

# vector:on Media Speed Management

## Adaptive and Reliable Media Speed Management

Process reliability and efficiency through automatic setting of desired media speed in shot peening machines with vector:on Media Speed Management

Compliance with specified process parameters in demanding shot peening applications forms the basis for quality, reliability and repeatability in the process. As one of the essential process parameters, the media speed during shot peening must be kept within narrow tolerances. However, by varying the relevant peening pressure setting, an unknown velocity of the media is established.

With **vector:on**, sentenso offers the reliable solution for process management of the media speed. The system actively meets the biggest challenge of reliable peening intensity, the uncertainties of uncontrolled changes in media velocities due to the influences of progressing wear of the nozzle and blast hose. **vector:on** enables the operator to measure media velocities automatically, to set the correct velocity for the process and to check it at any time when necessary.



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# Setup and Functions

**vector:on** is a measuring system which, with the aid of a high-speed camera and the associated **VelocityEasy** evaluation software, generates characteristic curves of media velocities depending on different peening pressure settings fully automatically. In this **adjustment** procedure the respective curves are stored in the system control – taking the media flow rate into account, which also influences the media acceleration in the nozzle.

During the subsequent **calibration**, a desired particle velocity is automatically set. In doing so, the system calculates the suitable peening pressure and finally performs a test measurement for confirmation.



In the normal peening process, a PLC then takes over the adjustment of the peening pressure required for the desired media velocity. All components are integrated into the shot peening machine in such a way that the adjustment and calibration can be performed live and automatic as well as under real operating conditions. In compressed air peening or blasting systems, the media velocity behind the nozzle can be recorded directly via a measuring set-up consisting of a high-speed camera and an illumination unit.

The entire adjustment and calibration procedure runs completely automatically and usually requires no intervention by the operator. These procedures can be called up at any time and thus ensure outstanding process reliability in media flow management.



The procedure steps required for this are conveniently carried out from the machine operating panel and consist of:

- Data acquisition
- Adjustment with characteristic curve acquisition
- Calibration of the system to check the achieved accuracy
- Output of a calibration certificate

