



**AUSTRALIS
ENGINEERING**

Coin Handling Solutions



Blank & Coin Handling - Vision Counting

Packaging - Robotics - Automation

VISION COUNTING SYSTEM



Australis Engineering has designed and manufactured the world's first Vision Counting System (VCS) for Coins and Blanks.

The VCS is an innovative approach to the dual requirements of counting coin blanks and to 'feeding' your entire coin production system.

In comparison to traditional coin counting machines the production time is reduced and reliability is improved when compared to most alternatives.

The VCS also requires zero setup between coin denominations. In comparison, traditional coin counting equipment normally requires significant setup or adjustment time between coin blank denominations. The overall throughput and volume capability is also greater than comparable counting methods.

Improve your audit and quality assurance

Benefits of the VCS:

- ⇒ Mass flow coin counts average 18,000 coins per minute (CPM) and peak rates of 21,000 CPM
- ⇒ Cost and time efficiency as the VCS requires no tooling changes or mechanical adjustments — it will count all denominations.
- ⇒ Improve your audit and quality assurance through highly accurate coin counts and data capture. Know what goes into the presses and what comes out.
- ⇒ Accuracy up to 99.9% for most denominations.
- ⇒ Reduced equipment footprint compared to traditional single flow counters.



How does it work?

- ⇒ Infeed belt conveyors feed coins/ blanks
- ⇒ High speed cameras capture images of coins in mass flow
- ⇒ Special purpose software processes images, accounting for overlapping coins
- ⇒ Results can be input to an MES system



MATERIALS HANDLING EXPERTS

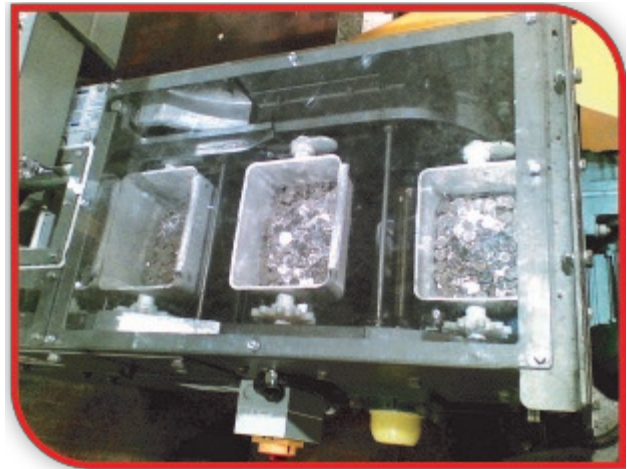
We have successfully installed materials handling systems to cater for:

- ⇒ Coins and coin blanks
- ⇒ IT, science, defence & aviation
- ⇒ Hazardous substances
- ⇒ Health and pharmaceuticals
- ⇒ Manufacturing & packaging
- ⇒ Paper & plastic products
- ⇒ Food & beverage (incl. beer, wine & spirits)
- ⇒ Automotive industries

Australis has been proudly producing materials handling equipment since 1983.

We specialise in equipment that:

- ⇒ Meets all Australian & International Standards
- ⇒ Uses high quality components & materials
- ⇒ Meets or exceeds occupational health & safety requirements
- ⇒ Is reliable and long lasting
- ⇒ Is custom designed using 2D and 3D CAD software to meet your exact needs and standards
- ⇒ Backed by our warranty and support services



World-wide export experience!



OUR CAPABILITIES

- ⇒ Conveyor systems
- ⇒ Palletisers and depalletisers
- ⇒ Robotics
- ⇒ Automation and PLC's
- ⇒ Bucket elevators & multi-axis conveyors
- ⇒ Vibratory systems
- ⇒ Linear Guides
- ⇒ Aluminium profile & machine guards
- ⇒ Carton erectors & stretch wrappers
- ⇒ Special purpose machinery

AUTOMATION & PLC

AUTOMATION

A full range of automation solutions can be supplied by Australis including:

- ⇒ PLC integration of new and existing equipment
- ⇒ Line control for speed & efficiency
- ⇒ Vision and sensor systems
- ⇒ Safety PLC systems including trapped key, light curtains, area scanners and muting

Automation Equipment

- ⇒ Robotics including custom gripper design
- ⇒ Pick and Place systems
- ⇒ Pneumatic and hydraulic powered systems

Custom designed solutions for difficult problems!
We tackle the projects other company's fear.

ELECTRICS

All systems can be supplied with a full range of electrical components for a full turnkey project.

Australis can also supply and install stand alone electric equipment for existing machinery

Electrical Services include:

- ⇒ Cabinet design and builds
- ⇒ Motor isolators
- ⇒ Field switch gear including VSD, Start/Stop controls
- ⇒ E-Stop, E-Lanyards and other safety equipment
- ⇒ Site wiring and installation

We only use quality brand name components including:

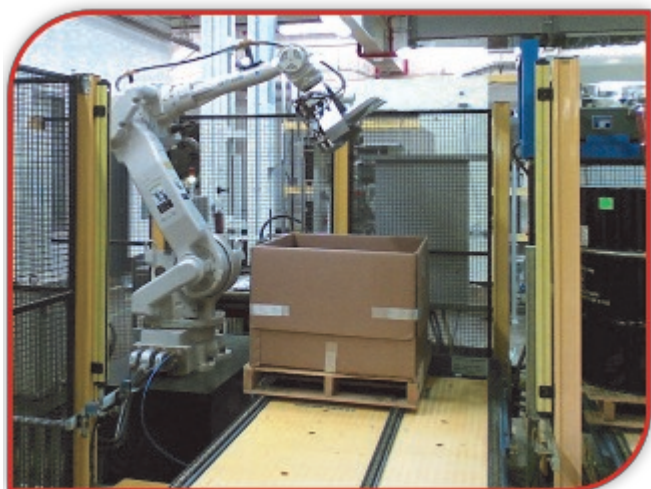
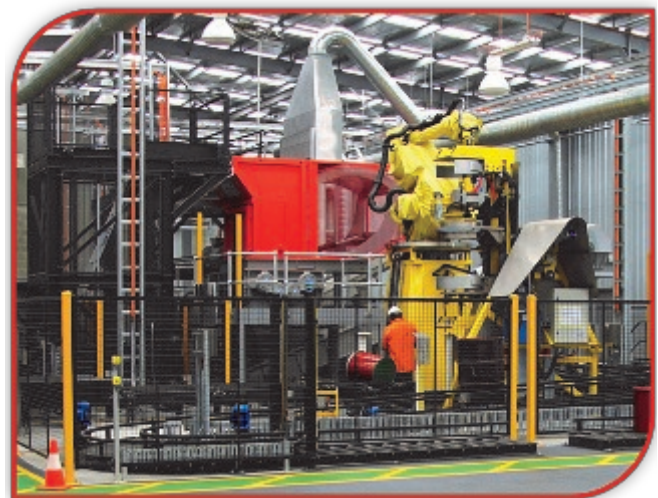
- ⇒ Allen Bradley
- ⇒ Siemens
- ⇒ Schneider
- ⇒ SICK
- ⇒ PILZ



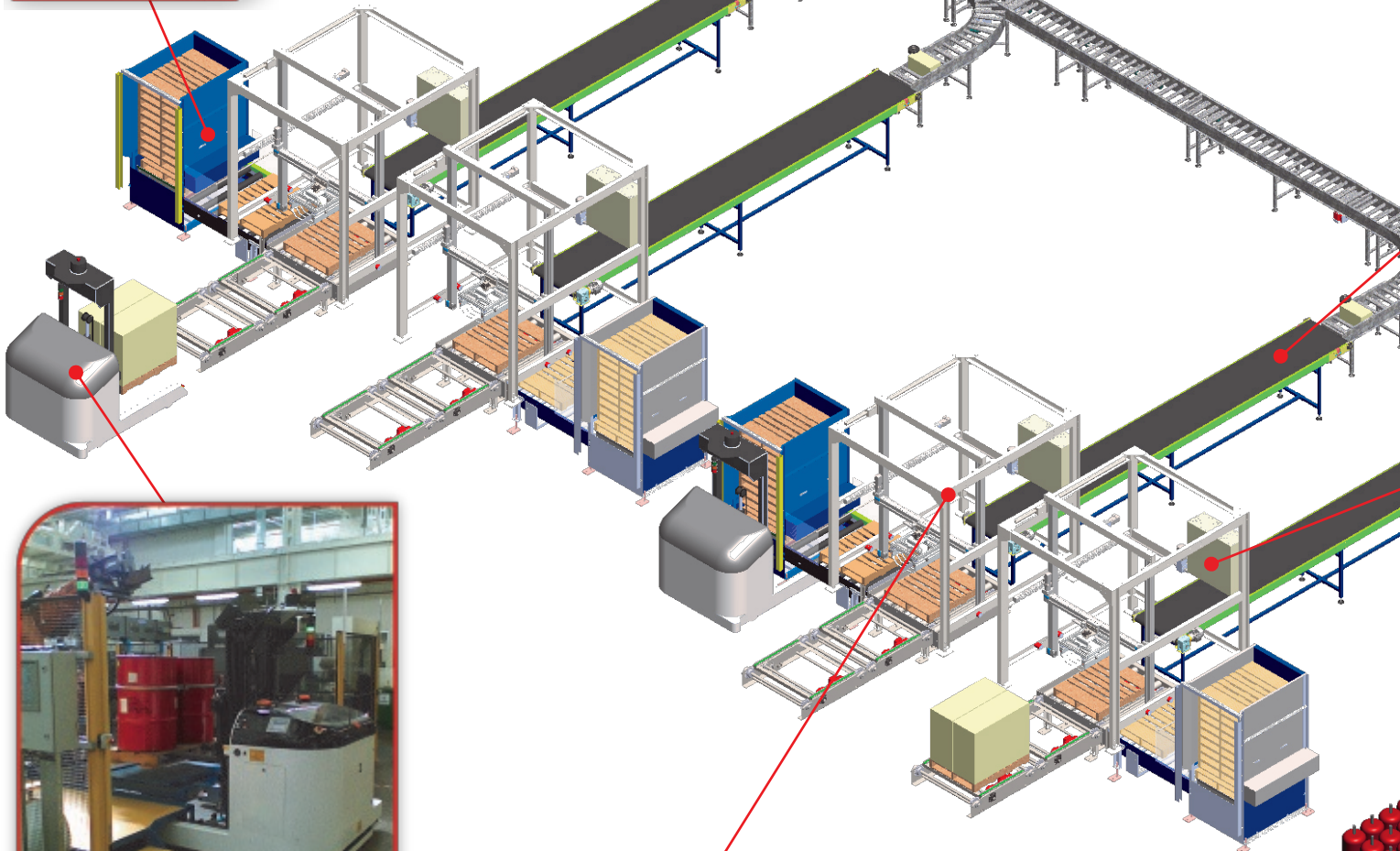
ROBOTIC SYSTEMS

Australis has an enviable track record in the integration of multi-axis and linear robotic systems for clients in a wide range of industries. Our solutions include:

- ⇒ Multi axis and Linear robots
- ⇒ High speed, high payload or high flexible handling
- ⇒ Systems include pick & place, palletising, depalletising machine tending, product loading and unloading
- ⇒ Grippers including mechanical and vacuum
- ⇒ Fully integrated & automated control systems
- ⇒ Customised grippers for special purpose applications
- ⇒ Choose from numerous brand robots, including KUKA, Fanuc, Motorman, ABB and others.

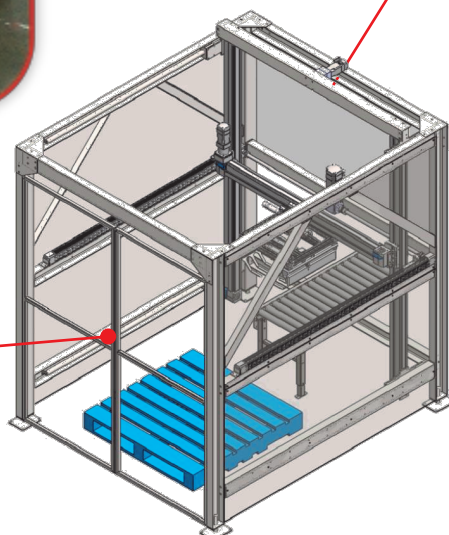


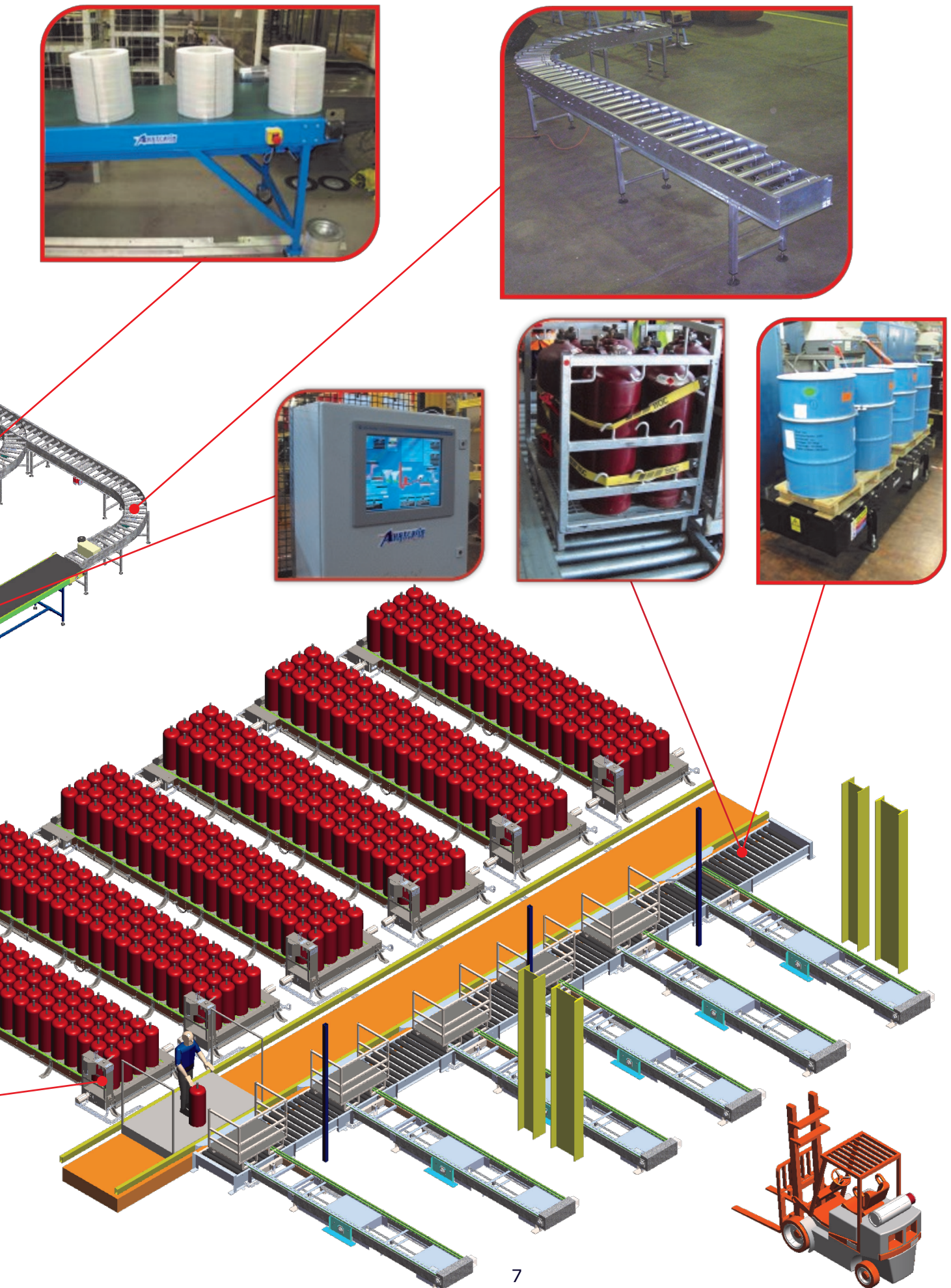
We work in partnership with our clients to understand and develop systems specifically to meet their needs providing the most efficient and cost effective solution — first time.



MLP-10 mini linear robotic palletiser

The cost-effective, small footprint solution to palletising by hand.





COIN & BLANK DISTRIBUTION SYSTEM

INNOVATIVE COIN DISTRIBUTION SYSTEM

Australis Engineering has an innovative coin distribution system available for deployment in areas where transporting your coins may be otherwise difficult.

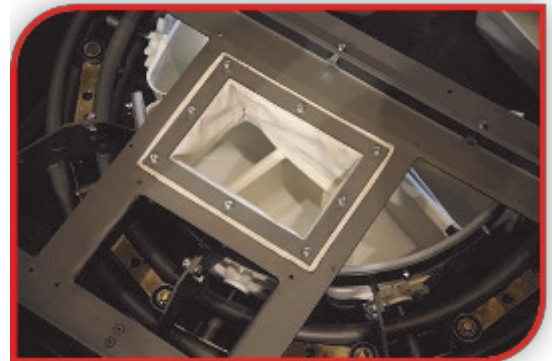
ELECON MULTI-AXIS ELEVATOR

The Elecon is the world's only conveyor that can move materials in all three directions.

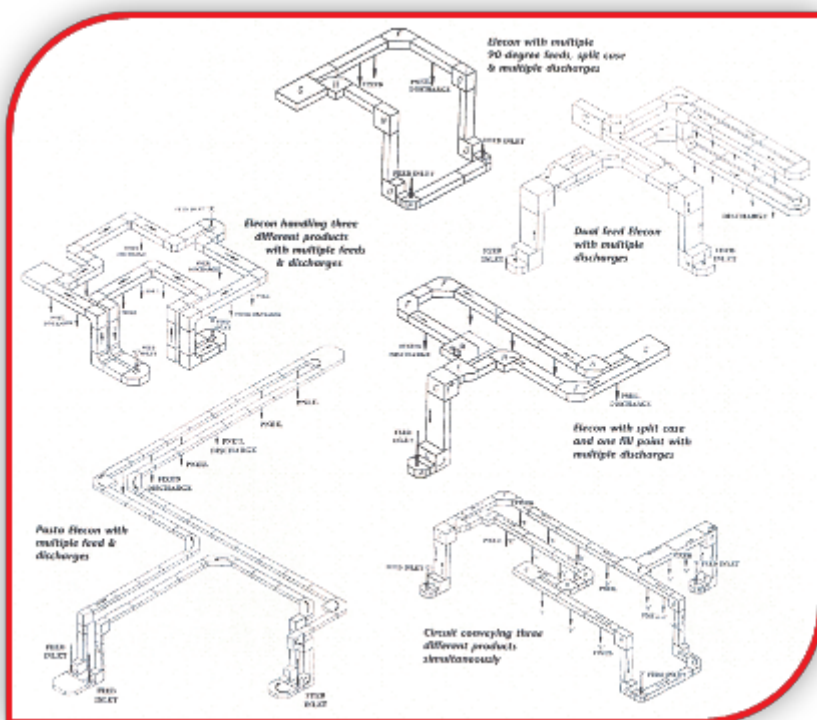
Besides the typical vertical and horizontal movement, the Elecon's buckets actually turn corners!

No other conveying system in the world is as flexible as the Elecon.

This three-axis capability is a result of its patented chain design and wedge-shaped buckets. Because it's so flexible, the Elecon system can handle virtually any circuit design you can imagine including multiple infeed and discharge points.



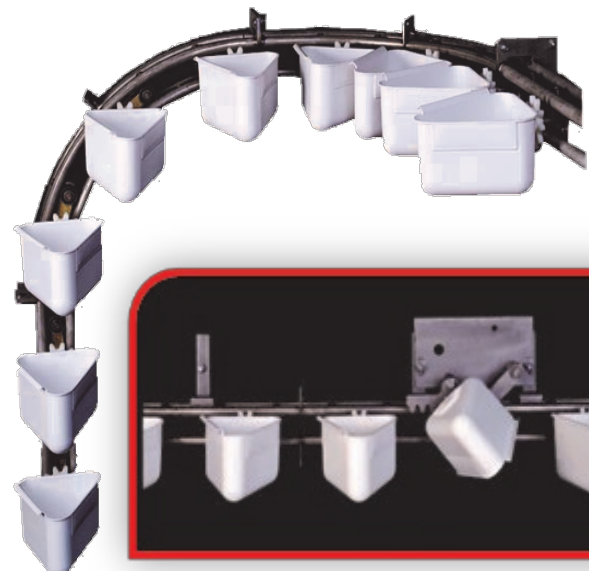
MULTIPLE INLETS & DISCHARGES FOR A COMPLETELY FLEXIBLE SYSTEM



Max Elecon
42000ml

Pasta Elecon
9000ml

Elecon
3600ml



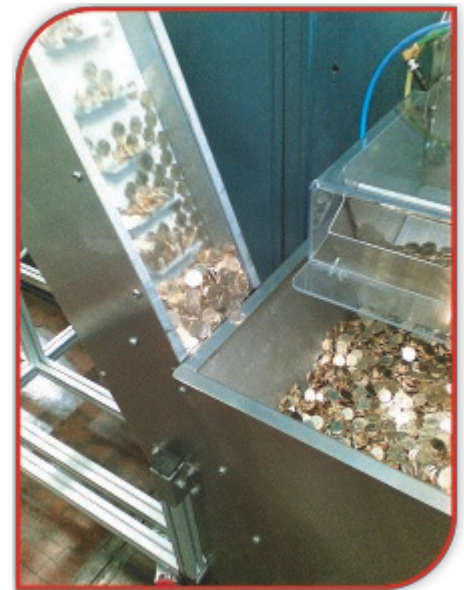
CUSTOM DESIGNED ELEVATORS

Coin and product elevators can be custom designed to suit the exact requirements of most situations.

Featuring innovative solutions to ensure your coins are not damaged or lost, our elevators are a versatile solution to moving your product to higher levels.

Some special features of our elevators include:

- ⇒ Integrated hopper, or
- ⇒ Direct feed with a vibratory feeder
- ⇒ Automatic 2-way divert chutes
- ⇒ Fully guarded and covered including polycarbonate guards
- ⇒ Specially designed conveyor boot to ensure coins do not fall through the bottom of the elevator or become jammed in the chain
- ⇒ Integrated control panels
- ⇒ Aluminium frames for mounting peripheral equipment



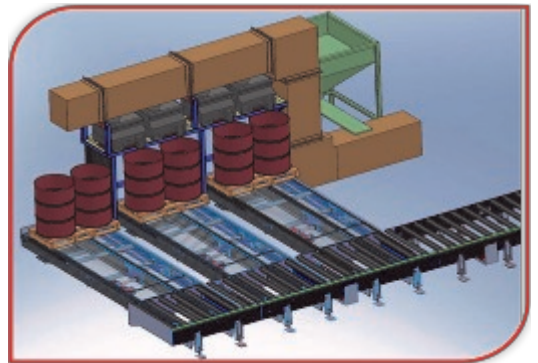
ENGINEERING CONSULTANCY

Australis Engineering is a leading engineering company with strong experience in the Coin Minting industry.

To succeed in an increasingly competitive and rapidly changing global market, the Minting industry must take a new approach to doing business. Our engineering consultancy service helps clients adapt to change by partnering our people with your team to develop and implement real solutions for your business.

We are committed to helping our clients cement their desired change to optimise manufacturing efficiency, optimise assets, deliver services quickly and cost-effectively, and position themselves for future success.

To achieve these outcomes Australis maintains a team of highly qualified and experienced Mechanical and Mechatronic Engineers who are able to trouble-shoot your coin, precious metal and bank-note production issues.



ISO 9000 Quality Management Certification | ISO 31000 Risk Management Certification

Australian designed - World Class Engineering

Our Consultant Engineers can assist you with:

- ⇒ Design for new, turnkey coin minting, precious metal or bank-note manufacturing or packaging systems
- ⇒ Integrated, one-off materials handling solutions including conveyors and palletising systems
- ⇒ Integrated and/ or new robotic and automation solutions
- ⇒ Continuous improvement of existing manufacturing or packaging systems
- ⇒ Mechanical engineering plant and process design
- ⇒ Materials handling design and analysis
- ⇒ Concept design and feasibility studies
- ⇒ CAPEX budget proposal
- ⇒ Remaining life assessment and structural recovery
- ⇒ Design auditing
- ⇒ Research and development
- ⇒ Project management and procurement
- ⇒ Training and personnel development



THE PROJECT

In 2007 the RA Mint began a modernisation program for their circulating coin production facility. The Mint sought to upgrade its circulating coin blank handling and finished coin warehousing with a state of the art system. The Mint required innovative engineering design as well as the capability to undertake the manufacture and installation of the materials handling and warehousing system (MHWS).

Key features of our award winning solution include:

- ⇒ A world's first coin Vision Counting System (VCS),
- ⇒ Fully automated to minimise manual handling & increase production output,
- ⇒ A fully integrated materials handling and warehousing solution, inclusive of special purpose conveyors, robotics and elevators
- ⇒ Automated Guided Vehicles (AGVs) to reduce manual handling,
- ⇒ bucket elevators, warehouse racking & pallet wrappers,
- ⇒ A Manufacturing Execution System (MES) to manage the entire coin production process.



Award Winner – Engineers Australia, Engineering Excellence Awards 2009



Beneficial outcomes of the Australis design include:

- ⇒ Whole-of-system integration using automation & best practice materials handling applications,
- ⇒ 2.2 million coins/ day output & peak rates in excess of 8,600 CPM,
- ⇒ VCS counting coins at rates >18,000 CPM and accuracies >99.9%,
- ⇒ AGVs to reduce manual lifting, improve throughput & occupational health & safety (OHS),
- ⇒ Industrial robotics to lift and decant large drums of coins and improve OHS,
- ⇒ Design, manufacture & installation of belt conveyors, labellers, warehousing & bucket elevators
- ⇒ Substantial tourism increase through innovative use of CCTV for enhanced viewing of system operation.

Innovation

A key element has been the design, manufacture and installation of a world's first, VCS for coins. The VCS is a high throughput counting of up to 18,000 cpm. The system is designed to be virtually touch free so there is little chance of jams or blockages, resulting in a highly reliable system achieving up to 99.9% accuracy in production (depending on denomination).

The VCS has potential in other coin handling environments & other high speed mass flow counting situations.



COIN & BLANK DISTRIBUTION SYSTEMS

COIN ELEVATORS

PRECIOUS METAL HANDLING

VISION COUNTING SYSTEMS

AUTOMATION

ROBOTICS

COLLABORATIVE ROBOTS

MULTI AXIS CONVEYORS

CONVEYORS & CONVEYING SYSTEMS

PALLET HANDLING

PALLETISING & DEPALLETISING

AUTOMATIC GUIDED VEHICLES

SAFETY SYSTEMS & MACHINE GUARDS

TURNKEY PROJECTS

CONSULTANCY

DEVELOPMENT & PROTOTYPING



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