Simple, real-time monitoring of small-diameter tool condition is possible

In many machining operations, the most critical machining processes involve small-diameter tools. Until now, monitoring power was not considered a good way to control the integrity of such tooling because the monitoring systems available in the market simply did not allow it. Often including low-sensitivity sensors, like Hall effect sensors, Rogowski coils, or even Digital Drive Data (data values available on the control bus of the drive motor electronics), these systems were just not able to detect the power variations generated by small-diameter tools. Keep in mind that the power consumption of a 0.1mm drill in steel is only around 0.2 watts! When the resolution of the system you install is no better than 1 or 2 watts, there is no chance to detect anything about the tool.

So, the only solutions available were post-process technologies such as mechanical probes, wands, or lasers. These systems are quite complicated to install, maintain, and they can significantly increase your cycle time (by at least 1.5 seconds per tool that is monitored).

Change the rules with WattPilote

WattPilote has changed the game: Thanks to its unique sensing technology and unequalled sensitivity, this system smashes through the traditional limitations seen when monitoring spindle and axis motor power. Digital Way has successful applications in which we control 0.2mm drills driven by 5.5kW motors.

Don’t Waste time anymore

WattPilote will control the power variations of your process in real-time. This means that your machine will not lose time because of post-process tool checking. And remember that lasers have difficulty reliably detecting tools that are much less than 1mm in diameter. And these same tools often break when they come into contact with mechanical probes or wands.

Use it anywhere

Thanks to its compact design, WattPilote can easily be installed on any kind of machine, from machining centers, to special compact drilling machines. It works with any kind of motors, regardless of their power rating, from 100 watts to 100kW.