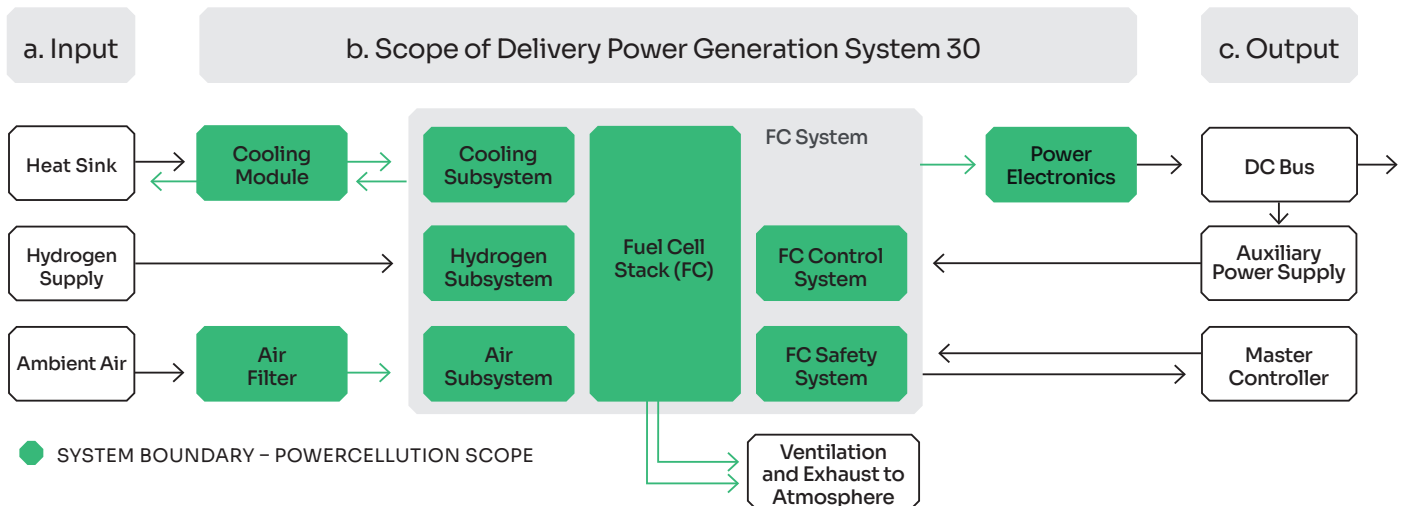


Stationary

# PowerCellution Power Generation System 30

PowerCellution products and services creates electric power based on fuel cells using hydrogen. All solutions based on this system will have minimal environmental impact through a zero emission hydrogen electric system.

Power generation system 30 is a versatile, robust and powerful system. As a midrange generator, it is suitable for integration into both movable and temporary electrical solutions as well as combined heat and power units or back-up generators. The system is based on the PowerCellution V Stack, which is proven to have long durability and stable performance from various successful customer cases.



## Scope of supply for standard configuration

### Fuel Cell System

Fuel Cell Stack	Converts hydrogen into electrical energy in a clean and efficient way
Hydrogen Subsystem	Regulates incoming hydrogen to the fuel cell stack and recirculating to increase the fuel efficiency
Cooling Subsystem	Manages cooling and produces heat that can be utilized for external uses
Air Subsystem	Regulates incoming air to a specific humidity, flow rate, pressure and temperature
FC Safety System	Passive and active protections based around continuous monitoring and control of the system
FC Control System	Process monitoring and control within the fuel cell system
<b>Cooling Module</b>	Rejects the produced heat through a heat-exchanger to an external system or by a radiator to ambient air
<b>Electronics Module</b>	Converts and stabilizes voltage output from the fuel cell stack
<b>Air Filter</b>	Provides chemical filtration of air feed to match the requirements of the fuel cell stack



HYDROGEN FUEL CELL SOLUTIONS FROM POWERCELL SWEDEN AB

# Physical data

## Configurations/specification

Max net power	30 kW
Dimensions	665 x 462 x 696 mm
Volume	210 l
Weight	< 150 kg

## Performance

Gross output (rated power)	160 V / 200 A
Voltage output	Normal operation 120-225 V, max 330 V
Current output	20-235 A
System heat output (max)	Up to 50 kW + 5 kW <sup>i</sup>
Coolant outlet temperature	80°C
Fuel quality	Pure Hydrogen <sup>ii</sup>
Fuel inlet pressure	8-12 bar(g) <sup>iii</sup>
Communication and control	CAN bus
System efficiency (peak, BOL)	57%
System efficiency (rated power, BOL)	37%
Operational lifetime	10 000 h <sup>iv</sup>

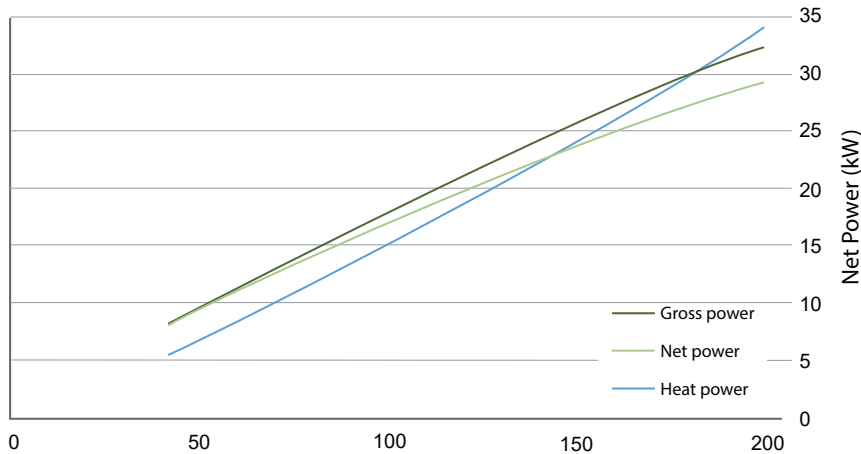


Figure: Performance measured at reference conditions

## Environment

Ambient temperature	-30-45 °C <sup>v</sup>
Humidity	5-95% relative humidity; non-condensing
Regulation and standards	E/ECE/324/Rev.2, /Add.99/Rev.2, FMVSS 305-01, ISO 23273:2013, SAE J1766:201401, SAE J2578:201408 <sup>vi</sup>
IP classification	IP54

<sup>i</sup> Fuel cell stack and BoP components (cathode compressor + intercooler)  
<sup>ii</sup> Hydrogen ISO 14687:2019, SAE J2719\_201511 and T/CECA-G 0015 2017  
<sup>iii</sup> 3 - 8 bar(g) is feasible, but low hydrogen feed pressure affects system performance  
<sup>iv</sup> Expected lifetime. Actual lifetime depends on use case  
<sup>v</sup> Start-up from sub-zero degrees requires external power assistance  
<sup>vi</sup> Fuel Cell System is designed in compliance with the following standards.