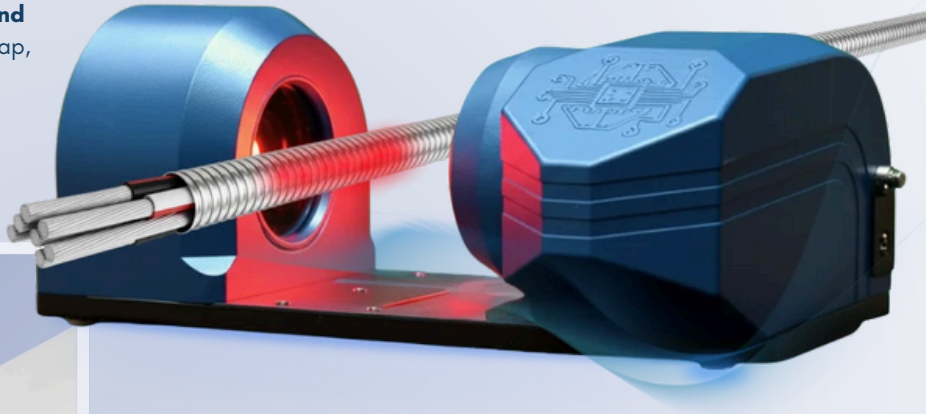
CORPEX

WE BUILD MACHINE VISION AND AI SYSTEMS

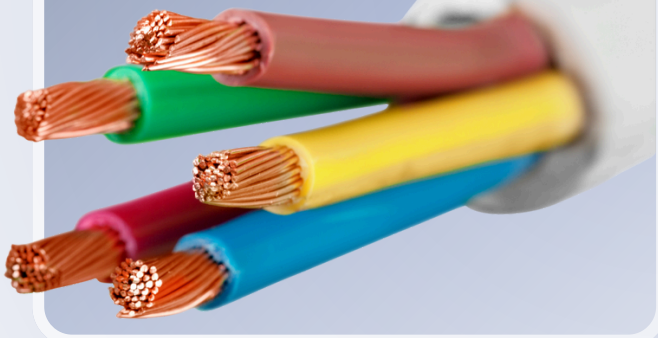
We help industrial companies automate inspection, measurement, and quality control using cameras, sensors, and AI-driven software.

Our systems **detect defects, verify dimensions, and improve consistency** so manufacturers reduce scrap, avoid downtime, and increase throughput.

SEE. THINK. AUTOMATE.



Wire and Cable Manufacturing



Packaging and Bottling

Warehousing and Logistics

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

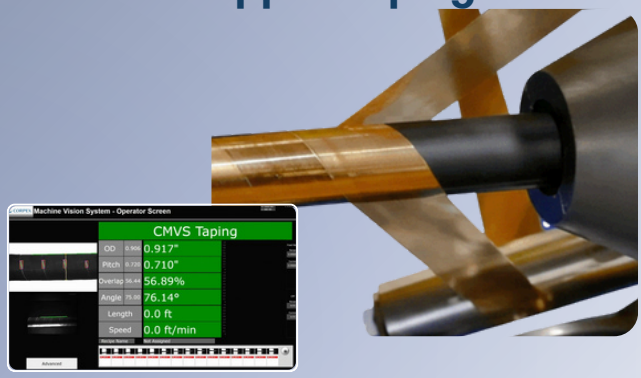
WIRE & CABLE IN MANUFACTURING

AI-powered inspection systems purpose-built for wire and cable production, from conductor measurement to armor inspection and reel monitoring.

Machine Vision for Wire & Cable

Real-time cable measurement with AI precision for consistent quality and dimensional accuracy.

Machine Vision for Copper Taping



High-speed vision inspection ensuring perfect tape overlap, pitch control, and defect detection.

Reel & Line Monitoring System for Cables

Smart inspection that **detects armor defects, monitors reels,** and enhances safety on the line.

Surface Defect Detection for ESP Cables

Hybrid AI and vision that exposes hidden armor distortions **before they affect production quality.**

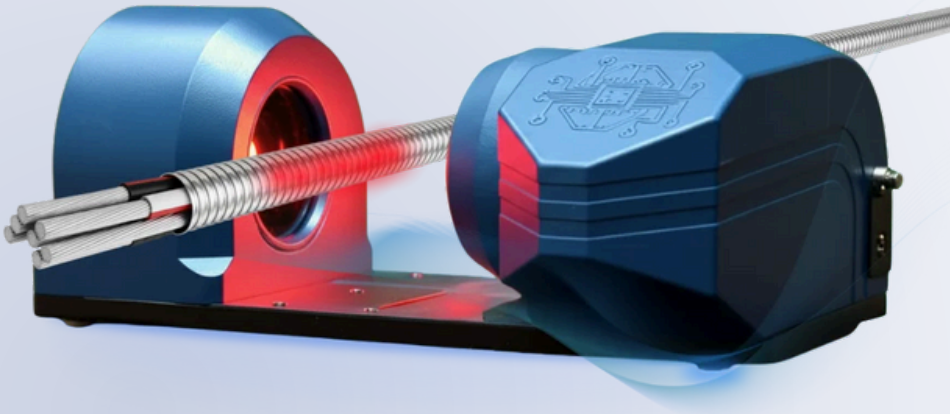
www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

MACHINE VISION FOR WIRE & CABLE

Real-Time Measurement for Armored and Convoluted Products

CORPEX Machine Vision for Wire and Cable is designed to deliver precise, **real-time measurement and defect detection** for armored and convoluted cable manufacturing.



By combining high-speed imaging with AI-based analysis, machine vision system **measures outside diameter, convolution pitch, and product length** while maintaining exceptional accuracy and consistency.

Its advanced vision and data processing capabilities help manufacturers ensure product integrity, improve quality control, and minimize production waste.

Applications

- Armored cable manufacturing
- Control and communication cables
- Re-spooling and take-up measurement
- Dimensional inspection for convoluted or wrapped products and more

How Machine Vision System for Wire and Cable Works?

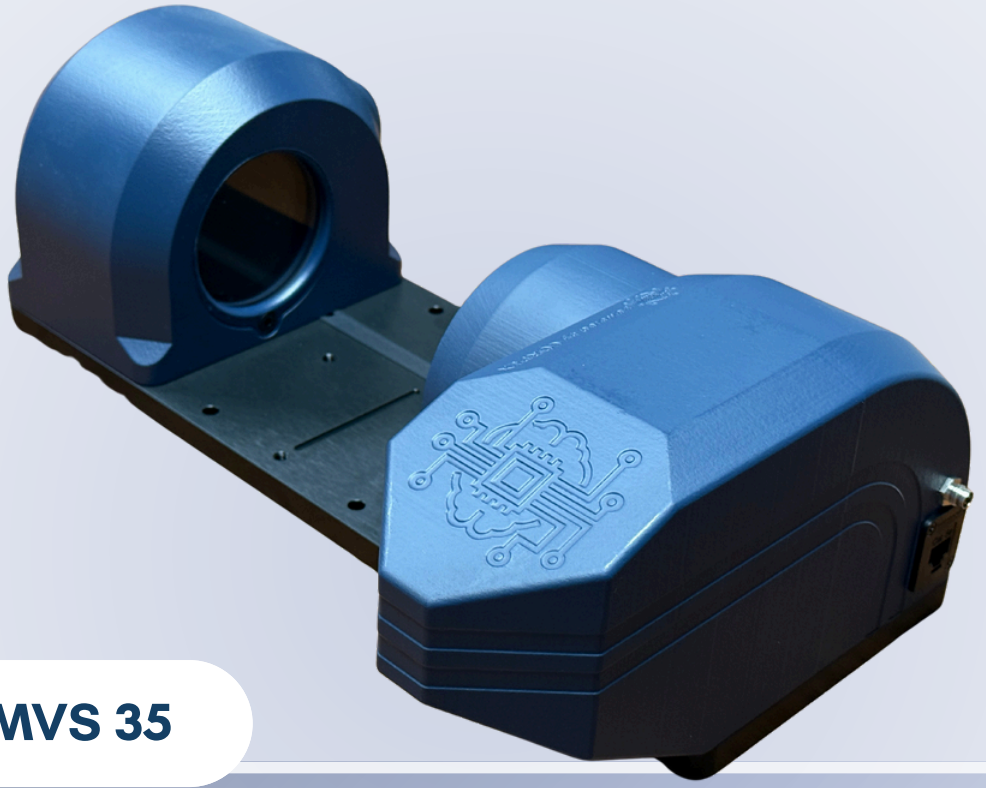
Our system captures and analyzes the product profile in real time using multiple high-resolution sensors. It compares every reading against target parameters received from the production system and highlights any deviations.

All measurement data is logged for traceability and analysis, allowing engineers and operators to review product consistency, identify trends, and refine production parameters for ongoing improvement.

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

MACHINE VISION FOR WIRE & CABLE



CMVS 35

- Target OD range: 0.15–1.35 inches
  3.81–34.29 mm
- Accuracy: ±0.001 inches in real time at max speed of armoring line up to 80ft/min
  ±0.0254 mm 26.2m/min
- Max pitch: 0.65 inches (18 convolutions per foot)
  16.51 mm (59 convolutions per meter)
- Large touch screen HMI (Human Machine Interface)
- Optional smart light

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

MACHINE VISION FOR WIRE & CABLE

CMVS 55

- Target OD range: 0.25–2.2 inches
  6.35–55.88 mm
- Accuracy: ±0.002 inches in real time at max speed of armoring line up to 80ft/min
  ±0.0508 mm 26.2m/min
- Max pitch: 0.75 inches (16 convolutions per foot)
  19.05 mm (52.5 convolutions per meter)
- Flexible mounting
- Large touch screen HMI
- Optional smart light

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

MACHINE VISION FOR WIRE & CABLE

CMVS 100

- Target OD range: 0.25–4.0 inches
  6.35–101.6 mm
- Accuracy: ±0.002 inches in real time at max speed of armoring line up to 80ft/min
  ±0.0508 mm 26.2m/min
- Max pitch: 0.75 inches (16 convolutions per foot)
  19.05 mm (52.5 convolutions per meter)
- Designed for high-speed armoring lines up to 80 ft/min
  26.2m/min
- Large touch screen HMI
- Optional smart light

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

MACHINE VISION FOR WIRE & CABLE

CMVS 125

- Target OD range: 0.25–5.0 inches
  6.35–127 mm
- Accuracy: ±0.002 inches in real time at max speed of armoring line up to 80ft/min
  ±0.051 mm 26.2m/min
- Max pitch: 0.75 inches (16 convolutions per foot)
  19.05 mm (52.5 convolutions per meter)
- Includes live visual feedback and quality data logging
- Large touch screen HMI
- Optional smart light

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

MACHINE VISION FOR WIRE & CABLE

CMVS 125 Dual Axis

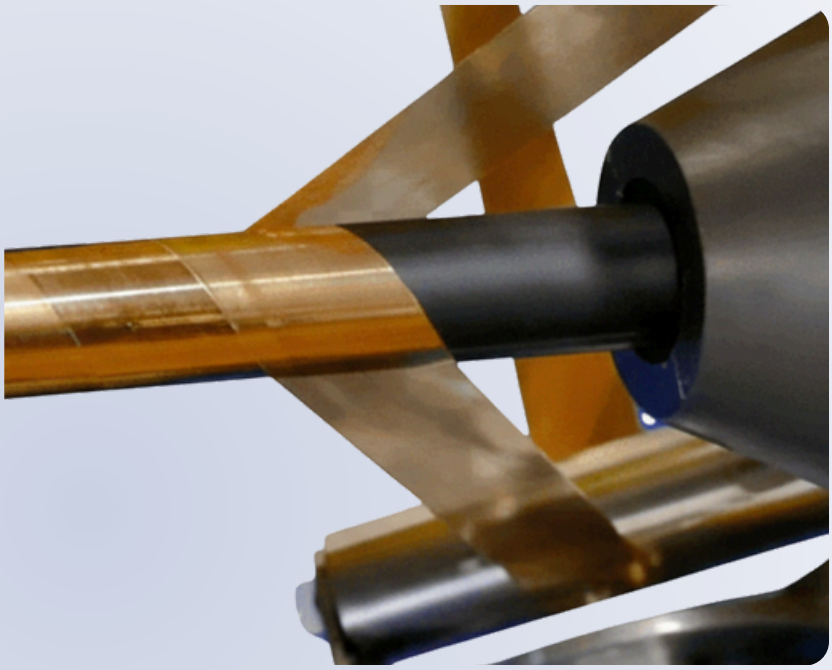
- Designed for flat and control cable
- Major axis: 1.5-5.0 inches
  38.1-127 mm
- Minor axis: 0.24-1.25 inches
  6.1-31.75 mm
- Accuracy: ±0.002 inches in real time at max speed of armoring line up to 80ft/min
  ±0.0508 mm 26.2m/min
- Measures both width and height simultaneously for advanced dimensional control
- Large touch screen HMI with optional smart light

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

MACHINE VISION FOR COPPER TAPING

High-Speed Precision for Cable Taping Inspection



CORPEX Copper Taping Vision System delivers high-speed, real-time inspection for copper-taped cable production. It measures outside diameter, pitch, and overlap percentage to ensure consistent taping accuracy across every product.

By combining advanced vision sensors with AI analysis, the system detects missing tape, pitch variation, and misalignment as they occur, helping manufacturers maintain precision, reduce rework, and improve overall production quality.

Benefits

- Maintains uniform tape overlap and pitch throughout production
- Reduces waste by catching defects early
- Improves line efficiency through data-driven adjustments
- Ensures high-quality, consistent cable output for demanding applications

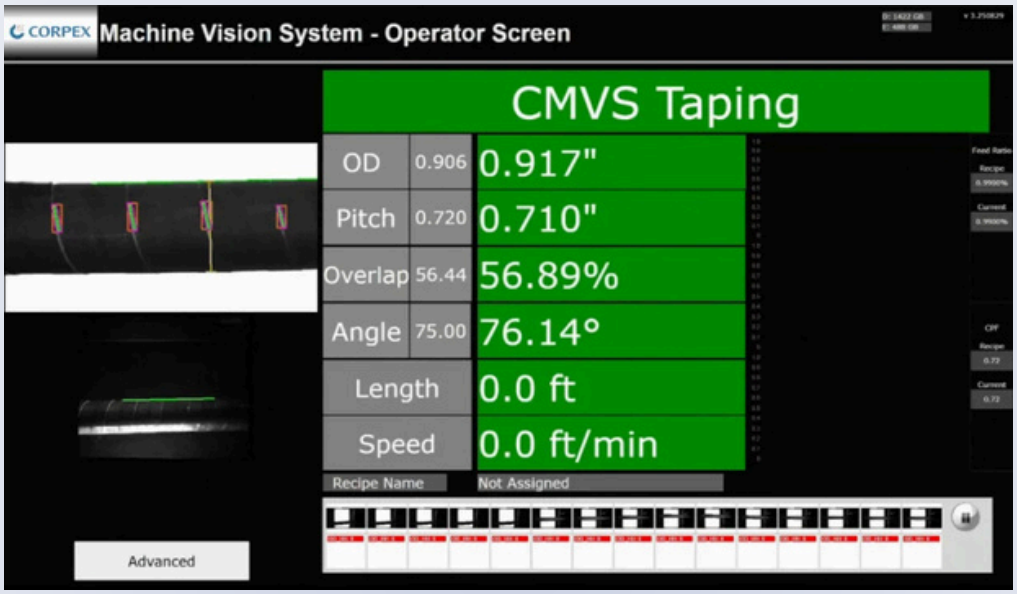
Applications

- Copper taping for armored and communication cables
- Control cable taping processes
- Real-time quality inspection on high-speed production lines
- Re-spooling and take-up quality verification

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

MACHINE VISION FOR COPPER TAPING



Technical Capabilities

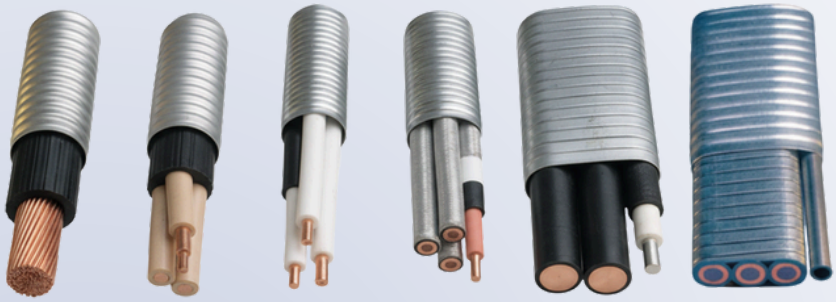
- Product range from 0.25 to 4.0 inches in diameter
  6.35–101.6 mm
- Pitch measurement precision up to 0.006 inches at 3-inch pitch and 0.003 inches up to 1-inch product size
  0.1524 mm 76.2 mm 0.0762 mm
  25.4 mm
- Real-time failure detection for missing tape or out-of-spec overlap
- Continuous inspection even at maximum line speed

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

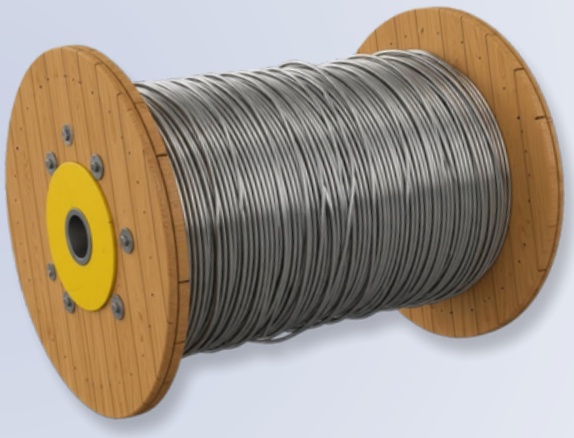
REEL & LINE MONITORING SYSTEM FOR CABLES

Comprehensive Inspection for Armored Cable Manufacturing



Designed to provide complete visual inspection and monitoring in cable manufacturing environments. It identifies missing armor, distorted products, and irregular shapes in real time while improving workplace safety through human detection in the workspace.

Enhances process visibility, quality control, and safety across production lines, helping manufacturers meet the highest standards of precision and efficiency.



How it Works?

The system compares live visual data to reference parameters and displays any variations on the operator interface.

Its **real-time visualization and recording** features allow engineers to analyze production data, identify trends, and take corrective actions before defects propagate through the process.

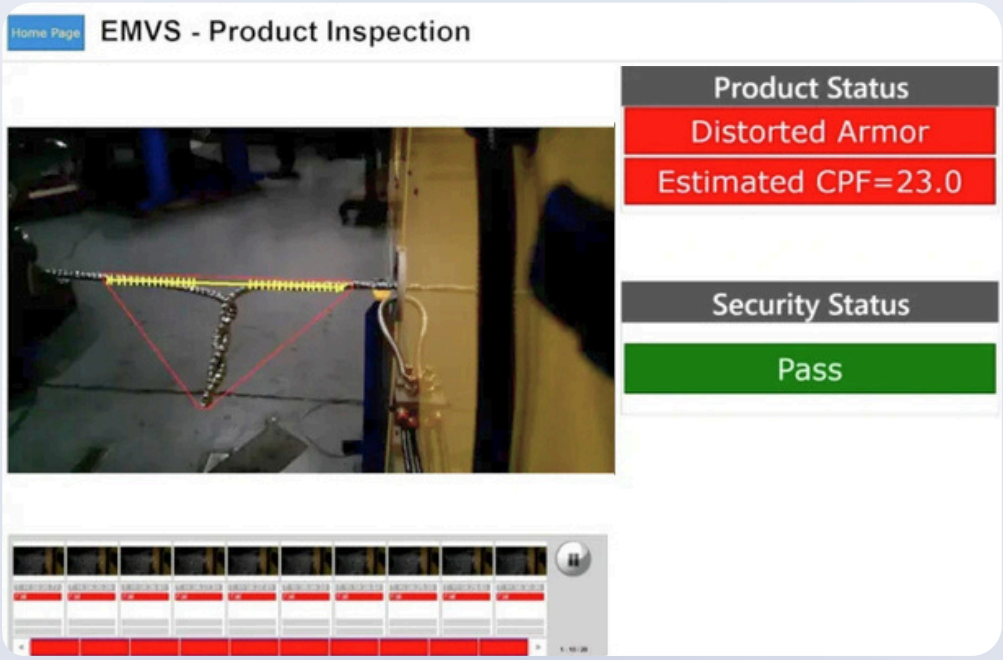
Applications

- Armored cable inspection
- Reel monitoring and tracking
- Process safety and human detection
- Integration with CMVS for combined quality management

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

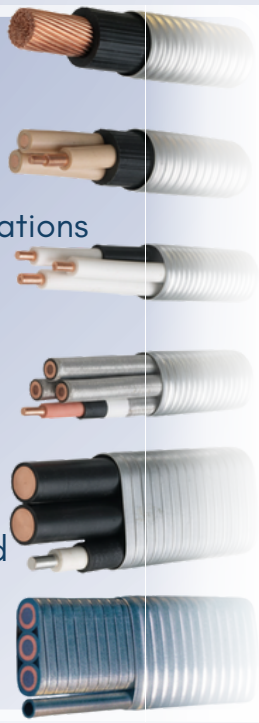
CORPEX

REEL & LINE MONITORING SYSTEM FOR CABLES



Product Inspection

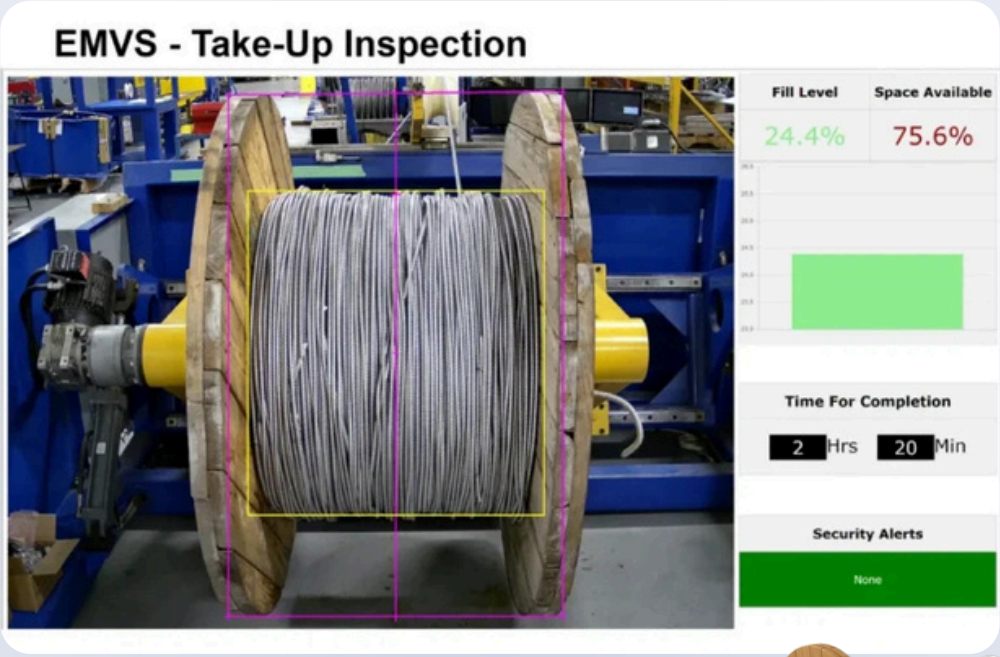
- Detects missing armor
- Detects distorted product
- Provides a rough estimate of convolution alignment with specifications
- Detects missing product
- Identifies misformed armor
- Detects a person in the workspace for safety alerts
- Fully configurable system parameters
- OPC output for system integration
- Interfaces with CMVS for measurement, product information, and real-time data exchange
- Includes a large touchscreen with a user-friendly display

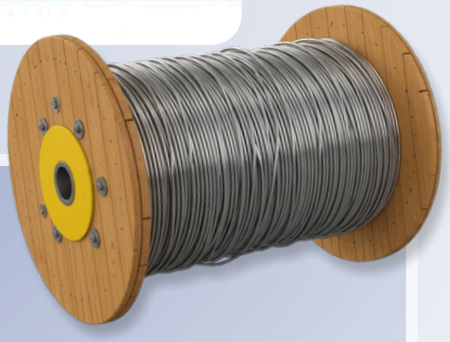


www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

REEL & LINE MONITORING SYSTEM FOR CABLES





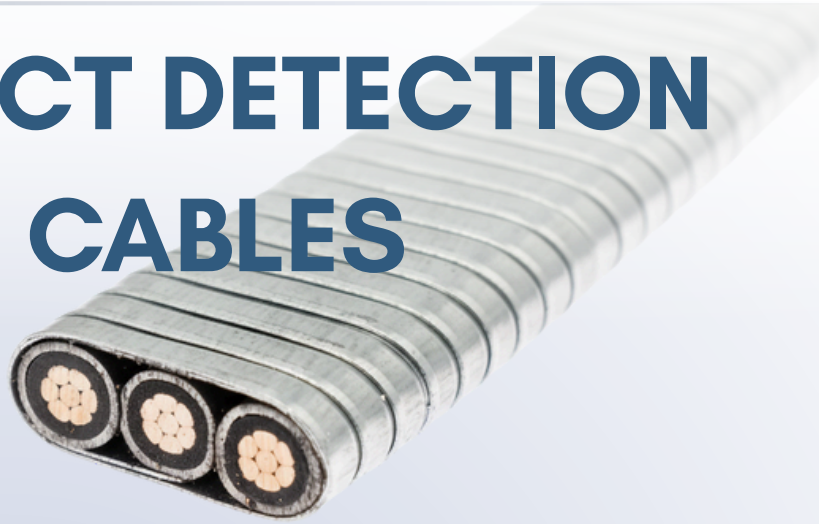
Reel Inspection

- Take-Up and Pay-Off Spool
- Detects reel presence and reel sizing
- Calculates rate of change to estimate time-to-full or time-to-empty
- Detects a person in the workspace for safety monitoring
- Fully configurable settings and thresholds
- OPC output for integration with plant systems
- Interfaces with CMVS for shared measurement data and real-time synchronization
- Includes a large touchscreen with a user-friendly display

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

SURFACE DEFECT DETECTION FOR ESP CABLES

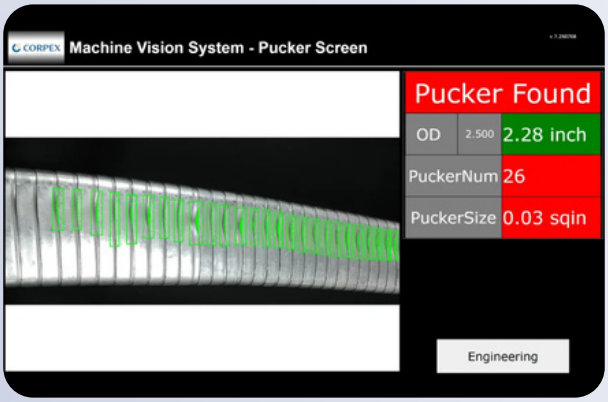


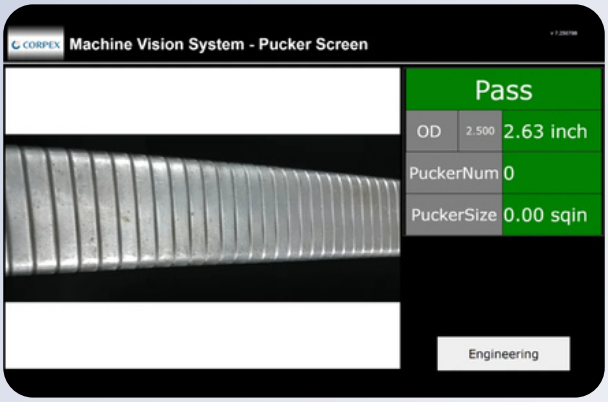
Hybrid AI and Vision for Armor Defect Detection

Surface Defect Detection for ESP Cables combines artificial intelligence and machine vision to detect armor deformation and puckering during cable manufacturing.

This hybrid technology identifies variations in shape and compression as they occur, **helping manufacturers maintain consistent product dimensions and prevent costly rework.**

By using both vision and AI in parallel, CORPEX ensures reliable, **real-time defect recognition** that surpasses traditional single-technology inspection methods.





How it Works?

Machine vision identifies potential irregularities, while the AI algorithm interprets these findings to confirm if the anomaly is a true defect or a harmless variation.

This collaboration between visual detection and AI reasoning **eliminates both false positives and false negatives**, ensuring only real quality concerns trigger operator attention.

Applications

- ESP and armored cable production
- Communication and control cables
- Re-spooling or tension-controlled winding lines
- Any process where dimensional stability is critical

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

BOTTLE INSPECTION SYSTEM

Smart Vision for Fill and Cap Inspection

Bottle Inspection System delivers AI-powered vision inspection for bottling and packaging operations. It ensures every bottle meets strict quality standards by detecting missing caps, seal issues, and fill-level variations **in real time**.

Engineered for transparent and semi-transparent bottles, the system eliminates manual checks, **reduces waste, and improves efficiency** across production lines

Benefits

- 100% in-line, non-contact inspection
- Detects and prevents packaging errors before they leave the line
- Improves throughput and reduces waste
- Provides automatic traceability and batch reports
- Reduces labor and inspection downtime
- Enhances consistency and customer satisfaction

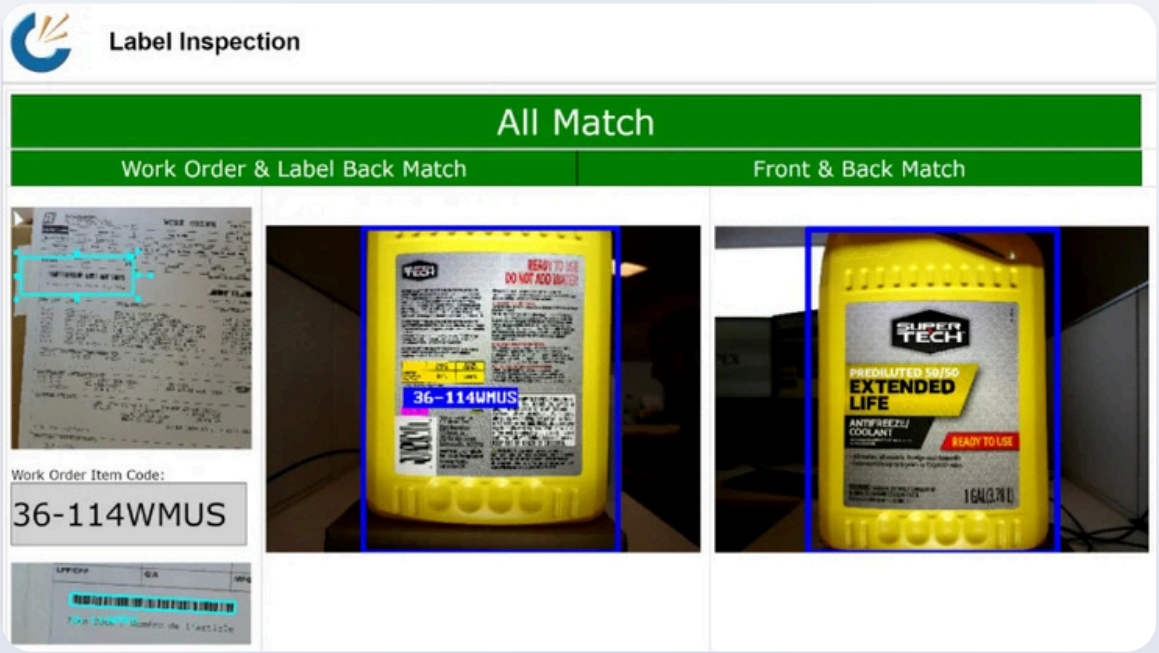
Applications

- Beverage and food bottling lines
- Chemical and lubricant packaging
- Health and pharmaceutical product filling
- Transparent and semi-transparent containers
- Integration with cap, label, and fill-level modules on multi-stage lines

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

LABEL INSPECTION SYSTEM



AI-Driven Accuracy for Product Identification and Compliance

Label Inspection System ensures every product label is present, correct, and properly positioned. Using advanced machine vision and AI recognition, **it verifies label accuracy, alignment, and readability in real time.**

By checking every container as it moves through production, the system prevents labeling errors, **reduces waste, and maintains full compliance** with product traceability and branding standards.

Benefits

- 100% label inspection at full line speed
- Prevents incorrect or misplaced labels
- Reduces rework, recalls, and product waste
- Ensures SKU and batch traceability through OCR and barcode reading
- Provides archived images for audit and regulatory compliance
- Enhances accuracy and consistency in labeling operations

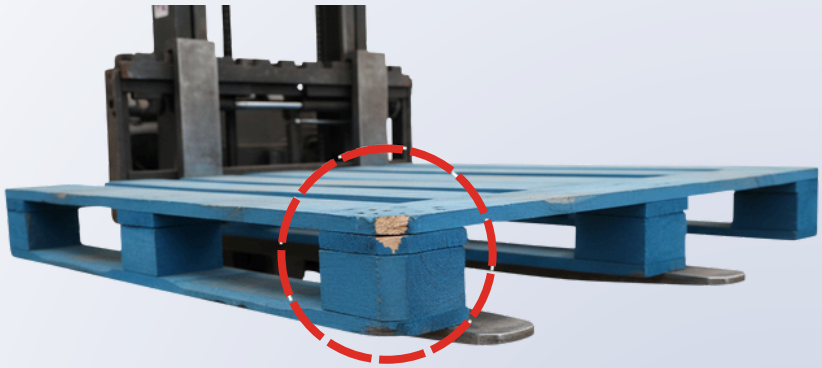
Applications

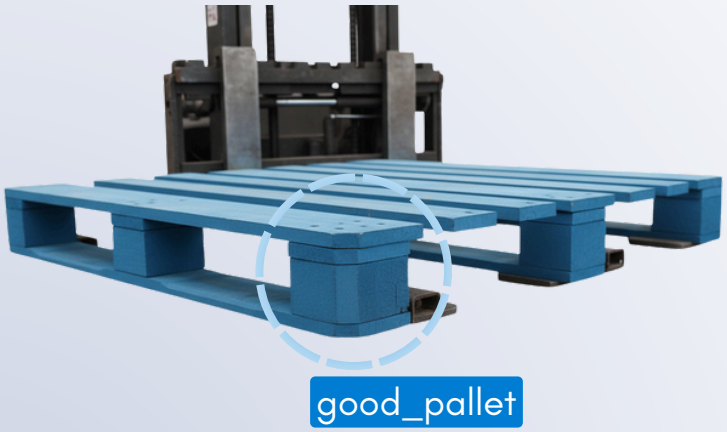
- Food, beverage, and consumer goods packaging
- Chemical and industrial labeling processes
- Pharmaceutical and healthcare product lines
- Bottling and labeling environments with mixed SKUs

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

BOX AND PALLET INSPECTION





Technology and Capabilities

- AI-driven image recognition and classification
- 3D spatial awareness and distance measurement
- Configurable safety and detection zones
- Continuous logging and playback functionality
- Integration with Industry 4.0 frameworks through OPC, MES, and SCADA connectivity

Benefits

- Prevents collisions and safety incidents
- Detects damaged or misplaced pallets in real time
- Reduces downtime by alerting operators to blocked or unsafe conditions
- Improves warehouse and production efficiency
- Ensures traceability through recorded inspection data
- Enhances automation readiness with AI-based event awareness

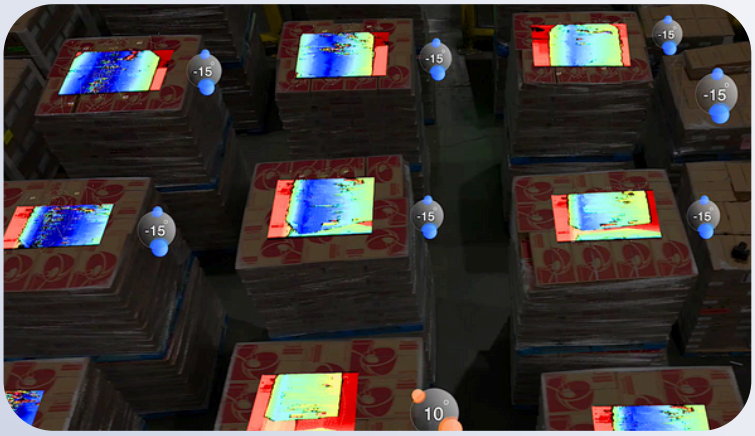
Applications

- Warehouse and distribution centers
- Cable manufacturing and re-spooling lines
- Pallet loading and dock operations
- Automated guided vehicle (AGV) zones
- Production areas requiring human-safety monitoring

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3

CORPEX

THERMO INSPECTION SYSTEM



Technology and Capabilities

- 49,000+ temperature measurement points per frame
- 20 frames per second for live thermal analysis
- Spatial and temporal pattern detection for predictive diagnostics
- AI-enhanced trend learning for proactive maintenance
- Integration-ready for Industry 4.0 systems and smart factories

Applications

In Warehousing and Logistics

- 100% pallet inspection at loading docks and storage zones
- Monitoring of incoming and outgoing goods for temperature stability
- Identification of uneven cooling, blocked airflow, or thermal leaks
- Elimination of manual thermometer checks through full automation

In Manufacturing and Production

- Real-time temperature trend detection for tool wear or lubrication failure
- Monitoring of cable, extrusion, or forming lines for abnormal heating
- Early identification of process drift or incorrect machine setup
- Data-based feedback to improve equipment reliability

Benefits

- Complete thermal visibility across products and materials
- Early detection of temperature-based inefficiencies or defects
- Reduced downtime through predictive alerts
- Higher process consistency and product safety
- Fully traceable thermal records for compliance and auditing
- Eliminates human error from manual measurement

www.corpex.biz getinfo@corpex.biz 7111 Syntex Dr Suite 100, Mississauga, ON L5N 8C3