



Experts in Machine Vision Solutions.

The Company

INNOVATIVE, COMPETENT, RELIABLE AND FAIR.

For almost 30 years we have been supplying world-wide system solutions for inspecting production and manufacturing processes. We produce machine vision solutions for the detection and inspection of parts for our target branches pharmaceuticals and medical technology, healthcare and automotive.

For optical quality inspection and material flow control in series production we develop and implement **individual machine vision solutions** based on world-wide available and proven technologies. A competent and dedicated team develops innovative, process-reliable solutions to meet your requirements. A good partnership and **fair cooperation with customers and suppliers** are very important to us. Building up and developing long-term business relations are at the forefront of our activities.

OCTUM is the **reliable partner** from whose know-how you also can benefit. Depending on customer request, we deliver just the machine vision solution or, together with our partner companies, complete solutions. With more than 5,000

production-reliable, installed system solutions, OCTUM is one of the most successful branch providers.

We are:

- certified in accordance with DIN EN ISO 9001:2015
- ams certified
- Cognex system integrator
- Halcon system integrator
- Omron system integrator
- Member of the VDMA (German Engineering Association)
- Dual partner of the DHBW (Dual University of Baden-Württemberg)

MORE THAN
1,000 CUSTOMERS
WORLDWIDE TRUST OCTUM



THE WAY TO YOUR SOLUTION IN 5 STEPS

01

Analysis

We conduct a feasibility analysis for your concrete performance requirements.

02

Solution

We present our solution suggestion in consultation with your team.

03

Kick-off

The joint project begins with an individual 3D model for your plant.

04

Engineering

Our project management ensures pinpoint delivery of the machine vision solution.

05

Concept

OCTUM trains your staff, maintains your system and offers on-site services.

We develop simple up to complex industrial machine vision solutions based on your requirements and development standards. In this process, we go to the limits of what is technically possible. Our **in-house development and production** allow us to respond quickly to your needs. For example, for individual hardware and software components which cannot be purchased elsewhere, such as:

- Special lighting systems
- 3D sensors with Scheimpflug adapters and telecentric optics
- Sensor heads for standard applications
- Mechanics for camera and lighting installation
- Protective housings
- Software modules for 2D/3D inspections
- HMI system software for smart cameras
- Customised interfaces to higher-level processes

The first Engineering step is to create an **application-specific 3D design drawing**. For both parties (customer and supplier) the mechanical setup for smooth line or machine integration is clear and trans-

parent in a very early stage off the project. Our entire software development based on scrum methods ensures transparent development processes and ultimately qualified system software.

Exploit the full potential of your system – we offer you **practical training for operators** and technicians adapted to your system solution.

Preventive maintenance measures increase the availability of the production line and reduce potential downtime costs. Telemaintenance is a low-cost alternative to on-site service. For this, we also offer secure VPN-tunnel solutions which have a higher acceptance by customer-IT.

Pharmaceutics and Medical Technology

SAFE SOLUTIONS FOR YOUR QUALITY PRODUCT.



Pharmaceutical products pass through many hands every day. Hereby safety is the most important factor. Machine Vision is used to ensure this safety for the people and the further processing of these products. Machine Vision is the best technology to keep an eye on every process step and document the results.

Since the company was established, OCTUM has been supplying inspection systems for the pharmaceutical and medical Industry. With every installation you benefit from **many years of experience** in an environment where safety is the number one priority. Our references proof, that our inspection systems comply with **GAMP5 directives as well as the requirements of 21 CFR Part 11**.

Our inspection systems cover the complete process chain for glass vials, plastic vials, ampoules and syringes. They are also widely-used in the field of surface inspection of wound materials.

The recognition of all Pharma codes as well as character recognition (OCR) and

verification (OCV) on all kinds of labels are important components of cross-company track-and-trace solutions. We support you in the fulfilment of legal specifications throughout the entire pharmaceutical production process and guarantee you a constant and **faultless production with cost reduction**. We are happy to show you the best solution for your application!



You will find further information on our website – please scan the code.



OUR MACHINE VISION SOLUTIONS INSPECT 600 PARTS/MIN RELIABLE AND ACCURATE



Pharmaceuticals and Medical Technology

WE DISCOVER EVERY SINGLE DEFECT.

Glass Vials:

- Empty vial inspection
- Vial Opening inspection
- Filling level inspection
- Stopper fit inspection
- Crimped cap inspection
- Printing inspection on crimped caps and flip-offs

Syringes:

- Syringe length measurement
- Finger flange damage inspection
- Syringe cap fitting inspection
- Plunger assembly inspection
- Label position inspection
- Safety device assembly inspection

Tubs and trays:

- Completeness of the syringe nest and tray
- Tyvek position and seal joint inspection
- Printing inspection on tub and nest

Labels:

- Verification of label type
- Quality and printing of characters and design samples
- 1D and 2D codes
- Validation of GS1 codes
- Code grading

Wound material:

- Contamination and sealing
- Dimensions and shapes
- Structure and completeness of the layers
- Print inspection

Plastic Vials:

- Type inspection
- Damage inspection
- Printing inspection
- Dropper inspection
- Screw cap fitting inspection
- Label position inspection

Pipettes and cups:

- Injection moulding defects
- Dimensions and shapes
- Roundness inspection
- Bending, deformation and skew position
- Webbing/burr
- Presence inspection and particle inspection
- Completeness in the rack

Ampoules:

- Ampoule head contour inspection
- Inspection for burn marks
- Printing inspection
- Coloured rings inspection

The Automotive and Automotive Suppliers Industry

WE SUPPLY THE OPTIMUM SOLUTION.

No compromises in **safety and quality** – that is the company's fundamental principle for the German automotive industry. Standards and norms are decisive instruments for constant elevation of the quality level throughout the industry (Quote: Annual Report 2018, VDMA, Pg.126).

The car passes through numerous stations on the production line until it finally stands in front of your home. Individual process steps require inspection for a flawless and safe car. Starting from the body and the technology right through to the final assembly.

Our machine vision systems have been proven in the automotive and automotive suppliers industry for years as efficient tools for quality assurance and **process inspection**. Our systems are designed for industrial use – in the foundry, shell, assembly or final assembly. By automatic inspections based on objective criteria, our machine vision systems ensure a smooth process in material logistics and guarantee traceability. Every single product leaves the production line complying with the specified quality criteria. We help you to meet your

customers requirements and deliver defect-free parts.

In line with **Industry 4.0** concepts the manifold process data gathered by machine vision systems can be directly used for process control.

The automotive industry was also a driving force behind OCTUM's new technological developments such as in-line 3D surface defect inspection which was then also used successfully in other industries.



OCTUM DELIVERD A TOTAL OF
MORE THAN 1,000
SYSTEMS TO THE AUTOMOTIVE INDUSTRY



OUR MV-SYSTEMS FOR MORE THAN
20 YEARS
IN OPERATION IN THE AUTOMOTIVE INDUSTRY

Application Examples Automotive

OCTUM MACHINE VISION SYSTEMS – FOR PERFECT PRODUCT QUALITY.

- **Assembly inspection on**
seat components, engine components
brake systems, car rear and front axles, ...
- **Completeness check of**
printing, displays, gear components,
ball bearings, Switches, sensor housings,
2C plastic, ...
- **3D inspection**
cast blanks, die-cast aluminium parts,
sealing rings, PTFE seals, pistons, ...
- **2D and 3D surface inspection**
piston rings, thermoformed housings,
machined flange and sealing faces,
brake disks, multilayer seals, compressor
wheels, ...
- **3D OCR**
engine block, cylinder crankcase,
forged parts, assembly
- **2D OCR**
on con-rods, gear wheels, machined
cast surfaces, ...
- **Quality tracking on coils**
- **Read DMC**
needle-printed, embossed, lasered,
etched, on all surfaces
- **Metal Blanks detection**
when loading presses, hot and cold sheets,
stack detection
- **Measurement**
piston ring stroke clearance, plug pins,
plastic housings, sealing rings, gaskets, ...
- **Type and position detection of**
motor blocks, ACDs, car side parts,
car doors, con-rods, gear wheels

... and much more.

Other application areas

OUR CONCEPTS ARE UNIQUE.

Toothpaste, lipstick or cheese – demanding customers expect **flawless products every day** on the shelves. Products that do not look perfect will stay on the shelves, especially if they are **food or cosmetic products**. But it is not only the appearance that counts. In order to have the products approved for trade and to maintain consumer protection in these industrys, many legal specification with regard to packaging, labelling and weight must be satisfied.

Our machine vision solutions ensure that only perfect products land on the shelves so that high customer satisfaction is guaranteed. **We are your partner** for your application – even on fast production lines. Our machine vision systems check the integrity of the packaging, the purity of the product and packaging medium, the correct printing, the BBD, faultless labelling, correct sealing and assembly, surface quality and much more.

Our machine vision solutions ensure your cost savings and create competitive advantages for you. Customers such as *L'Oréal, Procter & Gamble and VITA Cosmetic* put their trust in us. Our machine vision

systems guarantee a fast retail on investment especially but not only for high quantity production lines.



Would you like to see our applications? Visit our YouTube channel.

OUR MV SYSTEMS INSPECT
OVER 200 MIO.
TUBES WORLDWIDE PER YEAR





WE SPEND MORE THAN
8,000 H/YEAR
DEVELOPING OUR SYSTEM SOFTWARE

Our Products

OCTUM SOFTWARE PRODUCTS CV-Inspect AND OCTUMISer.

OCTUMISer

OCTUMISer is a central **operating, visualisation and parametrisation software** for all connected, smart camera systems of a production line with the following advantages:

- Control of up to 99 cameras from a central point
- Common user management for all connected systems
- System protection by barring and blocking Windows functions
- Integrated image storage with and without overlay displays including storage space monitoring for images and inspection programs.
- Display of the last bad images (NOK evaluated parts)
- Booting with the last active inspection program
- Integrated PDF print functionality for documentation
- Touch control
- Customer logo can be overlaid on request
- also as 21 CFR Part 11 incl. audit trails

CV-Inspect

We developed the CV-Inspect system software for the **assembly, completeness, surface defect inspection and measurement** of parts for all industrys. Experience from this and customer requests have been incorporated into the latest system version. Features of our CV-Inspect:

- Parametrisable for simple to complex tasks
- Flexible use for measuring, inspecting, detecting and identifying
- Proven mature functions
- Simply structured operation with an extensive safety concept
- Flexible result configuration and process interfacing
- Extensive statistics and measured value recording in an integrated database
- Functions can be extended application-specific
- System software can also be used for GAMP projects in the pharmaceutical industry

More about us

EXPERTS IN MACHINE VISION SOLUTIONS.

Why OCTUM?

- We provide solutions which exactly meet your requirements.
- We offer individual consultation with **technological and sales competence**.
- We only make promises that we can keep.
- In-house production, own documentation department, after-sales support and individual 3D designs round off our **comprehensive service**.
- Our system software complies with the development standards and requirements of the pharmaceutical industry (GAMP/FDA conform).
- World market leaders such as *Groninger, GSK, Bosch, Schuler, Roche*, and many more put their trust in us.
- **Unique new developments**, innovations and technological competence secure your competitive advantage.
- We are a **privately owned company** without foreign financial investors which means that we can act independently and quickly.

All your questions answered? So, off you go. You will find our contact data on the back of this brochure.

Facts and figures

- 1996** Founding of OCTUM GmbH
- 1998** Market launch of the freely configurable CV-200 machine vision system
- 2001** Market launch of the PC-based CV-600 machine vision system
- 2004** Octum is "Cognex System Integrator of the year for Central Europe"
- 2008** Over 1,500 machine vision systems from OCTUM in operation world-wide
- 2008** Market launch of OCTUMISer
- 2009** Move to new company premises in Ilsfeld with 1,200 m² floor space
- 2010** Market launch of CV_Inspect
- 2013** Move to new office annex
- 2018** Over 5,000 machine vision systems from OCTUM in operation world-wide.



Painting **Octumotion** by Gundula Kern. About this code you come directly to the review of *Vernissage Octumotion*.

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