

A tiny droplet in the right place, every time



Xenon chooses SCARA for reliable precision

Only a tiny droplet, and exactly in the right place. To meet this precise requirement during the automated pipetting of substances, a dosing needle must be positioned accurately, even if the target cannot yet be defined exactly. It must also be possible to repeat this action, efficiently and affordably.

Compact, flexible automation

Dresden-based machine construction company Xenon, which specialises in assembly, testing and automated packaging systems, developed a mechanical platform with an Epson SCARA clean room robot specifically for this purpose.

Thanks to the compact, flexible SCARA robot, this platform takes up little more than a square metre of space, which is a definite advantage, because floor space in laboratory environments is also expensive.

A visual solution

The SCARA clean room robot carries a mobile camera that can inspect different areas and makes it possible to correct positions. Even if the target part is not always positioned in exactly the same place, the camera makes it possible to move to dosing or gripping positions accurately. A second camera carries out quality control, checking whether the filled drop is in the correct position and is the required size.

The SCARA robot needs to be able to move empty and filled capillaries around flexibly. It may be required to place the filled capillaries on a sample carrier, install them in a disposable cartridge or deposit them for shock freezing into an integrated Dewar vessel in liquid nitrogen.

Handling, dispensing and QC functions of the pipetting platform can be combined with each other and programmed in various sequences, which makes it possible to adjust to new tasks and products at any time.

Careful recording and archiving

For the production of such medicinal products, it is indispensable that relevant batch-related data, like e. g. capillary diameter or drop size and the appertaining camera images can be recorded and archived.

Xenon

Our SCARA robots have the compact size, dexterity and affordability to make them the perfect choice for pharmaceutical applications such as at Xenon.

Volker Spanier

Head of Robotics - Epson

Key Facts

Xenon chose Epson SCARA robots to perform pipetting tasks that need to be accurate to minute tolerances.

Epson's robot vision systems allow the SCARA robot to see components, even when not in the same place every time.

The robot can also handle putting filled pipettes back into different locations each time.

Thanks to a compact design, each robot takes up only just over a metre of space.

For more information, visit www.epson.eu