

# EWAD-CZ

**R-134a**

- » ESEER up to 5.8
- » Inverter driven single screw compressor
- » Multiple efficiency and sound versions
- » Wide operating range (up to 50°C ambient temperature)
- » Low starting current
- » Cooling capacity from 640 to 1,800 kW



EWAD-CZ

Inverter driven air-cooled chiller

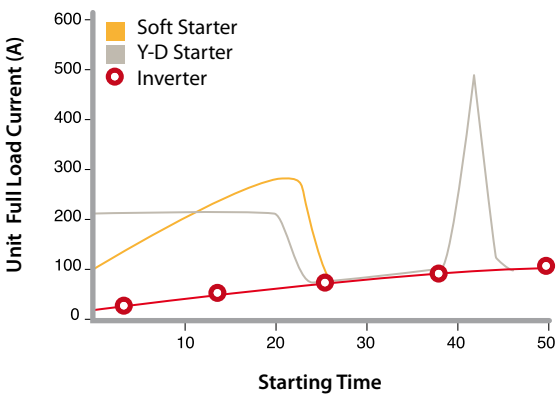


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# Minimum inrush current Maximum power factor

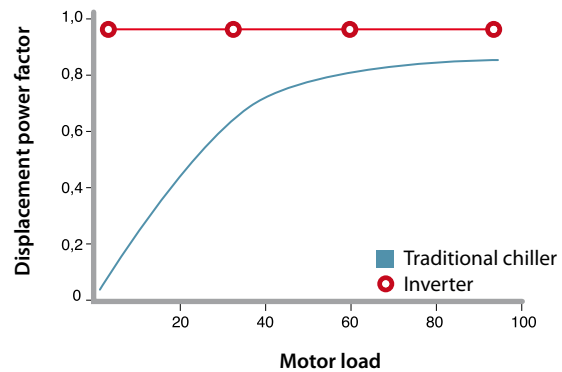
## EWAD-CZ PROVIDES MINIMUM INRUSH CURRENT COMPARED TO TRADITIONAL STARTING METHODS.

The use of variable speed motors eliminates the fluctuations in the power supply line and reduces the stress on the electrical equipment. This allows the reduction in size (and costs!) of the protection devices to be installed on the power supply line.



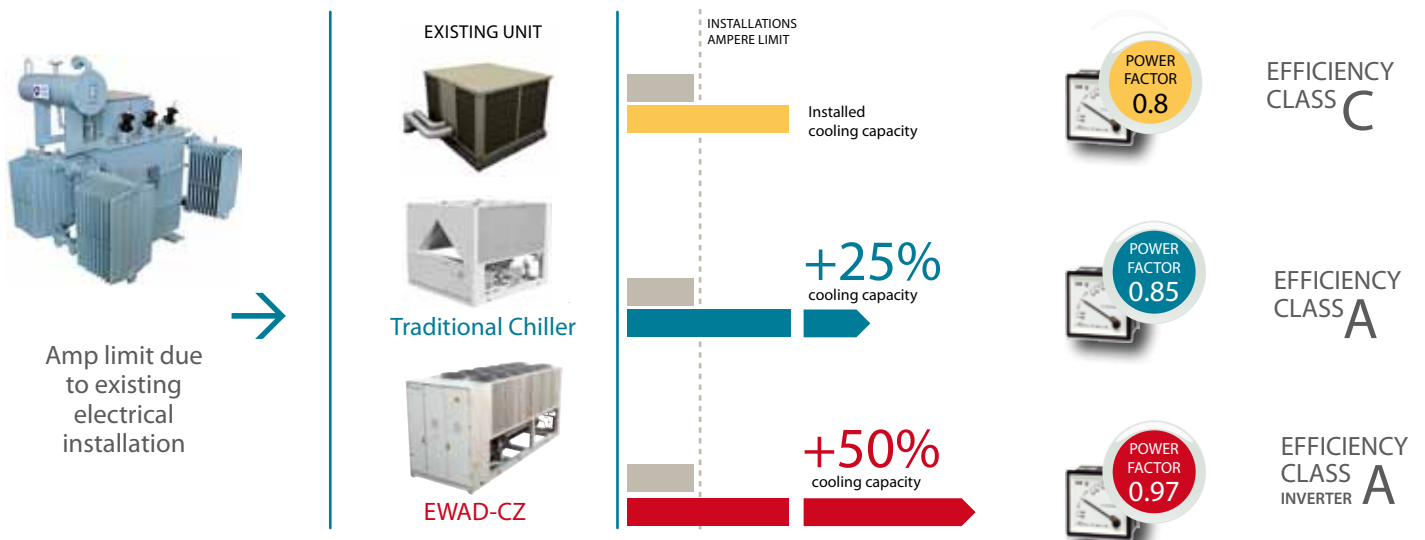
## EWAD-CZ UNITS FEATURE AN AMAZING 0.97 DISPLACEMENT POWER FACTOR AT WHATEVER CHILLER LOAD AND OPERATING CONDITION.

This delivers minimum current absorption and consequently reduces the cost of the electrical installation. The EWAD-CZ unit does not require the installation of traditional capacitors for power factor correction thus avoiding potential penalties related to reactive power.



## INCREASE COOLING OUTPUT WITHOUT CHANGING THE EXISTING POWER SUPPLY LINE!

The EWAD-CZ's superior energy efficiency combined with the highest possible displacement power factor allows you to increase the installed cooling capacity (up to +50%) without modifying the existing power supply line.

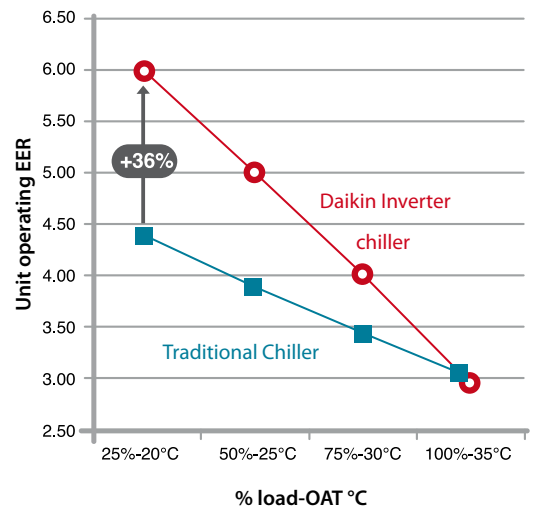


# ESEER up to 5.8

# EER up to 3.6

## DAIKIN "EWAD-CZ" HIGHEST EFFICIENCY AT BOTH FULL AND PART LOAD

The EWAD-CZ series offers the highest EER part load values in the HVAC air-cooled chiller market, up to 36 % better than for traditional technology. This allows a significant reduction in the system running costs in compliance with the most stringent requirements in terms of energy consumption and environmental regulations. These aspects, together with Sustainable Building Design, are becoming more and more crucial factors in the real estate market. The EWAD-CZ leads the industry in energy efficiency, quiet operation and responsible refrigerant management: ideal for building owners who want to pursue Leadership in Energy and Environmental Design (LEED®).

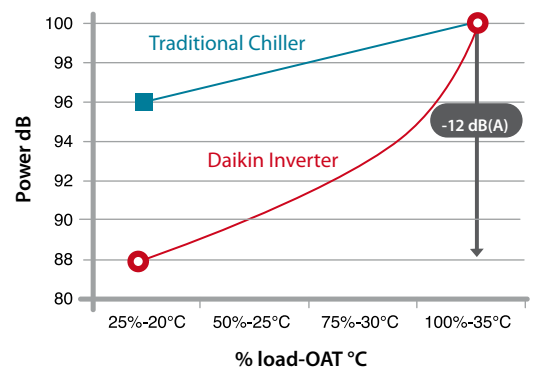


The combination of the variable speed single screw compressor and chiller control logic allow automatic modulation of the fan speed to achieve the optimum head pressure set-point and consequently the best global chiller energy performance at part load. Our resulting ESEER values are 25% higher than for traditional screw units and reach the highest ESEER values for this technology.

## 12 dB(A) NOISE REDUCTION TO MEET THE MOST STRINGENT REGULATIONS

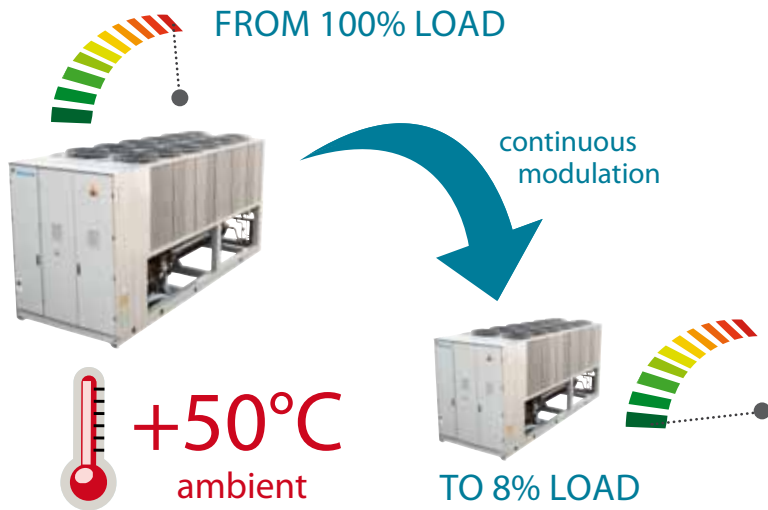
During the night, when the background noise is lower, the acoustical impact of a chiller becomes more critical for neighbours that want quiet. In these conditions the outdoor temperature is lower as well as the cooling load.

~~Speaker icon~~ **-12 dB(A)**



The EWAD-CZ works in partial load regime and the inverter devices adjust the speed of compressors and fans supplying the required cooling output and providing better sound performance.

\* Based on EWAD830CZXS rated at 700 kW, with 12/7 °C Evap. and 35 °C OAT

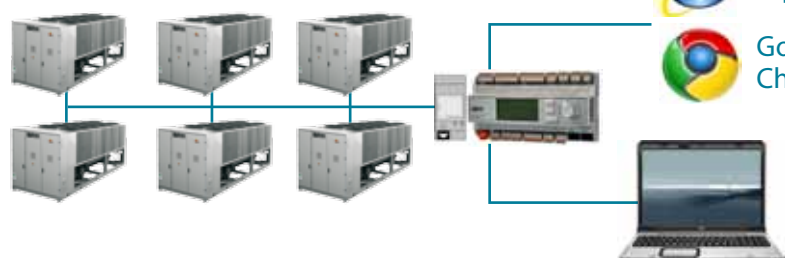


## SAVING FOOTPRINT & INSTALLATION TIME

The EWAD-CZ series are lighter and smaller than other air cooled chillers available in the market. Its compact footprint is ideal for replacement projects, allowing easy transportation and installation thus resulting in structural cost savings.

## EXTREMELY WIDE RANGE OF OPERATION, WITH OUTSIDE AMBIENT TEMPERATURES UP TO 50°C

The EWAD-CZ is equipped with a Daikin single-screw compressor and its condensing section is properly sized in order to achieve +50°C ambient temperature while still allowing stepless unloading down to 8% capacity. (Referred to as the three compressors model). Differing from other technologies available in the market (eg. centrifugals) with a single screw compressor, there is no inefficient "ON/OFF" operation at part loads. Thanks to this unique design, the EWAD-CZ unit features one of the widest working ranges in the market.

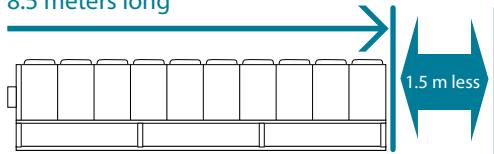


## PID CONTROLLER WITH OPTIMIZED DAIKIN SOFTWARE AND 'NETWORK READY' FEATURES

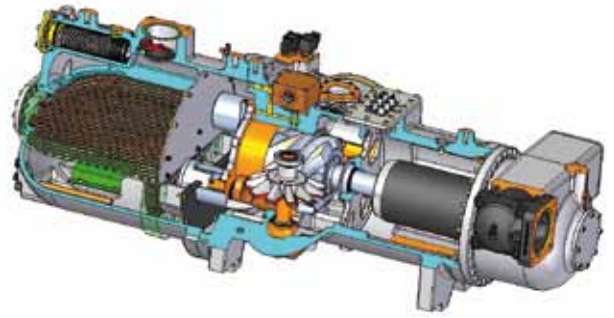
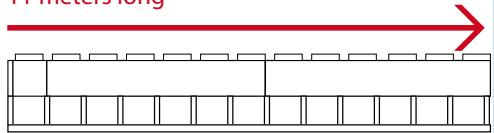
The EWAD-CZ unit is equipped with on-board PID controller, with a standard user-friendly in-built display, or an optional graphical touch screen. The controller is ready to be integrated with a wide range of BMS through standard communication protocols. The controller's display allows viewing of the unit's operating status and its multi-button keypad and rolling wheel allows the operator easy access to the unit's main functions.



EWAD-CZ 1.000 kW unit  
8.5 meters long



Typical competitor 1.000 kW unit  
11 meters long



## SINGLE-SCREW COMPRESSOR: DAIKIN "IN HOUSE" TECHNOLOGY

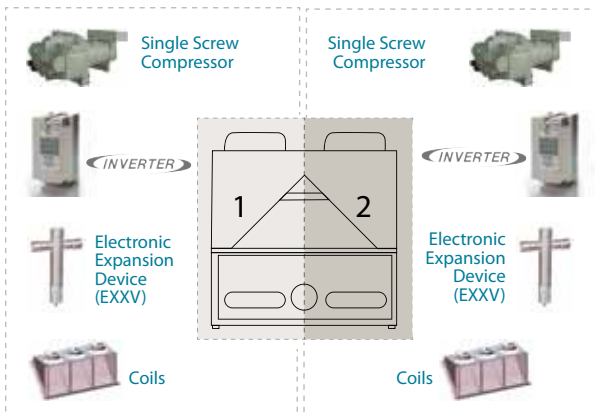
The compressor, the "heart" of the chiller, is fully developed, manufactured and serviced by Daikin.

The Daikin inverter-driven, single-screw compressor is the top of screw technology with its integrated oil separator, the best energy efficiency both at full and part loads and a proven reliability thanks to thousands of units running all around the world.

## PLUG & PLAY UNIT CONCEPT

The EWAD-CZ 's design allows faster chiller installation with a consequent reduction in commissioning cost.

- Standard factory functionality test
- Full refrigerant and oil charge
- Integrated Control Logic
- Single evaporator
- Single main power connection point
- Optional on-board inline dual-pumps



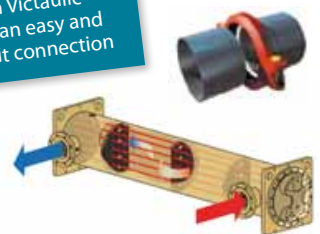
## IN-BUILT REDUNDANCY "MULTIPLE UNITS" ON A SINGLE SKID

The EWAD-CZ unit is designed with two or three (depending on capacity) independent refrigerant circuits. All critical components (e.g. compressor, EEXV etc...) are independent on each circuit allowing for the highest reliability standards.

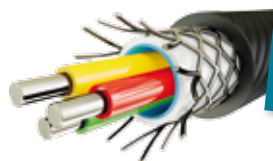
Water pump selectable  
according to available  
pressure needs



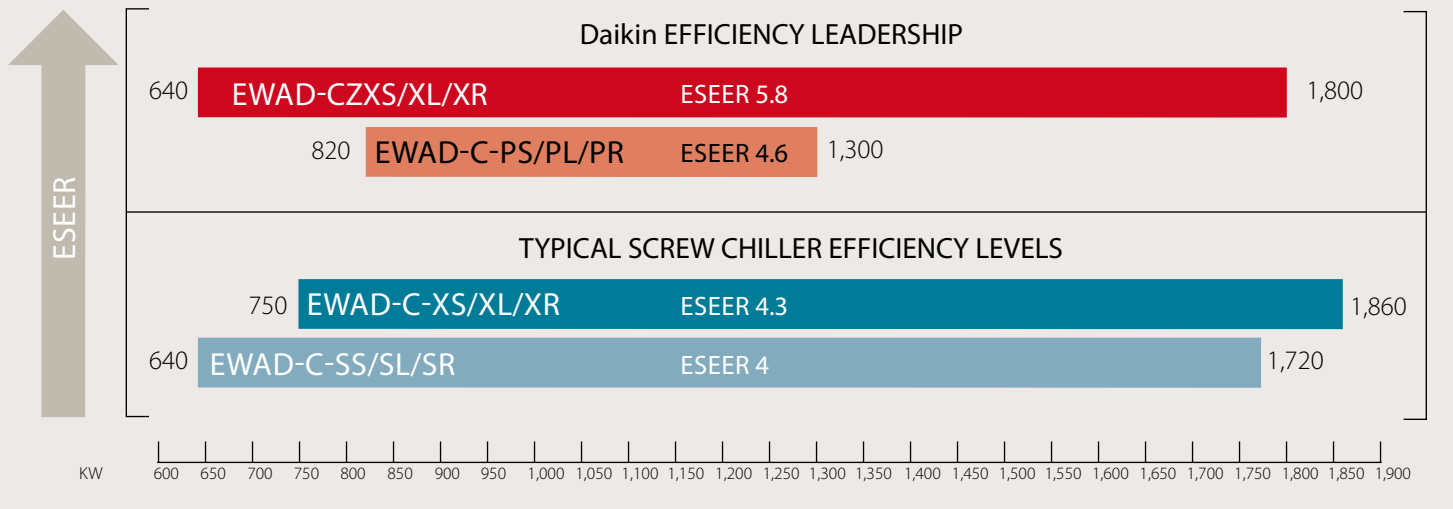
Single Shell&Tube Evaporator  
equipped with Victaulic  
connections for an easy and  
fast hydraulic unit connection



Single Power Connection  
Point to simplify the  
installation reducing systems  
start-up costs



# EWAD-C FAMILY



## STEP 1

## CHOOSE YOUR DAIKIN CHILLER



EWAD-C Family 620-2,000 kW  
R-134a Single - Screw with VFD



EWAD-BZ Family 100-620 kW  
R-134a Single - Screw with VFD



EWAQ-E/-F Family 170-680 kW  
R-410A MultiScroll



## STEP 2

## CHOOSE YOUR DAIKIN AIR HANDLING UNIT OR FAN COIL UNIT



D-AHU Professional  
(800 m<sup>3</sup>/h - 140.000 m<sup>3</sup>/h)



D-AHU Easy  
(500 m<sup>3</sup>/h - 30.000 m<sup>3</sup>/h)



D-AHU Energy  
(1,500 m<sup>3</sup>/h - 70,000 m<sup>3</sup>/h)



Floor standing unit FWV-D  
(1.0 kW - 8.0 kW)



Round flow cassette FWC-B  
(4.1 kW - 8.7 kW)



Ducted unit FWB-B  
(1.3 kW - 10.3 kW)



Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.



Daikin Europe N.V. participates in the Eurovent Certification programme for air conditioning units (AQU) and building packages (AGP), fan coil units (FCU) and air handling units (AHU). The certification is a mark of quality and energy efficiency. For more information, visit [www.eurovent-certification.com](http://www.eurovent-certification.com).

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