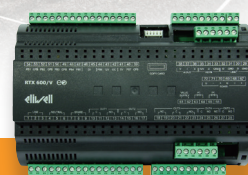


# Integrated Solutions for Retail

Eliwell energy saving offer for supermarkets



# Environmentally Optimised Solutions

## Eco-sustainability in the retail sector

The retail sector is a major energy consumer. Technologies are now available which are capable of yielding substantial savings - of up to 24% in system energy costs.

Energy saving solutions in retail applications must also satisfy the basic requirements of the industry, with special attention on food quality and European standards (EN13845 - EN12830) governing fresh and frozen food products. Eliwell, always attentive to the needs of the retail sector, offers energy efficient solutions with unbeatable ease of use that help maximise the quality and aesthetic nature of the retail product.

For Eliwell, eco-sustainability also means open solutions capable of integrating a variety of system components, including lighting, air conditioning and sanitary hot water into a single solution, leveraging on a network of experienced installers and installation's characteristics.





# Energy saving technologies

## Easy installation and maintenance

- Energy saving systems employing Eliwell components can cut refrigeration consumption up to 34%
- Using Eliwell systems to integrate HVAC and refrigeration systems, combined with low power lighting systems, can reduce overall consumption up to 24%
- Monitoring consumption and periodically servicing the systems can keep system efficiency constant over time, thus avoiding unnecessary consumption which can account for as much as 20%

AREA	FUNCTIONALITIES
Refrigeration	Floating condensation / evaporation, electronic motor speed regulation, EEV, frame heater day/night differentiated duty cycle
Plug-in cabinets	Setpoint modulation
Lighting	Lights programming
Air Conditioning	Heat recovery
Sanitary Hot Water	Heat recovery
Other	Load programming

*Energy saving functionalities specific for each area*

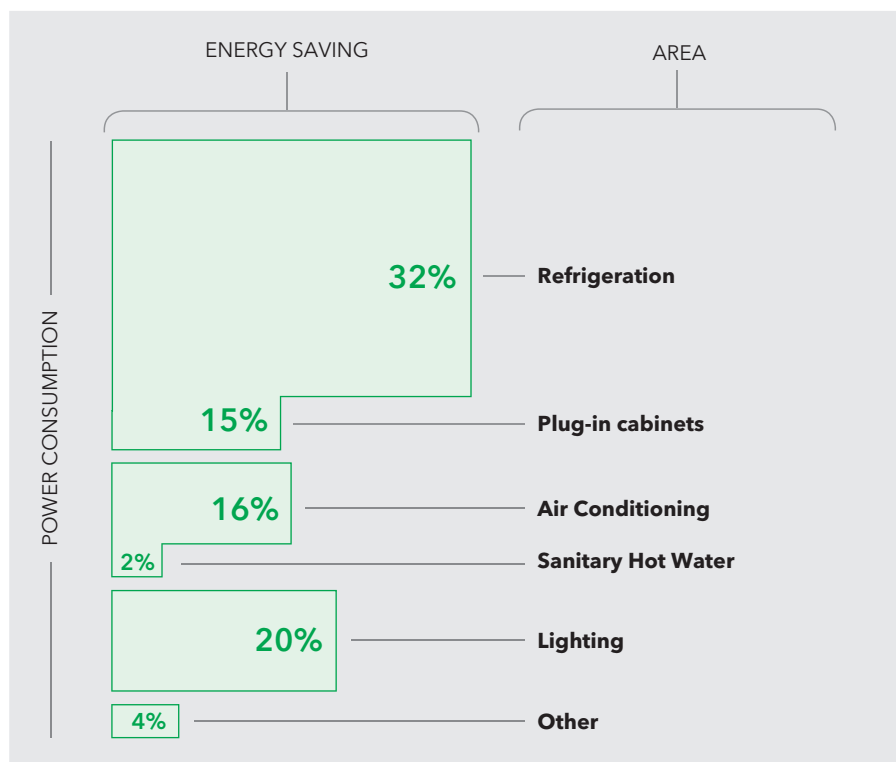


# Energy saving for Retail

## Up to 24% total Energy Saving in a supermarket

Below an example of energy saving achieved thanks to Eliwell solutions in a 1500m<sup>2</sup> supermarket.

The results are dependent on the size of the refrigeration system and the amount of energy drawn from each type of load: remote refrigerators, plug-in cabinets, lighting, back-lighted signs, HVAC and hot sanitary water.





## Sustainable saving over time

The maintenance of refrigeration equipment in retail outlets is a critical performance factor, as well as being essential to the quality of the refrigerated product itself.

The initial equipment cost accounts for less than 10% of the total life cycle cost. Therefore the choice of components has an impact on both initial costs and maintenance costs over the life cycle of the system.

Eliwell's monitoring, alarm management and remote management systems are designed to simplify and facilitate system adjustment and routine maintenance.

The fault notification functions, with prioritising filters and web access to detailed information for each unit, enable the user to correct non-critical deviations and reduce reactive service requirements.

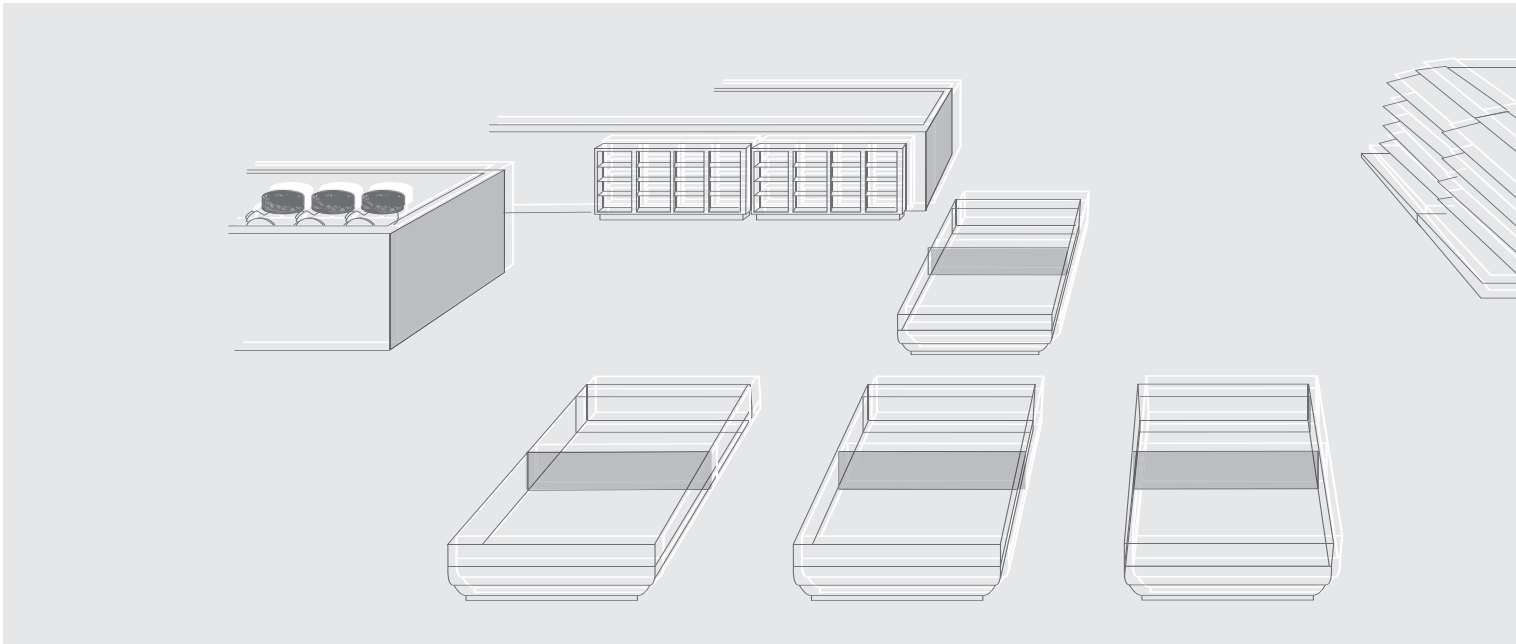
Statistical fault logs and detailed operating logs for each plant improve system maintenance and guarantee a high degree of efficiency over time plus increased component service life.

## Reduced maintenance costs

- Televis systems minimise on-site maintenance enabling remote control and system configuration through wired and wireless connectivity
- Eliwell Televis systems enable prompt response to malfunctions, and reduce service costs and downtime
- Centralised alarm and data management also reduce the number and duration of service calls
- The ease of use and versatility of Televis systems ensures users will be able to benefit from the full functionality set in minimal time

# Retail world

Whether it's a small convenience store or a hypermarket, Eliwell solutions have been developed to provide you outstanding performance, simplicity and reduced energy consumption.



## 1. Food quality monitoring and remote maintenance

Remote control and supervision systems integrate multiple components of the plant and functions including refrigeration control, HACCP recordings, energy consumption monitoring and lighting and air conditioning control.



(TelevisGo)

## 2. Compressor rack

Floating condensation control and inverter compressor control contribute to a considerable reduction in consumption, versus conventional systems.



(EWCM9000 EO Series)

## 3. Remote chilled cabinets

EEV System, RTX 600 and RTX 600/V controllers stands out for the high performance and high flexibility they offer through energy saving and algorithms and overall cabinet components control.

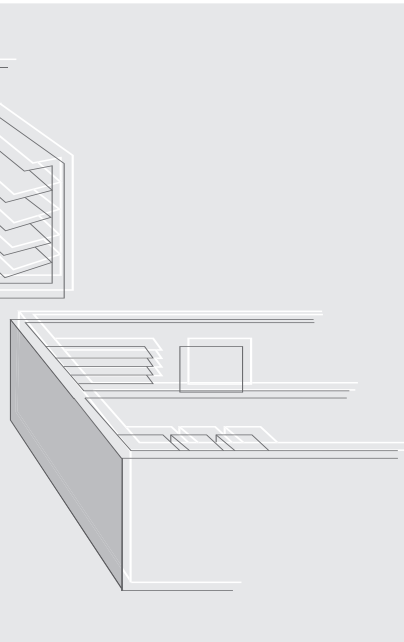


(RTX 600/V Series)



# Eliwell integrated solutions

- Refrigeration consumption reduction by up to 34%
- Refrigerant leakages monitoring
- Maintenance and service cost reduction
- Increased food quality - HACCP compliance



## 4. HVAC, lighting and system integration

Scheduling based on actual use of facilities, and programming by days of the week and seasons, yields savings which can reach 20% of lighting costs.

## 5. Cold rooms

Coldface series controllers offers the control of all static or ventilated cold room functions in a single device.

## 6. Data acquisition and alarm signalling

Wireless connectivity and I/O modules simplify retrofits and enable data collection in system upgrades introducing continuous monitoring of refrigerant leakages.



(FREE Smart, Panel, Evolution)



(Coldface Series)



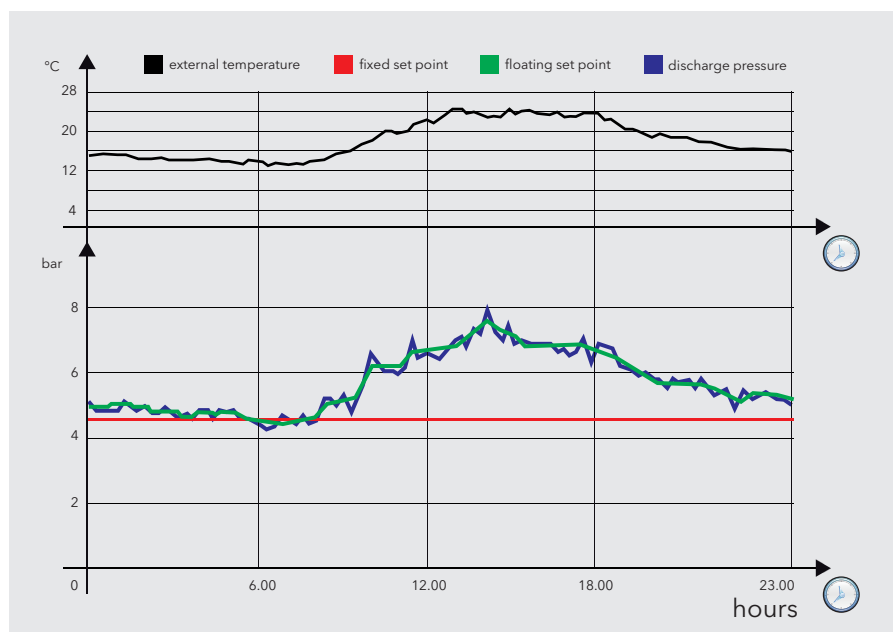
(RadioAdapter, TelevisIn/Out, LKD)

# 25% energy saving

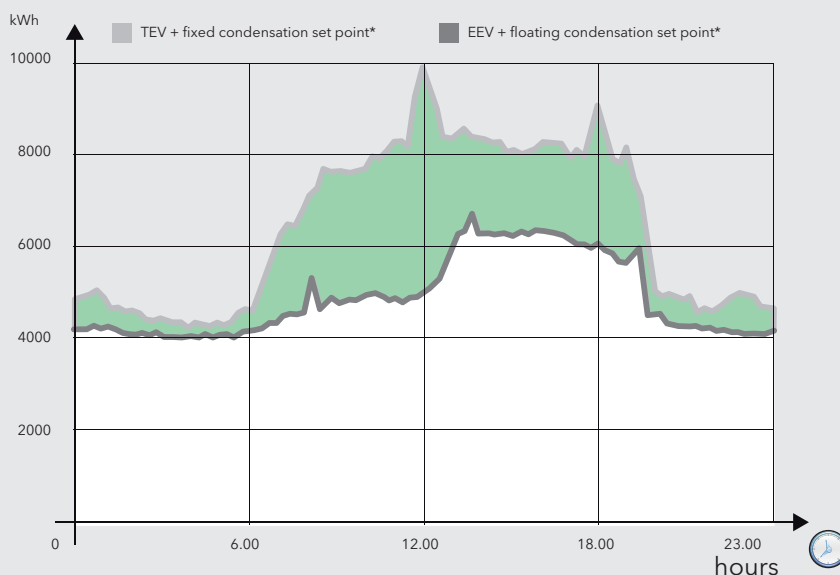
## Floating condensation based on environmental condition

The system dynamically manages condensation pressure in order to maintain the best temperature differential between condenser and external air, adapting itself to daily and seasonal changes.

Power consumption reduction, achievable during low ambient temperature conditions, allows considerable energy saving compared to fixed set point systems.



24 hours set-point modulation



The green area represents consumption reduction for a 25% total energy saving.

Maximum energy saving can be obtained when the supermarket is open.

Average daily consumption with/without EWCM 9100 EO e RTX 600 /V

\* Data source: Fieuw Koeltechniek



# Efficiency with distributed control



EWCM 9900 EO,  
V910

## Energy Saving in the compressor rack

The EWCM 9000 EO is designed to provide unbeatable energy efficiency in combination with outstanding flexibility of configuration and numerous operating modes for a wide range of installation requirements.

- Balanced fan/compressor operation
- Energy saving mode with configurable schedule/calendar
- Complete diagnostics for all loads

Use of inverters enables energy consumption reduction and improved compressor life. The best results are achieved in conjunction with electronic expansion valves.

For CO<sub>2</sub> cascade systems, V910 module perfectly integrates with EWCM EO for optimal control of heat exchanger electronic stepper expansion valve.



RTX 600/V,  
PXV

## Electronic valve control optimisation

RTX600/V combines the controller and electronic expansion valve drive in a single device, simplifying installation in the main switchboard. The plug-n-play LAN function helps to coordinate functions in remote cabinet aisle. The new Low and High Voltage Detector LVD function provides compressor protection from voltage fluctuations, thus extending component life.

ID985/V and V800 are ideal for remote cabinet configurations with synchronised defrosting and unified lighting control, operating with or without a supervision system and with no need for supplementary modules.

- Improved performance over conventional EEV controllers
- Compatible with pulse-type EEV valves from major manufacturers
- Unbeatable food storage and presentation quality



# Integration flexibility

## Integrated solutions for cold rooms

Coldface is the solution which replaces on-board controllers with integral cabinet control allowing to integrate electrical components on a DIN rail. The EWRC500 NT series covers all requirements of controllers for static and ventilated cold rooms.

The large display and dedicated buttons enable intuitive control of all the cold room functions.



*Coldface*

## HVAC, lighting and system integration

Eliwell provides HVAC control with the FREE platform, programmable with the languages of the IEC61131 industrial standard.

Automatic programming of lighting lines in response to actual use of facilities, and programming by days of the week and seasons, yields savings which can reach 20% of lighting costs.

By integrating services like heating and sanitary hot water with the refrigeration plant, the FREE platform enables significant savings up to 40% according to the system's climatic conditions.



*FREE Platform*



# Complete system supervision



RadioAdapter



TelevisGo

## Upgrading existing systems

LanAdapter and RadioAdapter network components re-uses existing Ethernet installations and wireless communications for boundless control and combined with the automatic controller recognition function, minimise system installation time.

RadioAdapter, Eliwell's MESH wireless connectivity solution, provides versatile, reliable controller networking. It minimises installation costs and gives full access to each controller, even on plug-in cabinets.

## Food quality and system control

TelevisGo is a device for the monitoring, control and remote management of installations.

The product is based on a PC Embedded standard platform to offer greater calculation power, data recording space and, thanks to the Microsoft Embedded operating system, easy system expansion using standard peripherals available on the market.



**DATA RECORDING AND  
ALARM MANAGEMENT**



**ENERGY  
REPORTS**



**WEB  
CONNECTIVITY**



**GRAPHIC  
DISPLAY**



**ACTIVITY  
AUTOMATION**



**ALGORITHMS AND  
EXPANDABILITY**



## Algorithms and Expandability with IEC 61131

- **5% energy saving by simply activating the floating evaporation algorithm in TelevisGo**
- System extensions with new plug-n-play algorithms installable from the web interface
- Algorithms for management of floating evaporation, faulty pressure probe backup and distribution of the dewpoint for energy saving functions with RTX600 /V and EWCM 9000 EO
- System for the development of new algorithms for distributed management of the installation based on FREE Studio with standard languages IEC 61131

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