

### OUR STORES ARE AIR-CONDITIONED IN AN ENERGY-EFFICIENT MANNER.

Mitsubishi Electric's modern air-conditioning technology for the GERRY WEBER Store.

GERRY WEBER International AG is a globally operating company in the fashion industry with a high sense of social and environmental responsibility. Sustainable reduction of energy consumption in the stores is an essential part of the company's philosophy. The Mr. Slim Series air-conditioning units from Mitsubishi Electric in the newly opened store in Ratingen are ultra-energy-efficient and high-performance units, which are especially suitable for commercial applications.



Customers expect an innovative presentation of current collections and trends in a GERRY WEBER store – as well as inviting temperatures that encourage you to spend time there.

#### Our atmosphere: customer-friendly.

GERRY WEBER International AG is a globally operating fashion and lifestyle group with stores for women's wear in over 62 countries. One of these stores is located in Ratingen's historic town center. The bright and friendly showroom of the newly opened store has an agreeable shopping atmosphere. Likewise, the indoor temperature of the store should also be inviting for customers. Our modern and powerful multi-split air conditioner provides consistent and comfortable indoor temperatures regardless of the time of year. The draft-free appliance is barely audible when it is heating or cooling the store.

At 26 °C the changing room area is always slightly warmer than the showroom area. This makes for a pleasant indoor climate, increasing the time customers spend at the point of sale (POS).

#### We meet the highest energy efficiency requirements

Apart from indoor requirements, outdoor conditions are also relevant when selecting an air-conditioning system. These include standard technical requirements laid down in the German Renewable Energies Heat Act (EEWärmeG) for efficient energy use in a building. According to this act, thermal energy demand is equal to the annual heat supply required for space heating and hot water production. The use of ambient heat meets the obligation if this energy covers at least 50 percent of the systems' thermal energy demand.

The store in Ratingen easily meets these requirements: with a heat-recovery and free-cooling ventilation system and an air-conditioning system, which is designed to cool. It also has an economic and energy-saving heating mode for times when outside temperatures are low.

The perfect solution: the outdoor unit of the Mr. Slim series with a Zubadan inverter of type PUAZ-SHW 140 has a cooling capacity of 14 kW and a heating capacity of 16 kW.

### **Our sustainable store climate concept**

The background Since 2010 all GERRY WEBER International AG stores have followed an efficient climate concept, which provides for temperature control using modern air-conditioning systems with inverter technology. It also provides for a ventilation system with cross-flow heat exchangers for fresh air supply to the sales area. This allows for an economical heating solution for winter using the heat-pump function and for pleasant shopping temperatures in summer. Due to the method of heat transport, indoor temperatures can be adjusted to store requirements at short notice. The system switches to reduced power as soon as the desired room temperature is approached and works at partial capacity to stay at the required temperature.

Lighting, ventilation, cooling and heat supply can be centrally controlled directly from GERRY WEBER company headquarters and is integrated into the Bluebox building management system. As a result, energy is centrally managed and anomalies can be detected early on. For example, checks can be made as to whether the nightly electricity consumption (due to window displays) is really necessary or whether adjustments can be made.

Energy consumption can be lowered by optimizing switching times for lighting as well as with the intelligent regulation of interior temperatures.

### **Our variable regulator with inverter provides optimal results.**

The multi-split air-conditioning system economically converts the outside air into environmental energy and manages the cooling as well as heating of the indoor areas. The system automatically switches from the cooling to the heating mode, so it can also be used to support heating measures in winter. This option is possible since the outside unit's heat-pump function makes it generally suitable for heating buildings. The outside unit is equipped with patented Zubadan technology and a function for quick defrosting, ensuring particularly stable temperatures even when temperatures outside are low.

Air-conditioning units with a speed-regulated inverter for the compressor have established themselves in the market over the standard inverters. A modulated (smooth) adjustment to the current energy requirements of the customer (interior units) is made possible by inverter technology and the inverter can operate at levels ranging from 30 to 100 % capacity. The system operates predominantly in partial-load capacity, leading to visibly lower operating costs. Units that cannot work in partial-load mode and only have an on-off mode are at a distinct disadvantage in comparison to modulated units as the former always operate at full-load capacity.

When the Mr. Slim outdoor-unit with Zubadan inverter technology was developed, particular attention was paid to increasing its energy efficiency. Within their market environment, the outdoor units produce the highest EER and COP values, thereby leading the market by example\*. These values were of significant interest for GERRY WEBER International AG as low energy consumption was just as important a factor to be considered when deciding on an air-conditioning system as integration in their in-house building management system.

\* The **Energy Efficiency Ratio**, (EER) for mechanical cooling systems and the **Coefficient of Performance** (COP) for mechanical heating pumps is the ratio of cooling or heating capacity provided to electrical work required.

### **Pleasant to look at and pleasant also for interior temperatures: our interior units with a filter lift**

A clear design, high-quality interior decoration and carefully selected decorative elements give the store its unmistakable charm, creating an inviting atmosphere for the customer. Air-conditioned temperature plays a significant role in creating this atmosphere. 4-way ceiling cassettes take care of the pleasant temperatures in the store. The large square ceiling cassettes of the Mr. Slim Series have four outlets by means of which an air stream that flows along the ceiling guarantees draft-free air distribution.

The redesigned air outlet brings air into the room horizontally such that the air spreads itself below the ceiling, thus air-conditioning the store without creating a draft.

The 4-way ceiling cassettes are fitted with a filter so that the customer gets the best quality of air. The filter can be lowered as far as 4 meters by remote control. Alternatively, the filters would have to be cleaned by using a ladder. However, the safety and workload of employees are of high priority for GERRY WEBER International AG, and the fashion house once again demonstrates its corporate social responsibility. The option of an automatically lowered filter per device allowing for simple, quick and safe filter cleaning as well as filter change was just another convincing reason for choosing these units instead of indoor appliances from other manufacturers.



The filter cassette can glide down to 4 m in a matter of a few seconds.

### Conclusion

Sustainable business management is one of the key values of GERRY WEBER International AG and is in line with its corporate objective of environmental responsibility. A central part of this concept is to centralize energy management using the Bluebox system, which significantly lowers energy consumption. Air-conditioning the sales areas is done by having a modern air-conditioning system. This allows for an economical heating solution in winter using the heat-pump function and for pleasant shopping temperatures in summer.

The Mr. Slim series of Mitsubishi Electric has particularly high-performance air-conditioning units with low energy consumption, which can be easily integrated into difficult environments.

The outdoor unit with Zubadan inverter offers particularly stable temperatures and is highly energy-efficient. The indoor appliances guarantee uniform, draft-free air distribution and have optional filter lifts for safe and simple cleaning.

