



CASE STUDY

Action Ford Dealership Johannesburg, South Africa



100% fresh outside air powered from solar energy

FORD'S FIRST GREEN DEALERSHIP, LOCATED IN THE PRESTIGIOUS SUBURBS OF JOHANNESBURG, SOUTH AFRICA, REQUIRED HIGH QUALITY ECONOMICAL COOLING FOR THEIR STAFF AND CUSTOMERS.

The first Greenfield dealership for Ford Middle East and Africa regional, Action Ford, moved to new premises in Krugersdorp in 2013. The original proposal for the new premises was to be self-sustainable with regards to their energy usage, encompassing the use of solar panels for a large amount of their energy usage, while being able to supply back to the energy grid in their off peak times in future.

According to Action Ford dealer principal Hartogh Streicher, this dealership is one of the first to be built from the ground up to comply with Ford's global guidelines, incorporating more environmentally friendly technologies. This includes energy efficient LED lights and more natural lighting.

Air conditioning was the biggest hurdle for the power supply from the solar plant. Action Ford decided to use the Climate Wizard. Three Climate Wizard air conditioners were installed and ducted to the main administration offices and executive suite - 270 m². Particular attention was given to the need for adequate outside air within the offices due to the proximity of the service workshops. Breezair Icon evaporative coolers were used to cool the showroom.

Action Ford dealership has come across several challenges when considering a suitable air conditioning system:

- the high energy requirements of traditional refrigerated systems to cool large open spaces,
- the volume and heat load generated from the large windows (specifically designed in order to harness the sun's energy for heating in winter), as well as
- operational activities, all together would be too much for the solar plant to cope.

Climate Wizard, together with Breezair evaporative coolers met the requirements. In addition, the 100% fresh outside air was introduced consistently. According to Hartogh Streicher, this was the first winter season without one staff taking a single day off sick!

"The air from the Climate Wizard is natural, you don't feel or notice it until you walk out of the area being cooled by it", he said.



The Result

Action Ford saved 9.8 kW of power, which is 2.6 times more efficient than using traditional refrigerated air conditioning. Further productivity increased due to no staff taking sick leave.

Project information

Installation	Climate Wizard	Refrigerated
Cooling requirement	40 kW (inherently handles O/A)	44 kW (including O/A requirements)
Input Power CW Only	5.4 kW	15.2 kW
COP (EER)*	7.4	2.9
Power Saving*	9.8 kW	-
System	3 x CW-H15	-

*Measured first 3 months of operation

Benefits

- ✓ ECONOMICAL SOLUTION
- ✓ HUGE ENERGY SAVINGS
- ✓ LOW MAINTENANCE COSTS AND LONG LIFE EQUIPMENT
- ✓ ENHANCED COMMITMENT TO THE ENVIRONMENT
- ✓ ONLY SOLUTION THAT COULD OFFER THE REQUIRED COOLING FROM SOLAR POWER

To discuss technical engineering project requirements

Contact Hennie Verster, Africa Sales Manager on 011 452 0394.

You will quickly realise how much energy efficiency you'll gain. We provide full technical support to help you optimise the benefits.



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