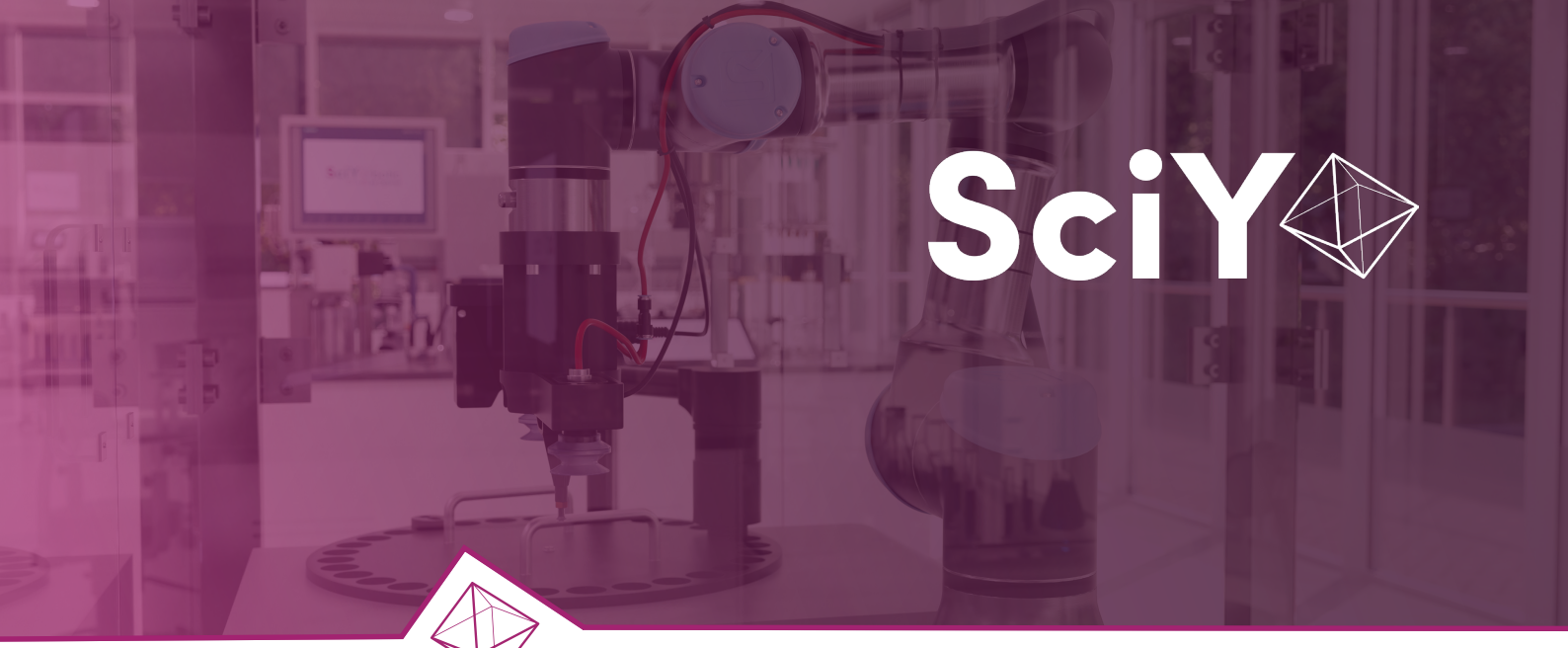

# SciYbotic TT Machines

## Introducing the SciYbotic TT Machines – a Quantum Leap in OSD Testing Technology

### Introduction

The cutting-edge SciYbotic range of tablet testing (TT) automated units advances the efficiency of oral solid dosage (OSD) manufacturing and improves quality control, cycle times and profitability.

### How it works

The TT range is part of the broader SciYbotic Quality Test Machines series of at-line solutions that enable the digitalization of pharmaceutical manufacturing from the lab all the way to commercial-scale production. This latest addition to the portfolio combines vision-guided six-axis robots, analytical instruments, and control systems driven by the synTQ knowledge management software. All these components operate in sync to support high-speed, accurate, repeatable and traceable quality control operations within a compact footprint.

### Key Features

- Compact unit that comprises:
  - Vision-guided six-axis robots
  - Analytical instruments — to perform assay, weight, thickness, and/or hardness testing
  - Control systems driven by synTQ
  - Chemometric models
- High speed, accurate solution
- Monitor tablets with full traceability

### Benefits

- Improves efficiency and profitability of OSD manufacturing
- Improves quality control methods
- Enhances consistency
- Lowers cycle times
- Flexible solution, tailored to your needs

Individual tablets are picked up by the robotic arm to be placed in one or multiple analytical instruments. They are precisely positioned in the analyser for quality checks and the synTQ platform, hosting chemometric and other predictive models, is used to define the characteristic of each sample. Once this action is complete and all tests have been performed, the robot moves the tablets to uniquely marked trays for easy traceability.

The TT machines offer high flexibility, as they are fully customizable to address the specific needs of each individual pharmaceutical application. They operate at high speeds and can be equipped with different analyzers, e.g. to perform only assay testing, or to combine this with weight, thickness and/or hardness. For example, the SciYbotic TTA-60 Quality Test Machine is equipped with a multi-purpose infrared analyzer or, if preferred, a Raman analyzer, to measure content uniformity and determine assay. Based on a typical tablet analysis time, it can process 60 tablets per hour and is able to provide quality decisions to the tablet press within 1 minute.

To advance interconnectivity and flexibility of smarter operations, users can also integrate and run their preferred chemometric models within their custom TT units. The solution can operate either as part of the user's existing production control system or in a standalone configuration. Finally, thanks to the synTQ software platform, which provides a holistic and data-driven real-time overview of manufacturing phases, users can maximize their visibility and control. As a result, companies can integrate the validated laboratory analytical technique, chemometric model and analyzer type into a flexible design, eventually within broader Process Analytical Technology (PAT) frameworks. Alternatively, they can use the TT units to kickstart PAT strategies, enhancing quality-centric manufacturing strategies.

## Martin Gadsby

### Chairman at the Optimal Group

The entire Optimal Group worked closely on the development of the SciYbotic TT design, and we are proud to see our technologies being leveraged to create such an advanced setup. Customers worldwide have already started asking us for comprehensive, fully integrated automated quality testing machines and we are delighted to be able to support them with our latest innovation. We look forward to working closely with pharmaceutical companies to drive the adoption of the TT range and help the entire sector realize the benefits of Pharma 4.0 applications. Through a fully autonomous design, these solutions can greatly streamline quality control, enhancing consistency while reducing complexity and processing time.

Streamline quality control, enhance consistency, and reduce complexity and processing time.