - 1.25, .0625
NO.4	0.1000	0.219	0.068	0.042	0.122	0.019	0.0790	0.0830	.1875 - 1.5, .0625
NO.5	0.1120	0.245	0.075	0.044	0.158	0.028	0.0870	0.1000	.1875 - 1.5, .0625
NO.6	0.1215	0.270	0.082	0.046	0.166	0.028	0.0950	0.1000	.25 - 2.5, .0625
NO.8	0.1440	0.322	0.096	0.052	0.182	0.030	0.1120	0.1110	.25 - 2.5, .0625
NO.10	0.1650	0.373	0.110	0.061	0.199	0.031	0.1300	0.1250	.3125 - 3, .0625
NO.12	0.1895	0.425	0.125	0.078	0.259	0.034	0.1520	0.1430	.3125 - 3, .0625
.25	0.2190	0.492	0.144	0.087	0.281	0.036	0.1790	0.1430	.375 - 3, .0625
.3125	0.2795	0.615	0.178	0.099	0.350	0.059	0.2300	0.1670	.4375 - 3, .0625
.375	0.3445	0.740	0.212	0.143	0.389	0.065	0.2930	0.1670	.5 - 3, .0625

BASIC DIA	PITCH DIA	A Head Dia	H Head Height	R Head Radius	M Recess Dia	N Recess Width	P Point Dia	S Point Length	L Lengths
.4375	0.3995	0.863	0.247	0.153	0.413	0.068	0.3430	0.2000	.5625 - 3, .0625
.5	0.4635	0.987	0.281	0.175	0.435	0.071	0.4070	0.2000	.75 - 3, .0625

Type AB, Type I Cross Recessed Pan Head Tapping Screw



Generic part name: TSLL

Notes:

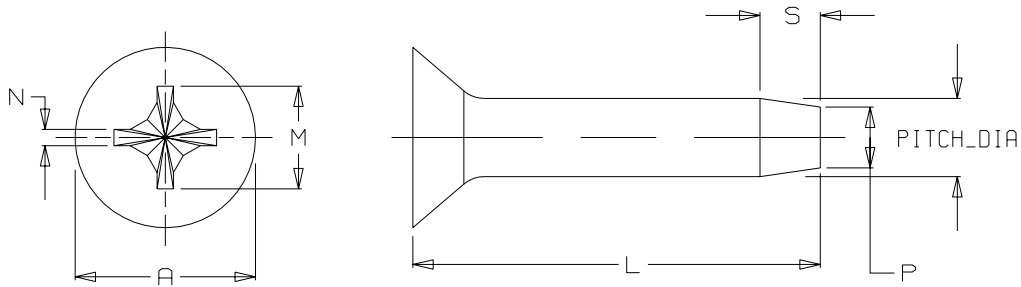
- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA value exactly as shown.

BASIC DIA	PITCH DIA	A Head Dia	H Head Height	R Head Radius	M Recess Dia.	N Recess Width	L Lengths
NO.0	0.0480	0.116	0.039	0.020	0.067	0.013	.125 - 1.25, .0625
NO.1	0.0620	0.142	0.046	0.025	0.074	0.014	.125 - 1.25, .0625
NO.2	0.0760	0.167	0.053	0.035	0.104	0.017	.125 - 1.25, .0625
NO.3	0.0880	0.193	0.060	0.037	0.112	0.019	.1875 - 1.25, .0625
NO.4	0.1000	0.219	0.068	0.042	0.122	0.019	.1875 - 1.5, .0625

ANSI Inch Tapping Screws

BASIC DIA	PITCH DIA	A Head Dia	H Head Height	R Head Radius	M Recess Dia.	N Recess Width	L Lengths
NO.5	0.1120	0.245	0.075	0.044	0.158	0.028	.1875 - 1.5, .0625
NO.6	0.1215	0.270	0.082	0.046	0.166	0.028	.25 - 2.5, .0625
NO.8	0.1440	0.322	0.096	0.052	0.182	0.030	.25 - 2.5, .0625
NO.10	0.1650	0.373	0.110	0.061	0.199	0.031	.3125 - 3, .0625
NO.12	0.1895	0.425	0.125	0.078	0.259	0.034	.3125 - 3, .0625
.25	0.2190	0.492	0.144	0.087	0.281	0.036	.375 - 3, .0625
.3125	0.2795	0.615	0.178	0.099	0.350	0.059	.4375 - 3, .0625
.375	0.3445	0.740	0.212	0.143	0.389	0.065	.5 - 3, .0625
.4375	0.3995	0.863	0.247	0.153	0.413	0.068	.5625 - 3, .0625
.5	0.4635	0.987	0.281	0.175	0.435	0.071	.75 - 3, .0625

Type B, Type I Cross Recessed Flat Countersunk Head



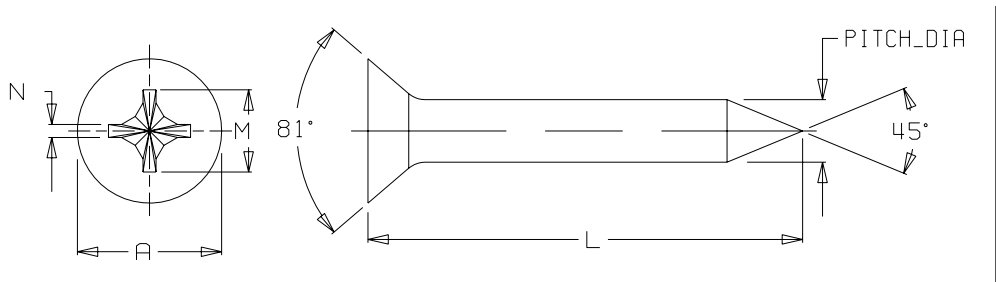
Generic part name: TSMM

Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA value exactly as shown.

BASIC DIA	PITCH DIA	A Head Dia	M Recess Dia	N Recess Width	P Point Dia	S Point Length	L Lengths
NO.0	0.0480	0.119	0.069	0.014	0.0310	0.0420	.125 - 1.25, .0625
NO.1	0.0620	0.146	0.077	0.015	0.0440	0.0480	.125 - 1.25, .0625
NO.2	0.0760	0.172	0.102	0.017	0.0580	0.0620	.1875 - 1.25, .0625
NO.3	0.0880	0.199	0.107	0.018	0.0680	0.0710	.25 - 1.25, .0625
NO.4	0.1000	0.225	0.128	0.018	0.0790	0.0830	.25 - 1.5, .0625
NO.5	0.1120	0.252	0.154	0.027	0.0870	0.1000	.3125 - 1.5, .0625
NO.6	0.1215	0.279	0.174	0.029	0.0950	0.1000	.3125 - 2.5, .0625
NO.8	0.1440	0.332	0.189	0.030	0.1120	0.1110	.375 - 2.5, .0625
NO.10	0.1650	0.385	0.204	0.032	0.1300	0.1250	.375 - 3, .0625
NO.12	0.1895	0.438	0.268	0.035	0.1520	0.1430	.4375 - 3, .0625
.25	0.2190	0.507	0.283	0.036	0.1790	0.1430	.5 - 3, .0625
.3125	0.2795	0.635	0.365	0.061	0.2300	0.1670	.625 - 3, .0625
.375	0.3445	0.762	0.393	0.065	0.2930	0.1670	.6875 - 3, .0625
.4375	0.3995	0.812	0.409	0.068	0.3430	0.2000	.8125 - 3, .0625
.5	0.4635	0.875	0.424	0.069	0.4070	0.2000	.875 - 3, .0625

Type AB, Type I Cross Recessed Flat Countersunk Head



ANSI Inch Tapping Screws

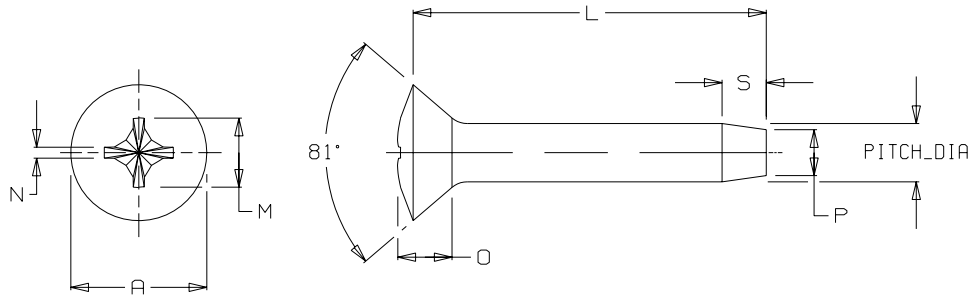
Generic part name: TSNN

Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA value exactly as shown.

BASIC DIA	PITCH DIA	A Head Dia	M Recess Dia	N Recess Width	L Lengths
NO.0	0.0480	0.119	0.069	0.014	.1875 - 1.25, .0625
NO.1	0.0620	0.146	0.077	0.015	.1875 - 1.25, .0625
NO.2	0.0760	0.172	0.102	0.017	.25 - 1.25, .0625
NO.3	0.0880	0.199	0.107	0.018	.25 - 1.5, .0625
NO.4	0.1000	0.225	0.128	0.018	.3125 - 1.5, .0625
NO.5	0.1120	0.252	0.154	0.027	.3125 - 1.5, .0625
NO.6	0.1215	0.279	0.174	0.029	.375 - 2.5, .0625
NO.8	0.1440	0.332	0.189	0.030	.375 - 2.5, .0625
NO.10	0.1650	0.385	0.204	0.032	.4375 - 3, .0625
NO.12	0.1895	0.438	0.268	0.035	.625 - 3, .0625
.25	0.2190	0.507	0.283	0.036	.6875 - 3, .0625
.3125	0.2795	0.635	0.365	0.061	.75 - 3, .0625
.375	0.3445	0.762	0.393	0.065	.9375 - 3, .0625
.4375	0.3995	0.812	0.409	0.068	1 - 3, .0625
.5	0.4635	0.875	0.424	0.069	1 - 3, .0625

Type B, Type I Cross Recessed Oval Countersunk Head



Generic part name: TSOO

Notes:

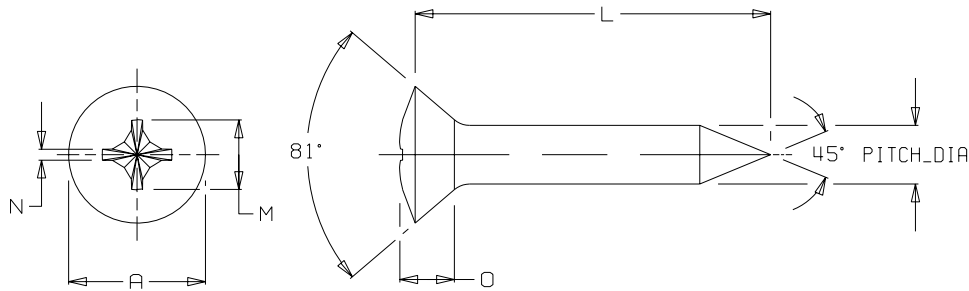
- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC_DIA	PITCH DIA	A Head Dia	O Total Height	M Recess Dia	N Recess Width	P Point Dia	S Point Length	L Lengths
NO.0	0.0480	0.119	0.056	0.074	0.014	0.0310	0.0420	0.1875-1.25, .0625
NO.1	0.0620	0.146	0.068	0.077	0.015	0.0440	0.0480	0.1875-1.25, .0625
NO.2	0.0760	0.172	0.080	0.112	0.018	0.0580	0.0620	0.25-1.25, .0625
NO.3	0.0880	0.199	0.092	0.124	0.019	0.0680	0.0710	0.25-1.5, .0625
NO.4	0.1000	0.225	0.104	0.136	0.019	0.0790	0.0830	0.3125-1.5, .0625
NO.5	0.1120	0.252	0.116	0.158	0.028	0.0870	0.1000	0.3125-1.5, .0625
NO.6	0.1215	0.279	0.128	0.178	0.030	0.0950	0.1000	0.375-2.5, .0625
NO.8	0.1440	0.332	0.152	0.192	0.031	0.1120	0.1110	0.375-2.5, .0625
NO.10	0.1650	0.385	0.176	0.209	0.033	0.1300	0.1250	0.4375-3.0, .0625
NO.12	0.1895	0.438	0.200	0.270	0.038	0.1520	0.1430	0.625-3.0, .0625
.25	0.2190	0.507	0.232	0.290	0.040	0.1790	0.1430	0.6875-3.0, .0625
.3125	0.2795	0.635	0.290	0.390	0.065	0.2300	0.1670	0.75-3.0, .0625
.375	0.3445	0.762	0.347	0.410	0.068	0.2930	0.1670	0.9375-3.0, .0625

ANSI Inch Tapping Screws

BASIC _DIA	PITCH DIA	A Head Dia	O Total Height	M Recess Dia	N Recess Width	P Point Dia	S Point Length	L Lengths
.4375	0.3995	0.812	0.345	0.422	0.070	0.3430	0.2000	1-3.0, .0625
.5	0.4635	0.875	0.354	0.437	0.071	0.4070	0.2000	1-3.0, .0625

Type AB, Type I Cross Recessed Oval Countersunk Head



Generic part name: TSPP

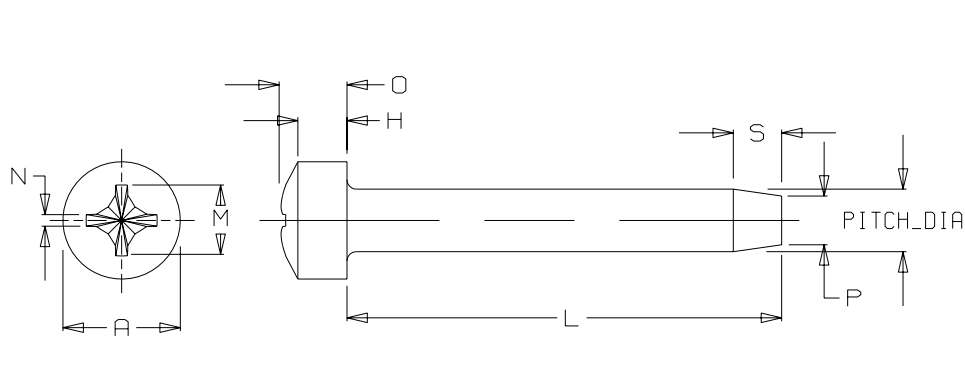
Notes:

- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC _DIA	PITCH DIA	A Head Dia	O Total Height	M Recess Dia	N Recess Width	L Lengths
NO.0	0.0480	0.119	0.056	0.074	0.014	0.1875-1.25, .0625
NO.1	0.0620	0.146	0.068	0.077	0.015	0.1875-1.25, .0625
NO.2	0.0760	0.172	0.080	0.112	0.018	0.25-1.25, .0625
NO.3	0.0880	0.199	0.092	0.124	0.019	0.25-1.5, .0625
NO.4	0.1000	0.225	0.104	0.136	0.019	0.3125-1.5, .0625
NO.5	0.1120	0.252	0.116	0.158	0.028	0.3125-1.5, .0625
NO.6	0.1215	0.279	0.128	0.178	0.030	0.375-2.5, .0625
NO.8	0.1440	0.332	0.152	0.192	0.031	0.375-2.5, .0625

BASIC DIA	PITCH DIA	A Head Dia	O Total Height	M Recess Dia	N Recess Width	L Lengths
NO.10	0.1650	0.385	0.176	0.209	0.033	0.4375-3.0, .0625
NO.12	0.1895	0.438	0.200	0.270	0.038	0.625-3.0, .0625
.25	0.2190	0.507	0.232	0.290	0.040	0.6875-3.0, .0625
.3125	0.2795	0.635	0.290	0.390	0.065	0.75-3.0, .0625
.375	0.3445	0.762	0.347	0.410	0.068	0.9375-3.0, .0625
.4375	0.3995	0.812	0.345	0.422	0.070	1-3.0, .0625
.5	0.4635	0.875	0.354	0.437	0.071	1-3.0, .0625

Type B, Type I Cross Recessed Fillister Head



Generic part name: TSQQ

Notes:

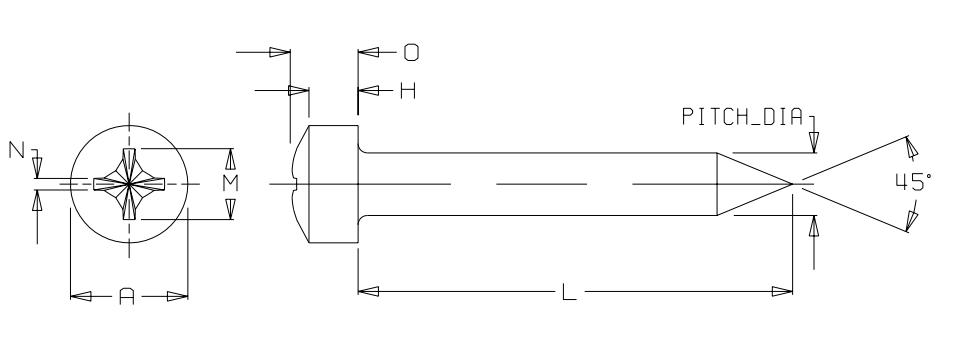
- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC DIA value exactly as shown.

ANSI Inch Tapping
Screws

BASIC DIA	PITCH DIA	A Head Dia	H Side Height	O Total Height	M Recess Dia	N Recess Width	P Point Dia	S Point Length	L Lengths
NO.0	0.0480	0.096	0.043	0.055	0.067	0.013	0.0310	0.0420	0.125-1.25, .0625
NO.1	0.0620	0.118	0.053	0.066	0.074	0.014	0.0440	0.0480	0.125-1.25, .0625
NO.2	0.0760	0.140	0.062	0.083	0.104	0.017	0.0580	0.0620	0.1875-1.25, .0625

BASIC DIA	PITCH DIA	A Head Dia	H Side Height	O Total Height	M Recess Dia	N Recess Width	P Point Dia	S Point Length	L Lengths
NO.3	0.0880	0.161	0.070	0.095	0.112	0.019	0.0680	0.0710	0.25-1.25, .0625
NO.4	0.1000	0.183	0.079	0.107	0.122	0.019	0.0790	0.0830	0.25-1.5, .0625
NO.5	0.1120	0.205	0.088	0.120	0.143	0.027	0.0870	0.1000	0.3125-1.5, .0625
NO.6	0.1215	0.226	0.096	0.132	0.166	0.028	0.0950	0.1000	0.3125-2.5, .0625
NO.8	0.1440	0.270	0.113	0.156	0.182	0.030	0.1120	0.1110	0.375-2.5, .0625
NO.10	0.1650	0.313	0.130	0.180	0.199	0.031	0.1300	0.1250	0.375-3.0, .0625
NO.12	0.1895	0.357	0.148	0.205	0.259	0.034	0.1520	0.1430	0.4375-3.0, .0625
.25	0.2190	0.414	0.170	0.237	0.281	0.036	0.1790	0.1430	0.5-3.0, .0625
.3125	0.2795	0.518	0.211	0.295	0.322	0.042	0.2300	0.1670	0.625-3.0, .0625
.375	0.3445	0.622	0.253	0.355	0.389	0.065	0.2930	0.1670	0.6875-3.0, .0625
.4375	0.3995	0.625	0.265	0.368	0.413	0.068	0.3430	0.2000	0.8125-3.0, .0625
.5	0.4635	0.750	0.297	0.412	0.435	0.071	0.4070	0.2000	0.875-3.0, .0625

Type AB, Type I Cross Recessed Fillister Head



Generic part name: TSRR

Notes:

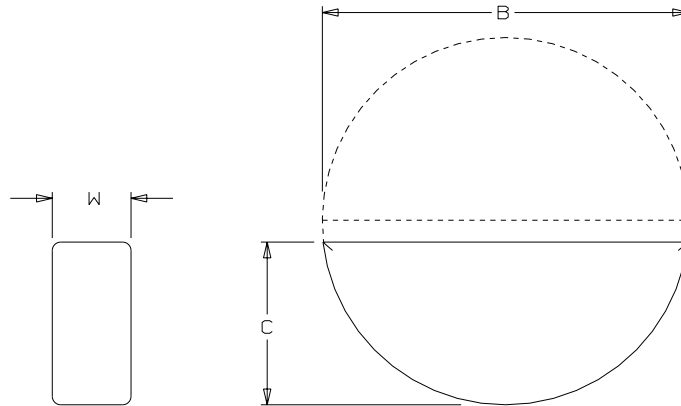
- Corresponds to standard ANSI B18.6.4-1981
- Lengths given as: from - to, incremented by.
- Enter the BASIC_DIA value exactly as shown.

BASIC _DIA	PITCH DIA	A Head Dia	H Side Height	O Total Height	M Recess Dia	N Recess Width	L Lengths
NO.0	0.0480	0.096	0.043	0.055	0.067	0.013	0.125-1.25, .0625
NO.1	0.0620	0.118	0.053	0.066	0.074	0.014	0.125-1.25, .0625
NO.2	0.0760	0.140	0.062	0.083	0.104	0.017	0.1875-1.25, .0625
NO.3	0.0880	0.161	0.070	0.095	0.112	0.019	0.25-1.25, .0625
NO.4	0.1000	0.183	0.079	0.107	0.122	0.019	0.25-1.5, .0625
NO.5	0.1120	0.205	0.088	0.120	0.143	0.027	0.3125-1.5, .0625
NO.6	0.1215	0.226	0.096	0.132	0.166	0.028	0.3125-2.5, .0625
NO.8	0.1440	0.270	0.113	0.156	0.182	0.030	0.375-2.5, .0625
NO.10	0.1650	0.313	0.130	0.180	0.199	0.031	0.375-3.0, .0625
NO.12	0.1895	0.357	0.148	0.205	0.259	0.034	0.4375-3.0, .0625
.25	0.2190	0.414	0.170	0.237	0.281	0.036	0.5-3.0, .0625
.3125	0.2795	0.518	0.211	0.295	0.322	0.042	0.625-3.0, .0625
.375	0.3445	0.622	0.253	0.355	0.389	0.065	0.6875-3.0, .0625
.4375	0.3995	0.625	0.265	0.368	0.413	0.068	0.8125-3.0, .0625
.5	0.4635	0.750	0.297	0.412	0.435	0.071	0.875-3.0, .0625

20

ANSI Inch Woodruff Keys

Full Radius Type, Small Series



Generic part name: KWA

Notes:

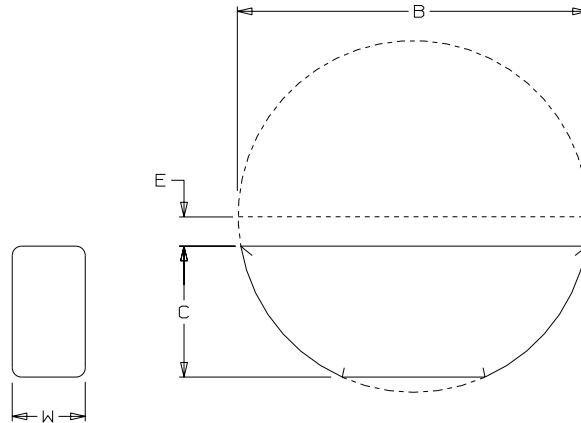
- Corresponds to standard USAS B17.2-1967.
- Enter the KEY NUMBER value exactly as shown.

KEY NUMBER	B Diameter	C Height	W Width
202	0.2500	0.1090	0.0625
202.5	0.3125	0.1400	0.0625
302.5	0.3125	0.1400	0.0938
203	0.3750	0.1720	0.0625
303	0.3750	0.1720	0.0938
403	0.3750	0.1720	0.1250
204	0.5000	0.2030	0.0625
304	0.5000	0.2030	0.0938
404	0.5000	0.2030	0.1250
305	0.6250	0.2500	0.9375
405	0.6250	0.2500	0.1250
505	0.6250	0.2500	0.1562

KEY NUMBER	B Diameter	C Height	W Width
605	0.6250	0.2500	0.1875
406	0.7500	0.3130	0.1250
506	0.7500	0.3130	0.1562
606	0.7500	0.3130	0.1875
806	0.7500	0.3130	0.2500
507	0.8750	0.3750	0.1562
607	0.8750	0.3750	0.1875
707	0.8750	0.3750	0.2188
807	0.8750	0.3750	0.2500
608	1.0000	0.4380	0.1875
708	1.0000	0.4380	0.2188
808	1.0000	0.4380	0.2500
1008	1.0000	0.4380	0.3125
1208	1.0000	0.4380	0.3750
609	1.1250	0.4840	0.1875
709	1.1250	0.4840	0.2188
809	1.1250	0.4840	0.2500
1009	1.1250	0.4840	0.3125
610	1.2500	0.5470	0.1875
710	1.2500	0.5470	0.2188
810	1.2500	0.5470	0.2500
1010	1.2500	0.5470	0.3125
1210	1.2500	0.5470	0.3750
811	1.3750	0.5940	0.2500
1011	1.3750	0.5940	0.3125
1211	1.3750	0.5940	0.3750
812	1.5000	0.6410	0.2500
1012	1.5000	0.6410	0.3125
1212	1.5000	0.6410	0.3750

ANSI Inch Woodruff Keys

Flat Bottom Type, Small Series



Generic Name: KWB

Notes:

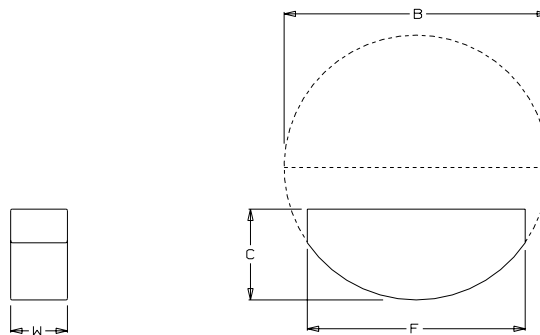
- Corresponds to standard USAS B17.2-1967.
- Enter the KEY NUMBER value exactly as shown.

KEY NUMBER	B Diameter	C Height	W Width	E Distance Below Center
202	0.2500	0.1090	0.0625	0.0156
202.5	0.3125	0.1400	0.0625	0.0156
302.5	0.3125	0.1400	0.0938	0.0156
203	0.3750	0.1720	0.0625	0.0156
303	0.3750	0.1720	0.0938	0.0156
403	0.3750	0.1720	0.1250	0.0156
204	0.5000	0.1940	0.0625	0.0469
304	0.5000	0.1940	0.0938	0.0469
404	0.5000	0.1940	0.1250	0.0469
305	0.6250	0.2400	0.0938	0.0625
405	0.6250	0.2400	0.1250	0.0625

KEY NUMBER	B Diameter	C Height	W Width	E Distance Below Center
505	0.6250	0.2400	0.1562	0.0625
605	0.6250	0.2400	0.1875	0.0625
406	0.7500	0.3030	0.1250	0.0625
506	0.7500	0.3030	0.1562	0.0625
606	0.7500	0.3030	0.1875	0.0625
806	0.7500	0.3030	0.2500	0.0625
507	0.8750	0.3650	0.1562	0.0625
607	0.8750	0.3650	0.1875	0.0625
707	0.8750	0.3650	0.2188	0.0625
807	0.8750	0.3650	0.2500	0.0625
608	1.0000	0.4280	0.1875	0.0625
708	1.0000	0.4280	0.2188	0.0625
808	1.0000	0.4280	0.2500	0.0625
1008	1.0000	0.4280	0.3125	0.0625
1208	1.0000	0.4280	0.3750	0.0625
609	1.1250	0.4750	0.1875	0.0781
709	1.1250	0.4750	0.2188	0.0781
809	1.1250	0.4750	0.2500	0.0781
1009	1.1250	0.4750	0.3125	0.0781
610	1.1250	0.5370	0.1875	0.0781
710	1.1250	0.5370	0.2187	0.0781
810	1.1250	0.5370	0.2500	0.0781
1010	1.1250	0.5370	0.3125	0.0781
1210	1.1250	0.5370	0.3750	0.0781
811	1.3750	0.5840	0.2500	0.0937
1011	1.3750	0.5840	0.3125	0.0937
1211	1.3750	0.5840	0.3750	0.0937
812	1.5000	0.6310	0.2500	0.1093
1012	1.5000	0.6310	0.3125	0.1093
1212	1.5000	0.6310	0.3750	0.1093

ANSI Inch Woodruff Keys

Full Radius Type, Large Series



Generic Name: KWC

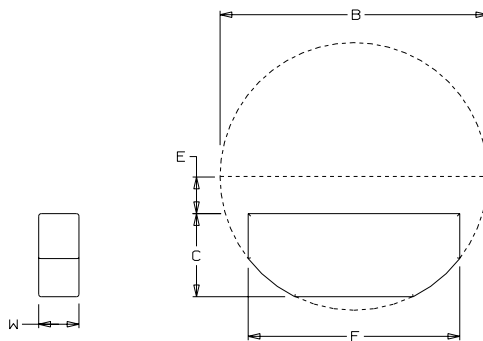
Notes:

- Corresponds to standard USAS B17.2-1967.
- Enter the KEY NUMBER value exactly as shown.

KEY NUMBER	B Diameter	F Length	C Height	W Width
617-1	2.1250	1.3800	0.4060	0.1875
817-1	2.1250	1.3800	0.4060	0.2500
1017-1	2.1250	1.3800	0.4060	0.3125
1217-1	2.1250	1.3800	0.4060	0.3750
617	2.1250	1.7230	0.5310	0.1875
817	2.1250	1.7230	0.5310	0.2500
1017	2.1250	1.7230	0.5310	0.3125
1217	2.1250	1.7230	0.5310	0.3750
822-1	2.7500	2.0000	0.5940	0.2500
1022-1	2.7500	2.0000	0.5940	0.3125
1222-1	2.7500	2.0000	0.5940	0.3750
1422-1	2.7500	2.0000	0.5940	0.4375

KEY NUMBER	B Diameter	F Length	C Height	W Width
1622-1	2.7500	2.0000	0.5940	0.5000
822	2.7500	2.3170	0.7500	0.2500
1022	2.7500	2.3170	0.7500	0.3125
1222	2.7500	2.3170	0.7500	0.3750
1422	2.7500	2.3170	0.7500	0.4375
1622	2.7500	2.3170	0.7500	0.5000
1228	3.5000	2.8800	0.9380	0.3750
1428	3.5000	2.8800	0.9380	0.4375
1628	3.5000	2.8800	0.9380	0.5000
1828	3.5000	2.8800	0.9380	0.5625
2028	3.5000	2.8800	0.9380	0.6250
2228	3.5000	2.8800	0.9380	0.6875
2428	3.5000	2.8800	0.9380	0.7500

Flat Bottom Type, Large Series



Generic Name: KWD

Notes:

- Corresponds to standard USAS B17.2-1967.
- Enter the KEY NUMBER value exactly as shown.

ANSI Inch Woodruff
Keys

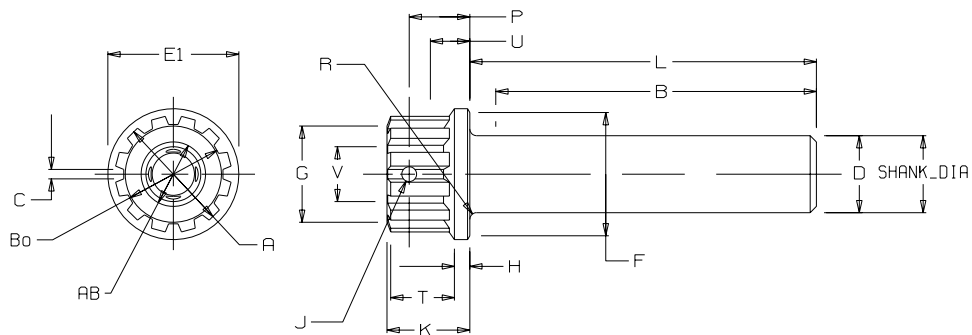
KEY NUMBER	B Diameter	F Length	C Height	W Width	E Distance Below Center
617-1	2.1250	1.3800	0.3960	0.1875	0.6562
817-1	2.1250	1.3800	0.3960	0.2500	0.6562
1017-1	2.1250	1.3800	0.3960	0.3125	0.6562
1217-1	2.1250	1.3800	0.3960	0.3750	0.6562
617	2.1250	1.7230	0.5210	0.1875	0.5312
817	2.1250	1.7230	0.5210	0.2500	0.5312
1017	2.1250	1.7230	0.5210	0.3125	0.5312
1217	2.1250	1.7230	0.5210	0.3750	0.5312
822-1	2.7500	2.0000	0.5840	0.2500	0.7812
1022-1	2.7500	2.0000	0.5840	0.3125	0.7812
1222-1	2.7500	2.0000	0.5840	0.3750	0.7812
1422-1	2.7500	2.0000	0.5840	0.4375	0.7812
1622-1	2.7500	2.0000	0.5840	0.5000	0.7812
822	2.7500	2.3170	0.7400	0.2500	0.6250
1022	2.7500	2.3170	0.7400	0.3125	0.6250
1222	2.7500	2.3170	0.7400	0.3750	0.6250
1422	2.7500	2.3170	0.7400	0.4375	0.6250
1622	2.7500	2.3170	0.7400	0.5000	0.6250
1228	3.5000	2.8800	0.9280	0.3750	0.8125
1428	3.5000	2.8800	0.9280	0.4375	0.8125
1628	3.5000	2.8800	0.9280	0.5000	0.8125
1828	3.5000	2.8800	0.9280	0.5625	0.8125
2028	3.5000	2.8800	0.9280	0.6250	0.8125
2228	3.5000	2.8800	0.9280	0.6875	0.8125
2428	3.5000	2.8800	0.9280	0.7500	0.8125

Section 3

ANSI Metric Series Part Library

ANSI Metric Aerospace Fasteners

Spline Wrenched Bolts



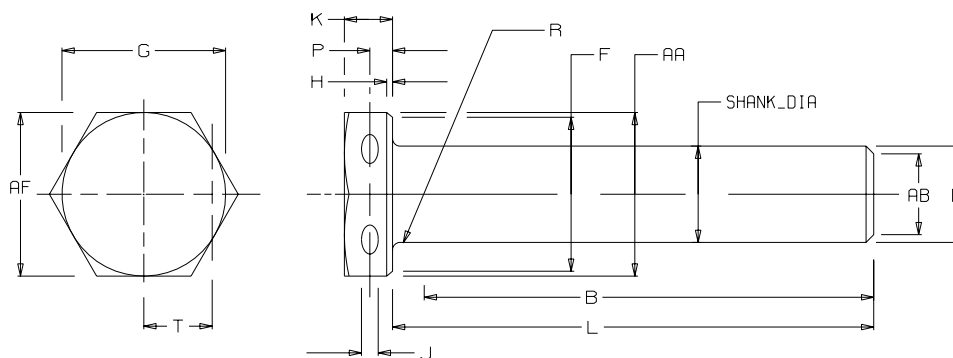
Generic Part Name: MASB

Notes:

- Corresponds to standards SAE MA 1518 and SAE MA 1549.
- These parts do not conform to ISO standard.
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

Name	Nom. Dia. & Thread Pitch	Wrench Dash No.	D Thd Dia.	E1 Flange Dia.	F Bearing Dia.	G Head Top Dia.	Shank Dia.	L Lengths
MASB01	4X0.7	06	4.00	8.30	7.50	6.00	4.00	18 to 56 by 2
MASB02	5X0.8	07	5.00	9.10	8.30	7.00	5.00	20 to 60 by 2, 64, 68
MASB03	6X1.0	08	6.00	10.60	9.80	8.00	6.00	22 to 58 by 2, 60 to 84 by 4
MASB04	7X1.0	09	7.00	12.10	11.30	9.00	7.00	24 to 58 by 2, 60 to 96 by 4
MASB05	8X1.0	10	8.00	13.60	12.80	10.00	8.00	26 to 58 by 2, 60 to 140 by 4
MASB06	10X1.25	12	10.00	16.70	15.70	12.00	10.00	32 to 58 by 2, 60 to 140 by 4
MASB07	12X1.25	14	12.00	19.90	18.80	14.00	12.00	36 to 58 by 2, 60 to 168 by 4

Hexagon Head Bolts



Generic Part Name: MAHB

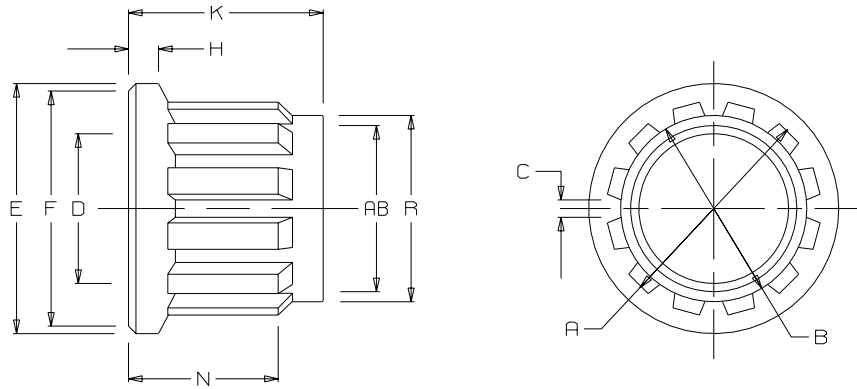
Notes:

- Corresponds to standards SAE MA 1518 and SAE MA 1549.
- These parts do not conform to ISO standard.

- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom. Dia. & Thread Pitch	D Thread Dia.	Shank Dia.	Af Flat Width	K Head Height	F Bearing Dia.	L Lengths
MAHB01	M3X0.5	3.00	3.00	7.00	3.40	6.40	14 to 42 by 2
MAHB02	M4X0.7	4.00	4.00	8.00	3.90	7.40	18 to 56 by 2
MAHB03	M5X0.8	5.00	5.00	9.00	3.00	8.30	20 to 60 by 2, 64, 68
MAHB04	M6X1	6.00	6.00	11.00	3.50	10.20	22 to 58 by 2, 60 to 84 by 4
MAHB05	M7X1	7.00	7.00	12.00	4.00	11.20	24 to 58 by 2, 60 to 96 by 4
MAHB06	M8X1	8.00	8.00	14.00	4.50	13.20	26 to 58 by 2, 60 to 112 by 4
MAHB07	M10X1.25	10.00	10.00	17.00	5.00	16.00	32 to 58 by 2, 60 to 140 by 4
MAHB08	M12X1.25	12.00	12.00	19.00	6.00	18.00	36 to 58 by 2, 60 to 168 by 4
MAHB09	M14X1.5	14.00	14.00	22.00	7.00	21.00	40 to 196 by 4
MAHB10	M16X1.5	16.00	16.00	24.00	8.00	23.00	44 to 220 by 4
MAHB11	M18X1.5	18.00	18.00	27.00	9.00	26.00	48 to 252 by 4
MAHB12	M20X1.5	20.00	20.00	30.00	10.00	29.00	52 to 276 by 4

Spline Drive Nuts



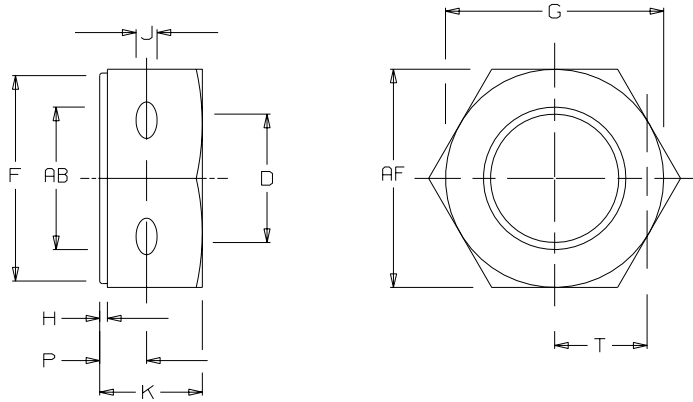
Generic Part Name: MASN

Notes:

- Corresponds to standards SAE MA 1518 and SAE MA 1549.
- These parts do not conform to ISO standard.

Name	Nom. Dia. & Thread Pitch	Wrench Dash No.	D Thrd Dia.	E Flng Dia.	F Bearing Dia.	K Head Hgt	R Head Top Dia.	Ab Cntrs nk Dia.
MASN01	5X0.8	07	5.00	9.10	8.30	7.00	7.22	5.80
MASN02	6X1.0	08	6.00	10.60	9.80	8.10	8.26	7.10
MASN03	7X1.0	09	7.00	12.10	11.30	9.10	9.31	8.10
MASN04	8X1.0	10	8.00	13.60	12.80	10.40	10.36	9.10
MASN05	10X1.25	12	10.00	16.70	15.70	13.00	12.44	11.10
MASN06	12X1.25	15	12.00	19.90	18.80	15.00	15.54	13.10

Plain Hexagon Nuts



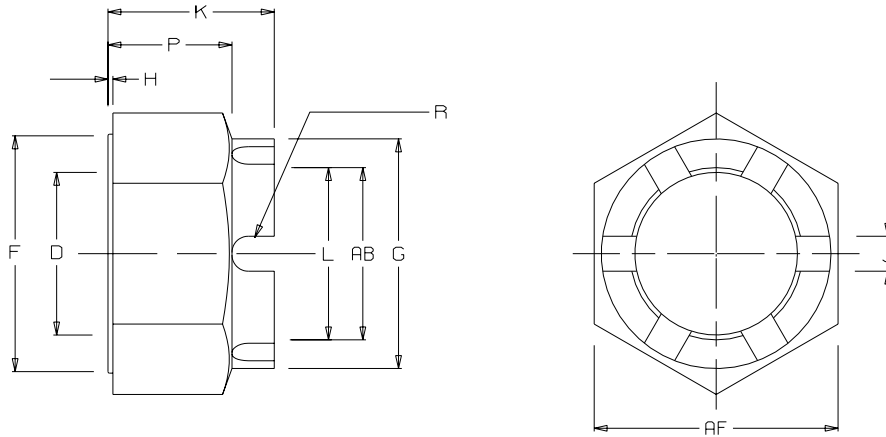
Generic Part Name: MAHN

Notes:

- Corresponds to standard SAE MA 1518.
- These parts do not conform to an ISO standard.

Name	Nom. Dia. & Thread Pitch	D Thread Dia.	Af Flat Width	K Nut Height	F Bearing Dia.	H Washer Thick.	Ab Cntrs nk Dia.
MAHN01	M3X0.5	3.00	7.00	2.40	6.40	0.40	3.80
MAHN02	M4X0.7	4.00	8.00	3.20	7.40	0.50	4.80
MAHN03	M5X0.8	5.00	9.00	4.00	8.30	0.50	5.80
MAHN04	M6X1	6.00	11.00	4.80	10.20	0.50	7.10
MAHN05	M7X1	7.00	12.00	5.60	11.20	0.50	8.10
MAHN06	M8X1	8.00	14.00	6.40	13.20	0.50	9.10
MAHN07	M10X1.25	10.00	17.00	8.00	16.00	0.60	11.10
MAHN08	M12X1.25	12.00	19.00	9.60	18.00	0.60	13.10
MAHN09	M14X1.5	14.00	22.00	11.20	21.00	0.60	15.20
MAHN10	M16X1.5	16.00	24.00	12.80	23.00	0.60	17.20
MAHN11	M18X1.5	18.00	27.00	14.40	26.00	0.60	19.20
MAHN12	M20X1.5	20.00	30.00	16.00	29.00	0.60	21.20

Castellated Nuts



Generic Part Name: MACN

Notes:

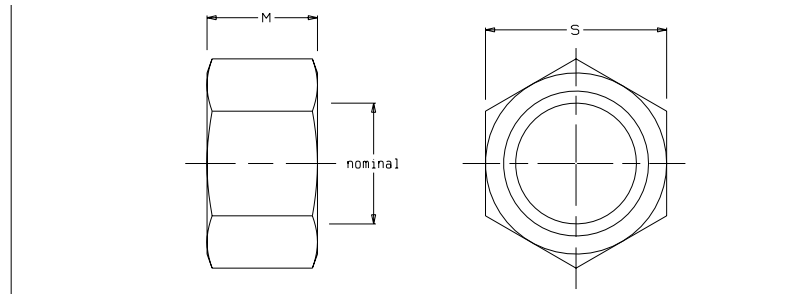
- Corresponds to standard SAE MA 1518
- These parts do not conform to an ISO standard.

Name	Nom. Dia. & Thread Pitch	D Thrd Dia.	Af Flat Width	K Nut Hgt	F Bearing Dia.	Ab Cntrs nk Dia.	G Head Top Dia.	P Flat Hgt
MACN01	M4X0.7	4.00	7.00	5.25	6.40	4.80	9.25	3.25
MACN02	M5X0.8	5.00	8.00	6.45	7.40	5.80	9.25	4.00
MACN03	M6X1	6.00	10.00	7.15	9.30	7.10	9.25	4.75
MACN04	M7X1	7.00	11.00	8.35	10.20	8.10	10.25	5.50
MACN05	M8X1	8.00	13.00	9.05	12.20	9.10	11.25	6.25
MACN06	M10X1.25	10.00	17.00	11.35	16.00	11.10	13.25	7.75
MACN07	M12X1.25	12.00	19.00	12.85	18.00	13.10	16.25	9.25
MACN08	M14X1.5	14.00	22.00	15.15	21.00	15.20	18.25	10.75
MACN09	M16X1.5	16.00	24.00	16.65	23.00	17.20	22.25	12.25
MACN10	M18X1.5	18.00	27.00	18.95	26.00	19.20	25.25	13.75
MACN11	M20X1.5	20.00	30.00	20.45	29.00	21.20	28.25	15.25

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ANSI Metric Hex Nuts

Hex Nuts, Style 1



Generic Part Name: MHN1

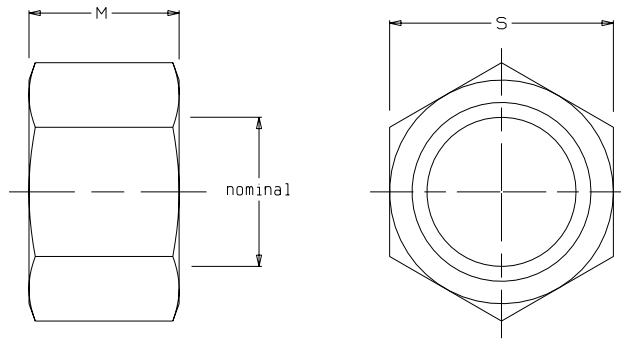
Notes:

- Corresponds to standard ANSI B18 2.4 1M-1979(1989).

Name	Nominal Nut Dia. & Thread Pitch	Nominal Dia.	S Width Across Flats	M Nut Thickness
MHN101	M1.6X0.35	1.60	3.20	1.30
MHN102	M2X0.4	2.00	4.00	1.60
MHN103	M2.5X0.45	2.50	5.00	2.00
MHN104	M3X0.5	3.00	5.50	2.40
MHN105	M3.5X0.6	3.50	6.00	2.80
MHN106	M4X0.7	4.00	7.00	3.20
MHN107	M5X0.8	5.00	8.00	4.70
MHN108	M6X1	6.00	10.00	5.20
MHN109	M8X1.25	8.00	13.00	6.80
MHN110	M10X1.5	10.00	16.00	8.40
MHN111	M12X1.75	12.00	18.00	10.80
MHN112	M14X2	14.00	21.00	12.80
MHN113	M16X2	16.00	24.00	14.80
MHN114	M20X2.5	20.00	30.00	18.00
MHN115	M24X3	24.00	36.00	21.50

Name	Nominal Nut Dia. & Thread Pitch	Nominal Dia.	S Width Across Flats	M Nut Thickness
MHN116	M30X3.5	30.00	46.00	25.60
MHN117	M36X4	36.00	55.00	31.00

Hex Nuts, Style 2



Generic Part Name: MHN2

Notes:

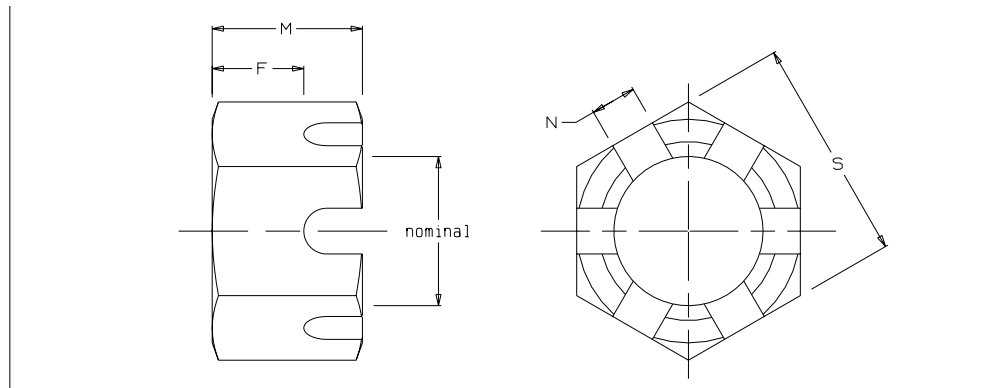
- Corresponds to standard ANSI B18 2.4 2M-1979(1989).

Name	Nominal Nut Dia. & Thread Pitch	Nominal Dia.	S Width Across Flats	M Nut Thickness
MHN201	M3X0.5	3.00	5.50	2.90
MHN202	M3.5X0.6	3.50	6.00	3.30
MHN203	M4X0.7	4.00	7.00	3.80
MNH204	M5X0.8	5.00	8.00	5.10
MHN205	M6X1	6.00	10.00	5.70
MHN206	M8X1.25	8.00	13.00	7.50
MHN207	M10X1.5	10.00	16.00	9.30
MHN208	M12X1.75	12.00	18.00	12.00

ANSI Metric Hex Nuts

Name	Nominal Nut Dia. & Thread Pitch	Nominal Dia.	S Width Across Flats	M Nut Thickness
MHN209	M14X2	14.00	21.00	14.10
MHN210	M16X2	16.00	24.00	16.40
MHN211	M20X2.5	20.00	30.00	20.30
MHN212	M24X3	24.00	36.00	23.90
MHN213	M30X3.5	30.00	46.00	28.60
MHN214	M36X4	36.00	55.00	34.70

Slotted Hex Nuts



Generic Part Name: MSHN

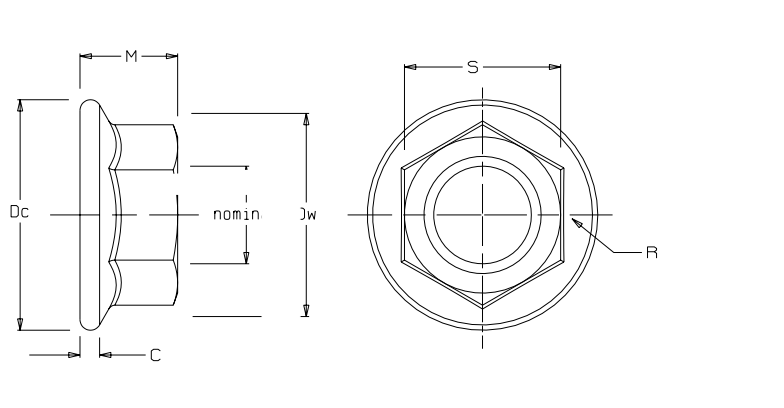
Notes:

- Corresponds to standard ANSI B18 2.4 3M-1979(1989).

Name	Nominal Nut Dia. & Thread Pitch	Nominal Dia.	S Width Across Flats	M Thickness	F Unslotted Thickness	N Width Of Slot
MSHN01	M5X0.8	5.00	8.00	5.10	3.20	2.00

Name	Nominal Nut Dia. & Thread Pitch	Nominal Dia.	S Width Across Flats	M Thickness	F Unslotted Thickness	N Width Of Slot
MSHN02	M6X1	6.00	10.00	5.70	3.50	2.40
MSHN03	M8X1.25	8.00	13.00	7.50	4.40	2.90
MSHN04	M10X1.5	10.00	16.00	9.30	5.20	3.40
MSHN05	M12X1.75	12.00	18.00	12.00	7.30	4.00
MSHN06	M14X2	14.00	21.00	14.10	8.60	4.30
MSHN07	M16X2	16.00	24.00	16.40	9.90	5.30
MSHN08	M20X2.5	20.00	30.00	20.30	13.30	5.70
MSHN09	M24X3	24.00	36.00	23.90	15.40	6.70
MSHN10	M30X3.5	30.00	46.00	28.60	18.10	8.50
MSHN11	M36X4	36.00	55.00	34.70	23.70	8.50

Hex Flange Nuts



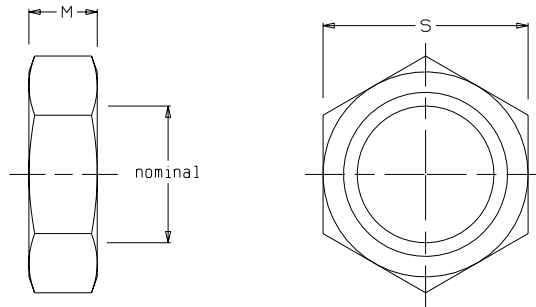
Generic Part Name: MHFN

Notes:

- Corresponds to standard ANSI B18 2.4 4M-1979(1989).

Name	Nominal Nut Dia. & Thread Pitch	Nom. Dia.	S Width Across Flats	M Thick	DC Flange Dia.	C Flange Edge Thick.	R Flange Edge Thick.
MHFN01	M5X0.8	5.00	8.00	5.00	11.80	1.00	0.30
MHFN02	M6X1	6.00	10.00	6.00	14.20	1.10	0.40
MHFN03	M8X1.25	8.00	13.00	8.00	17.90	1.20	0.50
MHFN04	M10X1.5	10.00	16.00	10.00	21.80	1.50	0.60
MHFN05	M12X1.75	12.00	18.00	12.00	26.00	1.80	0.70
MHFN06	M14X2	14.00	21.00	14.00	29.90	2.10	0.90
MHFN07	M16X2	16.00	24.00	16.00	34.50	2.40	1.00
MHFN08	M20X2.5	20.00	30.00	20.00	42.80	3.00	1.20

Hex Jam Nuts



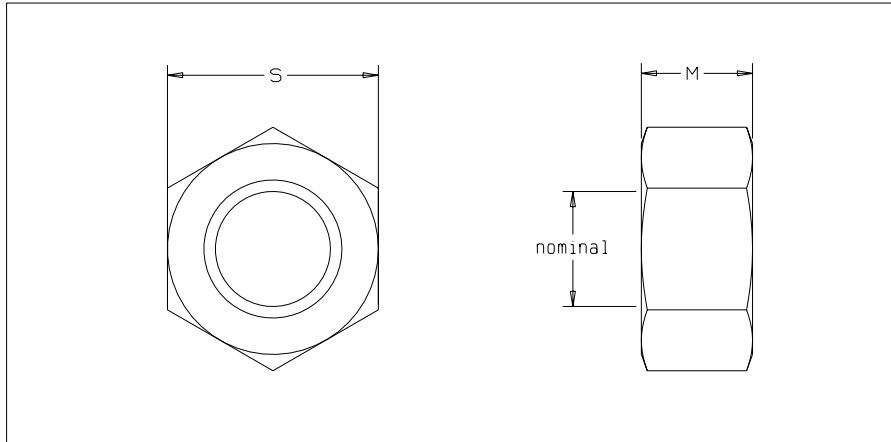
Generic Part Name: MHJN

Notes:

- Corresponds to standard ANSI B18 2.4 5M-1979(1989).

Name	Nominal Nut Dia. & Thread Pitch	Nominal Dia.	S Width Across Flats	M Thickness
MHJN01	M5X0.8	5.00	8.00	2.70
MHJN02	M6X1	6.00	10.00	3.20
MHJN03	M8X1.25	8.00	13.00	4.00
MHJN04	M10X1.5	10.00	16.00	5.00
MHJN05	M12X1.75	12.00	18.00	6.00
MHJN06	M14X2	14.00	21.00	7.00
MHJN07	M16X2	16.00	24.00	8.00
MHJN08	M20X2.5	20.00	30.00	10.00
MHJN09	M24X3	24.00	36.00	12.00
MHJN10	M30X3.5	30.00	46.00	15.00
MHJN11	M36X4	36.00	55.00	18.00

Heavy Hex Nuts



Generic Part Name: MHHN

Notes:

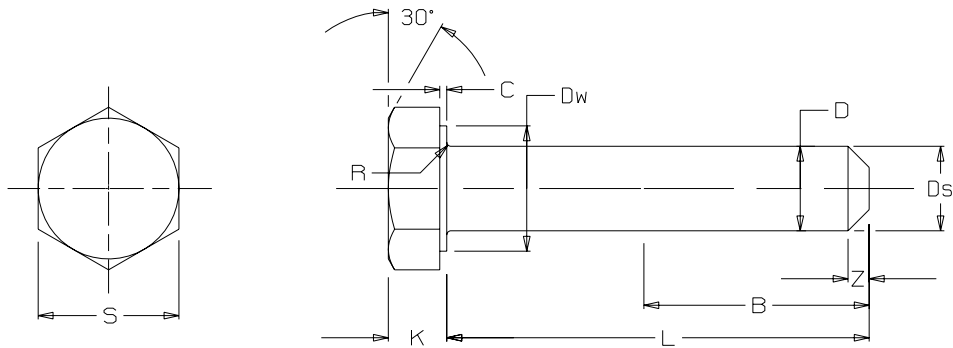
- Corresponds to standard ANSI B18 2.4 6M-1979(1989).

Name	Nominal Nut Dia. & Thread Pitch	Nominal Dia.	S Width Across Flats	M Thickness
MHHN01	M12X1.75	12.00	21.00	12.30
MHHN02	M14X2	14.00	24.00	14.30
MHHN03	M16X2	16.00	27.00	17.10
MHHN04	M20X2.5	20.00	34.00	20.70
MHHN05	M22X2.5	22.00	36.00	23.60
MHHN06	M24X3	24.00	41.00	24.20
MHHN07	M27X3	27.00	46.00	27.60
MHHN08	M30X3.5	30.00	50.00	30.70
MHHN09	M36X4	36.00	60.00	36.60
MHHN10	M42X4.5	42.00	70.00	42.00
MHHN11	M48X5	48.00	80.00	48.00
MHHN12	M56X5.5	56.00	90.00	56.00
MHHN13	M64X6	64.00	100.00	64.00
MHHN14	M72X6	72.00	110.00	72.00
MHHN15	M80X6	80.00	120.00	80.00
MHHN16	M90X6	90.00	135.00	90.00
MHHN17	M100X6	100.00	150.00	100.00

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ANSI Metric Hex Cap Screws

Hex Cap Screws



Generic Part Name: MHCS

Notes:

- Corresponds to standard ANSI B18.2.3.1M-1979.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”

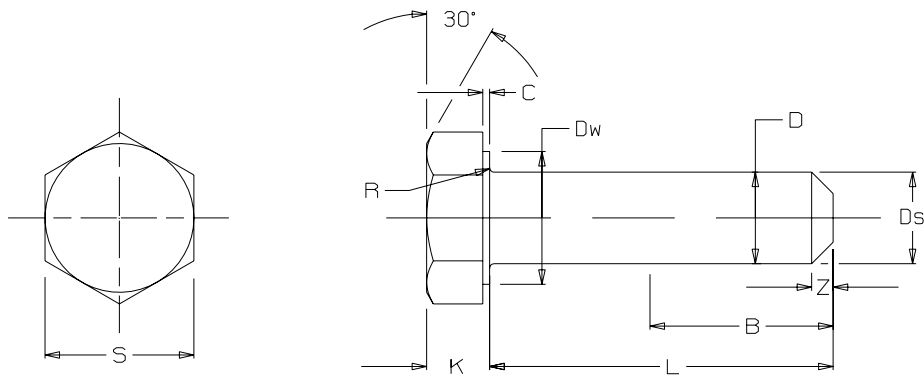
Name	Nom. Dia. & Thread Pitch	D Thread Dia.	DS Body Dia.	S Flat Width	K Head Hgt	L Length
MHCS01	M5X0.8	5.00	5.00	8.00	3.65	8.00 to 16.00 by 2, 20.00 to 50.00 by 5
MHCS02	M6X1	6.00	6.00	10.00	4.15	10.00 to 16.00 by 2, 20.00 to 50.00 by 5, 60.00
MHCS03	M8X1.25	8.00	8.00	13.00	5.50	14.00, 16.00, 20.00 to 50.00 by 5, 60.00, 70.00, 80.00
MHCS04	M10X1.5	10.00	10.00	16.00	6.63	16.00, 20.00 to 50.00 by 5, 60.00 to 100.00 by 10

**ANSI Metric Hex Cap
Screws**

Name	Nom. Dia. & Thread Pitch	D Thread Dia.	DS Body Dia.	S Flat Width	K Head Hgt	L Length
MHCS05	M12X1.75	12.00	12.00	18.00	7.76	20.00 to 50.00 by 5, 60.00 to 130.00 by 10
MHCS06	M14X2	14.00	14.00	21.00	9.09	20.00 to 50.00 by 5, 60.00 to 140.00 by 10
MHCS07	M16X2	16.00	16.00	24.00	10.32	25.00 to 50.00 by 5, 60.00 to 160.00 10
MHCS08	M20X2.5	20.00	20.00	30.00	12.88	30.00 to 50.00 by 5, 60.00 to 160.00 by 10, 180.00, 200.00
MHCS09	M24X3	24.00	24.00	36.00	15.44	35.00 to 50.00 by 5, 60.00 to 160.00 by 10, 180.00 to 300.00 by 20
MHCS10	M30X3.5	30.00	30.00	46.00	19.48	40.00, 45.00, 50.00, 60.00 to 160.00 by 10, 180.00 to 300.00 by 20
MHCS11	M36X4	36.00	36.00	55.00	23.38	50.00 to 160.00 by 10, 180.00 to 300.00 by 20
MHCS12	M42X4.5	42.00	42.00	65.00	26.97	60.00 to 160.00 by 10, 180.00 to 300.00 by 20
MHCS13	M48X5	48.00	48.00	75.00	31.07	70.00 to 160.00 by 10, 180.00 to 300.00 by 20
MHCS14	M56X5.5	56.00	56.00	85.00	36.20	80.00 to 160.00 by 10, 180.00 to 300.00 by 20
MHCS15	M64X6	64.00	64.00	95.00	41.32	90.00 to 160.00 by 10, 180.00 to 300.00
MHCS16	M72X6	72.00	72.00	105.00	46.45	100.00 to 160.00 by 10, 180.00 to 300.00 by 20
MHCS17	M80X6	80.00	80.00	115.00	51.58	110.00 to 160.00 by 10, 180.00 to 300.00 by 20
MHCS18	M90X6	90.00	90.00	130.00	57.74	120.00 to 160.00 by 10, 180.00 to 300.00 by 20

Name	Nom. Dia. & Thread Pitch	D Thread Dia.	DS Body Dia.	S Flat Width	K Head Hgt	L Length
MHCS19	M100X6	100.00	100.00	145.00	63.90	130.00 to 160.00 by 10, 180.00 to 300.00 by 20

Formed Hex Screws



Generic Part Name: MFHS

Notes:

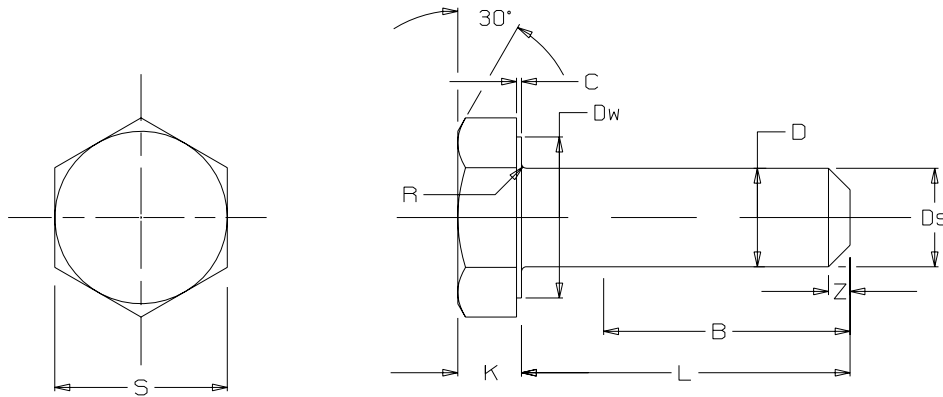
- Corresponds to standard ANSI/ASME B18.2.3.2M - 1979.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”

Name	Nom. Dia. & Thread Pitch	D Thread Dia.	Ds Body Dia.	S Flat Width	K Head Hgt	L Length
MFHS01	M5X0.8	5.00	5.00	8.00	3.65	8.00 to 16.00 by 2, 20 to 50 by 5

Name	Nom. Dia. & Thread Pitch	D Thread Dia.	Ds Body Dia.	S Flat Width	K Head Hgt	L Length
MFHS02	M6X1	6.00	6.00	10.00	4.15	10.00 to 16.00 by 2, 20.00 to 50.00 by 5, 60.00
MFHS03	M8X1.25	8.00	8.00	13.00	5.50	12.00, 14.00, 16.00, 20.00 to 50.00 by 5, 60.00, 70.00, 80.00
MFHS04	M10X1.5	10.00	10.00	16.00	6.63	16.00, 20.00 to 50.00 by 5, 60.00 to 100.00 by 10
MFHS05	M12X1.75	12.00	12.00	18.00	7.76	20.00 to 50.00 by 5, 60.00 to 120.00 by 10
MFHS06	M14X2	14.00	14.00	21.00	9.09	20.00 to 50.00 by 5, 60.00 to 140.00 by 10
MFHS07	M16X2	16.00	16.00	24.00	10.32	25.00 to 50.00 by 5, 60.00 to 150.00 by 10
MFHS08	M20X2.5	20.00	20.00	30.00	12.88	30.00 to 50.00 by 5, 60.00 to 150.00 by 10
MFHS09	M24X3	24.00	24.00	36.00	15.44	35.00 to 50.00 by 5, 60.00 to 150.00 by 10

**ANSI Metric Hex Cap
Screws**

Heavy Hex Screws



Generic Part Name: MHHS

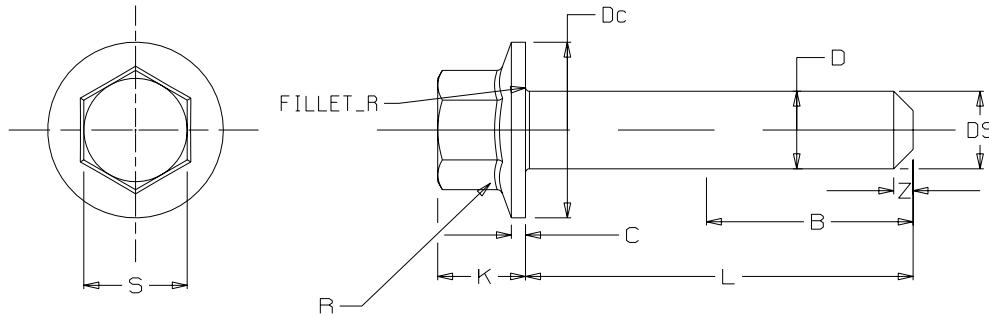
Notes:

- Corresponds to standard ANSI/ASME B18.2.3.3M - 1979.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom. Dia. & Thread Pitch	D Thread Dia.	Ds Body Dia.	S Flat Width	K Head Hgt	L Length
MHHS01	M12X1.75	12.00	12.00	21.00	7.76	20.00 to 50.00 by 5, 60.00 to 120.00 by 10
MHHS02	M14X2	14.00	14.00	24.00	9.09	20.00 to 50.00 by 5, 60.00 to 140.00 by 10
MHHS03	M16X2	16.00	16.00	27.00	10.325	25.00 to 50.00 by 5, 60.00 to 160.00 by 10
MHHS04	M20X2.5	20.00	20.00	34.00	12.88	30.00 to 50.00 by 5, 60.00 to 160.00 by 10, 180.00, 200.00

Name	Nom. Dia. & Thread Pitch	D Thread Dia.	Ds Body Dia.	S Flat Width	K Head Hgt	L Length
MHHS05	M24X3	24.00	24.00	41.00	15.44	35.00 to 50.00 by 5, 60.00 to 160.00 by 10, 180.00 to 240.00 by 20
MHHS06	M30X3.5	30.00	30.00	50.00	19.48	40.00, 45.00, 50.00 to 160.00 by 10, 180.00 to 300.00 by 20
MHHS07	M36X4	36.00	36.00	60.00	23.38	50.00 to 160.00 by 10, 180.00 to 300.00 by 20

Hex Flange Screws



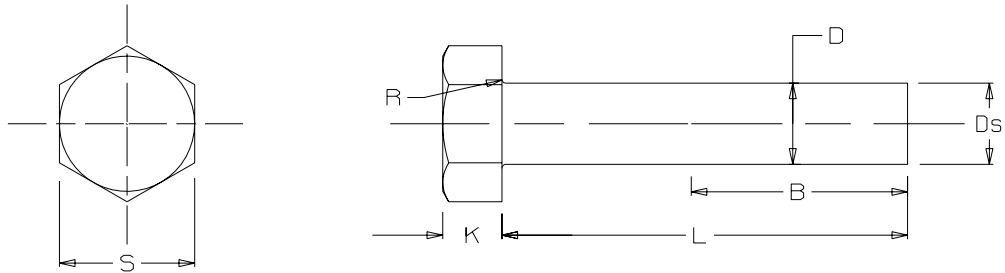
Generic Part Name: MHFS

Notes:

- Corresponds to standard ANSI/ASME B18.2.3.4M - 1984.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	D Thread Dia.	Ds Body Dia.	S Flat Width	K Head Hgt	Dc Flange Dia.	L Length
MHFS01	M5X0.8	5.00	5.00	7.00	5.60	11.40	8.00 to 16.00 by 2, 20.00 to 50.00 by 5
MHFS02	M6X1	6.00	6.00	8.00	6.80	13.60	10.00 to 16.00 by 2, 20.00 to 50.00 by 5, 60.00
MHFS03	M8X1.25	8.00	8.00	10.00	8.50	17.00	12.00, 14.00, 16.00, 20.00 to 50.00 by 5, 60.00, 70.00, 80.00
MHFS04	M10X1.5	10.00	10.00	13.00	9.70	20.80	16.00, 20.00 to 50.00 by 5, 60.00 to 100.00 by 10
MHFS05	M12X1.75	12.00	12.00	15.00	11.90	24.70	20.00 to 50.00 by 5, 60.00 to 120.00 by 10
MHFS06	M14X2	14.00	14.00	18.00	12.90	28.60	20.00 to 50.00 by 5, 60.00 to 140.00 by 10
MHFS07	M16X2	16.00	16.00	21.00	15.10	32.80	25.00 to 50.00 by 5, 60.00 to 150.00 by 10

Hex Bolts



Generic Part Name: MHB

Notes:

- Corresponds to standard ANSI/ASME B18.2.3.5M - 1979.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

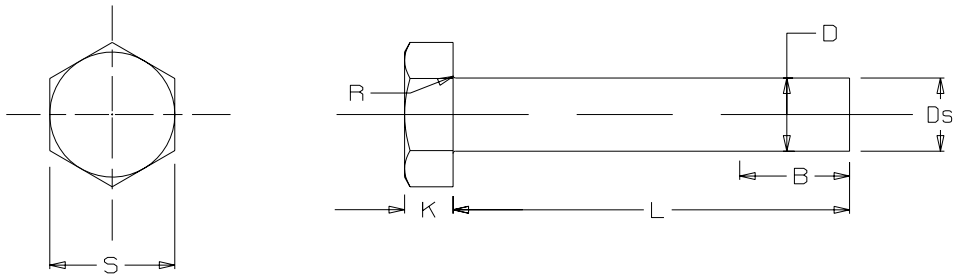
ANSI Metric Hex Cap Screws

Name	Nominal Dia. & Thread Pitch	D Thread Dia.	Ds Body Dia.	S Flat Width	K Head Height	L Length
MHB01	M5X0.8	5.00	5.00	8.00	3.88	55.00 to 80.00 by 5, 90.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00
MHB02	M6X16.00	6.00	10.00	4.38	0.30	65.00 to 60.00 by 5, 90.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00
MHB03	M8X1.25	8.00	8.00	13.00	5.68	90.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00
MHB04	M10X1.5	10.00	10.00	16.00	6.85	110.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00

Name	Nominal Dia. & Thread Pitch	D Thread Dia.	Ds Body Dia.	S Flat Width	K Head Height	L Length
MHB05	M12X1.75	12.00	12.00	18.00	7.95	130.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00
MHB06	M14X2	14.00	14.00	21.00	9.25	150.00, 160.00, 180.00 to 260.00 by 20, 300.00
MHB07	M16X2	16.00	16.00	24.00	10.75	160.00, 180.00, 200.00, 220.00, 240.00, 260.00, 300.00
MHB08	M20X2.5	20.00	20.00	30.00	13.40	160.00, 180.00, 200.00, 220.00, 240.00, 260.00, 300.00
MHB09	M24X3	24.00	24.00	36.00	15.90	160.00, 180.00, 200.00, 220.00, 240.00, 260.00, 300.00
MHB10	M30X3.5	30.00	30.00	46.00	19.75	60.00 to 80.00 by 5, 90.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00
MHB11	M36X4	36.00	36.00	55.00	23.55	70.00, 75.00, 80.00, 90.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00
MHB12	M42X4.5	42.00	42.00	65.00	27.05	90.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00
MHB13	M48X5	48.00	48.00	75.00	31.07	100.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00
MHB14	M56X5.5	56.00	56.00	85.00	36.20	120.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00
MHB15	M64X6	64.00	64.00	95.00	41.32	130.00 to 160.00 by 10, 180.00 to 260.00 by 20, 300.00
MHB16	M72X6	72.00	72.00	105.00	46.45	150.00, 160.00, 180.00 to 260.00 by 20, 300.00

Name	Nominal Dia. & Thread Pitch	D Thread Dia.	Ds Body Dia.	S Flat Width	K Head Height	L Length
MHB17	M80X6	80.00	80.00	115.00	51.58	160.00 to 260.00 by 20, 300.00
MHB18	M90X6	90.00	90.00	130.00	57.74	180.00 to 260.00 by 20, 300.00
MHB19	M100X6	100.00	100.00	145.00	63.90	200.00 to 260.00 by 20, 300.00

Heavy Hex Bolts



ANSI Metric Hex Cap
Screws

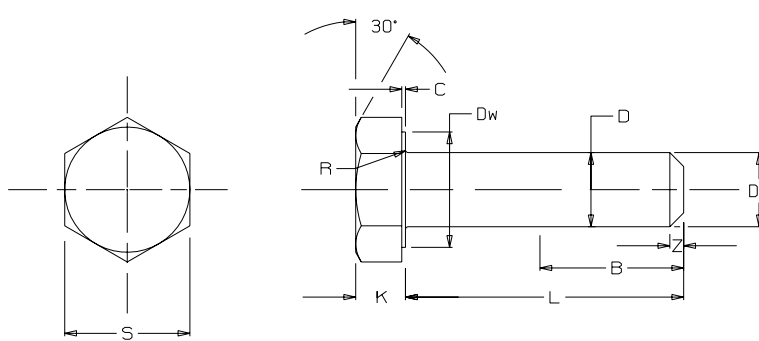
Generic Part Name: MHHB

Notes:

- Corresponds to standard ANSI/ASME B18.2.3.6M - 1979 (1989).
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	D Thread Dia.	Ds Body Dia.	S Flat Width	K Head Height	L Length
MHHB01	M12X1.75	12.00	12.00	21.00	7.95	130 to 160 by 10, 180 to 260 by 20, 300
MHHB02	M14X2	14.00	14.00	24.00	9.25	150, 160 to 260 by 20, 300
MHHB03	M16X2	16.00	16.00	27.00	10.75	160 to 260 by 20, 300
MHHB04	M20X2.5	20.00	20.00	34.00	13.40	160 to 260 by 20, 300
MHHB05	M24X3	24.00	24.00	41.00	15.90	160 to 260 by 20, 300
MHHB06	M30X3.5	30.00	30.00	50.00	19.75	70, 75, 80 to 160 by 10, 180 to 260 by 20, 300
MHHB07	M36X4	36.00	36.00	60.00	23.55	80 to 160 by 10, 180 to 260 by 20, 300

Heavy Hex Structural Bolts



Generic Part Name: MHSB

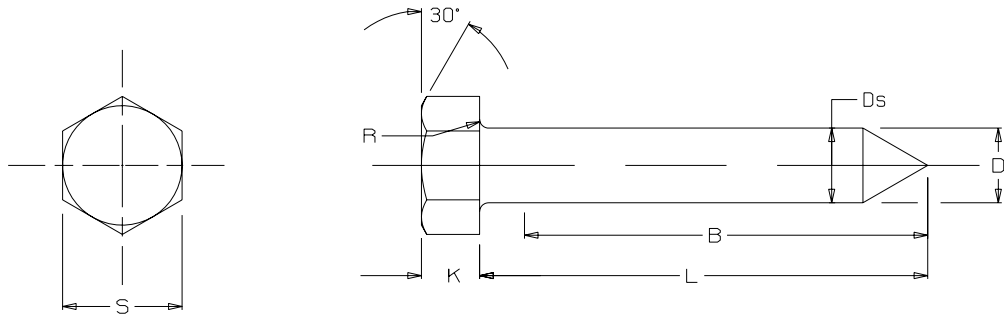
Notes:

- Corresponds to standard ANSI/ASME N18.2.3.7M - 1979 (1989).
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	D Thr. Dia.	Ds Body Dia.	S Flat Width	K Head Ht	L Length
MHSB01	M16X2	16.00	16.00	27.00	10.75	45 to 100 by 5, 110 to 300 by 10
MHSB02	M20X2.5	20.00	20.00	34.00	13.40	50 to 100 by 5, 110 to 300 by 10
MHSB03	M22X2.5	22.00	22.00	36.00	14.90	55 to 100 by 5, 110 to 300 by 10
MHSB04	M24X3	24.00	24.00	41.00	15.90	60 to 100 by 5, 110 to 300 by 10
MHSB05	M27X3	27.00	27.00	46.00	17.90	65 to 100 by 5, 110 to 300 by 10
MHSB06	M30X3.5	30.00	30.00	50.00	19.75	70 to 100 by 5, 110 to 300 by 10
MHSB07	M36X4	36.00	36.00	60.00	23.55	80 to 100 by 5, 110 to 300 by 10



Hex Lag Screws



Generic Part Name: MHLS

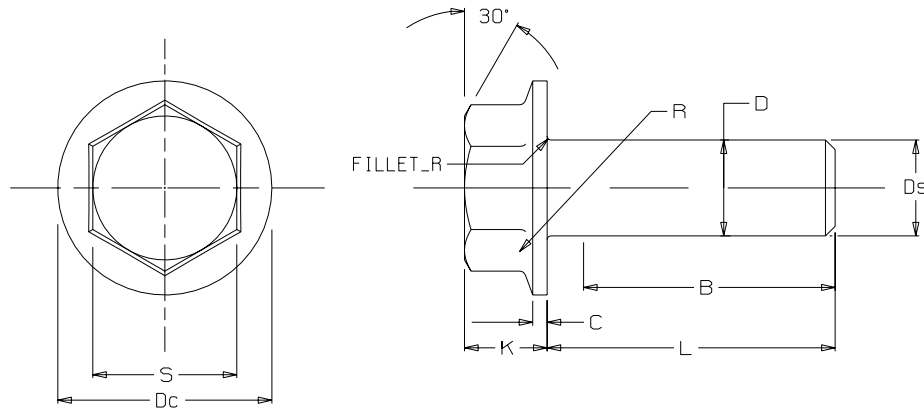
Notes:

- Corresponds to standard ANSI/ASME 18.2.3.8M - 1981.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	D Nom. Dia.	Ds Body Dia.	S Flat Width	K Head Height	P Thread Pitch	D1 Thread Root Dia.	L Length
MHLS01	5.00	5.00	8.00	3.90	2.300	3.200	8 to 16 by 2, 20 to 50 by 5
MHLS02	6.00	6.00	10.00	4.40	2.500	4.000	10 to 16 by 2, 20 to 50 by 5, 60
MHLS03	8.00	8.00	13.00	5.70	2.800	5.800	12, 14, 16, 20 to 50 by 5, 60
MHLS04	10.00	10.00	16.00	6.90	3.600	7.200	16, 20 to 50 by 5, 60 to 100 by 10
MHLS05	12.00	12.00	18.00	8.00	4.200	8.700	20 to 50 by 5, 60 to 120 by 10

Name	D Nom. Dia.	Ds Body Dia.	S Flat Width	K Head Height	P Thread Pitch	D1 Thread Root Dia.	L Length
MHLS06	16.00	16.00	24.00	10.80	5.100	12.000	25 to 50 by 5, 60 to 160 by 10
MHLS07	20.00	20.00	30.00	13.40	5.600	15.600	30 to 50 by 5, 60 to 160 by 10, 180, 200
MHLS08	24.00	24.00	36.00	15.90	7.300	18.100	35 to 50 by 5, 60 to 160 by 10, 180 to 300 by 20

Heavy Hex Flange Screws



Generic Part Name: MHHF

Notes:

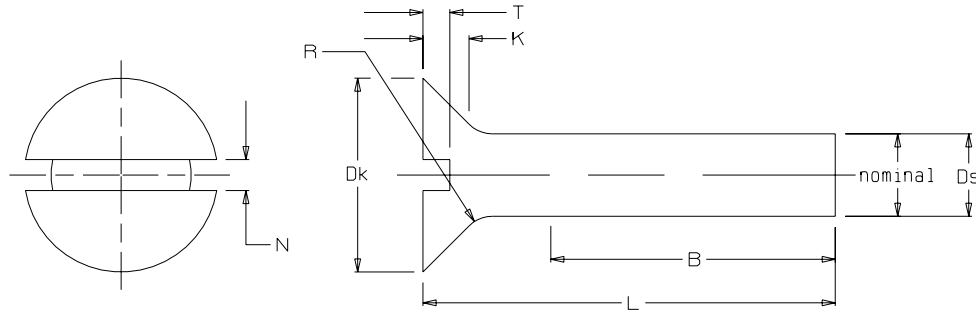
- Corresponds to standard ANSI/ASME 18.2.3.9M - 1984.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	D Thread Dia.	Ds Body Dia.	S Flat Width	K Head Hght	Dc Flange Dia.	L Length
MHHF01	M10X1.5	10.00	10.00	15.00	8.60	22.30	16, 20 to 50 by 5, 60 to 100 by 10
MHHF02	M12X1.75	12.00	12.00	18.00	10.40	26.60	20 to 50 by 5, 60 to 120 by 10
MHHF03	M14X2	14.00	14.00	21.00	12.40	30.50	20 to 50 by 5, 60 to 140 by 10
MHHF04	M16X2	16.00	16.00	24.00	14.10	35.00	25 to 50 by 5, 60 to 150 by 10
MHHF05	M20X2.5	20.00	20.00	30.00	17.70	43.00	30 to 50 by 5, 60 to 150 by 10

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ANSI Metric Machine Screws

Slotted Flat Countersunk Head



Generic Part Name: MSMS

Notes:

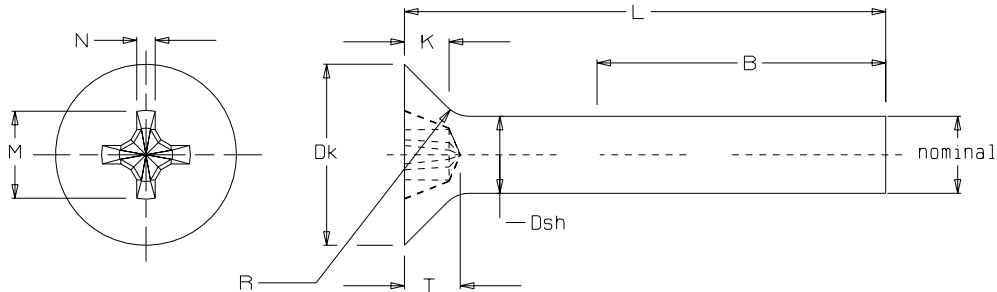
- Corresponds to standard ANSI/ASME B18.6.7M - 1985.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	Nom. Thd Dia.	Ds Body Dia.	Dk Head Dia.	N Slot Width	T Slot Depth	L Length
MSMS01	M2X0.4	2.00	2.00	4.40	0.70	0.60	3, 4, 5, 6, 8, 10, 13, 16, 20
MSMS02	M2.5X0.45	2.50	2.50	5.50	0.80	0.70	4, 5, 6, 8, 10, 13, 16, 20, 25
MSMS03	M3X0.5	3.00	3.00	6.30	1.00	0.90	5, 6, 8, 10, 13, 16, 20, 25, 30
MSMS04	M3.5X0.6	3.50	3.50	8.20	1.20	1.20	6, 8, 10, 13, 16, 20 to 35 by 5
MSMS05	M4X0.7	4.00	4.00	9.40	1.50	1.30	6, 8, 10, 13, 16, 20, 20 to 40 by 5

Name	Nominal Dia. & Thread Pitch	Nom. Thd Dia.	Ds Body Dia.	Dk Head Dia.	N Slot Width	T Slot Depth	L Length
MSMS06	M5X0.8	5.00	5.00	10.00	1.50	1.40	8, 10, 13, 16, 20 to 50 by 5
MSMS07	M6X1	6.00	6.00	12.60	1.90	1.60	8, 10, 13, 16, 20 to 60 by 5
MSMS08	M8X1.25	8.00	8.00	17.30	2.30	2.30	10, 13, 16, 20 to 70 by 5, 80
MSMS09	M10X1.5	10.00	10.00	20.00	2.80	2.60	13, 16, 20 to 70 by 5, 80, 90

Type 1 Cross Recessed Flat Countersunk Head

ANSI Metric Machine Screws



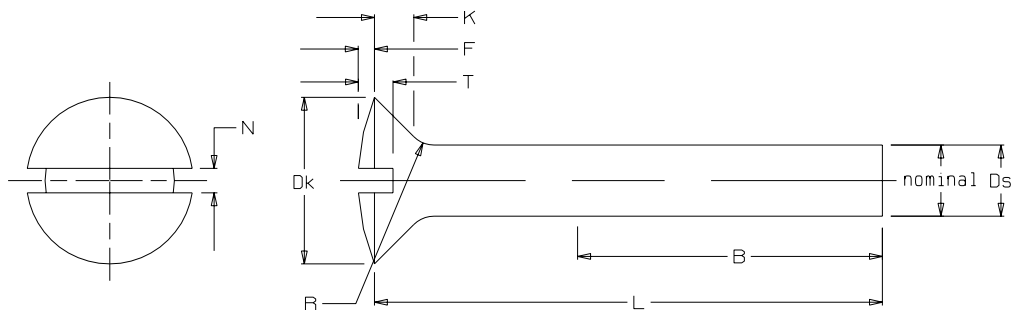
Generic Part Name: MCMS

Notes:

- Corresponds to standard ANSI/ASME B18.6.7M - 1985.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	Nominal Thread Dia.	Ds Body Dia.	Dk Head Dia.	M Recess Dia.	L Length
MCMS01	M2X0.4	2.00	2.00	4.40	2.31	3, 4, 5, 6, 8, 10, 13, 16, 20
MCMS02	M2.5X0.45	2.50	2.50	5.50	2.97	4, 5, 6, 8, 10, 13, 16, 20, 25
MCMS03	M3X0.5	3.00	3.00	6.30	3.27	5, 6, 8, 10, 13, 16, 20, 25, 30
MCMS04	M3.5X0.6	3.50	3.50	8.20	4.22	6, 8, 10, 13, 16, 20 to 35 by 5
MCMS05	M4X0.7	4.00	4.00	9.40	4.62	6, 8, 10, 13, 16, 20, 20 to 40 by 5
MCMS06	M5X0.8	5.00	5.00	10.40	5.22	8, 10, 13, 16, 20 to 50 by 5
MCMS07	M6X1	6.00	6.00	12.60	6.79	8, 10, 13, 16, 20 to 60 by 5
MCMS08	M8X1.25	8.00	8.00	17.30	8.95	10, 13, 16, 20 to 70 by 5, 80
MCMS09	M10X1.5	10.00	10.00	20.00	10.05	13, 16, 20 to 70 by 5, 80, 90

Slotted Oval Countersunk Head



Generic Part Name: MOMS

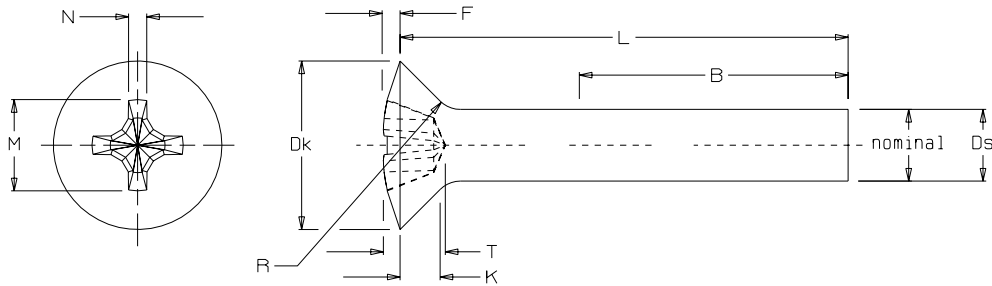
Note:

- Corresponds to standard ANSI/ASME B18.6.7M - 1985.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	Nom. Thread Dia.	Ds Body Dia.	Dk Head Dia.	N Slot Width	T Slot Depth	L Length
MOMS01	2X0.4	2.00	2.00	4.40	0.70	1.00	3, 4, 5, 6, 8, 10, 13, 16, 20
MOMS02	2.5X0.45	2.50	2.50	5.50	0.80	1.20	4, 5, 6, 8, 10, 13, 16, 20, 25
MOMS03	3X0.5	3.00	3.00	6.30	1.00	1.50	5, 6, 8, 10, 13, 16, 20, 25, 30
MOMS04	3.5X0.6	3.50	3.50	8.20	1.20	1.70	6, 8, 10, 13, 16, 20 to 35 by 5
MOMS05	4X0.7	4.00	4.00	9.40	1.50	1.90	6, 8, 10, 13, 16, 20, 20 to 40 by 5
MOMS06	5X0.8	5.00	5.00	10.40	1.50	2.40	8, 10, 13, 16, 20 to 50 by 5
MOMS07	6X1	6.00	6.00	12.60	1.90	2.80	8, 10, 13, 16, 20 to 60 by 5
MOMS08	8X1.25	8.00	8.00	17.30	2.30	3.70	10, 13, 16, 20 to 70 by 5, 80
MOMS09	10X1.5	10.00	10.00	20.00	2.80	4.40	13, 16, 20 to 70 by 5, 80, 90

ANSI Metric Machine Screws

Type 1 Cross Recessed Oval Countersunk Head



Generic Part Name: MRMS

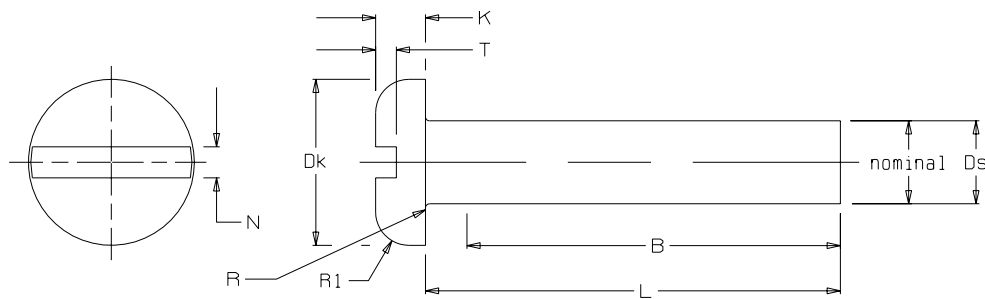
Notes:

- Corresponds to standard ANSI/ASME B18.6.7M - 1985.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	Nom. Thread Dia.	Ds Body Dia.	Dk Head Dia.	M Recess Dia.	L Length
MRMS01	2X0.4	2.00	2.00	4.40	2.52	3, 4, 5, 6, 8, 10, 13, 16, 20
MRMS02	2.5X0.45	2.50	2.50	5.50	3.22	4, 5, 6, 8, 10, 13, 16, 20, 25
MRMS03	3X0.5	3.00	3.00	6.30	3.61	5, 6, 8, 10, 13, 16, 20, 25, 30
MRMS04	3.5X0.6	3.50	3.50	8.20	4.54	6, 8, 10, 13, 16, 20 to 35 by 5
MRMS05	4X0.7	4.00	4.00	9.40	5.09	6, 8, 10, 13, 16, 20, 20 to 40 by 5
MRMS06	5X0.8	5.00	5.00	10.40	5.82	8, 10, 13, 16, 20 to 50 by 5

Name	Nominal Dia. & Thread Pitch	Nom. Thread Dia.	Ds Body Dia.	Dk Head Dia.	M Recess Dia.	L Length
MRMS07	6X1	6.00	6.00	12.60	7.47	8, 10, 13, 16, 20 to 60 by 5
MRMS08	8X1.25	8.00	8.00	17.30	10.02	10, 13, 16, 20 to 70 by 5, 80
MRMS09	10X1.5	10.00	10.00	20.00	11.41	13, 16, 20 to 70 by 5, 80, 90

Slotted Pan Head



ANSI Metric Machine Screws

Generic Part Name: MPMS

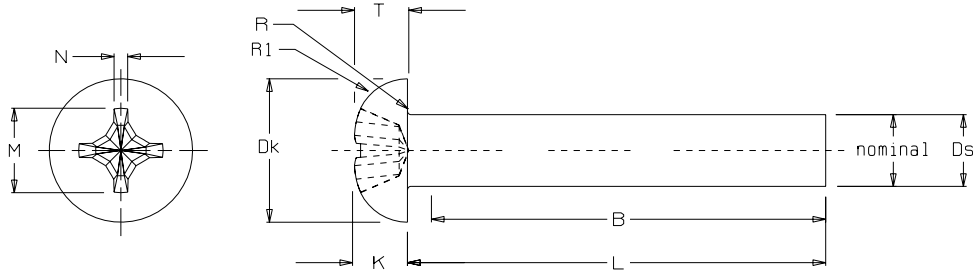
Notes:

- Corresponds to standard ANSI/ASME B18.6.7M - 1985.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	Nom. Thr. Dia.	Ds Body Dia	Dk Head Dia	K Head Ht.	T Slot Depth	N Slot Wdth	L Length
MPMS01	M2X0.4	2.00	2.00	4.00	1.30	0.50	0.70	2.5, 3, 4, 5, 6, 8, 10, 13, 16
MPMS02	M2.5X0.45	2.50	2.50	5.00	1.50	0.60	0.80	3, 4, 5, 6, 8, 10, 13, 16, 20, 25
MPMS03	M3X0.5	3.00	3.00	5.60	1.80	0.70	1.00	4, 5, 6, 8, 10, 13, 16, 20, 25, 30
MPMS04	M3.5X0.6	3.50	3.50	7.00	2.10	0.80	1.20	5, 6, 8, 10, 13, 16, 20 to 35 by 5
MPMS05	M4X0.7	4.00	4.00	8.00	2.40	1.00	1.50	5, 6, 8, 10, 13, 16, 20 to 40 by 5
MPMS06	M5X0.8	5.00	5.00	9.50	3.00	1.20	1.50	6, 8, 10, 13, 16, 20 to 50 by 5
MPMS07	M6X1	6.00	6.00	12.00	3.60	1.40	1.90	8, 10, 13, 16, 20 to 60 by 5

Name	Nominal Dia. & Thread Pitch	Nom. Thr. Dia.	Ds Body Dia	Dk Head Dia	K Head Ht.	T Slot Depth	N Slot Wdth	L Length
MPMS08	M8X1.25	8.00	8.00	16.00	4.80	1.90	2.30	10, 13, 16, 20 to 70 by 5, 80
MPMS09	M10X1.5	10.00	10.00	20.00	6.00	2.40	2.80	13, 16, 20 to 70 by 5, 80, 90

Type 1 Cross Recessed Pan Head



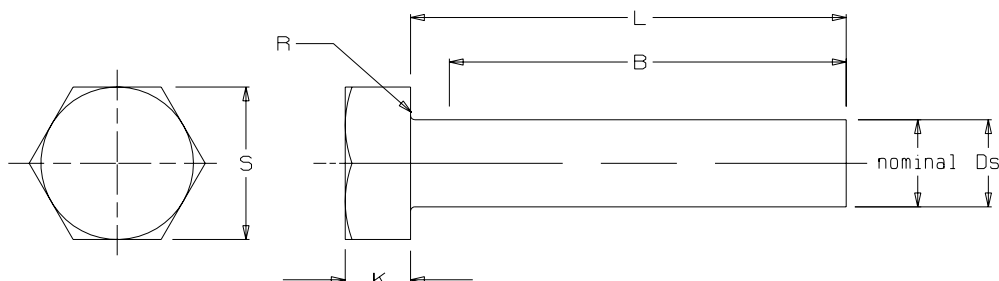
Generic Part Name: MTMS

Notes:

- Corresponds to standard ANSI/ASME B18.6.7M - 1985.
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

Name	Nominal Dia. & Thread Pitch	Nom. Thr. Dia.	Dk Head Dia.	K Head Ht	Ds Body Dia.	M Recess Dia.	L Length
MTMS01	M2X0.4	2.00	4.00	1.60	2.00	1.99	2.5, 3, 4, 5, 6, 8, 10, 13, 16
MTMS02	Mt2.5X0.45	2.50	5.00	2.10	2.50	2.85	3, 4, 5, 6, 8, 10, 13, 16, 20, 25
MTMS03	M3X0.5	3.00	5.60	2.40	3.00	3.06	4, 5, 6, 8, 10, 13, 16, 20, 25, 30
MTMS04	M3.5X0.6	3.50	7.00	2.60	3.50	4.08	5, 6, 8, 10, 13, 16, 20 to 35 by 5
MTMS05	M4X0.7	4.00	8.00	3.10	4.00	4.57	5, 6, 8, 10, 13, 16, 20 to 40 by 5
MTMS06	M5X0.8	5.00	9.50	3.70	5.00	5.07	6, 8, 10, 13, 16, 20 to 50 by 5
MTMS07	M6X1	6.00	12.00	4.60	6.00	7.09	8, 10, 13, 16, 20 to 60 by 5
MTMS08	M8X1.25	8.00	16.00	6.00	8.00	9.18	10, 13, 16, 20 to 70 by 5, 80
MTMS09	M10X1.5	10.00	20.00	7.50	10.00	10.35	13, 16, 20 to 70 by 5, 80, 90

Hex Head



Generic Part Name: MHMS

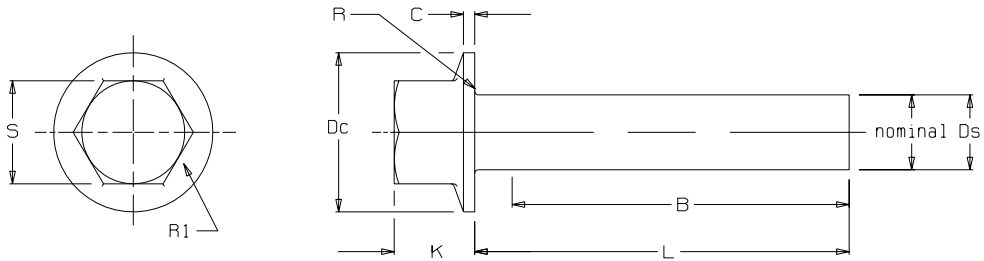
Notes:

- Corresponds to standard ANSI/ASME B18.6.7M - 1985.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	Nom. Thread Dia.	Ds Body Dia.	K Head Height	S Flat Width	L Length
MHMS01	M2X0.4	2.00	2.00	1.60	3.20	2.5, 3, 4, 5, 6, 8, 10, 13, 16
MHMS02	M2.5X0.45	2.50	2.50	2.10	4.00	3, 4, 5, 6, 8, 10, 13, 16, 20, 25
MHMS03	M3X0.5	3.00	3.00	2.30	5.00	4, 5, 6, 8, 10, 13, 16, 20, 25, 30
MHMS04	M3.5X0.6	3.50	3.50	2.60	5.50	5, 6, 8, 10, 13, 16, 20 to 35 by 5
MHMS05	M4X0.7	4.00	4.00	3.00	7.00	5, 6, 8, 10, 13, 16, 20 to 40 by 5
MHMS06	M5X0.8	5.00	5.00	3.80	8.00	6, 8, 10, 13, 16, 20 to 50 by 5
MHMS07	M6X1	6.00	6.00	4.70	10.00	8, 10, 13, 16, 20 to 60 by 5

Name	Nominal Dia. & Thread Pitch	Nom. Thread Dia.	Ds Body Dia.	K Head Height	S Flat Width	L Length
MHMS08	M8X1.25	8.00	8.00	6.00	13.00	10, 13, 16, 20 to 70 by 5, 80
MHMS09	M10X1.5	10.00	10.00	7.50	16.00	13, 16, 20 to 70 by 5, 80, 90
MHMS10	M12X1.75	12.00	12.00	9.00	18.00	16, 20 to 70 by 5, 80, 90

Hex Flange Head



Generic Part Name: MFMS

Notes:

- Corresponds to standard ANSI/ASME B18.6.7M - 1985.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. & Thread Pitch	Nom. Thread Dia.	Ds Body Dia.	K Head Ht	S Flat Width	Dc Flange Dia.	L Length
MFMS01	M2X0.4	2.00	2.00	2.20	3.00	4.50	2.5, 3, 4, 5, 6, 8, 10, 13, 16

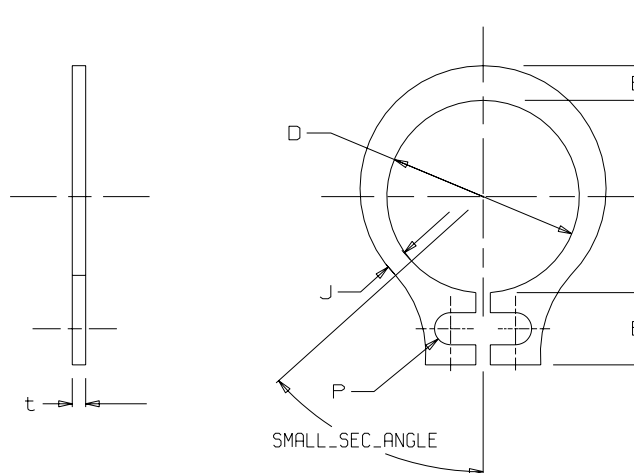
Name	Nominal Dia. & Thread Pitch	Nom. Thread Dia.	Ds Body Dia.	K Head Ht	S Flat Width	Dc Flange Dia.	L Length
MFMS02	M2.5X0.45	2.50	2.50	2.70	3.20	5.40	3, 4, 5, 6, 8, 10, 13, 16, 20, 25
MFMS03	M3X0.5	3.00	3.00	3.20	4.00	6.40	4, 5, 6, 8, 10, 13, 16, 20, 25, 30
MFMS04	M3.5X0.6	3.50	3.50	3.80	5.00	7.50	5, 6, 8, 10, 13, 16, 20 to 35 by 5
MFMS05	M4X0.7	4.00	4.00	4.30	5.50	8.50	5, 6, 8, 10, 13, 16, 20 to 40 by 5
MFMS06	M5X0.8	5.00	5.00	5.40	7.00	10.60	6, 8, 10, 13, 16, 20 to 50 by 5
MFMS07	M6X1	6.00	6.00	6.70	8.00	12.80	8, 10, 13, 16, 20 to 60 by 5
MFMS08	M8X1.25	8.00	8.00	8.60	10.00	16.80	10, 13, 16, 20 to 70 by 5, 80
MFMS09	M10X1.5	10.00	10.00	10.70	13.00	21.00	13, 16, 20 to 70 by 5, 80, 90
MFMS10	M12X1.75	12.00	12.00	13.70	15.00	24.80	16, 20 to 70 by 5, 80, 90

ANSI Metric Machine Screws

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ANSI Metric Retaining Rings

Basic External, Series 3AM1



Generic Part Name: MBER

Notes:

- Corresponds to standard ANSI/ASME B27.7 - 1977.
- These parts do not conform to an ISO standard.

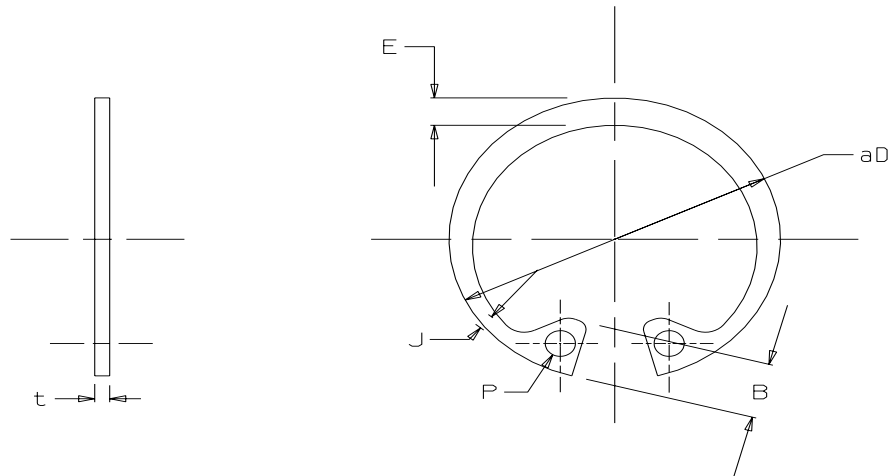
Name	Shaft Dia.	Ring Series Size No.	D Free Dia.	T Ring Thck.	P Hole Dia.	B Lug	E Lg. Sec	J Sm. Sec	Sm. Sec. Angle
MBER01	4.000	3AM1-4	3.60	0.25	0.60	1.35	0.65	0.40	48.00
MBER02	5.000	3AM1-5	4.55	0.40	0.60	1.40	0.65	0.40	47.00
MBER03	6.000	3AM1-6	5.45	0.40	0.60	1.40	0.75	0.50	46.00
MBER04	7.000	3AM1-7	6.35	0.60	1.00	2.05	0.90	0.60	45.00
MBER05	8.000	3AM1-8	7.15	0.60	1.00	2.20	1.00	0.65	37.00
MBER06	9.000	3AM1-9	8.15	0.60	1.00	2.20	1.15	0.75	36.00
MBER07	10.000	3AM1-10	9.00	0.60	1.00	2.20	1.30	0.80	35.00
MBER08	11.000	3AM1-11	10.00	0.60	1.00	2.20	1.40	0.85	34.00
MBER09	12.000	3AM1-12	10.85	0.60	1.00	2.20	1.50	0.90	33.00

Name	Shaft Dia.	Ring Series Size No.	D Free Dia.	T Ring Thck.	P Hole Dia.	B Lug	E Lg. Sec	J Sm. Sec	Sm. Sec. Angle
MBER10	13.000	3AM1-13	11.90	0.90	1.20	2.80	1.60	0.95	33.00
MBER11	14.000	3AM1-14	12.90	0.90	1.20	2.80	1.70	1.00	32.00
MBER12	15.000	3AM1-15	13.80	0.90	1.20	2.80	1.80	1.05	32.00
MBER13	16.000	3AM1-16	14.70	0.90	1.20	2.80	2.05	1.15	31.00
MBER14	17.000	3AM1-17	15.75	0.90	1.20	2.80	2.10	1.15	31.00
MBER15	18.000	3AM1-18	16.65	1.10	1.30	3.45	2.25	1.25	30.00
MBER16	19.000	3AM1-19	17.60	1.10	1.30	3.45	2.35	1.30	30.00
MBER17	20.000	3AM1-20	18.35	1.10	1.30	3.45	2.40	1.35	30.00
MBER18	21.000	3AM1-21	19.40	1.10	1.30	3.45	2.50	1.40	29.00
MBER19	22.000	3AM1-22	20.30	1.10	1.30	3.45	2.70	1.50	29.00
MBER20	23.000	3AM1-23	21.25	1.10	1.30	3.45	2.80	1.60	29.00
MBER21	24.000	3AM1-24	22.20	1.10	1.90	4.20	2.90	1.60	28.00
MBER22	25.000	3AM1-25	23.10	1.10	1.90	4.20	2.90	1.70	28.00
MBER23	26.000	3AM1-26	24.05	1.10	1.90	4.20	3.00	1.70	28.00
MBER24	27.000	3AM1-27	24.95	1.30	1.90	4.60	3.10	1.80	27.00
MBER25	28.000	3AM1-28	25.80	1.30	1.90	4.60	3.20	1.80	27.00
MBER26	30.000	3AM1-30	27.90	1.30	1.90	4.60	3.30	1.80	27.00
MBER27	32.000	3AM1-32	29.60	1.30	1.90	4.60	3.60	1.90	26.00
MBER28	34.000	3AM1-34	31.40	1.30	1.90	4.60	3.80	2.00	26.00
MBER29	35.000	3AM1-35	32.30	1.30	1.90	4.60	3.90	2.10	26.00
MBER30	36.000	3AM1-36	33.25	1.30	1.90	5.40	4.10	2.20	26.00
MBER31	38.000	3AM1-38	35.20	1.30	3.10	5.40	4.30	2.30	24.00
MBER32	40.000	3AM1-40	36.75	1.60	3.10	6.00	4.40	2.30	24.00
MBER33	42.000	3AM1-42	38.80	1.60	3.10	6.00	4.60	2.40	24.00
MBER34	43.000	3AM1-43	39.65	1.60	3.10	6.00	4.70	2.50	24.00
MBER35	45.000	3AM1-45	41.60	1.60	3.10	6.00	4.80	2.60	22.00
MBER36	46.000	3AM1-46	42.55	1.60	3.10	6.00	4.90	2.60	22.00
MBER37	48.000	3AM1-48	44.40	1.60	3.10	6.20	5.00	2.60	22.00
MBER38	50.000	3AM1-50	46.20	1.60	3.10	6.20	5.10	2.70	22.00
MBER39	52.000	3AM1-52	48.40	2.00	3.10	6.80	5.30	2.80	21.00

ANSI Metric Retaining Rings

Name	Shaft Dia.	Ring Series Size No.	D Free Dia.	T Ring Thck.	P Hole Dia.	B Lug	E Lg. Sec	J Sm. Sec	Sm. Sec. Angle
MBER40	54.000	3AM1-54	49.90	2.00	3.10	6.80	5.40	2.90	21.00
MBER41	55.000	3AM1-55	50.60	2.00	3.10	6.80	5.40	2.90	21.00
MBER42	57.000	3AM1-57	52.90	2.00	3.10	6.80	5.60	3.00	21.00
MBER43	58.000	3AM1-58	53.60	2.00	3.10	6.80	5.60	3.00	21.00
MBER44	60.000	3AM1-60	55.80	2.00	3.10	6.80	5.70	3.00	21.00
MBER45	62.000	3AM1-62	57.30	2.00	3.10	6.80	5.80	3.00	21.00
MBER46	65.000	3AM1-65	60.40	2.00	3.10	6.80	6.00	3.10	20.00
MBER47	68.000	3AM1-68	63.10	2.00	3.10	6.80	6.20	3.30	20.00
MBER48	70.000	3AM1-70	64.60	2.40	3.10	7.80	6.30	3.30	20.00
MBER49	72.000	3AM1-72	66.60	2.40	3.10	7.80	6.40	3.30	20.00
MBER50	75.000	3AM1-75	69.00	2.40	3.10	7.80	6.60	3.40	20.00
MBER51	78.000	3AM1-78	72.00	2.40	3.10	7.80	6.60	3.40	18.00
MBER52	80.000	3AM1-80	74.20	2.40	3.10	7.80	7.00	3.60	18.00
MBER53	82.000	3AM1-82	76.40	2.40	3.10	7.80	7.10	3.70	18.00
MBER54	85.000	3AM1-85	78.60	2.40	3.10	7.80	7.30	3.80	18.00
MBER55	88.000	3AM1-88	81.40	2.80	3.10	8.40	7.50	3.90	16.00
MBER56	90.000	3AM1-90	83.20	2.80	3.10	8.40	7.50	3.90	16.00
MBER57	95.000	3AM1-95	88.10	2.80	3.10	8.40	7.90	4.10	16.00
MBER58	100.000	3AM1-100	92.50	2.80	3.10	8.70	8.00	4.10	16.00

Basic Internal, Series 3BM1



Generic Part Name: MBIR

Notes:

- Corresponds to standard ANSI/ASME B27.7 - 1977.
- These parts do not conform to an ISO standard.

Name	Bore Dia.	Ring Series Size No.	D Fre Dia.	T Ring Thick.	P Hole Dia.	B Lug	E Large Sec	J Small Sec
MBIR0001	8.000	3BM1-8	8.80	0.40	0.80	1.70	0.85	0.45
MBIR0002	9.000	3BM1-9	10.00	0.60	1.00	2.10	1.25	0.65
MBIR0003	10.000	3BM1-10	11.10	0.60	1.00	2.10	1.30	0.70
MBIR0004	11.000	3BM1-11	12.20	0.60	1.00	2.50	1.30	0.70
MBIR0005	12.000	3BM1-12	13.30	0.60	1.00	2.50	1.35	0.70
MBIR0006	13.000	3BM1-13	14.25	0.90	1.20	2.90	1.35	0.75
MBIR0007	14.000	3BM1-14	15.45	0.90	1.20	3.30	1.60	0.90
MBIR0008	15.000	3BM1-15	16.60	0.90	1.50	3.30	1.65	0.90
MBIR0009	16.000	3BM1-16	17.70	0.90	1.50	3.40	1.70	0.95

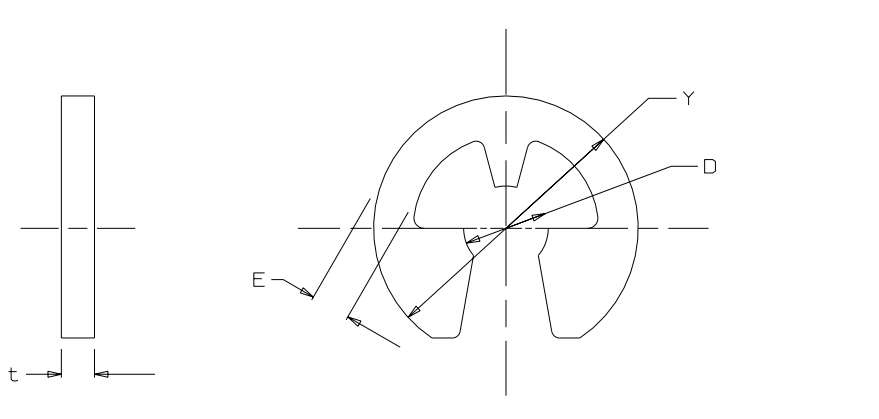
Name	Bore Dia.	Ring Series Size No.	D Fre Dia.	T Ring Thick.	P Hole Dia.	B Lug	E Large Sec	J Small Sec
MBIR0010	17.000	3BM1-17	18.90	0.90	1.50	3.40	1.70	0.95
MBIR0011	18.000	3BM1-18	20.05	0.90	1.50	3.60	1.80	1.00
MBIR0012	19.000	3BM1-19	21.10	0.90	1.50	3.60	1.80	1.00
MBIR0013	20.000	3BM1-20	22.25	0.90	1.50	4.00	2.00	1.10
MBIR0014	21.000	3BM1-21	23.30	0.90	1.50	4.00	2.10	1.20
MBIR0015	22.000	3BM1-22	24.40	1.10	1.50	4.00	2.10	1.20
MBIR0016	23.000	3BM1-23	25.45	1.10	1.50	4.00	2.20	1.20
MBIR0017	24.000	3BM1-24	26.55	1.10	1.50	4.00	2.30	1.30
MBIR0018	25.000	3BM1-25	27.75	1.10	1.50	4.00	2.60	1.30
MBIR0019	26.000	3BM1-26	28.85	1.10	1.50	4.00	2.70	1.40
MBIR0020	27.000	3BM1-27	29.95	1.30	1.90	4.60	2.80	1.40
MBIR0021	28.000	3BM1-28	31.10	1.30	1.90	4.60	2.90	1.50
MBIR0022	30.000	3BM1-30	33.40	1.30	1.90	4.60	3.00	1.50
MBIR0023	32.000	3BM1-32	35.35	1.30	1.90	4.60	3.10	1.60
MBIR0024	34.000	3BM1-34	37.75	1.30	1.90	4.60	3.20	1.60
MBIR0025	35.000	3BM1-35	38.75	1.30	1.90	4.60	3.30	1.60
MBIR0026	36.000	3BM1-36	40.00	1.30	1.90	4.60	3.40	1.70
MBIR0027	37.000	3BM1-37	41.05	1.30	1.90	4.60	3.40	1.70
MBIR0028	38.000	3BM1-38	42.15	1.30	1.90	4.60	3.40	1.70
MBIR0029	40.000	3BM1-40	44.25	1.60	1.90	5.10	4.00	2.00
MBIR0030	42.000	3BM1-42	46.60	1.60	1.90	5.80	4.20	2.10
MBIR0031	45.000	3BM1-45	49.95	1.60	1.90	6.00	4.30	2.10
MBIR0032	46.000	3BM1-46	51.05	1.60	2.30	6.00	4.30	2.10
MBIR0033	47.000	3BM1-47	52.15	1.60	2.30	6.00	4.30	2.20
MBIR0034	48.000	3BM1-48	53.30	1.60	2.30	6.00	4.50	2.30
MBIR0035	50.000	3BM1-50	55.35	1.60	2.30	6.00	4.60	2.30
MBIR0036	52.000	3BM1-52	57.90	2.00	2.30	6.40	4.70	2.30
MBIR0037	55.000	3BM1-55	61.10	2.00	2.30	6.70	5.10	2.50
MBIR0038	57.000	3BM1-57	63.25	2.00	2.30	6.90	5.20	2.50
MBIR0039	58.000	3BM1-58	64.40	2.00	2.30	6.90	5.30	2.60

Name	Bore Dia.	Ring Series Size No.	D Fre Dia.	T Ring Thick.	P Hole Dia.	B Lug	E Large Sec	J Small Sec
MBIR0040	60.000	3BM1-60	66.80	2.00	2.30	6.90	5.30	2.60
MBIR0041	62.000	3BM1-62	68.60	2.00	2.70	7.10	5.30	2.60
MBIR0042	63.000	3BM1-63	69.90	2.00	2.70	7.10	5.40	2.70
MBIR0043	65.000	3BM1-65	72.20	2.40	2.70	7.40	5.60	2.80
MBIR0044	68.000	3BM1-68	75.70	2.40	2.70	7.60	5.80	2.90
MBIR0045	70.000	3BM1-70	77.50	2.40	2.70	7.60	5.80	2.90
MBIR0046	72.000	3BM1-72	79.60	2.40	2.70	7.60	5.80	2.90
MBIR0047	75.000	3BM1-75	83.30	2.40	2.70	7.90	6.20	3.10
MBIR0048	78.000	3BM1-78	86.80	2.80	3.10	7.90	6.50	3.20
MBIR0049	80.000	3BM1-80	89.10	2.80	3.10	7.90	6.70	3.30
MBIR0050	82.000	3BM1-82	91.10	2.80	3.10	8.70	6.90	3.40
MBIR0051	85.000	3BM1-85	94.40	2.80	3.10	8.70	7.00	3.60
MBIR0052	88.000	3BM1-88	97.90	2.80	3.10	8.70	7.30	3.60
MBIR0053	90.000	3BM1-90	100.00	2.80	3.10	8.70	7.40	3.60
MBIR0054	92.000	3BM1-92	102.20	2.80	3.10	8.70	7.60	3.80
MBIR0055	95.000	3BM1-95	105.60	2.80	3.10	8.70	7.80	3.90
MBIR0056	98.000	3BM1-98	109.00	2.80	3.10	9.40	8.10	4.10
MBIR0057	100.000	3BM1-100	110.70	2.80	3.10	9.40	8.20	4.10
MBIR0058	102.000	3BM1-102	112.20	2.80	3.10	9.40	8.40	4.20
MBIR0059	105.000	3BM1-105	115.80	2.80	3.10	9.40	8.40	4.30
MBIR0060	108.000	3BM1-108	119.20	2.80	3.10	9.50	8.50	4.60
MBIR0061	110.000	3BM1-110	120.80	2.80	3.80	10.30	8.70	4.60
MBIR0062	115.000	3BM1-115	126.00	2.80	3.80	10.30	8.90	4.60
MBIR0063	120.000	3BM1-120	132.40	2.80	3.80	10.30	9.40	4.60
MBIR0064	125.000	3BM1-125	137.10	2.80	3.80	10.30	9.50	4.70
MBIR0065	130.000	3BM1-130	142.50	2.80	3.80	10.30	9.80	4.90
MBIR0066	135.000	3BM1-135	148.50	3.20	3.80	11.60	10.40	5.00
MBIR0067	140.000	3BM1-140	154.10	3.20	3.80	11.60	10.40	5.00
MBIR0068	145.000	3BM1-145	159.50	3.20	3.80	11.60	10.60	5.30
MBIR0069	150.000	3BM1-150	164.50	3.20	3.80	11.60	10.80	5.40

ANSI Metric Retaining Rings

Name	Bore Dia.	Ring Series Size No.	D Fre Dia.	T Ring Thick.	P Hole Dia.	B Lug	E Large Sec	J Small Sec
MBIR0070	155.000	3BM1-155	168.80	3.20	3.80	11.60	10.80	5.40
MBIR0071	160.000	3BM1-160	175.10	4.00	4.60	12.30	10.90	5.40
MBIR0072	165.000	3BM1-165	180.30	4.00	4.60	12.30	11.10	5.60
MBIR0073	170.000	3BM1-170	185.60	4.00	4.60	12.30	11.40	5.60
MBIR0074	175.000	3BM1-175	191.30	4.00	4.60	13.50	11.60	5.70
MBIR0075	180.000	3BM1-180	196.60	4.00	4.60	13.50	12.00	5.90
MBIR0076	185.000	3BM1-185	202.70	4.80	4.60	14.20	12.40	6.00
MBIR0077	190.000	3BM1-190	207.70	4.80	4.60	14.20	12.90	6.30
MBIR0078	200.000	3BM1-200	217.80	4.80	4.60	14.20	13.30	6.50
MBIR0079	210.000	3BM1-210	230.30	4.80	4.60	15.20	14.20	6.90
MBIR0080	220.000	3BM1-220	240.50	4.80	4.60	16.80	15.00	7.30
MBIR0081	230.000	3BM1-230	251.40	4.80	4.60	16.80	15.50	7.50
MBIR0082	240.000	3BM1-240	262.30	4.80	4.60	18.70	16.30	7.70
MBIR0083	250.000	3BM1-250	273.30	4.80	4.60	18.70	16.70	7.80

E - Ring External, Series 3CM1



Generic Part Name: MEER

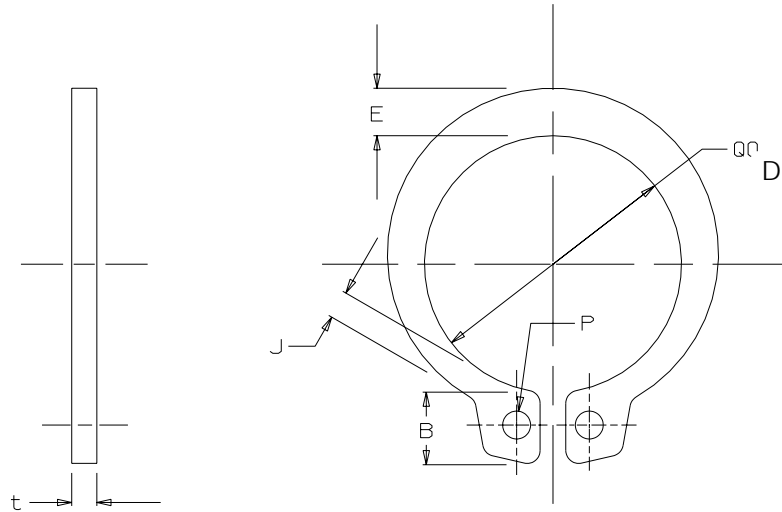
Notes:

- Corresponds to standard ANSI/ASME B27.7 - 1977.
- These parts do not conform to an ISO standard.

Name	Shaft Dia.	Ring Series Size No.	D Free Dia.	T Ring Thick.	E Bridge	Y Outer Dia.
MEER0001	1.000	3CM1-1	0.64	0.25	0.30	2.00
MEER0002	2.000	3CM1-2	1.30	0.25	0.55	4.00
MEER0003	3.000	3CM1-3	2.10	0.25	0.65	5.60
MEER0004	4.000	3CM1-4	2.90	0.40	0.85	7.20
MEER0005	5.000	3CM1-5	3.70	0.60	0.90	8.50
MEER0006	6.000	3CM1-6	4.70	0.60	1.15	11.10
MEER0007	7.000	3CM1-7	5.25	0.60	1.40	13.40
MEER0008	8.000	3CM1-8	6.15	0.60	1.40	14.60
MEER0009	9.000	3CM1-9	6.80	0.60	1.50	15.80
MEER0010	10.000	3CM1-10	7.60	0.90	1.50	16.80
MEER0011	11.000	3CM1-11	8.55	0.90	1.60	17.40
MEER0012	12.000	3CM1-12	9.20	0.90	1.80	18.60
MEER0013	13.000	3CM1-13	9.95	1.10	2.00	20.30
MEER0014	15.000	3CM1-15	11.40	1.10	2.10	22.80
MEER0015	16.000	3CM1-16	12.15	1.10	2.30	23.80
MEER0016	18.000	3CM1-18	13.90	1.10	2.50	27.20
MEER0017	20.000	3CM1-20	15.60	1.30	2.80	30.00
MEER0018	22.000	3CM1-22	17.00	1.30	3.00	33.00
MEER0019	25.000	3CM1-25	19.50	1.30	3.30	37.10

ANSI Metric
Retaining Rings

Heavy Duty External, Series 3DM1



Generic Part Name: MHER

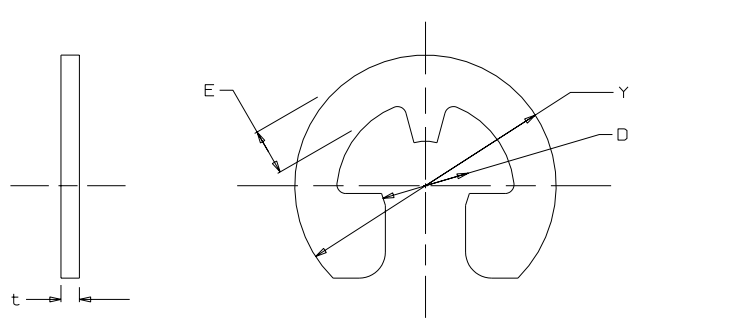
Notes:

- Corresponds to standard ANSI/ASME B27.8M - 1978.
- These parts do not conform to an ISO standard.

Name	Shaft Dia.	Ring Series Size No.	D Free Dia.	T Ring Thick.	P Hole Dia.	B Lug	E Large Sec	J Small Sec
MHER0001	10.000	3DM1-10	9.20	0.90	1.00	2.60	1.70	1.00
MHER0002	11.000	3DM1-11	10.00	0.90	1.00	2.60	1.90	1.10
MHER0003	12.000	3DM1-12	11.05	1.10	1.00	2.60	2.20	1.30
MHER0004	13.000	3DM1-13	11.80	1.30	1.20	3.00	2.30	1.30
MHER0005	14.000	3DM1-14	12.80	1.30	1.20	3.00	2.40	1.40
MHER0006	15.000	3DM1-15	13.80	1.30	1.20	3.30	2.60	1.40
MHER0007	16.000	3DM1-16	14.70	1.30	1.20	3.30	2.70	1.50
MHER0008	17.000	3DM1-17	15.65	1.30	1.20	3.30	2.80	1.60

Name	Shaft Dia.	Ring Series Size No.	D Free Dia.	T Ring Thick.	P Hole Dia.	B Lug	E Large Sec	J Small Sec
MHER0009	18.000	3DM1-18	16.55	1.60	1.90	4.10	3.00	1.80
MHER0010	19.000	3DM1-19	17.50	2.00	1.90	4.60	3.20	2.00
MHER0011	20.000	3DM1-20	18.45	2.00	1.90	4.60	3.40	2.00
MHER0012	22.000	3DM1-22	20.40	2.00	1.90	4.60	3.80	2.10
MHER0013	25.000	3DM1-25	23.10	2.00	1.90	4.60	3.80	2.10
MHER0014	27.000	3DM1-27	24.85	2.40	2.30	5.60	4.10	2.30
MHER0015	28.000	3DM1-28	25.70	2.40	2.30	5.60	4.30	2.40
MHER0016	30.000	3DM1-30	27.60	2.40	2.30	5.60	4.50	2.50
MHER0017	32.000	3DM1-32	29.35	2.40	2.30	5.60	4.70	2.60
MHER0018	35.000	3DM1-35	32.20	2.40	2.30	5.60	5.10	2.80
MHER0019	38.000	3DM1-38	35.05	2.80	2.70	7.10	5.50	3.10
MHER0020	40.000	3DM1-40	36.70	2.80	2.70	7.10	5.80	3.20
MHER0021	45.000	3DM1-45	41.10	2.80	2.70	7.40	6.50	3.60
MHER0022	50.000	3DM1-50	45.50	3.20	3.10	8.00	7.10	3.90

Reinforced E - Ring External, Series 3EM1



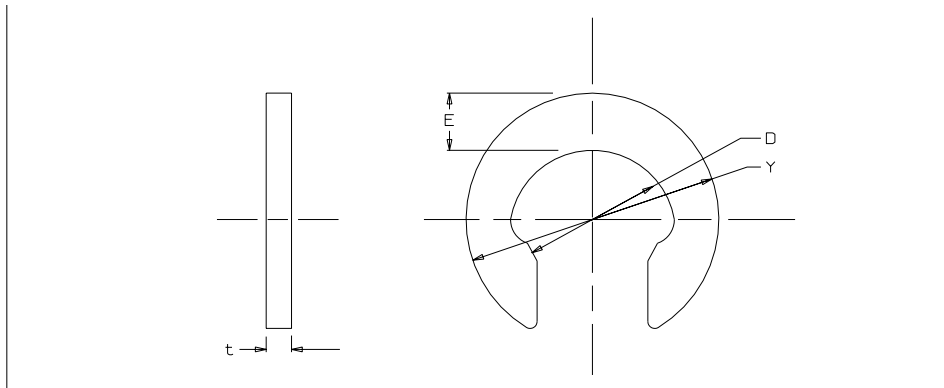
Generic Part Name: MRER

Notes:

- Corresponds to standard ANSI/ASME B27.8M - 1978.
- These parts do not conform to an ISO standard.

Name	Shaft Dia.	Ring Series Size No.	D Free Dia.	T Ring Thick.	Y Outer Dia.	E Large Sec
MRER0001	4.000	3EM1-4	2.90	0.60	8.50	1.50
MRER0002	5.000	3EM1-5	3.65	0.60	9.50	1.90
MRER0003	6.000	3EM1-6	4.65	0.60	11.35	2.20
MRER0004	7.000	3EM1-7	5.20	0.60	13.10	2.50
MRER0005	8.000	3EM1-8	6.15	0.60	14.95	2.70
MRER0006	9.000	3EM1-9	6.75	0.90	15.70	2.80
MRER0007	10.000	3EM1-10	7.45	0.90	16.75	3.00
MRER0008	11.000	3EM1-11	8.45	0.90	18.95	3.40
MRER0009	12.000	3EM1-12	9.10	1.10	19.60	3.50
MRER0010	13.000	3EM1-13	9.80	1.10	20.55	3.60
MRER0011	14.000	3EM1-14	10.90	1.10	22.10	3.80
MRER0012	15.000	3EM1-15	11.50	1.10	23.20	3.90

C - Ring External, Series 3FM1



Generic Part Name: MCER

Notes:

- Corresponds to standard ANSI/ASME B27.8M - 1978.

- These parts do not conform to an ISO standard.

Name	Shaft Dia.	Ring Series Size No.	D Free Dia.	T Ring Thick.	Y Outer Dia.	E Large Sec
MCER0001	3.000	3FM1-3	2.18	0.40	3.98	0.90
MCER0002	4.000	3FM1-4	3.00	0.40	5.00	1.00
MCER0003	5.000	3FM1-5	3.80	0.60	6.20	1.20
MCER0004	6.000	3FM1-6	4.80	0.60	7.40	1.30
MCER0005	7.000	3FM1-7	5.80	0.60	8.60	1.40
MCER0006	8.000	3FM1-8	6.80	0.60	10.00	1.60
MCER0007	9.000	3FM1-9	7.80	0.60	11.20	1.70
MCER0008	10.000	3FM1-10	8.75	0.60	12.15	1.70
MCER0009	11.000	3FM1-11	9.65	0.60	13.20	1.80
MCER0010	12.000	3FM1-12	10.55	0.60	14.35	1.90
MCER0011	13.000	3FM1-13	11.40	1.00	15.40	2.00
MCER0012	14.000	3FM1-14	12.30	1.00	16.30	2.00
MCER0013	15.000	3FM1-15	13.20	1.00	17.40	2.10
MCER0014	16.000	3FM1-16	14.10	1.00	18.50	2.20
MCER0015	17.000	3FM1-17	14.90	1.00	19.40	2.25
MCER0016	18.000	3FM1-18	15.80	1.20	20.40	2.30
MCER0017	19.000	3FM1-19	16.70	1.20	21.50	2.40
MCER0018	20.000	3FM1-20	17.55	1.20	22.65	2.55
MCER0019	22.000	3FM1-22	19.40	1.20	25.00	2.80
MCER0020	23.000	3FM1-23	20.20	1.20	26.00	2.90
MCER0021	24.000	3FM1-24	21.10	1.20	27.10	3.00
MCER0022	25.000	3FM1-25	22.00	1.20	28.30	3.15
MCER0023	26.000	3FM1-26	22.90	1.20	29.40	3.25
MCER0024	28.000	3FM1-28	24.60	1.60	31.60	3.50
MCER0025	30.000	3FM1-30	26.30	1.60	33.70	3.70
MCER0026	32.000	3FM1-32	28.10	1.60	36.10	4.00
MCER0027	35.000	3FM1-35	30.80	1.60	39.40	4.30

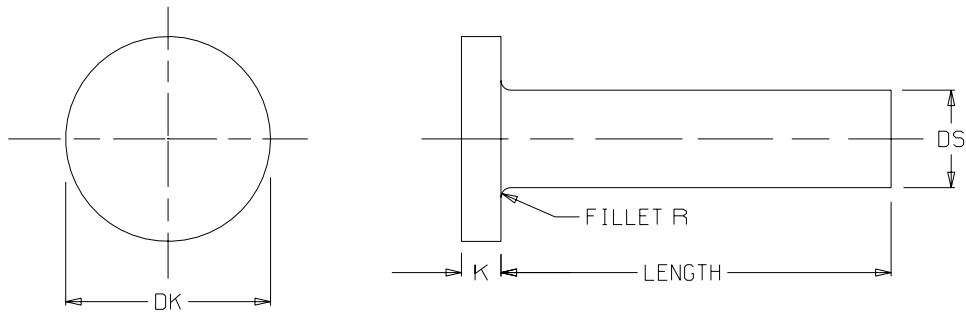
ANSI Metric Retaining Rings

Name	Shaft Dia.	Ring Series Size No.	D Free Dia.	T Ring Thick.	Y Outer Dia.	E Large Sec
MCER0028	36.000	3FM1-36	31.70	1.60	40.50	4.40
MCER0029	38.000	3FM1-38	33.40	1.60	42.60	4.60
MCER0030	40.000	3FM1-40	35.20	1.60	45.00	4.90
MCER0031	42.000	3FM1-42	37.00	1.60	47.20	5.10
MCER0032	45.000	3FM1-45	39.60	1.60	50.60	5.50
MCER0033	48.000	3FM1-48	42.30	1.60	54.10	5.90
MCER0034	50.000	3FM1-50	44.00	2.00	56.40	6.20
MCER0035	52.000	3FM1-52	46.00	2.00	58.60	6.30
MCER0036	55.000	3FM1-55	48.50	2.00	61.50	6.50

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ANSI Metric Rivets

Small Solid Flat Head Rivets



Generic Part Name: MFHR

Notes:

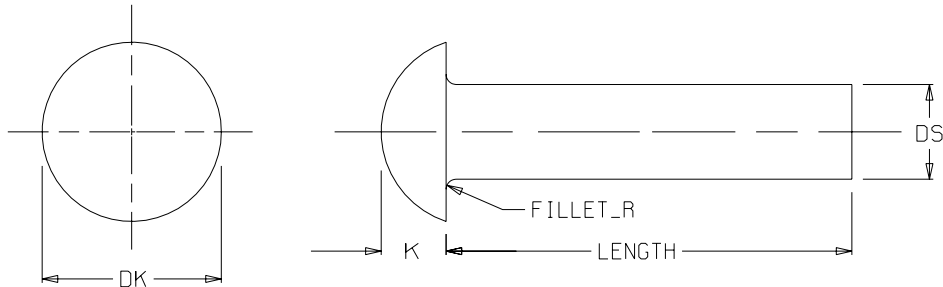
- Corresponds to standard ANSI/ASME B18.1.3M - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Ds Nominal Dia.	Preferred Size	Dk Head Dia.	K Head Thick.	Length
MFHR01	1.00	N	2.20	0.45	2 to 6 by 1, 8
MFHR02	1.20	N	2.60	0.52	2 to 6 by 1, 8, 10
MFHR03	1.40	N	3.00	0.58	3 to 6 by 1, 8, 10, 12
MFHR04	1.60	Y	3.40	0.68	3 to 6 by 1, 8, 10, 12, 15
MFHR05	2.00	Y	4.20	0.81	3 to 6 by 1, 8, 10, 12, 15, 18, 20
MFHR06	2.50	Y	5.20	0.98	4, 5, 6, 8, 10, 12, 15, 18, 20, 22, 25
MFHR07	3.00	Y	6.25	1.14	4, 5, 6, 8, 10, 12, 15, 18, 20, 22, 25, 28, 30

Name	Ds Nominal Dia.	Preferred Size	Dk Head Dia.	K Head Thick.	Length
MFHR08	3.50	N	7.25	1.31	5, 6, 8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35
MFHR09	4.00	Y	8.25	1.50	5, 6, 8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40
MFHR10	5.00	Y	10.25	1.83	6, 8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40, 45, 50
MFHR11	6.00	Y	12.35	2.18	6, 8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 60 by 5
MFHR12	7.00	N	14.35	2.51	8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 70 by 5
MFHR13	8.00	Y	16.40	2.89	8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 80 by 5
MFHR14	9.00	N	18.40	3.22	10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 90 by 5
MFHR15	10.00	Y	20.40	3.55	10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 100 by 5
MFHR16	11.00	N	22.45	3.88	12, 15, 18, 20, 22, 25, 28, 30, 35, 38, 40 to 100 by 5, 110
MFHR17	12.00	Y	24.45	4.24	12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 100 by 5, 110, 120

ANSI Metric Rivets

Small Solid Round Head Rivets



Generic Part Name: MRHR

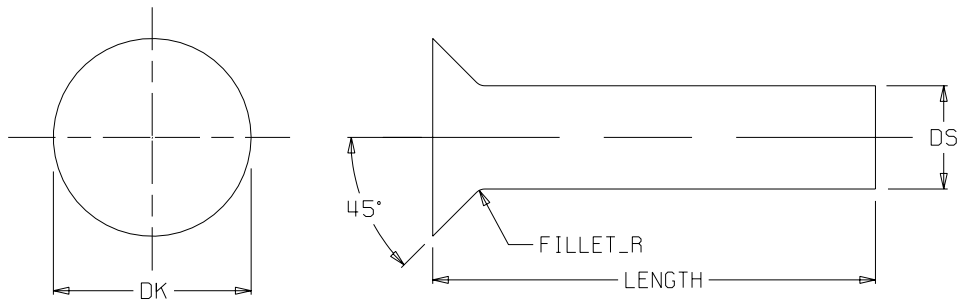
Notes:

- Corresponds to standard ANSI/ASME B18.1.3M - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Ds Nominal Dia.	Preferred Size	Dk Head Dia.	K Head Thick .	Length
MRHR01	1.00	N	1.95	0.72	2 to 6 by 1, 8
MRHR02	1.20	N	2.30	0.84	2 to 6 by 1, 8, 10
MRHR03	1.40	N	2.65	0.96	3 to 6 by 1, 8, 10, 12
MRHR04	1.60	Y	3.05	1.08	3 to 6 by 1, 8, 10, 12, 15
MRHR05	2.00	Y	3.75	1.32	3 to 6 by 1, 8, 10, 12, 15, 18, 20
MRHR06	2.50	Y	4.63	1.62	N/A
MRHR07	3.00	Y	5.50	1.92	N/A
MRHR08	3.50	N	6.38	2.25	N/A
MRHR09	4.00	Y	7.28	2.55	N/A
MRHR10	5.00	Y	9.03	3.15	N/A
MRHR11	6.00	Y	10.8y0	3.75	N/A
MRHR12	7.00	N	12.55	4.38	N/A

Name	Ds Nominal Dia.	Preferred Size	Dk Head Dia.	K Head Thick .	Length
MRHR13	8.00	Y	14.40	4.98	N/A
MRHR14	9.00	N	16.15	5.58	N/A
MRHR15	10.00	Y	17.95	6.20	N/A
MRHR16	11.00	N	19.70	6.80	N/A
MRHR17	12.00	Y	21.50	7.40	N/A

Small Solid Flat Countersunk Head Rivets



Generic Part Name: MFCR

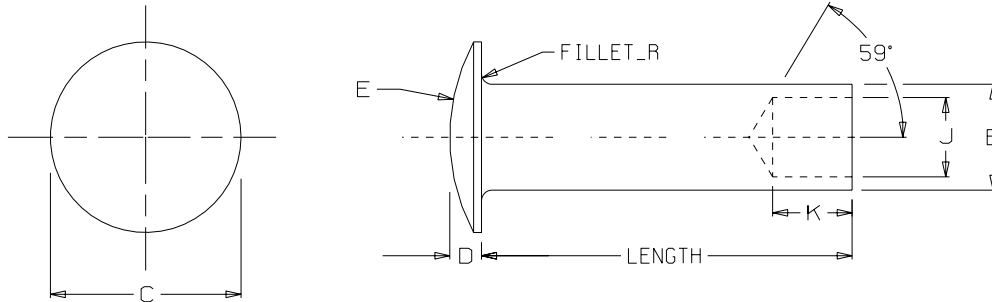
Notes:

- Corresponds to standard ANSI/ASME B18.1.3M - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Ds Nominal Dia.	Preferred Size	Dk Head Dia.	Length
MFCR01	1.00	N	1.93	3 to 6 by 1, 8
MFCR02	1.20	N	2.31	3 to 6 by 1, 8, 10
MFCR03	1.40	N	2.68	4, 5, 6, 8, 10, 12

Name	Ds Nominal Dia.	Preferred Size	Dk Head Dia.	Length
MFCR04	1.60	Y	3.06	4, 5, 6, 8, 10, 12, 15
MFCR05	2.00	Y	3.81	4, 5, 6, 8, 10, 12, 15, 18, 20
MFCR06	2.50	Y	4.75	5, 6, 8, 10, 12, 15, 18, 20, 22, 25
MFCR07	3.00	Y	5.70	5, 6, 8, 10, 12, 15, 18, 20, 22, 25, 28, 30
MFCR08	3.50	N	6.64	5, 6, 8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 35
MFCR09	4.00	Y	7.58	6, 8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40
MFCR10	5.00	Y	9.48	8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 50 by 5
MFCR11	6.00	Y	11.36	8, 10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 60 by 5
MFCR12	7.00	N	13.26	10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 70 by 5
MFCR13	8.00	Y	15.14	10, 12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 80 by 5
MFCR14	9.00	N	17.02	12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 90 by 5
MFCR15	10.00	Y	18.92	12, 15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 100 by 5
MFCR16	11.00	N	20.80	15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 100 by 5, 110
MFCR17	12.00	Y	22.68	15, 18, 20, 22, 25, 28, 30, 32, 35, 38, 40 to 100 by 5, 110, 120

General Purpose Semi-Tubular Rivets



Generic Part Name: MSTR

Notes:

- Corresponds to standard ANSI/ASME B18.7.1M - 1984.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

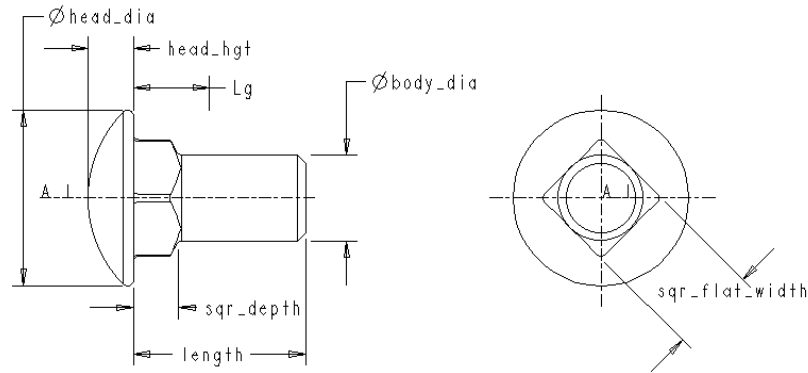
Name	B Nominal Dia.	C Head Dia.	D Head Thick .	E Head Radiu s	J Hole Dia.	K Hole Dept h	Length
MSTR01	1.60	2.88	0.48	3.09	1.20	1.20	2.0 to 16.0 by 0.5
MSTR02	2.00	3.60	0.60	3.83	1.50	1.50	2.0 to 20.0 by 0.5
MSTR03	2.50	4.50	0.75	4.84	1.88	1.88	2.0 to 25.0 by 0.5
MSTR04	3.00	5.40	0.90	5.78	2.25	2.25	2.5 to 30.0 by 0.5
MSTR05	3.50	6.30	1.05	6.80	2.63	2.63	3 to 35 by 1
MSTR06	4.00	7.20	1.20	7.81	3.00	3.00	3 to 40 by 1
MSTR07	5.00	9.00	1.50	9.74	3.75	3.75	4 to 50 by 1
MSTR08	6.00	10.80	1.80	11.72	4.50	4.50	5, 6 to 60 by 2
MSTR09	7.00	12.60	2.10	13.68	5.25	5.25	6 to 70 by 2
MSTR10	8.00	14.40	2.40	15.71	6.00	6.00	6 to 80 by 2

ANSI Metric Rivets

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ANSI Metric Round Head Bolts

Square Neck Bolts



Generic Part Name: MLSN

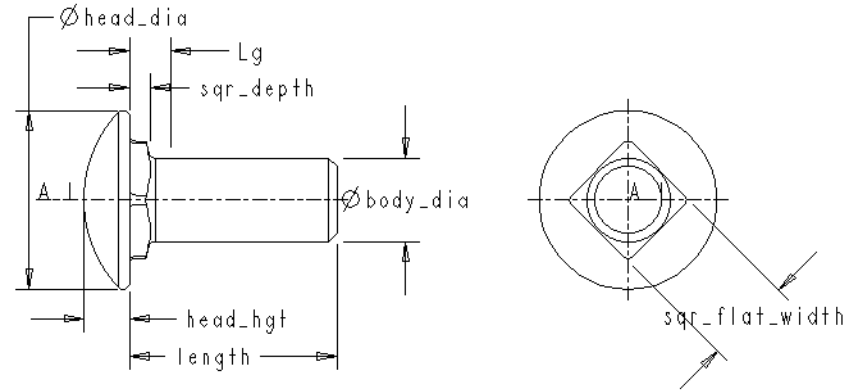
Notes:

- Corresponds to standard ANSI/ASME B18.5.2.2M - 1982.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thd Pitch	Body Dia	Head Hgt	Head Dia	Sqr Depth	Sqr Flat Width	Lg	Length
MLSN01	M5X0.8	5.4800	3.1000	11.8000	3.1000	5.4800	5.5	10, 12, 16, 20 to 50 by 5

Name	Nom Dia Thd Pitch	Body Dia	Head Hgt	Head Dia	Sqr Depth	Sqr Flat Width	Lg	Length
MLSN02	M6X1	6.4800	3.6000	14.2000	3.6000	6.4800	6.6, 42	12, 16, 20 to 50 by 5, 60
MLSN03	M8X1.25	8.5800	4.8000	18.0000	4.8000	8.5800	8.5, 38, 48, 58	16, 20 to 50 by 5, 60, 70, 80
MLSN04	M10X1.5	5.8000	22.3000	19.6000	10.5800	0.80000	10.3, 34 to 74 by 10	20 to 50 by 5, 60 to 100 by 10
MLSN05	M12X1.75	6.8000	26.6000	23.8000	12.7000	0.80000	12, 30 to 90 by 10	25 to 50 by 5, 60 to 120 by 10
MLSN06	M14X2	7.9000	30.5000	27.6000	14.7000	1.20000	13.9, 26 to 86 by 10, 90, 100	30 to 50 by 5, 60 to 140 by 10
MLSN07	M16X2	8.9000	35.0000	31.9000	16.7000	1.20000	14.9, 32 to 82 by 10, 86 to 116 by 10	30 to 50 by 5, 60 to 160 by 10
MLSN08	M20X2.5	10.9000	43.0000	39.9000	20.8400	1.60000	18.4, 34 to 74 by 10, 78 to 108 by 10, 128, 148	40, 45, 50 to 160 by 10, 180, 200
MLSN09	M24X3	13.1000	51.0000	47.6000	24.8400	1.60000	22.1, 36 to 66 by 10, 70 to 100 by 10, 120, 140, 147, 167	45, 50 to 160 by 10, 180 to 240 by 20

Short Square Neck Bolts



Generic Part Name: MSSN

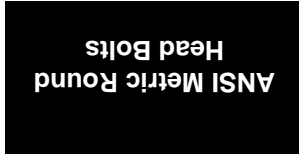
Notes:

- Corresponds to standard ANSI B18.5.2.1M - 1981.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia_thd pitch	Body Dia	Head Dia	Head Hgt	Sqr Flat Width	Sqr Depth	Lg	Length
MSSN01	M6X1	6.000	14.200	3.6000	6.4800	3.0000	5.0, 37, 42	12, 16, 20 to 60 by 5

ANSI Metric Round Head Bolts

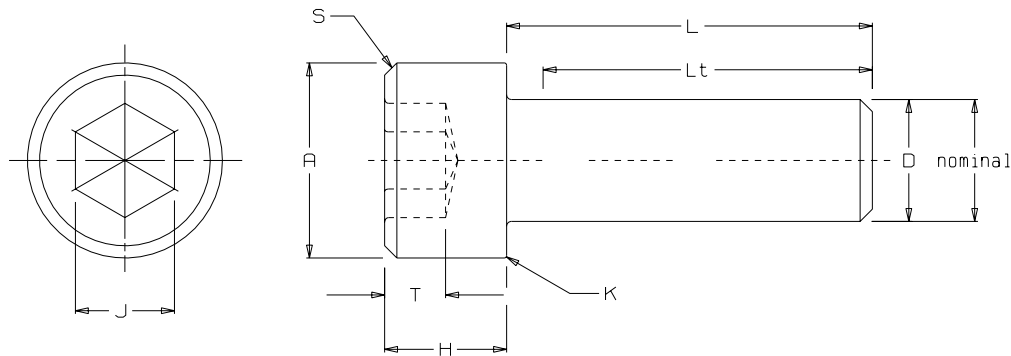
Name	Nom Dia_thd pitch	Body Dia	Head Dia	Head Hgt	Sqr Flat Width	Sqr Depth	Lg	Length
MSSN02	M8X1.25	8.000	18.000	4.8000	8.5800	3.0000	5.5, 33 to 48 by 5, 58	16, 20 to 70 by 5, 80
MSSN03	M10X1.5	10.000	22.300	5.8000	10.580	4.0000	7, 29 to 44 by 5, 54, 64, 74	20 to 70 by 5, 80, 90, 100
MSSN04	M12X1.75	12.000	26.600	6.8000	12.700	4.0000	7.5, 25 to 40 by 5, 50 to 90 by 10	20 to 70 by 5, 80 to 120 by 10
MSSN05	M14X2	14.000	30.500	7.9000	14.700	4.0000	8, 26, 31, 36 to 86 by 10, 90, 100	25 to 70 by 5, 80 to 140 by 10
MSSN06	M16X2	16.000	35.000	8.9000	16.700	5.0000	9, 27, 32 to 82 by 10, 86 to 116 by 10	30 to 70 by 5, 80 to 160 by 10
MSSN07	M20X2.5	20.000	43.000	10.900	20.840	5.0000	10, 34 to 74 by 10, 78 to 108 by 10, 128, 148	35 to 70 by 5, 80 to 160 by 10, 180, 200



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**ANSI Metric Socket Head
Screws**

Socket Head Cap Screws



Generic Part Name: MSCS

Notes:

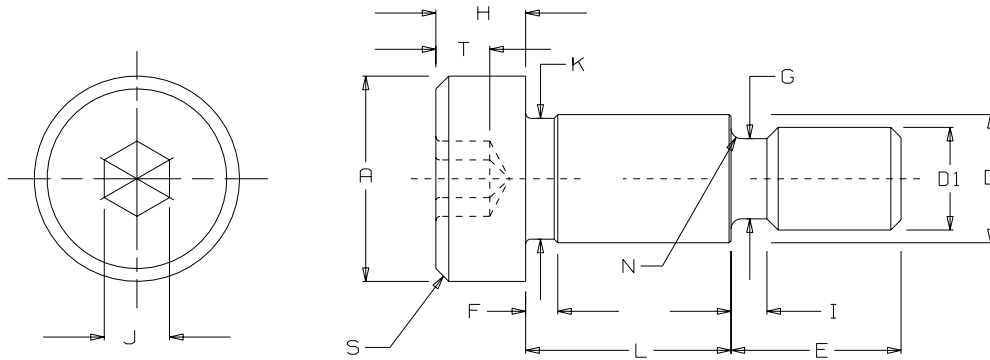
- Corresponds to standard ANSI/ASME B18.3.1M - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom. Size & Thread Pitch	Nom. Thread Dia.	D Body Dia.	A Head Dia.	H Head Hgt	Hex Socket Size	L Length
MSCS01	M1.6X0.35	1.60	1.60	3.00	1.60	1.500	3, 4, 5, 6, 8, 10, 12, 16
MSCS02	M2X0.4	2.00	2.00	3.80	2.00	1.500	3, 4, 5, 6, 8, 10, 12, 16, 20
MSCS03	M2.5X0.45	2.50	2.50	4.50	2.50	2.000	4, 5, 6, 8, 10, 12, 16, 20, 25
MSCS04	M3X0.5	3.00	3.00	5.50	3.00	2.500	5, 6, 8, 10, 12, 16, 20, 25, 30

Name	Nom. Size & Thread Pitch	Nom. Thread Dia.	D Body Dia.	A Head Dia.	H Head Hgt	Hex Socket Size	L Length
MSCS05	M4X0.7	4.00	4.00	7.00	4.00	3.000	6, 8, 10, 12, 16, 20 to 40 by 5
MSCS06	M5X0.8	5.00	5.00	8.50	5.00	4.000	8, 10, 12, 16, 20 to 50 by 5
MSCS07	M6X1	6.00	6.00	10.00	6.00	5.000	10, 12, 16, 20 to 60 by 5
MSCS08	M8X1.25	8.00	8.00	13.00	8.00	6.000	12, 16, 20 to 70 by 5, 80
MSCS09	M10X1.5	10.00	10.00	16.00	10.00	8.000	16, 20 to 70 by 5, 80 to 100 by 10
MSCS10	M12X1.75	12.00	12.00	18.00	12.00	10.000	20 to 70 by 5, 80 to 120 by 10
MSCS11	M14X2	14.00	14.00	21.00	14.00	12.000	20 to 70 by 5, 80 to 120 by 10
MSCS12	M16X2	16.00	16.00	24.00	16.00	14.000	25 to 70 by 5, 80 to 160 by 10
MSCS13	M20X2.5	20.00	20.00	30.00	20.00	17.000	30 to 70 by 5, 80 to 160 by 10, 180, 200
MSCS14	M24X3	24.00	24.00	36.00	24.00	19.000	40 to 70 by 5, 80 to 160 by 10, 180 to 240 by 20
MSCS15	M30X3.5	30.00	30.00	45.00	30.00	22.000	45 to 70 by 5, 80 to 160 by 10, 180 to 300 by 20

Name	Nom. Size & Thread Pitch	Nom. Thread Dia.	D Body Dia.	A Head Dia.	H Head Hgt	Hex Socket Size	L Length
MSCS16	M36X4	36.00	36.00	54.00	36.00	27.000	55 to 70 by 5, 80 to 160 by 10, 180 to 300 by 20
MSCS17	M42X4.5	42.00	42.00	63.00	42.00	32.000	65, 70, 80 to 160 by 10, 180 to 300 by 20
MSCS18	M48X5	48.00	48.00	72.00	48.00	36.000	80 to 160 by 10, 180 to 300 by 20

Hexagon Socket Head Shoulder Screws



Generic Part Name: MSSS

Notes:

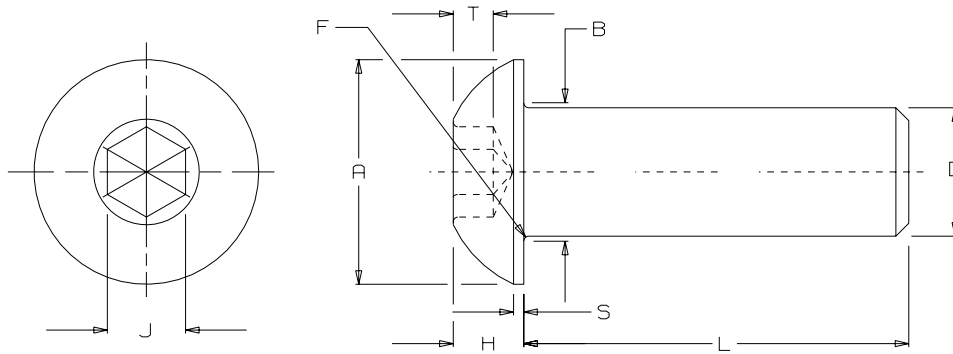
- Corresponds to standard ANSI/ASME B18.3.3M - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Size & Thread Pitch	D Shoulder Dia.	A Head Dia.	H Head Height	Hex Socket Size	T Hex Socket Depth	J Hex Socket Flat
MSSS01	6.500	6.487	10.00	4.50	3.000	2.40	3.071
MSSS02	8.000	7.987	13.00	5.50	4.000	3.30	4.084
MSSS03	10.000	9.987	16.00	7.00	5.000	4.20	5.084
MSSS04	13.000	12.984	18.00	9.00	6.000	4.90	6.095
MSSS05	16.000	15.984	24.00	11.00	8.000	6.60	8.115
MSSS06	20.000	19.980	30.00	14.00	10.000	8.80	10.127
MSSS07	25.000	24.980	36.00	16.00	12.000	10.00	12.146

Name	K Shoulder Neck Dia.	F Shoulder Neck Width	D1 Thd Dia.	Thd Pitch	G Thr. Neck Dia.	I Thr. Neck Width	E Thr. Lg	Lengths
MSSS01	5.92	2.50	5.00	0.800	3.86	2.40	9.75	10, 12, 16, 20, 25, 30, 40
MSSS02	7.42	2.50	6.00	1.000	4.58	2.60	11.25	10, 12, 16, 20, 25, 30, 40, 50
MSSS03	9.42	2.50	8.00	1.250	6.25	2.80	13.25	10, 12, 16, 20, 25, 30 to 100 by 10
MSSS04	12.42	2.50	10.00	1.500	7.91	3.00	16.40	12, 16, 20, 25, 30 to 120 by 10
MSSS05	15.42	2.50	12.00	1.750	9.57	4.00	18.40	30 to 120 by 10
MSSS06	19.42	2.50	16.00	2.000	13.23	4.80	22.40	40 to 120 by 10

Name	K Shoul- der Neck Dia.	F Shoul- der Neck Width	D1 Thd Dia.	Thd Pitch	G Thr. Neck Dia.	I Thr. Neck Width	E Thr. Lg	Lengths
MSSS07	24.42	3.00	20.00	2.500	16.57	5.60	27.40	50 to 120 by 10

Hexagon Socket Button Head Cap Screws



Generic Part Name: MSBS

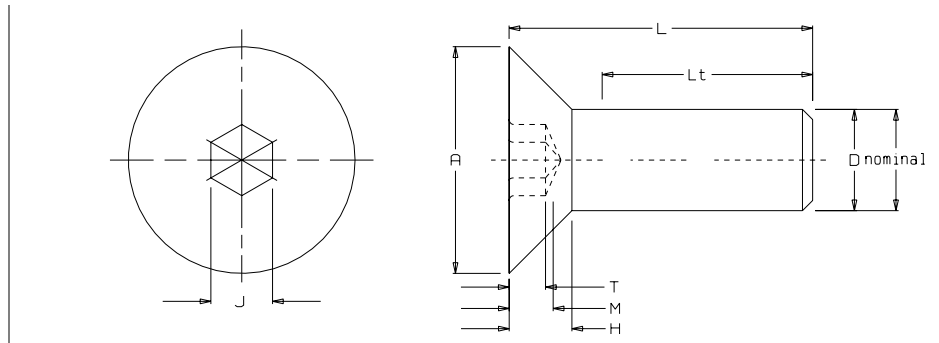
Notes:

- Corresponds to standard ANSI/ASME B18.3.4M - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Size & Thread Pitch	D Thrd Dia.	A Head Dia.	H Head Hgt	Hex Socket Size	S Head Side Hgt	L Length
MSBS01	M3X0.5	3.00	5.70	1.65	2.000	0.38	5, 6, 8, 10, 12
MSBS02	M4X0.7	4.00	7.60	2.20	2.500	0.38	6, 8, 10, 12, 16, 20
MSBS03	M5X0.8	5.00	9.50	2.75	3.000	0.50	6, 8, 10, 12, 16, 20, 25, 30

Name	Nominal Size & Thread Pitch	D Thrd Dia.	A Head Dia.	H Head Hgt	Hex Socket Size	S Head Side Hgt	L Length
MSBS04	M6X1	6.00	10.50	3.30	4.000	0.80	6, 8, 10, 12, 16, 20, 25, 30
MSBS05	M8X1.25	8.00	14.00	4.40	5.000	0.80	10, 12, 16, 20 to 40 by 5
MSBS06	M10X1.5	10.00	17.50	5.50	6.000	0.80	12, 16, 20 to 40 by 5
MSBS07	M12X1.75	12.00	21.00	6.60	8.000	0.80	25 to 60 by 5
MSBS08	M16X2	16.00	28.00	8.80	10.000	1.50	25 to 60 by 5

Hexagon Socket Flat Countersunk Head Cap Screws



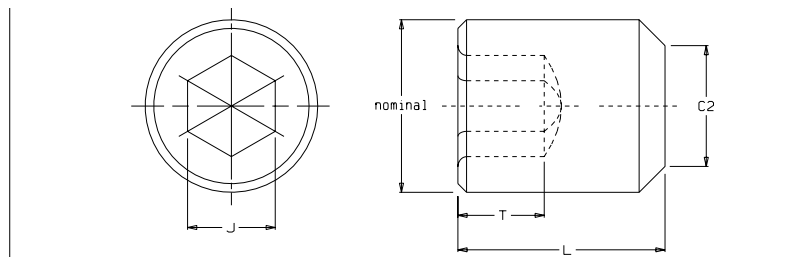
Generic Part Name: MSFS

Notes:

- Corresponds to standard ANSI/ASME B18.3.5M - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Size & Thread Pitch	Nominal Thread Dia.	D Body Dia.	A Head Dia.	Hex Socket Size	L Length
MSFS01	M3X0.5	3.00	3.00	6.72	2.000	6, 8, 10, 12, 16, 20 to 35 by 5
MSFS02	M4X0.7	4.00	4.00	8.96	2.500	8, 10, 12, 16, 20 to 40 by 5
MSFS03	M5X0.8	5.00	5.00	11.20	3.000	8, 10, 12, 16, 20 to 50 by 5
MSFS04	M6X1	6.00	6.00	13.44	4.000	8, 10, 12, 16, 20 to 50 by 5
MSFS05	M8X1.25	8.00	8.00	17.92	5.000	12, 16, 20 to 70 by 5
MSFS06	M10X1.5	10.00	10.00	22.40	6.000	16, 20 to 70 by 5, 80, 90
MSFS07	M12X1.75	12.00	12.00	26.88	8.000	30 to 70 by 5, 80 to 120 by 10
MSFS08	M14X2	14.00	14.00	30.24	10.000	30 to 70 by 5, 80 to 120 by 10
MSFS09	M16X2	16.00	16.00	33.60	10.000	30 to 70 by 5, 80 to 150 by 10
MSFS10	M20X2.5	20.00	20.00	40.32	12.000	30 to 70 by 5, 80 to 150 by 10

Socket Set Screws, Flat Point

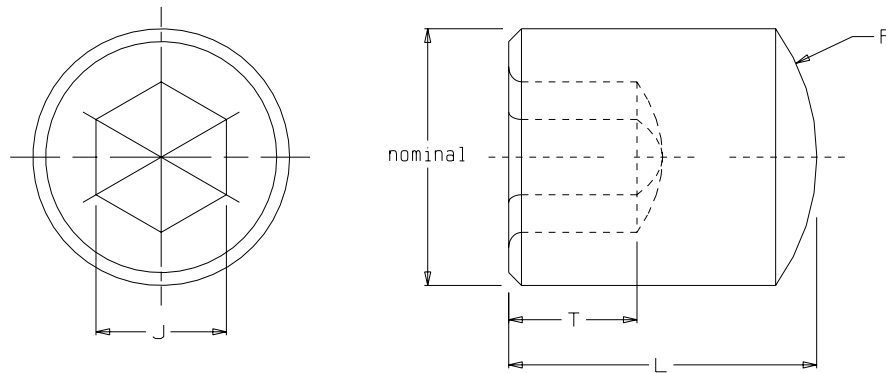


Generic Part Name: MOSF**Notes:**

- Corresponds to standard ANSI/ASME M18.3.6M - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom. Dia. & Thread Pitch	Nominal Thread Dia.	C2 Flat Point Dia.	Hex Socket Size	L Length
MOSF01	M1.6X0.35	1.60	0.80	0.700	1.5, 2, 2.5, 3
MOSF02	M2X0.4	2.00	1.00	0.900	1.5, 2, 2.5, 3, 4
MOSF03	M2.5X0.45	2.50	1.50	1.300	2, 2.5, 3, 4
MOSF04	M3X0.5	3.00	2.00	1.500	2, 2.5, 3, 4, 5
MOSF05	M4X0.7	4.00	2.50	2.000	2.5, 3, 4, 5, 6
MOSF06	M5X0.8	5.00	3.50	2.500	3, 4, 5, 6, 8
MOSF07	M6X1	6.00	4.00	3.000	4, 5, 6, 8
MOSF08	M8X1.25	8.00	5.50	4.000	5, 6, 8, 10
MOSF09	M10X1.5	10.00	7.00	5.000	6, 8, 10, 12
MOSF10	M12X1.75	12.00	8.50	6.000	8, 10, 12, 16
MOSF11	M16X2	16.00	12.00	8.000	10, 12, 16, 20
MOSF12	M20X2.5	20.00	15.00	10.000	12, 16, 20, 25
MOSF13	M24X3	24.00	18.00	12.000	16, 20, 25, 30

Socket Set Screws, Oval Point



Generic Part Name: MOSO

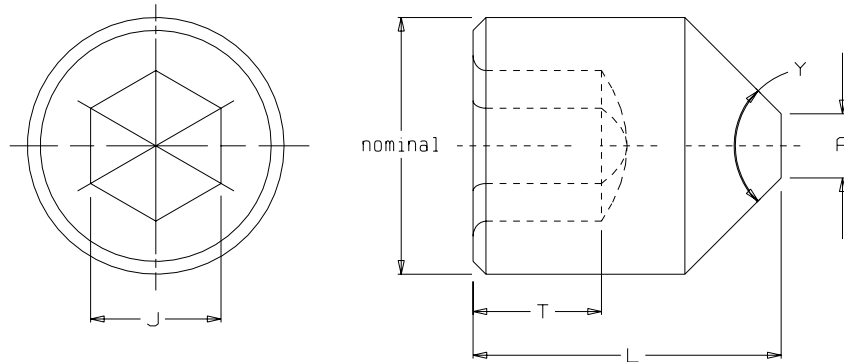
Notes:

- Corresponds to standard ANSI/ASME M18.3.6M - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom. Dia. & Thread Pitch	Nominal Thread Dia.	Hex Socket Size	J Hex Socket Flat	R Point Radius	L Length
MOSO01	M1.6X0.35	1.60	0.700	0.72	1.60	1.5, 2, 2.5, 3
MOSO02	M2X0.4	2.00	0.900	0.90	1.90	1.5, 2, 2.5, 3, 4
MOSO03	M2.5X0.45	2.50	1.300	1.29	2.28	2, 2.5, 3, 4
MOSO04	M3X0.5	3.00	1.500	1.54	2.65	2.5, 3, 4, 5
MOSO05	M4X0.7	4.00	2.000	2.04	3.80	3, 4, 5, 6
MOSO06	M5X0.8	5.00	2.500	2.56	4.55	4, 5, 6, 8
MOSO07	M6X1	6.00	3.000	3.07	5.30	5, 6, 8
MOSO08	M8X1.25	8.00	4.000	4.08	6.80	6, 8, 10
MOSO09	M10X1.5	10.00	5.000	5.08	8.30	8, 10, 12

Name	Nom. Dia. & Thread Pitch	Nominal Thread Dia.	Hex Socket Size	J Hex Socket Flat	R Point Radius	L Length
MOSO10	M12X1.75	12.00	6.000	6.09	9.80	10, 12, 16
MOSO11	M16X2	16.00	8.000	8.12	12.80	12, 16, 20
MOSO12	M20X2.5	20.00	10.000	10.13	15.80	16, 20, 25
MOSO13	M24X3	24.00	12.000	12.15	18.80	20, 25, 30

Socket Set Screws, Cone Point



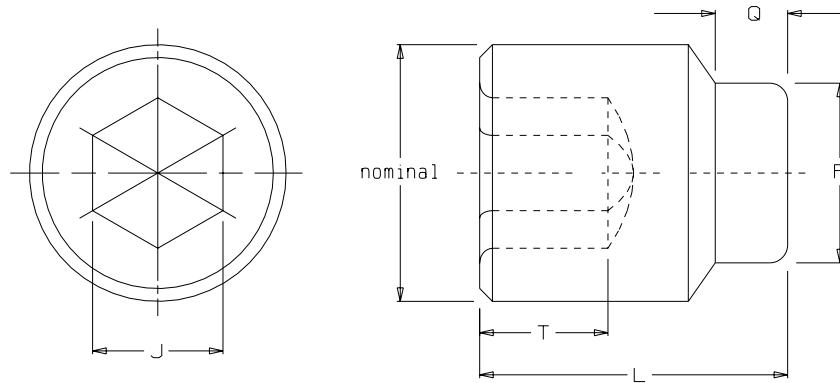
Generic Part Name: MOSC

Notes:

- Corresponds to standard ANSI/ASME M18.3.6M - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom. Dia. & Thread Pitch	Nominal Thread Dia.	Hex Socket Size	J Hex Socket Flat	A Cone Point Flat	L Length
MOSC01	M1.6X0.35	1.60	0.700	0.72	0.16	1.5, 2, 2.5, 3
MOSC02	M2X0.4	2.00	0.900	0.90	0.20	1.5, 2, 2.5, 3, 4
MOSC03	M2.5X0.45	2.50	1.300	1.29	0.25	2, 2.5, 3, 4
MOSC04	M3X0.5	3.00	1.500	1.54	0.30	2.5, 3, 4, 5
MOSC05	M4X0.7	4.00	2.000	2.04	0.40	3, 4, 5, 6
MOSC06	M5X0.8	5.00	2.500	2.56	0.50	4, 5, 6, 8
MOSC07	M6X1	6.00	3.000	3.07	1.50	5, 6, 8
MOSC08	M8X1.25	8.00	4.000	4.08	2.00	6, 8, 10
MOSC09	M10X1.5	10.00	5.000	5.08	2.50	8, 10, 12
MOSC10	M12X1.75	12.00	6.000	6.09	3.00	10, 12, 16
MOSC11	M16X2	16.00	8.000	8.12	4.00	12, 16, 20
MOSC12	M20X2.5	20.00	10.000	10.13	5.00	16, 20, 25
MOSC13	M24X3	24.00	12.000	12.15	6.00	20, 25, 30

Socket Set Screws, Half Dog Point



Generic Part Name: MOSD

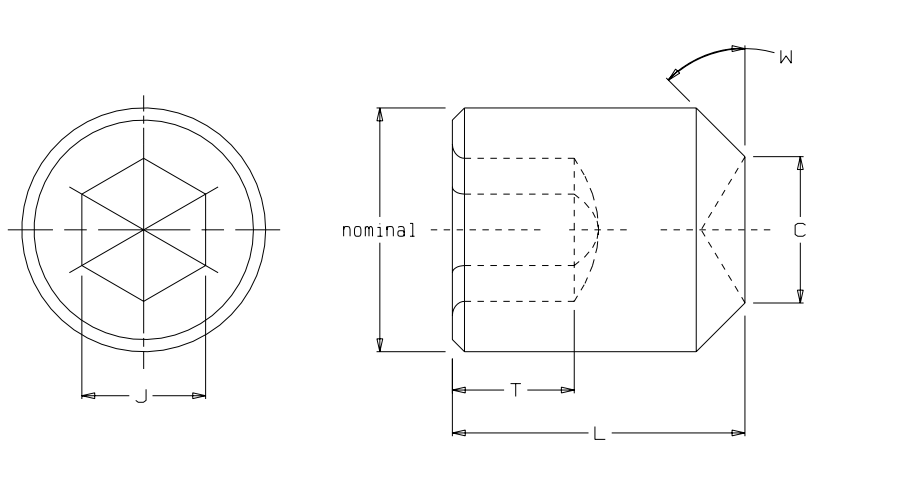
Notes:

- Corresponds to standard ANSI/ASME M18.3.6M - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom. Dia. & Thread Pitch	Nom. Thread Dia.	Hex Socket Size	J Socket Flat Width	P Point Dia.	Q Point Length	L Length
MOSD01	M1.6X0.35	1.60	0.700	0.72	0.80	0.53	2, 2.5, 3
MOSD02	M2X0.4	2.00	0.900	0.90	1.00	0.64	2.5, 3, 4
MOSD03	M2.5X0.45	2.50	1.300	1.29	1.50	0.78	2.5, 3, 4
MOSD04	M3X0.5	3.00	1.500	1.54	2.00	0.92	3, 4, 5
MOSD05	M4X0.7	4.00	2.000	2.04	2.50	1.20	3, 4, 5, 6
MOSD06	M5X0.8	5.00	2.500	2.56	3.50	1.37	5, 6, 8
MOSD07	M6X1	6.00	3.000	3.07	4.00	1.74	5, 6, 8
MOSD08	M8X1.25	8.00	4.000	4.08	5.50	2.28	6, 8, 10
MOSD09	M10X1.5	10.00	5.000	5.08	7.00	2.82	8, 10, 12

Name	Nom. Dia. & Thread Pitch	Nom. Thread Dia.	Hex Socket Size	J Socket Flat Width	P Point Dia.	Q Point Length	L Length
MOSD10	M12X1.75	12.00	6.000	6.09	8.50	3.35	10, 12, 16
MOSD11	M16X2	16.00	8.000	8.12	12.00	4.40	12, 16, 20
MOSD12	M20X2.5	20.00	10.000	10.13	15.00	5.45	16, 20, 25
MOSD13	M24X3	24.00	12.000	12.15	18.00	6.49	20, 25, 30

Socket Set Screws, Cup Point



Generic Part Name: MOSP

Notes:

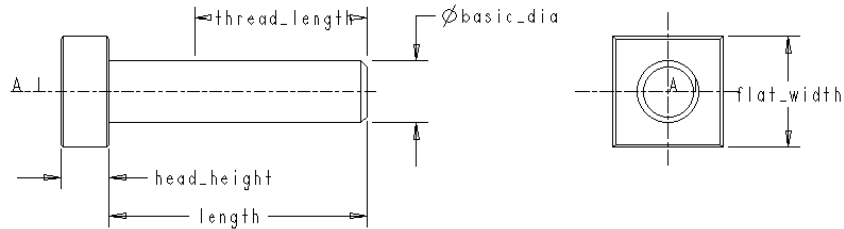
- Corresponds to standard ANSI/ASME M18.3.6M - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom. Dia. & Thread Pitch	Nominal Thread Dia.	C Cup Point Dia.	Hex Socket Size	J Hex Socket Flat	L Length
MOSP01	M1.6X0.35	1.60	0.80	0.700	0.72	1.5, 2, 2.5, 3
MOSP02	M2X0.4	2.00	1.00	0.900	0.90	1.5, 2, 2.5, 3, 4
MOSP03	M2.5X0.45	2.50	1.20	1.300	1.29	2, 2.5, 3, 4
MOSP04	M3X0.5	3.00	1.40	1.500	1.54	2, 2.5, 3, 4, 5
MOSP05	M4X0.7	4.00	2.00	2.000	2.04	2.5, 3, 4, 5, 6
MOSP06	M5X0.8	5.00	2.50	2.500	2.56	3, 4, 5, 6, 8
MOSP07	M6X1	6.00	3.00	3.000	3.07	4, 5, 6, 8
MOSP08	M8X1.25	8.00	5.00	4.000	4.08	5, 6, 8, 10
MOSP09	M10X1.5	10.00	6.00	5.000	5.08	6, 8, 10, 12
MOSP10	M12X1.75	12.00	8.00	6.000	6.09	8, 10, 12, 16
MOSP11	M16X2	16.00	10.00	8.000	8.12	10, 12, 16, 20
MOSP12	M20X2.5	20.00	14.00	10.000	10.13	12, 16, 20, 25
MOSP13	M24X3	24.00	16.00	12.000	12.15	16, 20, 25, 30

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**ANSI Metric T-Bolts and
T-Nuts**

Metric T-Bolts



Generic Part Name: MTB

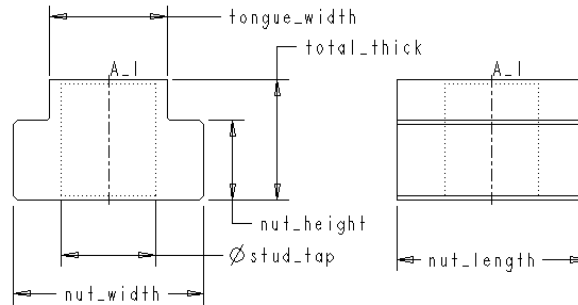
Notes:

- Corresponds to standard ANSI/ASME B5.1M - 1985.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal dia_thr pitch	Basic Dia	Flat Width	Head Hgt	Length	Thread length
MTB01	M4X0.7	4.000	9.000	2.500	45 to 80 by 5, 90 to 160 by 10, 180 to 260 by 20, 300	14, 20, 33
MTB02	M5X0.8	5.000	10.000	4.000	55 to 80 by 5, 90 to 160 by 10, 180 to 260 by 20, 300	16, 22, 35
MTB03	M6X1	6.000	13.000	6.000	65 to 80 by 5, 90 to 160 by 10, 180 to 260 by 20, 300	18, 24, 37
MTB04	M8X1.25	8.000	15.000	6.000	90 to 160 by 10, 180 to 260 by 20, 300	22, 28, 41

Name	Nominal dia_thr pitch	Basic Dia	Flat_ Width	Head_ Hgt	Length	Thread length
MTB05	M10X1.5	10.000	18.000	7.000	110 to 160 by 10, 180 to 260 by 20, 300	26, 32, 45
MTB06	M12X1.75	12.000	22.000	8.000	130 to 160 by 10, 180 to 260 by 20, 300	36, 49
MTB07	M16X2	16.000	28.000	10.000	160 to 260 by 20, 300	44, 57
MTB08	M20X2.5	20.000	34.000	14.000	160 to 260 by 20, 300	52, 65
MTB09	M24X3	24.000	43.000	18.000	160 to 260 by 20, 300	60, 73
MTB10	M30X3.5	30.000	53.000	23.000	60 to 80 by 5, 90 to 160 by 10, 180 to 260 by 20, 300	55, 60, 66, 72, 85
MTB11	M36X4	36.000	64.000	28.000	70, 75, 80 to 160 by 10, 180 to 260 by 20, 300	64, 69, 74, 78, 84, 97
MTB12	M42X4.5	42.000	75.000	32.000	90 to 160 by 10, 180 to 260 by 20, 300	83, 90, 96, 109
MTB13	M48X5	48.000	85.000	36.000	100 to 160 by 10, 180 to 260 by 20, 300	92, 102, 108, 121

Metric T-Nuts



Generic Part Name: MTN

Notes:

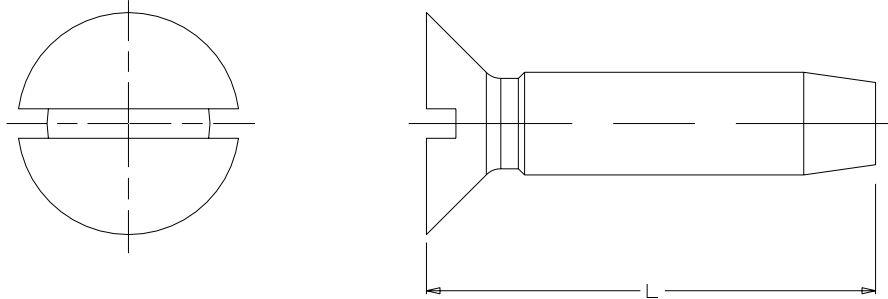
- Corresponds to standard ANSI/ASME B5.1M - 1985.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia Thr Pitch	Basic Dia	Tng Wdth	Stud Tap	Nut Wdth	Nut Ht	Total Thick	Nut Lgth
MTN01	M6X1	8.000	8.7000	6.000	15.000	6.000	9.000	18.000
MTN02	M8X1.25	10.000	11.000	8.000	18.000	7.000	10.500	20.000
MTN03	M10X1.5	12.000	13.500	10.000	22.000	8.000	12.000	23.000
MTN04	M12X1.75	16.000	17.250	12.000	28.000	10.000	15.000	27.000
MTN05	M16X2	20.000	20.500	16.000	34.000	14.000	21.000	35.000
MTN06	M20X2.5	24.000	26.500	20.000	43.000	18.000	27.000	46.000
MTN07	M24X3	30.000	33.000	24.000	53.000	23.000	34.000	53.000
MTN08	M30X3.5	36.000	39.250	30.000	64.000	28.000	42.000	65.000
MTN09	M36X4	42.000	46.750	36.000	75.000	32.000	48.000	75.000
MTN10	M42X4.5	48.000	52.500	42.000	85.000	36.000	54.000	85.000

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ANSI Metric Tapping Screws

Slotted Flat Countersunk Head



Generic Part Name: MSTS

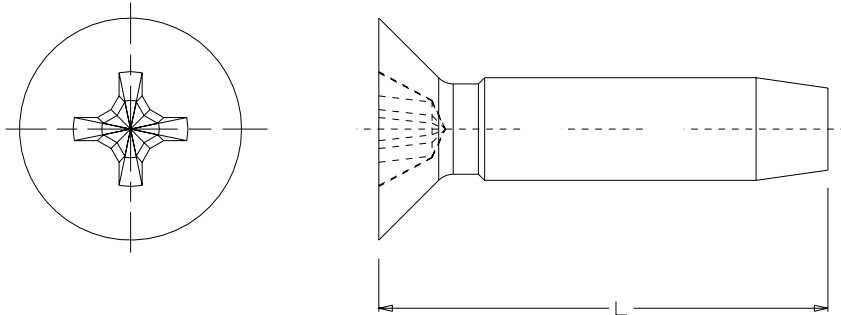
Notes:

- Corresponds to standard ANSI B18 6.5M-1981.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr. Pitch	Types	L Length
MSTS01	2.2 x 0.8	AB	6, 8, 10, 13
MSTS02	2.9 x 1	AB	8, 10, 13, 16
MSTS03	3.5 x 1.3	AB	10, 13, 16, 20, 25
MSTS04	4.2 x 1.4	AB	10, 13, 16, 20, 25
MSTS05	4.8 x 1.6	AB	13, 16, 20 to 35 by 5
MSTS06	5.5 x 1.8	AB	16, 20 to 40 by 5
MSTS07	6.3 x 1.8	AB	16, 20 to 40 by 5
MSTS08	8 x 2.1	AB	20 to 50 by 5
MSTS09	9.5 x 2.1	AB	25 to 60 by 5
MSTS11	2.2 x 0.8	B, BF, BT	6, 8, 10, 13
MSTS12	2.9 x 1	B, BF, BT	8, 10, 13, 16
MSTS13	3.5 x 1.3	B, BF, BT	10, 13, 16, 20, 25
MSTS14	4.2 x 1.4	B, BF, BT	10, 13, 16, 20, 25

Name	Nominal Dia. Thr. Pitch	Types	L Length
MSTS15	4.8 x 1.6	B, BF, BT	13, 16, 20 to 35 by 5
MSTS16	5.5 x 1.8	B,BF, BT	16, 20 to 40 by 5
MSTS17	6.3 x 1.	B, BF, BT	16, 20 to 40 by 5
MSTS18	8 x 2.1	B, BF, BT	20 to 50 by 5
MSTS19	9.5 x 2.1	B, BF, BT	25 to 60 by 5
MSTS21	2 x 0.4	D, F, T	6, 8, 10, 13
MSTS22	2.5 x 0.45	D, F, T	6, 8, 10, 13, 16
MSTS23	3 x 0.5	D, F, T	8, 10, 13, 16
MSTS24	3.5 x 0.6	D, F, T	8, 10, 13, 16
MSTS25	4 x 0.7	D, F, T	10, 13, 16, 20, 25
MSTS26	5 x 0.8	D, F, T	13, 16, 20 to 35 by 5
MSTS27	6 x 1	D, F, T	16, 20 to 40 by 5
MSTS28	8 x 1.25	D, F, T	20 to 50 by 5
MSTS29	10 x 1.5	D, F, T	20 to 60 by 5

Type 1 Cross Recessed Flat Countersunk Head



Generic Part Name: MCTS

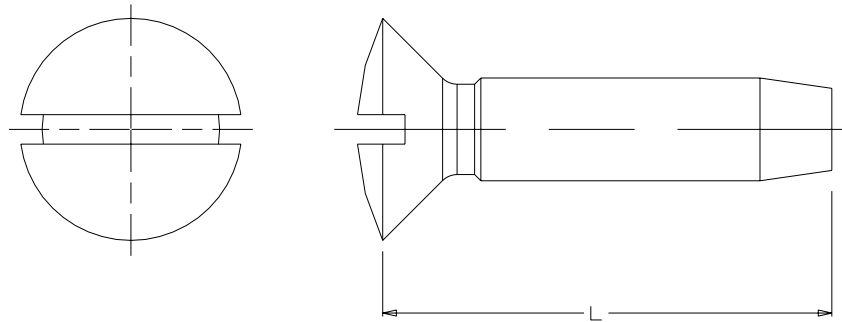
Notes:

- Corresponds to standard ANSI B18 6.5M-1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr. Pitch	Types	L Length
MCTS01	2.2 x 0.8	AB	6, 8, 10, 13
MCTS02	2.9 x 1	AB	8, 10, 13, 16
MCTS03	3.5 x 1.3	AB	10, 13, 16, 20, 25
MCTS04	4.2 x 1.4	AB	10, 13, 16, 20, 25
MCTS05	4.8 x 1.6	AB	13, 16, 20 to 35 by 5
MCTS06	5.5 x 1.8	AB	16, 20 to 40 by 5
MCTS07	6.3 x 1.8	AB	16, 20 to 40 by 5
MCTS08	8 x 2.1	AB	20 to 50 by 5
MCTS09	9.5 x 2.1	AB	25 to 60 by 5
MCTS11	2.2 x 0.8	B, BF, BT	6, 8, 10, 13
MCTS12	2.9 x 1	B, BF, BT	8, 10, 13, 16
MCTS13	3.5 x 1.3	B, BF, BT	10, 13, 16, 20, 25
MCTS14	4.2 x 1.4	B, BF, BT	10, 13, 16, 20, 25
MCTS15	4.8 x 1.6	B, BF, BT	13, 16, 20 to 35 by 5
MCTS16	5.5 x 1.8	B, BF, BT	16, 20 to 40 by 5
MCTS17	6.3 x 1.8	B, BF, BT	16, 20 to 40 by 5
MCTS18	8 x 2.1	B, BF, BT	20 to 50 by 5
MCTS19	9.5 x 2.1	B, BF, BT	25 to 60 by 5
MCTS21	2 x 0.4	D, F, T	6, 8, 10, 13
MCTS22	2.5 x 0.45	D, F, T	6, 8, 10, 13, 16
MCTS23	3 x 0.5	D, F, T	8, 10, 13, 16
MCTS24	3.5 x 0.6	D, F, T	8, 10, 13, 16
MCTS25	4 x 0.7	D, F, T	10, 13, 16, 20, 25
MCTS26	5 x 0.8	D, F, T	13, 16, 20 to 35 by 5
MCTS27	6 x 1	D, F, T	16, 20 to 40 by 5

Name	Nominal Dia. Thr. Pitch	Types	L Length
MCTS28	8 x 1.25	D, F, T	20 to 50 by 5
MCTS29	10 x 1.5	D, F, T	20 to 60 by 5

Slotted Oval Countersunk Head



ANSI Metric Tapping
Screws

Generic Part Name: MOTS

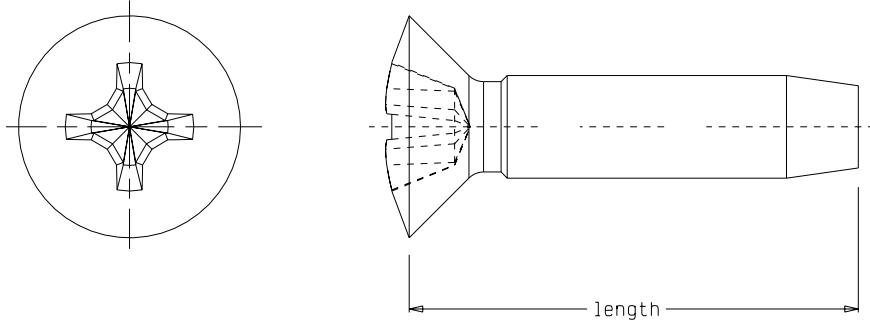
Notes:

- Corresponds to standard ANSI B18 6.5M-1981.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr. Pitch	Types	L Length
MOTS01	2.2 x 0.8	AB	6, 8, 10, 13
MOTS02	2.9 x 1	AB	8, 10, 13, 16
MOTS03	3.5 x 1.3	AB	10, 13, 16, 20, 25
MOTS04	4.2 x 1.4	AB	10, 13, 16, 20, 25
MOTS05	4.8 x 1.6	AB	13, 16, 20 to 35 by 5
MOTS06	5.5 x 1.8	AB	16, 20 to 40 by 5

Name	Nominal Dia. Thr. Pitch	Types	L Length
MOTS07	6.3 x 1.8	AB	16, 20 to 40 by 5
MOTS08	8 x 2.1	AB	20 to 50 by 5
MOTS09	9.5 x 2.1	AB	25 to 60 by 5
MOTS11	2.2 x 0.8	B, BF, BT	6, 8, 10, 13
MOTS12	2.9 x 1	B, BF, BT	8, 10, 13, 16
MOTS13	3.5 x 1.3	B, BF, BT	10, 13, 16, 20, 25
MOTS14	4.2 x 1.4	B, BF, BT	10, 13, 16, 20, 25
MOTS15	4.8 x 1.6	B, BF, BT	13, 16, 20 to 35 by 5
MOTS16	5.5 x 1.8	B, BF, BT	16, 20 to 40 by 5
MOTS17	6.3 x 1.8	B, BF, BT	16, 20 to 40 by 5
MOTS18	8 x 2.1	B, BF, BT	20 to 50 by 5
MOTS19	9.5 x 2.1	B, BF, BT	25 to 60 by 5
MOTS21	2 x 0.4	D, F, T	6, 8, 10, 13
MOTS22	2.5 x 0.45	D, F, T	6, 8, 10, 13, 16
MOTS23	3 x 0.5	D, F, T	8, 10, 13, 16
MOTS24	3.5 x 0.6	D, F, T	8, 10, 13, 16
MOTS25	4 x 0.7	D, F, T	10, 13, 16, 20, 25
MOTS26	5 x 0.8	D, F, T	13, 16, 20 to 35 by 5
MOTS27	6 x 1	D, F, T	16, 20 to 40 by 5
MOTS28	8 x 1.25	D, F, T	20 to 50 by 5
MOTS29	10 x 1.5	D, F, T	20 to 60 by 5

Type 1 Cross Recessed Oval Countersunk Head



ANSI Metric Tapping
Screws

Generic Part Name: MRTS

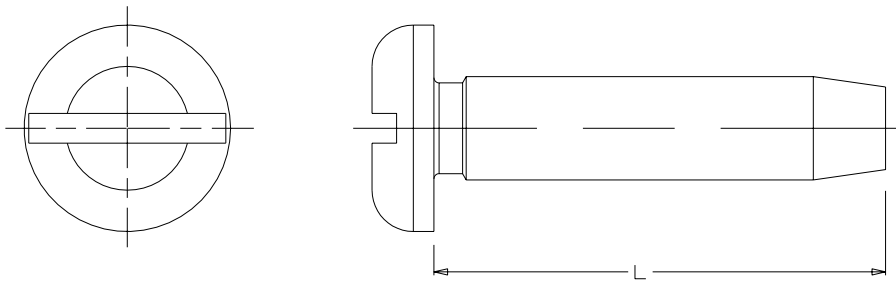
Notes:

- Corresponds to standard ANSI B18 6.5M-1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr. Pitch	Types	Length
MRTS01	2.2 x 0.8	AB	6, 8, 10, 13
MRTS02	2.9 x 1	AB	8, 10, 13, 16
MRTS03	3.5 x 1.3	AB	10, 13, 16, 20, 25
MRTS04	4.2 x 1.4	AB	10, 13, 16, 20, 25
MRTS05	4.8 x 1.6	AB	13, 16, 20 to 35 by 5
MRTS06	5.5 x 1.8	AB	16, 20 to 40 by 5
MRTS07	6.3 x 1.8	AB	16, 20 to 40 by 5
MRTS08	8 x 2.1	AB	20 to 50 by 5
MRTS09	9.5 x 2.1	AB	25 to 60 by 5
MRTS11	2.2 x 0.8	B, BF, BT	6, 8, 10, 13

Name	Nominal Dia. Thr. Pitch	Types	Length
MRTS12	2.9 x 1	B, BF, BT	8, 10, 13, 16
MRTS13	3.5 x 1.3	B, BF, BT	10, 13, 16, 20, 25
MRTS14	4.2 x 1.4	B, BF, BT	10, 13, 16, 20, 25
MRTS15	4.8 x 1.6	B, BF, BT	13, 16, 20 to 35 by 5
MRTS16	5.5 x 1.8	B, BF, BT	16, 20 to 40 by 5
MRTS17	6.3 x 1.8	B, BF, BT	16, 20 to 40 by 5
MRTS18	8 x 2.1	B, BF, BT	20 to 50 by 5
MRTS19	9.5 x 2.1	B, BF, BT	25 to 60 by 5
MRTS21	2 x 0.4	D, F, T	6, 8, 10, 13
MRTS22	2.5 x 0.45	D, F, T	6, 8, 10, 13, 16
MRTS23	3 x 0.5	D, F, T	8, 10, 13, 16
MRTS24	3.5 x 0.6	D, F, T	8, 10, 13, 16
MRTS25	4 x 0.7	D, F, T	10, 13, 16, 20, 25
MRTS26	5 x 0.8	D, F, T	13, 16, 20 to 35 by 5
MRTS27	6 x 1	D, F, T	16, 20 to 40 by 5
MRTS28	8 x 1.25	D, F, T	20 to 50 by 5
MRTS29	10 x 1.5	D, F, T	20 to 60 by 5

Slotted Pan Head



Generic Part Name: MPTS

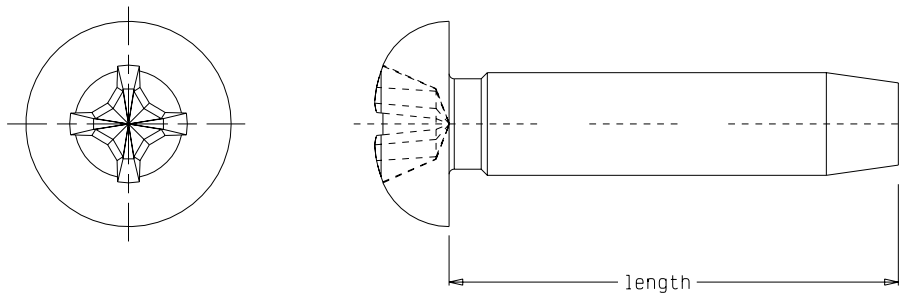
Notes:

- Corresponds to standard ANSI B18 6.5M-1981.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr. Pitch	Types	L Length
MPTS01	2.2 x 0.8	AB	4, 5, 6, 8, 10, 13
MPTS02	2.9 x 1	AB	6, 8, 10, 13, 16
MPTS03	3.5 x 1.3	AB	8, 10, 13, 16, 20, 25
MPTS04	4.2 x 1.4	AB	8, 10, 13, 16, 20, 25
MPTS05	4.8 x 1.6	AB	8, 10, 13, 16, 20 to 35 by 5
MPTS06	5.5 x 1.8	AB	13, 16, 20 to 40 by 5
MPTS07	6.3 x 1.8	AB	13, 16, 20 to 40 by 5
MPTS08	8 x 2.1	AB	16, 20 to 50 by 5
MPTS09	9.5 x 2.1	AB	20 to 60 by 5
MPTS10	2.2 x 0.8	B, BF, BT	4, 5, 6, 8, 10, 13
MPTS11	2.9 x 1	B, BF, BT	6, 8, 10, 13, 16
MPTS12	3.5 x 1.3	B, BF, BT	8, 10, 13, 16, 20, 25
MPTS13	4.2 x 1.4	B, BF, BT	8, 10, 13, 16, 20, 25
MPTS14	4.8 x 1.6	B, BT, BT	10, 13, 16, 20 to 35 by 5
MPTS15	5.5 x 1.8	B, BF, BT	13, 16, 20 to 40 by 5
MPTS16	6.3 x 1.8	B, BF, BT	13, 16, 20 to 40 by 5
MPTS17	8 x 2.1	B, BF, BT	16, 20 to 50 by 5
MPTS18	9.5 x 2.1	B, BT, BT	20 to 60 by 5
MPTS19	2 x 0.4	D, F, T	4, 5, 6, 8, 10, 13
MPTS20	2.5 x 0.45	D, F, T	4, 5, 6, 8, 10, 13, 16
MPTS21	3 x 0.5	D, F, T	6, 8, 10, 13, 16
MPTS22	3.5 x 0.6	D, F, T	6, 8, 10, 13, 16
MPTS23	4 x 0.7	D, F, T	8, 10, 13, 16, 20, 25
MPTS24	5 x 0.8	D, F, T	10, 13, 16, 20 to 40 by 5
MPTS25	6 x 1	D, F, T	13, 16, 20 to 40 by 5

Name	Nominal Dia. Thr. Pitch	Types	L Length
MPTS26	8 x 1.25	D, F, T	16, 20 to 50 by 5
MPTS27	10 x 1.5	D, F, T	20 to 60 by 5

Type 1 Cross Recessed Pan Head



Generic Part Name: MTTS

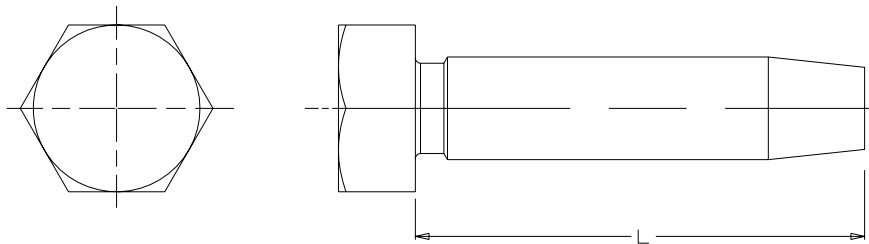
Notes:

- Corresponds to standard ANSI B18 6.5M-1981.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr. Pitch	Types	Length
MTTS01	2.2 x 0.8	AB	4, 5, 6, 8, 10, 13
MTTS02	2.9 x 1	AB	6, 8, 10, 13, 16
MTTS03	3.5 x 1.3	AB	8, 10, 13, 16, 20, 25
MTTS04	4.2 x 1.4	AB	8, 10, 13, 16, 20, 25
MTTS05	4.8 x 1.6	AB	8, 10, 13, 16, 20 to 35 by 5
MTTS06	5.5 x 1.8	AB	13, 16, 20 to 40 by 5
MTTS07	6.3 x 1.8	AB	13, 16, 20 to 40 by 5

Name	Nominal Dia. Thr. Pitch	Types	Length
MTTS08	8 x 2.1	AB	16, 20 to 50 by 5
MTTS09	9.5 x 2.1	AB	20 to 60 by 5
MTTS11	2.2 x 0.8	B, BF, BT	4, 5, 6, 8, 10, 13
MTTS12	2.9 x 1	B, BF, BT	6, 8, 10, 13, 16
MTTS13	3.5 x 1.3	B, BF, BT	8, 10, 13, 16, 20, 25
MTTS14	4.2 x 1.4	B, BF, BT	8, 10, 13, 16, 20, 25
MTTS15	4.8 x 1.6	B, BF, BT	10, 13, 16, 20 to 35 by 5
MTTS16	5.5 x 1.8	B, BF, BT	13, 16, 20 to 40 by 5
MTTS17	6.3 x 1.8	B, BF, BT	13, 16, 20 to 40 by 5
MTTS18	8 x 2.1	B, BF, BT	16, 20 to 50 by 5
MTTS19	9.5 x 2.1	B, BF, BT	20 to 60 by 5
MTTS21	2 x 0.4	D, F, T	4, 5, 6, 8, 10, 13
MTTS22	2.5 x 0.45	D, F, T	4, 5, 6, 8, 10, 13, 16
MTTS23	3 x 0.5	D, F, T	6, 8, 10, 13, 16
MTTS24	3.5 x 0.6	D, F, T	6, 8, 10, 13, 16
MTTS25	4 x 0.7	D, F, T	8, 10, 13, 16, 20, 25
MTTS26	5 x 0.8	D, F, T	10, 13, 16, 20 to 40 by 5
MTTS27	6 x 1	D, F, T	13, 16, 20 to 40 by 5
MTTS28	8 x 1.25	D, F, T	16, 20 to 50 by 5
MTTS29	10 x 1.5	D, F, T	20 to 60 by 5

Hex Head



Generic Part Name: MHTS

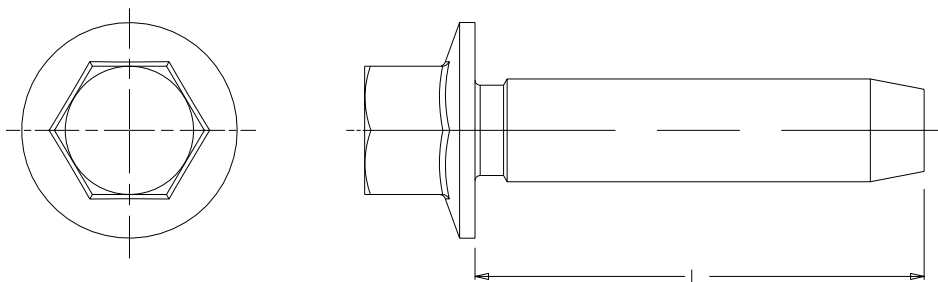
Notes:

- Corresponds to standard ANSI B18 6.5M-1981.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr. Pitch	Types	L Length
MHTS01	2.2 x 0.8	AB	4, 5, 6, 8, 10, 13
MHTS02	2.9 x 1	AB	6, 8, 10, 13, 16
MHTS03	3.5 x 1.3	AB	8, 10, 13, 16, 20, 25
MHTS04	4.2 x 1.4	AB	8, 10, 13, 16, 20, 25
MHTS05	4.8 x 1.6	AB	8, 10, 13, 16, 20 to 35 by 5
MHTS06	5.5 x 1.8	AB	13, 16, 20 to 40 by 5
MHTS07	6.3 x 1.8	AB	13, 16, 20 to 40 by 5
MHTS08	8 x 2.1	AB	16, 20 to 50 by 5
MHTS09	9.5 x 2.1	AB	20 to 60 by 5
MHTS10	2.2 x 0.8	B, BF, BT	4, 5, 6, 8, 10, 13
MHTS11	2.9 x 1	B, BF, BT	6, 8, 10, 13, 16
MHTS12	3.5 x 1.3	B, BF, BT	8, 10, 13, 16, 20, 25
MHTS13	4.2 x 1.4	B, BF, BT	8, 10, 13, 16, 20, 25
MHTS14	4.8 x 1.6	B, BF, BT	10, 13, 16, 20 to 35 by 5
MHTS15	5.5 x 1.8	B, BF, BT	13, 16, 20 to 40 by 5
MHTS16	6.3 x 1.8	B, BF, BT	13, 16, 20 to 40 by 5
MHTS17	8 x 2.1	B, BF, BT	16, 20 to 50 by 5
MHTS18	9.5 x 2.1	B, BF, BT	20 to 60 by 5
MHTS19	2 x 0.4	D, F, T	4, 5, 6, 8, 10, 13
MHTS20	2.5 x 0.45	D, F, T	4, 5, 6, 8, 10, 13, 16
MHTS21	3 x 0.5	D, F, T	6, 8, 10, 13, 16
MHTS22	3.5 x 0.6	D, F, T	6, 8, 10, 13, 16
MHTS23	4 x 0.7	D, F, T	8, 10, 13, 16, 20, 25
MHTS24	5 x 0.8	D, F, T	10, 13, 16, 20 to 40 by 5
MHTS25	6 x 1	D, F, T	13, 16, 20 to 40 by 5

Name	Nominal Dia. Thr. Pitch	Types	L Length
MHTS26	8 x 1.25	D, F, T	16, 20 to 50 by 5
MHTS27	10 x 1.5	D, F, T	20 to 60 by 5

Hex Flange Head



ANSI Metric Tapping
Screws

Generic Part Name: MFTS

Notes:

- Corresponds to standard ANSI B18 6.5M-1981.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

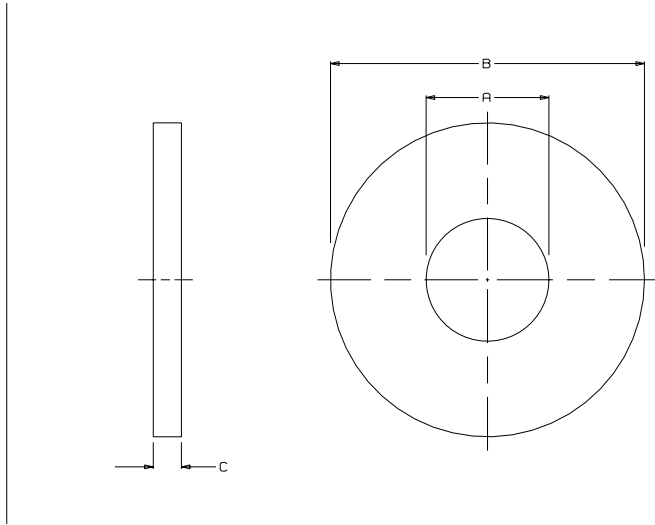
Name	Nominal Dia. Thr. Pitch	Types	L Length
MFTS01	2.2 x 0.8	AB	4, 5, 6, 8, 10, 13
MFTS02	2.9 x 1	AB	6, 8, 10, 13, 16
MFTS03	3.5 x 1.3	AB	8, 10, 13, 16, 20, 25
MFTS04	4.2 x 1.4	AB	8, 10, 13, 16, 20, 25
MFTS05	4.8 x 1.6	AB	8, 10, 13, 16, 20 to 35 by 5
MFTS06	5.5 x 1.8	AB	13, 16, 20 to 40 by 5
MFTS07	6.3 x 1.8	AB	13, 16, 20 to 40 by 5
MFTS08	8 x 2.1	AB	16, 20 to 50 by 5

Name	Nominal Dia. Thr. Pitch	Types	L Length
MFTS09	9.5 x 2.1	AB	20 to 60 by 5
MFTS10	2.2 x 0.8	B, BF, BT	4, 5, 6, 8, 10, 13
MFTS11	2.9 x 1	B, BF, BT	6, 8, 10, 13, 16
MFTS12	3.5 x 1.3	B, BF, BT	8, 10, 13, 16, 20, 25
MFTS13	4.2 x 1.4	B, BF, BT	8, 10, 13, 16, 20, 25
MFTS14	4.8 x 1.6	B, BF, BT	10, 13, 16, 20 to 35 by 5
MFTS15	5.5 x 1.8	B, BF, BT	13, 16, 20 to 40 by 5
MFTS16	6.3 x 1.8	B, BF, BT	13, 16, 20 to 40 by 5
MFTS17	8 x 2.1	B, BF, BT	16, 20 to 50 by 5
MFTS18	9.5 x 2.1	B, BF, BT	20 to 60 by 5
MFTS19	2 x 0.4	D, F, T	4, 5, 6, 8, 10, 13
MFTS20	2.5 x 0.45	D, F, T	4, 5, 6, 8, 10, 13, 16
MFTS21	3 x 0.5	D, F, T	6, 8, 10, 13, 16
MFTS22	3.5 x 0.6	D, F, T	6, 8, 10, 13, 16
MFTS23	4 x 0.7	D, F, T	8, 10, 13, 16, 20, 25
MFTS24	5 x 0.8	D, F, T	10, 13, 16, 20 to 40 by 5
MFTS25	6 x 1	D, F, T	13, 16, 20 to 40 by 5
MFTS26	8 x 1.25	D, F, T	16, 20 to 50 by 5
MFTS27	10 x 1.5	D, F, T	20 to 60 by 5

31

ANSI Metric Washers

Metric Plain Washers



Generic Part Name: MPW

Notes:

- Corresponds to standard ANSI B18.22M-1981.

Name	Nominal Diameter	Washer Series	A Inside Diameter	B Outside Diameter	C Thickness
MPW0101	1.600	NARROW	1.95	4.00	0.70
MPW0102	1.600	REGULAR	1.95	5.00	0.70
MPW0103	1.600	WIDE	1.95	6.00	0.90
MPW0201	2.000	NARROW	2.50	5.00	0.90
MPW0202	2.000	REGULAR	2.50	6.00	0.90
MPW0203	2.000	WIDE	2.50	8.00	0.90
MPW0301	2.500	NARROW	3.00	6.00	0.90
MPW0302	2.500	REGULAR	3.00	8.00	0.90
MPW0303	2.500	WIDE	3.00	10.00	1.20
MPW0401	3.000	NARROW	3.50	7.00	0.90
MPW0402	3.000	REGULAR	3.50	10.00	1.20

Name	Nominal Diameter	Washer Series	A Inside Diameter	B Outside Diameter	C Thickness
MPW0403	3.000	WIDE	3.50	12.00	1.40
MPW0501	3.500	NARROW	4.00	9.00	1.20
MPW0502	3.500	REGULAR	4.00	10.00	1.40
MPW0503	3.500	WIDE	4.00	15.00	1.75
MPW0601	4.000	NARROW	4.70	10.00	1.20
MPW0602	4.000	REGULAR	4.70	12.00	1.40
MPW0603	4.000	WIDE	4.70	16.00	2.30
MPW070	5.000	NARROW	5.60	11.00	1.40
MPW0702	5.000	REGULAR	5.60	15.00	1.75
MPW0703	5.000	WIDE	5.60	20.00	2.30
MPW0801	6.000	NARROW	6.65	13.00	1.75
MPW0802	6.000	REGULAR	6.65	18.80	1.75
MPW0803	6.000	WIDE	6.65	25.40	2.30
MPW0901	8.000	NARROW	8.90	18.80	2.30
MPW0902	8.000	REGULAR	8.90	25.40	2.30
MPW0903	8.000	WIDE	8.90	32.00	2.80
MPW1001	10.000	NARROW	10.85	20.00	2.30
MPW1002	10.000	REGULAR	10.85	28.00	2.80
MPW1003	10.000	WIDE	10.85	39.00	3.50
MPW1101	12.000	NARROW	13.30	25.40	2.80
MPW1102	12.000	REGULAR	13.30	34.00	3.50
MPW1103	12.000	WIDE	13.30	44.00	3.50
MPW1201	14.000	NARROW	15.25	28.00	2.80
MPW1202	14.000	REGULAR	15.25	39.00	3.50
MPW1203	14.000	WIDE	15.25	50.00	4.00
MPW1301	16.000	NARROW	17.25	32.00	3.50
MPW1302	16.000	REGULAR	17.25	44.00	4.00
MPW1303	16.000	WIDE	17.25	56.00	4.60
MPW1401	20.000	NARROW	21.80	39.00	4.00
MPW1402	20.000	REGULAR	21.80	50.00	4.60

ANSI Metric Washers

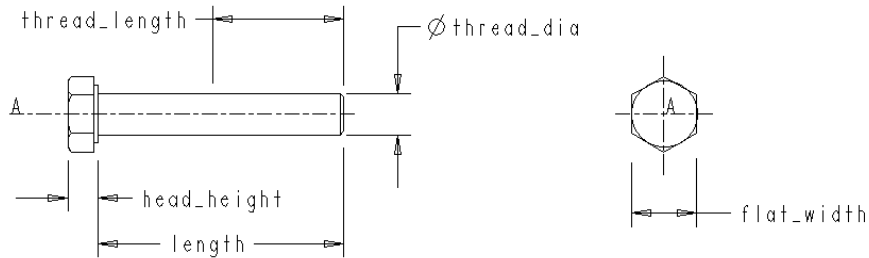
Name	Nominal Diameter	Washer Series	A Inside Diameter	B Outside Diameter	C Thickness
MPW1403	20.000	WIDE	21.80	66.00	5.10
MPW1501	24.000	NARROW	25.60	44.00	4.60
MPW1502	24.000	REGULAR	25.60	56.00	5.10
MPW1503	24.000	WIDE	25.60	72.00	5.60
MPW1601	30.000	NARROW	32.40	56.00	5.10
MPW1602	30.000	REGULAR	32.40	72.00	5.60
MPW1603	30.000	WIDE	32.40	90.00	6.40
MPW1701	36.000	NARROW	38.30	66.00	5.60
MPW1702	36.000	REGULAR	38.30	90.00	6.40
MPW1703	36.000	WIDE	38.30	110.00	8.50

Section 4
ISO Fasteners and Standard
Parts

32

ISO External Drive Hex Bolts and Screws

Hex Head Bolts, Grades A & B



Generic Part Name: IHBA

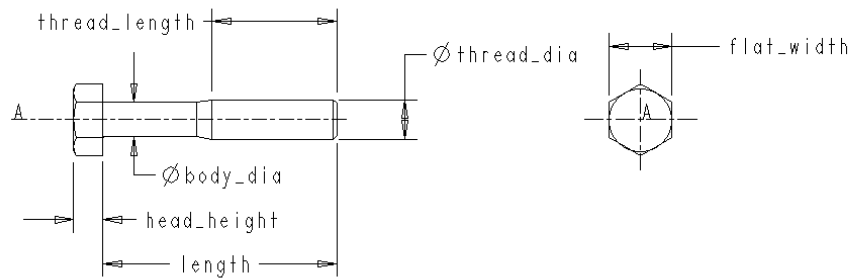
Notes:

- Corresponds to standard ISO 4014 - 1988.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr Pitch	Thread Dia	Flat Width	Head Height	Length	Thread Length
IHBA16	M1.6X0.35	1.6000	3.2000	1.2250	12, 16	9
IHBA17	M2X0.4	2.0000	4.0000	1.5250	16, 20	10
IHBA18	M2.5X0.45	2.5000	5.0000	1.8250	16, 20, 25	11
IHBA19	M3X0.5	3.0000	5.5000	2.1250	20 to 30 by 5	12
IHBA20	M4X0.7	4.0000	7.0000	2.9250	25 to 40 by 5	14
IHBA01	M5X0.8	5.0000	8.0000	3.6500	25 to 50 by 5	16
IHBA02	M6X1	6.0000	10.0000	4.1500	30 to 50 by 5, 60	18
IHBA03	M8X1.25	8.0000	13.0000	5.4500	40 to 70 by 5, 80	22
IHBA04	M10X1.5	10.0000	16.0000	6.5800	45 to 70 by 5, 80, 90, 100	26
IHBA05	M12X1.75	12.0000	18.0000	7.6800	50 to 70 by 5, 80 to 120 by 10	30

Name	Nominal Dia. Thr Pitch	Thread Dia	Flat Width	Head Height	Length	Thread Length
IHBA07	M16X2	16.0000	24.0000	10.1800	65, 70 to 160 by 10	38, 44
IHBA08	M20X2.5	20.0000	30.0000	12.7150	80 to 160 by 10, 180, 200	46, 52
IHBA09	M24X3	24.0000	36.0000	15.2150	90 to 160 by 10, 180 to 240 by 20	54, 60, 73
IHBA10	M30X3.5	30.0000	46.0000	19.1200	110 to 160 by 10, 180 to 300 by 20	66, 72, 85
IHBA11	M36X4	36.0000	55.0000	22.9200	140, 150, 160, 200 to 360 by 20	84, 97
IHBA12	M42X4.5	42.0000	65.0000	26.4200	160 to 440 by 20	96, 109
IHBA13	M48X5	48.0000	75.0000	30.4200	180 to 480 by 20	108, 121
IHBA14	M56X5.5	56.0000	85.0000	35.5000	220 to 500 by 20	137
IHBA15	M64X6	64.0000	95.0000	40.5000	260 to 500 by 20	153

Hex Head Bolts, Reduced Shank



Generic Part Name: IHBR

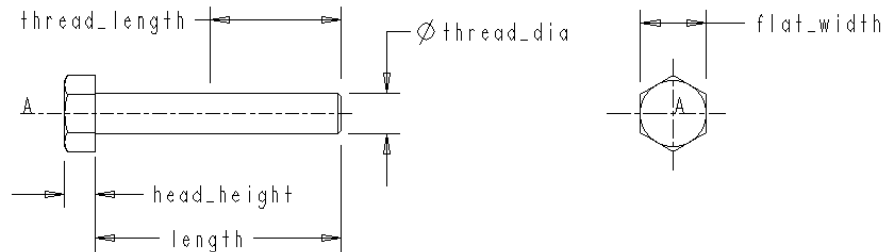
Notes:

- Corresponds to standard ISO 4015 - 1979.

- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal dia. thr. pitch	Thread dia.	Body Dia	Flat Width	Head Height	Length	Thr. Lgth
IHBR19	M3X0.5	3.0000	2.6000	5.5000	2.2000	20 to 30 by 5	12
IHBR20	M4X0.7	4.0000	3.5000	7.0000	3.0000	20 to 40 by 5	14
IHBR01	M5X0.8	5.0000	4.4000	8.0000	3.7400	25 to 50 by 5	16
IHBR02	M6X1	6.0000	5.3000	10.0000	4.2400	25 to 50 by 5, 60	18
IHBR03	M8X1.25	8.0000	7.1000	13.0000	5.5400	30 to 60 by 5, 70, 80	22
IHBR04	M10X1.5	10.0000	8.9000	16.0000	6.6900	40 to 70 by 5, 80, 90, 100	26
IHBR05	M12X1.75	12.0000	10.7000	18.0000	7.7900	45 to 70 by 5, 80 to 120 by 10	30
IHBR07	M16X2	16.0000	14.5000	24.0000	10.2900	55 to 70 by 5, 80 to 150 by 10	38, 44
IHBR08	M20X2.5	20.0000	18.2000	30.0000	12.8500	65, 70 to 150 by 10	46, 52

Hex Head Bolts, Grade C



Generic Part Name: IHBC

Notes:

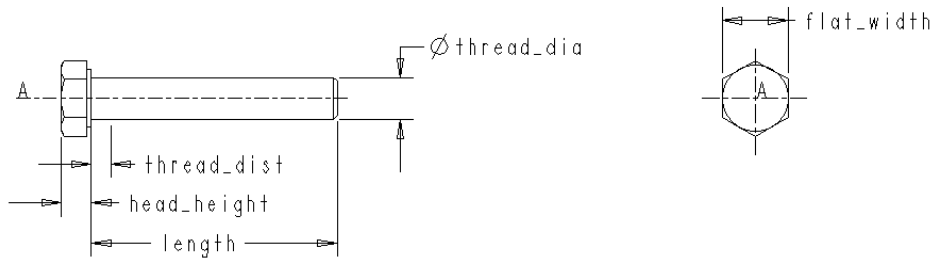
- Corresponds to standard ISO 4016 - 1988.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal dia. thr. pitch	Thread dia	Flat Width	Head Height	Length	Thread Length
IHBC01	M5X0.8	5.0000	8.0000	3.8750	25 to 50 by 5	16
IHBC02	M6X1	6.0000	10.0000	4.3750	30 to 50 by 5, 60	18
IHBC03	M8X1.25	8.0000	13.0000	5.6750	40 to 70 by 5, 80	22
IHBC04	M10X1.5	10.0000	16.0000	6.8500	45 to 70 by 5, 80, 90, 100	26
IHBC05	M12X1.75	12.0000	18.0000	7.9500	55 to 70 by 5, 80 to 120 by 10	30
IHBC07	M16X2	16.0000	24.0000	10.7500	65, 70 to 160 by 10	38, 44
IHBC08	M20X2.5	20.0000	30.0000	13.4000	80 to 160 by 10, 180, 200	46, 52
IHBC09	M24X3	24.0000	36.0000	15.9000	100 to 160 by 10, 180 to 240 by 20	54, 60, 73

ISO External Drive Hex Bolts and

Name	Nominal dia. thr. pitch	Thread dia	Flat_Width	Head_Height	Length	Thread_Length
IHBC10	M30X3.5	30.0000	46.0000	19.7500	120 to 160 by 10, 180 to 300 by 20	66, 72, 85
IHBC11	M36X4	36.0000	55.0000	23.5500	140, 150, 160 to 360 by 20	84, 97
IHBC12	M42X4.5	42.0000	65.0000	27.0500	180 to 420 by 20	96, 109
IHBC13	M48X5	48.0000	75.0000	31.0500	200 to 480 by 20	108, 121
IHBC14	M56X5.5	56.0000	85.0000	36.2500	240 to 500 by 20	137
IHBC15	M64X6	64.0000	95.0000	41.2500	260 to 500 by 20	153

Hex Head Screws, Grades A & B



Generic Part Name: IHSA

Notes:

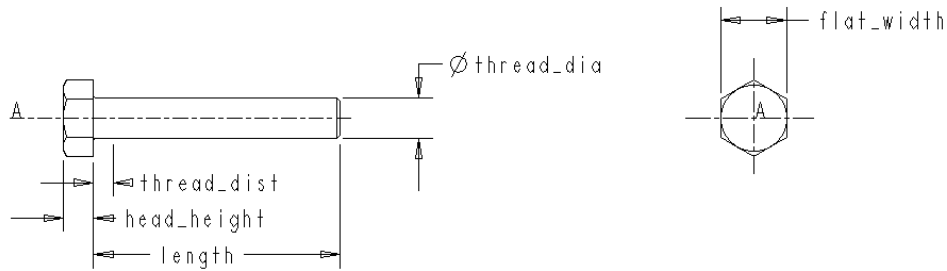
- Corresponds to standard ISO 4017 - 1988.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr Pitch	Thread Dia	Flat Width	Head Height	Thread Dist	Length
IHSA16	M1.6X0.35	1.6000	3.2000	1.2250	1.0500	2 to 6 by 1, 8, 10, 12, 16
IHSA17	M2X0.4	2.0000	4.0000	1.5250	1.2000	4, 5, 6 to 12 by 2, 16, 20
IHSA18	M2.5X0.45	2.5000	5.0000	1.8250	1.3500	5, 6 to 12 by 2, 16, 20, 25
IHSA19	M3X0.5	3.0000	5.5000	2.1250	1.5000	6 to 12 by 2, 16, 20, 25, 30
IHSA20	M4X0.7	4.0000	7.0000	2.9250	2.1000	8, 10, 12, 16, 20 to 40 by 5
IHSA01	M5X0.8	5.0000	8.0000	3.6500	2.4000	10, 12, 16, 20 to 50 by 5
IHSA02	M6X1	6.0000	10.0000	4.1500	3.0000	12, 16, 20 to 60 by 5
IHSA03	M8X1.25	8.0000	13.0000	5.4500	4.0000	16, 20 to 70 by 5, 80
IHSA04	M10X1.5	10.0000	16.0000	6.5800	4.5000	20 to 70 by 5, 80, 90, 100
IHSA05	M12X1.75	12.0000	18.0000	7.6800	5.3000	25 to 70 by 5, 80 to 120 by 10
IHSA07	M16X2	16.0000	24.0000	10.1800	6.0000	30 to 70 by 5, 80 to 160 by 10, 180, 200
IHSA08	M20X2.5	20.0000	30.0000	12.7150	7.5000	40 to 70 by 5, 80 to 160 by 10, 180, 200
IHSA09	M24X3	24.0000	36.0000	15.2150	9.0000	50 to 70 by 5, 80 to 160 by 10, 180, 200
IHSA10	M30X3.5	30.0000	46.0000	19.1200	10.5000	60, 65, 70 to 160 by 10, 180, 200
IHSA11	M36X4	36.0000	55.0000	22.9200	12.0000	70 to 160 by 10, 180, 200

ISO External Drive
Hex Bolts and

Name	Nominal Dia. Thr Pitch	Thread Dia	Flat Width	Head Height	Thread Dist	Length
IHSA12	M42X4.5	42.0000	65.0000	26.4200	13.5000	80 to 160 by 10, 180, 200
IHSA13	M48X5	48.0000	75.0000	30.4200	15.0000	100 to 160 by 10, 180, 200
IHSA14	M56X5.5	56.0000	85.0000	35.5000	16.5000	110 to 160 by 10, 180, 200
IHSA15	M64X6	64.0000	95.0000	40.5000	18.0000	120 to 160 by 10, 180, 200

Hex Head Screws, Grade C



Generic Part Name: IHSC

Notes:

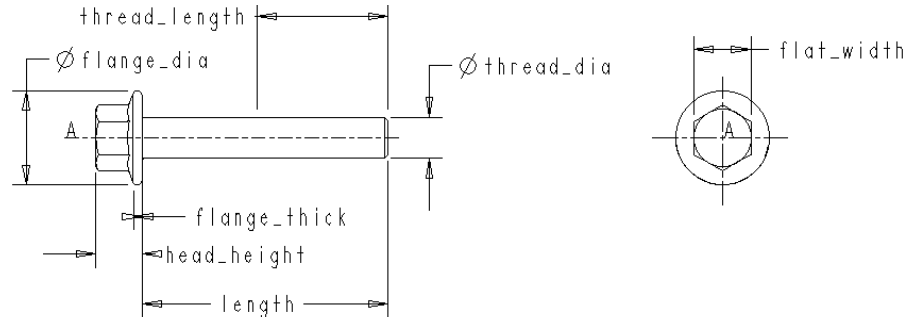
- Corresponds to standard ISO 4018 - 1988.
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

Name	Nominal dia. thr. pitch	Thread dia.	Flat Width	Head Height	Thread dist.	Length
IHSC01	M5X0.8	5.0000	8.0000	3.8750	2.4000	10, 12, 16, 20 to 50 by 5

Name	Nominal dia. thr. pitch	Thread dia.	Flat Width	Head Height	Thread dist.	Length
IHSC02	M6X1	6.0000	10.0000	4.3750	3.0000	12, 16, 20 to 60 by 5
IHSC03	M8X1.25	8.0000	13.0000	5.6750	4.0000	16, 20 to 70 by 5, 80
IHSC04	M10X1.5	10.0000	16.0000	6.8500	4.5000	20 to 70 by 5, 80, 90, 100
IHSC05	M12X1.75	12.0000	18.0000	7.9500	5.3000	25 to 70 by 5, 80 to 120 by 10
IHSC07	M16X2	16.0000	24.0000	10.7500	6.0000	30 to 70 by 5, 80 to 160 by 10
IHSC08	M20X2.5	20.0000	30.0000	13.4000	7.5000	40 to 70 by 5, 80 to 160 by 10, 180, 200
IHSC09	M24X3	24.0000	36.0000	15.9000	9.0000	50 to 70 by 5, 80 to 160 by 10, 180 to 240 by 20
IHSC10	M30X3.5	30.0000	46.0000	19.7500	10.5000	60, 65, 70 to 160 by 10, 180 to 300 by 20
IHSC11	M36X4	36.0000	55.0000	23.5500	12.0000	70 to 160 by 10, 180 to 360 by 20
IHSC12	M42X4.5	42.0000	65.0000	27.0500	13.5000	80 to 160 by 10, 180 to 420 by 20
IHSC13	M48X5	48.0000	75.0000	31.0500	15.0000	100 to 160 by 10, 180 to 480 by 20
IHSC14	M56X5.5	56.0000	85.0000	36.2500	16.5000	110 to 160 by 10, 180 to 500 by 20
IHSC15	M64X6	64.0000	95.0000	41.2500	18.0000	120 to 160 by 10, 180 to 500 by 20

ISO External Drive
Hex Bolts and

Hex Flange Bolts, Small Series



Generic Part Name: IHFBS

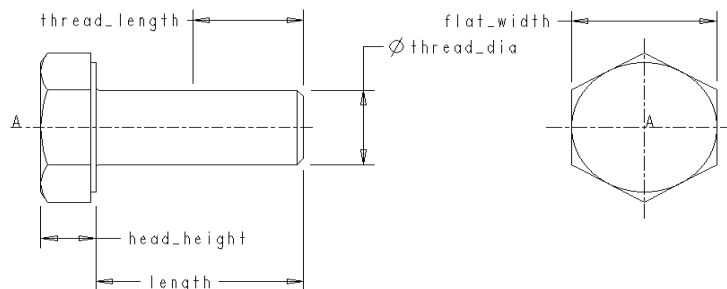
Notes:

- Corresponds to standard ISO 4162 - 1990.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr. Pitch	Thread Dia	Flat Width	Head Height	Flange Dia	Flange Thick	Length	Thr. Lgh
IHFBS01	M5X0.8	5.0000	7.0000	5.6000	11.4000	1.00000	25 to 50 by 5	16
IHFBS02	M6X1	6.0000	8.0000	6.8000	13.6000	1.10000	30 to 60 by 5	18
IHFBS03	M8X1.25	8.0000	10.0000	8.5000	17.0000	1.20000	35 to 70 by 5, 80	22
IHFBS04	M10X1.5	10.0000	13.0000	9.7000	20.8000	1.50000	40 to 70 by 5, 80, 90, 100	26
IHFBS05	M12X1.75	12.0000	15.0000	11.9000	24.7000	1.80000	45 to 70 by 5, 80 to 120 by 10	30

Name	Nominal Dia. Thr. Pitch	Thread Dia	Flat Width	Head Height	Flange Dia	Flange Thick	Length	Thr. Lgh
IHFBS06	M16X2	16.0000	21.0000	15.1000	32.8000	2.40000	55 to 70 by 5, 80 to 160 by 10	38, 44

Hex High-Strength Bolts, Regular Thread Length



Generic Part Name: IHBHL

Notes:

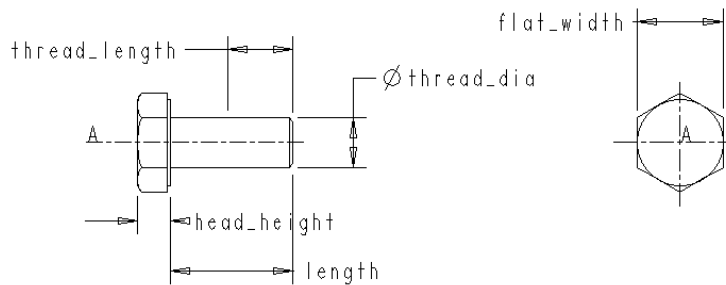
- Corresponds to standard ISO 7411 - 1984.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal dia. thr pitch	Thread dia	Flat Width	Head Height	Length	Thread Length
IHBHL01	M12X1.75	12.0000	21.0000	7.9500	35 to 100 by 5	30
IHBHL02	M16X2	16.0000	27.0000	10.7500	40 to 95 by 5, 100 to 150 by 10	38, 44

ISO External Drive Hex Bolts and

Name	Nominal dia. thr pitch	Thread dia	Flat Width	Head Height	Length	Thread Length
IHBHL03	M20X2.5	20.0000	34.0000	13.4000	45 to 95 by 5, 100 to 150 by 10	40, 46, 52
IHBHL04	M24X3	24.0000	41.0000	15.9000	55 to 95 by 5, 100 to 200 by 10	54, 60
IHBHL05	M30X3.5	30.0000	50.0000	19.7500	70 to 95 by 5, 100 to 200 by 10	66, 72
IHBHL06	M36X4	36.0000	60.0000	23.5500	85, 90, 95, 100 to 200 by 10	78, 84

Hex High-Strength Bolts, Short Thread Length



Generic Part Name: IHBHS

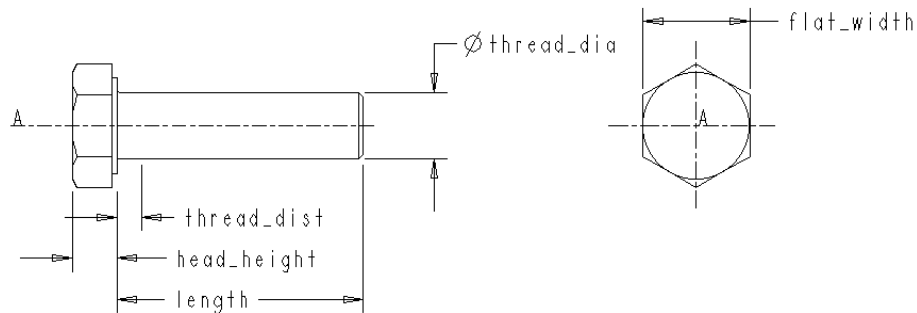
Notes:

- Corresponds to standard ISO 7412 - 1984.
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

Name	Nominal Dia. Thr. Pitch	Thread Dia	Flat Width	Head Height	Length	Thread Length
IHBHS01	M12X1.75	12.0000	21.0000	7.9500	40 to 100 by 5	25

Name	Nominal Dia. Thr. Pitch	Thread Dia	Flat Width	Head Height	Length	Thread Length
IHBHS02	M16X2	16.0000	27.0000	10.7500	45 to 95 by 5, 100 to 150 by 10	31, 38
IHBHS03	M20X2.5	20.0000	34.0000	13.4000	55 to 95 by 5, 100 to 150 by 10	36, 43
IHBHS04	M24X3	24.0000	41.0000	15.9000	65 to 95 by 5, 100 to 200 by 10	41, 48
IHBHS05	M30X3.5	30.0000	50.0000	19.7500	80, 90, 95, 100 to 200 by 10	49, 56
IHBHS06	M36X4	36.0000	60.0000	23.5500	90, 95, 100 to 200 by 10	56, 63

Hex Head Screws, Metric Fine Pitch Thread, Grades A & B



ISO External Drive
Hex Bolts and
Screws

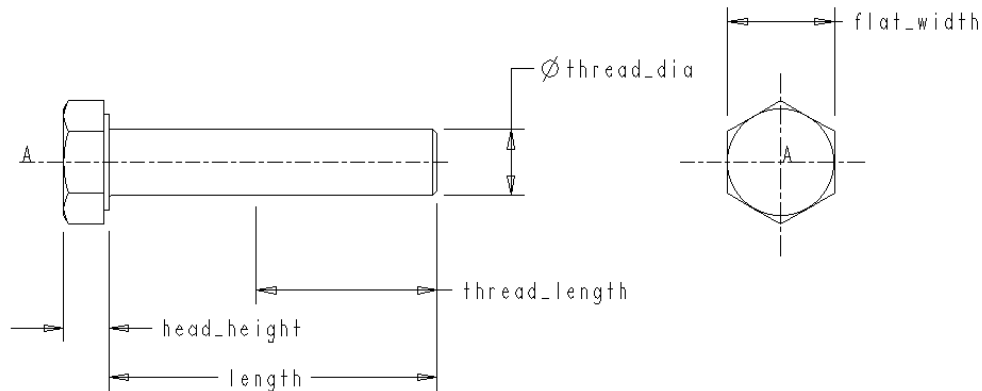
Generic Part Name: IHSF

Notes:

- Corresponds to standard ISO 8676 - 1988.
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

Name	Nominal Dia. Thr. Pitch	Thread Dia.	Flat Width	Head Height	Thread Dist	Length
IHSF01	M8X1	8.0000	13.0000	5.4500	3.0000	16, 20 to 70 by 5, 80
IHSF02	M10X1	10.0000	16.0000	6.5800	3.0000	20 to 70 by 5, 80, 90, 100
IHSF03	M12X1.5	12.0000	18.0000	7.6800	4.5000	25 to 70 by 5, 80 to 120 by 10
IHSF04	M16X1.5	16.0000	24.0000	10.1800	4.5000	35 to 70 by 5, 80 to 160 by 10
IHSF05	M20X1.5	20.0000	30.0000	12.7150	6.0000	40 to 70 by 5, 80 to 160 by 10, 180, 200
IHSF07	M24X2	24.0000	36.0000	15.3500	6.0000	40 to 70 by 5, 80 to 160 by 10, 180, 200
IHSF08	M30X2	30.0000	46.0000	19.1200	6.0000	40 to 70 by 5, 80 to 160 by 10, 180, 200
IHSF09	M36X3	36.0000	55.0000	22.9200	9.0000	40 to 70 by 5, 80 to 160 by 10, 180, 200
IHSF10	M42X3	42.0000	65.0000	26.4200	9.0000	90 to 160 by 10, 180 to 420 by 20
IHSF11	M48X3	48.0000	75.0000	30.4200	9.0000	100 to 160 by 10, 180 to 480 by 20
IHSF12	M56X4	56.0000	85.0000	35.5000	12.0000	120 to 160 by 10, 180 to 500 by 20
IHSF13	M64X4	64.0000	95.0000	40.5000	12.0000	130 to 160 by 10, 180 to 500 by 20

Hex Head Bolts, Metric Fine Pitch Thread, Grades A & B



Generic Part Name: IHBF

Notes:

- Corresponds to standard ISO 8765 - 1988.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia. Thr. Pitch	Thread Dia	Flat Width	Head Height	Length	Thread Length
IHBF01	M8X1	8.0000	13.0000	5.4500	40 to 70 by 5, 80	22
IHBF02	M10X1	10.0000	16.0000	6.5800	45 to 70 by 5, 80, 90, 100	26
IHBF03	M12X1.5	12.0000	18.0000	7.6800	50 to 70 by 5, 80 to 120 by 10	30
IHBF04	M16X1.5	16.0000	24.0000	10.1800	65, 70 to 160 by 10	38, 44
IHBF05	M20X1.5	20.0000	30.0000	12.7150	80 to 160 by 10, 180, 200	46, 52

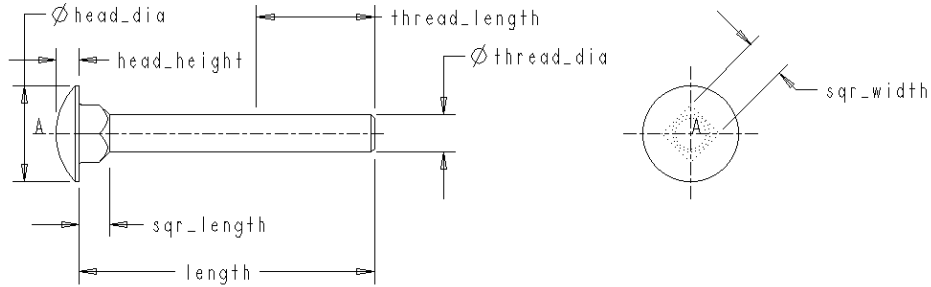
ISO External Drive Hex Bolts and

Name	Nominal Dia. Thr. Pitch	Thread Dia	Flat Width	Head Height	Length	Thread Length
IHBF07	M24X2	24.0000	36.0000	15.3500	100 to 160 by 10, 180 to 240 by 20	54, 60, 73
IHBF08	M30X2	30.0000	46.0000	19.1200	120 to 160 by 10, 180 to 300 by 20	60, 72, 85
IHBF09	M36X3	36.0000	55.0000	22.9200	140 to 160 by 10, 180 to 360 by 20	84, 97
IHBF10	M42X3	42.0000	65.0000	26.4200	160 to 440 by 20	96, 109
IHBF11	M48X3	48.0000	75.0000	30.4200	200 to 480 by 20	108, 121
IHBF12	M56X4	56.0000	85.0000	35.5000	220 to 500 by 20	137
IHBF13	M64X4	64.0000	95.0000	40.5000	260 to 500 by 20	153

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ISO Square Neck Bolts

Cup Head Square Neck Bolts, Grade C, Large Head



Generic Part Name: ISNBL

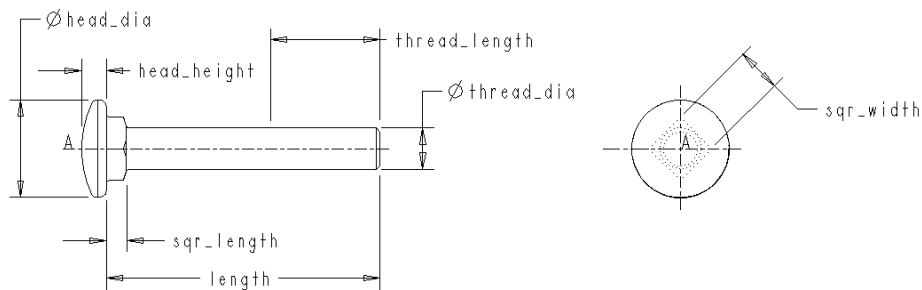
Notes:

- Corresponds to standard ISO 8677 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal dia. thr. pitch	Thread dia	Head Dia	Head Height	Sqr Width	Sqr Length	Length	Thr. Lngth.
ISNBL01	M5X0.8	5.0000	13.0000	3.1000	5.4800	4.1000	20 to 50 by 5	16
ISNBL02	M6X1	6.0000	16.0000	3.6000	6.4800	4.6000	30 to 60 by 5	18
ISNBL03	M8X1.25	8.0000	20.0000	4.8000	8.5800	5.6000	40 to 80 by 5	22
ISNBL04	M10X1.5	10.0000	24.0000	5.8000	10.5800	6.6000	45 to 75 by 5, 80, 90, 100	26

Name	Nominal dia. thr. pitch	Thread dia	Head Dia	Head Height	Sqr Width	Sqr Length	Length	Thr. Lngth.
ISNBL05	M12X1.75	12.0000	30.0000	6.8000	12.7000	8.8000	55 to 75 by 5, 80 to 120 by 10	30
ISNBL06	M16X2	16.0000	38.0000	8.9000	16.7000	12.9000	65, 70, 75, 80 to 160 by 10, 180, 200	38, 44
ISNBL07	M20X2.5	20.0000	46.0000	10.9000	20.8400	15.9000	75, 80 to 160 by 10, 180, 200	46, 52

Cup Head Square Neck Bolts, Grade B, Small Head



ISO Square Neck Bolts

Generic Part Name: ISNBS

Notes:

- Corresponds to standard ISO 8678 - 1988.

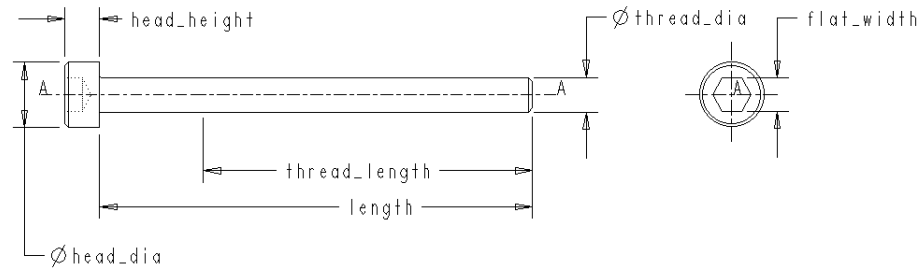
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

NAME	NOMINAL _DIA_THR _PITCH	thread dia	head_ dia	head_ height	sqr_ width	sqr_ length	length	thread_ length
ISNBS01	M6X1	6.0000	14.2000	3.6000	6.4800	3.0000	12, 16, 20 to 60 by 5	7, 11, 15 to 45 by 5, 18
ISNBS02	M8X1.25	8.0000	18.0000	4.8000	8.5800	3.0000	16, 20 to 65 by 5, 70, 80	10.5, 14.5 to 44.5 by 5, 22
ISNBS03	M10X1.5	10.000 0	22.3000	5.8000	10.580 0	4.0000	20 to 65 by 5, 70 to 100 by 10	13 to 43 by 5, 26
ISNBS04	M12X1.75	12.000 0	26.6000	6.8000	12.700 0	4.0000	20 to 65 by 5, 70 to 120 by 10	12.5 to 42.5 by 5, 30
ISNBS05	M16X2	16.000 0	35.0000	8.9000	16.700 0	5.0000	30 to 65 by 5, 70 to 160 by 10	21 to 51 by 5, 38, 44
ISNBS06	M20X2.5	20.000 0	43.0000	10.900 0	20.840 0	5.0000	35 to 65 by 5, 70 to 160 by 10	25 to 60 by 5, 46, 52

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ISO Hex Socket Head Screws

Hex Socket Head Cap Screws, Grade A



Generic Part Name: ISHCS

Notes:

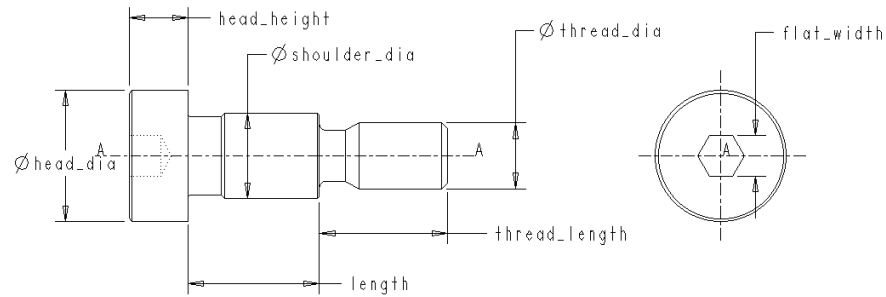
- Corresponds to standard ISO 4762 - 1989.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia.thr. Pitch	Thread Dia.	Head Dia.	Head Hght.	Flat Width	Length	Thread Length
ISHCS01	M1.6X0.35	1.6000	3.0000	1.6000	1.5600	2.5, 3, 4, 5, 6 to 12 by 2, 16	1.45, 1.95, 2.95, 3.95, 4.95 to 10.95 by 2, 14.95

Name	Nominal Dia.thr. Pitch	Thread Dia.	Head Dia.	Head Hght.	Flat Width	Length	Thread Length
ISHCS02	M2X0.4	2.0000	3.8000	2.0000	1.5600	3, 4, 5, 6 to 12 by 2, 16, 20	1.8, 2.8, 3.8, 4.8 to 10.8 by 2, 14.8, 16
ISHCS03	M2.5X0.45	2.5000	4.5000	2.5000	2.0600	4, 5, 6 to 12 by 2, 16, 20, 25	2.65, 3.65, 4.65 to 10.65 by 2, 14.65, 17, 18.65
ISHCS04	M3X0.5	3.0000	5.5000	3.0000	2.5800	5, 6 to 12 by 2, 16, 20, 25, 30	3.5, 4.5 to 10.5 by 2, 14.5, 18, 18.5
ISHCS05	M4X0.7	4.0000	7.0000	4.0000	3.0800	6 to 12 by 2, 16, 20 to 40 by 5	3.9 to 9.9 by 2, 13.9, 17.9, 20, 22.9
ISHCS06	M5X0.8	5.0000	8.5000	5.0000	4.0950	8, 10, 12, 16, 20 to 50 by 5	5.6 to 9.6 by 2, 13.6, 17.6, 22, 22.6
ISHCS07	M6X1	6.0000	10.0000	6.0000	5.1400	10, 12, 16, 20 to 60 by 5	7, 9, 13, 17, 22, 24, 27
ISHCS08	M8X1.25	8.0000	13.0000	8.0000	6.1400	12, 16, 20 to 70 by 5, 80	8.25, 12.25, 16.25 to 31.25 by 5, 28
ISHCS09	M10X1.5	10.0000	16.0000	10.0000	8.1750	16, 20 to 70 by 5, 80, 90, 100	11.5, 15.5 to 35.5 by 5, 32
ISHCS10	M12X1.75	12.0000	18.0000	12.0000	10.1750	20 to 70 by 5, 80 to 120 by 10	14.75 to 44.75 by 5, 36
ISHCS11	M16X2	16.0000	24.0000	16.0000	14.2120	25 to 70 by 5, 80 to 160 by 10	19 to 54 by 5
ISHCS12	M20X2.5	20.0000	30.0000	20.0000	17.2300	30 to 70 by 5, 80 to 160 by 10, 180, 200	22.5 to 62.5 by 5, 52

Name	Nominal Dia.thr. Pitch	Thread Dia.	Head Dia.	Head Hght.	Flat Width	Length	Thread Length
ISHCS13	M24X3	24.0000	36.0000	24.0000	19.2750	40 to 70 by 5, 80 to 160 by 10, 180, 200	31 to 66 by 5, 60
ISHCS14	M30X3.5	30.0000	45.0000	30.0000	22.2750	45 to 70 by 5, 80 to 160 by 10, 180, 200	34.5 to 59.5 by 5, 69.5, 72, 79.5, 89.5
ISHCS15	M36X4	36.0000	54.0000	36.0000	27.2750	55 to 70 by 5, 80 to 160 by 10, 180, 200	43 to 58 by 5, 68 to 98 by 10, 84

Hex Socket Head Shoulder Screws

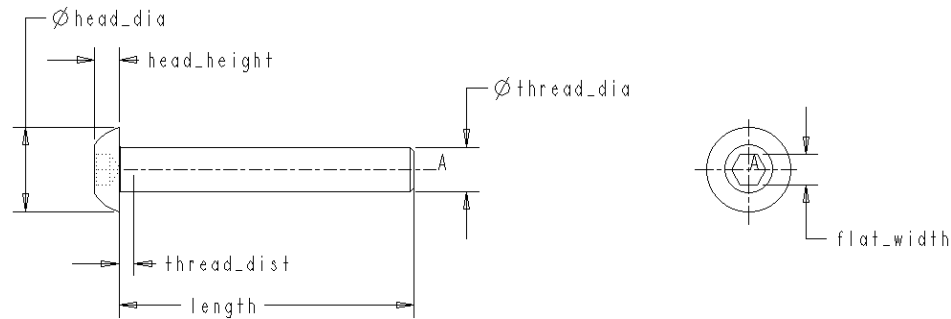


Generic Part Name: ISHSS**Notes:**

- Corresponds to standard ISO 7379 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom. Size	Shoulder Dia	Head Dia	Head Height	Flat Width	Thread Dia	Thread Length	Length
ISHSS01	6.5000	6.4870	10.0000	4.5000	3.0800	5.0000	9.7500	10, 12, 16, 20, 25, 30, 40
ISHSS02	8.0000	7.9870	13.0000	5.5000	4.0950	6.0000	11.2500	12, 16, 20, 25, 30, 40, 50
ISHSS03	10.0000	9.9870	16.0000	7.0000	5.0950	8.0000	13.2500	16, 20, 25, 30 to 100 by 10, 120
ISHSS04	13.0000	12.9840	18.0000	9.0000	6.0950	10.0000	16.4000	16, 20, 25, 30 to 100 by 10, 120
ISHSS05	16.0000	15.9840	24.0000	11.0000	8.1150	12.0000	18.4000	30 to 100 by 10, 120
ISHSS06	20.0000	19.9800	30.0000	14.0000	10.1150	16.0000	22.4000	40 to 100 by 10, 120
ISHSS07	25.0000	24.9800	36.0000	16.0000	12.1420	20.0000	27.4000	50 to 100 by 10, 120

Hex Socket Button Head Screws (Metric Series)



Generic Part Name: ISHBS

Notes:

- Corresponds to standard ISO 7380 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

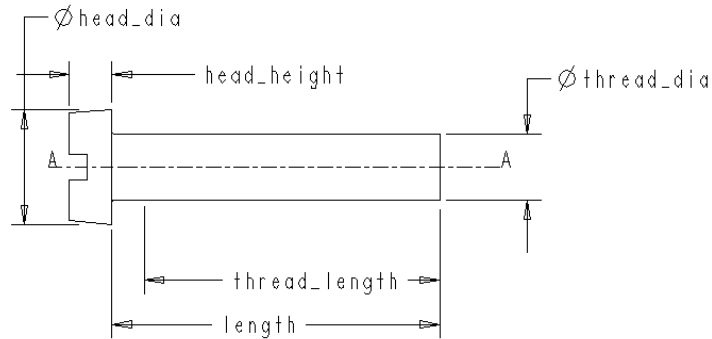
Name	Nominal Size Thr Pitch	Thread Dia	Thread Dist	Head Dia	Head Height	Flat Width	Length
ISHBS01	M3X0.5	3.0000	1.00000	5.7000	1.65000	2.0450	6, 8, 10, 12
ISHBS02	M4X0.7	4.0000	1.40000	7.6000	2.20000	2.5600	8, 10, 12, 16
ISHBS03	M5X0.8	5.0000	1.60000	9.5000	2.75000	3.0800	10, 12, 16, 20, 25, 30

Name	Nominal Size Thr Pitch	Thread Dia	Thread Dist	Head Dia	Head Height	Flat Width	Length
ISHBS04	M6X1	6.0000	2.00000	10.5000	3.30000	4.0950	10, 12, 16, 20, 25, 30
ISHBS05	M8X1.25	8.0000	2.50000	14.0000	4.40000	5.0950	10, 12, 16, 20 to 40 by 5
ISHBS06	M10X1.5	10.0000	3.00000	17.5000	5.50000	6.0950	16, 20 to 40 by 5
ISHBS07	M12X1.75	12.0000	3.50000	21.0000	6.60000	8.1150	16, 20 to 50 by 5
ISHBS08	M16X2	16.0000	4.00000	28.0000	8.80000	10.1150	25 to 50 by 5

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ISO Slotted Head Screws

Slotted Cheese Head Screws, Grade A



Generic Part Name: ISLGS

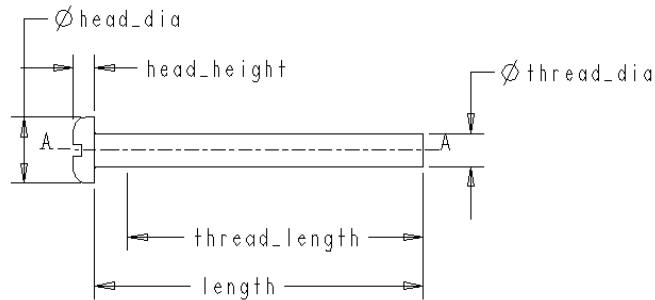
Notes:

- Corresponds to standard ISO 1207 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom. Dia Thr Pitch	Thread Dia	Head Dia	Head Height	Length	Thread Length
ISLGS01	M4X0.7	4.0000	7.0000	2.60000	5, 6 to 12 by 2, 16, 20 to 40 by 5	3.6, 4.6 to 10.6 by 2, 14.6, 18.6 to 38.6 by 5
ISLGS02	M5X0.8	5.0000	8.5000	3.30000	6 to 12 by 2, 16, 20 to 50 by 5	4.4 to 10.4 by 2, 14.4, 18.4 to 38.4 by 5, 38
ISLGS03	M6X1	6.0000	10.0000	3.90000	8, 10, 12, 16, 20 to 50 by 5, 60	6, 8, 10, 14, 18 to 38 by 5
ISLGS04	M8X1.25	8.0000	13.0000	5.00000	10, 12, 16, 20 to 50 by 5, 60, 70, 80	7.5, 9.5 to 17.5 by 4, 22.5 to 37.5 by 5, 38

Name	Nom. Dia Thr Pitch	Thread Dia	Head Dia	Head Height	Length	Thread Length
ISLGS05	M10X1.5	10.0000	16.0000	6.00000	12, 16, 20 to 50 by 5, 60, 70, 80	9, 13, 17, 22 to 37 by 5, 38

Slotted Pan Head Screws, Grade A



Generic Part Name: ISLPS

Notes:

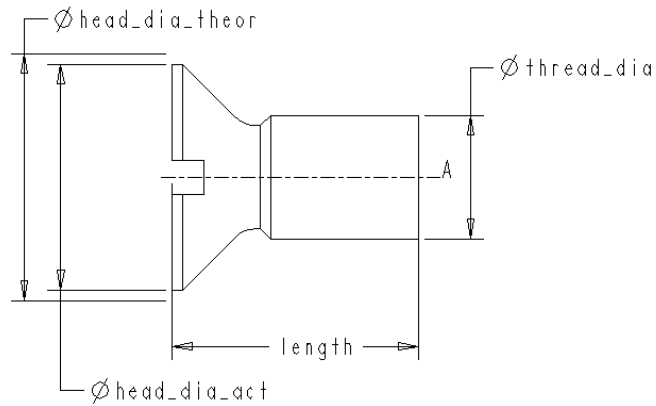
- Corresponds to standard ISO 1580 - 1983.
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

Name	Nom Dia Thr Pitch	Thread Dia	Head Dia	Head Height	Length	Thread Length
ISLPS01	M1.6X0.35	1.6000	3.2000	1.00000	2, 2.5, 3, 4, 5, 6, 8, 10, 12, 16	1.3, 1.8, 2.3 to 7.3 by 1, 9.3, 11.3, 15.3

Name	Nom Dia Thr Pitch	Thread Dia	Head Dia	Head Height	Length	Thread Length
ISLPS02	M2X0.4	2.0000	4.0000	1.30000	2.5, 3, 4, 5, 6, 8, 10, 12, 16, 20	1.7, 2.2 to 7.2 by 1, 9.2, 11.2, 15.2, 19.2
ISLPS03	M2.5X0.45	2.5000	5.0000	1.50000	3, 4, 5, 6, 8, 10, 12, 16, 20, 25	2.1 to 5.1 by 1, 7.1, 9.1, 11.1, 15.1, 19.1, 24.1
ISLPS04	M3X0.5	3.0000	5.6000	1.80000	4, 5, 6 to 12 by 2, 16, 20, 25, 30	3, 4, 5, 7, 9, 11, 15, 19, 24, 29
ISLPS05	M4X0.7	4.0000	8.0000	2.40000	5, 6 to 12 by 2, 16, 20 to 40 by 5	3.6, 4.6 to 10.6 by 2, 14.6, 18.6, 23.6 to 38.6 by 5
ISLPS06	M5X0.8	5.0000	9.5000	3.00000	6 to 12 by 2, 16, 20 to 50 by 5	4.4 to 10.4 by 2, 14.4, 18.4, 23.4 to 38.4 by 5, 38
ISLPS07	M6X1	6.0000	12.0000	3.60000	8, 10, 12, 16, 20 to 50 by 5, 60	6, 8, 10, 14, 18 to 38 by 5
ISLPS08	M8X1.25	8.0000	16.0000	4.80000	10, 12, 16, 20 to 50 by 5, 60, 70, 80	7.5, 9.5 to 17.5 by 4, 22.5 to 37.5 by 5, 38
ISLPS09	M10X1.5	10.0000	20.0000	6.00000	12, 16, 20 to 50 by 5, 60, 70, 80	9, 13, 17, 22 to 37 by 5, 38

Slotted Countersunk Head Screws, Grade A

ISO Slotted Head
Screws



Generic Part Name: ISLCS

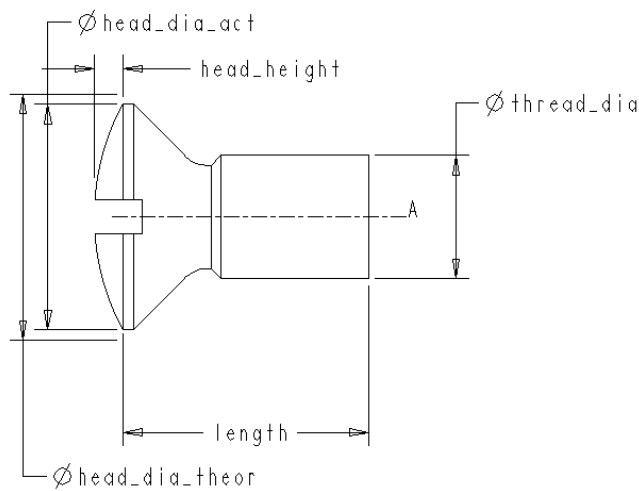
Notes:

- Corresponds to standard ISO 2009 - 1983.
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

Name	Nominal Dia Thr Pitch	Thread Dia	Head Dia Theor	Head Dia Act	Length
ISLCS01	M1.6X0.35	1.6000	3.6000	3.0000	2.5, 3, 4, 5, 6 to 12 by 2, 16
ISLCS02	M2X0.4	2.0000	4.4000	3.8000	3, 4, 5, 6 to 12 by 2, 16, 20
ISLCS03	M2.5X0.45	2.5000	5.5000	4.7000	4, 5, 6 to 12 by 2, 16, 20, 25
ISLCS04	M3X0.5	3.0000	6.3000	5.5000	5, 6 to 12 by 2, 16, 20, 25, 30
ISLCS05	M4X0.7	4.0000	9.4000	8.4000	5, 6 to 12 by 2, 16, 20 to 40 by 5

Name	Nominal Dia Thr Pitch	Thread Dia	Head Dia Theor	Head Dia Act	Length
ISLCS06	M5X0.8	5.0000	10.4000	9.3000	8, 10, 12, 16, 20 to 50 by 5
ISLCS07	M6X1	6.0000	12.6000	11.3000	8, 10, 12, 16, 20 to 50 by 5, 60
ISLCS08	M8X1.25	8.0000	17.3000	15.8000	10, 12, 16, 20 to 50 by 5, 60, 70, 80
ISLCS09	M10X1.5	10.0000	20.0000	18.3000	12, 16, 20 to 50 by 5, 60, 70, 80

Slotted Raised Countersunk Head Screws, Grade A



Generic Part Name: ISLRS

Notes:

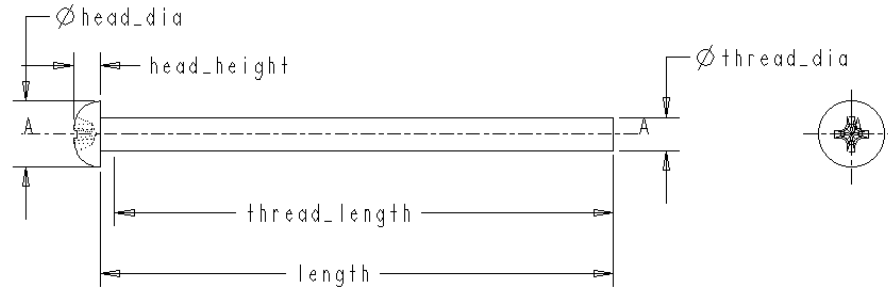
- Corresponds to standard ISO 2010 - 1983.
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

Name	Nominal Dia Thr Pitch	Thread Dia	Head Dia Theor	Head Dia Act	Head Height	Length
ISLRS01	M1.6X0.35	1.6000	3.6000	3.0000	0.4000	2.5, 3, 4, 5, 6 to 12 by 2, 16
ISLRS02	M2X0.4	2.0000	4.4000	3.8000	0.5000	3, 4, 5, 6 to 12 by 2, 16, 20
ISLRS03	M2.5X0.45	2.5000	5.5000	4.7000	0.6000	4, 5, 6 to 12 by 2, 16, 20, 25
ISLRS04	M3X0.5	3.0000	6.3000	5.5000	0.7000	5, 6 to 12 by 2, 16, 20, 25, 30
ISLRS05	M4X0.7	4.0000	9.4000	8.4000	1.0000	5, 6 to 12 by 2, 16, 20 to 40 by 5
ISLRS06	M5X0.8	5.0000	10.4000	9.3000	1.2000	8, 10, 12, 16, 20 to 50 by 5
ISLRS07	M6X1	6.0000	12.6000	11.3000	1.4000	8, 10, 12, 16, 20 to 50 by 5, 60
ISLRS08	M8X1.25	8.0000	17.3000	15.8000	2.0000	10, 12, 16, 20 to 50 by 5, 60, 70, 80
ISLRS09	M10X1.5	10.0000	20.0000	18.3000	2.3000	12, 16, 20 to 50 by 5, 60, 70, 80

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**ISO Cross Recessed Head
Screws**

Cross Recessed Pan Head Screws, Grade A



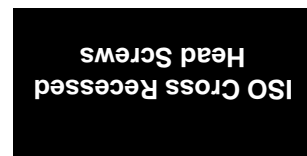
Generic Part Name: ICRPS

Notes:

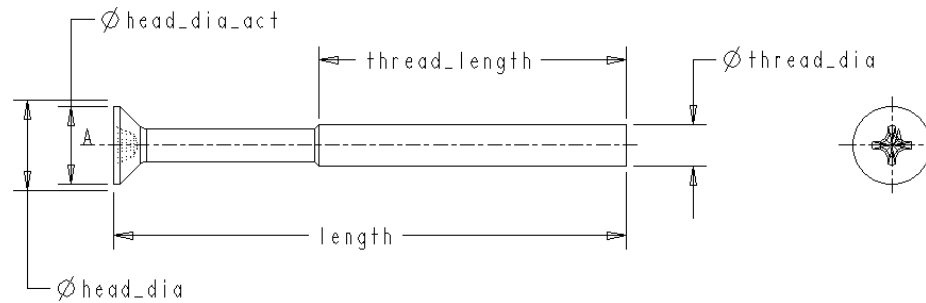
- Corresponds to standard ISO 7045 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Thread Dia	Head Dia	Head Height	Length	Thread Length
ICRPS01	M1.6X0.35	1.6000	3.2000	1.30000	3, 4, 5, 6 to 12 by 2, 16	2.3, 3.3, 4.3, 5.3 to 11.3 by 2, 15.3
ICRPS02	M2X0.4	2.0000	4.0000	1.60000	3, 4, 5, 6 to 12 by 2, 16, 20	2.2, 3.2, 4.2, 5.2 to 11.2 by 2, 15.2, 19.2

Name	Nom Dia Thr Pitch	Thread Dia	Head Dia	Head Height	Length	Thread Length
ICRPS03	M2.5X0.45	2.5000	5.0000	2.10000	3, 4, 5, 6 to 12 by 2, 16, 20, 25	2.1, 3.1, 4.1, 5.1 to 11.1 by 2, 15.1, 19.1, 24.1
ICRPS04	M3X0.5	3.0000	5.6000	2.40000	4, 5, 6 to 12 by 2, 16, 20, 25, 30	3, 4, 5 to 11 by 2, 15, 19, 24, 25
ICRPS05	M4X0.7	4.0000	8.0000	3.10000	5, 6 to 12 by 2, 16, 20 to 40 by 5	3.6, 4.6 to 10.6 by 2, 14.6, 18.6 to 38.6 by 5
ICRPS06	M5X0.8	5.0000	9.5000	3.70000	6 to 12 by 2, 16, 20 to 45 by 5	4.4 to 10.4 by 2, 14.4, 18.4 to 38.4 by 5, 38
ICRPS07	M6X1	6.0000	12.0000	4.60000	8, 10, 12, 16, 20 to 50 by 5, 60	6 to 10 by 2, 14, 18 to 38 by 5
ICRPS08	M8X1.25	8.0000	16.0000	6.00000	10, 12, 16, 20 to 50 by 5, 60	7.5, 9.5, 13.5, 17.5 to 37.5 by 5, 38
ICRPS09	M10X1.5	10.0000	20.0000	7.50000	12, 16, 20 to 50 by 5, 60	9, 13, 17 to 37 by 5, 38



Cross Recessed Countersunk Flat Head Screws, Property Class 4.8



Generic Part Name: ICRFC

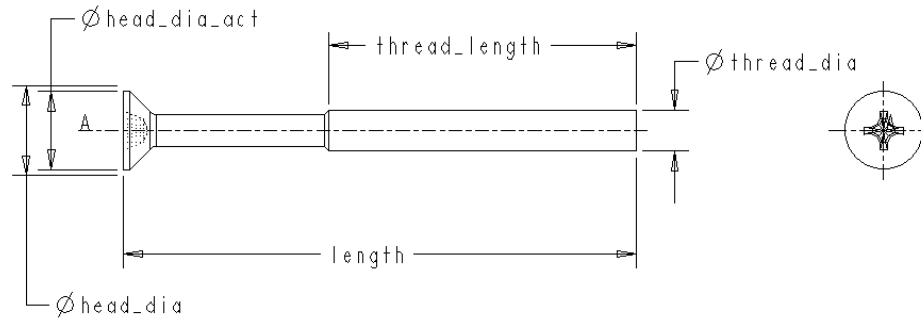
Notes:

- Corresponds to standard ISO 7046 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Thread Dia	Head Dia	Head Dia Act	Length	Thread Length
ICRFC01	M1.6X.35	1.6000	3.6000	3.0000	3, 4, 5, 6 to 12 by 2, 16	1.3, 2.3, 3.3, 4.3 to 10.3 by 2, 14.3

Name	Nom Dia Thr Pitch	Thread Dia	Head Dia	Head Dia Act	Length	Thread Length
ICRFC02	M2X0.4	2.0000	4.4000	3.8000	3, 4, 5, 6 to 12 by 2, 16, 20	1, 2, 3, 4 to 10 by 2, 14, 18,
ICRFC03	M2.5X0.45	2.5000	5.5000	4.7000	3, 4, 5, 6 to 12 by 2, 16, 20, 25	0.6, 1.6, 2.6, 3.6 to 9.6 by 2, 13.6, 17.6, 22.6
ICRFC04	M3X0.5	3.0000	6.3000	5.5000	4, 5, 6 to 12 by 2, 16, 20, 25, 30	1.35, 2.35, 3.35 to 9.35 by 2, 13.35, 17.35, 22.35, 27.35
ICRFC05	M4X0.7	4.0000	9.4000	8.4000	5, 6 to 12 by 2, 16, 20 to 40 by 5	0.9, 1.9, 3.9 to 11.9 by 2, 15.9 to 35.9 by 5
ICRFC06	M5X0.8	5.0000	10.4000	9.3000	6 to 12 by 2, 16, 20 to 50 by 5	1.7 to 7.7 by 2, 11.7, 15.7 to 40.7 by 5, 38
ICRFC07	M6X1	6.0000	12.6000	11.3000	8, 10, 12, 16, 20 to 50 by 5, 60	2.7, 4.7, 6.7, 10.7, 14.7 to 39.7 by 5, 38
ICRFC08	M8X1.25	8.0000	17.3000	15.8000	10, 12, 16, 20 to 50 by 5, 60	2.85, 4.85, 8.85, 12.85 to 37.85 by 5, 38
ICRFC09	M10X1.5	10.0000	20.0000	18.3000	12, 16, 20 to 50 by 5, 60	4, 8, 12 to 37 by 5, 38

Cross Recessed Countersunk Flat Head Screws, Property Class 8.8



Generic Part Name: ICRFS

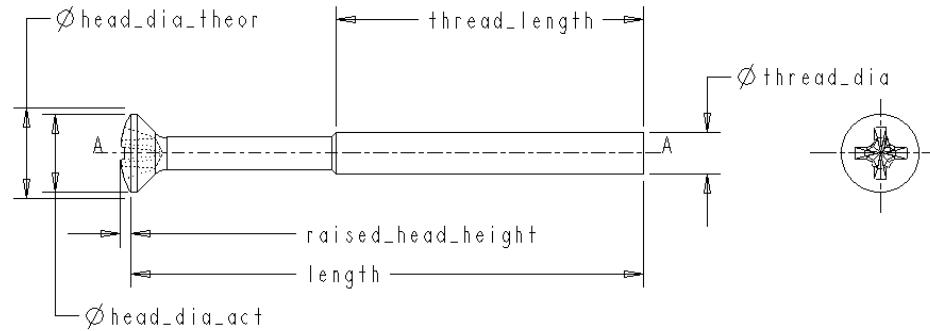
Notes:

- Corresponds to standard ISO 7046 - 2 - 1990.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Thread Dia	Head Dia	Head Dia Act	Length	Thread Length
ICRFS01	M2X0.4	2.0000	4.4000	3.8000	3, 4, 5, 6 to 12 by 2, 16, 20	1, 2, 3, 4 to 10 by 2, 14, 18

Name	Nom Dia Thr Pitch	Thread Dia	Head Dia	Head Dia Act	Length	Thread Length
ICRFS02	M2.5X0.45	2.5000	5.5000	4.7000	3, 4, 5, 6 to 12 by 2, 16, 20, 25	0.6, 1.6, 2.6, 3.6 to 9.6 by 2, 13.6, 17.6, 22.6
ICRFS03	M3X0.5	3.0000	6.3000	5.5000	4, 5, 6 to 12 by 2, 16, 20, 25, 30	1.35, 2.35, 3.35 to 9.35 by 2, 13.35, 17.35, 22.35, 27.35
ICRFS04	M4X0.7	4.0000	9.4000	8.4000	5, 6 to 12 by 2, 16, 20 to 40 by 5	0.9, 1.9, 3.9 to 7.9 by 2, 10.9, 15.9 to 35.9 by 5
ICRFS05	M5X0.8	5.0000	10.4000	9.3000	6 to 12 by 5, 16, 20 to 50 by 5	1.7 to 7.7 by 2, 11.7, 15.7 to 40.7 by 5, 38
ICRFS06	M6X1	6.0000	12.6000	11.3000	8, 10, 12, 16, 20 to 50 by 5, 60	2.7, 4.7, 6.7, 10.7, 14.7 to 39.7, 38
ICRFS07	M8X1.25	8.0000	17.3000	15.8000	10, 12, 16, 20 to 50 by 5, 60	2.85, 4.85, 8.85, 12.85 to 37.85 by 5, 38
ICRFS08	M10X1.5	10.0000	20.0000	18.3000	12, 16, 20 to 50 by 5, 60	4, 8, 12 to 37 by 5, 38

Cross Recessed Raised Countersunk Head Screws, Grade A



Notes:

- Corresponds to standard ISO 7047 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

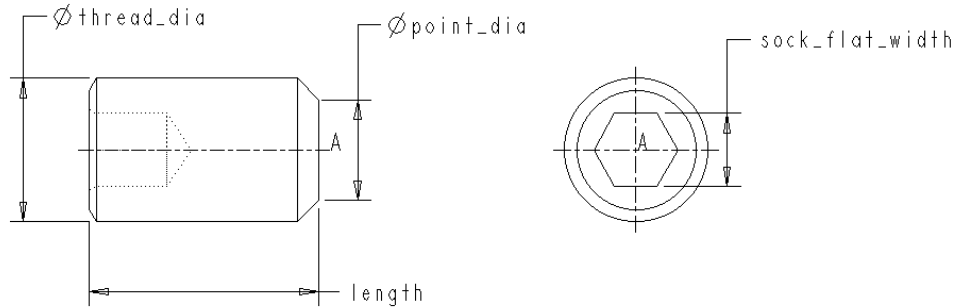
Name	Nom Dia Thr Pitch	Thd Dia	Head Dia Act	Raised Head Height	Head Dia Theor	Length	Thread Length
ICRRS01	M1.6X.35	1.6000	3.0000	0.40000	3.6000	3, 4, 5, 6 to 12 by 2, 16	1.3, 2.3, 3.3, 4.3 to 10.3 by 2, 14.3
ICRRS02	M2X0.4	2.0000	3.8000	0.50000	4.4000	3, 4, 5, 6 to 12 by 2, 16, 20	1, 2, 3, 4 to 10 by 2, 14, 18

Name	Nom Dia Thr Pitch	Thd Dia	Head Dia Act	Raised Head Height	Head Dia Theor	Length	Thread Length
ICRRS03	M2.5X0.45	2.5000	4.7000	0.60000	5.5000	3, 4, 5, 6 to 12 by 2, 16, 20, 25	0.6, 1.6, 2.6, 3.6 to 9.6 by 2, 13.6, 17.6, 22.6
ICRRS04	M3X0.5	3.0000	5.5000	0.70000	6.3000	4, 5, 6 to 12 by 2, 16, 20, 25, 30	1.35, 2.35, 3.35 to 9.35 by 2, 13.35, 17.35, 22.35, 27.35
ICRRS05	M4X0.7	4.0000	8.4000	1.00000	9.4000	5, 6 to 12 by 2, 16, 20 to 40 by 5	0.9, 1.9, 3.9 to 7.9 by 2, 11.9, 15.9 to 35.9 by 5
ICRRS06	M5X0.8	5.0000	9.3000	1.20000	10.4000	6 to 12 by 2, 16, 20 to 50 by 5	1.7 to 7.7 by 2, 11.7, 15.7 to 40.7 by 5, 38
ICRRS07	M6X1	6.0000	11.3000	1.40000	12.6000	8, 10, 12, 16, 20 to 50 by 5, 60	2.7, 4.7, 6.7, 10.7, 14.7 to 39.7 by 5, 38
ICRRS08	M8X1.25	8.0000	15.8000	2.00000	17.3000	10, 12, 16, 20 to 50 by 5, 60	2.85, 4.85, 8.85, 12.85 to 37.85 by 5, 38
ICRRS09	M10X1.5	10.0000	18.3000	2.30000	20.0000	12, 16, 20 to 50 by 5, 60	4, 8, 12 to 37 by 5, 38

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ISO Set Screws

Hex Socket Set Screws With Flat Point



Generic Part Name: ISEHF

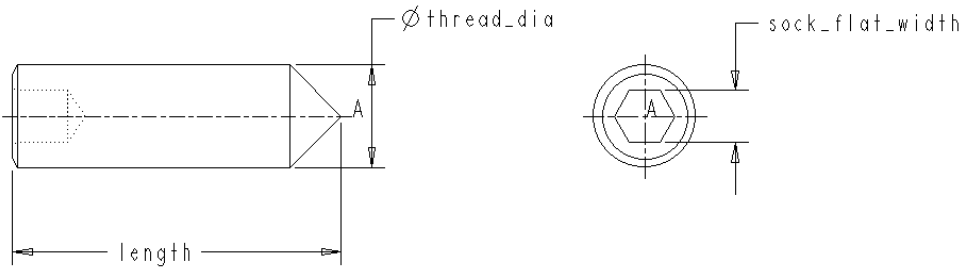
Notes:

- Corresponds to standard ISO 4026 - 1977.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Thread Dia	Point Dia	Sock Flat Width	Length
ISEHF01	M1.6X0.35	1.6000	0.8000	0.7240	2, 2.5, 3, 4, 5, 6, 8
ISEHF02	M2X0.4	2.0000	1.0000	0.9020	2, 2.5, 3, 4, 5, 6, 8, 10
ISEHF03	M2.5X0.45	2.5000	1.5000	1.2950	2, 2.5, 3, 4, 5, 6 to 12 by 2
ISEHF04	M3X0.5	3.0000	2.0000	1.5450	2, 2.5, 3, 4, 5, 6 to 12 by 2, 16
ISEHF05	M4X0.7	4.0000	2.5000	2.0450	2.5, 3, 4, 5, 6 to 12 by 2, 16, 20

Name	Nom Dia Thr Pitch	Thread Dia	Point Dia	Sock Flat Width	Length
ISEHF06	M5X0.8	5.0000	3.5000	2.5600	3, 4, 5, 6 to 12 by 2, 16, 20, 25
ISEHF07	M6X1	6.0000	4.0000	3.0800	4, 5, 6 to 12 by 2, 16, 20, 25, 30
ISEHF08	M8X1.25	8.0000	5.5000	4.0950	5, 6 to 12 by 2, 16, 20 to 40 by 5
ISEHF09	M10X1.5	10.0000	7.0000	5.0950	6 to 12 by 2, 16, 20 to 50 by 5
ISEHF10	M12X1.75	12.0000	8.5000	6.0950	8, 10, 12, 16, 20 to 60 by 5
ISEHF11	M16X2	16.0000	12.0000	8.1150	10, 12, 16, 20 to 60 by 5
ISEHF12	M20X2.5	20.0000	15.0000	10.1150	12, 16, 20 to 60 by 5
ISEHF13	M24X3	24.0000	18.0000	12.1420	16, 20 to 60 by 5

Hex Socket Set Screws With Cone Point



Generic Part Name: ISEHC

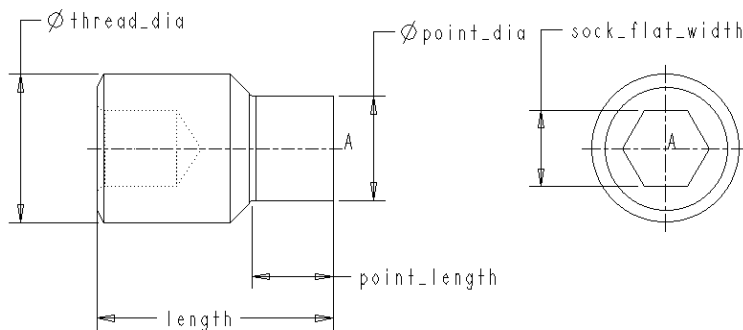
Notes:

- Corresponds to standard ISO 4027 - 1977.

- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Thread Dia	Sock Flat Width	Length
ISEHC01	M1.6X0.35	1.6000	0.7240	2, 2.5, 3, 4, 5, 6, 8
ISEHC02	M2X0.4	2.0000	0.9020	2, 2.5, 3, 4, 5, 6, 8, 10
ISEHC03	M2.5X0.45	2.5000	1.2950	2.5, 3, 4, 5, 6 to 12 by 2
ISEHC04	M3X0.5	3.0000	1.5450	2.5, 3, 4, 5, 6 to 12 by 2, 16
ISEHC05	M4X0.7	4.0000	2.0450	3, 4, 5, 6 to 12 by 2, 16, 20
ISEHC06	M5X0.8	5.0000	2.5600	4, 5, 6 to 12 by 2, 16, 20, 25
ISEHC07	M6X1	6.0000	3.0800	5, 6 to 12 by 2, 16, 20, 25, 30
ISEHC08	M8X1.25	8.0000	4.0950	6 to 12 by 2, 16, 20 to 40 by 5
ISEHC09	M10X1.5	10.0000	5.0950	8, 10, 12, 16, 20 to 50 by 5
ISEHC10	M12X1.75	12.0000	6.0950	10, 12, 16, 20 to 60 by 5
ISEHC11	M16X2	16.0000	8.1150	12, 16, 20 to 60 by 5
ISEHC12	M20X2.5	20.0000	10.1150	16, 20 to 60 by 5
ISEHC13	M24X3	24.0000	12.1420	20 to 60 by 5

Hex Socket Set Screws With Dog Point



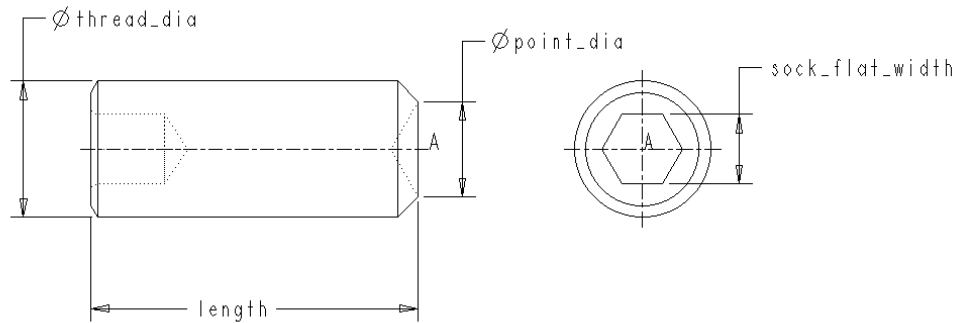
Generic Part Name: ISEHD

Notes:

- Corresponds to standard ISO 4028 - 1977.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Thread Dia	Point Dia	Sock Flat Width	Length	Point Length
ISEHD01	M1.6X0.35	1.6000	0.8000	0.7240	2, 2.5, 3, 4, 5, 6, 8	0.65, 1.05
ISEHD02	M2X0.4	2.0000	1.0000	0.9020	2.5, 3, 4, 5, 6, 8, 10	0.75, 1.25
ISEHD03	M2.5X0.45	2.5000	1.5000	1.2950	3, 4, 5, 6 to 12 by 2	0.88, 1.5
ISEHD04	M3X0.5	3.0000	2.0000	1.5450	4, 5, 6 to 12 by 2, 16	1, 1.75
ISEHD05	M4X0.7	4.0000	2.5000	2.0450	5, 6 to 12 by 2, 16, 20	1.25, 2.25
ISEHD06	M5X0.8	5.0000	3.5000	2.5600	6 to 12 by 2, 16, 20, 25	1.5, 2.75
ISEHD07	M6X1	6.0000	4.0000	3.0800	8, 10, 12, 16, 20, 25, 30	1.75, 3.25
ISEHD08	M8X1.25	8.0000	5.5000	4.0950	8, 10, 12, 16, 20 to 40 by 5	2.25, 4.3
ISEHD09	M10X1.5	10.0000	7.0000	5.0950	10, 12, 16, 20 to 50 by 5	2.75, 5.3
ISEHD10	M12X1.75	12.0000	8.5000	6.0950	12, 16, 20 to 60 by 5	3.25, 6.3
ISEHD11	M16X2	16.0000	12.0000	8.1150	16, 20 to 60 by 5	4.3, 8.36
ISEHD12	M20X2.5	20.0000	15.0000	10.1150	20 to 60 by 5	5.3, 10.36
ISEHD13	M24X3	24.0000	18.0000	12.1420	25 to 60 by 5	6.3, 12.43

Hex Socket Set Screws With Cup Point



Generic Part Name: ISEHP

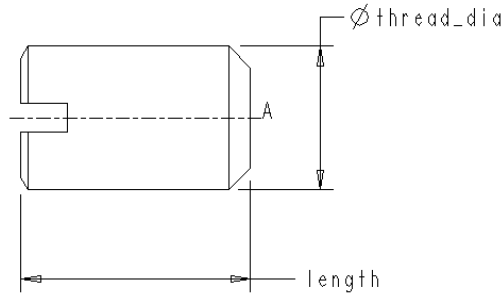
Notes:

- Corresponds to standard ISO 4029 - 1977.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Thread Dia	Point Dia	Sock Flat Width	Length
ISEHP01	M1.6X0.35	1.6000	0.8000	0.7240	2, 2.5, 3, 4, 5, 6, 8
ISEHP02	M2X0.4	2.0000	1.0000	0.9020	2, 2.5, 3, 4, 5, 6, 8, 10
ISEHP03	M2.5X0.45	2.5000	1.2000	1.2950	2, 2.5, 3, 4, 5, 6 to 12 by 2
ISEHP04	M3X0.5	3.0000	1.4000	1.5450	2.5, 3, 4, 5, 6 to 12 by 2, 16
ISEHP05	M4X0.7	4.0000	2.0000	2.0450	3, 4, 5, 6 to 12 by 2, 16, 20
ISEHP06	M5X0.8	5.0000	2.5000	2.5600	4, 5, 6 to 12 by 2, 16, 20, 25
ISEHP07	M6X1	6.0000	3.0000	3.0800	5, 6 to 12 by 2, 16, 20, 25, 30

Name	Nom Dia Thr Pitch	Thread Dia	Point Dia	Sock Flat Width	Length
ISEHP08	M8X1.25	8.0000	5.0000	4.0950	6 to 12 by 2, 16, 20 to 40 by 5
ISEHP09	M10X1.5	10.0000	6.0000	5.0950	8, 10, 12, 16, 20 to 50 by 5
ISEHP10	M12X1.75	12.0000	8.0000	6.0950	10, 12, 16, 20 to 60 by 5
ISEHP11	M16X2	16.0000	10.0000	8.1150	12, 16, 20 to 60 by 5
ISEHP12	M20X2.5	20.0000	14.0000	10.1150	16, 20 to 60 by 5
ISEHP13	M24X3	24.0000	16.0000 </td <td>12.1420</td> <td>20 to 60 by 5</td>	12.1420	20 to 60 by 5

Slotted Set Screws With Flat Point



Generic Part Name: ISESF

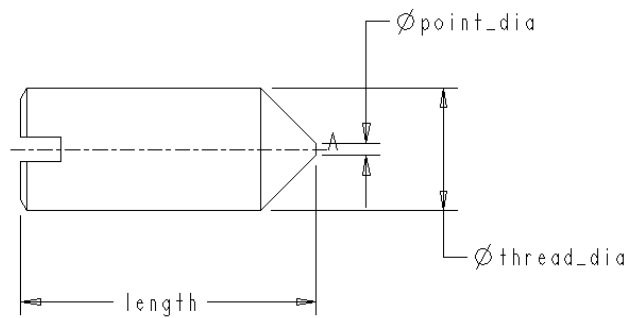
Notes:

- Corresponds to standard ISO 4766 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia Thr Pitch	Thread Dia	Length
ISESF01	M1.2X0.25	1.2000	2, 2.5, 3, 4, 5, 6
ISESF02	M1.6X0.35	1.6000	2, 2.5, 3, 4, 5, 6, 8

Name	Nominal Dia Thr Pitch	Thread Dia	Length
ISESF03	M2X0.4	2.0000	2, 2.5, 3, 4, 5, 6, 8, 10
ISESF04	M2.5X0.45	2.5000	2.5, 3, 4, 5, 6 to 12 by 2
ISESF05	M3X0.5	3.0000	3, 4, 5, 6 to 12 by 2, 16
ISESF06	M4X0.7	4.0000	4, 5, 6 to 12 by 2, 16, 20
ISESF07	M5X0.8	5.0000	5, 6 to 12 by 2, 16, 20, 25
ISESF08	M6X1	6.0000	6 to 12 by 2, 16, 20, 25, 30
ISESF09	M8X1.25	8.0000	8, 10, 12, 16, 20 to 40 by 5
ISESF10	M10X1.5	10.0000	10, 12, 16, 20 to 50 by 5
ISESF11	M12X1.75	12.0000	12, 16, 20 to 60 by 5

Slotted Set Screws With Cone Point



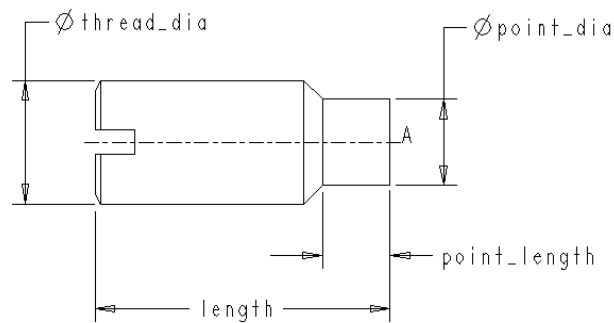
Generic Part Name: ISESC

Notes:

- Corresponds to standard ISO 7434 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Thread Dia	Point Dia	Length
ISESC01	M1.2X0.25	1.2000	0.12000	2, 2.5, 3, 4, 5, 6
ISESC02	M1.6X0.35	1.6000	0.16000	2, 2.5, 3, 4, 5, 6, 8
ISESC03	M2X0.4	2.0000	0.20000	3, 4, 5, 6, 8, 10
ISESC04	M2.5X0.45	2.5000	0.25000	3, 4, 5, 6 to 12 by 2
ISESC05	M3X0.5	3.0000	0.30000	4, 5, 6 to 12 by 2, 16
ISESC06	M4X0.7	4.0000	0.40000	4, 5, 6 to 12 by 2, 16, 20
ISESC07	M5X0.8	5.0000	0.50000	5, 6 to 12 by 2, 16, 20, 25
ISESC08	M6X1	6.0000	1.50000	6 to 12 by 2, 16, 20, 25, 30
ISESC09	M8X1.25	8.0000	2.00000	8, 10, 12, 16, 20 to 40 by 5
ISESC10	M10X1.5	10.0000	2.50000	10, 12, 16, 20 to 50 by 5
ISESC11	M12X1.75	12.0000	3.00000	12, 16, 20 to 60 by 5

Slotted Set Screws with Long Dog Point



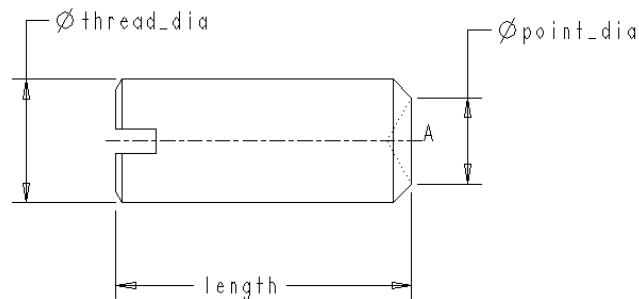
Generic Part Name: ISESD

Notes:

- Corresponds to standard ISO 7435 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia Thr Pitch	Thread Dia	Point Dia	Point Length	Length
ISESD01	M1.6X0.35	1.6000	0.80000	1.05000	2.5, 3, 4, 5, 6, 8
ISESD02	M2X0.4	2.0000	1.00000	1.25000	3, 4, 5, 6, 8, 10
ISESD03	M2.5X0.45	2.5000	1.50000	1.50000	4, 5, 6, 8, 10, 12
ISESD04	M3X0.5	3.0000	2.00000	1.75000	5, 6 to 12 by 2, 16
ISESD05	M4X0.7	4.0000	2.50000	2.25000	6 to 12 by 2, 16, 20
ISESD06	M5X0.8	5.0000	3.50000	2.75000	8, 10, 12, 16, 20, 25
ISESD07	M6X1	6.0000	4.00000	3.25000	8, 10, 12, 16, 20, 25, 30
ISESD08	M8X1.25	8.0000	5.50000	4.30000	10, 12, 16, 20 to 40 by 5
ISESD09	M10X1.5	10.0000	7.00000	5.30000	12, 16, 20 to 50 by 5
ISESD10	M12X1.75	12.0000	8.50000	6.30000	16, 20 to 60 by 5

Slotted Set Screws With Cup Point



Generic Part Name: ISESP

Notes:

- Corresponds to standard ISO 7436 - 1983.

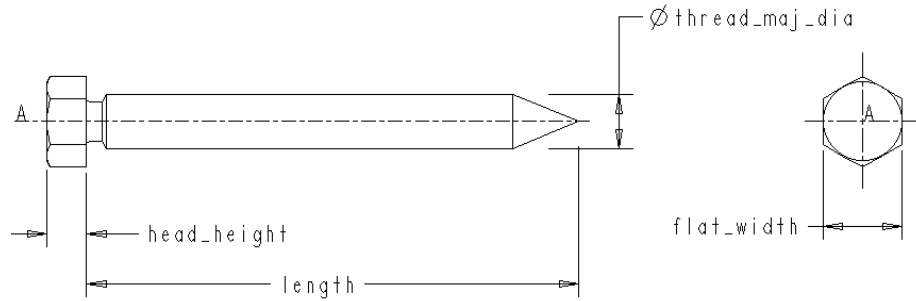
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Thread Dia	Point Dia	Length
ISESP01	M1.6X0.35	1.6000	0.80000	2, 2.5, 3, 4, 5, 6, 8
ISESP02	M2X0.4	2.0000	1.00000	2.5, 3, 4, 5, 6, 8, 10
ISESP03	M2.5X0.45	2.5000	1.20000	3, 4, 5, 6 to 12 by 2
ISESP04	M3X0.5	3.0000	1.40000	3, 4, 5, 6 to 12 by 2, 16
ISESP05	M4X0.7	4.0000	2.00000	4, 5, 6 to 12 by 2, 16, 20
ISESP06	M5X0.8	5.0000	2.50000	5, 6 to 12 by 2, 16, 20, 25
ISESP07	M6X1	6.0000	3.00000	6 to 12 by 2, 16, 20, 25, 30
ISESP08	M8X1.25	8.0000	5.00000	8, 10, 12, 16, 20 to 40 by 5
ISESP09	M10X1.5	10.0000	6.00000	10, 12, 16, 20 to 50 by 5
ISESP10	M12X1.75	12.0000	8.00000	12, 16, 20 to 60 by 5

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ISO Tapping Screws

Hex Head Tapping Screws



Generic Part Name: ITHHS

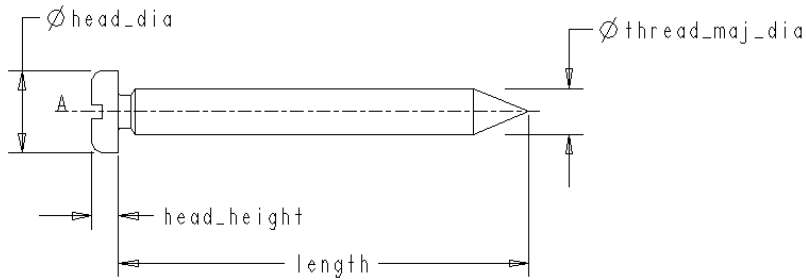
Notes:

- Corresponds to standard ISO 1479 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia Thr Pitch	Type	Thread Maj Dia	Head Height	Flat Width	Length
ITHHS01	ST2.2X0.8	C	2.24000	1.60000	3.2000	4.5, 6.5, 9.5, 13, 16
ITHHS02	ST2.9X1.1	C	2.90000	2.30000	5.0000	6.5, 9.5, 13, 16, 19
ITHHS03	ST3.5X1.3	C	3.53000	2.60000	5.5000	6.5, 9.5, 13, 16, 19, 22
ITHHS04	ST4.2X1.4	C	4.22000	3.00000	7.0000	9.5, 13, 16, 19, 22, 25
ITHHS05	ST4.8X1.6	C	4.80000	3.80000	8.0000	9.5, 13, 16, 19, 22, 25, 32
ITHHS06	ST5.5X1.8	C	5.46000	4.10000	8.0000	13, 16, 19, 22, 25, 32

Name	Nominal Dia Thr Pitch	Type	Thread Maj Dia	Head Height	Flat Width	Length
ITHHS07	ST6.3X1.8	C	6.25000	4.70000	10.0000	13, 16, 19, 22, 25, 32, 38
ITHHS08	ST8X2.1	C	8.00000	6.00000	13.0000	13, 16, 19, 22, 25, 32, 38, 45, 50
ITHHS09	ST9.5X2.1	C	9.65000	7.50000	16.0000	16, 19, 22, 25, 32, 38, 45, 50
ITHHS10	ST2.2X0.8	F	2.24000	1.60000	3.2000	4.5, 6.5, 9.5, 13, 16
ITHHS11	ST2.9X1.1	F	2.90000	2.30000	5.0000	6.5, 9.5, 13, 16, 19
ITHHS12	ST3.5X1.3	F	3.53000	2.60000	5.5000	6.5, 9.5, 13, 16, 19, 22
ITHHS13	ST4.2X1.4	F	4.22000	3.00000	7.0000	9.5, 13, 16, 19, 22, 25
ITHHS14	ST4.8X1.6	F	4.80000	3.80000	8.0000	9.5, 13, 16, 19, 22, 25, 32
ITHHS15	ST5.5X1.8	F	5.46000	4.10000	8.0000	13, 16, 19, 22, 25, 32
ITHHS16	ST6.3X1.8	F	6.25000	4.70000	10.0000	13, 16, 19, 22, 25, 32, 38
ITHHS17	ST8X2.1	F	8.00000	6.00000	13.0000	13, 16, 19, 22, 25, 32, 38, 45, 50
ITHHS18	ST9.5X2.1	F	9.65000	7.50000	16.0000	16, 19, 22, 25, 32, 38, 45, 50

Slotted Pan Head Tapping Screws



Generic Part Name: ITSPS

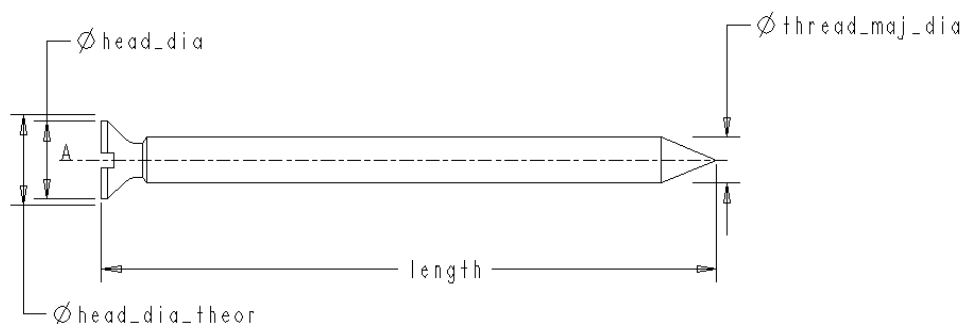
Notes:

- Corresponds to standard ISO 1481 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Type	Thread Maj Dia	Head Dia	Head Height	Length
ITSPS01	ST2.2X0.8	C	2.24000	4.0000	1.60000	4.5, 6.5, 9.5, 13, 16
ITSPS02	ST2.9X1.1	C	2.90000	5.6000	2.30000	6.5, 9.5, 13, 16, 19
ITSPS03	ST3.5X1.3	C	3.53000	7.0000	2.60000	6.5, 9.5, 13, 16, 19, 22
ITSPS04	ST4.2X1.4	C	4.22000	8.0000	3.00000	9.5, 13, 16, 19, 22, 25
ITSPS05	ST4.8X1.6	C	4.80000	9.5000	3.80000	9.5, 13, 16, 19, 22, 25, 32
ITSPS06	ST5.5X1.8	C	5.46000	11.0000	4.10000	13, 16, 19, 22, 25, 32
ITSPS07	ST6.3X1.8	C	6.25000	12.0000	4.70000	13, 16, 19, 22, 25, 32, 38
ITSPS08	ST8X2.1	C	8.00000	16.0000	6.00000	16, 19, 22, 25, 32, 38, 45, 50
ITSPS09	ST9.5X2.1	C	9.65000	20.0000	7.50000	16, 19, 22, 25, 32, 38, 45, 50

Name	Nom Dia Thr Pitch	Type	Thread Maj Dia	Head Dia	Head Height	Length
ITSPS10	ST2.2X0.8	F	2.24000	4.0000	1.60000	4.5, 6.5, 9.5, 13, 16
ITSPS11	ST2.9X1.1	F	2.90000	5.6000	2.30000	6.5, 9.5, 13, 16, 19
ITSPS12	ST3.5X1.3	F	3.53000	7.0000	2.60000	6.5, 9.5, 13, 16, 19, 22
ITSPS13	ST4.2X1.4	F	4.22000	8.0000	3.00000	9.5, 13, 16, 19, 22, 25
ITSPS14	ST4.8X1.6	F	4.80000	9.5000	3.80000	9.5, 13, 16, 19, 22, 25, 32
ITSPS15	ST5.5X1.8	F	5.46000	11.0000	4.10000	13, 16, 19, 22, 25, 32
ITSPS16	ST6.3X1.8	F	6.25000	12.0000	4.70000	13, 16, 19, 22, 25, 32, 38
ITSPS17	ST8X2.1	F	8.00000	16.0000	6.00000	16, 19, 22, 25, 32, 38, 45, 50
ITSPS18	ST9.5X2.1	F	9.65000	20.0000	7.50000	16, 19, 22, 25, 32, 38, 45, 50

Slotted Countersunk Head Tapping Screws



Generic Part Name: ITSCS

Notes:

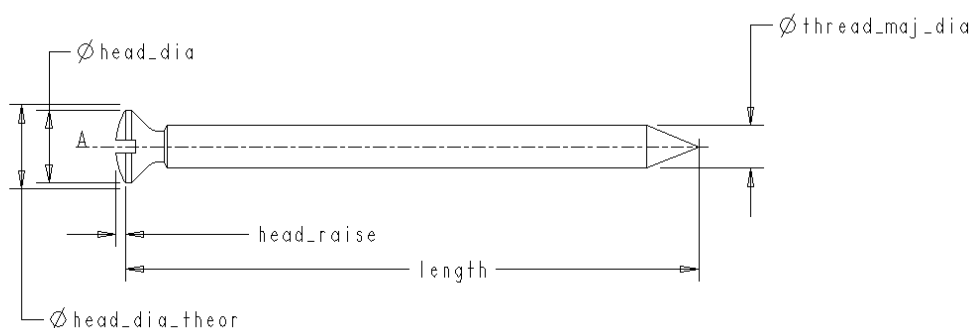
- Corresponds to standard ISO 1482 - 1983.

- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Type	Thread Maj Dia	Head Dia Theor	Head Dia	Length
ITSCS01	ST2.2X0.8	C	2.24000	4.4000	3.8000	4.5, 6.5, 9.5, 13, 16
ITSCS02	ST2.9X1.1	C	2.90000	6.3000	5.5000	6.5, 9.5, 13, 16, 19
ITSCS03	ST3.5X1.3	C	3.53000	8.2000	7.3000	9.5, 13, 16, 19, 22, 25
ITSCS04	ST4.2X1.4	C	4.22000	9.4000	8.4000	9.5, 13, 16, 19, 22, 25, 32
ITSCS05	ST4.8X1.6	C	4.80000	10.4000	9.3000	9.5, 13, 16, 19, 22, 25, 32
ITSCS06	ST5.5X1.8	C	5.46000	11.5000	10.3000	13, 16, 19, 22, 25, 32, 38
ITSCS07	ST6.3X1.8	C	6.25000	12.6000	11.3000	13, 16, 19, 22, 25, 32, 38
ITSCS08	ST8X2.1	C	8.00000	17.3000	15.8000	16, 19, 22, 25, 32, 38, 45, 50
ITSCS09	ST9.5X2.1	C	9.65000	20.0000	18.3000	19, 22, 25, 32, 38, 45, 50
ITSCS10	ST2.2X0.8	F	2.24000	4.4000	3.8000	4.5, 6.5, 9.5, 13, 16
ITSCS11	ST2.9X1.1	F	2.90000	6.3000	5.5000	6.5, 9.5, 13, 16, 19
ITSCS12	ST3.5X1.3	F	3.53000	8.2000	7.3000	9.5, 13, 16, 19, 22, 25
ITSCS13	ST4.2X1.4	F	4.22000	9.4000	8.4000	9.5, 13, 16, 19, 22, 25, 32
ITSCS14	ST4.8X1.6	F	4.80000	10.4000	9.3000	9.5, 13, 16, 19, 22, 25, 32
ITSCS15	ST5.5X1.8	F	5.46000	11.5000	10.3000	13, 16, 19, 22, 25, 32, 38
ITSCS16	ST6.3X1.8	F	6.25000	12.6000	11.3000	13, 16, 19, 22, 25, 32, 38
ITSCS17	ST8X2.1	F	8.00000	17.3000	15.8000	16, 19, 22, 25, 32, 38, 45, 50

Name	Nom Dia Thr Pitch	Type	Thread Maj Dia	Head Dia Theor	Head Dia	Length
ITSCS18	ST9.5X2.1	F	9.65000	20.0000	18.3000	19, 22, 25, 32, 38, 45, 50

Slotted Raised Countersunk Head Tapping Screws



Generic Part Name: ITSRC

Notes:

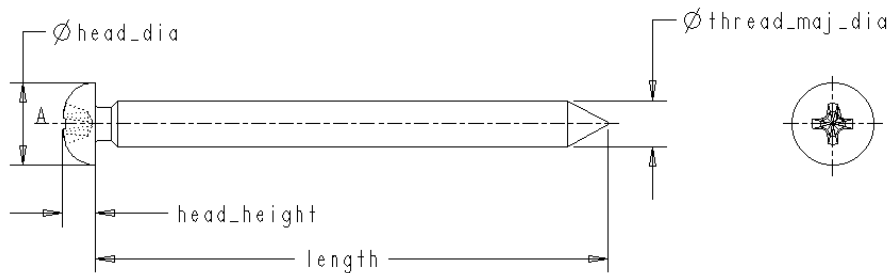
- Corresponds to standard ISO 1483 - 1983.
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

Name	Nom Dia Thr Pitch	Type	Thread Maj Dia	Head Dia Theor	Head Dia	Head Raise	Length
ITSRC01	ST2.2X0.8	C	2.24000	4.4000	3.8000	0.50000	4.5, 6.5, 9.5, 13, 16
ITSRC02	ST2.9X1.1	C	2.90000	6.3000	5.5000	0.70000	6.5, 9.5, 13, 16, 19
ITSRC03	ST3.5X1.3	C	3.53000	8.2000	7.3000	0.80000	9.5, 13, 16, 19, 22

Name	Nom Dia Thr Pitch	Type	Thread Maj Dia	Head Dia Theor	Head Dia	Head Raise	Length
ITSRC04	ST4.2X1.4	C	4.22000	9.4000	8.4000	1.00000	9.5, 13, 16, 19, 22, 25
ITSRC05	ST4.8X1.6	C	4.80000	10.4000	9.3000	1.20000	9.5, 13, 16, 19, 22, 25, 32
ITSRC06	ST5.5X1.8	C	5.46000	11.5000	10.3000	1.30000	13, 16, 19, 22, 25, 32
ITSRC07	ST6.3X1.8	C	6.25000	12.6000	11.3000	1.40000	13, 16, 19, 22, 25, 32, 38
ITSRC08	ST8X2.1	C	8.00000	17.3000	15.8000	2.00000	16, 19, 22, 25, 32, 38, 45, 50
ITSRC09	ST9.5X2.1	C	9.65000	20.0000	18.3000	2.30000	19, 22, 25, 32, 38, 45, 50
ITSRC10	ST2.2X0.8	F	2.24000	4.4000	3.8000	0.50000	4.5, 6.5, 9.5, 13, 16
ITSRC11	ST2.9X1.1	F	2.90000	6.3000	5.5000	0.70000	6.5, 9.5, 13, 16, 19
ITSRC12	ST3.5X1.3	F	3.53000	8.2000	7.3000	0.80000	9.5, 13, 16, 19, 22
ITSRC13	ST4.2X1.4	F	4.22000	9.4000	8.4000	1.00000	9.5, 13, 16, 19, 22, 25
ITSRC14	ST4.8X1.6	F	4.80000	10.4000	9.3000	1.20000	9.5, 13, 16, 19, 22, 25, 32
ITSRC15	ST5.5X1.8	F	5.46000	11.5000	10.3000	1.30000	13, 16, 19, 22, 25, 32
ITSRC16	ST6.3X1.8	F	6.25000	12.6000	11.3000	1.40000	13, 16, 19, 22, 25, 32, 38
ITSRC17	ST8X2.1	F	8.00000	17.3000	15.8000	2.00000	16, 19, 22, 25, 32, 38, 45, 50

Name	Nom Dia Thr Pitch	Type	Thread Maj Dia	Head Dia Theor	Head Dia	Head Raise	Length
ITSRC18	ST9.5X2.1	F	9.65000	20.0000	18.3000	2.30000	19, 22, 25, 32, 38, 45, 50

Cross Recessed Pan Head Tapping Screws



Generic Part Name: ITCPS

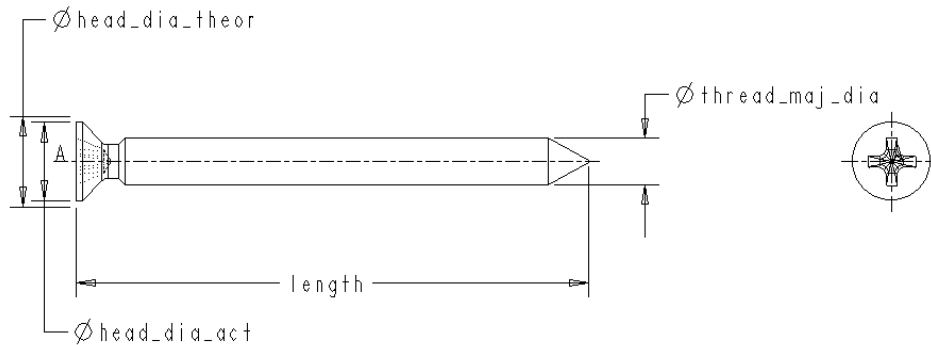
Notes:

- Corresponds to standard ISO 7049 - 1983.
- When a range of lengths is indicated, the range is expressed as "from to incremented by".

Name	Nom Dia Thr Pitch	Type	Head Dia	Head Height	Thread Maj Dia	Length
ITCPS01	ST2.2X0.8	C	4.0000	1.60000	2.24000	4.5, 6.5, 9.5, 13, 16
ITCPS02	ST2.9X1.1	C	5.6000	2.40000	2.90000	6.5, 9.5, 13, 16, 19
ITCPS03	ST3.5X1.3	C	7.0000	2.60000	3.53000	9.5, 13, 16, 19, 22, 25

Name	Nom Dia Thr Pitch	Type	Head Dia	Head Height	Thread Maj Dia	Length
ITCPS04	ST4.2X1.4	C	8.0000	3.10000	4.22000	9.5, 13, 16, 19, 22, 25, 32
ITCPS05	ST4.8X1.6	C	9.5000	3.70000	4.80000	9.5, 13, 16, 19, 22, 25, 32, 38
ITCPS06	ST5.5X1.8	C	11.0000	4.00000	5.46000	13, 16, 19, 22, 25, 32, 38
ITCPS07	ST6.3X1.8	C	12.0000	4.60000	6.25000	13, 16, 19, 22, 25, 32, 38
ITCPS08	ST8X2.1	C	16.0000	6.00000	8.00000	16, 19, 22, 25, 32, 38, 45, 50
ITCPS09	ST9.5X2.1	C	20.0000	7.50000	9.65000	19, 22, 25, 32, 38, 45, 50
ITCPS10	ST2.2X0.8	F	4.0000	1.60000	2.24000	4.5, 6.5, 9.5, 13, 16
ITCPS11	ST2.9X1.1	F	5.6000	2.40000	2.90000	6.5, 9.5, 13, 16, 19
ITCPS12	ST3.5X1.3	F	7.0000	2.60000	3.53000	9.5, 13, 16, 19, 22, 25
ITCPS13	ST4.2X1.4	F	8.0000	3.10000	4.22000	9.5, 13, 16, 19, 22, 25, 32
ITCPS14	ST4.8X1.6	F	9.5000	3.70000	4.80000	9.5, 13, 16, 19, 22, 25, 32, 38
ITCPS15	ST5.5X1.8	F	11.0000	4.00000	5.46000	13, 16, 19, 22, 25, 32, 38
ITCPS16	ST6.3X1.8	F	12.0000	4.60000	6.25000	13, 16, 19, 22, 25, 32, 38
ITCPS17	ST8X2.1	F	16.0000	6.00000	8.00000	16, 19, 22, 25, 32, 38, 45, 50
ITCPS18	ST9.5X2.1	F	20.0000	7.50000	9.65000	16, 19, 22, 25, 32, 38, 45, 50

Cross Recessed Countersunk Head Tapping Screws



Generic Part Name: ITCCS

Notes:

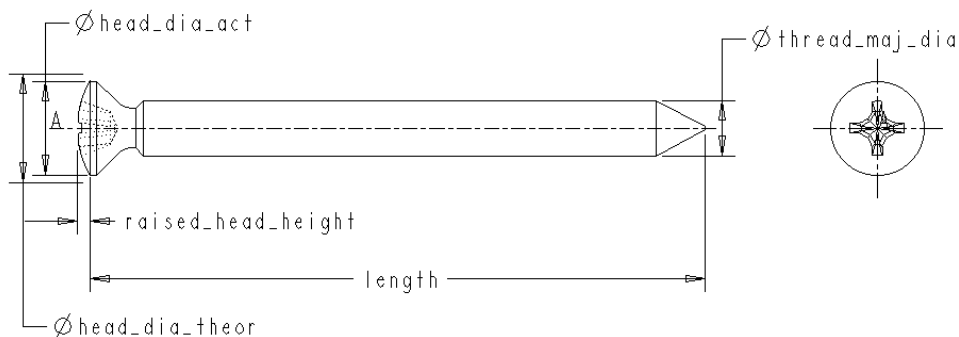
- Corresponds to standard ISO 7050 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nom Dia Thr Pitch	Type	Head Dia Theor	Thread Maj Dia	Head Dia Act	Length
ITCCS01	ST2.2X0.8	C	4.4000	2.24000	3.8000	4.5, 6.5, 9.5, 13, 16
ITCCS02	ST2.9X1	C	6.3000	2.90000	5.5000	6.5, 9.5, 13, 16, 19
ITCCS03	ST3.5X1.3	C	8.2000	3.53000	7.3000	9.5, 13, 16, 19, 22, 25
ITCCS04	ST4.2X1.4	C	9.4000	4.22000	8.4000	9.5, 13, 16, 19, 22, 25, 32
ITCCS05	ST4.8X1.6	C	10.4000	4.80000	9.3000	9.5, 13, 16, 19, 22, 25, 32
ITCCS06	ST5.5X1.8	C	11.5000	5.46000	10.3000	13, 16, 19, 22, 25, 32, 38
ITCCS07	ST6.3X1.8	C	12.6000	6.25000	11.3000	13, 16, 19, 22, 25, 32, 38
ITCCS08	ST8X2.1	C	17.3000	8.00000	15.8000	16, 19, 22, 25, 32, 38, 45, 50

ISO Tapping Screws

Name	Nom Dia Thr Pitch	Type	Head Dia Theor	Thread Maj Dia	Head Dia Act	Length
ITCCS09	ST9.5X2.1	C	20.0000	9.65000	18.3000	16, 19, 22, 25, 32, 38, 45, 50
ITCCS10	ST2.2X0.8	F	4.4000	2.24000	3.8000	4.5, 6.5, 9.5, 13, 16
ITCCS11	ST2.9X1	F	6.3000	2.90000	5.5000	6.5, 9.5, 13, 16, 19
ITCCS12	ST3.5X1.3	F	8.2000	3.53000	7.3000	9.5, 13, 16, 19, 22, 25
ITCCS13	ST4.2X1.4	F	9.4000	4.22000	8.4000	9.5, 13, 16, 19, 22, 25, 32
ITCCS14	ST4.8X1.6	F	10.4000	4.80000	9.3000	9.5, 13, 16, 19, 22, 25, 32
ITCCS15	ST5.5X1.8	F	11.5000	5.46000	10.3000	13, 16, 19, 22, 25, 32, 38
ITCCS16	ST6.3X1.8	F	12.6000	6.25000	11.3000	13, 16, 19, 22, 25, 32, 38
ITCCS17	ST8X2.1	F	17.3000	8.00000	15.8000	16, 19, 22, 25, 32, 38, 45, 50
ITCCS18	ST9.5X2.1	F	20.0000	9.65000	18.3000	16, 19, 22, 25, 32, 38, 45, 50

Cross Recessed Raised Countersunk Head Tapping Screws



Generic Part Name: ITCRS**Notes:**

- Corresponds to standard ISO 7051 - 1983.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

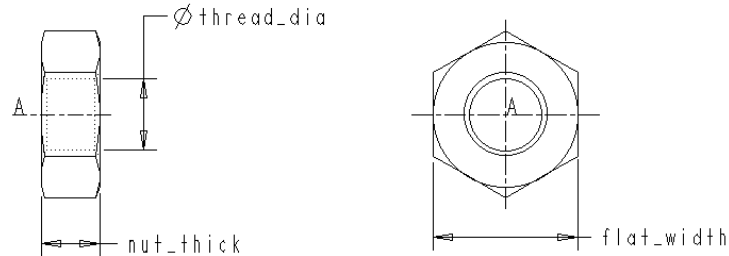
Name	Nom Dia Thr Pitch	Type	Head Dia Act	Raised Head Height	Thread Maj Dia	Head Dia Theor	Length
ITCRS01	ST2.2X0.8	C	3.8000	0.50000	2.24000	4.4000	4.5, 6.5, 9.5, 13, 16
ITCRS02	ST2.9X1.1	C	5.5000	0.70000	2.90000	6.3000	6.5, 9.5, 13, 16, 19
ITCRS03	ST3.5X1.3	C	7.3000	0.80000	3.53000	8.2000	9.5, 13, 16, 19, 22, 25
ITCRS04	ST4.2X1.4	C	8.4000	1.00000	4.22000	9.4000	9.5, 13, 16, 19, 22, 25, 32
ITCRS05	ST4.8X1.6	C	9.3000	1.20000	4.80000	10.4000	9.5, 13, 16, 19, 22, 25, 32
ITCRS06	ST5.5X1.8	C	10.3000	1.30000	5.46000	11.5000	13, 16, 19, 22, 25, 32, 38
ITCRS07	ST6.3X1.8	C	11.3000	1.40000	6.25000	12.6000	13, 16, 19, 22, 25, 32, 38
ITCRS08	ST8X2.1	C	15.8000	2.00000	8.00000	17.3000	16, 19, 22, 25, 32, 38, 45, 50
ITCRS09	ST9.5X2.1	C	18.3000	2.30000	9.65000	20.0000	16, 19, 22, 25, 32, 38, 45, 50
ITCRS10	ST2.2X0.8	F	3.8000	0.50000	2.24000	4.4000	4.5, 6.5, 9.5, 13, 16
ITCRS11	ST2.9X1.1	F	5.5000	0.70000	2.90000	6.3000	6.5, 9.5, 13, 16, 19
ITCRS12	ST3.5X1.3	F	7.3000	0.80000	3.53000	8.2000	9.5, 13, 16, 19, 22, 25
ITCRS13	ST4.2X1.4	F	8.4000	1.00000	4.22000	9.4000	9.5, 13, 16, 19, 22, 25, 32,
ITCRS14	ST4.8X1.6	F	9.3000	1.20000	4.80000	10.4000	9.5, 13, 16, 19, 22, 25, 32
ITCRS15	ST5.5X1.8	F	10.3000	1.30000	5.46000	11.5000	13, 16, 19, 22, 25, 32, 38

Name	Nom Dia Thr Pitch	Type	Head Dia Act	Raised Head Height	Thread Maj Dia	Head Dia Theor	Length
ITCRS16	ST6.3X1.8	F	11.3000	1.40000	6.25000	12.6000	13, 16, 19, 22, 25, 32, 38
ITCRS17	ST8X2.1	F	15.8000	2.00000	8.00000	17.3000	16, 19, 22, 25, 32, 38, 45, 50
ITCRS18	ST9.5X2.1	F	18.3000	2.30000	9.65000	20.0000	16, 19, 22, 25, 32, 38, 45, 50

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ISO Hex Nuts

Hex Nuts, Style 1, Grade A & B



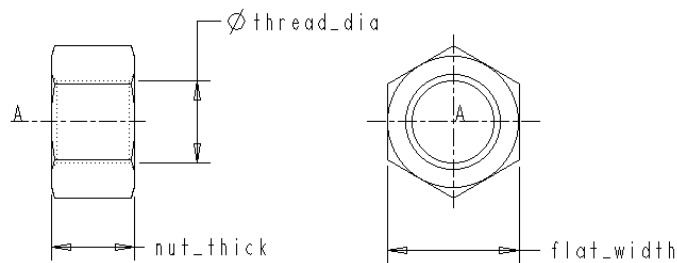
Generic Part Name: INHS1

Note: Corresponds to standard ISO 4032 - 1986.

Name	Nominal Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHS101	M1.6X0.35	1.6000	3.2000	1.3000
INHS102	M2X0.4	2.0000	4.0000	1.6000
INHS103	M2.5X0.45	2.5000	5.0000	2.0000
INHS104	M3X0.5	3.0000	5.5000	2.4000
INHS105	M4X0.7	4.0000	7.0000	3.2000
INHS106	M5X0.8	5.0000	8.0000	4.7000
INHS107	M6X1	6.0000	10.0000	5.2000
INHS108	M8X1.25	8.0000	13.0000	6.8000
INHS109	M10X1.5	10.0000	16.0000	8.4000
INHS110	M12X1.75	12.0000	18.0000	10.8000
INHS111	M16X2	16.0000	24.0000	14.8000
INHS112	M20X2.5	20.0000	30.0000	18.0000
INHS113	M24X3	24.0000	36.0000	21.5000
INHS114	M30X3.5	30.0000	46.0000	25.6000
INHS115	M36X4	36.0000	55.0000	31.0000

Name	Nominal Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHS116	M42X4.5	42.0000	65.0000	34.0000
INHS117	M48X5	48.0000	75.0000	38.0000
INHS118	M56X5.5	56.0000	85.0000	45.0000
INHS119	M64X6	64.0000	95.0000	51.0000

Hex Nuts, Style 2, Grade A & B



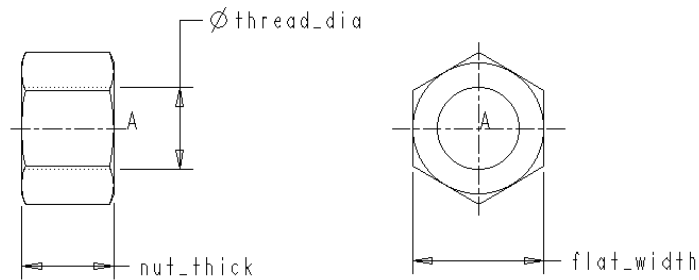
Generic Part Name: INHS2

Note: Corresponds to standard ISO 4033- 1979.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHS201	M5X0.8	5.0000	8.0000	5.1000
INHS202	M6X1	6.0000	10.0000	5.7000
INHS203	M8X1.25	8.0000	13.0000	7.5000
INHS204	M10X1.5	10.0000	16.0000	9.3000
INHS205	M12X1.75	12.0000	18.0000	12.0000
INHS206	M16X2	16.0000	24.0000	16.4000
INHS207	M20X2.5	20.0000	30.0000	20.3000
INHS208	M24X3	24.0000	36.0000	23.9000

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHS209	M30X3.5	30.0000	46.0000	28.6000
INHS210	M36X4	36.0000	55.0000	34.7000

Hex Nuts, Grade C



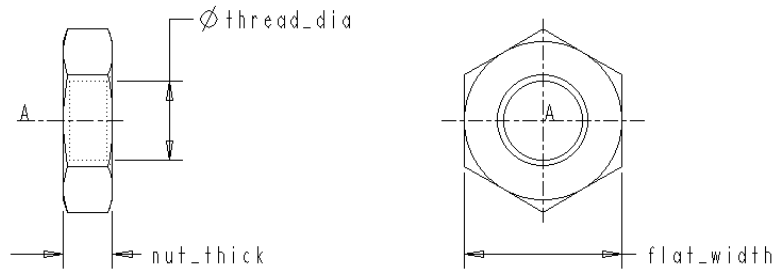
Generic Part Name: INHGC

Note: Corresponds to standard ISO 4034- 1986.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHGC01	M5X0.8	5.0000	8.0000	5.6000
INHGC02	M6X1	6.0000	10.0000	6.1000
INHGC03	M8X1.25	8.0000	13.0000	7.9000
INHGC04	M10X1.5	10.0000	16.0000	9.5000
INHGC05	M12X1.75	12.0000	18.0000	12.2000
INHGC06	M16X2	16.0000	24.0000	15.9000
INHGC07	M20X2.5	20.0000	30.0000	19.0000
INHGC08	M24X3	24.0000	36.0000	22.3000
INHGC09	M30X3.5	30.0000	46.0000	26.4000
INHGC10	M36X4	36.0000	55.0000	31.5000

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHGC11	M42X4.5	42.0000	65.0000	34.9000
INHGC12	M48X5	48.0000	75.0000	38.9000
INHGC13	M56X5.5	56.0000	85.0000	45.9000
INHGC14	M64X6	64.0000	95.0000	52.4000

Hex Thin Nuts (Chamfered), Grade A & B



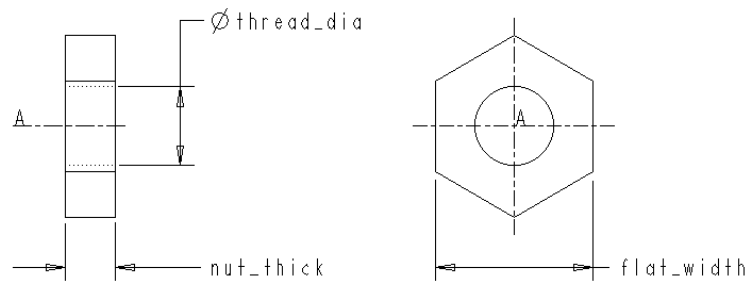
Generic Part Name: INHTC

Note: Corresponds to standard ISO 4035- 1986.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHTC01	M1.6X0.35	1.6000	3.2000	1.0000
INHTC02	M2X0.4	2.0000	4.0000	1.2000
INHTC03	M2.5X0.45	2.5000	5.0000	1.6000
INHTC04	M3X0.5	3.0000	5.5000	1.8000
INHTC05	M4X0.7	4.0000	7.0000	2.2000
INHTC06	M5X0.8	5.0000	8.0000	2.7000
INHTC07	M6X1	6.0000	10.0000	3.2000
INHTC08	M8X1.25	8.0000	13.0000	4.0000

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHTC09	M10X1.5	10.0000	16.0000	5.0000
INHTC10	M12X1.75	12.0000	18.0000	6.0000
INHTC11	M16X2	16.0000	24.0000	8.0000
INHTC12	M20X2.5	20.0000	30.0000	10.0000
INHTC13	M24X3	24.0000	36.0000	12.0000
INHTC14	M30X3.5	30.0000	46.0000	15.0000
INHTC15	M36X4	36.0000	55.0000	18.0000
INHTC16	M42X4.5	42.0000	65.0000	21.0000
INHTC17	M48X5	48.0000	75.0000	24.0000
INHTC18	M56X5.5	56.0000	85.0000	28.0000
INHTC19	M64X6	64.0000	95.0000	32.0000

Hex Thin Nuts (Unchamfered), Grade B

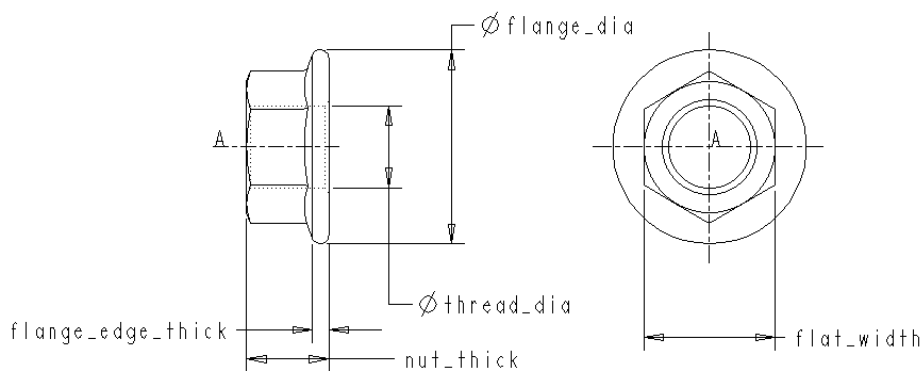


Generic Part Name: INHTU

Note: Corresponds to standard ISO 4036 - 1979.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHTU01	M1.6X0.35	1.6000	3.2000	1.00000
INHTU02	M2X0.4	2.0000	4.0000	1.20000
INHTU03	M2.5X0.45	2.5000	5.0000	1.60000
INHTU04	M3X0.5	3.0000	5.5000	1.80000
INHTU05	M4X0.7	4.0000	7.0000	2.20000
INHTU06	M5X0.8	5.0000	8.0000	2.70000
INHTU07	M6X1	6.0000	10.0000	3.20000
INHTU08	M8X1.25	8.0000	13.0000	4.00000
INHTU09	M10X1.5	10.0000	16.0000	5.00000

Hex Nuts with Flange, Grade A



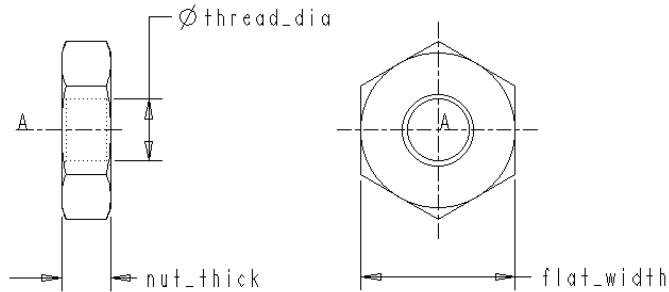
ISO Hex Nuts

Generic Part Name: INHFA

Note: Corresponds to standard ISO 4161 - 1983.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick	Flange Dia	Flange Edge Thick
INHFA01	M5X0.8	5.0000	8.0000	5.0000	11.8000	1.00000
INHFA02	M6X1	6.0000	10.0000	6.0000	14.2000	1.10000
INHFA03	M8X1.25	8.0000	13.0000	8.0000	17.9000	1.20000
INHFA04	M10X1.5	10.0000	15.0000	10.0000	21.8000	1.50000
INHFA05	M12X1.75	12.0000	18.0000	12.0000	26.0000	1.80000
INHFA06	M14X2	14.0000	21.0000	14.0000	29.9000	2.10000
INHFA07	M16X2	16.0000	24.0000	16.0000	34.5000	2.40000
INHFA08	M20X2.5	20.0000	30.0000	20.0000	42.8000	3.00000

Hex Nuts for Fine Mechanics, Grade F



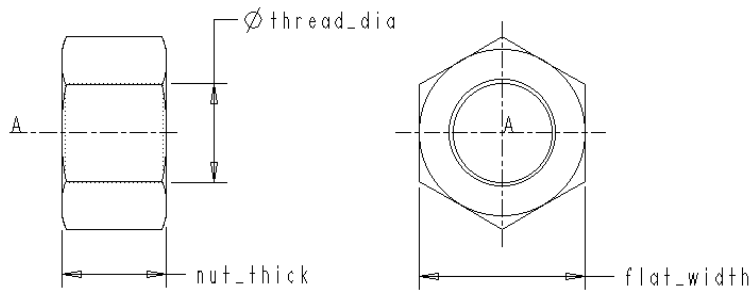
Generic Part Name: INHFM

Note: Corresponds to standard ISO 4166 - 1979.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHFM01	M1X0.25	1.00000	2.50000	0.80000

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHFM02	M1.2X0.25	1.20000	3.00000	1.00000
INHFM03	M1.4X0.3	1.40000	3.00000	1.20000

Hex Structural Nuts, Large Flats, Grade B

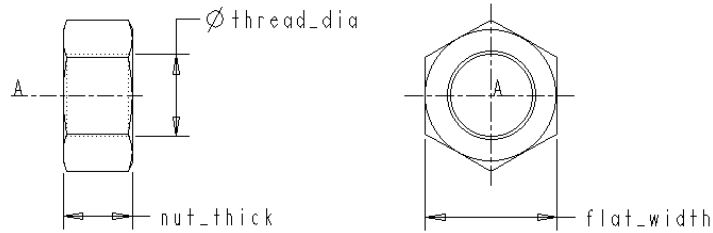


Generic Part Name: INSLW

Note: Corresponds to standard ISO 4775 - 1984.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INSLW01	M16X2	16.0000	27.0000	17.1000
INSLW02	M20X2.5	20.0000	34.0000	20.7000
INSLW03	M24X3	24.0000	41.0000	24.2000
INSLW04	M30X3.5	30.0000	50.0000	30.7000
INSLW05	M36X4	36.0000	60.0000	36.6000

Hex Structural Nuts, Style 1, Grade A & B

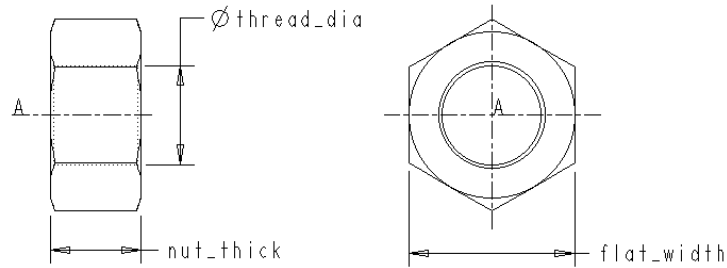


Generic Part Name: INSS1

Note: Corresponds to standard ISO 7413 - 1984.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INSS101	M10X1.5	10.0000	16.0000	8.4000
INSS102	M12X1.75	12.0000	18.0000	10.8000
INSS103	M16X2	16.0000	24.0000	14.8000
INSS104	M20X2.5	20.0000	30.0000	18.0000
INSS105	M24X3	24.0000	36.0000	21.5000
INSS106	M30X3.5	30.0000	46.0000	25.6000
INSS107	M36X4	36.0000	55.0000	31.0000

Hex Structural Nuts, Large Flats, Style 1, Grade B



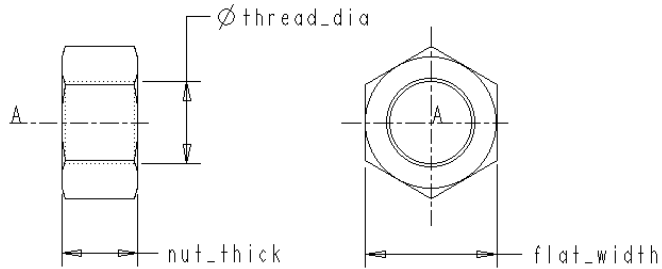
Generic Part Name: INSLB

Note: Corresponds to standard ISO 7414 - 1984.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INSLB01	M16X2	16.0000	27.0000	14.8000
INSLB02	M20X2.5	20.0000	34.0000	18.0000
INSLB03	M24X3	24.0000	41.0000	21.5000
INSLB04	M30X3.5	30.0000	50.0000	25.6000
INSLB05	M36X4	36.0000	60.0000	31.0000

ISO Hex Nuts

Hex Structural Nuts, Style 2, Grade A

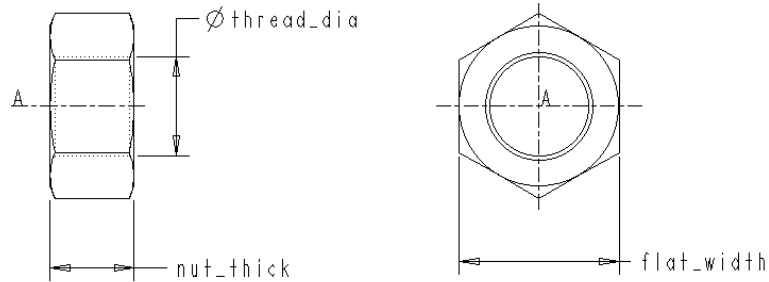


Generic Part Name: INSS2

Note: Corresponds to standard ISO 7417 - 1984.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INSS201	M10X1.5	10.0000	16.0000	9.3000
INSS202	M12X1.75	12.0000	18.0000	12.0000
INSS203	M16X2	16.0000	24.0000	16.4000

Hex Nuts, Style 1, Metric Fine Pitch Thread, Grade A & B



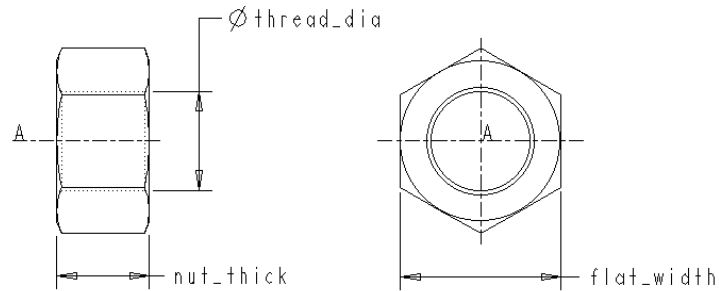
Generic Part Name: INHF

Note: Corresponds to standard ISO 8673 - 1988.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHF101	M8X1	8.0000	13.0000	6.8000
INHF102	M10X1	10.0000	16.0000	8.4000
INHF103	M12X1.5	12.0000	18.0000	10.8000
INHF104	M16X1.5	16.0000	24.0000	14.8000
INHF105	M20X1.5	20.0000	30.0000	18.0000
INHF106	M24X2	24.0000	36.0000	21.5000
INHF107	M30X2	30.0000	46.0000	25.6000
INHF108	M36X3	36.0000	55.0000	31.0000
INHF109	M42X3	42.0000	65.0000	34.0000
INHF110	M48X3	48.0000	75.0000	38.0000
INHF111	M56X4	56.0000	85.0000	45.0000
INHF112	M64X4	64.0000	95.0000	51.0000

ISO Hex Nuts

Hex Nuts, Style 2, Metric Fine Pitch Thread, Grade A & B

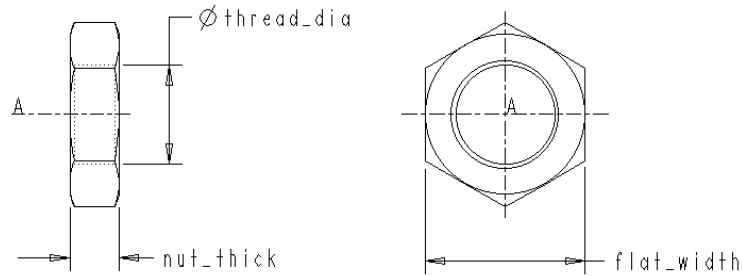


Generic Part Name: INHF2

Note: Corresponds to standard ISO 8674 - 1988.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHF201	M8X1	8.0000	13.0000	7.5000
INHF202	M10X1	10.0000	16.0000	9.3000
INHF203	M12X1.5	12.0000	18.0000	12.0000
INHF204	M16X1.5	16.0000	24.0000	16.4000
INHF205	M20X1.5	20.0000	30.0000	20.3000
INHF206	M24X2	24.0000	36.0000	23.9000
INHF207	M30X2	30.0000	46.0000	28.6000
INHF208	M36X3	36.0000	55.0000	34.7000

Hex Thin Nuts, Metric Fine Pitch Thread, Grade A & B



Generic Part Name: INHTF

Note: Corresponds to standard ISO 8675 - 1988.

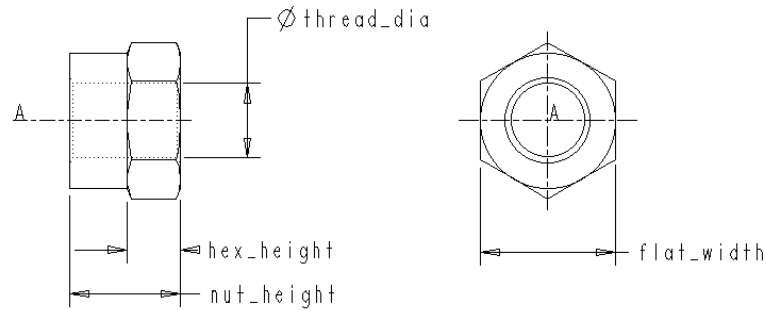
Name	Nominal Dia Thr Pitch	Thread Dia	Flat Width	Nut Thick
INHTF01	M8X1	8.0000	13.0000	4.0000
INHTF02	M10X1	10.0000	16.0000	5.0000
INHTF03	M12X1.5	12.0000	18.0000	6.0000
INHTF04	M16X1.5	16.0000	24.0000	8.0000
INHTF05	M20X1.5	20.0000	30.0000	10.0000
INHTF06	M24X2	24.0000	36.0000	12.0000
INHTF07	M30X2	30.0000	46.0000	15.0000
INHTF08	M36X3	36.0000	55.0000	18.0000
INHTF09	M42X3	42.0000	65.0000	21.0000
INHTF10	M48X3	48.0000	75.0000	24.0000
INHTF11	M56X4	56.0000	85.0000	28.0000
INHTF12	M64X4	64.0000	95.0000	32.0000



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**ISO Prevailing Torque Type
Nuts**

Prevailing Torque Hex Nuts, Style 1, with Non-Metal Inserts

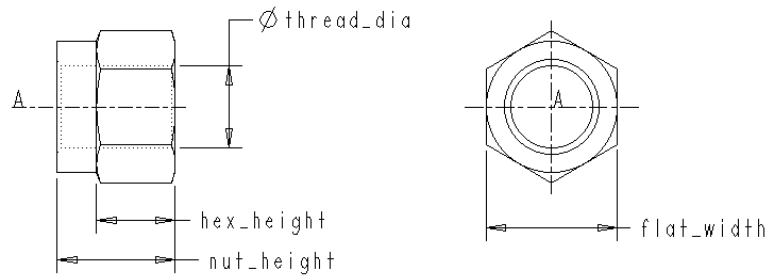


Generic Part Name: INPS1

Note: Corresponds to standard ISO 7040 - 1983.

Name	Nominal Dia Thr Pitch	Thread Dia	Flat Width	Hex Height	Nut Height
INPS101	M3X0.5	3.0000	5.5000	2.1500	4.5000
INPS102	M4X0.7	4.0000	7.0000	2.9000	6.0000
INPS103	M5X0.8	5.0000	8.0000	4.4000	6.8000
INPS104	M6X1	6.0000	10.0000	4.9000	8.0000
INPS105	M8X1.25	8.0000	13.0000	6.4400	9.5000
INPS106	M10X1.5	10.0000	16.0000	8.0400	11.9000
INPS107	M12X1.75	12.0000	18.0000	10.3700	14.9000
INPS108	M16X2	16.0000	24.0000	14.1000	19.1000
INPS109	M20X2.5	20.0000	30.0000	16.9000	22.8000
INPS110	M24X3	24.0000	36.0000	20.2000	27.1000
INPS111	M30X3.5	30.0000	46.0000	24.3000	32.6000
INPS112	M36X4	36.0000	55.0000	29.4000	38.9000

Prevailing Torque Hex Nuts, Style 2, with Non-Metal Inserts



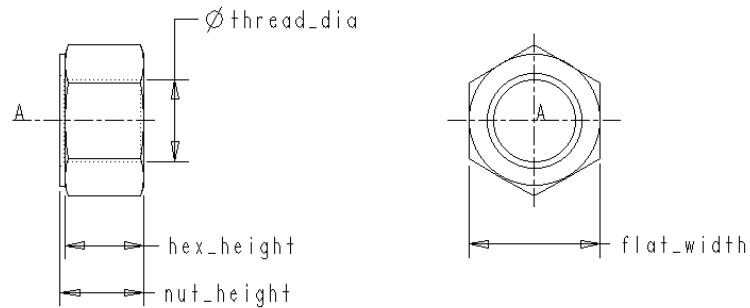
Generic Part Name: INPS2

Note: Corresponds to standard ISO 7041 - 1983.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Hex Height	Nut Height
INPS201	M5X0.8	5.0000	8.0000	4.8000	7.2000
INPS202	M6X1	6.0000	10.0000	5.4000	8.5000
INPS203	M8X1.25	8.0000	13.0000	7.1400	10.2000
INPS204	M10X1.5	10.0000	16.0000	8.9400	12.8000
INPS205	M12X1.75	12.0000	18.0000	11.5700	16.1000
INPS206	M16X2	16.0000	24.0000	15.7000	20.7000
INPS207	M20X2.5	20.0000	30.0000	19.0000	25.1000
INPS208	M24X3	24.0000	36.0000	22.6000	29.5000
INPS209	M30X3.5	30.0000	46.0000	27.3000	35.6000
INPS210	M36X4	36.0000	55.0000	33.1000	42.6000

ISO Prevailing Torque Type Nuts

Prevailing Torque All-Metal Nuts, Style 2, Property Class 5, 8, 10, 12

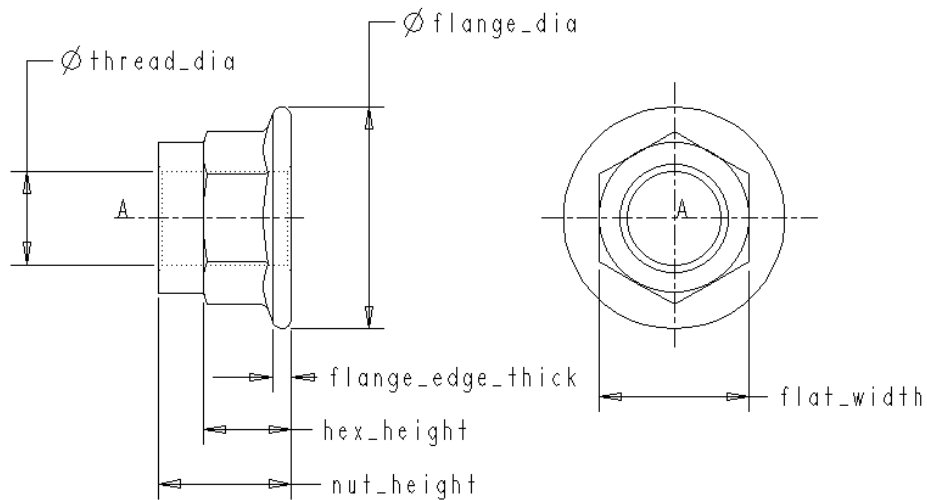


Generic Part Name: INPM2

Note: Corresponds to standard ISO 7042 - 1983.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Hex Height	Nut Height
INPM201	M5X0.8	5.0000	8.0000	4.8000	5.1000
INPM202	M6X1	6.0000	10.0000	5.4000	6.0000
INPM203	M8X1.25	8.0000	13.0000	7.1400	8.0000
INPM204	M10X1.5	10.0000	16.0000	8.9400	10.0000
INPM205	M12X1.75	12.0000	18.0000	11.5700	12.0000
INPM206	M16X2	16.0000	24.0000	15.7000	16.4000
INPM207	M20X2.5	20.0000	30.0000	19.0000	20.3000
INPM208	M24X3	24.0000	36.0000	22.6000	23.9000
INPM209	M30X3.5	30.0000	46.0000	27.3000	30.0000
INPM210	M36X4	36.0000	55.0000	33.1000	36.0000

Prevailing Torque Hex Nuts with Flange and Non-Metal Inserts



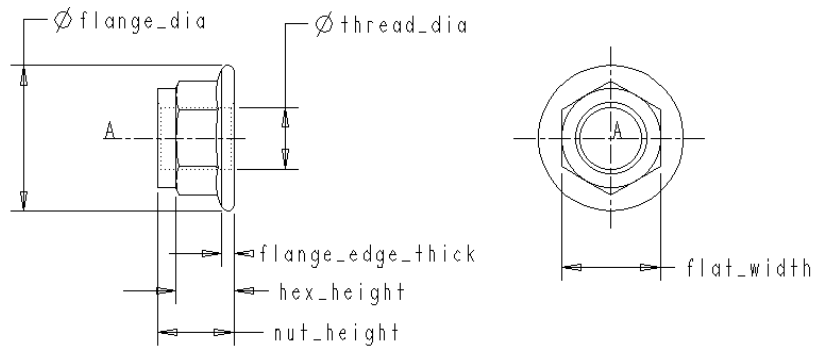
Generic Part Name: INPFN

Note: Corresponds to standard ISO 7043 - 1983.

Name	Nominal Dia Thr Pitch	Thread Dia	Flat Width	Hex Height	Flange Dia	Flange Edge Thick	Nut Height
INPFN01	M5X0.8	5.0000	8.0000	4.7000	11.8000	1.00000	7.1000
INPFN02	M6X1	6.0000	10.0000	5.7000	14.2000	1.10000	9.1000
INPFN03	M8X1.25	8.0000	13.0000	7.6000	17.9000	1.20000	11.1000
INPFN04	M10X1.5	10.0000	15.0000	9.6000	21.8000	1.50000	13.5000
INPFN05	M12X1.75	12.0000	18.0000	11.6000	26.0000	1.80000	16.1000
INPFN06	M14X2	14.0000	21.0000	13.3000	29.9000	2.10000	18.2000
INPFN07	M16X2	16.0000	24.0000	15.3000	34.5000	2.40000	20.3000
INPFN08	M20X2.5	20.0000	30.0000	18.9000	42.8000	3.00000	24.8000

ISO Prevailing Torque Type Nuts

Prevailing Torque All-Metal Hex Nuts with Flange

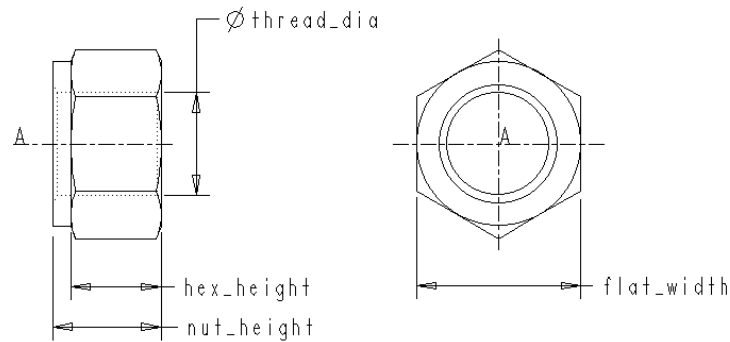


Generic Part Name: INPFM

Note: Corresponds to standard ISO 7044 - 1983.

Name	Nominal Dia Thr Pitch	Thread Dia	Flat Width	Hex Height	Flange Dia	Flange Edge Thick	Nut Height
INPFM01	M5X0.8	5.0000	8.0000	4.7000	11.8000	1.00000	6.2000
INPFM02	M6X1	6.0000	10.0000	5.7000	14.2000	1.10000	7.3000
INPFM03	M8X1.25	8.0000	13.0000	7.6000	17.9000	1.20000	9.4000
INPFM04	M10X1.5	10.0000	15.0000	9.6000	21.8000	1.50000	11.4000
INPFM05	M12X1.75	12.0000	18.0000	11.6000	26.0000	1.80000	13.8000
INPFM06	M14X2	14.0000	21.0000	13.3000	29.9000	2.10000	15.9000
INPFM07	M16X2	16.0000	24.0000	15.3000	34.5000	2.40000	18.3000
INPFM08	M20X2.5	20.0000	30.0000	18.9000	42.8000	3.00000	22.4000

Prevailing Torque All-Metal Nuts, Style 1, Property Class 5, 8, 10



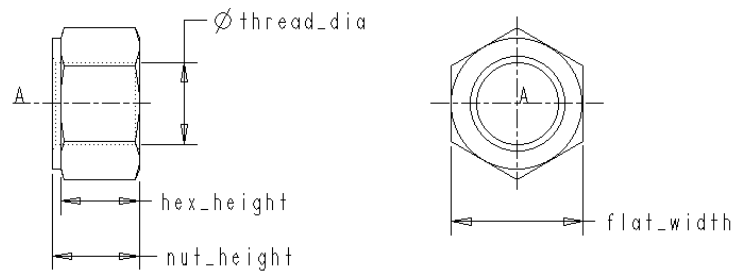
Generic Part Name: INPM1

Note: Corresponds to standard ISO 7719 - 1983.

Name	Nominal Dia Thr Pitch	Thread Dia	Flat Width	Hex Height	Nut Height
INPM101	M5X0.8	5.0000	8.0000	4.4000	5.3000
INPM102	M6X1	6.0000	10.0000	4.9000	5.9000
INPM103	M8X1.25	8.0000	13.0000	6.4400	7.1000
INPM104	M10X1.5	10.0000	16.0000	8.0400	9.0000
INPM105	M12X1.75	12.0000	18.0000	10.3700	11.6000
INPM106	M16X2	16.0000	24.0000	14.1000	15.2000
INPM107	M20X2.5	20.0000	30.0000	16.9000	19.0000
INPM108	M24X3	24.0000	36.0000	20.2000	23.0000
INPM109	M30X3.5	30.0000	46.0000	24.3000	26.9000
INPM110	M36X4	36.0000	55.0000	29.4000	32.5000

ISO Prevailing
Torque Type Nuts

Prevailing Torque All-Metal Nuts, Style 2, Property Class 9



Generic Part Name: INPM9

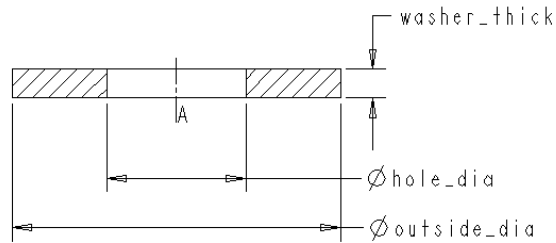
Note: Corresponds to standard ISO 7720 - 1983.

Name	Nom Dia Thr Pitch	Thread Dia	Flat Width	Hex Height	Nut Height
INPM901	M5X0.8	5.0000	8.0000	4.8000	5.3000
INPM902	M6X1	6.0000	10.0000	5.4000	6.7000
INPM903	M8X1.25	8.0000	13.0000	7.1400	8.0000
INPM904	M10X1.5	10.0000	16.0000	8.9400	10.5000
INPM905	M12X1.75	12.0000	18.0000	11.5700	13.3000
INPM906	M16X2	16.0000	24.0000	15.7000	17.9000
INPM907	M20X2.5	20.0000	30.0000	19.0000	21.8000
INPM908	M24X3	24.0000	36.0000	22.6000	26.4000
INPM909	M30X3.5	30.0000	46.0000	27.3000	31.8000
INPM910	M36X4	36.0000	55.0000	33.1000	38.5000

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ISO Washers

Plain Washers, Normal Series, Grade A

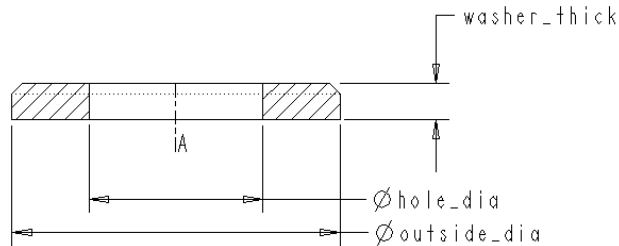


Generic Part Name: IWPNA

Note: Corresponds to standard ISO 7089 - 1983.

Name	Nominal Size	Hole Dia	Outside Dia	Washer Thick
IWPNA01	1.6000	1.7000	4.0000	0.35000
IWPNA02	2.0000	2.2000	5.0000	0.35000
IWPNA03	2.5000	2.7000	6.0000	0.55000
IWPNA04	3.0000	3.2000	7.0000	0.55000
IWPNA05	3.5000	3.7000	8.0000	0.55000
IWPNA06	4.0000	4.3000	9.0000	0.90000
IWPNA07	5.0000	5.3000	10.0000	1.10000
IWPNA08	6.0000	6.4000	12.0000	1.80000
IWPNA09	8.0000	8.4000	16.0000	1.80000
IWPNA10	10.0000	10.5000	20.0000	2.20000
IWPNA11	12.0000	13.0000	24.0000	2.70000
IWPNA12	14.0000	15.0000	28.0000	2.70000
IWPNA13	16.0000	17.0000	30.0000	3.30000
IWPNA14	20.0000	21.0000	37.0000	3.30000
IWPNA15	24.0000	25.0000	44.0000	4.30000
IWPNA16	30.0000	31.0000	56.0000	4.30000
IWPNA17	36.0000	37.0000	66.0000	5.60000

Plain Washers, Chamfered, Normal Series, Grade A

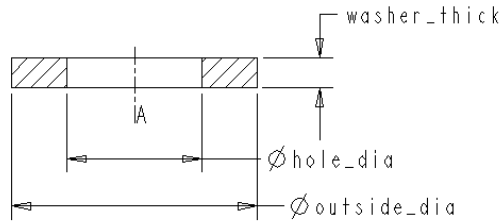


Generic Part Name: IWCNA

Note: Corresponds to standard ISO 7090 - 1983.

Name	Nominal Size	Hole Dia	Outside Dia	Washer Thick
IWCNA01	5.0000	5.3000	10.0000	1.10000
IWCNA02	6.0000	6.4000	12.0000	1.80000
IWCNA03	8.0000	8.4000	16.0000	1.80000
IWCNA04	10.0000	10.5000	20.0000	2.20000
IWCNA05	12.0000	13.0000	24.0000	2.70000
IWCNA06	14.0000	15.0000	28.0000	2.70000
IWCNA07	16.0000	17.0000	30.0000	3.30000
IWCNA08	20.0000	21.0000	37.0000	3.30000
IWCNA09	24.0000	25.0000	44.0000	4.30000
IWCNA10	30.0000	31.0000	56.0000	4.30000
IWCNA11	36.0000	37.0000	66.0000	5.60000

Plain Washers, Normal Series, Grade C

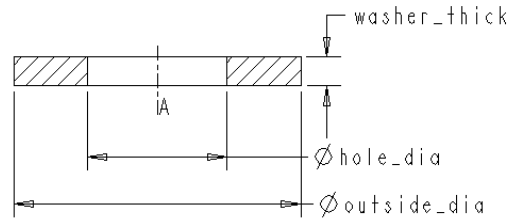


Generic Part Name: IWPNC

Note: Corresponds to standard ISO 7091 - 1983.

Name	Nominal Size	Hole Dia	Outside Dia	Washer Thick
IWPNC01	5.0000	5.5000	10.0000	1.20000
IWPNC02	6.0000	6.6000	12.0000	1.90000
IWPNC03	8.0000	9.0000	16.0000	1.90000
IWPNC04	10.0000	11.0000	20.0000	2.30000
IWPNC05	12.0000	13.5000	24.0000	2.80000
IWPNC06	14.0000	15.5000	28.0000	2.80000
IWPNC07	16.0000	17.5000	30.0000	3.60000
IWPNC08	20.0000	22.0000	37.0000	3.60000
IWPNC09	24.0000	26.0000	44.0000	4.60000
IWPNC10	30.0000	33.0000	56.0000	4.60000
IWPNC11	36.0000	39.0000	66.0000	6.00000

Plain Washers, Small Series, Grade A

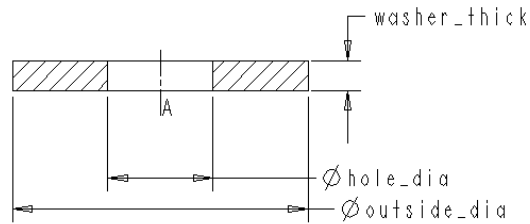


Generic Part Name: IWPSA

Note: Corresponds to standard ISO 7092 - 1983.

Name	Nominal Size	Hole Dia	Outside Dia	Washer Thick
IWPSA01	1.6000	1.7000	3.5000	0.35000
IWPSA02	2.0000	2.2000	4.5000	0.35000
IWPSA03	2.5000	2.7000	5.0000	0.55000
IWPSA04	3.0000	3.2000	6.0000	0.55000
IWPSA05	3.5000	3.7000	7.0000	0.55000
IWPSA06	4.0000	4.3000	8.0000	0.55000
IWPSA07	5.0000	5.3000	9.0000	1.10000
IWPSA08	6.0000	6.4000	11.0000	1.80000
IWPSA09	8.0000	8.4000	15.0000	1.80000
IWPSA10	10.0000	10.5000	18.0000	1.80000
IWPSA11	12.0000	13.0000	20.0000	2.20000
IWPSA12	14.0000	15.0000	24.0000	2.70000
IWPSA13	16.0000	17.0000	28.0000	2.70000
IWPSA14	20.0000	21.0000	34.0000	3.30000
IWPSA15	24.0000	25.0000	39.0000	4.30000
IWPSA16	30.0000	31.0000	50.0000	4.30000
IWPSA17	36.0000	37.0000	60.0000	5.60000

Plain Washers, Large Series, Grade A & C

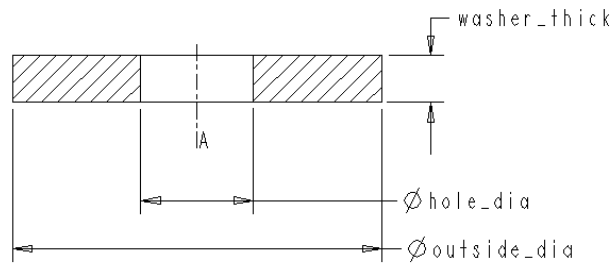


Generic Part Name: IWPLA

Note: Corresponds to standard ISO 7093 - 1983.

Name	Nominal Size	Hole Dia	Outside Dia	Washer Thick
IWPLA01	3.0000	3.2000	9.000	0.90000
IWPLA02	3.5000	3.7000	11.000	0.90000
IWPLA03	4.0000	4.3000	12.000	1.10000
IWPLA04	5.0000	5.3000	15.000	1.40000
IWPLA05	6.0000	6.4000	18.000	1.80000
IWPLA06	8.0000	8.4000	24.000	2.20000
IWPLA07	10.0000	10.5000	30.000	2.70000
IWPLA08	12.0000	13.0000	37.000	3.30000
IWPLA09	14.0000	15.0000	44.000	3.30000
IWPLA10	16.0000	17.0000	50.000	3.30000
IWPLA11	20.0000	22.0000	60.000	4.60000
IWPLA12	24.0000	26.0000	72.000	6.00000
IWPLA13	30.0000	33.0000	92.000	7.00000
IWPLA14	36.0000	39.0000	110.000	9.20000

Plain Washers, Extra Large Series, Grade C

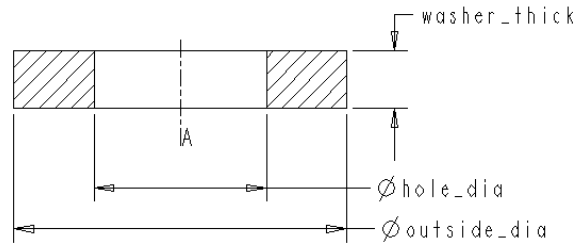


Generic Part Name: IWPEC

Note: Corresponds to standard ISO 7094 - 1983.

Name	Nominal Size	Hole Dia	Outside Dia	Washer Thick
IWPEC01	5.0000	5.5000	18.000	2.30000
IWPEC02	6.0000	6.6000	22.000	2.30000
IWPEC03	8.0000	9.0000	28.000	3.60000
IWPEC04	10.0000	11.0000	34.000	3.60000
IWPEC05	12.0000	13.5000	44.000	4.60000
IWPEC06	14.0000	15.5000	50.000	4.60000
IWPEC07	16.0000	17.5000	56.000	6.00000
IWPEC08	20.0000	22.0000	72.000	7.00000
IWPEC09	24.0000	26.0000	85.000	7.00000
IWPEC10	30.0000	33.0000	105.000	7.00000
IWPEC11	36.0000	39.0000	125.000	9.20000

Plain Washers, Structural, Hardened

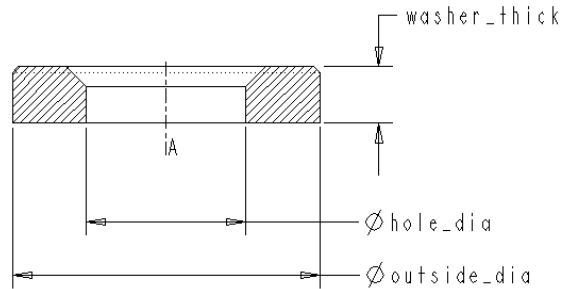


Generic Part Name: IWPHS

Note: Corresponds to standard ISO 7415 - 1984.

Name	Nominal Size	Hole Dia	Outside Dia	Washer Thick
IWPHS01	12.0000	14.0000	27.0000	4.60000
IWPHS02	16.0000	18.0000	34.0000	4.60000
IWPHS03	20.0000	22.0000	42.0000	4.60000
IWPHS04	24.0000	26.0000	50.0000	4.60000
IWPHS05	30.0000	33.0000	60.0000	4.60000
IWPHS06	36.0000	39.0000	72.0000	4.60000

Plain Washers, Chamfered, Structural, Hardened

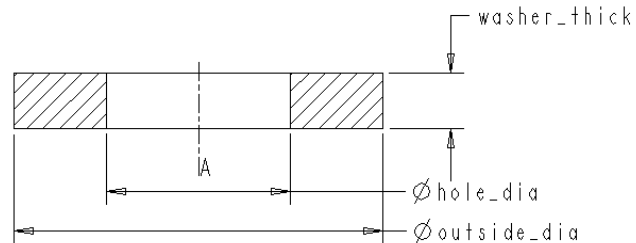


Generic Part Name: IWCHS

Note: Corresponds to standard ISO 7416 - 1984.

Name	Nominal Size	Hole Dia	Outside Dia	Washer Thick
IWCHS01	12.0000	13.0000	25.0000	4.60000
IWCHS02	16.0000	17.0000	33.0000	4.60000
IWCHS03	20.0000	21.0000	40.0000	4.60000
IWCHS04	24.0000	25.0000	47.0000	4.60000
IWCHS05	30.0000	31.0000	56.0000	5.60000
IWCHS06	36.0000	37.0000	66.0000	5.60000

Plain Washers for Clevis Pins, Grade A



Generic Part Name: IWCPA

Note: Corresponds to standard ISO 8738 - 1986.

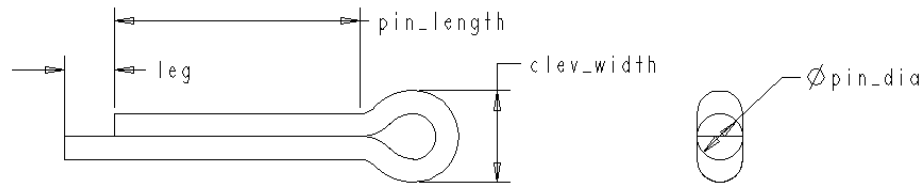
Name	Nominal Size	Hole Dia	Outside Dia	Washer Thick
IWCPA01	3.000	3.000	6.000	0.9000
IWCPA02	4.000	4.000	8.000	0.9000
IWCPA03	5.000	5.000	10.000	1.1000
IWCPA04	6.000	6.000	12.000	1.8000
IWCPA05	8.000	8.000	15.000	2.2000
IWCPA06	10.000	10.000	18.000	2.7000
IWCPA07	12.000	12.000	20.000	3.3000
IWCPA08	14.000	14.000	22.000	3.3000
IWCPA09	16.000	16.000	24.000	3.3000
IWCPA10	18.000	18.000	28.000	4.3000
IWCPA11	20.000	20.000	30.000	4.3000
IWCPA12	22.000	22.000	34.000	4.3000
IWCPA13	24.000	24.000	37.000	4.3000
Iwcpa14	27.000	27.000	39.000	5.6000
Iwcpa15	30.000	30.000	44.000	5.6000

Name	Nominal Size	Hole Dia	Outside Dia	Washer Thick
Iwcpa16	33.000	33.000	47.000	5.6000
Iwcpa17	36.000	36.000	50.000	6.6000
Iwcpa18	40.000	40.000	56.000	6.6000
Iwcpa19	45.000	45.000	60.000	6.6000
Iwcpa20	50.000	50.000	66.000	9.0000
Iwcpa21	55.000	55.000	72.000	9.0000
Iwcpa22	60.000	60.000	78.000	11.0000
Iwcpa23	70.000	70.000	92.000	11.0000
Iwcpa24	80.000	80.000	98.000	13.2000
Iwcpa25	90.000	90.000	110.000	13.2000
Iwcpa26	100.000	100.000	120.000	13.2000

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ISO Pins

Split Pins, Metric Series



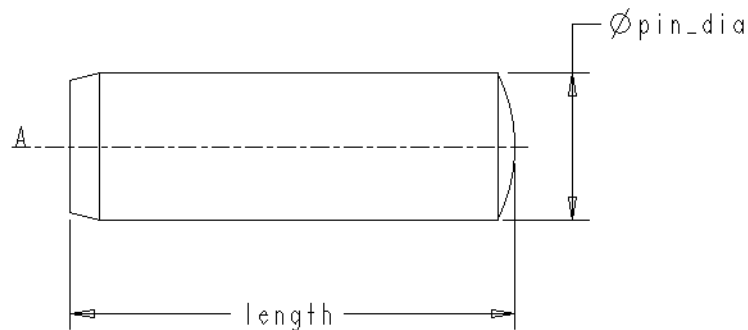
Generic Part Name: IPSMS

- Corresponds to standard ISO 1234 - 1976.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Size	Pin Dia	Leg	Clew Width	Pin Length
IPSMS01	0.6000	0.5000	1.60000	1.0000	4, 5, 6 to 12 by 2
IPSMS02	0.8000	0.7000	1.60000	1.4000	5, 6 to 16 by 2
IPSMS03	1.0000	0.9000	1.60000	1.8000	6 to 20 by 2
IPSMS04	1.2000	1.0000	2.50000	2.0000	8 to 22 by 2, 25
IPSMS05	1.6000	1.4000	2.50000	2.8000	8 to 22 by 2, 25, 28, 32
IPSMS06	2.0000	1.8000	2.50000	3.6000	10 to 22 by 2, 25, 28 to 40 by 4
IPSMS07	2.5000	2.3000	2.50000	4.6000	12 to 22 by 2, 25, 28 to 40 by 4, 45, 50
IPSMS08	3.2000	2.9000	3.20000	5.8000	14 to 22 by 2, 25, 28 to 40 by 4, 45, 50, 56, 63
IPSMS09	4.0000	3.7000	4.00000	7.4000	18, 20, 22, 25, 28 to 40 by 4, 45, 50, 56, 63, 71, 80
IPSMS10	5.0000	4.6000	4.00000	9.2000	22, 25, 28 to 40 by 4, 45, 50, 56, 63, 71, 80, 90, 100

Name	Nominal Size	Pin Dia	Leg	Clev Width	Pin Length
IPSMS11	6.3000	5.9000	4.00000	11.8000	32, 36, 40, 45, 50, 56, 63, 71, 80, 90, 100, 112, 125
IPSMS12	8.0000	7.5000	4.00000	15.0000	40, 45, 50, 56, 63, 71, 80, 90, 100, 112, 125, 140, 160
IPSMS13	10.0000	9.5000	6.30000	19.0000	45, 50, 56, 63, 71, 80, 90, 100, 112, 125, 140 to 200 by 20
IPSMS14	13.0000	12.4000	6.30000	24.8000	71, 80, 90, 100, 112, 125, 140 to 200 by 20, 224, 250
IPSMS15	16.0000	15.4000	6.30000	30.8000	112, 140 to 200 by 20, 224, 250, 280
IPSMS16	20.0000	19.3000	6.30000	38.6000	160 to 200 by 20, 224, 250, 280

Parallel Pins, Unhardened



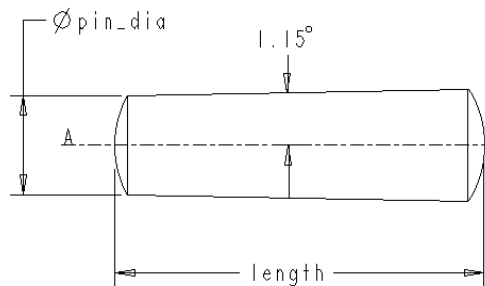
Generic Part Name: IPPUC

Notes:

- Corresponds to standard ISO 2338 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Length
IPPUC01	0.6000	2, 3, 4, 5, 6
IPPUC02	0.8000	2, 3, 4, 5, 6, 8
IPPUC03	1.0000	4, 5, 6, 8, 10
IPPUC04	1.2000	4, 5, 6 to 12 by 2
IPPUC05	1.5000	4, 5, 6 to 16 by 2
IPPUC06	2.0000	6 to 20 by 2
IPPUC07	2.5000	6 to 24 by 2
IPPUC08	3.0000	8 to 30 by 2
IPPUC09	4.0000	8 to 32 by 2, 35, 40
IPPUC10	5.0000	10 to 32 by 2, 35 to 50 by 5
IPPUC11	6.0000	12 to 32 by 2, 35 to 60 by 5
IPPUC12	8.0000	14 to 32 by 2, 35 to 80 by 5
IPPUC13	10.0000	18 to 32 by 2, 35 to 95 by 5
IPPUC14	12.0000	26 to 32 by 2, 35 to 100 by 5
IPPUC15	16.0000	26 to 32 by 2, 35 to 95 by 5, 100 to 180 by 20
IPPUC16	20.0000	35 to 95 by 5, 100 to 200 by 20
IPPUC17	25.0000	50 to 95 by 5, 100 to 200 by 20
IPPUC18	30.0000	60 to 95 by 5, 100 to 200 by 20
IPPUC19	40.0000	80 to 95 by 5, 100 to 200 by 20
IPPUC20	50.0000	95, 100 to 200 by 20

Taper Pins, Unhardened



Generic Part Name: IPTUC

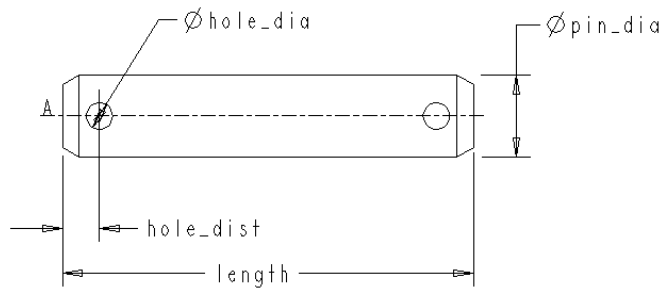
Notes:

- Corresponds to standard ISO 2339 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Length
IPTUC01	0.6000	4, 5, 6, 8
IPTUC02	0.8000	5, 6 to 12 by 2
IPTUC03	1.0000	6 to 16 by 2
IPTUC04	1.2000	6 to 20 by 2
IPTUC05	1.5000	8 to 24 by 2
IPTUC06	2.0000	10 to 32 by 2, 35
IPTUC07	2.5000	10 to 32 by 2, 35
IPTUC08	3.0000	12 to 32 by 2, 35, 40, 45
IPTUC09	4.0000	14 to 32 by 2, 35 to 55 by 5
IPTUC10	5.0000	18 to 32 by 2, 35 to 60 by 5
IPTUC11	6.0000	22 to 32 by 2, 35 to 90 by 5
IPTUC12	8.0000	22 to 32 by 2, 35 to 100 by 5, 120
IPTUC13	10.0000	26 to 32 by 2, 35 to 95 by 5, 100 to 160 by 20

Name	Pin Dia	Length
IPTUC14	12.0000	32, 35 to 95 by 5, 100 to 180 by 20
IPTUC15	16.0000	40 to 95 by 5, 100 to 200 by 20
IPTUC16	20.0000	45 to 95 by 5, 100 to 200 by 20
IPTUC17	25.0000	50 to 95 by 5, 100 to 200 by 20
IPTUC18	30.0000	55 to 95 by 5, 100 to 200 by 20
IPTUC19	40.0000	60 to 95 by 5, 100 to 200 by 20
IPTUC20	50.0000	65 to 95 by 5, 100 to 200 by 20

Clevis Pins without Heads



Generic Part Name: IPCWH

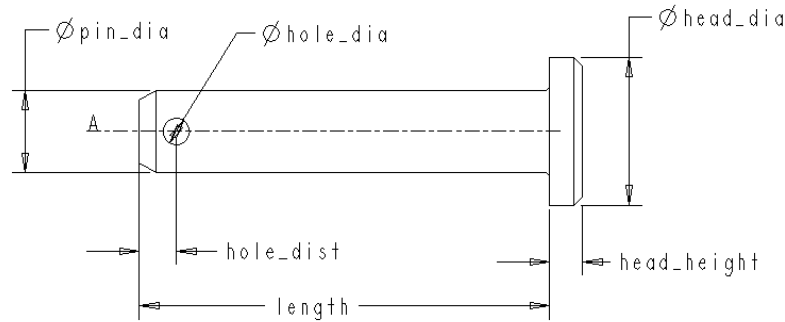
Notes:

- Corresponds to standard ISO 2340 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Hole Dia	Hole Dist	Length
IPCWH01	3.000	0.8000	1.6000	6 to 30 by 2
IPCWH02	4.000	1.0000	2.2000	8 to 32 by 2, 35, 40
IPCWH03	5.000	1.2000	2.9000	10 to 32 by 2, 35 to 50 by 5

Name	Pin Dia	Hole Dia	Hole Dist	Length
IPCWH04	6.000	1.6000	3.2000	12 to 32 by 2, 35 to 60 by 5
IPCWH05	8.000	2.0000	3.5000	16 to 32 by 2, 35 to 80 by 5
IPCWH06	10.000	3.2000	4.5000	20 to 32 by 2, 35 to 100 by 5
IPCWH07	12.000	3.2000	5.5000	24 to 32 by 2, 35 to 100 by 5, 120
IPCWH08	14.000	4.0000	6.0000	28, 30, 32, 35 to 100 by 5, 120, 140
IPCWH09	16.000	4.0000	6.0000	32, 35 to 95 by 5, 100 to 160 by 20
IPCWH10	18.000	5.0000	7.0000	35 to 95 by 5, 100 to 180 by 20
IPCWH11	20.000	5.0000	8.0000	40 to 95 by 5, 100 to 200 by 20
IPCWH12	22.000	5.0000	8.0000	45 to 95 by 5, 100 to 200 by 20
IPCWH13	24.000	6.3000	9.0000	50 to 95 by 5, 100 to 200 by 20
IPCWH14	27.000	6.3000	9.0000	55 to 95 by 5, 100 to 200 by 20
IPCWH15	30.000	8.0000	10.0000	60 to 95 by 5, 100 to 200 by 20
IPCWH16	33.000	8.0000	10.0000	65 to 95 by 5, 100 to 200 by 20
IPCWH17	36.000	8.0000	10.0000	70 to 95 by 5, 100 to 200 by 20
IPCWH18	40.000	8.0000	10.0000	80, 90, 95, 100 to 200 by 20
IPCWH19	45.000	10.0000	12.0000	90, 95, 100 to 200 by 20
IPCWH20	50.000	10.0000	12.0000	100 to 200 by 20
IPCWH21	55.000	10.0000	14.0000	120 to 200 by 20
IPCWH22	60.000	10.0000	14.0000	120 to 200 by 20
IPCWH23	70.000	13.0000	16.0000	140 to 200 by 20
IPCWH24	80.000	13.0000	16.0000	160, 180, 200
IPCWH25	90.000	13.0000	16.0000	180, 200
IPCWH26	100.000	13.0000	16.0000	200

Clevis Pins with Heads



Generic Part Name: IPCHH

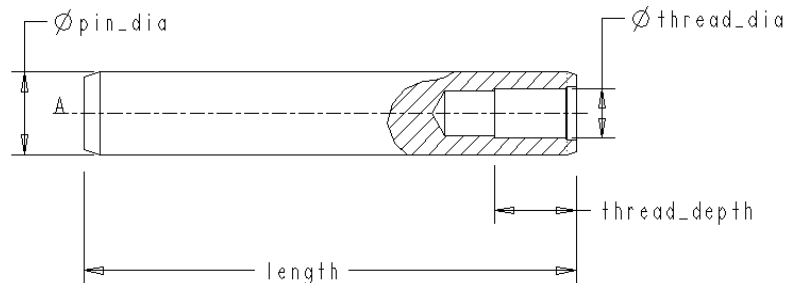
Notes:

- Corresponds to standard ISO 2341 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Hole Dia	Hole Dist	Head Dia	Head Height	Length
IPCHH01	3.000	0.8000	1.6000	5.000	1.0000	6 to 30 by 2
IPCHH02	4.000	1.0000	2.2000	6.000	1.0000	8 to 32 by 2, 35, 40
IPCHH03	5.000	1.2000	2.9000	8.000	1.6000	10 to 32 by 2, 35 to 50 by 5
IPCHH04	6.000	1.6000	3.2000	10.000	2.0000	12 to 32 by 2, 35 to 60 by 5
IPCHH05	8.000	2.0000	3.5000	14.000	3.0000	16 to 32 by 2, 35 to 80 by 5
IPCHH06	10.000	3.2000	4.5000	18.000	4.0000	20 to 32 by 2, 35 to 100 by 5
IPCHH07	12.000	3.2000	5.5000	20.000	4.0000	24 to 32 by 2, 35 to 100 by 5, 120
IPCHH08	14.000	4.0000	6.0000	22.000	4.0000	28, 30, 32, 35 to 95 by 5, 100, 120, 140
IPCHH09	16.000	4.0000	6.0000	25.000	4.5000	32, 35 to 95 by 5, 100 to 160 by 20

Name	Pin Dia	Hole Dia	Hole Dist	Head Dia	Head Height	Length
IPCHH10	18.000	5.0000	7.0000	28.000	5.0000	35 to 95 by 5, 100 to 180 by 20
IPCHH11	20.000	5.0000	8.0000	30.000	5.0000	40 to 95 by 5, 100 to 200 by 20
IPCHH12	22.000	5.0000	8.0000	33.000	5.5000	45 to 95 by 5, 100 to 200 by 20
IPCHH13	24.000	6.3000	9.0000	36.000	6.0000	50 to 95 by 5, 100 to 200 by 20
IPCHH14	27.000	6.3000	9.0000	40.000	6.0000	55 to 95 by 5, 100 to 200 by 20
IPCHH15	30.000	8.0000	10.0000	44.000	8.0000	60 to 95 by 5, 100 to 200 by 20
IPCHH16	33.000	8.0000	10.0000	47.000	8.0000	65 to 95 by 5, 100 to 200 by 20
IPCHH17	36.000	8.0000	10.0000	50.000	8.0000	70 to 95 by 5, 100 to 200 by 20
IPCHH18	40.000	8.0000	10.0000	55.000	8.0000	80 to 95 by 5, 100 to 200 by 20
IPCHH19	45.000	10.0000	12.0000	60.000	9.0000	90, 95, 100 to 200 by 20
IPCHH20	50.000	10.0000	12.0000	66.000	9.0000	100 to 200 by 20
IPCHH21	55.000	10.0000	14.0000	72.000	11.0000	120 to 200 by 20
IPCHH22	60.000	10.0000	14.0000	78.000	12.0000	120 to 200 by 20
IPCHH23	70.000	13.0000	16.0000	90.000	13.0000	140 to 200 by 20
IPCHH24	80.000	13.0000	16.0000	100.000	13.0000	160, 180, 200
IPCHH25	90.000	13.0000	16.0000	110.000	13.0000	180, 200
IPCHH26	100.000	13.0000	16.0000	120.000	13.0000	200

Parallel Pins with Internal Thread, Unhardened



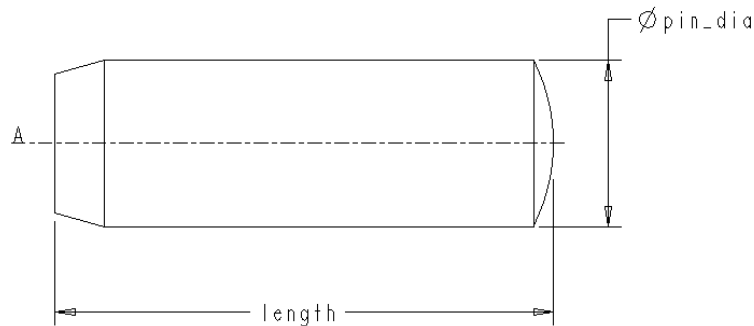
Generic Part Name: IPPUT

Notes:

- Corresponds to standard ISO 8733 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Thread Dia	Thread Depth	Length
IPPUT01	6.0000	4.0000	6.0000	16 to 32 by 2, 35 to 60 by 5
IPPUT02	8.0000	5.0000	8.0000	18 to 32 by 2, 35 to 80 by 5
IPPUT03	10.0000	6.0000	10.0000	22 to 32 by 2, 35 to 100 by 5
IPPUT04	12.0000	6.0000	12.0000	26 to 32 by 2, 35 to 100 by 5, 120
IPPUT05	16.0000	8.0000	16.0000	32, 35 to 95 by 5, 100 to 160 by 20
IPPUT06	20.0000	10.0000	18.0000	40 to 95 by 5, 100 to 200 by 20
IPPUT07	25.0000	16.0000	24.0000	50 to 95 by 5, 100 to 200 by 20
IPPUT08	30.0000	20.0000	30.0000	60 to 95 by 5, 100 to 200 by 20
IPPUT09	40.0000	20.0000	30.0000	80 to 95 by 5, 100 to 200 by 20
IPPUT10	50.0000	24.0000	36.0000	100 to 200 by 20

Parallel Pins, Hardened (Dowel Pins)



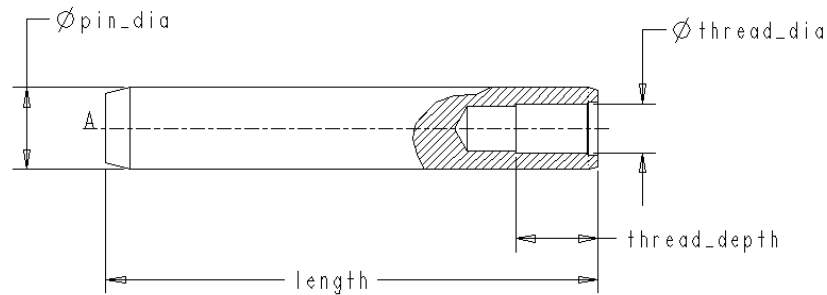
Generic Part Name: IPPHD

Notes:

- Corresponds to standard ISO 8734 - 1987.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Length
IPPHD01	1.0000	3, 4, 5, 6, 8, 10
IPPHD02	1.5000	4, 5, 6 to 16 by 2
IPPHD03	2.0000	5, 6 to 20 by 2
IPPHD04	2.5000	6 to 24 by 2
IPPHD05	3.0000	8 to 30 by 2
IPPHD06	4.0000	10 to 32 by 2, 35, 40
IPPHD07	5.0000	12 to 32 by 2, 35 to 50 by 5
IPPHD08	6.0000	14 to 32 by 2, 35 to 60 by 5
IPPHD09	8.0000	18 to 32 by 2, 35 to 80 by 5
IPPHD10	10.0000	22 to 32 by 2, 35 to 100 by 5
IPPHD11	12.0000	26 to 32 by 2, 35 to 100 by 5
IPPHD12	16.0000	40 to 100 by 5
IPPHD13	20.0000	50 to 100 by 5

Parallel Pins with Internal Thread, Hardened



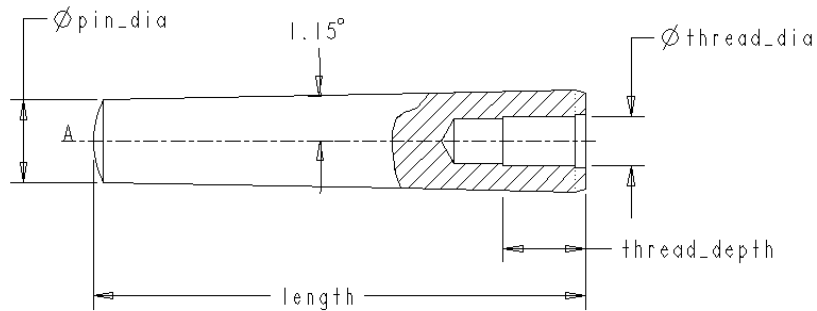
Generic Part Name: IPPHT

Notes:

- Corresponds to standard ISO 8735 - 1987.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Thread Dia	Thread Depth	Length
IPPHT01	6.0000	4.0000	6.0000	16 to 32 by 2, 35 to 60 by 5
IPPHT02	8.0000	5.0000	8.0000	18 to 32 by 2, 35 to 80 by 5
IPPHT03	10.0000	6.0000	10.0000	22 to 32 by 2, 35 to 100 by 5
IPPHT04	12.0000	6.0000	12.0000	26 to 32 by 2, 35 to 100 by 5, 120
IPPHT05	16.0000	8.0000	16.0000	32, 35 to 95 by 5, 100 to 160 by 20
IPPHT06	20.0000	10.0000	18.0000	40 to 95 by 5, 100 to 200 by 20
IPPHT07	25.0000	16.0000	24.0000	50 to 95 by 5, 100 to 200 by 20
IPPHT08	30.0000	20.0000	30.0000	60 to 95 by 5, 100 to 200 by 20
IPPHT09	40.0000	20.0000	30.0000	80 to 95 by 5, 100 to 200 by 20
IPPHT10	50.0000	24.0000	36.0000	100 to 200 by 20

Taper Pins with Internal Thread, Unhardened



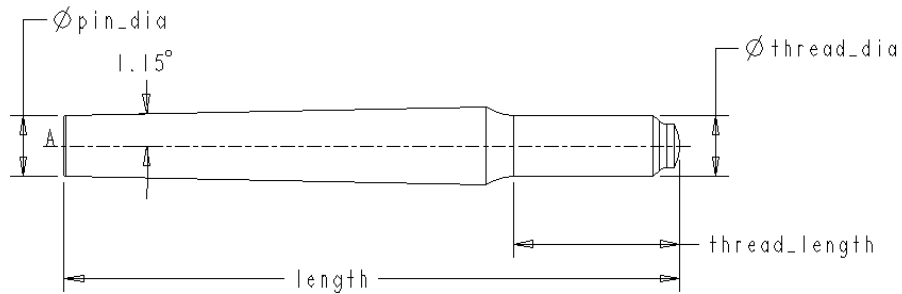
Generic Part Name: IPTUT

Notes:

- Corresponds to standard ISO 8736 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Thread Dia	Thread Depth	Length
IPTUT01	6.0000	4.0000	6.0000	16 to 32 by 2, 35 to 60 by 5
IPTUT02	8.0000	5.0000	8.0000	18 to 32 by 2, 35 to 80 by 5
IPTUT03	10.0000	6.0000	10.0000	22 to 32 by 2, 35 to 100 by 5
IPTUT04	12.0000	6.0000	12.0000	26 to 32 by 2, 35 to 100 by 5, 120
IPTUT05	16.0000	8.0000	16.0000	32, 35 to 95 by 5, 100 to 160 by 20
IPTUT06	20.0000	10.0000	18.0000	40 to 95 by 5, 100 to 200 by 20
IPTUT07	25.0000	16.0000	24.0000	50 to 95 by 5, 100 to 200 by 20
IPTUT08	30.0000	20.0000	30.0000	60 to 95 by 5, 100 to 200 by 20
IPTUT09	40.0000	20.0000	30.0000	80 to 95 by 5, 100 to 200 by 20
IPTUT10	50.0000	24.0000	36.0000	100 to 200 by 20

Taper Pins with External Thread, Unhardened



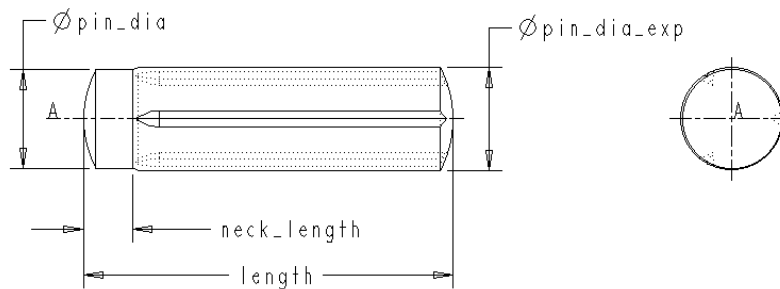
Generic Part Name: IPTET

Notes:

- Corresponds to standard ISO 8737 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Thread Length	Thread Dia	Length
IPTET01	5.0000	15.6000	5.0000	40, 45, 50
IPTET02	6.0000	20.0000	6.0000	45 to 60 by 5
IPTET03	8.0000	24.5000	8.0000	55, 60, 65, 75
IPTET04	10.0000	27.0000	10.0000	65, 75, 85, 100
IPTET05	12.0000	30.5000	12.0000	85, 100, 120
IPTET06	16.0000	39.0000	16.0000	100 to 160 by 20
IPTET07	20.0000	39.0000	16.0000	120, 140, 160, 190
IPTET08	25.0000	45.0000	20.0000	140, 160 to 250 by 30
IPTET09	30.0000	52.0000	24.0000	160 to 280 by 30
IPTET10	40.0000	65.0000	30.0000	190 to 280 by 30, 320
IPTET11	50.0000	78.0000	36.0000	220, 250, 280 to 400 by 40

Grooved Pins, Full-Length Parallel Grooved with Pilot



Generic Part Name: IPGPG

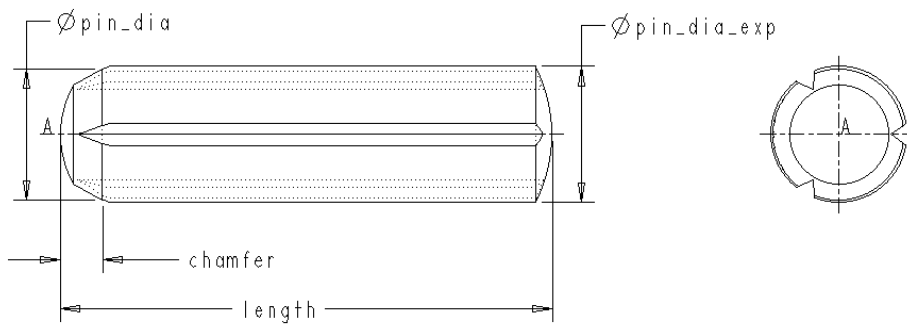
Notes:

- Corresponds to standard ISO 8739 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Neck Length	Pin Dia Exp	Length
IPGPG01	1.5000	2.00000	1.6000	8 to 20 by 2
IPGPG02	2.0000	2.00000	2.1500	8 to 30 by 2
IPGPG03	2.5000	2.50000	2.6500	10 to 30 by 2
IPGPG04	3.0000	2.50000	3.2000	10 to 32 by 2, 35, 40
IPGPG05	4.0000	3.00000	4.2500	10 to 32 by 2, 35 to 60 by 5
IPGPG06	5.0000	3.00000	5.2500	14 to 32 by 2, 35 to 60 by 5
IPGPG07	6.0000	4.00000	6.3000	14 to 32 by 2, 35 to 80 by 5
IPGPG08	8.0000	4.00000	8.3000	14 to 32 by 2, 35 to 100 by 5
IPGPG09	10.0000	5.00000	10.3500	14 to 32 by 2, 35 to 100 by 5
IPGPG10	12.0000	5.00000	12.3500	18 to 32 by 2, 35 to 100 by 5
IPGPG11	16.0000	5.00000	16.4000	22 to 32 by 2, 35 to 100 by 5
IPGPG12	20.0000	7.00000	20.5000	26 to 32 by 2, 35 to 100 by 5

Name	Pin Dia	Neck Length	Pin Dia Exp	Length
IPGPG13	25.0000	7.00000	25.5000	26 to 32 by 2, 35 to 100 by 5

Grooved Pins, Full-Length Parallel Grooved with Chamfer



Generic Part Name: IPGPC

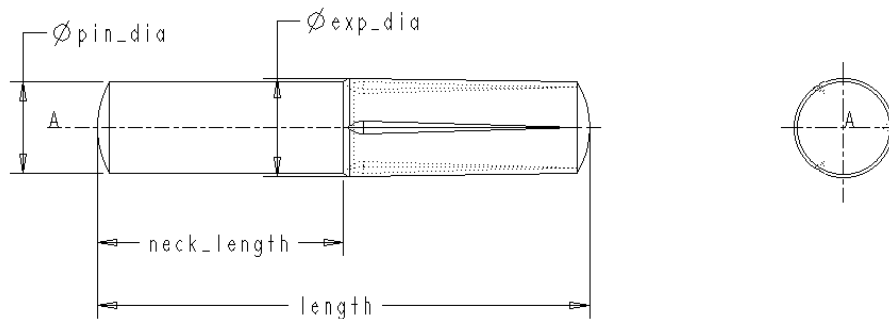
Notes:

- Corresponds to standard ISO 8740 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Chamfer	Pin Dia Exp	Length
IPGPC01	1.5000	0.60000	1.6000	8 to 20 by 2
IPGPC02	2.0000	0.80000	2.1500	8 to 30 by 2
IPGPC03	2.5000	1.00000	2.6500	10 to 30 by 2
IPGPC04	3.0000	1.20000	3.2000	10 to 32 by 2, 35, 40
IPGPC05	4.0000	1.40000	4.2500	10 to 32 by 2, 35 to 60 by 5
IPGPC06	5.0000	1.70000	5.2500	14 to 32 by 2, 35 to 60 by 5

Name	Pin Dia	Chamfer	Pin Dia Exp	Length
IPGPC07	6.0000	2.10000	6.3000	14 to 32 by 2, 35 to 80 by 5
IPGPC08	8.0000	2.60000	8.3000	14 to 32 by 2, 35 to 100 by 5
IPGPC09	10.0000	3.00000	10.3500	14 to 32 by 2, 35 to 100 by 5
IPGPC10	12.0000	3.80000	12.3500	18 to 32 by 2, 35 to 100 by 5
IPGPC11	16.0000	4.60000	16.4000	22 to 32 by 2, 35 to 100 by 5
IPGPC12	20.0000	6.00000	20.5000	26 to 32 by 2, 35 to 100 by 5
IPGPC13	25.0000	7.50000	25.5000	26 to 32 by 2, 35 to 100 by 5

Grooved Pins, Half-Length Reverse Taper Grooved



Generic Part Name: IPGTH

Notes:

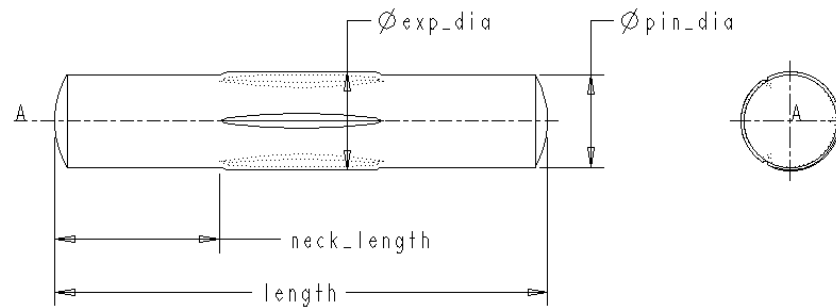
- Corresponds to standard ISO 8741 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Length	Neck Length	Exp Dia
IPGTH01	1.5000	8 to 20 by 2	<i>length/2</i>	If <i>length</i> <= 10, <i>exp_dia</i> = 1.6 If <i>length</i> > 10, <i>exp_dia</i> = 1.63
IPGTH02	2.0000	8 to 30 by 2	<i>length/2</i>	If <i>length</i> <= 16, <i>exp_dia</i> = 2.1 If <i>length</i> > 16, <i>exp_dia</i> = 2.15
IPGTH03	2.5000	8 to 30 by 2	<i>length/2</i>	If <i>length</i> <= 12, <i>exp_dia</i> = 2.6 If <i>length</i> > 12 & <i>length</i> < 22, <i>exp_dia</i> = 2.65 If <i>length</i> >= 22, <i>exp_dia</i> = 2.7
IPGTH04	3.0000	8 to 32 by 2, 35, 40	<i>length/2</i>	If <i>length</i> <= 12, <i>exp_dia</i> = 3.1 If <i>length</i> > 12 & <i>length</i> <= 16, <i>exp_dia</i> is 3.15 If <i>length</i> > 16 & <i>length</i> <= 24, <i>exp_dia</i> = 3.2 If <i>length</i> > 24, <i>exp_dia</i> = 3.25
IPGTH05	4.0000	10 to 32 by 2, 35 to 60 by 5	<i>length/2</i>	If <i>length</i> <=12, <i>exp_dia</i> = 4.15 If <i>length</i> > 12 & <i>length</i> <= 20, <i>exp_dia</i> = 4.20 If <i>length</i> > 20 & <i>length</i> <= 35, <i>exp_dia</i> = 4.25 If <i>length</i> > 35, <i>exp_dia</i> = 4.30
IPGTH06	5.0000	10 to 32 by 2, 35 to 60 by 5	<i>length/2</i>	If <i>length</i> <=12, <i>exp_dia</i> = 5.15 If <i>length</i> > 12 & <i>length</i> <= 20, <i>exp_dia</i> = 5.20 If <i>length</i> > 20 & <i>length</i> <= 35, <i>exp_dia</i> = 5.25 If <i>length</i> > 35, <i>exp_dia</i> = 5.30
IPGTH07	6.0000	12 to 32 by 2, 35 to 80 by 5	<i>length/2</i>	If <i>length</i> <=16, <i>exp_dia</i> = 6.15 If <i>length</i> > 16 & <i>length</i> <= 24, <i>exp_dia</i> = 6.25 If <i>length</i> > 24 & <i>length</i> <= 40, <i>exp_dia</i> = 6.30 If <i>length</i> > 40, <i>exp_dia</i> = 6.35

Name	Pin Dia	Length	Neck Length	Exp Dia
IPGTH08	8.0000	14 to 32 by 2, 35 to 100 by 5	<i>length/2</i>	<p>If <i>length</i> ≤ 20, <i>exp_dia</i> = 8.20</p> <p>If <i>length</i> > 20 & <i>length</i> ≤ 24, <i>exp_dia</i> = 8.25</p> <p>If <i>length</i> > 24 & <i>length</i> ≤ 30, <i>exp_dia</i> = 8.30</p> <p>If <i>length</i> > 30 & <i>length</i> ≤ 45, <i>exp_dia</i> = 8.35</p> <p>If <i>length</i> > 45 & <i>length</i> ≤ 75, <i>exp_dia</i> = 8.40</p> <p>If <i>length</i> > 75, <i>exp_dia</i> = 8.35</p>
IPGTH09	10.0000	18 to 32 by 2, 35 to 95 by 5, 100 to 160 by 20	<i>length/2</i>	<p>If <i>length</i> ≤ 24, <i>exp_dia</i> = 10.20</p> <p>If <i>length</i> > 24 & <i>length</i> ≤ 35, <i>exp_dia</i> = 10.30</p> <p>If <i>length</i> > 35 & <i>length</i> ≤ 50, <i>exp_dia</i> = 10.40</p> <p>If <i>length</i> > 50 & <i>length</i> ≤ 90, <i>exp_dia</i> = 10.45</p> <p>If <i>length</i> > 90, <i>exp_dia</i> = 10.40</p>
IPGTH10	12.0000	26 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20	<i>length/2</i>	<p>If <i>length</i> ≤ 30, <i>exp_dia</i> = 12.25</p> <p>If <i>length</i> > 30 & <i>length</i> ≤ 40, <i>exp_dia</i> = 12.30</p> <p>If <i>length</i> > 40 & <i>length</i> ≤ 55, <i>exp_dia</i> = 12.40</p> <p>If <i>length</i> > 55 & <i>length</i> ≤ 100, <i>exp_dia</i> = 12.50</p> <p>If <i>length</i> > 100, <i>exp_dia</i> = 12.45</p>
IPGTH11	16.0000	26 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20	<i>length/2</i>	<p>If <i>length</i> ≤ 30, <i>exp_dia</i> = 16.25</p> <p>If <i>length</i> > 30 & <i>length</i> ≤ 40, <i>exp_dia</i> = 16.30</p> <p>If <i>length</i> > 40 & <i>length</i> ≤ 55, <i>exp_dia</i> = 16.40</p> <p>If <i>length</i> > 55 & <i>length</i> ≤ 100, <i>exp_dia</i> = 16.50</p> <p>If <i>length</i> > 100, <i>exp_dia</i> = 16.45</p>

Name	Pin Dia	Length	Neck Length	Exp Dia
IPGTH12	20.0000	26 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20	$length/2$	<p>If $length \leq 35$, $exp_dia = 20.25$</p> <p>If $length > 35$ & $length \leq 45$, $exp_dia = 20.30$</p> <p>If $length > 45$ & $length \leq 55$, $exp_dia = 20.40$</p> <p>If $length > 55$ & $length \leq 120$, $exp_dia = 20.50$</p> <p>If $length > 120$, $exp_dia = 20.45$</p>
IPGTH13	25.0000	26 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20	$length/2$	<p>If $length \leq 35$, $exp_dia = 25.25$</p> <p>If $length > 35$ & $length \leq 45$, $exp_dia = 25.30$</p> <p>If $length > 45$ & $length \leq 55$, $exp_dia = 25.40$</p> <p>If $length > 55$ & $length \leq 120$, $exp_dia = 25.50$</p> <p>If $length > 120$, $exp_dia = 25.45$</p>

Grooved Pins, Third-Length Centre Grooved



Generic Part Name: IPGTT**Notes:**

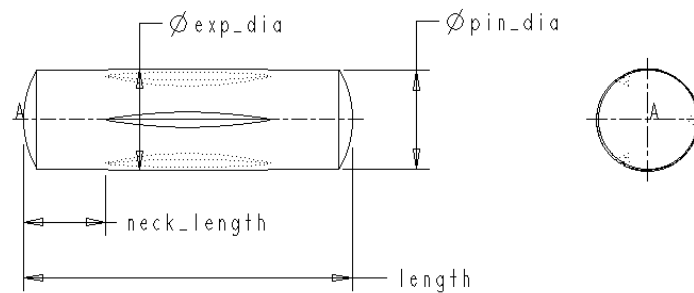
- Corresponds to standard ISO 8742 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Length	Neck Length	Exp Dia
IPGTT01	1.5000	8 to 20 by 2	$length/3$	If $length \leq 12$, $exp_dia = 1.6$ If $length > 12$, $exp_dia = 1.63$
IPGTT02	2.0000	12 to 30 by 2	$length/3$	If $length \leq 20$, $exp_dia = 2.1$ If $length > 20$, $exp_dia = 2.15$
IPGTT03	2.5000	12 to 30 by 2	$length/3$	If $length \leq 16$, $exp_dia = 2.6$ If $length > 16$, $exp_dia = 2.65$
IPGTT04	3.0000	12 to 32 by 2, 35, 40	$length/3$	If $length \leq 16$, $exp_dia = 3.1$ If $length > 16$ & $length \leq 24$, $exp_dia = 3.15$ If $length > 24$, $exp_dia = 3.2$
IPGTT05	4.0000	18 to 32 by 2, 35 to 60 by 5	$length/3$	If $length \leq 20$, $exp_dia = 4.15$ If $length > 20$ & $length \leq 30$, $exp_dia = 4.20$ If $length > 30$ & $length \leq 45$, $exp_dia = 4.25$ If $length > 45$, $exp_dia = 4.30$
IPGTT06	5.0000	18 to 32 by 2, 35 to 60 by 5	$length/3$	If $length \leq 20$, $exp_dia = 5.15$ If $length > 20$ & $length \leq 30$, $exp_dia = 5.20$ If $length > 30$ & $length \leq 55$, $exp_dia = 5.25$ If $length > 55$, $exp_dia = 5.30$

Name	Pin Dia	Length	Neck Length	Exp Dia
IPGTT07	6.0000	22 to 32 by 2, 35 to 80 by 5	$length/3$	If $length \leq 24$, $exp_dia = 6.15$ If $length > 24$ & $length \leq 35$, $exp_dia = 6.25$ If $length > 35$ & $length \leq 60$, $exp_dia = 6.30$ If $length > 60$, $exp_dia = 6.35$
IPGTT08	8.0000	26 to 32 by 2, 35 to 100 by 5	$length/3$	If $length \leq 30$, $exp_dia = 8.20$ If $length > 30$ & $length \leq 35$, $exp_dia = 8.25$ If $length > 35$ & $length \leq 45$, $exp_dia = 8.30$ If $length > 45$ & $length \leq 65$, $exp_dia = 8.35$, If $length > 65$, $exp_dia = 8.40$
IPGTT09	10.0000	32, 35 to 95 by 5, 100 to 160 by 20	$length/3$	If $length \leq 40$, $exp_dia = 10.20$ If $length > 40$ & $length \leq 55$, $exp_dia = 10.30$ If $length > 55$ & $length \leq 75$, $exp_dia = 10.40$ If $length > 75$ & $length \leq 120$, $exp_dia = 10.45$ If $length > 120$, $exp_dia = 10.40$
IPGTT10	12.0000	40 to 95 by 5, 100 to 200 by 20	$length/3$	If $length \leq 45$, $exp_dia = 12.25$ If $length > 45$ & $length \leq 60$, $exp_dia = 12.30$ If $length > 60$ & $length \leq 80$, $exp_dia = 12.40$ If $length > 80$, $exp_dia = 12.50$
IPGTT11	16.0000	45 to 95 by 5, 100 to 200 by 20	$length/3$	If $length \leq 45$, $exp_dia = 16.25$ If $length > 45$ & $length \leq 60$, $exp_dia = 16.30$ If $length > 60$ & $length \leq 80$, $exp_dia = 16.40$ If $length > 80$, $exp_dia = 16.50$

Name	Pin Dia	Length	Neck Length	Exp Dia
IPGTT12	20.0000	45 to 95 by 5, 100 to 200 by 20	$length/3$	<p>If $length \leq 50$, $exp_dia = 20.25$</p> <p>If $length > 50$ & $length \leq 65$, $exp_dia = 20.30$</p> <p>If $length > 65$ & $length \leq 90$, $exp_dia = 20.40$</p> <p>If $length > 90$, $exp_dia = 20.50$</p>
IPGTT13	25.0000	45 to 95 by 5, 100 to 200 by 20	$length/3$	<p>If $length \leq 50$, $exp_dia = 25.25$</p> <p>If $length > 50$ & $length \leq 65$, $exp_dia = 25.30$</p> <p>If $length > 65$ & $length \leq 90$, $exp_dia = 25.40$</p> <p>If $length > 90$, $exp_dia = 25.50$</p>

Grooved Pins, Half-Length Centre Grooved



Generic Part Name: IPGCG**Notes:**

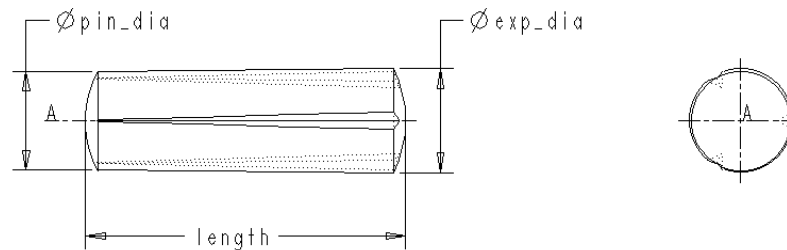
- Corresponds to standard ISO 8743 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Length	Neck Length	Exp Dia
IPGCG01	1.5000	8 to 20 by 2	$length/4$	If $length \leq 12$, $exp_dia = 1.6$ If $length > 12$, $exp_dia = 1.63$
IPGCG02	2.0000	12 to 30 by 2	$length/4$	If $length \leq 20$, $exp_dia = 2.1$ If $length > 20$, $exp_dia = 2.15$
IPGCG03	2.5000	12 to 30 by 2	$length/4$	If $length \leq 16$, $exp_dia = 2.6$ If $length > 16$, $exp_dia = 2.65$
IPGCG04	3.0000	12 to 32 by 2, 35, 40	$length/4$	If $length \leq 16$, $exp_dia = 3.1$ If $length > 16$, & $length \leq 24$, $exp_dia = 3.15$ If $length > 24$, $exp_dia = 3.2$
IPGCG05	4.0000	18 to 32 by 2, 35 to 60 by 5	$length/4$	If $length \leq 20$, $exp_dia = 4.15$ If $length > 20$ & $length \leq 30$, $exp_dia = 4.20$ If $length > 30$ & $length \leq 45$, $exp_dia = 4.25$ If $length > 45$, $exp_dia = 4.30$
IPGCG06	5.0000	18 to 32 by 2, 35 to 60 by 5	$length/4$	If $length \leq 20$, $exp_dia = 4.15$ If $length > 20$ & $length \leq 30$, $exp_dia = 4.20$ If $length > 30$ & $length \leq 45$, $exp_dia = 4.25$ If $length > 45$, $exp_dia = 4.30$

Name	Pin Dia	Length	Neck Length	Exp Dia
IPGCG07	6.0000	22 to 32 by 2, 35 to 80 by 5	<i>length/4</i>	<p>If <i>length</i> ≤ 20, <i>exp_dia</i> = 4.15 If <i>length</i> > 20 & <i>length</i> ≤ 30, <i>exp_dia</i> = 4.20 If <i>length</i> > 30 & <i>length</i> ≤ 45, <i>exp_dia</i> = 4.25 If <i>length</i> > 45, <i>exp_dia</i> = 4.30</p>
IPGCG08	8.0000	26 to 32 by 2, 35 to 100 by 5	<i>length/4</i>	<p>If <i>length</i> ≤ 20, <i>exp_dia</i> = 4.15 If <i>length</i> > 20 & <i>length</i> ≤ 30, <i>exp_dia</i> = 4.20 If <i>length</i> > 30 & <i>length</i> ≤ 45, <i>exp_dia</i> = 4.25 If <i>length</i> > 45, <i>exp_dia</i> = 4.30</p>
IPGCG09	10.0000	32, 35 to 95 by 5, 100 to 160 by 20	<i>length/4</i>	<p>If <i>length</i> ≤ 20, <i>exp_dia</i> = 4.15 If <i>length</i> > 20 & <i>length</i> ≤ 30, <i>exp_dia</i> = 4.20 If <i>length</i> > 30 & <i>length</i> ≤ 45, <i>exp_dia</i> = 4.25 If <i>length</i> > 45, <i>exp_dia</i> = 4.30</p>
IPGCG10	12.0000	40 to 95 by 5, 100 to 200 by 20	<i>length/4</i>	<p>If <i>length</i> ≤ 20, <i>exp_dia</i> = 4.15 If <i>length</i> > 20 & <i>length</i> ≤ 30, <i>exp_dia</i> = 4.20 If <i>length</i> > 30 & <i>length</i> ≤ 45, <i>exp_dia</i> = 4.25 If <i>length</i> > 45, <i>exp_dia</i> = 4.30</p>
IPGCG11	16.0000	45 to 95 by 5, 100 to 200 by 20	<i>length/4</i>	<p>If <i>length</i> ≤ 20, <i>exp_dia</i> = 4.15 If <i>length</i> > 20 & <i>length</i> ≤ 30, <i>exp_dia</i> = 4.20 If <i>length</i> > 30 & <i>length</i> ≤ 45, <i>exp_dia</i> = 4.25 If <i>length</i> > 45, <i>exp_dia</i> = 4.30</p>
IPGCG12	20.0000	45 to 95 by 5, 100 to 200 by 20	<i>length/4</i>	<p>If <i>length</i> ≤ 20, <i>exp_dia</i> = 4.15 If <i>length</i> > 20 & <i>length</i> ≤ 30, <i>exp_dia</i> = 4.20 If <i>length</i> > 30 & <i>length</i> ≤ 45, <i>exp_dia</i> = 4.25 If <i>length</i> > 45, <i>exp_dia</i> = 4.30</p>

Name	Pin Dia	Length	Neck Length	Exp Dia
IPGCG13	25.0000	45 to 95 by 5, 100 to 200 by 20	$length/4$	<p>If $length \leq 20$, $exp_dia = 4.15$</p> <p>If $length > 20$ & $length \leq 30$, $exp_dia = 4.20$</p> <p>If $length > 30$ & $length \leq 45$, $exp_dia = 4.25$</p> <p>If $length > 45$, $exp_dia = 4.30$</p>

Grooved Pins, Full-Length Taper Grooved



Generic Part Name: IPGTF

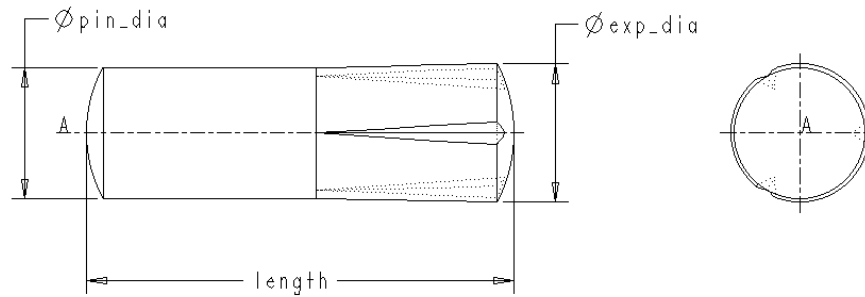
Notes:

- Corresponds to standard ISO 8744 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Length	Exp Dia
IPGTF01	1.5000	8 to 20 by 2	If <i>length</i> ≤ 10, <i>exp_dia</i> = 1.63 If <i>length</i> > 10, <i>exp_dia</i> = 1.60
IPGTF02	2.0000	8 to 30 by 2	If <i>length</i> ≥ 8, <i>exp_dia</i> = 2.15
IPGTF03	2.5000	8 to 30 by 2	If <i>length</i> ≤ 16, <i>exp_dia</i> = 2.7 If <i>length</i> > 16, <i>exp_dia</i> = 2.65
IPGTF04	3.0000	8 to 32 by 2, 35, 40	If <i>length</i> ≤ 8, <i>exp_dia</i> = 3.25 If <i>length</i> > 8 & <i>length</i> ≤ 16, <i>exp_dia</i> = 3.30 If <i>length</i> > 16 & <i>length</i> ≤ 24, <i>exp_dia</i> = 3.25 If <i>length</i> > 24, <i>exp_dia</i> = 3.2
IPGTF05	4.0000	8 to 32 by 2, 35 to 60 by 5	If <i>length</i> ≤ 10, <i>exp_dia</i> = 4.30 If <i>length</i> > 10 & <i>length</i> ≤ 20, <i>exp_dia</i> = 4.35 If <i>length</i> > 20 & <i>length</i> ≤ 35, <i>exp_dia</i> = 4.30 If <i>length</i> > 35, <i>exp_dia</i> = 4.25
IPGTF06	5.0000	8 to 32 by 2, 35 to 60 by 5	If <i>length</i> ≤ 12, <i>exp_dia</i> = 5.30 If <i>length</i> > 12 & <i>length</i> ≤ 20, <i>exp_dia</i> = 5.35 If <i>length</i> > 20 & <i>length</i> ≤ 40, <i>exp_dia</i> = 5.30 If <i>length</i> > 40, <i>exp_dia</i> = 5.25
IPGTF07	6.0000	10 to 32 by 2, 35 to 80 by 5	If <i>length</i> ≤ 12, <i>exp_dia</i> = 6.30 If <i>length</i> > 12 & <i>length</i> ≤ 30, <i>exp_dia</i> = 6.35 If <i>length</i> > 30 & <i>length</i> ≤ 50, <i>exp_dia</i> = 6.30 If <i>length</i> > 40, <i>exp_dia</i> = 6.25

Name	Pin Dia	Length	Exp Dia
IPGTF08	8.0000	12 to 32 by 2, 35 to 100 by 5	<p>If <i>length</i> <= 8, <i>exp_dia</i> = 8.35</p> <p>If <i>length</i> > 16 & <i>length</i> <= 30, <i>exp_dia</i> = 8.40</p> <p>If <i>length</i> > 30 & <i>length</i> <= 55, <i>exp_dia</i> = 8.35</p> <p>If <i>length</i> > 55 & <i>length</i> <= 80, <i>exp_dia</i> = 8.30</p> <p>If <i>length</i> > 80, <i>exp_dia</i> = 8.25</p>
IPGTF09	10.0000	14 to 32 by 2, 35 to 100 by 5, 129	<p>If <i>length</i> <= 20, <i>exp_dia</i> = 10.40</p> <p>If <i>length</i> > 20 & <i>length</i> <= 40, <i>exp_dia</i> = 10.45</p> <p>If <i>length</i> > 40 & <i>length</i> <= 60, <i>exp_dia</i> = 10.40</p> <p>If <i>length</i> > 60 & <i>length</i> <= 100, <i>exp_dia</i> = 10.35</p> <p>If <i>length</i> > 100, <i>exp_dia</i> = 10.30</p>
IPGTF10	12.0000	14 to 32 by 2, 35 to 100 by 5, 120	<p>If <i>length</i> <= 20, <i>exp_dia</i> = 12.40</p> <p>If <i>length</i> > 20 & <i>length</i> <= 40, <i>exp_dia</i> = 12.45</p> <p>If <i>length</i> > 40 & <i>length</i> <= 65, <i>exp_dia</i> = 12.40</p> <p>If <i>length</i> > 65, <i>exp_dia</i> = 12.30</p>
IPGTF11	16.0000	24 to 32 by 2, 35 to 100 by 5, 120	<p>If <i>length</i> <= 24, <i>exp_dia</i> = 16.55</p> <p>If <i>length</i> > 24 & <i>length</i> <= 50, <i>exp_dia</i> = 16.60</p> <p>If <i>length</i> > 50 & <i>length</i> <= 90, <i>exp_dia</i> = 16.55</p> <p>If <i>length</i> > 90, <i>exp_dia</i> = 16.50</p>
IPGTF12	20.0000	26 to 32 by 2, 35 to 100 by 5, 120	If <i>length</i> >= 26, <i>exp_dia</i> = 20.60
IPGTF13	25.0000	26 to 32 by 2, 35 to 100 by 5, 120	If <i>length</i> >= 26, <i>exp_dia</i> = 25.60

Grooved Pins, Half-Length Taper Grooved

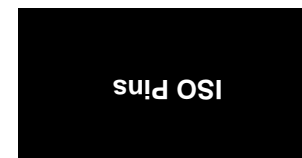


Generic Part Name: IPGHT

Notes:

- Corresponds to standard ISO 8745 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

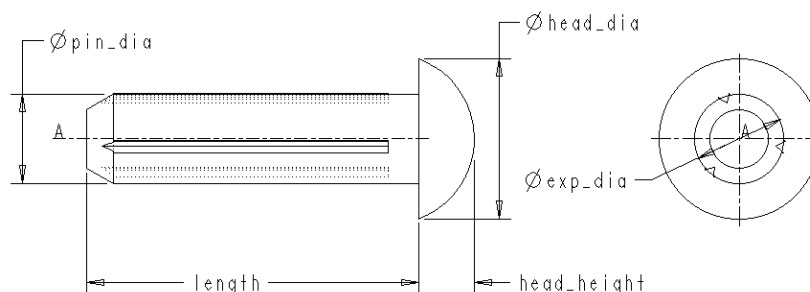
Name	Pin Dia	Length	Exp Dia
IPGHT01	1.5000	8 to 20 by 2	If $length \leq 10$, $exp_dia = 1.63$ If $length > 10$, $exp_dia = 1.60$
IPGHT02	2.0000	8 to 30 by 2	If $length \geq 8$, $exp_dia = 2.15$



Name	Pin Dia	Length	Exp Dia
IPGHT03	2.5000	8 to 30 by 2	If <i>length</i> <= 16, <i>exp_dia</i> = 2.7 If <i>length</i> > 16, <i>exp_dia</i> = 2.65
IPGHT04	3.0000	8 to 32 by 2, 35, 40	If <i>length</i> <= 8, <i>exp_dia</i> = 3.25 If <i>length</i> >8 & <i>length</i> <= 16, <i>exp_dia</i> = 3.30 If <i>length</i> > 16 & <i>length</i> <= 24, <i>exp_dia</i> = 3.25 If <i>length</i> > 24, <i>exp_dia</i> = 3.2
IPGHT05	4.0000	10 to 32 by 2, 35 to 60 by 5	If <i>length</i> <= 10, <i>exp_dia</i> = 4.30 If <i>length</i> > 10 & <i>length</i> <= 20, <i>exp_dia</i> = 4.35 If <i>length</i> > 20 & <i>length</i> <= 35, <i>exp_dia</i> = 4.30 If <i>length</i> > 35, <i>exp_dia</i> = 4.25
IPGHT06	5.0000	10 to 32 by 2, 35 to 60 by 5	If <i>length</i> <= 12, <i>exp_dia</i> = 5.30 If <i>length</i> > 12 & <i>length</i> <= 20, <i>exp_dia</i> = 5.35 If <i>length</i> > 20 & <i>length</i> <= 40, <i>exp_dia</i> = 5.30 If <i>length</i> > 40, <i>exp_dia</i> = 5.25
IPGHT07	6.0000	10 to 32 by 2, 35 to 80 by 5	If <i>length</i> <= 12, <i>exp_dia</i> = 6.30 If <i>length</i> > 12 & <i>length</i> <= 30, <i>exp_dia</i> = 6.35 If <i>length</i> > 30 & <i>length</i> <= 50, <i>exp_dia</i> = 6.30 If <i>length</i> > 40, <i>exp_dia</i> = 6.25
IPGHT08	8.0000	14 to 32 by 2, 35 to 100 by 5	If <i>length</i> <= 16, <i>exp_dia</i> = 8.35 If <i>length</i> > 16 & <i>length</i> <= 30, <i>exp_dia</i> = 8.40 If <i>length</i> > 30 & <i>length</i> <= 55, <i>exp_dia</i> = 8.35 If <i>length</i> > 55 & <i>length</i> <= 80, <i>exp_dia</i> = 8.30 If <i>length</i> > 80, <i>exp_dia</i> = 8.25

Name	Pin Dia	Length	Exp Dia
IPGHT09	10.0000	14 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20	<p>If <i>length</i> ≤ 20, <i>exp_dia</i> = 10.40</p> <p>If <i>length</i> > 20 & <i>length</i> ≤ 40, <i>exp_dia</i> = 10.45</p> <p>If <i>length</i> > 40 & <i>length</i> ≤ 60, <i>exp_dia</i> = 10.40</p> <p>If <i>length</i> > 60 & <i>length</i> ≤ 100, <i>exp_dia</i> = 10.35</p> <p>If <i>length</i> > 100, <i>exp_dia</i> = 10.30</p>
IPGHT10	12.0000	18 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20	<p>If <i>length</i> ≤ 20, <i>exp_dia</i> = 12.40</p> <p>If <i>length</i> > 20 & <i>length</i> ≤ 40, <i>exp_dia</i> = 12.45</p> <p>If <i>length</i> > 40 & <i>length</i> ≤ 65, <i>exp_dia</i> = 12.40</p> <p>If <i>length</i> > 65, <i>exp_dia</i> = 12.30</p>
IPGHT11	16.0000	26 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20	<p>If <i>length</i> ≤ 24, <i>exp_dia</i> = 16.55</p> <p>If <i>length</i> > 24 & <i>length</i> ≤ 50, <i>exp_dia</i> = 16.60</p> <p>If <i>length</i> > 50 & <i>length</i> ≤ 90, <i>exp_dia</i> = 16.55</p> <p>If <i>length</i> > 90, <i>exp_dia</i> = 16.50</p>
IPGHT12	20.0000	26 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20	If <i>length</i> ≥ 26, <i>exp_dia</i> = 20.60
IPGHT13	25.0000	26 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20	If <i>length</i> ≥ 26, <i>exp_dia</i> = 25.60

Grooved Pins with Round Head



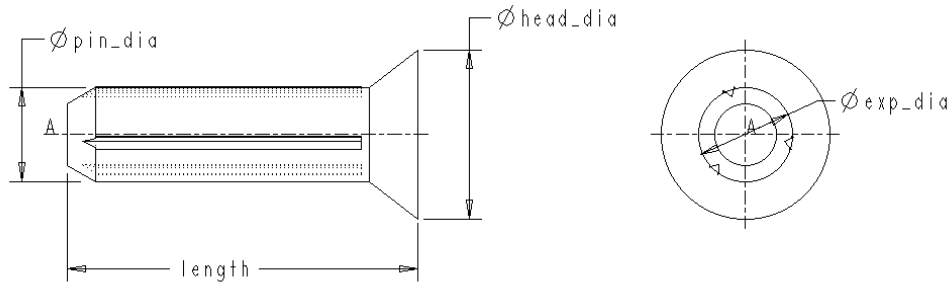
Generic Part Name: IPGRH

Notes:

- Corresponds to standard ISO 8746 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Head Dia	Head Height	Exp Dia	Length
IPGRH01	1.4000	2.6000	0.9000	1.5000	3, 4, 5, 6
IPGRH02	1.6000	3.0000	1.1000	1.7000	3, 4, 5, 6, 8
IPGRH03	2.0000	3.7000	1.3000	2.1500	3, 4, 5, 6, 8, 10
IPGRH04	2.5000	4.6000	1.6000	2.7000	3, 4, 5, 6, to 12 by 2
IPGRH05	3.0000	5.4500	1.9500	3.2000	4, 5, 6 to 12 by 2, 16
IPGRH06	4.0000	7.2500	2.5500	4.2500	5, 6 to 12 by 2, 16, 20
IPGRH07	5.0000	9.1000	3.1500	5.2500	6 to 12 by 2, 16, 20, 25
IPGRH08	6.0000	10.8000	3.7500	6.3000	8, 10, 12, 16, 20, 25, 30
IPGRH09	8.0000	14.4000	5.0000	8.3000	10, 12, 16, 20 to 40 by 5
IPGRH10	10.0000	16.0000	7.4000	10.3500	12, 16, 20 to 40 by 5
IPGRH11	12.0000	19.0000	8.4000	12.3500	16, 20 to 40 by 5
IPGRH12	16.0000	25.0000	10.9000	16.4000	20 to 40 by 5
IPGRH13	20.0000	32.0000	13.9000	20.5000	25 to 40 by 5

Grooved Pins with Countersunk Head



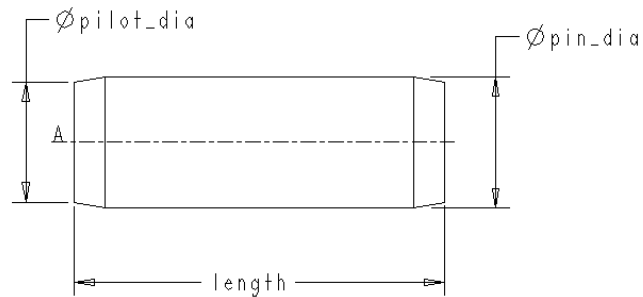
Generic Part Name: IPGCH

Notes:

- Corresponds to standard ISO 8747 - 1986.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Pin Dia	Exp Dia	Head Dia	Length
IPGCH01	1.4000	1.5000	2.7000	3, 4, 5, 6
IPGCH02	1.6000	1.7000	3.0000	3, 4, 5, 6, 8
IPGCH03	2.0000	2.1500	3.7000	4, 5, 6, 8, 10
IPGCH04	2.5000	2.7000	4.6000	4, 5, 6 to 12 by 2
IPGCH05	3.0000	3.2000	5.4500	5, 6 to 12, 16
IPGCH06	4.0000	4.2500	7.2500	6 to 12 by 2, 16, 20
IPGCH07	5.0000	5.2500	9.1000	8, 10, 12, 16, 20, 25
IPGCH08	6.0000	6.3000	10.8000	8, 10, 12, 16, 20, 25, 30
IPGCH09	8.0000	8.3000	14.4000	10, 12, 16, 20 to 40 by 5
IPGCH10	10.0000	10.3500	16.0000	12, 16, 20 to 40 by 5
IPGCH11	12.0000	12.3500	19.0000	16, 20 to 40 by 5
IPGCH12	16.0000	16.4000	26.0000	20 to 40 by 5
IPGCH13	20.0000	20.5000	31.5000	25 to 40 by 5

Spring-Type Straight Pins, Coiled and Heavy Duty



Generic Part Name: IPSCH

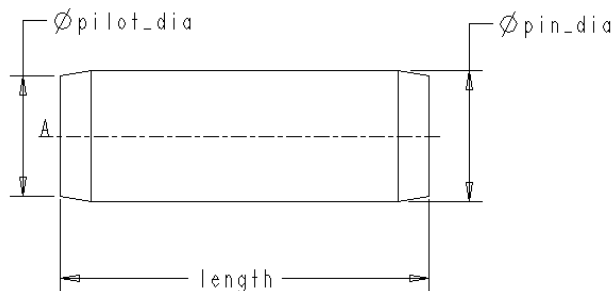
Notes:

- Corresponds to standard ISO 8748 - 1987.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Dia	Pin Dia	Pilot Dia	Length
IPSCH01	1.5000	1.7100	1.4000	4, 5, 6 to 26 by 2
IPSCH02	2.0000	2.2100	1.9000	4, 5, 6 to 32 by 2, 35, 40
IPSCH03	2.5000	2.7300	2.4000	5, 6 to 32 by 2, 35, 40, 45
IPSCH04	3.0000	3.2600	2.9000	6 to 32 by 2, 35 to 50 by 5
IPSCH05	3.5000	3.7900	3.4000	6 to 32 by 2, 35 to 50 by 5
IPSCH06	4.0000	4.3000	3.9000	8 to 32 by 2, 35 to 60 by 5
IPSCH07	5.0000	5.3500	4.8500	10 to 32 by 2, 35 to 60 by 5
IPSCH08	6.0000	6.4000	5.8500	12 to 32 by 2, 35 to 75 by 5
IPSCH09	8.0000	8.5500	7.8000	16 to 32 by 2, 35 to 100 by 5, 120

Name	Nominal Dia	Pin Dia	Pilot Dia	Length
IPSCH10	10.0000	10.6500	9.7500	20 to 32 by 2, 35 to 100 by 5, 120
IPSCH11	12.0000	12.7500	11.7000	24 to 32 by 2, 35 to 95 by 5, 100 to 160 by 20
IPSCH12	14.0000	14.8500	13.6000	28, 30, 32, 35 to 95 by 5, 100 to 200 by 20
IPSCH13	16.0000	16.9000	15.6000	35 to 95 by 5, 100 to 200 by 20
IPSCH14	20.0000	21.0000	19.6000	45 to 95 by 5, 100 to 200 by 20

Spring-Type Straight Pins, Coiled and Standard Duty



Generic Part Name: IPSCS

Notes:

- Corresponds to standard ISO 8750 - 1987.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

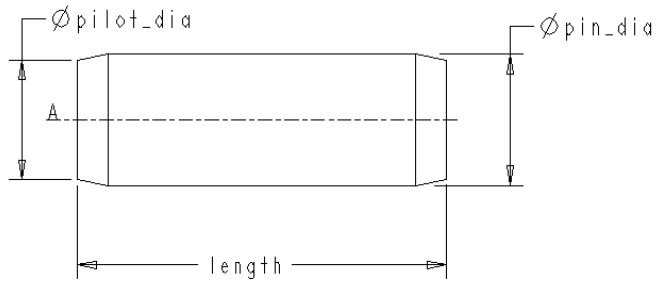
Name	Nominal Dia	Pin Dia	Pilot Dia	Length
IPSCS01	0.8000	0.9100	0.7500	4, 5, 6 to 16 by 2
IPSCS02	1.0000	1.1500	0.9500	4, 5, 6 to 16 by 2
IPSCS03	1.2000	1.3500	1.1500	4, 5, 6 to 16 by 2
IPSCS04	1.5000	1.7300	1.4000	4, 5, 6 to 24 by 2
IPSCS05	2.0000	2.2500	1.9000	4, 5, 6 to 32 by 2, 35, 40
IPSCS06	2.5000	2.7800	2.4000	5, 6 to 32 by 2, 35, 40, 45
IPSCS07	3.0000	3.3000	2.9000	6 to 32 by 2, 35 to 50 by 5
IPSCS08	3.5000	3.8400	3.4000	6 to 32 by 2, 35 to 50 by 5
IPSCS09	4.0000	4.4000	3.9000	8 to 32 by 2, 35 to 60 by 5
IPSCS10	5.0000	5.5000	4.8500	10 to 32 by 2, 35 to 60 by 5
IPSCS11	6.0000	6.5000	5.8500	12 to 32 by 2, 35 to 75 by 5
IPSCS12	8.0000	8.6300	7.8000	16 to 32 by 2, 35 to 100 by 5, 120
IPSCS13	10.0000	10.8000	9.7500	20 to 32 by 2, 35 to 100 by 5, 120
IPSCS14	12.0000	12.8500	11.7000	24 to 32 by 2, 35 to 95 by 5, 100 to 160 by 20
IPSCS15	14.0000	14.9500	13.6000	28, 30, 32, 35 to 95 by 5, 100 to 200 by 20
IPSCS16	16.0000	17.0000	15.6000	32, 35 to 95 by 5, 100 to 200 by 20
IPSCS17	20.0000	21.1000	19.6000	45 to 95 by 5, 100 to 200 by 20

Spring-Type Straight Pins, Coiled and Light Duty

Generic Part Name: IPSC L

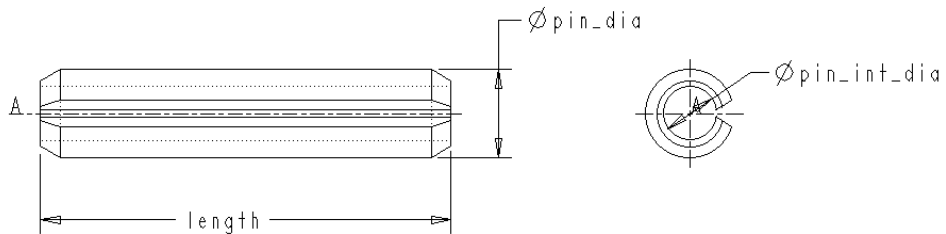
Notes:

- Corresponds to standard ISO 8751 - 1987.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.



Name	Nominal Dia	Pin Dia	Pilot Dia	Length
IPSCLO1	1.50000	1.75000	1.40000	4, 5, 6 to 24 by 2
IPSCLO2	2.00000	2.28000	1.90000	4, 5, 6 to 32 by 2, 35, 40
IPSCLO3	2.50000	2.82000	2.40000	5, 6 to 32 by 2, 35, 40, 45
IPSCLO4	3.00000	3.35000	2.90000	6 to 32 by 2, 35 to 50 by 5
IPSCLO5	3.50000	3.87000	3.40000	6 to 32 by 2, 35 to 50 by 5
IPSCLO6	4.00000	4.45000	3.90000	8 to 32 by 2, 35 to 60 by 5
IPSCLO7	5.00000	5.50000	4.85000	10 to 32 by 2, 35 to 65 by 5
IPSCLO8	6.00000	6.55000	5.85000	12 to 32 by 2, 35 to 75 by 5
IPSCLO9	8.00000	8.65000	7.80000	16 to 32 by 2, 35 to 100 by 5, 120

Spring-Type Straight Pins, Slotted



Generic Part Name: IPSSS

Notes:

- Corresponds to standard ISO 8752 - 1987.
- When a range of lengths is indicated, the range is expressed as “from to incremented by”.

Name	Nominal Size	Pin Dia	Pin Int Dia	Length
IPSSS01	1.0000	1.3000	0.8000	4, 5, 6 to 20 by 2
IPSSS02	1.5000	1.8000	1.1000	4, 5, 6 to 20 by 2
IPSSS03	2.0000	2.4000	1.5000	4, 5, 6 to 30 by 2
IPSSS04	2.5000	2.9000	1.8000	4, 5, 6 to 30 by 2
IPSSS05	3.0000	3.5000	2.1000	4, 5, 6 to 32 by 2, 35, 40
IPSSS06	3.5000	4.0000	2.3000	4, 5, 6 to 32 by 2, 35, 40
IPSSS07	4.0000	4.6000	2.8000	4, 5, 6 to 32 by 2, 35 to 50 by 5
IPSSS08	4.5000	5.1000	2.9000	5, 6 to 32 by 2, 35 to 50 by 5
IPSSS09	5.0000	5.6000	3.4000	5, 6 to 32 by 2, 35 to 80 by 5
IPSSS10	6.0000	6.7000	4.0000	10 to 32 by 2, 35 to 100 by 5
IPSSS11	8.0000	8.8000	5.5000	10 to 32 by 2, 35 to 100 by 5, 120
IPSSS12	10.0000	10.8000	6.5000	10 to 32 by 2, 35 to 95 by 5, 100 to 160 by 20
IPSSS13	12.0000	12.8000	7.5000	10 to 32 by 2, 35 to 95 by 5, 100 to 180 by 20
IPSSS14	13.0000	13.8000	8.5000	10 to 32 by 2, 35 to 95 by 5, 100 to 180 by 20
IPSSS15	14.0000	14.8000	8.5000	10 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS16	16.0000	16.8000	10.5000	10 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS17	18.0000	18.9000	11.5000	10 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS18	20.0000	20.9000	12.5000	10 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20

Name	Nominal Size	Pin Dia	Pin Int Dia	Length
IPSSS19	21.0000	21.9000	13.5000	14 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS20	25.0000	25.9000	15.5000	14 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS21	28.0000	28.9000	17.5000	14 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS22	30.0000	30.9000	18.5000	14 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS23	32.0000	32.9000	20.5000	20 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS24	35.0000	35.9000	21.5000	20 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS25	38.0000	38.9000	23.5000	20 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS26	40.0000	40.9000	25.5000	20 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS27	45.0000	45.9000	28.5000	20 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20
IPSSS28	50.0000	50.9000	31.5000	20 to 32 by 2, 35 to 95 by 5, 100 to 200 by 20



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