



DFC[®]400 EU MCFC-Fuel Cell Power Plant

400 kW; 400 V; 50 Hz

Key Features

Minimal environmental impact with almost “no NO_x, no SO_x”.

- ✓ High Efficiency
- ✓ Low Environmental Impact
- ✓ Fuel Flexibility
- ✓ High Reliability
- ✓ Quiet Operation

Advantages

DFC[®]400 EU – For indoor and outdoor (with housing) installation with low space requirement.

The DFC[®]400 EU stationary fuel cell power plant from FuelCell Energy Solutions provides high-quality, ultra-clean electrical power with 47 % efficiency around-the-clock. Designed for commercial and industrial applications, the system offers easy transport, quiet and reliable operation, easy site planning and regulatory approval.

The DFC[®]400 EU is ideal for stationary application sites as wastewater treatment plants, manufacturing facilities, food and beverage processing facilities, universities and office campuses.

Power Output

Power at Plant Rating	400 kW
Standard Output AC Voltage	400 V
Standard Frequency	50 Hz
Optional Output AC Voltages	by request
Optional Output Frequency	60 Hz

Efficiency

LHV	47 +/- 2 %
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Available Heat

Exhaust Temperature	400 - 450 °C
Exhaust Flow	2,500 kg/h
Allowable Backpressure	15 mbar
Heat Energy Available for Recovery	245 kW (to 120 °C) 360 kW (to 50 °C)

Fuel Consumption

Natural Gas (9.63 kWh/m ³)	90 Nm ³ /h
Biogas (60 % Methane)	147 Nm ³ /h

Water Consumption

Average	0.3 m ³ /h
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Water Discharge

Average	0.15 m ³ /h
Peak during WTS Backflush	0.25 m ³ /h

CO₂ Emissions

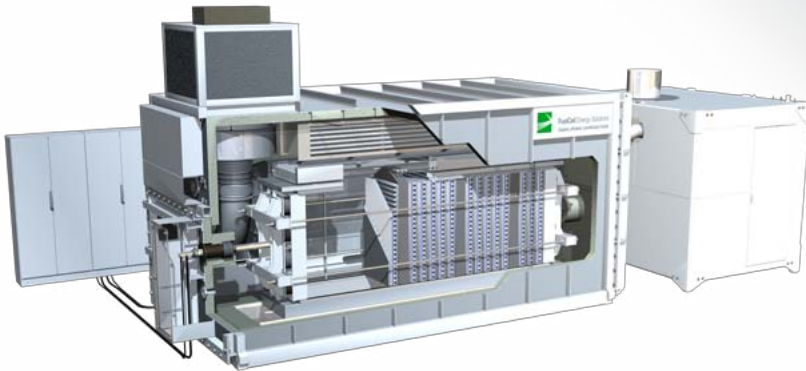
CO ₂	445 g/kWh
with the Use of Exhaust Heat	236 - 309 g/kWh



FuelCell Energy Solutions
Ultra-Clean, Efficient, Reliable Power

Layout

Flexibly adaptable to given space by modular design.



FuelCell Energy Solutions GmbH is your partner for innovative CCHP solutions with fuel cells in the extended European area. For more information please visit our website at www.fces.de

Experiences and practical orientation

Innovative energy producers appreciate our long-term full-service.

Direct FuelCell® power plants are generating ultra-clean, efficient and reliable power at more than 50 locations worldwide. With over 300 megawatts of power generation capacity installed or in backlog, FuelCell Energy Solutions GmbH/ FuelCell Energy, Inc. is a global leader in providing ultra-clean baseload distributed generation to utilities, industrial operations, universities, municipal water treatment facilities, government installations and other customers around the world.

The company's power plants have generated more than 3.8 billion kilowatt hours of ultra-clean power using a variety of fuels including renewable biogas from wastewater treatment and food processing as well as clean natural gas.

Dimensions

Fuel Cell Module and Mechanical Balance of Plant	total length: 9.48 m width: 3.06 m height: 3.90 m
Electrical Balance of Plant	total length: 5.40 m width: 0.85 m height: 2.20 m

Weights

Mechanical Balance of Plant	6.5 t
Electrical Balance of Plant	5.7 t
Fuel Cell Module	22 t

Sound Level at 3.0 m

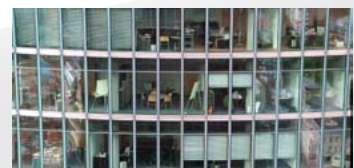
Standard	81 dB(A)
Optional	66 dB(A)



university



public building



office complex

The fleet of Direct FuelCell power plants of FuelCell Energy Solutions GmbH/ FuelCell Energy, Inc. are certified to or comply with a variety of commercial and industrial standards: ANSI/CSA America FC-1, UL 1741, CARB 2007, OSHA 29 CFR Part 1910, IEEE 1547, NFPA 70, NFPA 853, and California Rule 21.

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