

Global specialists in high performance vision systems and inspection machines

**Contact Lens** 



## WHAT WE DO

Global specialists in high performance machine vision and vision systems for quality control, sorting, inspection and guidance.

### **WE'RE ONE-OF-A-KIND**

Combining industrial automation with machine vision we provide inspection machines and solutions to blue-chip manufacturers worldwide.

Let us do your hard work. We remove the headache of deploying automated visual inspection.











### Our specialist capabilities include

- Ready-to-run inspection machines for quality control.
- Single and multi-camera off-the-shelf vision systems for automated inspection.
- High-performance automation and control.
- Machine vision sensors, cameras, software and associated technologies.

- Robot inspection cells. Robot and vision technology combined.
- Automated optical metrology. Metrology-grade inspection machines for quality assurance.
- Special purpose machines, cells and lines for quality control - tailored to your requirements.
- Vision systems training and support.



Industrial Vision Systems operates from a custom designed facility at the prestigious Harwell Science and Innovation Campus in the United Kingdom. The campus is one of the most advanced and active innovation communities in Europe, located just South of Oxford and only forty-five minutes from Heathrow Airport.

# Our Comprehensive Services



### **Machines**

Take advantage of our engineering and machine building know-how. Our advanced solutions range from standard machines customised to your needs through to special purpose machinery, all designed, built and installed by experts.



## **Consulting**

Our knowledgeable experts will assess and determine the best solution for your product range and application. Using our skilled expertise, we provide quick and timely demonstration results, analysis, and solution proposals.



### **Automation**

Benefit from our unique combination of machine vision mastery and automation expertise to provide complete turn-key solutions from a single partner. Take advantage of our complete handling and automation package to optimise your production.



### Inspection

We are passionate about machine vision. Leave nothing to chance by leveraging our unparalleled proficiency and experience in vision technology to provide unrivalled inspection solutions customised with the latest generation technology.



### **Validation**

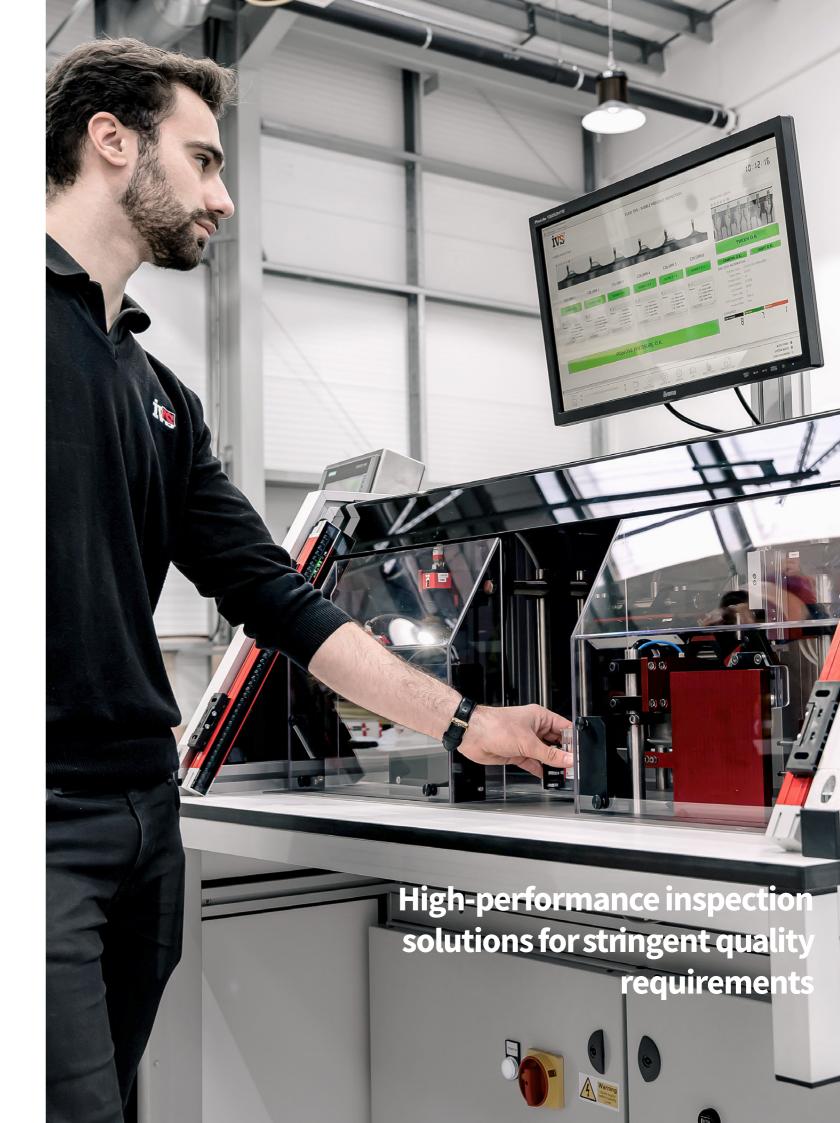
Expedite machine qualification and validation with our tested and proven processes for methodological execution according to GAMP. Minimise risk by using our validation services carried out by industry experts.



### **Support**

From after-sales servicing, preventative maintenance, remote solutions, on-site support, through to training - we offer a comprehensive support package. Our training programs are customised to your specific needs to embed knowledge and confidence into your engineers.

Benefit from the most innovative and advanced inspection machines and vision systems available. Deployed worldwide in automated production processes for quality control, inspection, guidance, identification, measurement, tracking and counting – in many diverse industries.





## **EASY SETUP**

Our expert vision engineers will get you automated faster.

Benefit from easy configuration and seamless integration with established industry leading software and hardware solutions. Achieve reliable robust inspection performance using IVS graphical User Interface software options. Trusted industry-standard vision tools provide advanced visual inspection.



## **FAST PAYBACK**

Quick and easy integration is critical.

We provide a 'right-first-time' solution, saving you money, and allowing you to fast track your development using our expertise. Minimise your project life cycles and have access to the latest and most potent development tools.



## **RELIABLE INSPECTION**

A vision system like no other.

Advanced algorithms, enhanced intelligence, feature analysis and extendable processing. We cover all areas of machine vision technology, combining application requirements into a single solution.

Use our expertise, after all, we've been doing this a long time. Over the last twenty years we've continued to invest in R&D, so our vision engineers are using the very latest machine vision technology, algorithms and hardware.



## Contact Lens

## Partner with industry leading experts.

### Validated Automated Inspection for Contact Lenses and Optical Lenses.

We offer a full range of high-speed quality control vision inspection products for contact lens and optical lens production. Benefit from our long-standing expertise in contact lens and optics inspection to optimise your line efficiency, increase your yield, and ensure only the highest quality products leave your factory floor.



### **Typical Applications**

- Flash and chips on contact lenses
- Surface inspection of lens zones
- Cosmetic defect lens inspection
- Ovality and dimensional checks
- Lens mould defect detection
- Monomer inspection checks
- Contact lens thickness checks
- Radius of curvature inspection
- Lens verification in pack
- Contact lens blister pack checks

- Bubble detection on lenses
- Internal flaws in contact lenses
- Inclusions and scratch detection
- Monomer thickness verification
- Surface and wavefront deformation
- Lens packaging checks
- Precision gauging of lenses
- Cavity ID checks on moulds
- Lens packaging inspection
- Lot and code verification



### **Cutting-Edge Inspection Technologies**

Take advantage of our industry know-how and unerring commitment to research and design. We work at the cutting-edge of technology to ensure that our innovative inspection solutions are based on the very latest technologies.



### **Unrivalled Expertise**

Benefit from partnering with industry experts. Leading global lens manufacturers have used our validated quality control vision systems in contact lens manufacturing for over twenty years. Ask the experts.



### **Maximise OEE**

Maximise your yields and benefit from optimised OEE. Our machine vision solutions deliver increased yields in smart lens production processes. Maximise quality and eliminate costly escapes, coupled with real-time data and alerts.

### **Capture Every Lens Defect, Every Time**

Leave nothing to chance by accessing industry experts to provide your customised inspection solution. With world leading inspection technologies, our systems find lens defects and anomalies as they happen ensuring only the highest quality products leave your factory floor.

Efficiency matters. Equip your SMEs with real-time data at their fingertips, recognise yield drift, quantify defect types, and identify common failures. Our meticulous inspection solutions deliver 100% automated lens inspection with meaningful data.

Save time and effort by partnering with experts with decades of experience and an unwavering commitment to technical excellence.









## Contact Lens Inspection Solutions IVS-CLCi

Adaptable machine vision inspection solutions for complete contact lens quality checks across the entire production floor. From raw mould verification, through to precision lens inspection, and full packaging track and trace.

All defect categories are analysed at speed, and individual contact lenses are segregated for failure type, deviation and failure data. Reject cosmetic, mould flaws, inclusions and surface failures on contact lenses. Check monomer defects. Confirm the cavity ID on moulds. Inspect blister packs for lens presence. Confirm lot and date codes cross-match and are printed correctly.



Boost your production efficiency by leveraging our long standing experience and know-how. Avoid risk by using our proven turnkey solutions.

#### **Unlock Potential**

Benefit from our class-leading lens inspection systems that offer state-of-the-art inspection technologies. Achieve operational excellence with our data unification, metric visuals, and customisable production statistics.



#### **Optimise Production**

Our machine vision solutions deliver increased yields in smart lens production processes. Maximise quality and eliminate costly escapes, coupled with real-time data and alerts.

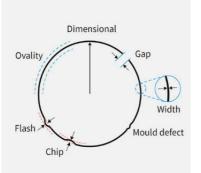
### **Automate Metrology Checks**

Enhance your off-line precision metrology checks with our semi-automated off-line inspection solutions. Save time and effort spent manually inspecting lenses by automating traditional checks.









#### Typical contact lens checks

- Edge checks
- Internal flaws
- Surface inspection
- Bubble checks
- Inclusions and scratches
- Size deviation
- Colour recognition
- Code quality
- Measurement checks
- Mould inspection
- Packaging compliance
- Character recognition
- Track and trace

## Optical Lens Vision Inspection IVS-OLVi

## Increase yield with automatic quality control in ophthalmic lens production.

Innovative solutions for scratches, inclusion and defect detection on optical lenses. Advanced algorithms, enhanced intelligence, feature analysis and extendable processing. A vision system like no other for lens inspection.

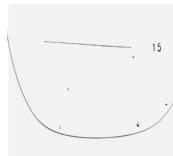
Scanning in multiple directions, we identify scratches in all orientations. Defects are measured for a whole host of feature extraction, including size, position on lens, form factor, width, length and contrast.

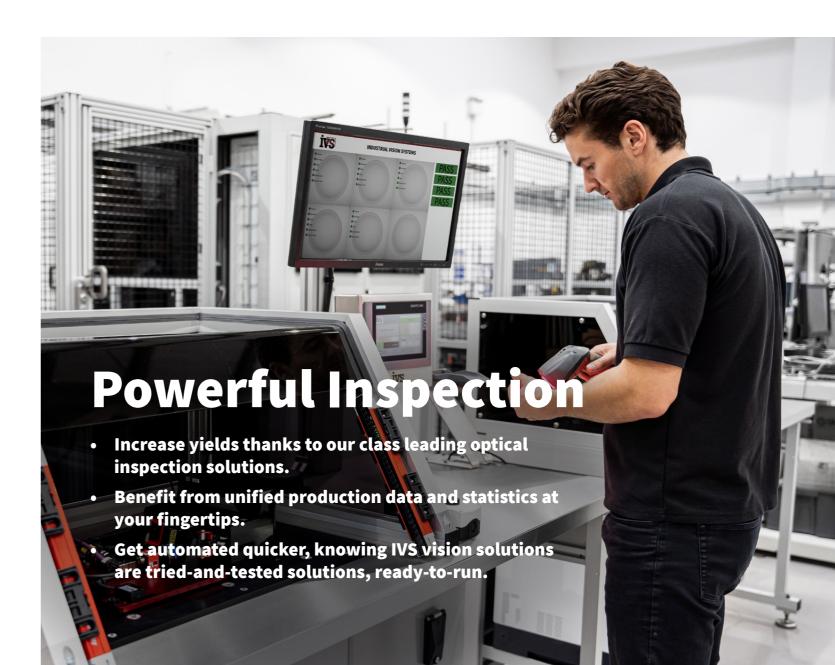
- Scratches
- Cosmetic defects
- Inclusions
- Pits & holes
- Debris
- Chips













## Services

### Leave nothing to chance - partner with IVS and benefit from support and training packages delivered by industry leading experts.

Working with us means drawing on the experience of our large team of vision service engineering specialists who together offer an extraordinary range of expertise and support in machine vision technology, artificial intelligence, industrial automation and control.

Improve your uptime and reduce risk of unexpected disruptions by using our service and support network to help you get the most out of your investment. We offer on-site support, annual preventative maintenance and calibration to ensure your system remains reliable and consistent to improve the quality of your products and reduce the risk of costly defects.

- Training
- Support
- Preventative Maintenance
- Service Excellence



As part of our comprehensive after-sales service offering, IVS provides a choice of training courses in the operation and maintenance of our complete range of inspection machines and systems. Courses are practical, with a hands-on approach and all delegates are awarded certificates on successfully completing a course.



### **Basic Training**

The two-day basic training course gives an overview of all the typical application areas of machine vision. You will be introduced to the full range of image processing functionality as well as to the various ways of integrating our vision systems into production processes and quality management systems.



## **Advanced Training**

Our advanced training course builds on the foundation knowledge of the basic course providing a deeper understanding of complex applications, machine operation and vision tools. When you complete this course you will be able to fully understand the software, the hardware, and the program deployed on your system giving you confidence to support your vision systems in-house.



### **Tailored Packages**

Tailored to suit your individual requirements covering everything from basic training, to advanced application specific training, to machine operation and maintenance. Courses can be held at either IVS training facility at Harwell Campus or delivered on site.

### **Topics Covered**

Industrial Vision Systems is committed to providing comprehensive training empowering your engineers to support all aspects of your machine vision solution.

- How to set-up a machine vision system
- On-going maintenance of the system
- Automatic operation and results
- Measuring using machine vision
- Assembly control and verification
- PLC, serial and I/O control
- Debug facilities
- Camera and lighting technology
- Optics and filters
- Machine vision project control

- Manual operation
- Live mode
- Automatic mode
- Bar code recognition
- Presence verification
- Gauging
- Positioning
- Character and pattern recognition
- Template matching
- Training assignments

### **Key Benefits**

- Delivered by our team of experienced and professional technical instructors
- Combination of practical workshop exercises and classroom based learning
- Fully documented with printed Training Manuals for each delegate
- Certified training certificate for each delegate on satisfactory completion
- Flexible private classes at IVS Harwell Campus or at your manufacturing site
- Full range of courses catering for all levels of ability

### **World-class Support**

## Partner with machine vision experts.

We support systems around the world with our comprehensive support package. When you partner with IVS you benefit from lifetime support from industry experts. Our systems are deployed with remote access solutions meaning we can securely analyse, maintain and troubleshoot your system minimising costly downtime.



www.industrialvision.co.uk 14

## **Service Excellence**

Our mission is to make companies more efficient, highly flexible and quicker with our machine vision solutions.

Get the most out of your investment. We know that working in partnership with our customers achieves the best results. By listening to our clients and working together, we communicate on equal terms – building trust and going the extra mile to deploy and support the ideal vision solution.



### **Right First Time**

We operate under the concepts and philosophies of Total Quality Management and are dedicated to continual improvement in all phases of our business to better serve our customers, employees and the community in which we live and work. We are a British Standard Institute (BSI) and CE Marking Association registered company. We are also proud to have accreditation from SafeContractor® due to our commitment to achieving excellence in health and safety management across all areas of our business.

Our extensive range of vision and ID products for all applications is backed by an unerring commitment to quality and adherence to Good Automated Manufacturing Practice (GAMP) guidelines. We operate a complete in-house mechanical, electrical and control design service providing customers with full project management and feedback.

We have experts in industrial image processing, 3D CAD design, PLC control, electrical design, factory automation and project management. This allows us to deliver a complete scale of projects from the supply of vision peripherals and components through to fully integrated complete vision machines and production lines.

Not only do we provide consultancy and technical support but we also offer comprehensive training programs to familiarise customers with the capabilities of our vision system applications.















Genesis Building | Harwell Campus Didcot | Oxfordshire OX11 OSG | United Kingdom

Tel: +44(0) 1865 823322 sales@industrialvision.co.uk

### www.industrialvision.co.uk







