



Ultimate Guide to Energy Savings in Cold Storage

How to Lower Energy Consumption, Improve Performance, and
Maximise Cold Store Efficiency with Smarter Cold Store Door Solutions.



Ultigroup

What Matters To You, Matters To Us.

When it comes to getting a door system for your cold storage area, you want to find an expert who's got your back.

At Ulti Group, what matters to you, matters to us, and we've got the experience to make sure you get the perfect door, installed exactly right, that will protect your people, products and profits.

**"SOLUTIONS YOU
CAN TRUST"**





WE ARE NEW ZEALAND'S LEADING AND MOST TRUSTED INDUSTRIAL DOOR AND DOCK LOADING SYSTEM PROVIDER.

Ever since Ulti Group was founded in 1993, we have been protecting what matters most to our customers.

With innovative door systems, loading systems, and warehouse safety solutions installed and maintained across a wide range of industries, improving operational efficiency, increasing productivity, and reducing both cost and risk at facilities right across New Zealand.

But, let's start with energy efficiency...

What does that mean for you?

Well, we partner with you to build smarter, safer access solutions that protect what matters most: your people, products and profits. As you know, getting a door for your cold storage area is about more than just picking any old door out of a lineup—it's about getting to know your location, understanding your needs, and identifying any areas of concern.

Our experts take you through the whole process, lending their experience to make sure you get the right system, right from the start.

How To Maximise Your Energy Efficiency In Cold Storage Areas

Freezer and coolroom storage areas are used in plenty of different industries, from dairy/agriculture applications to supermarkets and other food development or storage.

But no matter the industry, the challenges of maintaining temperatures in cold storage areas remain the same—how do you maintain temperatures and minimise energy loss while making sure there's easy, safe, and reliable access to the area?

We designed this guide to answer the most common questions and concerns people have about their cold storage areas, including:

- the risks of poor energy efficiency in cold storage areas
- the most common areas of concern
- how to combat ice build-up
- how to identify your biggest energy leaks
- the types of freezer and coolroom doors available
- how to choose the right one for your facility's needs

Let's get started.

Ask about our Free Thermal Audits



OUR TOP 5 ENERGY SAVING TIPS

- 1** Monitor your energy use regularly. If you notice a spike in energy use, it might be time for some maintenance or an update to your cooler and freezer doors (it might not be your refrigeration system's fault)
- 2** Follow a regular maintenance schedule for doors, to help keep things in good condition and identify issues early
- 3** Invest in a full cold chain loading system to ensure that your products stay the right temperature even during loading and unloading
- 4** Have a professional thermal audit done every 3 years to make sure your systems are still working as they should and performing to a high level.
- 5** Have an equipment upgrade roadmap in place for the next five years. This makes it easier to plan and budget for the future and keeps your facility up to date on the latest technologies



THE COST OF DOING NOTHING

Poor energy efficiency and ice build-up could be costing you more than you think.

With rising energy costs and increased pressure to meet sustainability initiatives, the risks of poor energy efficiency continue to grow year after year, with electricity costs up 17% in the last five years.

The business cost

- Loss of product
- Rising energy costs
- Increased maintenance costs
- Increased H&S issues
- Loss of sustainability certifications
- Decreased product quality
- Damage to your brand

The environmental cost

- Higher carbon emissions
- Increased waste due to spoilage

HOW TO IDENTIFY PROBLEM AREAS

You can't fix a problem you don't know about! The first step to solving your energy loss problems and improving the efficiency of your cold storage area is identifying potential problem areas.

Luckily there are some simple steps you can take to identify issues early and save yourself the headache (and the cost) of serious problems.



Mind the gaps

Make sure your doors fit snugly in the openings and there aren't any gaps around the edges. A properly fitted door that is sealed on all four sides can make a massive difference to your energy efficiency.



Look for ice build-up

Ice build-up and or condensation around door areas are clear signs of improper sealing. This can result in health and safety hazards and put extra strain on the door and your refrigeration equipment.



Time your doors

How fast (or slow) are your doors? The longer they take to open and close, the more difficult it is to maintain temperatures and the more energy is wasted.



Check for damage

Damage to the doors themselves as well as the seals or mechanisms can be hard to notice if you're not looking for it but can end up costing you a lot over time due to energy loss and downtime.

The Impact of not Having the Right Door

Before we get into choosing the right door for your cold storage areas, it's worth remembering the negative impact the *wrong door* can have.

Just take the before and after photo of the Air Door installation. Does the iced up freezer look familiar? We can do better.

Don't let your old and inefficient doors hold you back from reaching your sustainability goals.



Contamination

A door that doesn't seal properly or closes too slowly allows contamination from vermin, dust or bacteria.



Product Damage

Leaking seals and slow closing doors can let in moisture, draughts and more that can damage products.



Energy Loss

The longer a door is open, the harder your refrigeration systems will have to work, wasting energy and money.



Safety Hazards

Without the right visibility or light communication systems in place, the risk of collisions and injuries can be significantly increased.



High Maintenance Costs

An improperly fitted door (or one that's not fit for purpose) can cause damage to the door, refrigeration units, or surrounding areas, resulting in unnecessarily high maintenance costs.

Freezer conditions before and after Air Door installation (2°C to -24°C)



Types Of Freezer And Coolroom Doors

So how do I choose the best door for my specific needs?

Don't worry, we'll make it easy.



PVC STRIP CURTAINS

A PVC strip curtain is a simple and cheap solution that consists of overlapping strips of plastic that hang from a rail.

It creates a basic barrier between two areas and reduces some thermal loss while also preventing dust and insects from entering.

Keep in mind, a PVC strip curtain on its own is not a cost-effective long-term option. But, when used in conjunction with a rapid door such as the Ulti DuoTherm, they can help decrease thermal loss when the main door is open.

Things to consider:

- They can compromise hygiene
- They slow down traffic and increase the risk of accidents
- They don't last very long
- They don't provide adequate insulation on their own

MANUAL SLAB DOORS

Manual slab doors are more durable and hygienic than PVC strip curtains and provide better insulation.

However, a manual slab door is only a practical solution if it is for an area that only requires limited, infrequent access or in instances where safety and productivity are not high priorities.

Things to consider:

- It wastes time and lowers productivity
- It requires more space to slide sideways
- It relies on workers remembering to close it promptly
- Ice build-up is a common problem with manual doors
- It presents additional safety risks



HIGH SPEED DOORS

A high speed door, such as the Ulti DuoTherm reduces thermal loss, improves traffic flow and increases productivity and safety by providing high visibility for fast moving forklifts.

It's a great solution for medium to high use doorways in cold storage applications, providing an excellent blend of energy efficiency and productivity thanks to it's high insulation and high speeds.

Things to consider:

- It may not provide enough insulation while open
- It involves more complex technology and installation costs
- It may require more maintenance
- As with all powered equipment, it is not immune to downtime due to power outages or mechanical failures





AIR DOORS

An air door system, such as the Ulti Air Door, is an innovative solution that creates an invisible barrier of high-speed air across an opening, preventing thermal loss, maintaining hygiene, and eliminating the chance of ice build-up.

And it allows vehicles and workers to pass through without obstruction. It's more effective than other options at preventing heat transfer and moisture accumulation without affecting visibility or accessibility.

An air door is the ultimate option for cold storage applications in high-use areas that need unobstructed access and quickly pays for itself with energy savings.

Things to consider:

- Its complex configuration requires a larger initial investment
- As with all powered equipment, it is not immune to downtime due to power outages or mechanical failure
- It requires significantly more space around the opening than other options

The Doors Of The Future Are Here

Although the concept of an air curtain or door has been around since the early 1900s, our air doors have perfected the technology, producing a highly effective stream of air that creates a seal between two different environments while allowing for an uninterrupted flow of traffic.

It might sound like something out of a sci-fi movie, but it's an incredibly efficient technology that's being used around the world.

Talk to the Ulti Group team today to see if an Ulti Air Door is right for you.

HYBRID AIR DOORS

A hybrid combination of a high speed door and an air barrier system, such as the Ulti DuoTherm Air, provides a physical seal when closed and an invisible seal when opened, protecting the area from thermal loss, humidity, and contamination at all times.

It's the perfect solution for cold storage doors that are in constant use, where energy efficiency and sustainability goals are top of mind.

Things to consider:

- It's not as compact or efficient while open as a dedicated air door
- It requires more space than a standard rapid door
- As with all powered equipment, it is not immune to downtime due to power outages or mechanical failure



— What To Consider When Choosing A Door

There are several factors you'll need to consider to make sure you get the best possible door for your needs. Here are a few of the top questions we ask when someone is looking for a cold storage door.

1

How busy is your doorway?

The more frequently you need to access an area, the more important the speed and durability of your doors. For an area that is only accessed once a day or less, a manual door or a slower moving door won't have much of an impact on the productivity of your team.

And you'll naturally have a lower risk of collisions or injuries.

But if you're accessing the area more frequently, you'll definitely want to consider fast moving doors, equipped with safety features that alert you to possible obstructions to keep your operations on track.

2

What are the temperature and humidity levels on either side of the door?

If the door separates a chilled airlock from the outdoor ambient temperature, a much higher level of insulation will be required to protect against big changes in outdoor temperatures.

But if it's a freezer that's connected to a chilled warehouse you may not require as much insulation.

No matter what temperatures you're dealing with, you'll need to ensure your door is properly insulated and has appropriate thermal breaks where required to prevent the loss of energy. It's more technical than you might think.



3

What type of traffic uses the opening?

How your team accesses the cold storage area also impacts the size, speed and activations of the door you might choose.

Pedestrian-only access has different requirements than forklift access.

For example, if it's only pedestrians, the door can be much smaller and an insulated hinged door might be a good solution.

But if there are forklifts operating, you will need a larger opening that allows for quick access and has sensor or remote activations. With forklift access, you'll also want a door that self-refeeds if impacted to minimise downtime.

4

What's your budget?

Finally, we can't ignore the issue of budget.

While it would be nice to always get the latest, greatest of everything, it's important to choose a solution that suits both your needs and your budget.

However, when choosing based on price, make sure you consider the long-term costs as well.

For example, a door may be cheaper upfront, but how long will it last? Is it durable enough for long-term use?

Or will you need to repair it frequently and replace it completely far sooner than one that might cost a bit more upfront?

— Our Freezer And Coolroom Doors

It's time to explore some options. Here's just a few of the most popular cold storage doors we know you'll love.



ULTI DUOTHERM

An ultra-fast dual curtain door that outperforms traditional freezer doors, providing high levels of insulation and energy efficiency.

One of our most popular options, the Ulti DuoTherm is perfect for any freezer or coolroom application where speed, durability and efficiency are a priority.

Also available with an added air barrier system or as a blast freezer door

- Ulti DuoTherm Air Door
- Ulti DuoTherm Blast Door



ULTI AIR DOOR

A high-tech innovation that uses re-circulatory air currents to maintain temperatures and create a barrier without inhibiting access, this is a highly effective and versatile option for a range of applications.

It allows for superior temperature control and is ideal in areas with a constant flow of traffic or goods.



ULTI DUOTHERM AIR

A high-performance insulated door featuring an integrated air curtain system that creates an effective environmental barrier while reducing energy loss and ice build-up.

Combining rapid operating speeds with outstanding thermal performance, it is ideal for freezer, chiller, and temperature-controlled environments where insulation, productivity, and climate separation are critical.



INSULATED SECTIONAL

A premium insulated option with enhanced sound and thermal insulation, perfect for energy savings while maintaining a controlled environment. It's also highly customisable to suit unique applications.



SLIDING FREEZER DOOR

Designed for cold storage and temperature-controlled environments, it provides reliable thermal performance, smooth operation, and easy access, with options for large openings.

— Whatever Your Problem, We've Got A Solution

We consider your full facility when developing your cold storage door recommendations to make sure we're covering every angle and delivering the best value for your business.



Productivity

Rapid doors and well designed loading systems can significantly reduce the time it takes for people and products to move around your facility, increasing your output and profits.



Pest Prevention

Protective curtains, properly sealed loading areas and high-speed doors keep birds, insects and vermin out and your product (and your reputation) safe.



Hygiene Control

Washdown safe doors, air barrier systems, and touchless controls designed to protect against bacteria and pathogens reduce the risk of contamination, and keep your product and people safe.



Warehouse Protection

Secure doors and loading areas help you prevent losses, by controlling access, keeping your people and products safe.



Site Safety

Light communication, vehicle restraints and impact protection barriers keep your people, doors, and equipment safe, and warehouse productive.



Temperature Control

Properly insulated and sealed doors and loading systems can significantly lower your operating costs by preventing energy loss and product spoilage and safety due to ice build-up.

— What Risks Are You Willing To Take?



Plenty of things in life are worth taking a risk for—the safety of your employees and the security of your business isn't one of them.

On paper, it can be easy to justify choosing the cheaper option when it comes to a door system for your business, but in reality, the costs add up fast. More breakdowns, increased H&S risks, frequent servicing, and lack of security are just a few of the costs a inferior door will incur over time.

DON'T RISK IT

CASE STUDY

— How Van Dyck Got Rid of Their Ice Headache

PROBLEM

The poly panel doors that Van Dyck Fine Foods had were struggling with ice build-up around the door frames and on the floor. This was causing several issues for the company:

- Reduced traction for the forklifts created safety hazards for staff
- Increased thermal loss from the freezers resulted in high energy costs
- The ice build-up damaged the doors themselves, creating the need for frequent maintenance and repairs

SOLUTION:

We installed two Ulti DuoTherm doors from our range of specialist high-speed freezer doors. These doors are designed to withstand harsh freezer environments and provide superior insulation and sealing.

The Ulti DuoTherm doors have a dual curtain system with an air thermal chamber in between the two curtains, creating an effective barrier against cold air escaping and warm air entering the freezer.

The curtains are also flexible enough to absorb impacts from forklifts, and if they do get knocked out of alignment, they can be quickly and easily refed on the spot, minimising downtime in those critical freezer applications.

They are so pleased with the new doors that they are already looking to install another one in the facility.

RESULTS:

- A significant reduction in ice build-up
- Less thermal loss, resulting in lower power bills and higher performance
- Reduced maintenance and repair costs
- Happier staff with safer and more comfortable working conditions





Ulti Group are always there to help and the results of installing the Ulti DuoTherm doors have been great. Without the ice build-up, the area is safer, and our power bills have decreased. And anything I need, Ulti is just a phone call away.

Jeremy Price
Van Dyck Fine Foods



Ultigroup
PROTECTING WHAT MATTERS

— What To Expect When You Work With Ulti Group

We take our partnership seriously, so when you work with us, you'll get all the expert support you need to make sure your site operations run smoothly.



NZ-wide support



World class solution designs



Free expert resources and advice



Rapid response times



Proactive Asset Management

OUR PROCESS

1.



Book A Consultation

Schedule a time to talk to one of our experts and we'll go over your plans and requirements to better understand how we can help.

2.



Receive A Proposal

We'll send you a detailed proposal and designs that meets your budget and requirements.

3.



Solution Sorted, Hassle-Free

Once we've agreed on a solution, we'll handle everything from installation to after-sales service.



Take Care Of Your Doors And They'll Take Care Of You

**Up to 85% of
equipment failures
are due to poor
maintenance.**

You should have a preventative maintenance plan in place from the day your doors are installed!

It may seem like a hassle, but it will save you time and money in the long run. At Ulti Group, we offer full preventative maintenance services as a simple, effective way to maximise the lifetime of your door with a plan that works for you.

REACTIVE MAINTENANCE

No equipment condition monitoring
Last minute callouts
Downtime waiting for repairs
Increased H&S risks
High-cost afterhours or last-minute rates
Potential security breaches
Unpredictable costs

VS

PROACTIVE MAINTENANCE

Live equipment monitoring using IoT
Continuous functionality
Repairs planned ahead of time for no downtime
Less risk of malfunction
Extended door lifespan
Reliable security
Easy to plan and budget for



Learn more

Protect your investment and keep operations running smoothly with our proactive preventative maintenance services, customised to suit your needs.

ultigroup.co.nz/services-we-provide/preventative-maintenance-service/





— Partner With The Experts

We'll help you protect what matters most with smarter, safer, more efficient solutions.

Book a free consultation today and get the best cold storage solutions for your business.





**Protecting
What Matters**

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