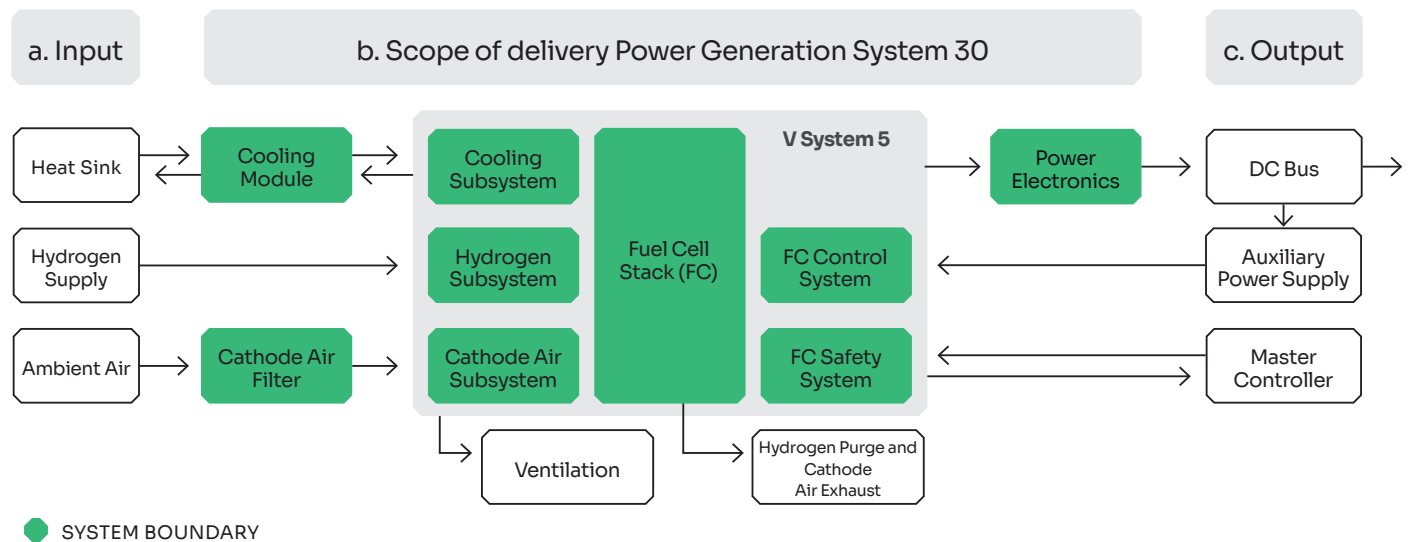


PowerCellution Power Generation System 30

PowerCellution products create electric power based on fuel cells using hydrogen. All of our solutions have minimal environmental impact through the use of zero emission hydrogen electric technology.

Power Generation System 30 is a versatile and robust system. As a midrange generator, it is suitable for integration into both movable and temporary applications for both primary and back-up power generators. It can also be used in a combined heat and power unit.

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 recirculates the hydrogen to increase the fuel efficiency.
Cooling Subsystem	Manages cooling and produces heat that can be utilized for external use.
Air Subsystem	Regulates incoming air to a specific humidity, flow rate, pressure and temperature.
FC Safety System	Passive and active protections mechanisms based around continuous monitoring and control of the system.
FC Control System	Process monitoring and control within the fuel cell system.

Cooling Module

Rejects the produced heat through a heat-exchanger to an external system or through a radiator to ambient air.

Electronics Module

Converts and stabilizes voltage output from the fuel cell stack.

Air Filter

Provides chemical filtration of the air feed to match the requirements of the fuel cell stack.



Physical data

Specifications

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 105–225 V, max 330 V
Current output	20–235 A
System heat output (max)	Up to 50 kW + 5 kW ⁱ
Coolant outlet temperature	80°C
Fuel quality	Pure Hydrogen ⁱⁱ
Fuel inlet pressure	8–12 bar(g) ⁱⁱⁱ
Communication and control	CAN bus
System efficiency (peak, BOL)	54 %
System efficiency (rated power, BOL)	42 %
Operational lifetime	10 000 h ^{iv}

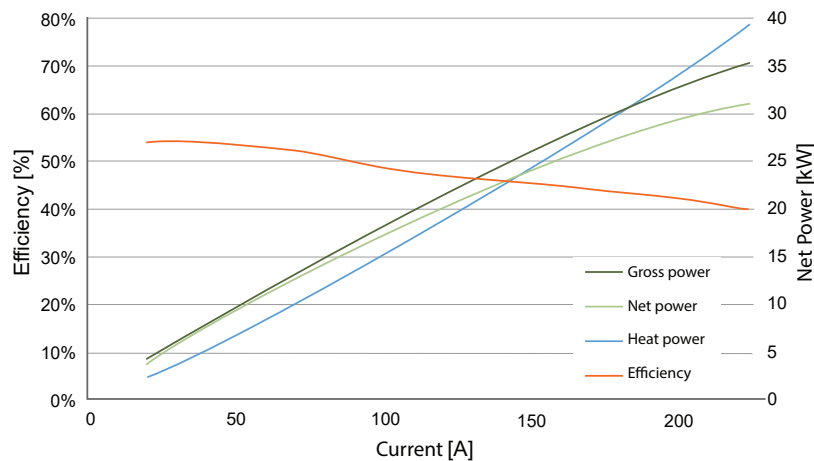


Figure: Performance measured at reference conditions and BOL

Environment

Ambient temperature	-30–45 °C ^v
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 ^{vi}
IP classification	IP54

ⁱ Fuel cell stack and BoP components (cathode compressor + intercooler).
ⁱⁱ Hydrogen ISO 14687:2019.
ⁱⁱⁱ 3 - 8 bar(g) optional configuration.
^{iv} Expected lifetime. Actual lifetime depends on use case.
^v Start-up from sub-zero degrees requires external power assistance.
^{vi} Fuel Cell System is designed according to the listed standards.