



WILLIAMS REFRIGERATION

COLDROOMS

HIGH PERFORMANCE REFRIGERATED COLDROOMS

WWW.WILLIAMS-REFRIGERATION.CO.UK

WILLIAMS: THE COLDROOM CHOICE

Williams offer a vast choice of coldrooms and accessories. Whatever your application, whatever your budget, and whatever size and shape your coldroom needs to fit, we have a solution.

Williams has been manufacturing and supplying coldrooms to the foodservice, bakery and retail industries for nearly forty years.

With more expertise than any other coldroom supplier on the market, you can rely on Williams to offer the best advice and the best solution for your business.

We offer a huge range of cladding, door and window options to make our coldrooms ideal for both back of house and front of house applications.

We provide completely bespoke, fully engineered coldrooms, tailored to suit any application and footprint, as well as 'off-the shelf' modular versions for the budget conscious.

With increasing pressure on kitchen space, our weatherproof external coldrooms can help maximise your storage options by being sited outside.

Williams Refrigeration is a leading manufacturer of professional refrigeration with a global reputation for delivering excellence.

As well as coldrooms, our extensive product range includes high performance, energy-efficient and environment-friendly refrigerated cabinets and counters, blast chillers, backbar and specialist bakery equipment.

Our 'right first time' philosophy means that our products provide years of trouble-free operation and are easy to service and maintain.





SPECIFYING COLDROOMS

Consider your choices

When buying cold storage for your foodservice operation there are many variables that should be considered to ensure your investment, as well as valuable kitchen space, are both maximised. The menu itself and application, type of operation, available space and budget all should have an influence, as well as location and accessibility.

When considering the storage of large volumes of food, buying refrigerated cabinets or counters is unlikely to be cost-effective, or indeed as efficient, as buying a coldroom. It's important to make sure your purchase is in line with both your current and your longer term operational requirements, to make sure the coldroom is used to its full potential.

Amongst the first areas to address are what types of food you store and how frequently it is delivered.

Establishments that receive ingredients on a daily basis are more likely to need regular refrigerated cabinets and counters, rather than one large coldroom, as ingredients are likely to be required and used within a short time of their arrival.

However, if you receive large batches of meat / fish or vegetables just once or twice a week then the additional space of a coldroom is certain to be far more valuable and cost effective.

A coldroom can only hold a single temperature. If you're looking to store a number of different food types it's advisable to use the coldroom for similar produce, while using a cabinet or counter for foods that may be vulnerable to contamination.

Kitchens can have many potential accessibility issues, such as being located in a basement or up a flight of stairs. In such cases a flat-packed, modular coldroom may well be easier to deliver and install rather than traditional refrigerated cabinets.

As well as accessibility issues there may not be the space available within the kitchen for the refrigerated storage you need. In such cases exterior coldrooms are available for siting in back yards or near loading bays, for example.

There are many other factors to consider, such as door location and door type. For example, where is the coldroom door to be located in relation to the prep or cooking area — and therefore, should it be left or right hand hung. If it's in a tight location, does it need a sliding door? Internal shelving must also be considered to maximise available storage space.

Our Project Team will guide you through all of these many considerations during the initial survey, helping you to choose the Williams coldroom that's the right fit for your business now and for the years ahead.

SPECIFICATION OPTIONS

- 1. PIR Fire Rated Walls** - Fully tested to BS4735 fire resistance standards, our coldrooms offer complete peace of mind
- 2. POD Refrigeration System** - Unique to Williams the POD system offers additional storage space and easy installation
- 3. LED Lighting** - Ultra bright light with minimal energy consumption and heat generation
- 4. Control Panel** - Housed in a smart stainless steel body, it has a built in isolator, volt-free contacts and a clear temperature display
- 5. Internal Release** - Provides complete peace of mind for staff working in the coldroom
- 6. Access Ramps** - Ideal for high traffic areas with roll-in trolleys*
- 7. Sliding Doors** - Ideal for narrow walkways and busy concourses
- 8. Foamed in Conduit** - provides protection for cabling, thereby reducing the risk of potential damage and future maintenance issues
- 9. Temperature Monitoring**
- 10. Viewing Panel** - Offers clear lines of sight, thereby reducing potential accidents when your coldroom is in continual use

* Consideration should be given to ramp location for Health & Safety aspects







THE COMPLETE COLDROOM SERVICE

We make sure you get the very best from your investment by helping you maximise your storage capacity and minimise your running costs.

We will support you on every level, from conceptual design through to formal specification and beyond with quality workmanship and aftercare.

SITE SURVEY

Upon receipt of your order we conduct a full survey and consider your requirements.

It's the first step towards planning a coldroom that meets your needs precisely, with each installation being tailored to the application, by using the most appropriate equipment.

PROJECT MANAGEMENT

A dedicated Project Manager will be assigned to support you from the moment you place your order, through to final completion. They will take the strain and carry out a site survey, provide detailed approval drawings and site specific risk and method statements, as well as overseeing the installation, through to final testing and commissioning.

Our vastly experienced Project Management Teams offer full national coverage and are geographically based to deal with any installation on a local basis. Our experience of designing and installing coldrooms for a wide variety of applications is unrivalled.

DRAWINGS

Once the site survey is complete, our estimating team will check we have all the details we need.

They'll then draw up the project in full, working with you directly and with any third party, such as a consultant or construction company. The plans can include manufacturing or CAD drawings that will help you visualise the finished coldroom and how it will fit within your existing operation.

RISK AND METHOD STATEMENTS

We provide site-specific risk and method statements to ensure compliance with all relevant regulations.



INSTALLATION

Our installation teams consist of fully trained and qualified refrigeration engineers who are experienced in all aspects of commercial refrigeration installation. A team near you will be on hand throughout the entire installation, completing the project to the highest of standards.

They will remain on hand for both reactive repairs and planned maintenance, ensuring your systems keep providing peak performance and efficiency.

Installations are performed in line with and exceeding the Carbon Trust's Good Practice Guide. Our installation complies with BS EN 378:1:2008 and the British Refrigeration Association standards as set out in document 'Part 5 – commissioning'.

TESTING

This includes tasks such as carrying out a functional performance test, looking at energy efficiency and air circulation, and checking the components and the refrigeration systems.

We can also offer thermal imaging, particularly useful when seeking BREEAM accreditation.

COMMISSIONING

Once a new coldroom is installed it is vital that it is fully commissioned, ensuring its future efficient operation. Our commissioning process ensures the overall operation of the plant meets with the original design specification.

This is the final stage of the project before handing the system over for you to use. Your Williams team will run through a comprehensive commissioning checklist, including supplying a list of all the relevant component serial numbers.

TRAINING

Training will also be given at this stage, to ensure staff are familiar with operational, cleaning and day-to-day maintenance requirements.

WARRANTY AND AFTERCARE

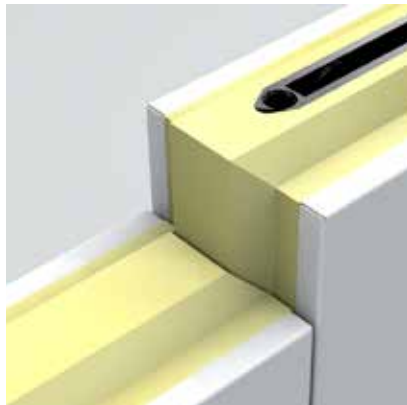
If you look after your coldroom, it will serve you well for many trouble-free years. Refrigeration equipment must be maintained to prevent faults occurring. Appointing a good service and maintenance contractor will save you money through reduced energy bills, reduced service costs and reduced plant downtime.

DISPOSAL

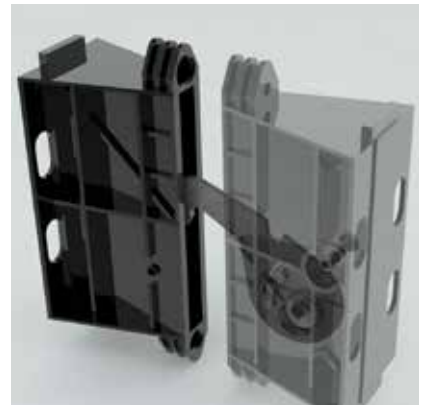
Williams offers safe and legal disposal of redundant panels and equipment under WEEE regulations.



CAMLOCK PANEL THICKNESS



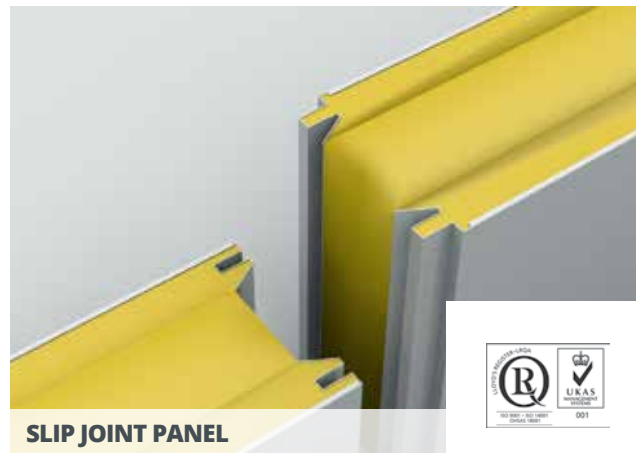
TONGUE AND GROOVE PANEL



FULLY CAMLOCKED



SLIP JOINT PANEL THICKNESS



SLIP JOINT PANEL

CONSTRUCTION

Our coldroom panels use precision injected polyurethane insulation for the ultimate in temperature control and rigid construction, and have low GWP and zero ODP. They are produced in a comprehensive range of widths and heights and form external walls, ceilings and floors where applicable.

Each panel is tongue and grooved to ensure an airtight and waterproof joint, thus providing a tight, thermally efficient stable structure.

Our standard polyurethane foam provides optimal insulation and has ultra-low thermal conductivity – so the cold stays where you want it - in the coldroom.

It's also resistant to chemicals, solvents, microbes and is free of toxic emissions, for added safety and peace of mind.

Optional types of insulation include rockwool and polyisocyanurate (PIR) insulation cores - fire retardant rated to BS rating.

All our panels meet the very latest international standards for food safety and thermal efficiency, and are environment friendly.

CAMLOCKS

Williams camlocks are securely foamed in to tongue and groove joints and located in roof, wall and floor panels. This provides a tight locking stable structure which eliminates the risk of ice build up and ensures a 100% thermal envelope.

SLIP JOINTS

A slip joint is a tongue and groove sandwich panel system that uses a male and female action on the longitudinal joint to achieve tightness and insulation.

Panels slip into place allowing easy installation, structural strength and a smooth clean finish. Ceiling panels are usually joined to wall panels using a metal angle to hold firmly in position.

COMPLETE PEACE OF MIND

Fully tested to BS4735 fire resistance standards, our coldrooms offer complete peace of mind and, when combined with our unique project management, make complying with building regulations simple.

INFILL PANELS

A solution for filling in any gaps between the coldroom structure and the building's walls or ceiling, creating a clean, seamless finish.



LOW ENERGY EVAPORATORS



LED LIGHTING



STRIP CURTAINS



HEAT RECOVERY

ENVIRONMENTAL CARE

Through our Greenlogic initiative, Williams is committed to supplying energy efficient and sustainable refrigeration.

During the initial survey, we will address the importance of balancing the cost of a project with energy efficiency, noise levels and refrigerant choice, and help guide you through the process of selecting the most suitable solution for your needs.

Energy saving and environment friendly features are fitted as standard across our coldroom ranges, such as LED lighting and precision injected polyurethane insulation, which has low Global Warming Potential (GWP) and zero Ozone Depletion Potential (ODP).

ENERGY SAVING FEATURES / OPTIONS

- High density polyurethane insulation with low GWP and zero ODP
- Energy efficient camlocked design
- Energy saving LED lights
- Self-closing doors
- Low energy evaporators with EC fans offer the optimum in energy efficient performance combined with low noise levels and high reliability
- Low energy condensing units with variable condensing temperature, with several being ECA approved.
- Strip curtains – reduced running costs and noise levels
- Compatible with heat recovery systems (see example on pages 18/19)

This commitment to sustainable refrigeration applies not only to our products but to our plant, manufacturing and management processes too.

Williams Refrigeration holds the environmental management certification ISO 14001 for the design, manufacture, installation and servicing of refrigeration products.

The Williams range of bespoke coldrooms represents the pinnacle in environmentally friendly commercial refrigeration. Designed using low energy components, recyclable materials and extra insulation, it can offer our customers substantial energy savings.



POWER TO YOUR COLDROOM

Selecting the most suitable refrigeration equipment is vital in providing efficient and reliable cooling for many years.

There are two main types of refrigeration system associated with coldrooms. Integral refrigeration has the system mounted on the coldroom itself whereas remote refrigeration has it sited away from the coldroom.

Whether you're looking for a coldroom with an integral refrigeration system or a remote unit, Williams will help you select the most suitable system for your application.

Integral refrigeration can be wall or ceiling mounted and is most suitable for well ventilated areas only. It is the simplest, most straightforward and least expensive to install and combines the condensing unit, evaporator and control panel all in the same unit.

However, fresh air must be available for the units to perform correctly and provide adequate cooling capacity.

These units expel heat from the front of the system meaning the ambient temperature will increase accordingly. As such the type of system to be used must be considered at the design stage of the project.

Remote refrigeration is the most popular and reliable method. It can offer improved energy savings and life span over integral refrigeration.

With remote systems, the coldroom's condensing unit is sited elsewhere, often outside, so any noise and heat from the coldroom operation is taken away. Remote condensing units are supplied in a weatherproof housing as standard. Unhoused condensing units, for interior siting, are also available.

Many sites have remote systems but, during planning, the distance from the coldroom to the condensing unit is often overlooked. This can potentially be a serious issue. The pipe run, connecting the remote system, should be as short as possible – the ideal is 15 metres or less. The maximum practical run is 30 metres. The further the distance, the more powerful system you will need, which will impact on running costs and energy efficiency.

REFRIGERANTS

Williams offers a variety of refrigerants, depending on the application for which the coldroom is designed. We are working with suppliers to provide the greenest, most environment-friendly coldroom solutions.

As new refrigerants are developed, we will test them and, providing they do not compromise food safety and functionality, use those offering the lowest ODP and GWP.

CONDENSING UNITS

Williams offers three types of condensing unit - selection is based on coldroom size and usage.

Hermetic: for standard coldrooms / remote unit location.

Scroll: for larger rooms and duties, longer horizontal pipe runs and specialist applications such as blast chilling.

Semi-hermetic: these are generally for more industrial applications, excessive pipe run or vertical lift distances and specialist blast chilling and freezing applications.



Some of the condensing units we offer are ECA approved. This means 100% first year tax relief can be reclaimed against their cost.

EVAPORATORS

Williams provide high quality evaporator units suited to site requirements, using low energy fans, where available.

Low profile – this is a long, slim, compact evaporator for maximising head and storage height below the evaporator and is suitable for the majority of standard commercial coldroom applications. Generally fitted with low wattage energy efficient fan motors with limited air throw.

Box or block – large commercial, industrial and specialist application type evaporators with high air velocity and volume and greater air throw distances.

Pod – this design is unique to Williams. It is housed on the coldroom roof and offers easy installation and ensures the internal storage area is maximised. Servicing can be undertaken outside the room and the complete refrigeration system can be removed and changed without any disturbance of the rooms contents.

Low level Pod systems are available where height is restricted. The systems are available with pre-installed condensing unit.

CONTROL PANELS

The safest and most reliable option is the Williams control panel. Housed in a smart stainless steel body, it has a built in isolator, volt-free contacts and a clear temperature display.

Low cost models with plastic housings are available for those on a tight budget, but they will require a separate isolator. Bespoke control panels are also available.

Audible Hi-Lo temperature alarms ensure maximum protection of your stock by alerting users if temperatures fluctuate beyond a safe point, for example if the doors are left open.



HINGED DOOR WITH VIEWING PANEL



SLIDING DOOR

OPENING UP A WORLD OF STORAGE

With high capacity storage, easy access is key. Our range of coldrooms can be supplied with slab, fully or semi-rebate doors and feature heavy duty hinges for smooth movement and increased longevity. Robust handles are ergonomically designed for 'easy grab' whilst being able to withstand the stresses of everyday use.

All coldroom door types feature security locks for stock control and protection. The internal safety release provides complete peace of mind for staff working in the coldroom.

When space is at a premium our doors can be fitted either left or right hand hung, to encourage efficient work flow.

Our hinged and sliding doors are available in a variety of finishes including white foodsafe laminate, 304 grade stainless steel, PVC or GRP. Glass doors are also available - contact Williams for further details.

HINGED DOORS

Our fully and semi rebated self-closing hinged doors are constructed with 90mm polyurethane insulation and fitted with double bellow gaskets, providing superior energy efficiency. A door snubber ensures positive closing.

Heavy duty, chrome plated, rising butt, self-closing hinges provide longevity and durability. Their flush fitting helps avoid potential damage by trolleys.

The robust handle for hinged doors has an adjustable strike for varying dimensions.

The handle has invisible and tamper proof screws for when the door is closed and is interchangeable for left or right hand doors. It has a grey hammered finish and enamelled housing and strike.

Our heavy duty chrome latch handle provides an easy grab whilst its durable construction allows it to withstand the day-to-day stresses of a commercial kitchen. It has the provision for locking, with a padlock.

Optional kick plates are offered in a choice of finishes, providing additional strength to our coldroom doors.



FIRE DOORS



HEAVY DUTY HINGED DOORS



HANDLE FOR HINGED DOORS



STRIP CURTAINS



DOOR SNUBBERS



PERSONNEL DOORS

SLIDING DOORS

These feature our high performance track system, tested to ensure smooth running throughout its lifespan. Sliding doors are ideal for narrow walkways and busy concourses and their streamlined design helps to minimise potential accidents by reducing obstructions.

Low voltage frame and threshold heaters are supplied as standard on all low temperature doors, while heaters can also be incorporated within the door if required.

PERSONNEL (FLIP / FLAP) DOORS

These provide the best option for busy preparation areas and for easy access from one room to another.

FIRE DOORS

As kitchen space is at a premium, coldrooms are increasingly placed in more unusual places and can lead to potential issues with fire regulations as all doorways need to comply to the latest standards. Our range of PIR fire rated doors are designed to meet these requirements, allowing for easy installation and compliance.

FREEZER DOORS

Door mullion heaters for freezer models prevent the build-up of condensation, reducing the chance of a slip hazard forming.

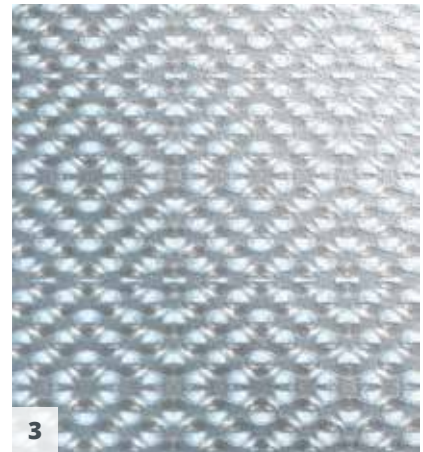
VIEWING PANELS

When your coldroom is in continual use, such as warehousing or central preparation areas, doors with 300mm² viewing panels are essential. These offer clear lines of sight, thereby reducing potential accidents.

STRIP CURTAINS

Internal strip curtains restrict the loss of cold air from the room and are available on both fixed and sliding door models - perfect for when access is needed for an extended amount of time.

Strip curtains are durable and easy to maintain but also simple to repair and to keep clean. They help to save on running costs and reduce noise levels.



FLOOR TYPES

Although often overlooked, coldroom floors play a vital part in ensuring hassle free operation and maintaining a consistent temperature.

Designed for high traffic and bulk ingredient transit, the coldroom flooring has a reinforced non-slip GFK stainless steel finish. For lighter commercial use, it can be supplied with an optional overlay.

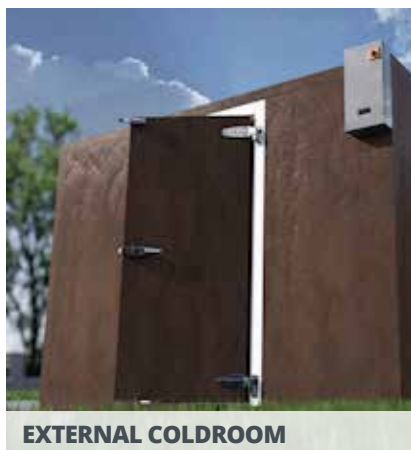
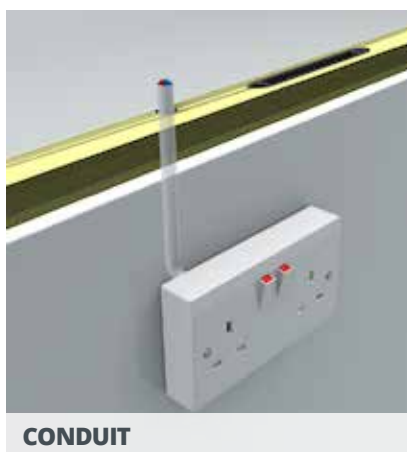
CHOICE OF FINISH

Williams offer a wide choice of floor types to suit any application.

1. Aluminium chequer plate (2 or 5 bar)
2. Smooth galvanized steel for altro finish
3. Rigidised galvanised steel
4. Rigidised 304 stainless steel
5. Fibreglass reinforced phenolic resin
6. Marine ply for altro finish

MODULAR HEATER MAT

Our coldrooms can be provided with heater mats. These are built into the base of the floor panels to avoid cold transfer into the building structure, effectively preventing the build up of ice in the ground which can in turn lead to frost heave or cold transfer onto the surface of the floor below.

**EXTERNAL COLDROOM****ACCESS HATCH****SHELVING****COVING****CONDUIT****BUMPER BARS**

OTHER OPTIONS

EXTERNAL COLDROOMS

With increasing pressure on kitchen space, external coldrooms provide the ideal solution for increased storage capacity and are designed to be suitable for all weather conditions.

Williams offers a choice of roof finishes including PVC or a unique thermal membrane. All are designed to ensure adequate ventilation, to prevent sweating from temperature variation, and have a sloping roof profile which allows excellent drainage.

- Available in a choice of finishes – including brown, forest green, gun metal grey and white
- Stainless steel or HPS weather grain panel finish
- Internal or external weatherproof control panel

BUMPER RAILS

Bumper rails enhance the durability and longevity of both the interior and exterior of your coldroom. These tough rails are designed to absorb the impact from trolleys – ideal for environments with high stock rotation such as supermarkets and centralised production facilities.

COVING

White PVC coving for enhanced aesthetics and ease of cleaning.

FOAMED IN CONDUITS

Conduits can be foamed into the panel insulation. As well as improving the aesthetics of the room they provide protection for cabling, thereby reducing the risk of potential damage and future maintenance issues.

SHELVING

Maximise your coldroom capacity by choosing from a wide range of functional shelving options. Our recommended systems are durable, have a strong load bearing and are easy to clean.

We offer a wide choice of finishes including stainless steel, anodised aluminium and nylon coated to suit all applications and budgets.

ACCESS HATCH

For ease of service and maintenance.



COLDROOMS FOR ANY OCCASION

Williams Refrigeration offers an unrivalled range of modular coldrooms, meaning no matter your requirements there's a Williams for you. Our industry-leading Project Management Team make it easy for you to add modular storage into your workflow.

With nearly forty years of experience in manufacturing and supplying coldrooms we know that every one we supply is unique, and has a unique function.

We know that aesthetics are increasingly important for caterers, especially with the rise in 'theatre' style kitchens. Whilst coldrooms come in white foodsafe PVC finish as standard, they can be adapted to suit any environment.

From bright polished stainless steel to jaw dropping textures, if you can imagine it we can build it. We also offer a range of custom made infill panels for when you require a built-in look.

EXTERNAL COLDROOMS

When space is at a premium our range of external coldrooms are built to withstand the elements. Ideal for extending cold storage out of the kitchen or for on-site chilling, such as game larders.

FLEXIBLE STORAGE

Eating with the seasons is a rising trend in the UK and whilst it's key in attracting customers it can play havoc with your stock control. Our coldrooms are designed to allow for internal dividing walls and can be supplied as dual temperature models. These flexible designs allow you to adapt your cold storage as required.

CENTRAL PRODUCTION UNITS

We've supplied some of the largest kitchens in the UK with dedicated cold preparation rooms. Our expertise helps to create optimum workflows from prep to cooked and back to chilled. These dedicated work spaces make bulk food preparation efficient and stress-free.

MEDICAL AND SPECIALIST USE

When performance is everything you can trust Williams to deliver. We've supplied equipment to leading medical research facilities and hospitals across the globe. From exacting temperature controls to bespoke racking and even vibration free test rooms - we've supplied them all.

FRONT OF HOUSE DISPLAY

Recent years have seen a trend for coldrooms positioned front of house. Our bespoke coldrooms offer features such as glass walls, designer cladding and advanced lighting, making them an ideal method for displaying products like wine or meat, creating a touch of drama from something that might otherwise be hidden away.





CASE STUDY : COLDROOMS AND HEAT RECOVERY

Energy Efficient Coldrooms.

To maximise clinical space and save running costs, Sheffield Teaching Hospital recently invested in a £10 million project that saw it develop an innovative, new CPU kitchen.

It features a suite of coldrooms and modular blast chillers from Williams as well as a pioneering energy saving system that recycles waste heat from the refrigeration and uses it to heat up the CPU's hot water supply.

Even the most efficient coldrooms and blast chillers can draw large amounts of power, and generate substantial heat.

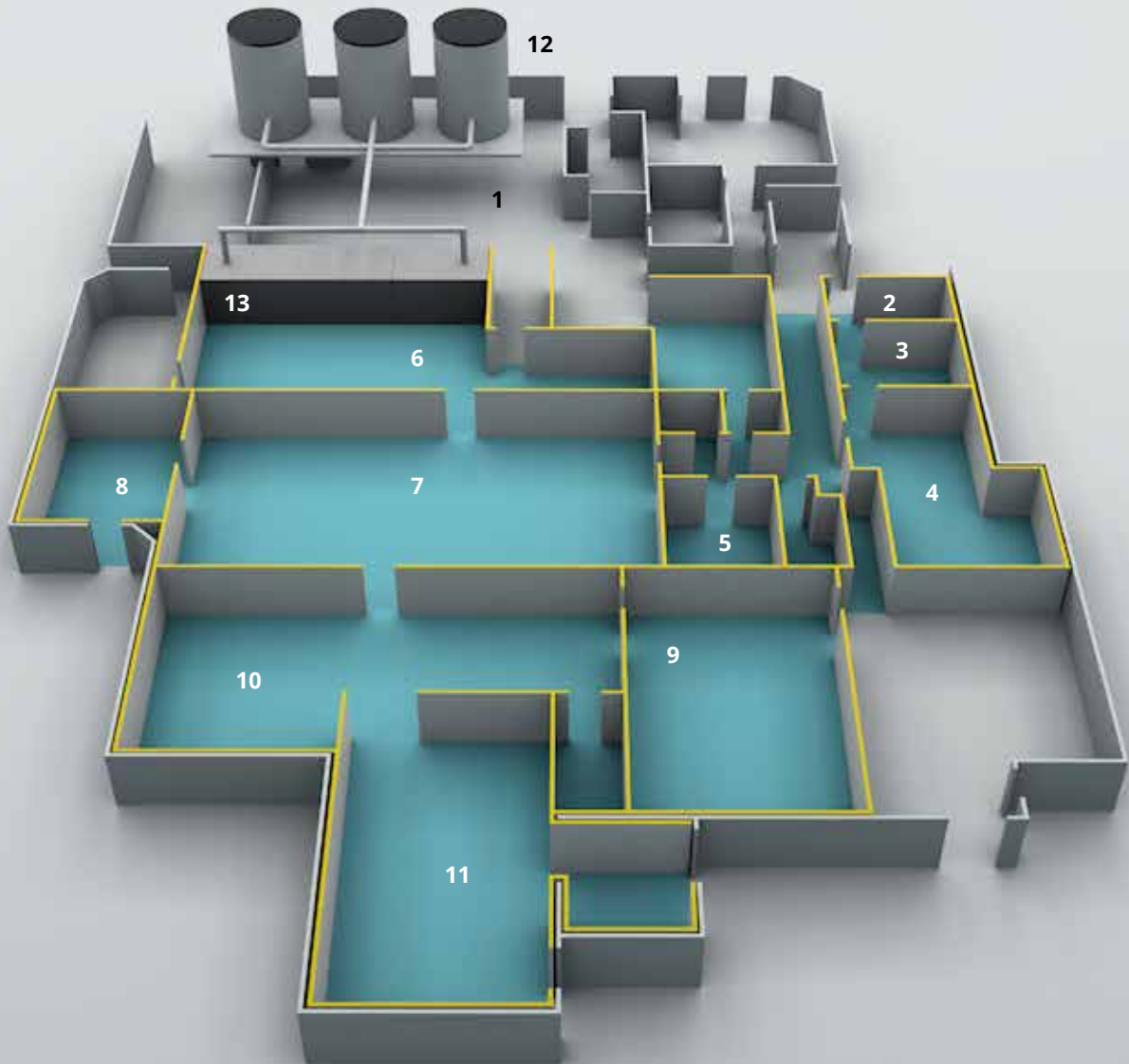
Rather than letting that heat go to waste, our modular range of coldrooms and blast chillers are designed to be fully compatible with heat recovery systems.

As well as installing coldrooms, blast chillers, blast freezers and refrigerated preparation rooms, Williams supplied insulated panels that were used to divide all the rooms and other areas of the site, thereby creating hygiene stations, ambient stores and so on. The panels form a tough, rigid structure ideal for the purpose, but also flexible in terms of application and design.

The CPU has been designed ergonomically with key consideration given to workflow - for example, the salad coldroom leads into the salad wash room, which then leads into the salad / sandwich prep room.

The CPU generates thousands of meals a day, servicing five hospitals. The meals are transferred from the CPU in containers and, once on site, are loaded into regeneration trolleys, which are used to serve the food at ward level.

**CASE STUDY: SHEFFIELD TEACHING
HOSPITAL SHOWCASES ONE OF OUR MOST
INNOVATIVE, SUSTAINABLE PROJECTS.**



Key

- | | |
|----------------------|-----------------------------|
| 1. Hot Food Prep | 8. Bulk Holding Freezer |
| 2. Salad Coldroom | 9. Clean Trolley Park |
| 3. Salad Wash | 10. Pick and Pack |
| 4. Salad Preparation | 11. Trolley Dispatch |
| 5. Milk Coldroom | 12. Heat Exchange |
| 6. Lid and Labelling | 13. Blast Chillers/Freezers |
| 7. Bulk Holding | |



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Installation of all Williams products requires adequate ventilation.
 Williams reserves the right to modify the design, materials and finish in accordance with its progressive product development policy.

Williams Refrigeration is a trading name of AFE Group Limited.
 Registered in England & Wales under Registered Number 3872673.
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an Ali Group Company

