

January 11, 2010

**Aerospace technology adopted:**

**The new lightweight construction series from HAINBUCH**

MARBACH. Higher productivity, lower energy consumption and offloading of the machine-drive – these are the highlights of the new carbon, ultra-light clamping devices that HAINBUCH, the clamping device manufacturer, now offers for machine tools as well as for machining centers. Thanks to the new material the new Carbon Fiber clamping devices are as much as two thirds lighter than the standard versions, however they are even stronger and more rigid – with identical clamping force values.

**Low weight, a lot to offer**

By its nature carbon fibre reinforced plastic is extremely light and extremely rigid, good reasons why to this point it has been primarily used in the aerospace industry and for various high-performance sports. However now HAINBUCH has also discovered the advantages of this lightweight and optimized it for HAINBUCH's purposes. The results are chucks that consist of multiple plastic fiber layers that are successively embedded in an epoxy resin matrix. A complex process that requires a lot of experience and even more finger-tip sensitivity.

The result is impressive: The force-actuated TOPlus and the manually-actuated TOROK clamps open the new product series in the machine tool area of lightweight constructions. Users will be pleased and not just due to faster acceleration or delay of the machine spindle. Thanks to the faster machine cycle times, productivity is also increased. And in addition, thanks to the low-weight, energy consumption is low, set-up is extremely user-friendly, and the machine drive has a significantly lower load. And all this with increased strength and stiffness.

**Stationary it's also a good choice**

The lightweight version of the manual-actuation MANOK plus stationary chuck is designed for implementation on milling machines and machining centers with low load weight. The aluminum flange – in conjunction with the Carbon Fiber base structure – allows a weight reduction of approximately 2/3 relatively to the standard version. In addition, the lightweight construction variant of the MANOK plus substantially minimizes the interference contour and offers impressive dynamic machining on 5-axis machines, and not just through low energy consumption and less centrifugal forces. Here as well the low weight offloads the machine drive and has a positive effect on positioning accuracy and user friendly set-up.

**Photos:**

01\_HAINBUCH\_CFK.jpg

The new lightweight construction series from HAINBUCH is made of ultra-light carbon, nonetheless it is extremely rigid. It is available for lathes as well as for milling machines.

02\_HAINBUCH\_CFK.jpg

Multiple layers of plastic fibers successively embedded in an epoxy resin matrix – this is what makes the lightweights from HAINBUCH so unique.

03\_HAINBUCH\_CFK.jpg

Carbon Fiber chucks are as much as two-thirds lighter than the standard versions. For the manual-actuation MANOK plus stationary chuck the benefits of the low weight are also reflected in a significantly minimized interference contour.

04\_HAINBUCH\_CFK.pdf

The minimized mass inertia of the lightweight construction chuck reduces ramp-up time by approx. -30%.

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