



Waveline W900 in use: Deublin measures roughness and contours with COBOT

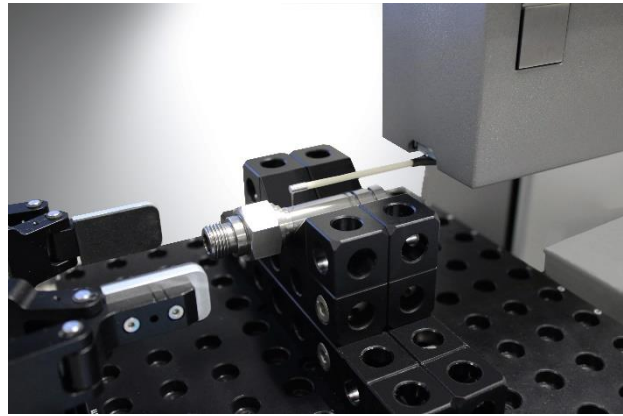
At the beginning of 2023, Deublin, the world's leading supplier of rotary unions, decided to purchase a new roughness and contour measuring station from HOMMEL ETAMIC. Workpieces such as rotors, housings, seal rings, seal carriers and end caps in various sizes and designs are measured.

Rotating unions are used in machines in numerous industries – as intended, wherever liquids, gases and signals are transferred from a static line to a rotating machine element. “During the production of our rotating unions, we check the quality of their highly sensitive components so that we can ensure that the rotating unions fulfill their function 100%,” says Sven Könenkamp. He works for Deublin as CAQ Administrator (Computer Added Quality) and CMM Global Team Coordinator (Coordinate-measuring machine).”

Several hundred thousand rotary unions are manufactured worldwide every year and demand in the ever-expanding user market is rising continuously. “Due to the ever-increasing quantities, the efficiency of an automated measurement solution is becoming increasingly important for us, as are globally comparable measurement results,” says Sven Könenkamp. “As we want to use the new measuring system in the long term and intend to use it uniformly at all our locations worldwide for all our products, flexibility is one of our most important requirements. The new solution should work both manually and in CNC operation, it should check individual parts as well as large quantities in serial production.”

Deublin first became aware of the “Waveline W900 nanoscan” standard measuring device with integrated COBOT interface during a visit to the Hommel Etamic stand at the Control trade fair in 2022. The product-specific features were convincing: the flexible device measures both contours and roughness, both horizontally and vertically. Thanks to magnetic coupling and

RFID recognition, it has a fast probe arm change system and a high traversing speed in CNC mode. The system has a COBOT connection, enables a fully automatic probe arm change and is modularly expandable. In addition, the measuring system not only differentiates the measured workpieces between OK and NOK, but also divides the NOK parts into rejects and a state of possible reworking.



The aim is to develop a specific Deublin program for the new W900 that is based solely on the workpiece. Due to the high production and design depth, this means that the program must store several thousand measuring tasks and perform them in a standardized way – without allowing individual settings for individual operators. “We have well over 1000 turning operations in our portfolio, which in turn consist of more than 20 components,” says Sven Könenkamp. “The automated measuring solution therefore has to switch between the specified measuring tasks without long set-up times. We want to use our existing resources and capacities in a more targeted manner. Highly specialized colleagues no longer have to stand at the machine and carry out setups for the workpieces, but are freed up for planning, problem solving and administration,” says Sven Könenkamp.

The Deublin quality team has now stored numerous standard measurements and programs in the software. The operator selects the appropriate program for the respective measuring task so that the COBOT recognizes the specified workpiece based on the contour, picks it up and places it in the workpiece holder. The Waveline W900 then carries out the measurement immediately. The workpiece is then automatically evaluated and fed to the palletizer. The “Evovis” measuring and evaluation software ensures the highest possible degree of efficiency.

Evovis also provides various statistical interfaces, interactive analysis and evaluation functions and central management of all inspection characteristics. “We gain new insights into our production, processes, and products. This helps us enormously in our Continuous Improvement Process and in automation,” says Sven Könenkamp. “With the W900, we can further develop our programs based on data and therefore in a calculable way.”

Deublin wants to roll out the efficiency gains of automated measuring systems worldwide. “With the Waveline W900, we have a measuring system that is geared towards the future. As soon as the fully developed program for the measuring sequences is ready, our colleagues will be able to use our expertise and the specifically developed measuring tasks to get started worldwide.”

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