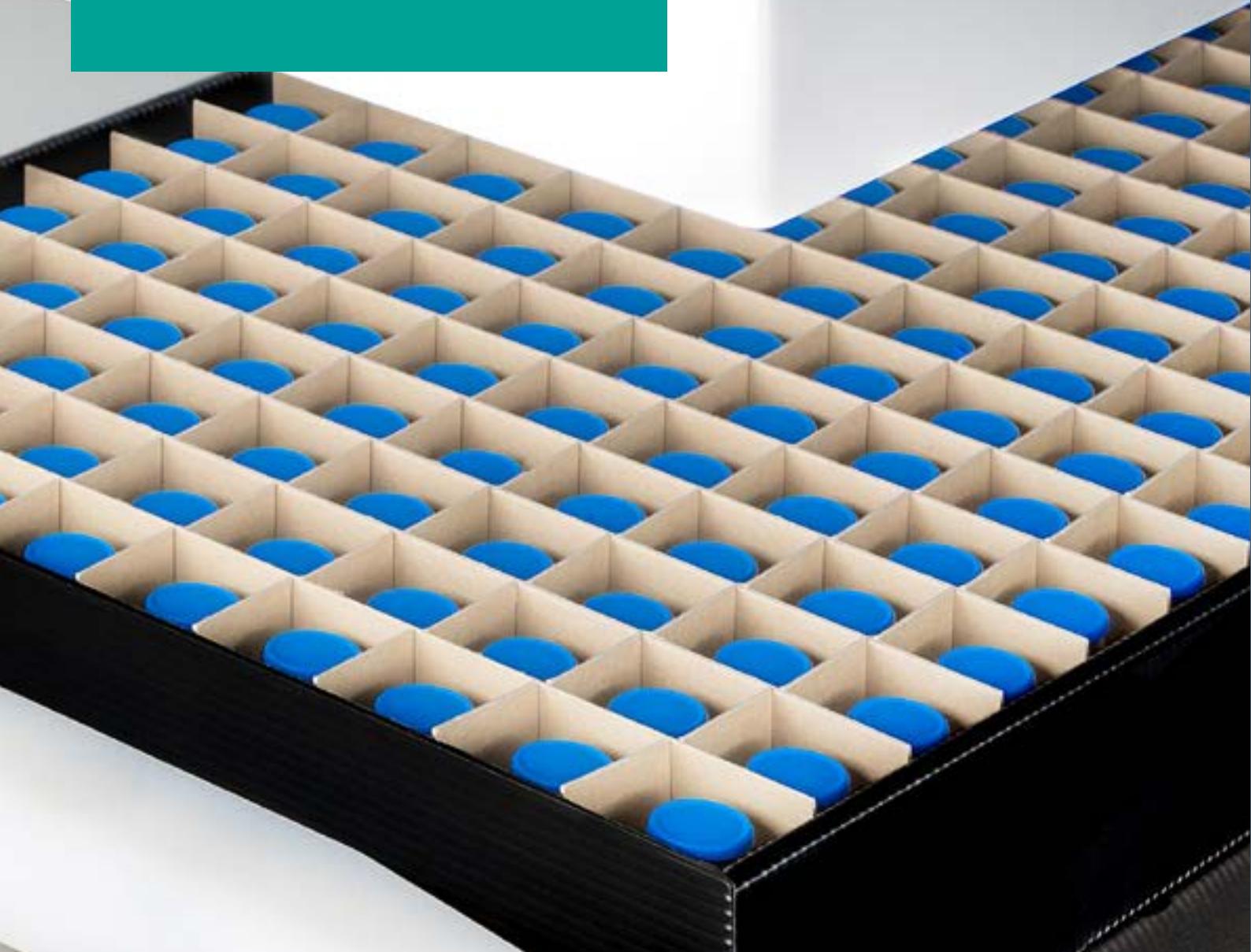


# Expert Image Processing Solutions for the LifeScience Sector

Automated Management of Vials, Ampules,  
Syringes and Carpules





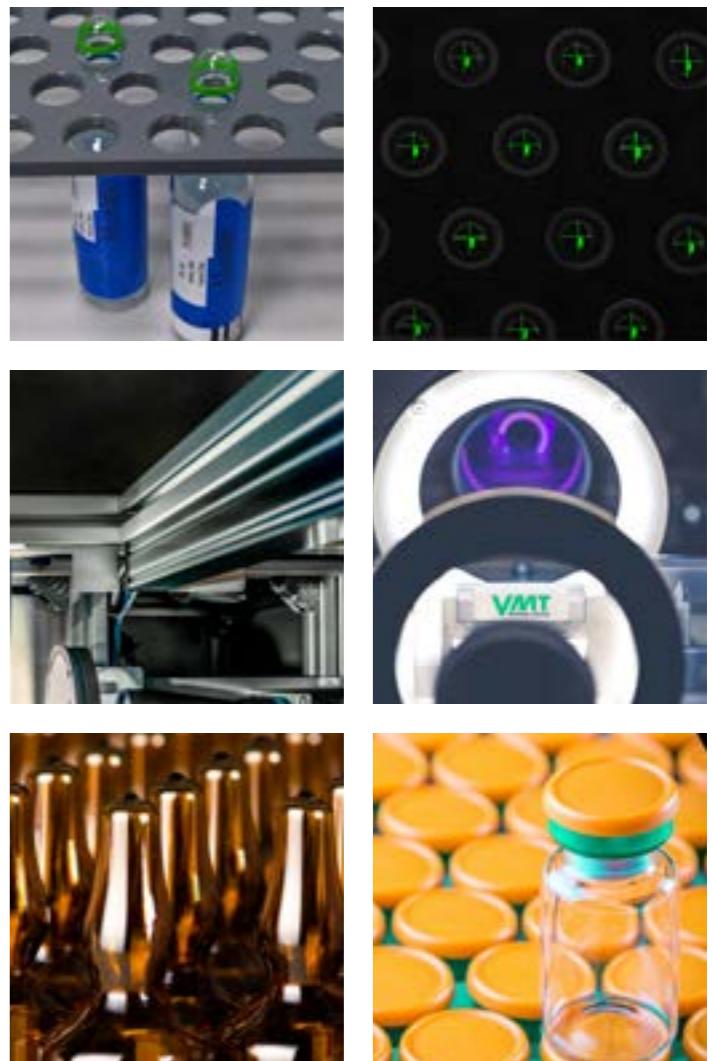
## Error-Proof and Flexible Automated Counting by Advanced Image Processing

VMT™ MultiCount is a tailor-made system for automated counting that offers maximum flexibility and easy operation. State-of-the-art camera and lighting technology paired with advanced image processing algorithms ensure reliable counting of vials and ampules.

VMT™ MultiCount is built on the longstanding expertise of VMT™ Bildverarbeitungssysteme GmbH. The core of the system is the image processing system VMT-IS/V, which is already in operation in hundreds of plants. Due to the optical properties of different containers, two versions of the system are available: VMT™ MultiCount for vials and VMT™ MultiCount+ for vials and ampules.

Both versions are designed as stand-alone test systems but can also be integrated into production lines. The system can be easily adjusted to new vial types or ampules. And all measurements and results are logged and documented.

Unlike traditional counting methods using templates or other tools, VMT MultiCount allows fully automated counting of vials and ampules. The count result is independent from the type of container used and the objects being counted do not have to be arranged in any specific alignment.



State-of-the-art, long-lasting LED lighting, optimal camera selection, and precisely aligned optics ensure durable and stable detection. All components were selected in compliance with pharmaceutical industry standards, and the test system was designed for use in cleanrooms.

VMT MultiCount delivers reliable detection for a wide range of pharmaceutical containers. Vials and ampules from 1ml to 100 ml and with diameters from 5 mm to 50 mm can be counted and it can automatically check a variety of materials — transparent or colored glass, plastics, and colored lids.

# Features and Technical Data



## Vial Formats

- 2R, 4R, 6R, 8R, 10R, 15R, 20R, 25R, 30R, 50R, 100R
- 20H, 30H, 50H, 100H, 200H
- Clear and brown glass
- Multicolor or transparent caps and flip tops
- Adjustable to additional formats

## Ampule Formats

- DIN formats 1, 2, 3, 5, 6, 10, 15, 20, 25, 30, 50 ml
- Clear and brown glass, with/without ring coding
- Adjustable to additional formats

## Transport Containers

- MultiCount: max. size 400 x 600 mm
- MultiCount+: max. size 375 x 700 mm
- Stainless steel trays
- Rail carriers
- Cartons of any color with/without compartments
- Plastic carriers

## Test Bench

### MultiCount

- Vial test bench dimensions (H x W x D in mm): 2100 x 1150 x 700
- Weight: 260 kg
- Power consumption: max. 800 W
- Processing time: < 1 sec

### MultiCount+

- Vial and ampule test bench dimensions (H x W x D in mm): 1950 x 1470 x 800
- Weight: 520 kg
- Power consumption: max. 1550 W
- Processing time: < 4 sec

### Additional Data

- Manufactured with high-grade stainless steel
- Mounted on anti-static wheels
- Harmonized components
- Ambient temperature: 5 ... 40 °C
- Relative humidity: 50 ... 90% (non-condensing)
- Input voltage: 230 V AC
- CE conformity under current machine directives

## Automatic Traceability

### VMT™ MultiCount

VMT™ MultiCount revolutionizes management of vials and ampules in pharmaceutical production. A computerized image processing system makes counting by hand unnecessary.

Stringent quality standards in the pharmaceutical industry require that raw materials and finished products are constantly monitored to account for all materials used in production. Discrepancies are detected by continuously counting and reconciling raw materials and finished products.

Even in modern production facilities, products such as vials and ampules are often still counted and documented manually — an expensive, time-consuming, and unreliable process.

VMT™ MultiCount automates this process completely. State-of-the-art camera and lighting technologies work with high-performance image processing algorithms to count vials and/or ampules independent of size, fill level, or color — and in any kind of container (e.g., stainless steel trays, cartons). The count results for every container and batch are then logged.

Count results and additional production data can be printed on demand from an integrated label printer. VMT MultiCount can also perform material flow calculations and reconciliation by comparing count results with predefined values.

VMT™ MultiCount is operated simply and intuitively either with a keyboard and mouse or a user-friendly widescreen touch panel. The software and control panel are consistent with VMT's

high standards.

To complement our portfolio of image processing and quality testing systems, VMT also offers comprehensive support for qualification processes, e.g., by developing qualification plans and test specifications.

## Highlights

- 100% logging, documentation, and traceability
- Simple management and expansion of product types
- Batch management
- Configurable user administration, support for networked systems
- Available as stand-alone test bench or inline system
- Designed for use in cleanroom environments
- Validated according to FDA 21 CFR Part 11
- Implementation of qualification processes, such as DQ, IQ, FAT, OQ, and PQ

# Solution Excellence for Your Vision

VMT Vision Machine Technic Bildverarbeitungssysteme GmbH is your leading automation partner for machine vision turnkey solutions worldwide. VMT® develops and supplies customized machine vision, robot vision, and laser sensor systems for all industrial sectors using our self-developed state-of-the-art hardware and software products. As a professional consultant, VMT® provides objective solutions tailored to individual applications. Our technical services cover the complete life cycle of your machine vision solution, including planning, commissioning, installation, and system integration as well as training, maintenance, and upgrade services. With more than 30 years of experience in industrial machine vision applications, you can be confident that VMT® will provide proven solutions for your operation that nobody else can match.



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