



PowerLOC Indexable End Mill



Problem

- Inaccuracy of indexable end mill shanks.
- Slippage(axial tool movement)
- Inability to remove the steel tool shanks from high technology ShrinkFIT chucks.

Solution

- Develop a shank that works with collet chucks and ShrinkFIT holders.
- Reduced diameter for ShrinkFIT Technology.
- Develop a square on the back of the shank to eliminate any tool pressure slippage.

Advantages & Benefits

- Extend tool life or increase feed rates.
- Use indexable end mills in the two most accurate toolholders - Collet Chucks and ShrinkFIT.

T.I.R Causes Vibration. Vibration Causes Poor Cutting and Premature Failure in Inserts.



Typical Tolerance of a $\varnothing 20\text{mm}$ Indexable End Mill

Shank Diameter = 20mm

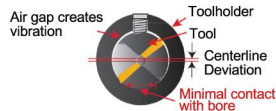
Shank Tolerance = -0.023mm
+ 0mm

ID Tolerance of End Mill Holder = +0.023mm
0mm

Total Out of Tolerance = 0.046mm

For Every 0.003mm T.I.R.,
Cutting Tools Lose 10% Tool Life.

0.046mm T.I.R Typical Use: End Mill Holder



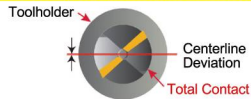
Average tool life

0.01mm T.I.R Better Option: PowerLOC Collet Chuck



Up to 25% more tool life

0.005mm T.I.R Best Option: ShrinkLOC Holder



Up to 50% additional tool life



PowerLOC Square Shank Adapter

Use with ER collet chucks
and PowerLOC
indexable end
mills and turn
them into
PowerLOC
milling
holders.

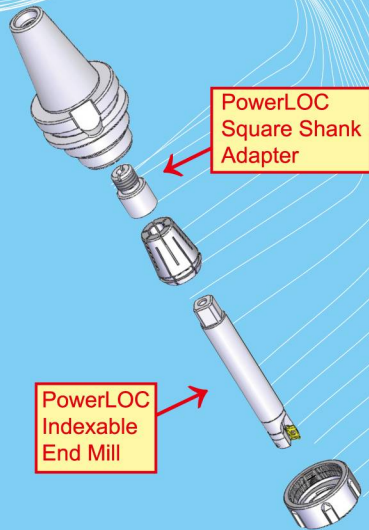


PowerLOC Square
Shank Adapter

T W PAT. NO. M408428
J P PAT. NO. 3168351
D E PAT. NO. Nr. 202011004740.7

Adapts ER Chucks into PowerLOC Milling Holders:

PowerLoc Square Shank Adapters turn our standard collet chucks into milling holders capable of performing heavier milling jobs than you ever thought possible.



We're Making a Better Connection
Between the Cutting Tool and Spindle.