

# CREATING HEALTHY AND SUSTAINABLE STORES

The new Danfoss system provides the best control and system management in the industry to ensure food safety and to save energy for store owners around the world.

## HEALTHY STORES

- 1. HACCP REPORT**  
Set up your system to automatically generate and forward updated HACCP reports - and eliminate time wasted on recording and generating the reports.
- 2. EFFECTIVE AND DOCUMENTED ALARM HANDLING**  
Avoid food loss and secure the right temperature at all times with a professional tool for effective handling and documentation of alarm actions.
- 3. SET-POINT MANAGEMENT**  
Verify that set-points have not been changed across your stores - and tag any that show changes to indicate that action must be taken.
- 4. BENCHMARKING**  
Compare your store or asset to other sites to analyse store health and where to take action.

## SUSTAINABLE STORES

- 1. P<sub>o</sub> OPTIMISATION**  
Optimise the suction pressure within the entire refrigeration system. For a typical supermarket the result is an additional 10% savings or 4,000 euros annually.
- 2. ADAPTIVE SUPERHEAT**  
Optimise utilisation of the evaporator with ADAP-KOOL® Adaptive Superheat Control and achieve an additional 5-8% energy savings per year - or the equivalent of 2,400 euros for a typical supermarket.
- 3. HEAT RECLAIM**  
Reclaim wasted heat for hot tap water production and heating without compromising food quality. Tests indicate savings of 14-18,000 euros/year for a medium size supermarket.
- 4. NATURAL REFRIGERANT**  
Choose Danfoss components that accommodate natural refrigerants to reduce your carbon footprint.
- 5. DEMAND RESPONSE**  
Participate in incentive programmes sponsored by utility companies - and significantly cut your energy costs in the process.



In 1983, Danfoss was at the leading edge when it launched the ADAP-KOOL® solution. The system set new standards for control of cooling processes in supermarkets.

Today, more than 50,000 Danfoss ADAP-KOOL® systems are installed globally.

Go to [coolthinking.danfoss.com](http://coolthinking.danfoss.com) for more information on the next generation system by Danfoss.

[COOLTHINKING.DANFOSS.COM](http://COOLTHINKING.DANFOSS.COM)



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## COOL THINKING

Creating Healthy and Sustainable Stores

Introducing  
the new Danfoss  
system **AK-SM  
800 series  
& AK-EM 800**

Produced by Danfoss Electronic Controllers & Services

# MEET THE **NEXT GENERATION** **REFRIGERATION** SYSTEM BY DANFOSS

Danfoss has spent four years and 200,000 manhours bringing together top industry experts in the development of this new system, with the objective of creating healthy and sustainable stores.

*We call it "cool thinking".*

- World-class **R&D experts** on refrigeration control and management, who have created the most sophisticated **control algorithms** in the industry, protected by Danfoss intellectual property and industry-leading patents.
- **Applications experts** who possess knowledge on how to efficiently apply refrigeration technology and how to make the system components work best in stores across the globe.
- System experts, including **hardware and software engineers**, from Danfoss R&D Centers of Excellence in China, India, the U.S., and Europe.

The new system, including the system manager AK-SM 800 series and the enterprise manager AK-EM 800, provide the best control and management solution with the following benefits:

- Easy set-up and commissioning
- Remote access to system data
- Improved food safety
- Reduced energy consumption
- Improved system performance

For more information, please go to [coolthinking.danfoss.com](http://coolthinking.danfoss.com)

## A Complete Solution

Further enhancing the value of the new Danfoss system are the easy installation, fast and intuitive commissioning and top-notch service and technical support provided by your local sales office. Danfoss is a full-service solution provider you can rely on for service, upgrades and support when you need them.



*Best-in class system components create the best system performance in the industry.*



## STATE-OF-THE-ART SYSTEM MANAGER

### AK-SM 800 SERIES

- Intuitive local interface for daily alarm handling, commissioning and service
- Full web interface for remote commissioning, fine tuning and system set-up
- Graphical presentation of store and equipment

*Danfoss has created a more intuitive user panel for the front-end, including graphics and a folder structure which provides a fast overview and is easy to navigate.*



**FAST DIAGNOSTICS WITH DASHBOARDS**  
Customised or auto-configured dashboards provide easy overview and fast diagnostics via a web browser or local screen.



**CONFIGURATION WIZARDS**  
Choose from a selection of wizards for stepwise set-up of system, users and refrigeration layout.

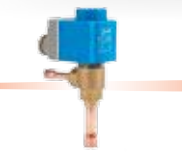


**REMOTE MANAGEMENT TOOL**  
A PC software tool for offline programming, customising and simulation of the AK-SM 800 series which makes it easier for contractors to prepare commissioning.

# IT'S **COOL THINKING** FOR YOUR STORES



**Variable speed controllers**  
New range of drives for variable speed control of compressors and condensers for improved efficiency and prolonged life.



**AKV electronic expansion valves**  
Robust injection valve, perfectly matched to ADAP-KOOL® case controllers for maximum efficiency.



**High-end evaporator controllers**  
Advanced controllers with unique adaptive superheat control algorithm to ensure superior performance.



**Pack controllers**  
For basic to advanced control of large CO<sub>2</sub> or HFC compressor packs, including control of gas cooler, heat recovery and oil management.



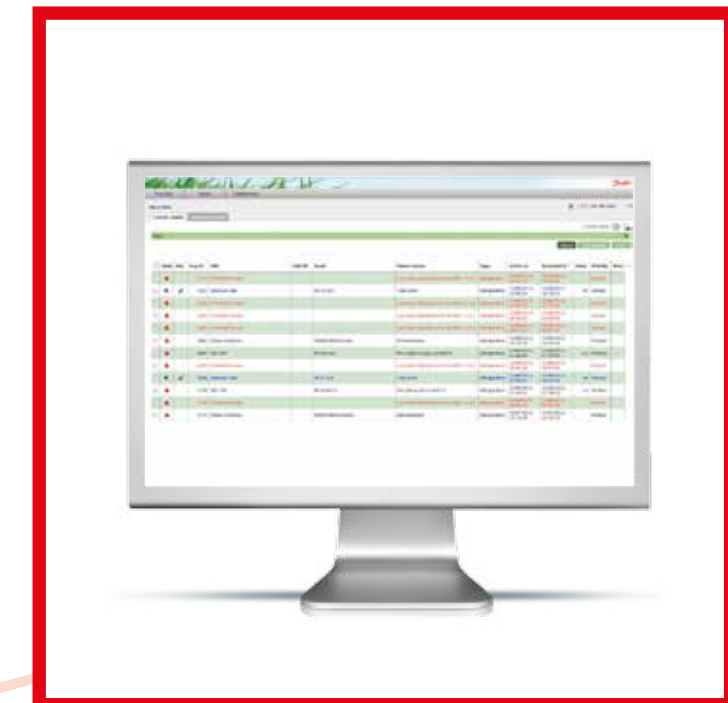
**Evaporator controllers**  
Accurate temperature control of refrigeration appliances and cold rooms.



## NEW ENTERPRISE LEVEL SOFTWARE

### AK-EM 800

- Alarm handling – via multiple location sites
- History collection and overview
- HACCP reports
- Temperature performance reports



**HACCP REPORTS**  
The function automatically collects data, generates reports, stores them and forwards them.



**CUSTOMISED REPORTS**  
Customised reports allow you to compare temperatures and other data points across assets and entities.