

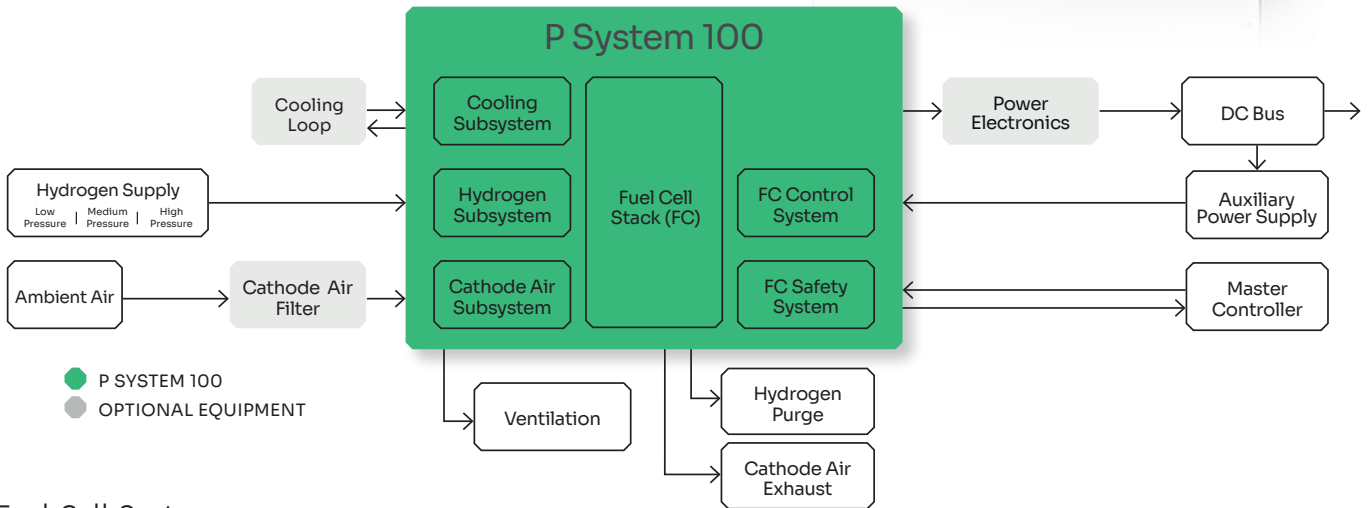
# P System 100

PowerCell group 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.

P System 100 is a powerful fuel cell system 100 kW of max power and integration to a wide range of hydrogen inlet pressures. With the possibility of operating at a very low inlet pressure the system is compatible with components that enabling compatibility with future renewable fuels.

It is suitable for integration in both primary and back-up power generators. It can also be used in a combined heat and power unit.

The system has a durable construction meant to ensure lasting and reliable use over time.



## Fuel Cell System

P SYSTEM 100

Fuel cell system, based on our P Stack delivers continuous DC current.

## Optional equipment

Power Electronics	Converts and stabilizes the voltage output from the fuel cell stack.
Cathode Air Filter	Provides chemical filtration of the air feed to match the requirements of the fuel cell stack.
Cooling loop	Manages cooling and produces heat that can be utilized for external use.

## Service Offer

Consultation	We are able to offer a power study that works to optimize a fuel cell system and auxiliary component solution based on your preferences in terms of efficiency, durability and performance, with the baseline being your current and projected future power.
Turnkey Solutions	To facilitate your implementation of hydrogen-electric solutions, we also offer complete turnkey solutions. Examples of such solutions include a complete hydrogen tank system together with our fuel cell system or a complete zero-emission solution.
Commissioning	Our engineers work closely with you during the first months of usage, providing support and guidance as needed by you.

## P System 100

### Specifications

Dimensions	606 x 696 x 674 mm
Volume	284 l
Weight	212 kg

### Performance (without DC/DC)

Variation	60	75	100 <sup>i</sup>
Net power output	9 – 60 kW	11 – 75 kW	15 – 100 kW
Gross output (rated power)	180 V / 360 A	220 V / 380 A	300 V / 380 A
Voltage output <sup>ii</sup>	150 – 300 VDC	185 – 370 VDC	250 – 500 V
Current output	50 – 450 A	50 – 450 A	50 – 450 A
System heat output (max) <sup>iii</sup>	< 85 + 7 kW	< 110 + 8 kW	< 140 kW + 11 kW
Coolant outlet temperature	80°C		
Fuel quality <sup>iv</sup>	Pure hydrogen		
Fuel inlet pressure <sup>v</sup>	0.5 - 3 Bar (g) / 3 - 8 Bar (g) / 8 - 12 Bar (g)		
Communication and control	CAN bus 500 kpbs		
System efficiency (peak, BOL)	55%		
System efficiency (rated power, BOL)	45%		
Operational lifetime <sup>vi</sup>	20 000 h		

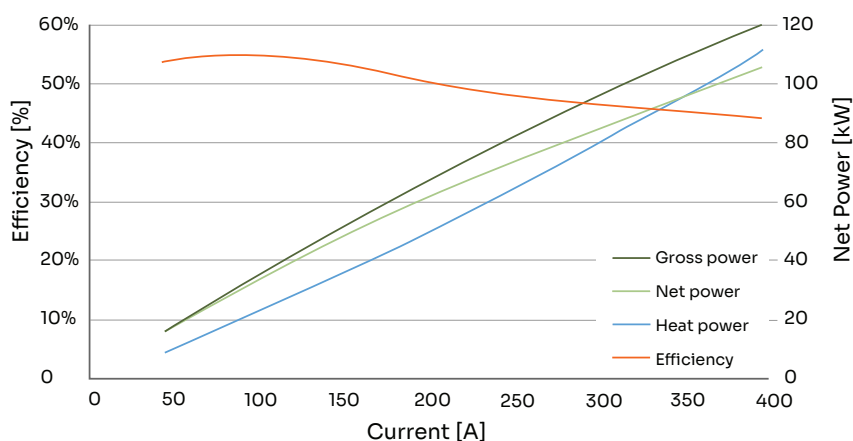


Figure: Performance measured at reference conditions and BOL

### Environment

Ambient temperature <sup>vii</sup>	Operation: 5 to 45°C / -30 to 45 °C; Transport and storage: 2 to 60°C
Humidity	30–95% relative humidity; non-condensing
Regulation and standards <sup>viii</sup>	E/ECE/324/Rev.2, /Add.99/Rev.2, FMVSS 305-01, ISO 23273:2013, SAE J1766:201401, SAE J2578:201408
IP classification	IP54

<sup>i</sup> Standard variation.

<sup>ii</sup> Peak power EOL to OCV (Open Circuit Voltage, i.e. no-load condition, 0 A) BOL.

<sup>iii</sup> Fuel cell stack and BoP components (cathode compressor + intercooler).

<sup>iv</sup> Hydrogen ISO 14687:2019.

<sup>v</sup> Standard inlet pressure is between 8 to 12 bar (g)

<sup>vi</sup> Expected lifetime, actual lifetime depends on use case.

<sup>vii</sup> Start-up from sub-zero degrees requires external power assistance.

<sup>viii</sup> Fuel Cell System is designed according to the listed standards.