

Production cycle time shortened by optimized feed rate

Adaptive Control from ARTIS

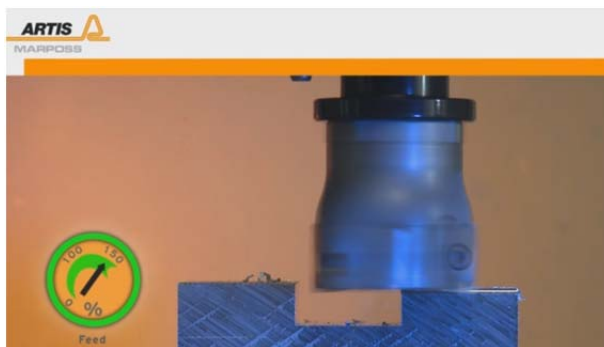
In metal cutting processes, the ideal processing speed depends on many factors. ARTIS has developed the function Adaptive Control (AC) which optimizes the feed rate to match processing. Without changing overall spindle power, the function regulates the feed rate automatically within pre-set limits, the make best use of the machine's capacity all of the time.

At the beginning and the end of metal working processes as well as during any idle periods, a higher feed rate is used. The level of increase is pre-set, e.g. at 130 % of normal. As soon as material contact is made, the feed rate is immediately reduced to 100 %. Using this function, metal working processes can be shortened by up to 15 %.

Another aspect of optimization is protection of the machine and the tool. Under certain circumstances, normal processing speeds may be too fast, for example if the work piece has dimensional deviations or if the material has hardness variations. The option of setting a lower feed rate throughout the machining process can impact economic viability. During processing, the feed rate is only slowed down by the AC as necessary to avoid overloading and damage.

Basically, the adaptive control function helps reduce cycle times, improve tool lifetime and raise overall machine availability. ARTIS offers Adaptive Control as option for its systems CTM and Genior Modular. Another alternative is to integrate Adaptive Control as a pure software solution in the machine control system.

1,477 characters, including blanks



Caption: ARTIS Adaptive Control increases feed rate in idle to a pre-set level and reduces it again at material contact. This delivers real reductions in metal-working times.