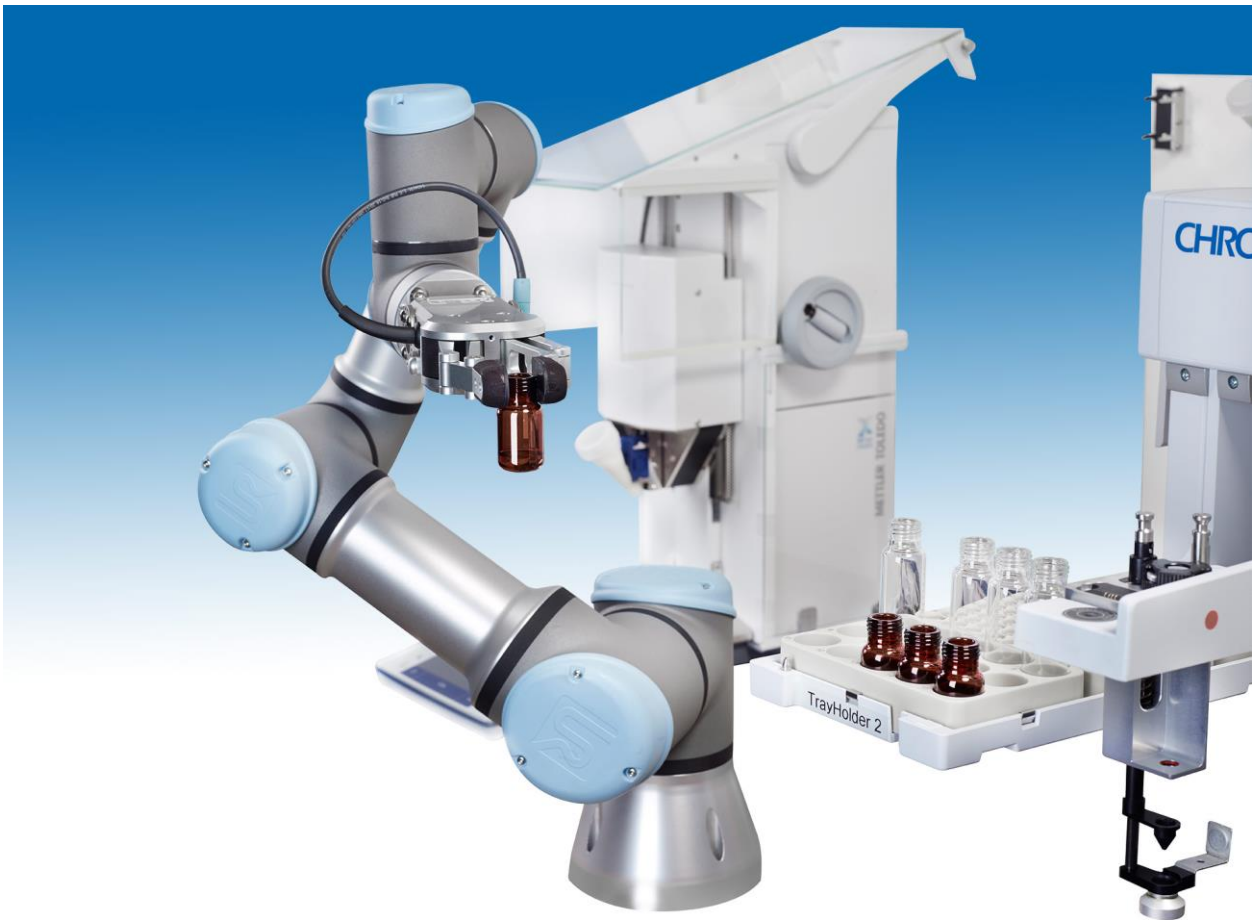




Axel Semrau®

CHRONECT® Bionic



Product Information

A new era of laboratory automation

At the analytica 2018 Axel Semrau® paved the way for a new era of laboratory automation. CHRONECT® Bionic is a new and to date unique solution for the laboratory world. Autosampler offer a high degree of automation but still can only serve a limited area narrowing automated sample preparation to a small space. Therefore, so far, many working steps could not be included. CHRONECT Bionic is a multi-dimensional robot with six joints which can be moved individually and independently (Figure 1). By this, the limited working space is broadened and extended.

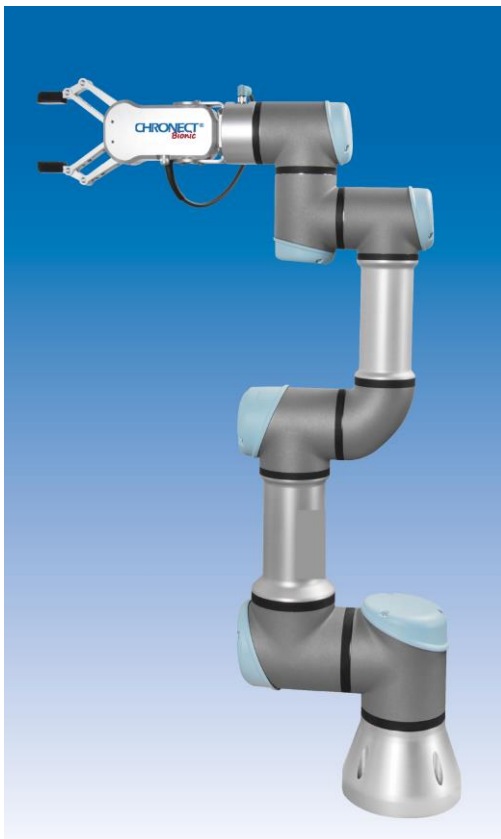


Figure 1: Cooperative CHRONECT® Bionic.

Operating principle

CHRONECT Bionic complements automated sample preparation by further working steps which so far were performed manually. The fields of application are manifold and are defined by your requirements. A first example of an application is the automated powder dosing which was developed in close collaboration with METTLER-TOLEDO GmbH, Jüke Systemtechnik GmbH and Trajan Scientific and Medical: CHRONECT® Quantos. Here, a precise amount of powder is dosed for further processing within the CHRONECT® Robotic XYZ robotic system. CHRONECT® Bionic positions one of up to 32 powder dosing heads into a Quantos Powder Dosing system. This system consists of the Quantos Dosing Module and a scale by METTLER-TOLEDO. CHRONECT Bionic takes the target vial from the XYZ robotic system and places it below the dosing head within the scale. The correct amount of powder is then weighed in automatically. Then, the vial is placed back into the CHRONECT Robotic system (Figure 2). Here, a safe and efficient Liquid Handling can be performed. The entire control is realized by our well-established software CHRONOS. CHRONECT Bionic may be used either as part of a cumulative application or as an independent module. Depending on the needs, a cooperative robot is available which can interact with the user. Other requirements call for an industrial robot for an extra-fast application. The picker arm can be adapted to the various fields of application. Additionally, depending on the area of application, CHRONECT Bionic is available in different sizes.

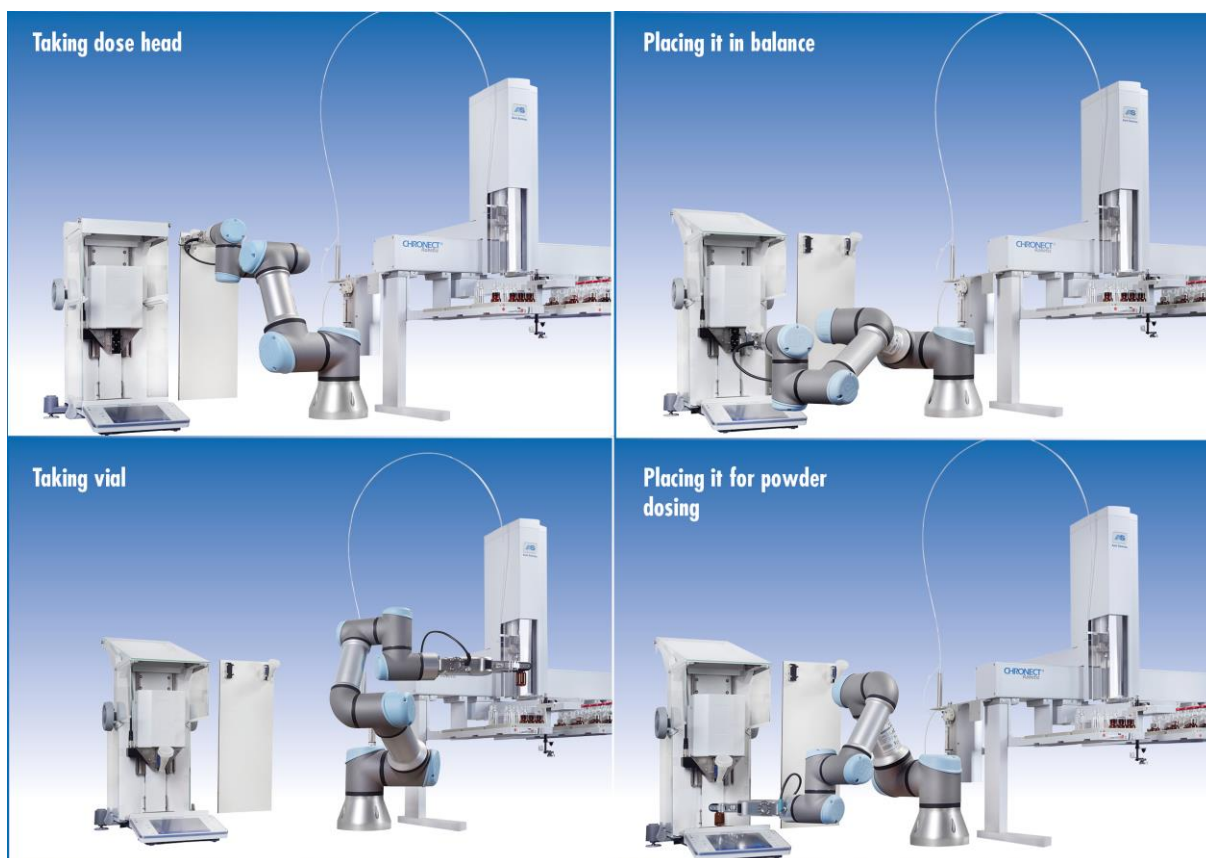


Figure 2: Brief outline of the course of automated powder dosing.

Configuration

As a single module

- Cooperative robot for direct interaction with the operator
- Industrial robot for extra-fast application

As an entire application,

e.g. for automated powder dosing

- CHRONECT Bionic
- Quantos Powder Dosing System by METTLER-TOLEDO consisting of
 - Quantos Dosing Module
 - Scale
- CHRONECT Robotic consisting of
 - PAL Autosampler by CTC Analytics
 - Control software CHRONOS

Benefits of CHRONECT Bionic

- Flexible use
- Perfect addition to XYZ robotic systems
- Automatization of time-consuming sample preparation steps
- Accurate performance
- Automation of unpleasant working steps
- Prevention of error sources through manual sample preparation
- Extension of the automated working space
- Security of investment
- Future-oriented automation for the digital laboratory
- Factory Acceptance Test and Site Acceptance Test

Conclusion

CHRONECT Bionic is the missing link between operator and automated sample preparation and therefore a further step towards the digital lab. It takes over time-consuming and unpleasant working steps. The performance is steadily accurate and minimizes error sources within sample preparation. As a consequence, lab co-workers gain time for other tasks. Being individually applicable, CHRONECT Bionic closes gaps in your laboratory and comprises the perfect addition to your XYZ robotic systems. We are glad to help you to find the perfect automation process for your application. Please, feel free to contact us!

Subject to technical changes

**CHRONECT® Bionic is a
development by Axel Semrau®**

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