

# E.C. TECHNOLOGY AND EFFICIENT WORK FANS

**NEW GENERATION E.C. FANS** 











# SODECA presents its **new "Efficient Work" high performance fans,** fitted with next-generation motors to obtain higher energy savings.

These new products exceed the requirements of the ErP 2009/125/CE Ecodesign Directive and its regulating provisions (EU) 327/2011 for fans, and 1253/2014 for ventilation units, collaborating with the EU KYOTO Protocol objective of reducing carbon emissions.

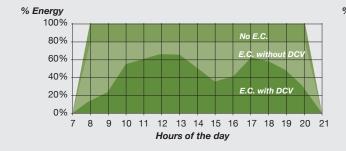
The electronic variable speed drives (VSD) permit the fan speed to be adjusted to demand, thus obtaining extra energy savings. SODECA has a wide range of electronic control accessories for use in conjunction with the variable speed drive. Control the temperature, humidity, CO<sub>2</sub> or pressure of your facility by adjusting the fan speed to the demand. The electronic variable speed drives (VSD) can also be connected to single or three-phase networks with an extensive range of supply voltages and frequencies.



## COMPARISON OF ENERGY SAVINGS

Just replacing the fan installed with a fan fitted with E.C. technology will allow you to obtain electricity consumption savings of 21%. If in addition you install an electronic control to regulate the variable speed drive (VSD), you will have a demand controlled ventilation (DCV) system and obtain higher savings.

In the following case, a simulation is made of ventilation demand in an office block on a business day (7am-9pm), according to the "Demand Controlled Ventilation Systems" technical report set out in Annex 18 of the International Energy Agency (IEA). The energy savings obtained after replacing the conventional ventilation system in the above case with an E.C. demand controlled ventilation system is given below. The average savings percentage is 50%. Energy savings enable the excess cost of the E.C. equipment to be quickly amortised. It is a profitable option, with or without a demand control ventilation system.









Synchronous E.C. Industrial Brushless motors with permanent magnets, and with an efficiency that is 27% higher than their asynchronous equivalent. Also manufactured with a variable speed drive (VSD).



## **HEP/EW**

High-efficiency wall-mounted axial fans fitted with E.C. brushless industrial motor and built-in electronics.









#### Fan:

- Airflow direction from motor to impeller.
- Fibreglass-reinforced polyamide-6 impeller.
- · Sheet steel support base.
- Anti-contact protective grille pursuant to standard UNE-EN ISO 12499.
- Adjustable speed by 0-10 V signal or built-in automatic control.

#### Motor:

- New high-efficiency (IE4) synchronous E.C. motors. Fitted with high-intensity neodymium magnets.
- A compact, built-in motor and electronic unit that facilitates the air flow.

- High-reliability motor that requires no maintenance.
- Fitted with durable ball bearings.
- IP65 protection.
- Electronic variable speed drive highly configurable with 2 analogue inputs, 2 digital outputs, 1 relay output and a choice of 1 analogue or 1 digital output.
- Possibility of connection to MODBUS and CAN Open field buses.
- Available with single-phase 220-240 V 50/60 Hz (VSD1/B type) or three-phase 380-415 V 50/60 Hz (VSD3/B type) inputs.
- Fan operating temperature: -25 °C +60 °C.

# HFW-L/EW

Tubular axial fans designed with four support arms to reduce vibrations and fitted with an aerodynamic aluminium low-consumption impeller and an IE4 Brushless E.C. Industrial motor.







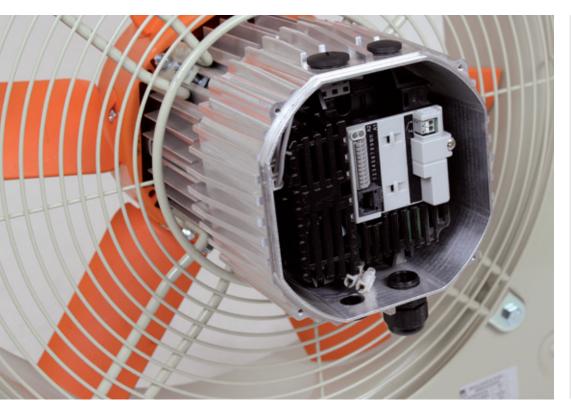


## Fan:

- · Airflow direction from motor to impeller.
- · Rotors made of cast aluminium.
- Support ring made of sheet steel with double flange and cable gland for motor power supply.
- Hot dip galvanised tubular sheet steel casing.
- Variable speed drive (VSD), single-phase or three-phase, supplied with fan.

## Motor:

- New high-efficiency (IE4) synchronous E.C. motors.
  Fitted with high-intensity neodymium magnets.
- · Compact motors to facilitate air flow.
- High-reliability sensorless control, which requires no maintenance.
- Fitted with durable ball bearings.
- IP65 protection.
- Fan operating temperature: -25 °C +50 °C.







# **SVE/PLUS/EW**

In-line, low noise duct fans mounted inside a 40 mm Phonoabsorbent acoustic casing.







#### Fan:

- · Acoustic casing coated with phonoabsorbent material.
- All models fitted with a reaction impeller.
- Standardised inlet and impulsion flanges allowing for easy installation in ducts.
- · Fitted with a folding inspection cover.
- Support feet built into the box, for easy installation.
- · Linear airflow direction.
- Speed controlled by a built-in 10 kΩ MTP010 power meter or an external 0-10 V signal.

#### Motor:

- Single-phase 200-240 V 50/60 Hz, IP54 protection. Except model SVE/PLUS/EW-400/H, 200-277V 50/60Hz, IP55 protection.
- Maximum temperature of air to be carried: -25 °C +60 °C. Except model SVE/PLUS/EW-200/H, -25 °C +45 °C.
- E.C. brushless external rotor motors with high efficiency and built-in variable speed drive controlled by 0-10 V signal.

# SVE/PLUS/EW/CPC

Low-noise, in-line duct extractor fans for automatic operation mounted inside a 40 mm phonoabsorbent acoustic insulated casing, with constant pressure control.









#### Fan:

- Acoustic casing coated with phonoabsorbent material.
- · All models fitted with a reaction impeller.
- Standardised inlet and impulsion flanges allowing for easy installation in ducts.
- Fitted with a folding inspection cover.
- · Support feet built into the box, for easy installation.
- · Linear airflow direction.

#### Motor:

- Single-phase 200-240 V 50/60 Hz, IP54 protection.
  Except model SVE/PLUS/EW-400/H, 200-277V 50/60Hz, IP55 protection.
- Maximum temperature of air to be carried: -25 °C +60 °C. Except model SVE/PLUS/EW-200/H, -25 °C +45 °C.
- High efficiency external brushless-E.C. motors.

# CJV/EW

Automatic operation extractor fan units with vertical air outlet, E.C. Brushless industrial motor and constant pressure control for housing mechanical ventilation (VMC).









Model CJV/EW-1800/T approved for 400 °C/2 h



## Fan:

- Extractor fan units with vertical impulsion and two circular extraction nozzles.
- Galvanised sheet steel casing.
- Forward-curved impeller, made of galvanised sheet steel.
- · Single-phase variable speed drive (VSD) supplied with fan.

## Motor

- New high-efficiency (IE4) synchronous E.C. motors. Fitted with high-intensity neodymium magnets.
- High-reliability sensorless control, which requires no maintenance.
- · Fitted with durable ball bearings.
- IP55 protection.
- Fan operating temperature: -25 °C +60 °C.
- CJV/EW-1800/T: Fan operating temperature: S1 -25 °C +60 °C continuous operation. 400 °C/2 h S2 operation.
- · Approved in accordance with standard EN 12101-3.

# **CBD/EW**

Double inlet centrifugal fans with direct-drive motors and forward-curved impeller, fitted with E.C. brushless industrial motor and built-in electronics









## Fan

- · Galvanised sheet steel casing. •
- Forward-curved impeller made
  of galvanised sheet steel.
- Adjustable speed by 0-10 V signal or built-in automatic control.

## Motor:

- New high-efficiency (IE4) synchronous E.C. motors. Fitted with high-intensity neodymium magnets.
- A compact, built-in motor and electronic unit that facilitates the air flow.
- High-reliability motor that requires no maintenance.
- Fitted with durable ball

## bearings.

- IP54 protection.
- Electronic variable speed drive highly configurable with 2 analogue inputs, 2 digital outputs, 1 relay output and a choice of 1 analogue or 1 digital output.
- Possibility of connection to MODBUS and CAN Open field buses.
- Available with single-phase 220-240 V 50/60 Hz (VSD1/B type) or three-phase 380-415 V 50/60 Hz (VSD3/B type) inputs.
- Fan operating temperature:
  -25 °C +60 °C.

# CJBD/EW

Ventilation units with acoustic insulation, fitted with CBD/EW fans and Brushless E.C. Industrial motors.









## Fan:

- · Galvanised sheet steel casing.
- · Forward-curved impeller made of galvanised sheet steel.
- Variable speed drive (VSD), single-phase or three-phase, supplied with fan.
- Speed controlled by a built-in 10 k $\Omega$  MTP010 power meter or an external 0-10V signal.

#### Motor

- New high-efficiency (IE4) synchronous E.C. motors.
  Fitted with high-intensity neodymium magnets.
- · Compact motors to facilitate air flow.
- High-reliability sensorless control, which requires no maintenance.
- Fitted with durable ball bearings.
- IP54 protection.
- Fan operating temperature: -25 °C +60 °C.

# CJBD/EW/CPC

Automatic operation extractor fan units with acoustic insulation, fitted with Brushless industrial E.C. motors and constant pressure control.









#### Fan:

- · Galvanised sheet steel casing.
- · Forward-curved impeller made of galvanised sheet steel.
- Variable speed drive (VSD), single-phase or three-phase, supplied with fan.

#### Motor:

- New high-efficiency (IE4) synchronous E.C. motors.
  Fitted with high-intensity neodymium magnets.
- · Compact motors to facilitate air flow.
- High-reliability sensorless control, which requires no maintenance.
- · Fitted with durable ball bearings.
- · IP54 protection.
- Fan operating temperature: -25 °C +60 °C.

# CKDR/EW

F-400 extractor fan units with a large door for each of maintenance and 40 mm acoustic insulation slab.











## Fan:

- · Galvanised sheet steel structure.
- 40 mm acoustic insulation slab.
- Reaction impeller made of galvanised sheet steel.
- Approved in accordance with standard EN 12101-3, with certificate no.: 0370-CPR-2358.
- Modifiable door opening direction thanks to its exchangeable hinges.
- Can be adjusted to different positions.
- Able to operate continuously at 120 °C.

## Motor:

- New high-efficiency (IE4) synchronous E.C. motors.
  Fitted with high-intensity neodymium magnets.
- High-reliability sensorless control, which requires no maintenance.
- · Fitted with durable ball bearings.
- · IP55 protection.
- Fan operating temperature: -25 °C +120 °C.

# **CVT/EW**

400 °C/2h centrifugal roof-mounted extractor fans, with vertical air outlet, fitted with Brushless E.C. industrial motors.









## Fan:

- Galvanised sheet steel support base.
- Impeller with reaction blades, made of galvanised sheet steel.
- Bird guard.
- Aluminium rain cover.

## Motor

- New high-efficiency (IE4) synchronous E.C. motors.
  Fitted with high-intensity neodymium magnets.
- High-reliability sensorless control, which requires no maintenance.
- · Fitted with durable ball bearings.
- IP55 protection.
- Fan operating temperature: -25 °C +60 °C.





# **CRF/EW**

Centrifugal roof-mounted extract fans with low noise level and external rotor motor, fitted with a Brushless E.C. industrial motor.







Centrifugal roof-mounted extract fans with low noise level and external rotor motor, fitted with an E.C. Brushless industrial motor and a built-in speed regulating power meter.

#### Fan:

- · Made of galvanised sheet steel.
- · Impeller with reaction blades made of plastic material.
- · Bird quard.
- · Folding body for ease of inspection and maintenance.

#### Motor:

- New high efficiency E.C. external rotor motors regulated by 0-10V signal. IP54 protection.
- Single-phase 230V-50/60Hz and three-phase 400V-50/60Hz.
- Maximum temperature of air to be carried: -25 °C + 50 °C.

# CRF/EW/CPC

Roof-mounted, automaticoperation centrifugal extractor fans with low noise level, fitted with external Brushless E.C. Motor and constant pressure control.









Centrifugal roof-mounted extract fans with low noise level and external rotor motor, fitted with a Brushless E.C. industrial motor.

#### Fan:

- · Made of galvanised sheet steel.
- · Impeller with reaction blades made of plastic material.
- Bird guard.
- · Folding body for ease of inspection and maintenance.

#### Motor:

- High efficiency E.C. external rotor motors regulated by 0-10 V signal.
- IP54 protection.
- Single-phase 230 V-50/60 Hz and three-phase 400 V-50/60 Hz.
- Maximum temperature of air to be carried: -25 °C +50 °C.





## **HEADQUARTER**

## Sodeca S.L.U.

Ctra. de Berga, km 0,7 E-08580 SANT QUIRZE DE BESORA Barcelona, SPAIN Tel. +34 93 852 91 11 Fax +34 93 852 90 42 General sales: comercial@sodeca.com

Export sales: ventilation@sodeca.com



www.sodeca.com



## **EUROPE**

## **FINLAND** Sodeca Finland Oy Mr. Kai Yli-Sipilä Metsälinnankatu 30, PL2 FI-32700 Huittinen FINLAND

Tel. + 358 400 320 125 orders.finland@sodeca.com

## **PORTUGAL** Sodeca Portugal Unip. Lda

PORTO Rua Veloso Salgado 1120/1138 4450-801 Leça de Palmeira Tel. +351 229 991 100

# UNITED KINGDOM Sodeca Fans UK Ltd

Mr. Mark Newcombe Tamworth Enterprise Centre Philip Dix House, Corporation Street, Tamworth , B79 7DN UNITED KINGDOM Tel. +44 (0) 1827 216 109 sales@sodeca.co.uk

geral@sodeca.pt

# LISBOA Pq. Emp. da Granja Pav. 8 2625-607 Vialonga Tel. +351 219 748 491 geral@sodeca.pt

ALGARVE Rua da Alegria S/N 8200-557 Cortesões Tel. +351 913 615 773 geral@sodeca.pt

## **AMERICA**

#### COLOMBIA Sodeca Latam S.A.S

Sra. Luisa Stella Prieto Calle7 No. 13 A-44 Manzana 4 Lote1, Montana Mosquera, Cundinamarca Bogotá, COLOMBIA Tel. +57 1 756 4213 ventascolombia@sodeca.co

#### CHILE Sodeca Ventiladores Ltda

Sr. Frederic Cousquer Santa Bernardita 12.005 (Esquina con Puerta Sur) Bodegas 24 a 26, San Bernado, Santiago, CHILE Tel. +56 22 840 5582 ventas.chile@sodeca.com

#### **CARIBBEAN ZONE** Sodeca Cuba

Residencial Miramar Apto. Nº 108, Ave. 7ma Nº 1805 entre 18 y 20, Miramar Playa, La Habana, CUBA Tel. +537 20 43721 carlos@sodeca.co.cu

# PERU Sodeca Perú SAC

Sr. Jose Luis Jiménez C/ Mariscal Jose Luis de Orbegoso 331. Urb. El pino. 15022 , San Luis. Lima, PERÚ Tel. +51 1 326 24 24 Cel. +51 994671594 comercial@sodeca.pe

## **RUSSIA**

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Sodeca, L.L.C. Mr. Stanislav Alifanov Myasischeva str, 1, room 603 Business Center "Chaika" 140180 Zhukovskiy Moscow region, RUSSIA Tel. +7 495 955 90 50 alifanov@sodeca.com



