

Press Release

Inspecting Heavy Assemblies with 3D AOI and X-Ray

Hanover, March 1, 2021 – Current trends in e-mobility are moving towards ever-larger and heavier electronic assemblies, a development which has thus far made inspection using inline inspection systems difficult. To achieve a defect tolerance of zero, randomly performing manual inspections is not sufficient as an alternative. Now, to meet the need for a solution for these inspection objects, such as power electronics, Viscom has developed a handling system capable of inspecting assemblies weighing up to 15 kg. With additional project-specific modifications, the new system can also inline inspect significantly heavier objects weighing up to 40 kg.

For electric drives and engine control units in the automotive industry, in telecommunications, in medical technology and in industrial technology, the need for inspection solutions for heavy electronic assemblies is on the rise. These assemblies are often very complex and populated with large components and sockets or completely assembled even before solder joint inspection is performed. To meet the need for flexible handling of large and heavy objects which need to be inspected fully automatically in the process line, Viscom has developed the new Heavy Flex handling solution. The Heavy Flex handling options are available for Viscom's S3016 ultra system for optical inline 3D inspection from below, for the S3088 series 3D AOI systems, as well as for the iX7059 3D X-ray systems.

The Heavy Flex handling options make it possible to inline inspect PCBs weighing up to 15 kg and measuring up to 450 x 400 mm, by means of both automatic optical inspection (3D AOI) and automatic X-ray inspection (3D AXI). The inspection system can also be optionally outfitted to automatically inspect assemblies on workpiece carriers or inspection objects weighing up to 40 kg – all without altering the inspection system's control components or



dimensions. Thanks to the new handling concept, even very heavy inspection objects can be transported at a speed of up to 600 mm/s.

As a systems developer, Viscom also offers customer-specific solutions. The modular system design makes it possible to develop a complete specific solution if the customer's existing process line transport system needs to be integrated into the optical or X-ray inline inspection. To ensure a seamless connection, Heavy Flex supports integration of commercially available transport systems for the fully automatic transport of assemblies on workpiece carriers. The connection is made by means of well-known standard interfaces. Thanks to the modular design principle, up to 70 percent of the work necessary to meet the customer's specific needs in a custom transport integration project can be covered already at the start of the project. Additional assembly-specific adjustments and process integration at the customer's facility normally require only a few man-days.





With the new Heavy Flex handling options, even extremely heavy inspection objects can now for the first time be inspected fully automatically in the process line using 3D AOI and 3D AXI. (Photo: Viscom AG)



About Viscom

Founded in 1984, Viscom AG is one of the leading suppliers worldwide in the field of assembly inspection within electronics production. With its headquarters and production site in Hanover, Germany, the company develops, produces and sells high-quality inspection systems from the areas of AOI, SPI, AXI and MXI bond inspection as well as as well as conformal coating inspection. The systems from Hanover set high standards in terms of accuracy and speed. The product range covers the complete spectrum of optical inspection and X-ray inspection for small-and medium-sized companies as well as for large series production. Viscom systems are used for 100% automatic inspection of electronic assemblies such as those used in the production of automotive electronics, aerospace technology or in the manufacture of telecommunications electronics.

Product development also focuses on customer-specific system developments and networking with other production processes for smart factory applications. In order to achieve this, Viscom AG increasingly invests in its own software and hardware development which is constantly defining new standards in inspection technology.

International sales are handled by a broad network of its own subsidiaries, application centers, service centers and representatives. A service team of inhouse technicians and application specialists commission Viscom systems worldwide, offering maintenance, conversion and modernization from a single source. In addition, system-specific training courses are offered for customers' operators, programmers and maintenance personnel. Experienced engineers and technicians from the application and service departments share their expert knowledge with participants.

Viscom AG has been listed on the Frankfurt Stock Exchange since 2006 (ISIN: DE0007846867).