

SUCCESS STORIES!



DAIKIN
Refrigeration

First ZEAS installation in Berlin fascinates installer and owner of meat production plant!

Since November 2009, ZEAS has been available from DAIKIN. Two weeks after its introduction, the first ZEAS installation in Germany is already in operation. This ZEAS installation is responsible for cooling both a refrigeration showcase as a freezer room in a new branch store of "Fleischwarenfabrik Mischau", a manufacturer and retailer of meat products in Berlin.

INTERVIEW:



"The installation and operation of the system is surprisingly easy - with DAIKIN ZEAS we are able to work efficiently and cost-effectively," praises Rolf Bilek from the Potsdam Anlagenbau und Kältetechnik GmbH.

DAIKIN staff member: Why did you choose a ZEAS?

Rolf Bilek from "Potsdamer Anlagenbau und Kältetechnik GmbH" in Potsdam: We have had great experience with DAIKIN VRV. ZEAS is based on the VRV principle of operation, which means straightforward design and installation. And it turned out to be even **easier** than expected, simply **impressive**.

DAIKIN staff member: What are your expectations regarding ZEAS?

Company owner Richard Mischau: From the ZEAS I expect high reliability in operation and low running costs, to my mind, the most important challenges a cooling installation should meet.

DAIKIN staff member: What potential do you think ZEAS provides for you and your company?

Rolf Bilek: From my point of view, the most important opportunities of ZEAS are in the field of shop-fitting and generally in applications, where various dedicated cooling systems with individual control are to be connected to a single system – by low expenditures whilst showing steady operating performance. And an extremely low noise level would be an extra plus to the end user.

Richard Mischau: The extremely **low noise** level of this unit is really **unbelievable**. There is no reason to complain, even in the middle of a residential area.

DAIKIN staff member: Are you satisfied with the installation process?

Rolf Bilek: Installation and commissioning are **amazingly simple** – DAIKIN ZEAS allows you to work **outstandingly efficiently** and **cost-consciously**.

"Plug-and-Play" saves you time and money

It makes it possible, to connect various, individually controlled cooling systems to the ZEAS system. Thanks to the compact design of the units, carbon footprint of these systems is very small. In this case, ZEAS was installed in a space-saving manner into a shaft.



Installation site of the ZEAS



Cooling room



Sales counter

Second ZEAS installation in Ulm fascinates installer and owner of bakery

Shortly after its introduction, the second ZEAS installation in Germany is already in operation. This ZEAS provides low-temperature cooling to a freezer room at the headquarters facilitation of the bakery “Bäckerei Staib” in Ulm. From now on, baked goods will be cooled down and stored in this place.

INTERVIEW:



Company owner Reinhold Baumann in the Staib bakery

DAIKIN staff member: Imagine there was no ZEAS. What would have been your choice in this case?

Company owner Reinhold Baumann from HVAC vendor “Baumann Kälte Klima Technik GmbH”: That depends on the size of the installation. In case of smaller projects, I chose compact condensing units, but when it came to larger systems, I applied combined systems, consisting of semi-hermetic compressors and condensing units in the past.

DAIKIN staff member: Why did you switch over to ZEAS?

Reinhold Baumann: There was a very important reason to change to ZEAS: the **output power** is adapted **without an additional frequency inverter**. In addition, this decision was eased by the **hassle-free installation**.

DAIKIN staff member: Are you satisfied with the ZEAS installation process?

Reinhold Baumann: Installation and commissioning are **amazingly simple** - DAIKIN ZEAS allows you to work efficiently and cost-consciously. **“Plug-and-Play”** saves you time and **money**.

DAIKIN staff member: What do you think about DAIKIN consulting and after-sales support?

Reinhold Baumann: After-sales support was **superior**; DAIKIN staff provided full support both during the preparation stage and in commissioning.

DAIKIN staff member: From your point of view, what is the most important benefit of ZEAS?

Reinhold Baumann: As an installer, of course, an **efficient** workflow is my primary concern. That's why I am so **excited** about the very **low installing** effort. I can't recommend ZEAS enough.

Bakery owner Staib: My expectations regarding ZEAS are low running costs. Therefore I got an additional power meter installed. So I am able to assess the real efficiency of DAIKIN ZEAS.

DAIKIN staff member: Would you choose ZEAS again in upcoming projects?

Reinhold Baumann: For me, there is no other answer than **“Yes”**.



Installation site of the ZEAS



Bakery - counter display



Two evaporators

VISIBLE SAFETY: the DAIKIN weather shelter for a safe operation of your ZEAS application whatever the weather.

ZEAS by DAIKIN: Utilization of VRV technology for refrigeration and freezing applications allows for a flexible system design with the highest level of energy efficiency. And to ensure that this system works in any weather conditions, the appropriate DAIKIN weather shelter is now available. It protects the unit against impact from wind, snow and hail and even against weather-related damages. This is to prevent a high-pressure drop during cooling operation at a low ambient temperature. Visible Safety!

INTERVIEW:



From left: Michael Nigg and Markus Zolt from the company F+S Kälte-Klimatechnik GmbH in Gernlinden

DAIKIN staff member: How did you hear about ZEAS by DAIKIN?

Michael Nigg, Master-Craftsman of Refrigeration Technology and installers-foreman with HVAC vendor "F+S Kälte-Klimatechnik GmbH" in Gernlinden: It was my boss who told me about the new product from the refrigeration

division of DAIKIN, furthermore, our DAIKIN sales representative came up to me and told me about **ZEAS with VRV technology for commercial refrigeration** applications. It was this that eventually aroused my curiosity.

DAIKIN staff member: Did you take part in DAIKIN ZEAS road shows? If so, what was your first impression of this product?

Michael Nigg: Yes I did and I found it **very informative**. It also sparked my interest in this product. Furthermore, I gained a lot of **knowledge to help me with my first installation** which we have now finished. I am **sure** the product will perform well on the market, and we will find this product in a wide range of applications.

DAIKIN staff member: Did you run into any problems in configuring your very first ZEAS implementation?

Michael Nigg: Everything ran **smoothly**, furthermore, I received excellent support from DAIKIN in designing my very first ZEAS system.

DAIKIN staff member: Are you satisfied with the ZEAS installation process?

Michael Nigg: I felt that the **installation** was **very easy** and **very fast**. Even **setting the parameters** turned out to be a very **easy** procedure.

DAIKIN staff member: What do you think about DAIKIN consulting and after-sales support?

Michael Nigg: **Support was excellent**; we received **advice and support from our DAIKIN** representative, from the very beginning to the final goal, both regarding technology and regarding information about the product, that, in turn, **proved to be very helpful** concluding the deal.

DAIKIN staff member: Would you choose ZEAS again in upcoming projects?

Michael Nigg: **No doubt about that!** If it proves to be the optimal solution for the intended application.



Installation site of the ZEAS with weather protection



Butcher shop sales counter



Production of meat

ZEAS IN DUET: Refrigeration and freezing – without fail

Is there something better than ZEAS? Yes, there is: two ZEAS! Especially in applications such as those in Berlin, where two make the perfect team, providing both refrigeration and freezing to a supermarket. Read the interview with the managing directors of HVAC vendor “SEK Scheer & Ehrke, Kälte-Klimatechnik GmbH” below.

INTERVIEW:



The three Managing Directors (from left) Nico Ehrke, Matthias Scheer and René Sahr.

DAIKIN staff member: Did you take part in the DAIKIN ZEAS road shows? If so, what was your first impression of this new product?

The directors: Yes, we did. We visited the ZEAS road show in Berlin and were **pleasantly surprised**.

DAIKIN staff member: Why did you choose

ZEAS for this project?

The directors: There were several reasons for choosing ZEAS. Some of them are: wide power range, **unbelievable energy efficiency, simple piping dimensioning, low carbon footprint and compact design and controllers.**

DAIKIN staff member: What sort of goods do you refrigerate or freeze using ZEAS in supermarkets?

The directors: There are **two ZEAS** running in that supermarket, one provides **middle temperature refrigeration**, and the other one provides **low temperature freezing**. The **refrigeration zone** consists of **four different refrigeration zones**: one for **dairy products at 4 - 6 °C** in a **refrigerated shelf of 21.25 m**, a second for **meat at 0 - 2 °C** in a **refrigerated shelf of 3.75 m**, a third **6 °C cold storage room for dairy products**, and a **fourth 2 °C cold meat storage room**. The freezing system generates a **temperature of -24 °C** to a **freezer showcase combination with glass top**.

DAIKIN staff member: Is DAIKIN ZEAS suitable to replace an older system?

The directors: Yes, provided that the manufacturer of the refrigeration equipment has certified pressure ratings, and the equipment is no more than 3 years old.

DAIKIN staff member: Would you choose ZEAS again in upcoming projects? Regarding ZEAS, what additional fields of application come to mind?

The directors: Absolutely! Having had such a **positive experience**, we will definitely **choose ZEAS in the future** and we will **recommend it** to others! Aside from that, there are plans for some further projects in the **fields of supermarkets and gastronomy**. ZEAS is also the **most qualified system** in the field of gastronomy; when it comes to gastronomy, you have to connect about **20 refrigeration units**. As a matter of fact around, the ZEAS system is **suitable for any application** with a **thermal expansion valve** and **different power ranges**.



Installation site of the ZEAS



Refrigerated display case in the supermarket



Freezers in the supermarket

“ZEAS again?” “Definitely!”

ZEAS: This means VRV technology for commercial refrigeration applications. For instance, in the feedstuffs industry, constant and reliable cooling down after the mixing process is a major concern. Thanks to speed control for different power demands depending on the requirements of the operator. Compact and energy-efficient, simple in design and installation. But amazing effectiveness!

INTERVIEW:



Ralf Schalück - owner of the company Schalück Kälte & Klima from Gütersloh

DAIKIN staff member: We introduced DAIKIN ZEAS at the Chillventa 2008 as a highlight. For you as an installer, did ZEAS already come into your mind as a suitable product at that point?

Ralf Schalück: Yes, it did. That's what the refrigeration industry was waiting for.

DAIKIN staff member: Why did you choose ZEAS for this project?

Ralf Schalück: I am quite familiar with **VRV technology in air conditioning**, and I know about its **stability**. That's why applying the ZEAS in this project with **varying power demands was exactly the right solution**. The ZEAS is able to provide **full power**, if needed, otherwise it runs in **partial load**.

DAIKIN staff member: What exactly is to be cooled in this project?

Ralf Schalück: They mix lard and corn to form “Meisenknödel”, a sort of birdfeed in the shape of dumplings. Those warm dumplings have to be cooled down in a given time interval, passing through a cool-down room on a conveyor. After that, they are put into a mesh and packaged. As the production output varies **between 100% and, sometimes, down to 50%**, we have very **varying output-power demands**. So the ZEAS with its **speed control** was exactly what we needed. And the **small size equipment with compact outdoor unit** fascinates our **customer**. Furthermore, it emits on astonishingly **low noise levels**.

DAIKIN staff member: Did you run into any problems in configuring your very first ZEAS implementation?

Ralf Schalück: As a Master-Craftsman of Refrigeration Technology: **no problem at all**.

DAIKIN staff member: Are you satisfied with the ZEAS installation process?

Ralf Schalück: According to my installers: **no problems at all**. Connect piping and wiring, evacuate the system, refrigerant in, and switch-on. **Program operating range, and leave it running**.

DAIKIN staff member: From your point of view, what is the most important benefit of ZEAS?

Ralf Schalück: The **compact** and **energy efficient** units. Furthermore, the design, installation and **speed control** are **straightforward**.

DAIKIN staff member: Would you choose ZEAS again in upcoming projects?

Ralf Schalück: **Absolutely!**



Installation site of the ZEAS



Cooling room for the birdfeed



Birdfeed

“I wish I was a chicken...”

On the organic farm of “Arbeiterwohlfahrt Schultenhof” in Dortmund-Renninghausen, “all meters are within the green fields” - from now on also thanks to the ZEAS, installed by the Dortmund HVAC vendor “HE-SIE Kältetechnik”! A 5HP ZEAS proved to be the ideal solution for refrigerating 3 cold meat storage rooms at the farm-owned butchery. Due to its low operation noise, it was possible to install the ZEAS nearby the henhouse, without causing any trouble or disturbance to the noise-sensitive poultry. So, the hens keep on enjoying their peaceful and happy lives, and there is no decline in “egg output”. But there are more positive facts you should know about ZEAS: please read the interview with Mr. Marc März, employee at “HE-SIE Kältetechnik GmbH”, which he was kind enough to give to us.

INTERVIEW:

DAIKIN staff member: How did you hear about DAIKIN ZEAS?

Marc März, planning consultant at “HE-SIE Kältetechnik GmbH”: I heard about the ZEAS through frequent and eye-catching **ZEAS News** and the ZEAS road show in Bochum.

DAIKIN staff member: Why did you choose the ZEAS for this project?

Marc März: Because we were looking for **innovative technology** to implement this project. The “Schultenhof” as an organic farm is well-known for being adaptive to new, eco-friendly products. The most important goal was to save energy. Furthermore, we had to implement an **outdoor installation within very tight installation spaces**. By using ZEAS, we managed to meet all of those requirements.

DAIKIN staff member: Did you run into any problems in configuring your very first ZEAS implementation?

Marc März: Designing a ZEAS system and its components is **unsophisticated**. If we had a question, **we gladly accepted DAIKIN support** which was **consistent and flexible**.

DAIKIN staff member: Are you satisfied with the ZEAS installation process?

Marc März: **Installation and commissioning is astonishingly simple. Switch-on, fill up additional refrigerant, done!**

DAIKIN staff member: What do you think about DAIKIN consulting and after-sales support?

Marc März: It was available at any time! Both in person and by phone...

DAIKIN staff member: Would you choose ZEAS again in upcoming projects?

Marc März: We have already **planned further ZEAS projects** as we are simply **delighted with the system**.



Installation site of the ZEAS



Hen coop



Organic farm

WOW! THE NEW BOOSTER!

Refrigeration and freezing by ZEAS

Refrigeration and freezing can be even more simple and compact: by using the new ZEAS Booster! Before you know it, the booster turns a refrigeration ZEAS into a freezing ZEAS - hassle-free and efficiently. The ZEAS booster with its 49dB(A) is not only very low in noise, but, due to its compact dimensions (H x W x D = 480 x 680 x 310), it can be easily installed almost anywhere and with minimum space requirements - of course also outdoors.

Read below, how satisfied installer Christian Bielawa of HVAC vendor "Herbert Service-Kälte GmbH" talks about the planning, application and installation of the ZEAS and the ZEAS booster:

INTERVIEW:



Christian Bielawa from the company Herbert Service-Kälte GmbH in Bensheim

DAIKIN staff member: How did you hear about the DAIKIN ZEAS?

Christian Bielawa: During a DAIKIN Partner conference, Mr. Tadjewski approached me and told me about this **innovative ZEAS**.

DAIKIN staff member: Why did you choose the ZEAS and the ZEAS booster for this project? Was there another solution, comparable to ZEAS?

Christian Bielawa: The ZEAS equipment is **ready-made, including electric control box**. Those **very compact dimensions** and the powder-coated casing were two factors for my **enthusiasm regarding ZEAS**. Furthermore, the ZEAS operates at an extremely low noise level, and it is a **clear-line concept**, from A to Z.

DAIKIN staff member: Did you run into any problems in configuring your very first ZEAS + booster implementation?

Christian Bielawa: Generally speaking, we did **very well**, as you can find all you have to know in the design documents. And regarding booster design, we **received great support** by the DAIKIN regional office.

DAIKIN staff member: Are you satisfied with the ZEAS + booster installation process?

Christian Bielawa: Our installers got **enthusiastic about the clear design** of the components inside the ZEAS and the **very good handling of the system**.

DAIKIN staff member: What do you think about DAIKIN consulting and after-sales support?

Christian Bielawa: One word: **Yes**.

DAIKIN staff member: What potential do you think provides ZEAS for you and your company?

Christian Bielawa: In future, we will take ZEAS **into account in a lot of our offers**. Especially when it comes to **combining systems for both refrigerating and freezing**.

DAIKIN staff member: Would you choose ZEAS and its booster again in upcoming projects?

Christian Bielawa: **Rest assured we will!**



Christian Bielawa with the Herbert Service-Kälte GmbH installers at the installation site of the ZEAS



Deep-freeze room



Installation site of the ZEAS booster

Better one in Bonn than six in the city! One ZEAS replaces six single units in eco-mall in Bonn!

Why HVAC vendor of "Kältetechnik Schall" was so enthusiastic about ZEAS, even in the planning stages:

"We always have an open mind for innovations, and we want to pioneer them. We heard of this new and very interesting DAIKIN technology by "ZEAS News", and we did a test-run immediately. Great idea, as the **prices we could offer to the investor were lower compared to traditional multi-systems**. The fast response and fast processing by DAIKIN field-staff regarding our very first ZEAS design was excellent. **And after completing our first ZEAS project, we then managed to design ZEAS projects independently and unproblematically.** Another great advantage: a compact solution and therefore little space requirements."

And what is the opinion of the end user, "Bergfeld's Biomarkt" in Bonn?

"Our energy advisor strongly recommended that we renew our commercial refrigeration systems from scratch. Up until now, we wasted 50% of energy cost in commercial refrigeration! We simply needed an energy efficient technology; especially to keep our credible image as an eco-mall. Up to now, six single units, completed by six freezer-showcases with additional heat loss caused noise problems in the salesroom and a very bad energy footprint. **So our main goal was: as low energy costs as possible.** And, as we already use "green electricity", a system like ZEAS is the perfect match."

How satisfied is the installer after installation and commissioning of ZEAS?

"Installation was very easy, effective and fast, due to the small cross-sections. **We saved tremendous amounts of time during commissioning!** It is largely trouble-free and you do not need to adjust control components, etc. Furthermore, our installers are very happy, because installation of the piping was fast and easy."

And the end user?

"We were surprised by the fast installation process of the ZEAS. We truly appreciate the low noise operation of the system, compared to the six units we had in the past. **A really great "Don't worry - be happy"-package!** We are already considering reconstructing our other branch stores in Bonn."

Volume

2 x shop counter + area
6 meters of refrigerated shelf
1 x vegetable box walk-in refrigerator
1 x freezer shelf, stand-alone by DAIKIN CCU



Rainer Schaal, Managing Director and owner of the company Kältetechnik Schaal, at the ZEAS installation site



Bergfeld's organic market in Bonn



Cooler

ZEAS-Bayreuth Festival: Applause for a great staging by DAIKIN

The “Green Hill” never sleeps: At least when it comes to the commercial kitchen of the festival hall. During events they cook between 1,000 and 2,000 meals for spectators and artists. Since very recently, a 5PS ZEAS does the business of refrigeration. And: There is still capacity for even more refrigeration units left! So, ZEAS too, is well prepared for the ongoing triumphs of the “Bayreuth Festival Hall”.

INTERVIEWS:

Mr. Karl-Heinz Matitschka, CTO, is responsible for machinery of the Bayreuth Festival Hall.

DAIKIN staff member: What are your expectations regarding a new refrigeration solution?

Mr. Matitschka: A new refrigerating machine has to have a **frugal** and **energy efficient performance**, it has to be **reliable** and **durable**.

DAIKIN staff member: Are you satisfied with your new equipment? And what do you think are the main highlights of ZEAS?

Mr. Matitschka: The ZEAS is doing well and stable since its commissioning; we got the desired climate conditions in all refrigeration units, very important to our food stored there. I especially appreciate the way of **installing the machine**, so that it is **not visible**, and, due to its low noise operation, you **cannot hear it**. And its **low space requirements are fantastic**. Now please read an interview with Mr. Hans Zettner, managing director and owner of HVAC vendor „Hans Zettner GmbH Kälte-Klimaanlagen“ Bayreuth:

DAIKIN staff member: How did you hear about DAIKIN ZEAS?

Mr. Zettner: I heard about the ZEAS at the **ZEAS introduction show in the regional office Munich**, last autumn.

DAIKIN staff member: Why did you choose the ZEAS for this project? Was there another solution, comparable to ZEAS?

Mr. Zettner: What do you mean by “comparable”? **The most important and most critical factors in our decision** were **low noise operation, reliability, weather-proof casing** and **low efforts in installing and wiring**.

DAIKIN staff member: Did you run into any problems in configuring your very first ZEAS implementation?

Mr. Zettner: **No, no problems at all.** It was very good.

DAIKIN staff member: Are you satisfied with the ZEAS installation process?

Mr. Zettner: Installation was **similar to VRV**, and therefore **routine work**. The slogan **“VRV technology for commercial refrigerating and freezing”** says it all.

DAIKIN staff member: What do you think about DAIKIN consulting and after-sales support?

Mr. Zettner: It was excellent!

DAIKIN staff member: What potential do you think ZEAS provides for you and your company?

Mr. Zettner: I feel, the ZEAS **definitely has growing potential, and deservedly so**. The ZEAS is still in its early stages of development.

DAIKIN staff member: Would you choose ZEAS again in upcoming projects?

Mr. Zettner: All I can say so far is that **the next ones are already underway!**



Preparation room/cooler



Bayreuth Festival Theatre



ZEAS installation site

Unknown factor: refrigeration power requirements. Known factor: ZEAS!

The 20-HP ZEAS with continuously adjustable, energy-saving power controls

The local Chamber of Trade is an essential partner for anyone wanting to learn the butcher's trade in the Nuremberg region. And when it comes to practical training, the ZEAS from DAIKIN is just as indispensable. The following interview outlines the special problems that were overcome without the slightest problem.

INTERVIEW:

DAIKIN employee: Why did you choose a ZEAS for this project?

Mr. Binder, General Manager of Kälte Binder GmbH: I was really impressed by the **virtually continuous, energy-saving ZEAS power control** that makes it possible to **match the refrigeration output to different levels of demand**.

This aspect was decisive for this project because we were unable to determine the exact refrigeration requirements in advance. There are two air coolers connected to the ZEAS that can be operated separately on five different power settings.

Another key feature for me was the **compact design and weatherproof housing designed**

for outdoor installation. I was also impressed by the **virtually silent operation**, because the unit is located directly below the classroom windows.

And the **compact design** made installation a lot easier. What's more, we were able to dispense with defrosting controls and an external vacuum pressure regulator because the ZEAS handles this automatically.

DAIKIN: What are your expectations of the ZEAS?

Mr. Binder: Everything you would expect of a refrigeration system like this: smooth, **fault-free operation for many years to come**.

DAIKIN: What for you is the most important advantage of ZEAS?

Mr. Binder: The ability to **control the power**.

DAIKIN: Were you happy with the actual installation?

Mr. Binder: Installation was **simple and straightforward**.

DAIKIN: Would you select the ZEAS again for other projects?

Mr. Binder: **ZEAS is the perfect solution** when it isn't possible to establish the exact refrigeration requirement. So whenever a similar requirement arises, I'll always go for the ZEAS.



ZEAS installation location



Evaporator



Production

Clinically tested

ZEAS in the Oberhavel Kliniken, Henningsdorf

Advantage: ZEAS versatility. A hospital kitchen has special demands when it comes to refrigeration and freezing requirements. ZEAS by DAIKIN proved to be the right solution for the Oberhavel Kliniken in Henningsdorf, Germany. Let yourself be inspired!

INTERVIEW:



Mr. Yves Schirmer, General Manager of Schirmer Kälte Klima in Zehdenick

DAIKIN employee: How did you become familiar with the ZEAS from DAIKIN?

Mr. Yves Schirmer, General Manager of Schirmer Kälte Klima in Zehdenick: I saw a few articles in the trade press and read about it in the **ZEAS News** from DAIKIN.

DAIKIN: What type of system would you have installed before the ZEAS?

Mr. Schirmer: Normally, it would have been a standard multi-compressor system.

DAIKIN: What do you cool with the three ZEAS and the CCU?

Mr. Schirmer: One 5-HP ZEAS supplies **all the normal cold-storage cells**, one 20-HP ZEAS is for the workrooms and **technical cold rooms**, another 20-HP ZEAS handles the **complete deep-freezing**. The Series 4 CCU is required for cooling down freshly-prepared meals in the pressure cooker.

DAIKIN: Why did you opt for two normal cooling and one deep-freezing ZEAS?

Mr. Schirmer: The architects were faced with the problem that the customer did not have **a machine room large enough to accommodate a multi-compressor system**. Thanks to its **small footprint, the ZEAS is ideal**. **Another extremely important criterion** for the hospital setting is the outdoor installation and **low noise operation**. **ZEAS proved to be the best solution**. The **low operating costs** made the **decision even easier**.

DAIKIN: Were you satisfied with the ZEAS installation?

Mr. Schirmer: The **installation was quick and easy**. Another very positive aspect was the fact that **pipe dimensions are much smaller than usual** when you can use a R-410A refrigerant.

DAIKIN: Did you get good advice and support from DAIKIN?

Mr. Schirmer: Most definitely!

DAIKIN: What do you see as the most important advantage of the ZEAS?

Mr. Schirmer: In addition to the things I mentioned, I would say the **accurate and continuously adjustable control** that ensures **optimum evaporation temperatures in all cold storage zones with the ZEAS**.

DAIKIN: Would you choose the ZEAS again for other projects?

Mr. Schirmer: Yes. In fact, a new **12-HP ZEAS is already on order**.



Location of the three ZEAS and CCU



Cold room

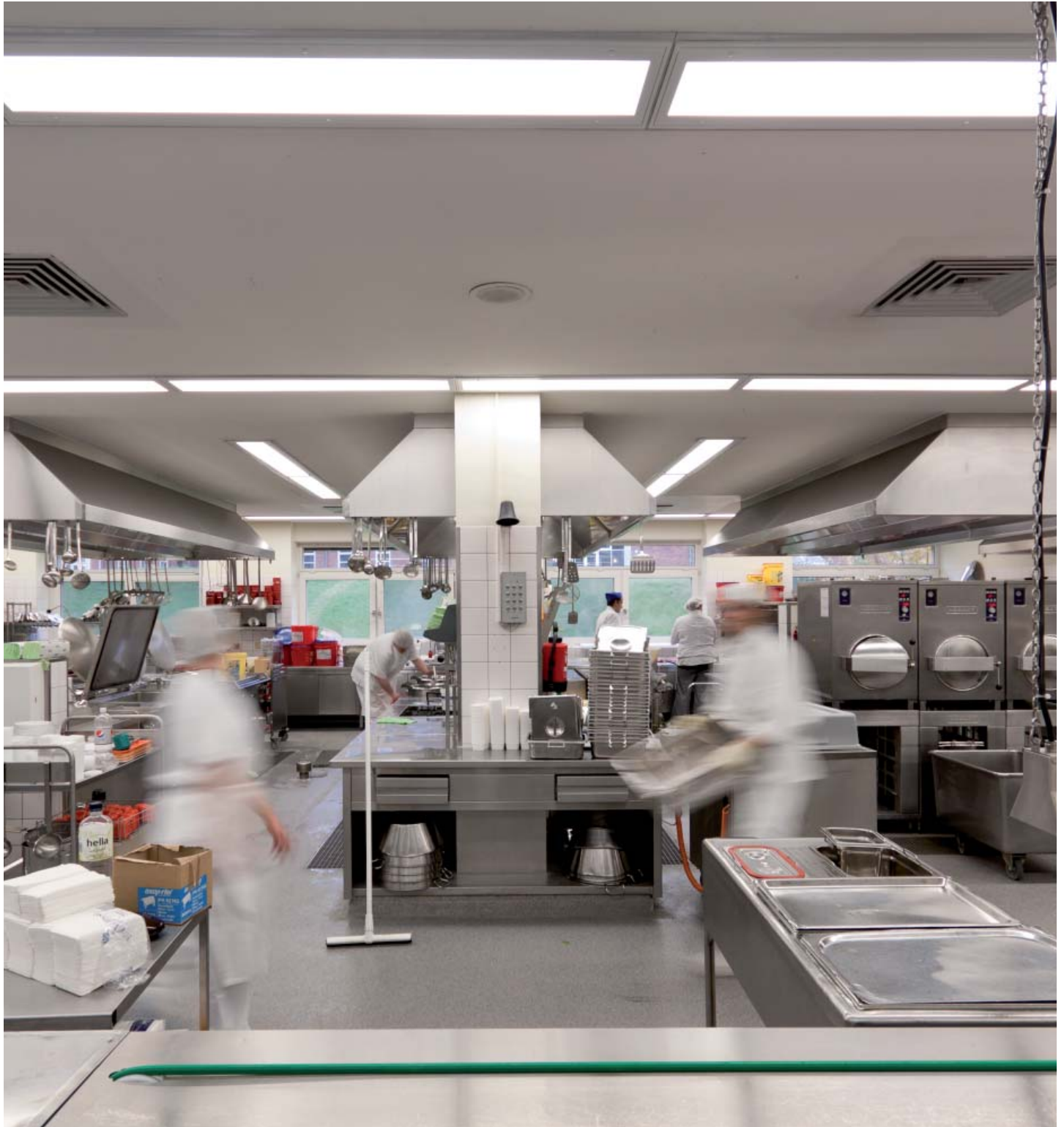


Kitchen

Cold cuisine: Starts with 1 ZEAS and 2 boosters

Kiel City Hospital relies on commercial refrigeration by DAIKIN

They don't waste words up in the far north. Even when it has to do with the intelligent, highly efficient technology found in the ZEAS from DAIKIN – the revolution in commercial refrigeration! This interview summarizes the key advantages.



Hospital kitchen

INTERVIEW:



Mr. Martin Klix, employee Pschorn Kälte- und Klimatechnik Company, Kiel

DAIKIN employee: How did you become familiar with the ZEAS from DAIKIN?

Mr. Martin Klix, Pschorn Kälte- und Klimatechnik, Kiel: The first time I saw a ZEAS was on a **tour of the DAIKIN factory in Ostend, Belgium**. And I was amazed and **very impressed by the product**.

DAIKIN Mitarbeiter: What made you opt for the ZEAS and the two boosters for this project? Was there any other comparable solution?

Mr. Klix: Well, **not really comparable**. A possible alternative might have been a multi-compressor system, but that's **not really a product comparable with the ZEAS**. I realized this after we installed ZEAS.

DAIKIN: How did you manage the layout of your first ZEAS and the two boosters?

Mr. Klix: It was perfect – **no problems at all!**

DAIKIN: Were you satisfied with the installation of the ZEAS and the boosters?

Mr. Klix: The installation **was extremely easy** – I'm simply amazed!

DAIKIN: Did you get good advice and support from DAIKIN?

Mr. Klix: The **advice and support** were **first class**.

DAIKIN: How do you see the potential for ZEAS in your company?

Mr. Klix: The **potential** in our company is excellent. I **have been planning to expand our refrigeration business**. And this **decision** will definitely be **supported by ZEAS**.

DAIKIN: Would you choose the ZEAS and boosters for future projects?

Mr. Klix: Most **certainly** – it would just depend on the size of the installation.



Installation location for the ZEAS and the two boosters



Interior setup with air ducting



ZEAS – A sensible decision

WITH THE SUPER TRAFFIC-LIGHT SOLUTION!

INTERVIEW:

DAIKIN employee: How did you become familiar with the ZEAS from DAIKIN?

Mr. Christoph Apel, Distribution Manager, Kälte Apel based in Calbe, refrigeration and air-conditioning specialists: I was first introduced to ZEAS by Manuel Freudenberg of DAIKIN and also saw it at **Chillventa 2010 in Nuremberg!**

DAIKIN: Which system would you have installed prior to the ZEAS?

Mr. Apel: Multi-compressor systems from German manufacturers – the old standbys!

DAIKIN: What are the basic requirements for the system installed in the Richter nursing home?

Mr. Apel: The most important aspects are **reliable operation, cost efficiency and the high-volume refrigeration power.**

DAIKIN: What needs to be kept cold in the nursing facility?

Mr. Apel: Mostly refrigerated and frozen food.

DAIKIN: Why did you opt for a normal-temperature ZEAS and a ZEAS booster?

Mr. Apel: The **compact, series-production ZEAS** from DAIKIN supplies commercial refrigeration from a single source in the **required quality.** This **saves time and money.** The DAIKIN system optimally regulates both the deep-freeze and the normal refrigeration ranges.

DAIKIN: Were you satisfied with the ZEAS installation?

Mr. Apel: In terms of the installation and controls, **ZEAS gives you the same flexibility as a VRV system.**

In the past, the system installer had to put together all of the different components, including the machinery, liquefier etc. Now, the complete system is **supplied as a plug-and-play unit.** Along with the **logistical advantages, the compact design of the ZEAS and booster requires minimum space.** This makes it possible to **integrate several individually-controlled refrigeration units** into the system. **Different cold zones can be kept at a preset temperature** with just one outdoor unit.

DAIKIN: What is the most important ZEAS feature for you?

Mr. Apel: It's definitely **amazing energy efficiency** of the ZEAS and booster.

During commissioning, which took place with nursing home owner Mr. Richter, attention is focused on the noise level of the outdoor unit.

Mr. Apel: Mr. Richter, the machine is now running and has taken over its job of refrigerating the cold storage cells.

Mr. Richter: The **noise level** is much lower than I expected. The decision to install a new system in our building was not easy. But in retrospect, it was **absolutely the right choice.**

DAIKIN: Would you choose the ZEAS for future projects?

Herr Apel: **Of course!** Our team is proud to present the system we installed in the Richter nursing home. It is the first of its kind in Saxony-Anhalt. We are happy to see that the **owner is delighted** with our work.



The installers with the ZEAS



A glance at the traffic lights tells the story. A green light means everything is working as it should, yellow is a warning, while red means a malfunction has occurred!



The Richter nursing home in Giersleben, Germany

Erzgebirge Aue football team ready for the German Premier League! This also applies to refrigeration! Thanks to ZEAS!

Something the Erzgebirge Aue football team is still working on has already been achieved by the EKH hospital in Schwarzenberg: Premier League status! First-class commercial refrigeration comes from ZEAS.

“Cook & Chill” is part of the new centralized catering system for the reorganized Marienstift health and care center owned by the company EKH mbH based in Schwarzenberg, Germany. This made it necessary to rebuild the main refrigeration system and expand it with a blast freezer and a blast chiller.

Mr. Löscher, the technical manager, expected compliance with all of his specifications:

- Liquidation of the existing refrigeration machine room
- Outdoor installation of a central refrigeration system
- A space-saving, compact and extremely quiet unit
- Simultaneous supply of existing cold-storage cells as well as the new “Cook & Chill” chiller and freezer
- Energy-efficient operation using the new high-performance R-410A refrigerant

► There was only one ideal technical solution: ZEAS from DAIKIN!

INTERVIEW:

DAIKIN employee: What were the most important reasons for choosing a ZEAS?

Mr. Rainer Lottermoser, Owner and Managing Director of Kälte Klima Technik Lottermoser Company in Eibenstock: As local refrigeration specialists, the after-sales service and the **latest product information** from DAIKIN are extremely important, because at the end of the day, this is what benefits our customers. And as service providers, **satisfied customers** are our **top priority**.

DAIKIN: How did you manage the layout of your first ZEAS?

Mr. Lottermoser: Design a ZEAS system is **less complicated than a multi-compressor installation**. With the **variable-speed compressor**, the ZEAS continuously **adjusts the power to meet different requirements**.

QUESTIONS FOR THE TECHNICAL MANAGER OF THE MARIENSTIFT HEALTH AND CARE CENTER:

DAIKIN: What do you expect from the ZEAS?

Mr. Löscher, technical manager of the Marienstift health and care center: For us, the **key requirements** are **100 % reliability of the machinery** and **energy efficiency**. Both of these targets must be achieved over a **wide range of refrigeration power requirements**.

DAIKIN: What are the most important requirements for your system? Does the ZEAS fulfill all of these?

Mr. Löscher: The building is used as a nursing home and the refrigeration unit is installed outside. So **extremely quiet operation** was one of the most important factors in our **investment decision**. The **ZEAS from DAIKIN** clearly meets **all of our needs**.



Location of the ZEAS



Cold-storage room



Cold-storage cell

Refrigerating and freezing without a handicap: ZEAS makes it all possible.

What is a perfect match for Germany's best new golf course? The **DAIKIN ZEAS and booster!** We are delighted to have enhanced the quality of this outstanding golf course in Mecklenburg-West Pomerania. Read on to find out how satisfaction feels from the course designer's viewpoint.

INTERVIEW:

DAIKIN employee: Why did you choose a ZEAS with booster for this project?

Mr. Thomas Dieckemann, Managing Director, Meister Kälte Company based in Kiekindemark: For this project, the customer wanted to have normal-temperature and deep-freeze facilities combined in one system. At the same time, the new system was required to save a substantial amount of energy compared with separate systems. It also needed to be located outdoors to reduce noise levels in the building. These three aspects had a significant influence on my choice. Only one system was capable of meeting all of the requirements: a ZEAS with booster from DAIKIN.

DAIKIN: How did you manage the layout of your first ZEAS system?

Mr. Dieckemann: The layout of the ZEAS with booster doesn't require any more work than a conventional refrigeration system. In fact, the layout of the pipework is even easier. This definitely saves time. And as anyone in the trade will tell you, time is money.

DAIKIN: How did you manage the layout of your first ZEAS system?

Mr. Dieckemann: The plug-and-play design of the ZEAS with booster really comes in handy for installing the system. It's also extremely easy to lay the pipework, set up the electrical connections and launch operation. Other advantages include the fact that there is no time-consuming assembly work to carry out on the machine. And for this project we didn't need to add any weatherproof housing.

DAIKIN: Did you get good advice and support from DAIKIN?

Mr. Dieckemann: Yes, the support we received from DAIKIN refrigeration advisor Mr. Freudenberg was a great help in this project.

DAIKIN: Would you choose the ZEAS with booster for future projects?

Mr. Dieckemann: A ZEAS with or without booster is the best solution for projects that demand energy efficiency and noise reduction.

DAIKIN: How do you see the ZEAS potential for your company?

Mr. Dieckemann: The potential is clearly there. Many small food retailers and a number of kitchens are planning on changing over from R22. This is where I see the greatest potential for space-saving ZEAS units.



Thomas Dieckemann, Managing Director, Meister Kälte Company based in Kiekindemark, on site with the new ZEAS



Golf carts



View of the links

Rock solid convinced!

"Felsenkeller" Weimar cooled by ZEAS – Installer all around pleased

Tradition meets Most Advanced Technology The first Thuringian craft brewery "Felsenkeller" is a house with a long history. Brewing of beer is done up to today, and the amber nectar is served in the on-site public house. For that, it needs optimised refrigeration and storage conditions. ZEAS meets those requirements with excellently!

ZEAS Spare-Parts Emergency Service

01 80 - 5 01 26 82

Service call at 24 hours per day
7 days a week

INTERVIEW:

DAIKIN staff member: How did you get aware of the DAIKIN ZEAS?

Andreas Köllner, business executive of the Kälte-Klima-Technik Köllner GmbH in Erfurt: I got aware during the training sessions at DAIKIN. Another point was, I read articles in magazines, and representatives approached me proactively.

DAIKIN staff member: Why did you just opt for the DAIKIN ZEAS for this project, the "Felsenkeller" in Weimar?

Mr Köllner: The installation is done without any problems, and very favourable. In my opinion, the top-highlights of the DAIKIN ZEAS are the high potential of energy savings and the optimal performance at volatile demand.

DAIKIN staff member: Did you run into any problems in configuring your very first ZEAS implementation?

Mr Köllner: Configuring was self-explanatory: I did not experience any problems, thanks to the very good DAIKIN design documents.

DAIKIN staff member: Are you satisfied with the ZEAS installation process?

Mr Köllner: I am very satisfied with the ZEAS installation process: I have to say, assembling was easy and cost-effective – just according to the motto "Power up – Go home".

DAIKIN staff member: What do you think about DAIKIN consulting and after-sales support?

Mr Köllner: I felt very well looked after, and, additionally, I was impressed by the high level of expertise of Mr Freudenberg of DAIKIN.

DAIKIN staff member: Would you choose ZEAS again in upcoming projects?

Mr Köllner: Yes – that's for sure. There are already two other ZEAS projects, and additionally with the DAIKIN CCU condensing units. In my view, ZEAS and CCU make up an unbeatable team regarding reliability and value-for-money ratio.



The seating area of the "Felsenkeller" craft brewery



Mr Köllner on the installation site of the ZEAS



The "Felsenkeller" in Weimar

WEZ means Weser-Einkaufs-Zentrum And "Want a ZEAS"!

Yes to tradition: For more than 100 years, the Weser-Einkaufs-Zentrum is a household name to consumers in the region. By responsible-minded handling of goods and trustful dealing with employees, together with environmental awareness, the WEZ deserved to become the market leader in the region. Not only living our values, but also being open-minded about new technologies guarantee business success. So the WEZ realized, despite its consciousness of tradition, the limitations of conventional multi-compressor refrigeration systems regarding flexibility and sustainability. Because of that, in the context of a completely new design of the refrigeration of the sales floor, WEZ opted for DAIKIN ZEAS. The future supermarket will get refrigerated by ZEAS!

**ZEAS Spare-Parts Emergency
Service**

01 80 - 5 01 26 82

Service call at 24 hours per day
7 days a week



Well-armed with shelter against wind and weather



Read below the interview with installer Peter Wassmann, who is completely positive about ZEAS!



Peter Wassmann, Project Manager at Röthemeyer in Hille

DAIKIN staff member: How did you get aware of the DAIKIN ZEAS?

Peter Wassmann, Project Manager at Röthemeyer in Hille: By a road show of DAIKIN, introducing the ZEAS product to professional partners.

DAIKIN staff member: Could you tell us your decisive factors in opting for the ZEAS?

Mr Wassmann: This project was all about a redesign of the sales floor. In doing so, additional refrigerated shelves got installed. But an upgrade of the existing multi-compressor refrigeration system would have caused considerable expenditure. This is when the ZEAS came in. The advantage in this project: its simple installation. It was possible to position the outdoor unit onto the flat-roof of the market, directly above the refrigeration equipment.

DAIKIN staff member: Did you run into any problems in configuring your very first ZEAS implementation?

Mr Wassmann: Configuration was done using the Refrigeration X-Press software. This software also provides the piping dimensions needed. In parallel, the REFNET branches needed are also calculated and output in a BOM format. Sure caution should be exercised as the outdoor unit supercools the liquid refrigerant, and this affects the configuration of the solenoid and injection valves.

DAIKIN staff member: Did you run into any problems in installing your very first ZEAS?

Mr Wassmann: Installation and commissioning were surprisingly simple, without any problems. Piping was run through ducts in the false ceiling and from there to the outdoor unit. Integration into the existing but upgraded control- and remote-monitoring system did not cause any problems.

DAIKIN staff member: What do they refrigerate by the use of the ZEAS?

Mr Wassmann: The outdoor unit is connected to two display-refrigerators with a cabinet-top each. Those display-refrigerators with a total length of 40 m contain anything, which needs refrigeration, ranging from dairy products to sausage products.

DAIKIN staff member: Would you choose the ZEAS again in upcoming projects of this kind?

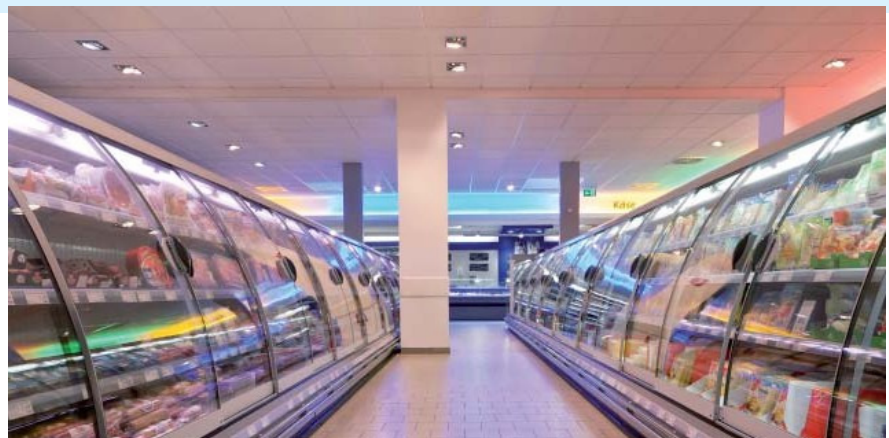
Mr Wassmann: That's for sure, as the ZEAS offers many advantages, among others:

- There is no need for a technical room, as the ZEAS is suitable for outdoor installation.
- The ZEAS can be positioned nearly anywhere, so you can implement short piping lengths.
- Small piping cross-sections due to R410A refrigerant.
- Low sound pressure levels.
- Good control (constant evaporating temperature) due to inverter technology

Considering those advantages, this is quite out of the question to me: ZEAS yes or no? **IN THE FUTURE: ALWAYS ZEAS!**



Installation site of the



Supermark

The sweetest ZEAS since there is chocolate...

So that the delicious chocolate does not melt until in your mouth... now ZEAS even cares for that!

And this at one of the most prestigious enterprises, which makes us happy with their dainties: Stollwerck, whose renowned brands like Alpia or Sarotti are best-known to us. At the production site Saalfeld in Thuringia, they decided to use a DAIKIN ZEAS for refrigerating one of their production halls.

Read in the interview below, what smart solutions and additional components they applied and how multifaceted commercial refrigeration can be in our days. Marcus Schramm, Master Craftsman in Refrigeration Planting at the DAIKIN professional partner Kälte Schramm, put it in a nutshell:

ZEAS Spare-Parts Emergency Service

01 80 - 5 01 26 82

Service call at 24 hours per day
7 days a week

INTERVIEW:



Mr Marcus Schramm, Master Craftsman in Refrigeration Planting at Kälte Schramm GmbH

DAIKIN staff member: How did you get aware of the DAIKIN ZEAS?

Mr Marcus Schramm, Master Craftsman in Refrigeration Planting at Kälte Schramm GmbH: The ZEAS system got introduced to us in the course of a DAIKIN conference of experts with professional partners, and in my point of view, the system was simply unique. To me, it was clear from the outset: I have to install such a system one day.

DAIKIN staff member: Did you run into any problems in configuring your very first ZEAS implementation?

Mr Schramm: I'm bound to say, using the Refrigeration-Xpress software, configuration of the ZEAS system was very simple.

DAIKIN staff member: Are you satisfied with the ZEAS installation process?

Mr Schramm: Installation and especially commissioning of the ZEAS is very easy and time saving, compared to a conventional multi-compressor refrigeration system. And, as all businessmen know: "Time is money!"

DAIKIN staff member: What do they refrigerate by the use of the ZEAS?

Mr Schramm: Using the ZEAS and two Güntner-evaporators, in combination with a hose system for conducting air, they provide refrigeration to a production line in their Saalfeld Chocolate Plant.

DAIKIN staff member: Would you choose ZEAS again in upcoming projects?

Mr Schramm: Yes sure, for the simple reason that I experienced nothing but positive aspects – during the whole project. That's why I will always opt for the ZEAS system, as long as the system is suitable for the application in question.



The production hall at the Saalfelder Chocolate Plant.



Smart Solutions and fast implementation.



The production line with optimal refrigeration.

On the pig's back! New ZEAS at the Merz Butchery in Eppelheim



NEW

ZEAS Spare-Parts Emergency Service

01 80 · 5 01 26 82

Service call at 24 hours per day
7 days a week

INTERVIEW:



Interview with Mr. Zugck of Kälte Zugck, and Mr. Merz, Business Executive of the Merz Butchery

DAIKIN staff member: How did you get aware of the ZEAS?

Mr. Zugck: Some years ago, in the course of a presentation in 2009, when DAIKIN introduced enhancements of its commercial refrigeration range. Nowadays by your branch office.

Mr. Merz: By the proposal of Mr. Zugck to install a new, state-of-the-art system on my place. Energy efficiency, low refrigerant volume and the possibility to install the unit outdoors, right beside the freezer-cells, were fascinating.

DAIKIN staff member: Mr. Zugck, which installation would you have implemented in the past?

Mr. Zugck: Well, a conventional multi-system with semi-hermetic compressors in the cellar, and the condensing unit on the roof. A very sophisticated design would have been needed.

DAIKIN staff member: Which features were the most important ones to you?

Mr. Zugck: Simple configuration of the ZEAS and the piping system by the use of Refrigeration Express. Because the freezer-rooms were needed for production, reconstruction had to be done as fast as possible. The fast, simple installation of the ZEAS provided the basis for doing this. And the smaller refrigeration piping was faster installed, compared to large dimension piping, e.g. for R-404A.

Mr. Merz: The fact, the freezer-rooms are independent from the system as a whole. Energy consumption, sound level, square requirements for machine, savings in refrigerant.

DAIKIN staff member: How did you get along with planning, installation and commissioning?

Mr. Zugck: Support by your DAIKIN branch office and the good collaboration resulted in a hassle-free execution of planning and commissioning.

DAIKIN staff member: What's your opinion of the ZEAS approach as a whole?

Mr. Zugck: The approach is very innovative. Given the system is suitable for the application, it is the ideal solution. In this case, ZEAS was exactly the most appropriate solution to my customer.

Mr. Merz: The smaller and more compact a system is, the more easy-minded I can go into the matter. The mere fact that there is no extensive piping network with the risk of leaks, and the cost savings in both investment and operation are convincing.

DAIKIN staff member: Are you going to replace other systems by ZEAS in your facilities?

Mr. Merz: Taken for granted! I can very well imagine gradually replacing older systems with ZEAS, in further steps.



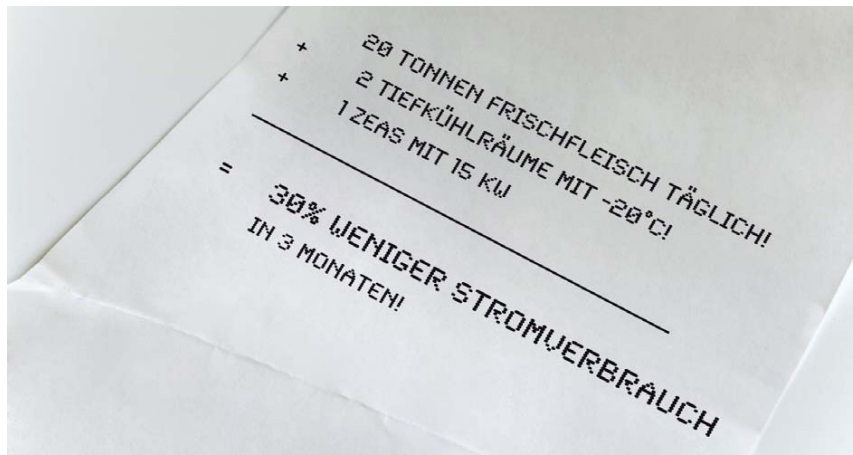
Installation of the ZEAS



The Merz Butchery – the five star butchery



Cold-stored meat products



Differences between elder system and ZEAS

Electricity consumption of the freezer-rooms was reduced by about 30% in the period from November 2011 to January 2012, a great cost saving for the production plant.

The elder system contained 100 kg of R22, so a leak test had to be done twice a year. But nevertheless, there was still a threat to the environment. The new system contains no more than 15.2 kg of R-410A, and there is practically no risk of leaks: That's good for plant and environment at any rate.

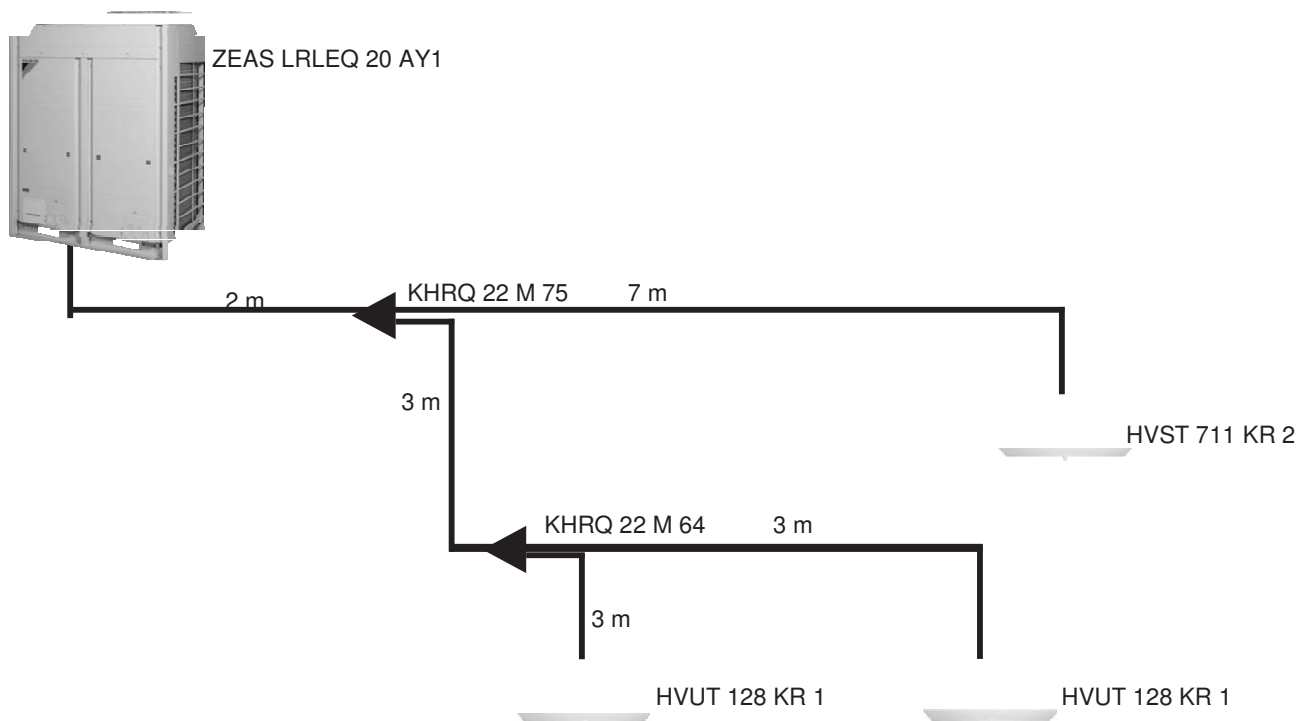
The reconstruction has become indispensable as the 25 years old system became unprofitable and showed more and more leakiness.

The situation before reconstruction:

Multi-System featuring three rugged, open-type compressors in the cellar and radial condenser. Long piping lengths, causing losses. High current input and poor capacity control.

Description of the new system:

Two freezer-rooms with temperature of -20°C and three evaporators in total. Continuously containing 20 tons of fresh meat.



Model	Qty	Description
LRLEQ 20 AY1	1	freezing-
KHRQ 22 M 64 T	1	REFNET
LKHRQ 22 M 75 T	1	REFNET

Conditions	
Capacity required	15.00 kW (98,3 %)
Capacity available	15.26 kW
Outside air temp.	+32.0 °C
Evaporation temp.	-30.0 °C

Pipe	
Ø10 mm	16 m
Ø12 mm	2 m
Ø18 mm	13 m
Ø35 mm	2 m
Ø28 mm	3 m

PSSSSSSSSSSSSSSSSSSSSSSSSSSST!

ZEAS: Silent and invisible. Spread the word!

About the project: The building of this trendy pub is situated in the centre of Saarlouis, and the storefront is under monumental protection. In the past, the building housed a brewery. Many reconstruction works resulted in interlaced structures. If required, another condensing unit was added. Mrs Sturies, the restaurateur, and, as an architect, also the planner of the whole project, runs already 2 other trendy pubs in Saarbrücken. The challenge to the executing specialist company in refrigeration, Systemtechnik E. Martini GmbH in Völklingen, was, to integrate all the elder standalone systems, spread in the whole building, and to find a reasonable solution, especially regarding energy efficiency. As only a multi-system could offer a solution, but strict noise emission limits were to comply with, DAIKIN ZEAS became quickly the first choice.

ZEAS Spare-Parts Emergency Service

01 80 - 5 01 26 82

Service call at 24 hours per day
7 days a week

INTERVIEW:



Mrs Sturies, Mr Erik Martini, and Mr. Erik Martini, Systemtechnik E. Martini GmbH company

DAIKIN staff member: How did you get aware of the ZEAS?

Mr Martini: By DAIKIN publications and by the training offer to our installers.

Mrs Sturies: The very special problem with this object required a plain solution, and the Martini Company well-advised me. Consequently, only the ZEAS proved to be the possibility.

DAIKIN staff member: In former days, what sort of system would you have installed?

Mr Martini: A conventional multi-system would not have been an option, due to harsh space limitations. Meaning we ought to have installed pair-type systems, boosting installation time and costs and investments. Peak currents of the pair-type systems would have resulted in rising electricity consumption.

DAIKIN staff member: Which features were the most important ones to you?

Mr Martini: We had to find a centralised solution. Next, after deciding to place the system onto the roof, we had to install a silent unit, as there are tenants who have roof gardens right beside it. And in the case we add another fridge; it could simply get connected to the existing network.

Mrs Sturies: We were looking for a centralised but so to speak reliable solution. Another main concern was energy efficiency. And due to the structural conditions, I put emphasis on a small piping and simple installation. Big wall-breakthroughs were no option in this old building. For me as the restaurateur, of course operational reliability and spare parts supply were hugely important. In addition, maintenance and repair must be carried out as easily as possible. All in all features that pertain to the DAIKIN ZEAS.

DAIKIN staff member: How did you get along with planning, installation and commissioning?

Mr Martini: The concept equals a conventional multi-system, so no problems at all. The ZEAS features some characteristics to be considered, but by the use of

the configuration software, and with support by DAIKIN, also no problems at all. Commissioning was done without any problems.

Mrs Sturies: Coordination between the Martini Company and me made planning easy.

DAIKIN staff member: What's your opinion of the ZEAS approach as a whole?

Mr Martini: The „Compact Multi System“ approach is the future. There is no more easy way to configure and to implement a multi-system. Smallest refrigerant charges, low energy consumption. All we need now is a ZEAS with a capacity of 5 kW. Having this, I could realise much more projects in gastronomy.

Mrs Sturies: A very great approach for planning, and a straightforward thing for operators.

DAIKIN staff member: Would you choose to replace other systems by ZEAS?

Mrs Sturies: We got what we wanted. ZEAS was the right choice. In the case we had to replace the systems in our Saarbrücken facilities: certainly by ZEAS again.

Mr Martini: Sure I will check out the possibilities to use a ZEAS in other projects, too.



Installation site of the ZEAS



Refrigerated bar



Aiming high with ZEAS!

Differences between elder system and ZEAS

BEFORE:

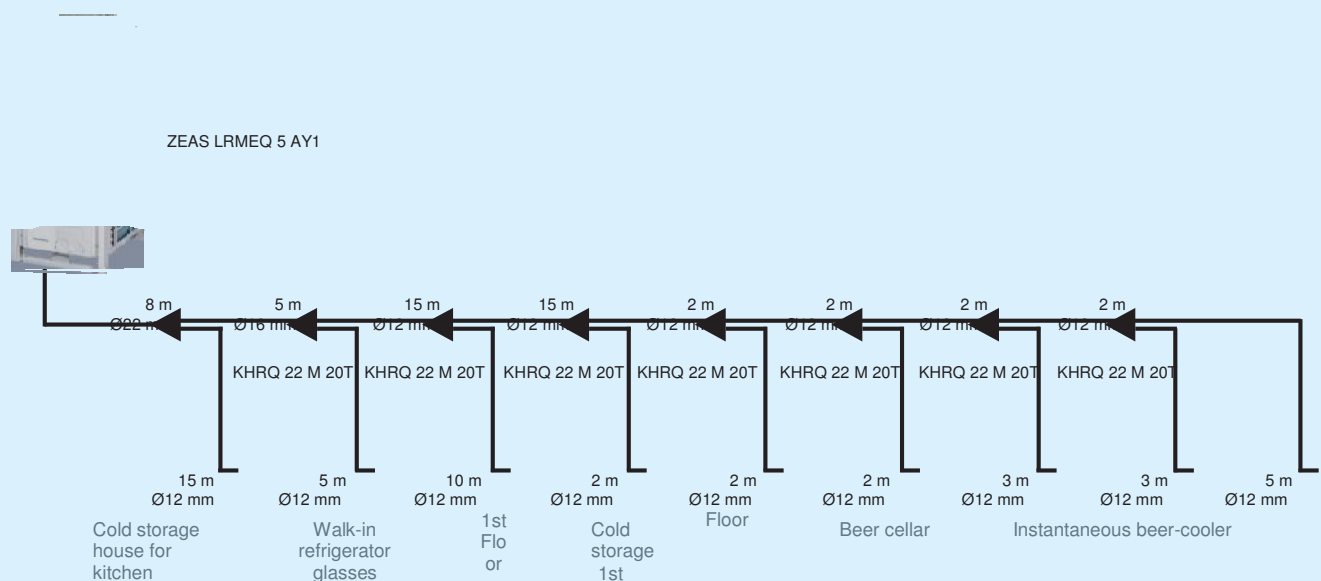
- Each fridge with its own unit.
- 3 different refrigerants.
- The cellar got extremely heated up.
- Difficult, time consuming maintenance.
- Many sources of trouble
- Units difficult to access
- High electricity consumption
- Units in the cellar and on exterior wall

AFTER

- One compact outdoor unit
- R-410A
- Cold Cellar as storage for beverages
- Simple maintenance of only one unit
- Manageable equipment, easily accessible
- Easy access
- Efficient performance yield
- On the roof

System Description

- 2 x refrigeration of bar-counter
- Walk-in refrigerator for beverages, with complementary refrigeration
- Walk-in refrigerator for beer
- Walk-in refrigerator kitchen for food
- Bottle cooler
- Coca Cola unit
- The cooling tables of the kitchen were connected to the CCU, because the plate evaporator is not designed for R-410A pressures.
- Level difference lowest fridge – ZEAS: 8 m
- Longest distance fridge – ZEAS: 30 m





Daikin Europe N.V.

Zandvoordestraat 300
BE-8400 Oostende, Belgium

T.: +32·59 55 81 11

F.: +32·59 55 88 99