

Press release

KVC 621 SE: the new compact testing solution for mass-produced stamped parts

Automated system tests up to 4,000 parts per minute

Winterthur, October 2023

Inspection with the usual standard of precision, plus innovative testing technology in a new housing: with a width of only 600 millimeters and fast throughput times, the KVC 621 SE automated testing system is the ideal solution for mass-produced stamped parts. As many as 4,000 parts pass through this automatic system each minute – and testing of every single one of them is guaranteed. The largely standardized design means that customers can also expect the services and quality they are used to, combined with improved availability for delivery at an attractive cost-to-benefit ratio.

There are many production environments where every square centimeter is crucial: stamped part manufacturers are among those who have to utilize the space available for their production processes as efficiently as possible. Knowing this, Kistler has developed the compact KVC 621 SE automated optical testing system specifically for quality control in mass production.

This new system handles all testing jobs within a housing that is only 600 millimeters wide and 900 millimeters deep – with the added advantage of fast and straightforward installation. Unlike pneumatic solutions, the KVC 621 SE is not reliant on compressed air thanks to its fully electromechanical drive. A digital feedthrough loop also enables users to save valuable space by positioning the automated testing system closer to the stamping press. The KVC 621 SE comes equipped as standard with up to three integrated camera stations and a sensitive touchscreen so the system can be delivered and commissioned quickly – within only four to six weeks.

Precise and rapid testing of stamped parts

Stamped parts undergo optical inspection in the automated testing system: cameras capture the workpieces from various viewing angles; the KiVision image processing software – developed by Kistler – evaluates the photographs to detect deviations in dimensions or contours as well as relevant surface defects. With KiVision 5.3 and all later versions, users can create their own command macros that make it easier to perform complex testing jobs. Depending on the nature of the tested parts and the requirements, this software also allows anomaly detection based on artificial intelligence. KiVision

is especially suitable for use in case of previously unknown surface defects or those that change frequently – such as defects that occur when inspecting weld points, for example.

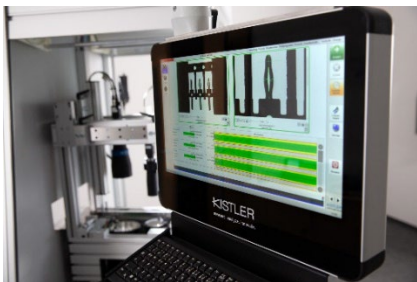
In continuous operation, the automated system can test as many as 4,000 stamped parts per minute. Even with these cycle times, the integrated safety concepts ensure that the testing process is absolutely reliable. Thanks to rigorous PLC monitoring of the individual processes and the handshake, the automated system is guaranteed to capture and test every single workpiece. The benefit: the KVC 621 SE ensures that only OK parts are wound onto the reels in the downstream process steps – so manufacturers can count on consistent top product quality.

Lifetime advice and support – from initial inquiry to upgrade

Kistler's experts are standing by to assist users throughout the product's lifetime – from the initial inquiry and choice of testing parameters to installation, maintenance and machine upgrades. Our team brings together expertise in all the necessary fields, from mechanical engineering to image processing, and they work hand-in-hand to ensure seamless support. This also includes tailored on-site training and advisory services for employees.

What's more, users benefit from straightforward remote maintenance: if the automated system has a LAN connection, Kistler's technicians can quickly and efficiently support and check all electrical components – with no need to travel to the customer's site. The advantages: higher machine availability combined with lower maintenance costs.

Image material (please name the Kistler Group as picture source)



The KiVision software developed by Kistler analyzes test images, detects anomalies and allows users to create their own command macros.



With the new compact KVC 621 SE automated testing system, manufacturers can check up to 4,000 stamped parts per minute for defects.

About the Kistler Group

Kistler is the global market leader for dynamic pressure, force, torque and acceleration measurement technology. Cutting-edge technologies provide the basis for Kistler's modular solutions. Customers in industry and scientific research benefit from Kistler's experience as a development partner, enabling them to optimize their products and processes so as to secure sustainable competitive edge. Unique sensor technology from this owner-managed Swiss corporation helps to shape future innovations not only in automotive development and industrial automation but also in many newly emerging sectors. Drawing on our extensive application expertise, and always with an absolute commitment to quality, Kistler plays a key part in the ongoing development of the latest megatrends. The focus is on issues such as electrified drive technology, autonomous driving, emission reduction and Industry 4.0. Some 2,000 employees at more than 60 facilities across the globe are dedicated to the development of new solutions, and they offer application-specific services at the local level. Ever since it was founded in 1959, the Kistler Group has grown hand-in-hand with its customers and in 2022, it posted sales of CHF 434 million. About 8% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.