Complete climate concept

Hanos is an international wholesaler to the food service industry and the business opened a new facility in the Netherlands in November 2015. In order to meet the functional demands of the building Biddle has provided:

- 6 x CA2 comfort air curtains above several entrances.
- 2 x CA2 ambient and 14 x DoorFlow air curtains between the chilled and "warmer" areas.
- 3 x IsolAir chilled room air curtain above the entrance to the chilled expedition.
- 1 x MAT Hybride cold store air curtain between the chilled room and cold store.

**MAT Hybrid between chilled room and cold store**

A MAT cold store air curtain was installed above the door opening to the cold store in order to deal with large temperature differences between the two climate areas. The Multi Air stream Technology forms the basis for the MAT. Three air streams providing different temperatures but similar discharge velocity and direction create optimal climate separation between the two areas. The hybrid version consists of a combined water and electrical heating coil. First, the waste heat available from the refrigeration and freezer installation is used. Then, when necessary, the electrical heating coil will automatically assist the water coil.

**Remotely monitored**

A constant water flow is a requirement for the proper functioning. By means of the RCM Module (Remote Control Monitoring module) the water flow is monitored remotely in order to guarantee a reliable solution.

**Your benefits**

- Reduced icing & misting
- Optimal climate separation
- Energy-saving climate solution
- Unique turnkey concept
- Constant internal temperature

**Energy savings**

- € 9,800
- 80% Less consumption
- 36 months Return on investment
- 5% Door use

"Our cooperation with Biddle is ideal, because Biddle takes responsibility for a full solution"

Rob Kuijpers, Head of facilities, Hanos
Information about the cold store

- Size door opening: 2.5 m width and 3.0 m height
- Installation of 1 x MAT 250 incl. door contact switch
- Temperature cold store: -23 °C
- Temperature chilled room: 2 °C
- Door use: in 5% of the time the door is opened
- Setting: fixed discharge temperature of 1 °C, speed 2.

Results

The MAT Hybrid was monitored for a month in December 2015 and door usage was observed to be very low. In the monitored period the door was opened 501 minutes per week equating to 5% usage. The fan rotated 4605 minutes (76.5 hours) per week, with 17.5 kW of energy supplied by the coil. The energy savings are 76.5 hours x 17.5 kW = 1343 kW per week.

Compared to an equivalent electrical unit the energy savings are 1343 kW per week and on yearly basis the total is 69,836 kW. The savings are €9,800 based on a price of €0.14 per kWh. The purchase price of a MAT Hybrid is €35,000, so the Return On Investment is 36 months.

Conclusions

By applying a MAT Hybrid instead of an electrical unit the savings are nearly €10,000 on yearly basis. In this case these savings are obtained with a very low door use of 5% of the time.

Your contact person industry / cold stores:
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