

Formatting Thread Notes

Thread notes provide information about standard hole features in your design, including the values listed in the hole chart for that hole.

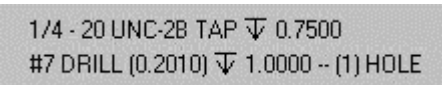
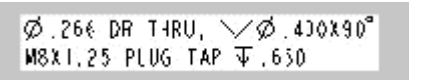
You can customize the format and information to be displayed in your thread notes by modifying the `CALLOUT_FORMAT` field in the Hole Chart

Use the following principles to customize your thread note format:

- Each parameter is preceded by an ampersand (&).
- A space should always follow a parameter name.
- Indicate line breaks with a slash (/).
- Use control characters (for example, <CTRL+A) to get an extended ASCII character.
- If the hole is a member of a pattern, use the `Pattern_No` parameter in the thread note to indicate the number of pattern holes in the pattern.

Note

*You can also edit thread notes after exiting the **HOLE** dialog box. They are the 3D notes attached to the hole features (**Tools ▶ Environment**). You can preview the thread note for a hole in the **Notes** slide-up panel when you are defining or redefining a standard hole.*

<p>UNC Note</p> <p>To display the following note, use the following text in the <code>CALLOUT_FORMAT</code> field of the hole chart:</p> <pre>&Screw_size &Thread_Series - &Thread_Class TAP <CTRL-a>x<CTRL-b> &Thread_depth / &Number_Size DRILL (&Diameter) <CTRL-a>x<CTRL-b> &Drill_Depth -- (&Pattern_No) HOLE</pre>	
<p>Metric Countersink Note</p> <p>Use the following text in the <code>CALLOUT_FORMAT</code> field of the hole chart:</p> <pre>&Diameter DRILL THRU, <CTRL-a>n<CTRL-b> - &Csink_diameter x &Csink_angle <CTRL-a>w<CTRL-b> / &Metric_size x &Pitch PLUG TAP <CTRL-a>x<CTRL-b> &Thread_Depth</pre>	

<p>Metric Counterbore Note</p> <p>Use the following text in the CALLOUT_FORMAT field of the hole chart:</p> <pre>&Diameter DRILL THRU, <CTRL-a>n<CTRL-b> - &Cbore_diameter x &Cbore_depth<CTRL-a>v<CTRL-b> / &Metric_size x &Pitch PLUG TAP <CTRL-a>x<CTRL-b> &Thread_Depth</pre>	
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Displaying Thread Notes based on Hole State

You can also define the callout format for each standard hole state by adding a DEFAULT_CALLOUT_FORMAT_DATA table below the existing THREAD_DATA table in Hole Chart. Each row of this table represents a state that the standard hole might have and the callout format that should be displayed for that state. For the current state of the hole, Pro/ENGINEER searches the corresponding row in the table and uses the callout format that you specified in the CALLOUT_FORMAT cell of the respective row.

As multiple callouts can exist in the hole table in a hole file, there is a precedence rule that determines how the callout is chosen. Default callouts are mentioned in the CALLOUT_FORMAT row and the DEFAULT_CALLOUT_FORMAT_DATA table. The default callout uses the CALLOUT_FORMAT in either of these cases:

- When CALLOUT_FORMAT contains a non-empty string and if there is no match in the DEFAULT_CALLOUT_FORMAT_DATA table
- If the DEFAULT_CALLOUT_FORMAT_DATA table is not present.

The current state of the hole determines a callout match in the DEFAULT_CALLOUT_FORMAT_DATA table. The columns HOLE_TYPE, THREAD, DRILLED_DEPTH, THREAD_DEPTH, CSINK, CBORE, and EXIT_CSINK are used for matching. The matching row is the first match from top of the table when it succeeds in matching all of the above-mentioned columns. If any of the columns contain a value of NA, it is considered a successful match for that column.



The following table lists all the possible combinations of standard hole states, with some samples of callout formats.

DEFAULT_CALLOUT_FORMAT_DATA

HOLE_TYPE	THREAD	DRILLED_DEPTH	THREAD_DEPTH	CSINK	CBORE	EXIT_CSINK	CALLOUT_FORMAT	Preview
TAPPED	YES	VAR	VAR	NO	NO	NO	&FASTENER &THREAD <CTRL-a>x<CTRL-b> &THREAD_DEPTH	10-24 2B 0.359

HOLE _TYPE	THREAD	DRILLED _DEPTH	THREAD DEPTH	DSINK	CBOR	EXIT CSINK	CALLOUT FORMAT	Preview
TAPPED	YES	VAR	VAR	YES	NO	NO		
TAPPED	YES	VAR	VAR	YES	YES	NO		
TAPPED	YES	VAR	VAR	NO	YES	NO		
TAPPED	YES	TO SEL	VAR	NO	NO	NO		
TAPPED	YES	TO SEL	VAR	YES	NO	NO		
TAPPED	YES	TO SEL	VAR	YES	YES	NO		
TAPPED	YES	TO SEL	VAR	NO	YES	NO		
TAPPED	YES	THRU NEXT	VAR	NO	NO	NO		
TAPPED	YES	THRU NEXT	VAR	YES	NO	NO		
TAPPED	YES	THRU NEXT	VAR	YES	YES	NO		
TAPPED	YES	THRU NEXT	VAR	NO	YES	NO		
TAPPED	YES	THRU UNTIL	VAR	NO	NO	NO		
TAPPED	YES	THRU UNTIL	VAR	YES	NO	NO		
TAPPED	YES	THRU UNTIL	VAR	YES	YES	NO		
TAPPED	YES	THRU UNTIL	VAR	NO	YES	NO		
TAPPED	YES	THRU _ALL	VAR	NO	NO	NO	TAP &FASTENER <CTRL-A>x &THREAD_DEPTH / TAP DRILL THRU	TAP 10-24 8.000 TAP DRILL THRU
TAPPED	YES	THRU ALL	VAR	YES	NO	NO		
TAPPED	YES	THRU ALL	VAR	YES	YES	NO		
TAPPED	YES	THRU ALL	VAR	YES	NO	YES		

HOLE _TYPE	THREAD	DRILLED DEPTH	THREAD DEPTH	SINK	BORING	EXIT CSINK	CALLOUT FORMAT	Preview
TAPPED	YES	THRU ALL	VAR	YES	YES	YES		
TAPPED	YES	THRU ALL	VAR	NO	YES	NO		
TAPPED	YES	THRU ALL	VAR	NO	YES	YES		
TAPPED	YES	THRU ALL	VAR	NO	NO	YES		
TAPPED	YES	THRU ALL	THRU	NO	NO	NO	&FASTENER &THREAD_ - &THREAD_ CLASS THRU	6-32 UNC - 2B THRU SERIES
TAPPED	YES	THRU ALL	THRU	YES	NO	NO		
TAPPED	YES	THRU ALL	THRU	YES	YES	NO		
TAPPED	YES	THRU ALL	THRU	YES	NO	YES		
TAPPED	YES	THRU ALL	THRU	YES	YES	YES		
TAPPED	YES	THRU ALL	THRU	NO	YES	NO		
TAPPED	YES	THRU ALL	THRU	NO	YES	YES		
TAPPED	YES	THRU ALL	THRU	NO	NO	YES		
DRILLE	NO	VAR	NA	NO	NO	NO	<CTRL-A>n &DIAMETER <CTRL-A>n<CTRL-B> &DRILL_DEPTH	∅ 0.10 ↴ 0.305 1,2,3
DRILLE	NO	VAR	NA	YES	NO	NO		
DRILLE	NO	VAR	NA	YES	YES	NO		
DRILLE	NO	VAR	NA	YES	NO	YES		
DRILLE	NO	VAR	NA	YES	YES	YES		
DRILLE	NO	VAR	NA	NO	YES	NO		
DRILLE	NO	VAR	NA	NO	YES	YES		
DRILLE	NO	VAR	NA	NO	NO	YES		
DRILLE	NO	THRU ALL	NA	NO	NO	NO	<CTRL-A>n &DIAMETER THRU	∅ 0.31 THRU 1,2,3

HOLE _TYPE	THREA D	DRILLE D _DEPTH	DRILLE D _DEPTH	DSINK	CBOR	EXIT CSINK	CALLOUT _FORMAT	Preview
DRILLE	NO	THRU _ALL	NA	YES	NO	NO	<CTRL-A>n<CTRL-B> &DIAMETE THRU / <CTRL-A>w<CTRL-B> <CTRL-A>n<CTRL-B> &CSINKDIAM x &CSINKANGLE[.0] <CTRL-A>\$<CTRL-B>	
DRILLE	NO	THRU ALL	NA	YES	YES	NO		
DRILLE	NO	THRU ALL	NA	YES	NO	YES		
DRILLE	NO	THRU ALL	NA	YES	YES	YES		
DRILLE	NO	THRU _ALL	NA	NO	YES	NO	<CTRL-A>n<CTRL-B> &DIAMETE THRU / <CTRL-A>v<CTRL-B> <CTRL-A>n<CTRL-B> &CBOREDIAM <CTRL-A>x<CTRL-B> &CBORDEPTH	
DRILLE	NO	THRU ALL	NA	NO	YES	YES		
DRILLE	NO	THRU ALL	NA	NO	NO	YES		
DRILLE	NO	TO _SEL	VAR	NO	NO	NO		
DRILLE	NO	TO _SEL	VAR	YES	NO	NO		
DRILLE	NO	TO _SEL	VAR	YES	YES	NO		
DRILLE	NO	TO _SEL	VAR	NO	YES	NO		
DRILLE	NO	THRU NEXT	VAR	NO	NO	NO		
DRILLE	NO	THRU NEXT	VAR	YES	NO	NO		
DRILLE	NO	THRU NEXT	VAR	YES	YES	NO		
DRILLE	NO	THRU NEXT	VAR	NO	YES	NO		

HOLE _TYPE	THREAD	DRILLED _DEPTH	THREAD DEPTH	CSINK	CBOR	EXIT CSINK	CALLOUT _FORMAT	Preview
DRILLE	NO	THRU UNTIL	VAR	NO	NO	NO		
DRILLE	NO	THRU UNTIL	VAR	YES	NO	NO		
DRILLE	NO	THRU UNTIL	VAR	YES	YES	NO		
DRILLE	NO	THRU UNTIL	VAR	NO	YES	NO		
CLEAR	NO	THRU _ALL	NA	NO	NO	NO		
CLEAR	NO	THRU ALL	NA	YES	NO	NO		
CLEAR	NO	THRU ALL	NA	YES	YES	NO		
CLEAR	NO	THRU ALL	NA	YES	NO	YES		
CLEAR	NO	THRU ALL	NA	YES	YES	YES		
CLEAR	NO	THRU ALL	NA	NO	YES	NO		
CLEAR	NO	THRU ALL	NA	NO	YES	YES		
CLEAR	NO	THRU ALL	NA	NO	NO	YES		
CLEAR	NO	THRU NEXT	NA	NO	NO	NO		
CLEAR	NO	THRU NEXT	NA	YES	NO	NO		
CLEAR	NO	THRU NEXT	NA	YES	YES	NO		
CLEAR	NO	THRU NEXT	NA	NO	YES	NO		
CLEAR	NO	THRU UNTIL	NA	NO	NO	NO		
CLEAR	NO	THRU UNTIL	NA	YES	NO	NO		
CLEAR	NO	THRU UNTIL	NA	YES	YES	NO		
CLEAR	NO	THRU UNTIL	NA	NO	YES	NO		

HOLE _TYPE	THREAD	DRILLED _DEPTH	THREAD DEPTH	CSINK	CBOR	EXIT CSINK	CALLOUT FORMAT	Preview
CLEAR	NO	TO SE	INA	NO	NO	NO		
CLEAR	NO	TO SE	INA	YES	NO	NO		
CLEAR	NO	TO SE	INA	YES	YES	NO		
CLEAR	NO	TO SE	INA	NO	YES	NO		
TAPER	YES	VAR	VAR	NO	NO	NO		
TAPER	YES	VAR	VAR	YES	NO	NO		
TAPER	YES	VAR	VAR	YES	YES	NO		
TAPER	YES	VAR	VAR	NO	YES	NO		