



Diameter Correction Tool for thread mills

E-DCT

Volume 1



KEY FEATURES: E-DCT



1 Diameter correction tool for thread milled hole

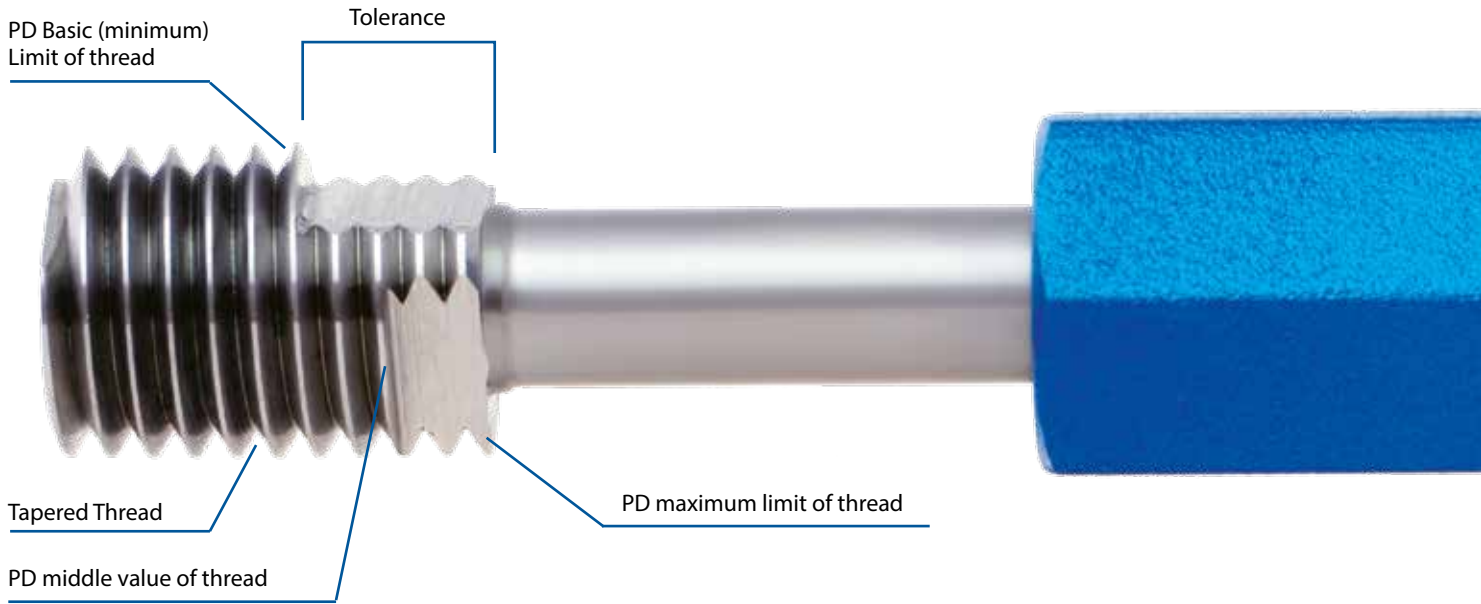
2 Reduce the set up and machining time

3 Measuring level at the workpiece surface

4 Estimate the position within tolerance by notch

E-DCT: KEY FEATURES & BENEFITS

E-DCT Specification



Judgement of internal thread with E-DCT

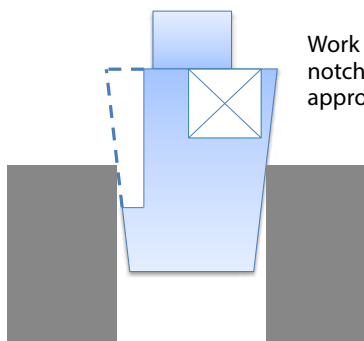


| Hole No. | 1 | 2 | 3 | 4 | 5 |
|---------------------------------|-----------------------------------|-----------------------------------------------|-------------------------|-----------|-------------------------------------------------|
| Position of gauge (depth) E-DCT | | | | | |
| GP gauge go through | NG | NG | NG (not go through) | OK | OK |
| NP gauge stop | OK | OK | OK | OK | NG |
| Judgement | NG (-) | NG (0) | NG | OK | NG (+) |
| Reason of Judgement | Smaller than Basic Pitch Diameter | Pitch Diameter is around Basic Pitch Diameter | Internal thread Tapered | | Larger than maximum tolerance of Pitch Diameter |

1. Estimate the PD by position of the notches



1.1 Work surface is between 1st notch and 2nd notch

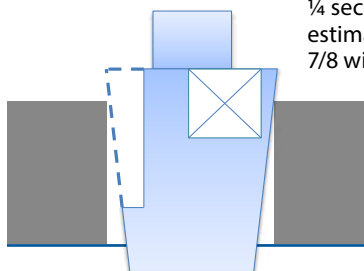


Work surface is between 1st notch and 2nd notch, which is approx. 1/4 of PD tolerance.

Example: M10X1.5 6H
Tolerance
9.026 +0.180 / 0
 $+0.180 \times 1/4 = +0.045$

PD of the thread is about +0.045

1.2 Work surface is between 2nd notch and 3rd notch

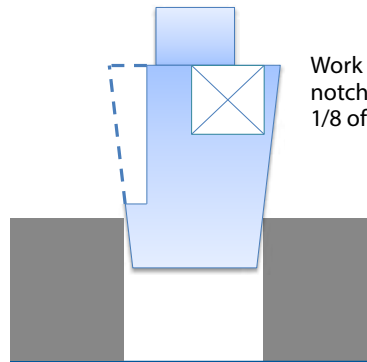
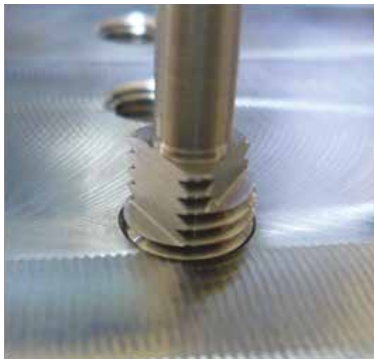


Work surface is at upper position about 1/4 second and third notch. Soof you can estimate PD is about 7/8 within tolerance.

Example: M10X1.5 6H
Tolerance
9.026 +0.180 / 0
 $+0.180 \times 7/8 = +0.158$

PD of the thread is about +0.160

1.3 Work surface is below the first notch (minimum limit)

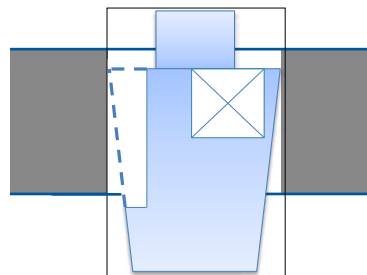
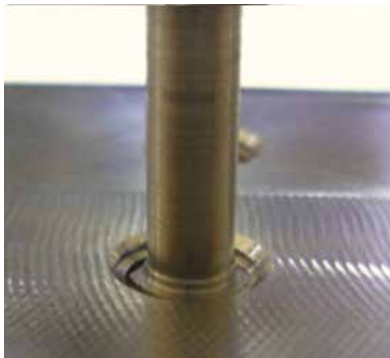


Work surface is below the first notch (Bottom Limit), about 1/8 of PD tolerance.

Example: M10X1.5 6H
Tolerance
9.026 +0.180 / 0
+0.180X -1/8=-0.023

PD of the thread is about -0.020. (Not pass for small PD)

1.4 Work surface is over the 3rd notch (maximum limit)



Work surface is over the 3rd notch (maximum Limit), about 1/8 of PD tolerance.

Example: M10X1.5 6H
Tolerance
9.026 +0.180 / 0
+0.180X +9/8= +0.203

PD of the thread is about +0.203. (Not pass for large PD)

How to calculate the correction value?

- 1) After threadmilling inspect the female thread with a plug gauge GP-NP.
- 2) After process 1), inspect position of pitch diameter with "E-DCT"
- 3) Notch ① indicates the tolerance of the pitch diameter.
Notch ② indicates medium value of tolerance and over.

E-DCT shows pitch diameter value is around 0 in the below photo.



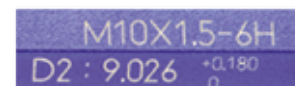
Ex) M10X1.5-6H Tolerance of pitch diameter is 0.180
pitch diameter value is around 0 as show on left photo.
If target value is 75% of tolerance , threadmill should rotate larger.

Correction value should be

- Based on diameter = 0.180x75%=0.135
- Based on semi-diameter = 0.135/2=0.068

Tolerance of pitch diameter is marked on shank of E-DCT.

Tolerance of pitch diameter x ratio of notch(%) = correction value.



E-DCT

Threading | Measuring | UNJC | UNJF



- Diameter correction tool for thread mill
- Reduce the set up and machining time

UNJC

UNJF

For 3B

| EDP | Thread size | | Price |
|----------|-------------|--------|-------|
| G1609623 | 1/4 - 20 | UN(J)C | |
| G1609624 | 1/4 - 28 | UN(J)F | |
| G1609625 | 5/16 - 18 | UN(J)C | |
| G1609626 | 5/16 - 24 | UN(J)F | |
| G1609627 | 3/8 - 16 | UN(J)C | |
| G1609628 | 3/8 - 24 | UN(J)F | |
| G1609631 | 1/2 - 13 | UN(J)C | |
| G1609632 | 1/2 - 20 | UN(J)F | |
| G1609635 | 5/8 - 11 | UN(J)C | |
| G1609636 | 5/8 - 18 | UN(J)F | |
| G1609638 | 3/4 - 16 | UN(J)F | |
| | | | |
| | | | |
| | | | |
| | | | |

For EG-3B Helicoil

| EDP | Thread size | | Price |
|----------|-------------|--------|-------|
| G1609723 | 1/4 - 20 | UN(J)C | |
| G1609724 | 1/4 - 28 | UN(J)F | |
| G1609726 | 5/16 - 24 | UN(J)F | |
| G1609728 | 3/8 - 24 | UN(J)F | |
| G1609731 | 1/2 - 13 | UN(J)C | |
| G1609732 | 1/2 - 20 | UN(J)F | |
| G1609736 | 5/8 - 18 | UN(J)F | |
| G1609738 | 3/4 - 16 | UN(J)F | |
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| | | | |
| | | | |

Threading | Measuring



UNJF



shaping your dreams

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