



# DFC®1500 EU MCFC-Fuel Cell Power Plant

1.4 MW; 20 kV; 50 Hz

## Key Features

Minimal environmental impact with almost “no NOx, no SOx”.

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

## Advantages

DFC®1500 EU - Reliable and high quality power supply on an industrial scale.

The DFC®1500 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, and easy site planning and regulatory approval. The DFC®1500 EU is ideal for wastewater treatment plants, manufacturing, food and beverage processing, universities and office campuses.

### Power Output

Power at Plant Rating	1,400 kW
Standard Output AC Voltage	20 kV
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	370 +/- 28 °C
Exhaust Flow	8,300 kg/h
Allowable Backpressure	12.5 mbar
Heat Energy Available for Recovery	649 kW (to 120 °C) 1,092 kW (to 50 °C)

### Fuel Consumption

Natural gas (9.63 kWh/m³)	309 Nm³/h
Biogas (60 % Methane)	516 Nm³/h

### Water Consumption

Average	1.02 m³/h
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### Water Discharge

Average	0.51 m³/h
Peak during WTS Backflush	3.41 m³/h

### Emissions

NOx	4.54 x 10 <sup>-3</sup> g/kWh
SOx	4.54 x 10 <sup>-5</sup> g/kWh
PM10	9.0 x 10 <sup>-6</sup> g/kWh

### CO<sub>2</sub> Emissions

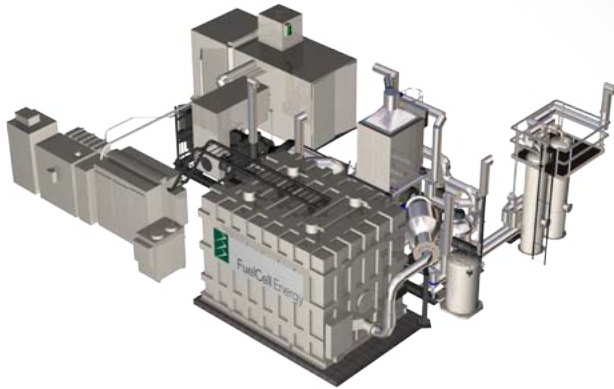
CO <sub>2</sub>	445 g/kWh
with the Use of Exhaust Heat	236- 309 g/kWh



**FuelCell Energy Solutions**  
Ultra-Clean, Efficient, Reliable Power

# Layout

DFC®1500EU provides the entry to MW installations.



## Dimensions

Fuel Cell Module and Mechanical Balance of Plant	total length:	18 m
	wideness:	13 m
	height: max.	9 m

## Weights

Water Treatment Skid	9.1 t
Main Process Skid	22.7 t
Desulfurization	6.8 t
Electrical Balance of Plant	12.1 t
Fuel Cell Module	48.6 t

## Sound Level at 3.0 m

Standard	72 dB(A)
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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](http://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.



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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FuelCell Energy Solutions  
Ultra-Clean, Efficient, Reliable Power

FuelCell Energy Solutions GmbH  
Winterbergstr. 28  
01277 Dresden, Germany  
+49 351 25 53 73 90  
[info@fces.de](mailto:info@fces.de)  
[www.fces.de](http://www.fces.de)