



Minutes from the group sessions

Conference: "Refrigeration in the supermarket sector"

Date: 8-9 November 2017

16 November 2017

On day two of the conference "Refrigeration in the supermarket sector" held on the 8-9 November 2017, two group sessions were held.

In this document, you will find the minutes from the two group sessions.

Please keep in mind that the statements of this document are made by individuals participating in the conference and do not necessarily represent the opinion of the all the participants at the conference or Danish Technological Institute (DTI).

The group sessions were made up by two parallel group sessions:

- Challenges for producers, suppliers, and installers
- Challenges for end users

Each session worked with prioritized questions. The questions were partly prepared by DTI, partly recited during the discussions after the presentations at the conference, and partly handed in by the conference participants.

A moderator conducted the session and a notary took notes during the sessions. After the sessions, the main points from the group sessions were summed up in plenum.

Group session: Challenges for producers, suppliers and installers

Question: Can we benchmark the whole store instead of just single components? Will this leave more room to "creativity"?

Notes:

- Ecodesign will not cover the whole system – Select components in the right combination (many covered by ecodesign)
- Definitely not – It will increase creative thinking by setting higher minimum requirements
- There are many ways to obtain the same goal
- Ecodesign drives development – see for instance household refrigerators – labelling works!
- We need to tell the customers about ecodesign and energy labelling and how to use ecodesign and energy labelling

- We have several examples of legislation working in Denmark (red. higher minimum energy efficiency requirements than the rest of Europe) to achieve higher energy efficiency

Question: How do we ensure that we have the right documentation for the construction of refrigeration systems all the way from rack to cabinet? – what are the needs for testing and documentation?

Notes:

- Lack of ecodesign for refrigeration components
- Manufacturers using time to optimize in part load, this is not used in standards
- Ecodesign on e.g. compressors?
- Work performed by installers must meet certain standards because they are certified
- We need commissioning standards to ensure quality
- Ecodesign can ensure that the right documentation is delivered by the suppliers
- Documentation regarding suction pressure vs. cabinet temperature - do you have the right temperature with the suction pressure?

Question: What do you see as the biggest hindrance/bump on the road for further development of refrigeration in the supermarket sector? – how do we go forward?

Notes:

- F-Gas is safe and easy to use – now we have to educate personnel and have safety regulations/procedures
- Education – Propane/CO₂
- Data collection – We have to learn how to utilize data to optimize
- Fear of new things – We have to try new possibilities
- Legislation works – Charge limitation introduced in 2007 in Denmark – We have managed to solve problems regarding this
- More talk with the decision makers (end-users)
- Provide better products to the end-users
- Legislation cannot be “a bump in the road”
- CDUs using natural refrigerants are still twice as expensive

Question: What are the most urgent R&D challenges within the supermarket refrigeration sector?

Notes:

- R&D has already been done – Education is needed
- We don't know why some supermarkets are energy efficient and some are not
- We need to get our knowledge implemented (e.g. ejectors and/or parallel compression) – We are behind schedule!
- More optimization is needed on the existing systems
- Component level (heat exchangers) - Material research is needed.
- LSPM motors in compressors
- Small scale CO₂ compressors for small CDUs
- System measurements are not reliable
- Much data is available – Nobody is using this data – Decisions have to be based on data
- Data have to be more coherent

- Heat exchanger in cabinets must be sustainable the next 15 years. Evaporators must be optimized for HFCs and CO₂ (multi-purpose cabinet)

The session managed to go through four out of six questions.

Group session: Challenges for end users

Question: Do you feel the right information is provided from manufacturers and installers? How do we make sure that we have the right dialogue at the right time?

Notes:

- This is not a problem. The required information is provided and there is a proper dialogue between the parties.
- Ground for the cooperation.
- Make one's own specification to ensure that you get the needed information. Know what you want and what is available on the market.
- Have people employed to make sure that the required information is obtained, so this issue is covered.
- Different ways to approach this within each supermarket chain – might not be relevant for this forum, but might be an issue in another forum.

Question: Who is responsible for the tender process or purchasing? A purchasing department or the technical department? What is the right constellation?

Notes:

- The technical department makes the tendering, specifications etc.
- In DK; this might already be dealt with, but it might be a challenge in other places – where there are no budgets to buy the most efficient products, but the cheaper products will be chosen instead
- Make a business case for the customer
- Include life time costs in requirements – analysis included in contracts.
- One issue could be that it is not possible to get a service contract at a fixed cost for more than five years.

Question: Which are the most important factors when purchasing new installations? Purchasing price, running cost, energy consumption, design, easy reorganization of stores, others?

Notes:

- All of the above
- Life time costs, design of the refrigeration furniture

Question: Does your company have a commitment to reduce environmental impact in regard of energy consumption/CO₂ emissions? Does energy reduction have a branding value?

Notes:

- Easy to answer! Yes and yes...
- Often the requirements concerning the payback time of an investment could be an issue that does not correlate with a commitment to reduce environmental impact – but the companies do not look at their investments in terms of their policy on environmental impact.

- How to document new technology (prototyping) and hold back the focus on payback time

Question: What is the benefit from ecodesign and energy labelling? Seen from end user perspective (professional) why not concentrate on the rack and/or the installation?

Notes:

- Bigger investments – focus on life cost analysis
- Efficiency is hard to sell due to the difference in price and here the legislation could have an impact
- Like to see more strength on the sales level
- Labelling and SEPR could be a benefit, e.g. in connection with making new investments
- Important aspects: temperature, humidity, noise – the function is the primary parameter – energy consumption is further down the list. It depends on the amount of energy consumption – therefore not that interested in trying out new products, but stay with known products that provide energy, stability etc. - i.e. a system that works
- Energy labelling in the professional sector does not matter
- Can you trust the information?
- Finding the biggest game for the supermarket – free cabinets vs. energy consumption. This relates to e.g. beverage producers, who place beverage coolers at the supermarkets free of charge, but the energy costs are covered by the supermarkets.
- Does the cabinets have an energy consumption 2-3 times bigger than needed – relevant for the turnover of the company
- Ecodesign should have an impact in terms of transparency – but what is the impact in real life
- Ecodesign and energy labelling not equal to quality/life time not reflected in the labelling – other performance issues could be better. Labelling could have the same impact as on consumer goods – end users have the power to set demands and change the market. Press the market in a specific direction by asking for certain specifications from the suppliers/manufacturers.
- The focus on servicing old versus new systems – a challenge in connection with new technology – the business case – the roll out possibilities and life span.
- Have to focus on both old and new technology

Question: How do we ensure that the installed cabinets can maintain the promised temperatures? By installing “over capacity” or by documenting/testing?

Notes:

- If problems with the temperature - the plant is taken out of service