

Innovate

## Kennametal Introduces its Mill 4-12KT, the Next Generation of Tangential Shoulder Milling

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*New tangential shoulder mill features an innovative triangular-shaped margin design providing cutting edges with exceptional strength.*

Kennametal recently announced its new **Mill 4-12<sup>KT</sup>**, the next generation of tangential shoulder mills, producing high quality floor surface finishes for nearly all steel and cast-iron applications.

"The Mill 4-12<sup>KT</sup> uses 15% lower cutting forces, an important consideration with today's lighter-duty, 40-taper machine tools," said Tim Marshall, Senior Global Product Manager. "That allows customers to feed faster without putting additional stress on the spindle. And in long overhang situations or where the part fixturing is less than optimal, lower forces equate to less chatter, reduced edge chipping, and smoother surface finishes."

Mill 4-12<sup>KT</sup> has tangentially mounted inserts with four cutting edges per insert for reduced tooling costs. Seven corner radii from 0.016" (0.4 mm) to 0.122" (3.1 mm) are available, along with coolant-through, medium and coarse pitch cutter bodies 2" (50mm) to 8" (200mm) in diameter. With an axial depth of cut range from 0.019" to 0.472" (0.5 to 12mm), Mill 4-12<sup>KT</sup> covers most shoulder milling applications.

Multiple factors contribute to significant performance increases, even in aggressive cutting conditions:

1. The tangential, "on-edge" insert design also allows the insert to take advantage of the strength of the carbide thickness more so than radially mounted inserts found on traditional milling cutters.
2. A shallow pocket design allows the core size of the cutter body to be very robust.
3. The axial and radial seating surface designs provide exceptional stability.

The Mill 4-12<sup>KT</sup> is the perfect complement to Kennametal's existing shoulder milling portfolio. This includes the Mill 4-11 and Mill 4-15, cutters known for their ability to generate shoulders with high quality wall surface finishes.

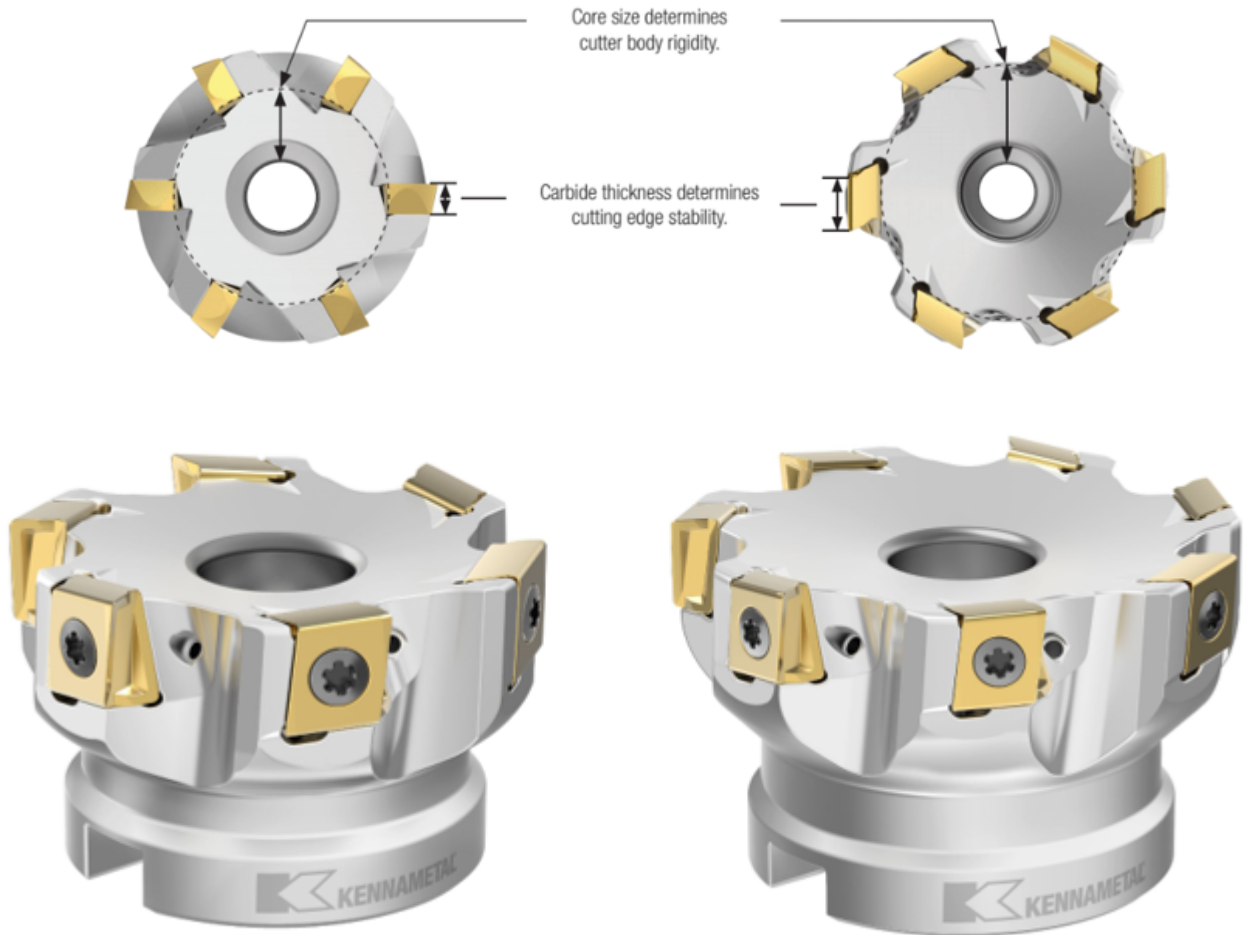
## Comparison

### Radially Mounted

- Requires large pocket; reduces the core size of the cutter.
- Allows very small diameter cutter bodies.
- Access to insert screw can be tough.

### Tangentially Mounted

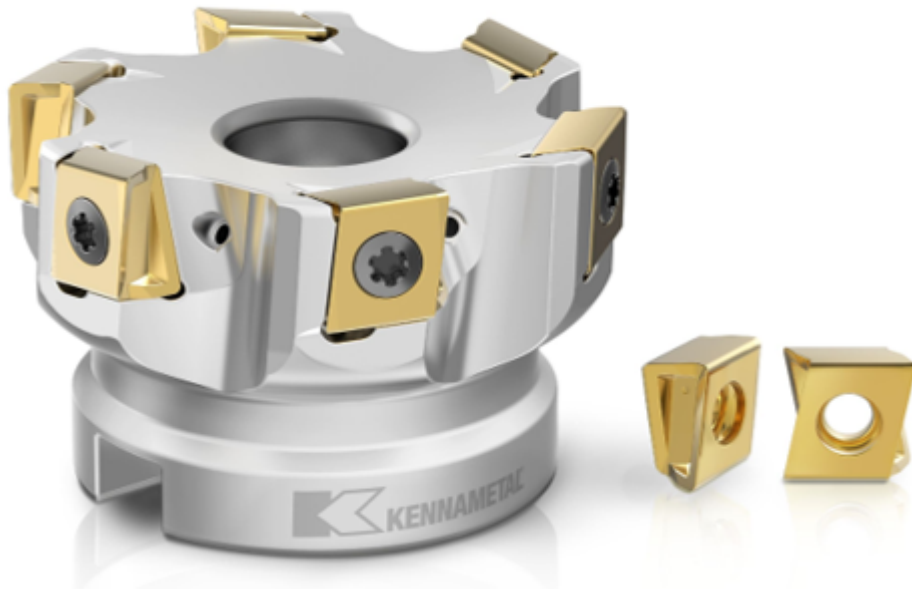
- A shallow pocket allows for large core size of the cutter.
- Very strong cutting edge.
- Easy access to insert screw.



Mill 4-12KT cutter bodies are available in medium and coarse pitch.



The innovative triangular-shaped margin on the new Mill 4-12KT provides cutting edges with exceptional strength.



Mill 4-12KT has tangentially mounted inserts with four cutting edges per insert for reduced tooling costs.

*For more information on the Mill 4-12<sup>KT</sup> and to browse the selection of mills and inserts, go to [MSCDirect.com](http://MSCDirect.com).*

[www.mscdirect.com/betterMRO](http://www.mscdirect.com/betterMRO)

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