

2 NEW TYPES OF ALIMASTER END MILLS

Mitsubishi Materials renowned range of solid carbide end mills includes the Alimaster series, designed specifically for ultra high efficiency milling of aluminium alloys.

The latest additions to the series are a 3 flute square corner type the A3SA / DLC3SA, and the A3SARB / DLC3SARB, a 3 flute corner radius type. Both types are available uncoated and also with the new DLC coating.

Development of the whole Alimaster range has progressed by optimising the micro grain carbide substrate together with the latest ideas in flute and cutting edge geometry. The combination of these features has been proven over time and has enabled Alimaster to gain an advantage in today's ultra competitive aluminium alloy material machining market. Some of the range now comes with a new and technologically advanced, eye-catching, DLC coating.

New Coating Technology

The uniquely developed DLC coating provides the ultimate welding resistance during high speed machining and is especially effective when the coolant supply is reduced. Additionally, the low coefficient of friction reduces cutting resistance in all modes of cutting and helps to provide smooth chip evacuation to prevent the common problem of flute clogging when machining aluminium alloys at high feeds and speeds.

Helical Through Coolant Holes

Helical holes maintain a stable coolant supply even after re-grinding. This means chip discharge during plunging,



ramping and grooving has been significantly improved, for stable, high efficiency cutting.

Optimum End and Flute Geometry

Both of these new Alimaster types feature irregular helix and polished flutes. The irregular flute geometry suppresses chatter to enable excellent surface finishes and the highly polished flute surfaces prevent built up edge and aids chip evacuation during full width cutting and plunging. In addition the centre cutting edges have been optimised to provide extra strength and reliability even during plunging.

To complete the innovative range of features on all of the new types, a smooth radius geometry is formed at the exit of the flutes that prevents tool overlap marks on the workpiece after deep wall machining.

The A3SA / DLC3SA square corner type is available from $\varnothing 12 \sim \varnothing 25$ and the A3SARB / DLC3SARB also in diameters $12 \sim 25$ with a range of corner radii from 1.0 mm \sim 5.0 mm.

