

NEW - FMAX MB TYPE - COARSE PITCH

Mitsubishi Materials has now extended its range of high feed FMAX cutters for finish machining.

In a reversal of the existing philiosphy of a large number of teeth, the new MB type is designed with a minimum number of teeth to facilitate fine finish machining of non rigid components or when milling on smaller, less robust machining centres. The effect of fewer teeth lessens the cutting force but maintains the existing insert mounting and fine cutting edge adjustment functions.



NEW MB TYPE

The F-MAX face milling range has been specified with indexable PCD inserts for machining aluminium alloy materials that are commonly used in the aerospace and automotive sectors. Benefits over competitors milling tools are realised through the ultra fine pitch design that enables milling at feed rates beyond 20m/min.

To achieve such impressive speed and feed rates, the FMAX consists of a lightweight and robust tool body design that combines alloy steel and aluminium to maximise rigidity and performance whilst simultaneously reducing stress on the machine tool spindle. This lightweight design combines with the anti-fly dovetail clamping mechanism of the insert pockets to enhance rigidity and resistance to forces during high speed machining. The indexable inserts also incorporate an angled face to increase the clamping forces on the insert.





In addition, the insert pockets have a chip breaker wall (body-protector) on the rake face that helps to form chip shapes and dispose the swarf away from the cutting area. To guarantee that swarf is disposed of efficiently, FMAX has the facility for through coolant with the jets directed at the cutting edge of each insert. The through coolant design is compatible with all standard through-coolant milling arbors. A fine pitch insert adjustment screw as well as a secondary ultra-fine adjustment nut provides a precise run-out adjustment of better than 5 microns. This easy to use adjustment system guarantees surface finishes and unparalleled precision.

Fine and super fine pitch adjustment screws



The existing range of coarse, fine and super fine pitch FMAX cutters are capable of machining up to a maximum 2mm depth of cut, and can run up to vc 3000 (m/min) to provide extreme feeds and material removal rates. Machining at such high speeds is the result of not just the robust and lightweight body, but also the MD2030 PCD insert grade.This diamond sintered grade contains ultra micro-particle diamond that improves fracture resistance during interrupted cutting whilst offering an extremely stable cutting edge. To reduce costs for the end-user, the MD2030 PCD inserts can also be re-ground to extend tool life.

The new MB type is available with a selection of diameters that includes 50, 63, 80, 100 each with 4 teeth and a \emptyset 125mm with 6 teeth.



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