

G 660 Spring End Grinding Machine – The Big Sister of the G 450



Fig. 1 WAFIOS G 660 Spring end grinding machine

WAFIOS is introducing the single- and dual-plate spring end grinding machine G 660 and is thus completing the G 450 series presented in 2017. This latest innovation aims to strengthen the company's market position in relation to spring end grinding. The G 660 is equipped with grinding wheels of 660 mm diameter and loading plates of 740 mm diameter. They allow a smooth grinding of spring ends of up to 13 mm wire diameter.

As is the case with other WAFIOS machines, the G 660 is installed with the latest version of the WAFIOS WPS EasyWay 3.2 control program which is easy to use and boasts a high level of operational safety. This control system is ready for operation in future Industry 4.0 applications, such as "Predictive Maintenance" or "Smart Machine". Successful features of the G 450 machine have also been adopted and refined, including e.g. iQtemperature. iQtemperature allows the in-process measurement of the workpieces' temperature which can thus be controlled in accordance with process instructions. This significantly increases production rates while also guaranteeing that quality standards are met.

Alongside this patented, unique selling point, the machines also include the WAFIOS particulate deflector that is also patented. It consists of a special coating of the extraction channel that effectively reduces soiling, grinding deposit, and other dirt to a minimum, thereby reducing both maintenance and upkeep costs. The automatic generation of a basic spring end grinding program on the basis of the spring data entered, makes it possible to start production quickly and to process small and very small batch sizes. In combination with the reliable spring length measuring device, ground spring ends of highest quality are the result.

The newly developed modular loading system optimizes the spring end grinding process for batch sizes from 5,000 springs. The loading units' extremely short set-up times enable the processing of a large range of springs. In most cases, changing over to a different spring size is possible within few minutes and without the help of any tools.

The latest software option *iQbestload* increases productivity by optimizing the use of the machine and loading unit. Also, the workpiece quality is improved as the further processing of the bottom end of the spring, after the end of the grinding cycle while waiting for the end of the loading cycle, is prevented. This is made possible by a predefined, incomplete loading of the loading plate during the indexed, automatic loading process. The loading plate is predefined with gaps that are skipped during the loading process. As a result, the loading time can be reduced.

The basic scope of the machine has also been enhanced in comparison to the previous model so that even the standard version now constitutes a fully functioning machine capable of carrying out the majority of applications commonly required in the industry, including spring length measurement, active process cooling and VPN access to the machine. While the former measures the uncoiled spring lengths at the end of the grinding process to guarantee the minimum batch tolerance, active process cooling ensures the safe removal of the grinding deposit in the grinding room.

In a nutshell, the main technical features of the comprehensive standard equipment package comprise the WPS 3.2 EasyWay programming system as well as numerous hardware and software options.