

ENGINEERING
TOMORROW

Danfoss

Case story | Danfoss ProsaLink and Optyma™ Plus

Connected cold room protects valuable medicines for specialist vet – thanks to **ProsaLink** and **Optyma™ Plus**

When a specialist veterinary practice wanted a new cold room, it needed to know its perishable medicines would be safe. Contractor Pitkin & Ruddock chose proven components, and connected them online.

HIGHLIGHTS

- Reliable new cold room, constructed in 3 weeks
- Tightly-scheduled installation under COVID restrictions
- **Alsense® Food Service IoT connection gives mobile phone alerts**
- Temperature evidence data stored in the cloud
- Danfoss specification support throughout

“This is the second connected system we’ve installed. It was easy – Danfoss gave our engineers a quick run-through, and everything was fine. The client loves it.”
– Jason Newland, Technical Sales and Projects Engineer, Pitkin & Ruddock Ltd.

Based in Thetford, Norfolk, Integra Veterinary Services is a specialist vet practice with a mission to provide top-quality advice and support to livestock farmers.

To keep its customers’ livestock healthy, the Integra team relies on keeping a ready supply of specialist veterinary medicines, stored centrally at the practice’s offices. However, these valuable drugs are highly sensitive to temperature change – and the company was increasingly concerned about the reliability of its standalone refrigerators.

Integra decided to consolidate its refrigeration into one large cold room, built within an existing administrative area. This offered several benefits, but centralising its entire stock of medicines in a single facility meant the new room would need to be completely reliable – with constant temperature monitoring.

The practice asked its longstanding air conditioning partner, Pitkin & Ruddock Ltd, for assistance.

The challenge:
how to protect valuable specialist medicines, and prove it

Building a dedicated cold room would enable Integra to improve efficiency and release space, while solving worries about the reliability of its nine ageing refrigerator cabinets.

Pitkin & Ruddock Technical Sales and Projects Engineer Jason Newland explains: “The manager lives opposite the office, so he’d pop into work at the weekend to double check the fridges were OK, because the medicines were so important.”



Before, the medicines were stored in nine standalone refrigeration cabinets.

Each of the standalone refrigerators had a temperature probe, enabling Integra to record evidence that the medicines had been stored in controlled conditions. The new cold room would need to replicate this ability – while using proven equipment that could be entrusted with the entire supply.

What's more, the installation needed to fit into a tight, three-week window – which required co-ordinating several sets of contractors alongside practice staff under COVID-safe conditions.

Jason recalls: "Before we could build the cold room, the electricians needed to remove and reinstall lights, smoke detectors and sockets in a different location and the builders needed to brick up a door way and create a new door way applying all the finishing touches. After that, we could build the room itself, and then it was our turn to install the refrigeration equipment. Finally, the electricians returned to install the lighting inside the cold room and power supplies for the refrigeration system.

"We had to control the number of people on site at any one time because of COVID – so the contractors had to be separate, and we designed the schedule to give plenty of space for the vet team too."

The solution:
Optyma™ condensing unit and controls with
Alsense® Food Service IoT connectivity

With 65 years of air conditioning and refrigeration experience, Pitkin & Ruddock were confident in their ability to deliver a



Establishing the connected cold room, the Vet practise can now rely on remote monitoring and alarms to secure stable and optimal temperatures at all times.

first-class cold room. But given the specialist nature of the facility, Jason's manager suggested approaching Danfoss key account manager Mark Fiddy to review their plans.

As well as recommending key components, Mark suggested an important addition: connecting the cold room to the cloud. Using the Danfoss Alsense® Food Service IoT system to monitor the temperature, the practice staff could receive alarms and status via the ProsaLink mobile app while keeping a record on the cloud of the temperature and status log.

Jason says: "Mark realised these medicines were critical, and suggested the Alsense® Food Service connection. We took it to the client, and they loved the idea."

With so much depending on the cold room's reliability, Jason needed components he could trust. He used the Danfoss Coolselector®2 calculation and selection software to specify a full suite of Danfoss products:

- Danfoss Optyma™ Plus condensing unit, running with R449A refrigerant
- Danfoss Optyma™ control panel
- Danfoss ProsaLink monitoring unit and PR-SC4 Modbus telemetry device
- Danfoss T2/TE2 orifice, SLD adaptor, and thermostatic expansion valve
- Danfoss EVR2 solenoid valve and terminal box coil

The all-important Internet link was achieved using a Danfoss PR-SC4 Modbus telemetry device.



Jason Newland

Jason explains why he chose the Danfoss brand for this key job:

“As a Danfoss ambassador, we’ve installed Danfoss equipment plenty of times before and it’s brilliant. It’s tried and tested, and our engineers like working with it. It’s top of the range equipment.”

The result: complete confidence, easy reporting, and no more weekend checks

Installation went well. Despite the tight scheduling, the plug-and-play format of the Optyma™ system made it easy to get the job right first time. For Jason, this is a key strength of the equipment.

“It’s really simple to install and looks great,” he says. “All the equipment you need is already on it – you fit the Optyma control panel, and then it’s just the cabling to link it up.”

Similarly, connecting the cold room to the cloud was simple – and Jason reports Pitkin & Ruddock’s technicians quickly felt at home with the technology.

For Integra Veterinary Services, the impact of the new cold room has been transformational. Monitoring medicine temperatures is far simpler – with one refrigerator to check instead of nine. Reporting is automated via the ProsaLink app, providing clear evidence of compliance.

For more information on the installation and similar projects, please contact

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Meanwhile, the confidence of the mobile app monitoring has enabled the practice to benefit from placing bigger pharmaceutical orders and hold more stock – so there’s always a ready supply when their clients need it.

And importantly, the manager no longer needs to interrupt his weekends to check on the refrigerators.

Jason says: “If there’s a power cut or the temperature dips for longer than an hour, it sends an alarm notification to any staff who have downloaded the ProsaLink app. They export the data each week, so their head office can keep records and show the medicines have been kept at the proper temperature.

“The system also sends an email to the manager if there’s a problem. That gives him confidence the medicines are OK – so he doesn’t need to check at weekends anymore.”

In conclusion, Jason is happy to have been able to help his client, thanks to a combination of Danfoss technology and advice. He concludes: “There’s other kit out there, but you don’t get the same support that you do with Danfoss.”

Discover Danfoss cold room solutions and support

At Danfoss, we work closely with contractors to deliver reliable, energy-efficient cold rooms, with low maintenance costs and long service life. With extensive knowledge and experience – and the widest portfolio for cold room and walk-in refrigeration applications – we’re here to help.



Danfoss connected cold room solution.

For further information on Danfoss cold room solutions and Danfoss Alsense® Food Service IoT, please contact your local Danfoss sales representative or visit our website: alsensefoodservice.danfoss.com

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