



Acoustic louvres

Acoustic Solutions

Problem:
Transfield Worley needed an acoustically silenced ventilation system for two compressor stations on a gas field. The compressors were inside a building and were very noisy. The pumps also generated a lot of heat so Transfield Worley needed a ventilation system that would keep the building cool while minimising noise emissions on the site. Safety and reliability were primary concerns for this design.

Solution:
Windsor designed and manufactured a ventilation system that met all of the requirements for the site.

Other applications:
Acoustic screens for condensers at Haywards sub-station
Acoustic enclosures for noisy machines and operator control rooms.



Boiler emission control

Design and Build

Problem:
With the introduction of a new Inter-island ferry, Centreport needed to quickly install a new passenger gangway.

Solution:
Windsor designed and built a new ferry gangway with a section that telescopes out and can pivot vertically and slew sideways. This involved extensive co-operation with companies building other parts of the project as well as managing subcontractors to deliver the gangway to a very tight timeframe.

Other applications:
Machine to cut cigarette filters
Vacuum cleaner that cleans a bus from the front doorway
Light traps to reduce beetle infestation at pulp mills.



Ferry gangway

SOLUTIONS, SUPPORT AND SERVICE

Windsor believes that quality servicing is the key to consistent, cost-effective operation. All specialist equipment and installations need professional servicing, maintenance and occasional repairs. Windsor equipment is backed up by our full-time maintenance and service team. Programmed maintenance management support, tailored to customer requirements, is a very cost-effective approach.

We offer versatility, professionalism and high quality results.



Lever Ponds airlift filter

Setting the standards

ENGINEERED SOLUTIONS



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Bus cleaning system – Perth



Substation acoustic screen



Windsor factory



Acoustic enclosure in sawmill

ENGINEERING EXPERTISE & EXPERIENCE

Over the last 30 years Wellington-based Windsor Engineering Group has established a strong reputation for high quality design and engineering solutions, both in New Zealand and overseas. Core capabilities enabling this are:

- Innovative Mechanical and Electrical Engineers with a broad range of experience.
- Practical Designers with the ability to translate ideas into economic solutions.
- Dedicated Project Managers who co-ordinate the resources of Windsor and associated companies to provide complete turn-key solutions.
- A factory with highly qualified staff and specialist production technology to manufacture the solution.
- A dedicated servicing and maintenance team.
- The ability to work closely with the customer to deliver the right solution.
- Windsor has the engineering and business skills to build prototypes and commercialise new technology or manufacture under license.

Windsor has significant experience in a wide range of industries including:

- Wood processing
- Dairy processing
- Food industry
- Meat processing
- Oil and gas
- Chemical
- Concrete
- General engineering

Examples of the types of solution Windsor provides include:

- **Drying kilns** and ovens for a variety of applications
- **Filter systems** control dust and fume emissions to meet low regulatory levels in industries from food (dairy, grain and seed and flour milling) to chemicals, wood, cement and many others
- **Pneumatic conveying** of particulate material of virtually any description
- **Specialist noise control** solutions to satisfy increasingly stringent regulations
- **Heat exchangers** for many industrial applications, including dairy and food production, pulp and paper industry and energy saving systems.
- **Electronic process control systems**
- **Aluminium and stainless steel fabrication**
- **Special purpose** machinery design and fabrication e.g., sheep washers and ship passenger bridges

SPECIFIC SOLUTIONS FOR YOUR NEEDS

Windsor will purpose design and build the optimum solution to suit your needs. Our R&D team's considerable expertise means we can develop new technology, or adapt existing technology, whichever is appropriate. The following case studies highlight some of the projects Windsor has completed.

Sheep Washers

Problem:

Klenzion had developed a patented stock washing system which improved visual cleanliness, reduced bacterial counts and used less water than existing stock-washing systems. They needed someone to develop this into a reliable commercial solution so they teamed up with Windsor in 2003.

Solution:

Windsor developed the machine that automatically conveys sheep through a wash tunnel where specially placed nozzles firstly wash off the high levels of organic matter and then rinse each animal clean with potable water. Windsor also assisted with marketing the system.

Heat Exchangers

Problem:

Fonterra's decision to replace their heatplants with new 40 barg boilers meant that they would need a reliable NZ supplier for replacement heat exchangers.

Solution:

Windsor designed and built new stainless steel coils and the associated high-pressure pipework.

Other applications:

Windsor has used this technology to build similar heat exchangers for fibre dryers, process heating systems and heat dumps, as well as for energy recovery from waste heat streams.

Curing and Drying Chambers

Problem:

A Wellington battery manufacturer needed a large scale curing oven to make lead oxide battery plates. These are made of a special paste, supported by a moulded frame, and must be cured in a carefully controlled atmosphere to achieve the necessary quality standards.

Solution:

Windsor provided a solution to meet the client's particular needs. A special cart-loaded curing chamber was designed and built, complete with heating, humidification and control systems necessary for controlled atmosphere curing.

The finished product meets all the client's quality and performance needs.

Other applications:

A drying chamber for electric traction motor windings.

Steaming chambers for Humes of Te Rapa for curing concrete pipes.



Cooling tower attenuators



Klenzion sheep washer



Dairy heat exchanger



Steam chamber for concrete pipes