## Brushlessgimbal.ca (Blackreaction.LLC)

21 Galtee Brampton Onterio Canada L6XOJ5
Tel:14122507094 or 14165608554
Contact person:Oran Goffe E-mail:Sales@brushlessgimbal.ca

Hydrogen infrastructure for DRONES, Boats, Aircraft including portable refueling station. Fuel cell stacks are offered with stack only or compete with controller, valve and fuel tanks. We offer a full turn key solutions for Multi copter DRONES, fixed wing & VTOL air craft.

# SKYLLE 1550H

Skylle 1550H is a hexa-copter hydrogen fuel-cell drone equipped with the latest hydrogen fuel power system. It has an extended flight time up to 3 hours. Full carbon fiber design brings the performance to a more stable and reliable level. Positioning accuracy is up to 1cm with an optional RTK system. The lightweight frame is easy to detach, making it extremely portable and easy to repair on the go if required. With a plug-and-play connector for payload attaching and Gimbal controlling, the drone is compatible with different payloads. The applicable fields covered includes survey, mapping, inspection, public security, aerial photography, and others.



# Specifications

Model Skylle 1550H

Aircraft type Hexa-copter

Aircraft size 2297(L) × 2297(W) × 645(H) mm

Wheelbase 1550 mm

Total weight (no load) <17 kg

Propeller size 29 inches

Power system Hydrogen fuel cell

Standard takeoff weight 18 kg

Max payload weight 1.5 kg

Endurance (no payload) 180 minutes

Cruising speed 0-10 m/s

Climbing speed 0-2 m/s

Max. flight altitude (above sea level) 5000 m

Communication & control frequency/range 2 km(2.4 GHz) / 10 km(900 MHz)

Communication range 10 km

Wind resistance 12 m/s (level 6)

Operating temperature range -5~40 °C

Operating humidity range 10%-90%

EMI (Electromagnetic interference resistance) 100 A/m PFMF (power frequency magnetic field)

Hydrogen storage volume 12 L

Hydrogen storage pressure 35 MPa

# NOTUZI H100

Notuzi H100 is a four-rotor long-endurance hydrogen fuel drone equipped with the latest hydrogen fuel power system to extend its flight time and make its performance to a more stable and reliable level. With foldable arms, it is really space-saving and easy to carry. Equipped with a portable backpack, people are capable of completing all kinds of inspection tasks individually. It is compatible with different payloads including the thermal camera, the zoom camera, etc, the Notuzi H100 is available for various complicated missions in the public service, electric power, gas& oil, and other industries.



## **Specifications**

Model Notuzi H100

Aircraft type Quadcopter

Wheelbase 1060 mm

Weight (without battery) 3.95 kg

Battery Hydrogen fuel cell +1050 mAh Li-HV

Weight (with battery) 7.25 kg

Max. flight time (without payload) 100 min

Max. flight time (with payload) 80 min

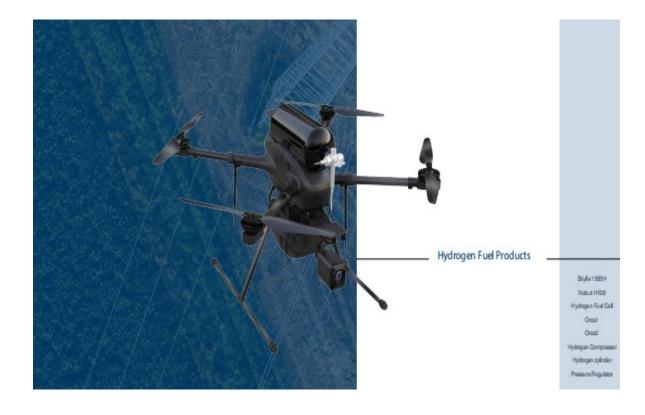
Max. payload weight 1 kg

Max. take-off weight 8.2 kg

Cruise speed 0~10 m/s

Climb speed 0~2 m/s

Wind resistance Level 5 (10 m/s)



# HYDROGEN H VTOL HYDROGEN FUEL CELL DRONE 15HOUR FLIGHT TIME! M8 ADAPTED FOR FUEL CELL

#### Features

Hydrogen H VTOL long endurance drone record-breaking 15-hour flight time RTF VTOL fixed-wing mapping drone RTK, PPK positioned, surveying and mapping drone for GIS.

15-Hour Flight Time New Hydrogen UAV

New hydrogen H that features a record-breaking 15-hour flight time It is a hydrogen-powered vertical take-off and landing drone with an integrated design.

developed hydrogen fuel battery shows great stability and tremendously extended drone flight time.

Custom gimbal is available for extra money

Product Details

15-Hour Flight Time for Enhance Mission Efficiency

The biggest highlight of hydrogen H is the elevated flight time thanks to its high-efficiency metal bipolar plate hydrogen fuel cell with a maximum hydrogen storage capacity of 27L· Its flight time reaches a record-breaking 15 hours without payload and it can fly for 10 hours even with a 3kg payload while most drones in market have a maximum 2-hour flight time· In mapping practice, mission is usually interrupted by multiple take-offs and landings in different spots and hence accomplished in lower efficiency· The extended flight time of hydrogen H greatly improved mission efficiency· Other features include convenient operation, high security, wide coverage, zero emission and low noise· Coupled with different payloads, it provides solutions for global customers in areas like surveying and mapping, rescue, security & protection, border scouting and forest scouting· Industrial-chain Products with Integrated Design bump, and hydrogen production device·

As one of the few companies capable of industrial chain integration and independent research and development, MMC UAV has developed its own hydrogen fuel cell and other related products including hydrogen cylinder, pressure reducing valve, booster hydrogen H has undergone overall upgrades in hydrogen fuel cell and drone design and comes with an established hydrogen fuel system that breaks its own flight time record. Low heat and silence make the new drone safer and more convenient. The integrated design tightens the connection among drone, fuel cell and payload.

#### includes:

Hydrogen H VTOL Carbon 1 set

Fuel cell Hydrogen fuel cell 1000w - 1500w 1 set

Tank Hydrogen tank(350bar) 6 set

Spares valve Spare Considerable Parts 1 set

RC RXTX Autopilot & telemetry Data radio GPS RTK, PPK

Extra Battery Set 65 Battery (Each set includes 2pcs battery,)

Hydrogen Generator not included

Ground station not included

Camera gimbal not included



# HYDROGEN SUPPORT EQUIPMENT: ORCA 1 ALL IN ONE HYDROGEN REFUELING STATION

Orca 1 is an all in one hydrogen refueling station that combines hydrogen generation, storage, pressurization, and refueling together. It is convenient to deliver and operate, which can be helpful to solve the shortage of hydrogen stations. And it is widely applied to refuel the hydrogen fuel-cell drones.

- Fast refueling
- Anti-static and explosion-proof
- Automatic operation
- · Monitor and alarm system to improve safety

Product Details

Source Tap water

Dispensing pressure 35 MPa

Control system PLC

Dimension 3.8m\*2.3m\*2.3m

HYDROGEN STORAGE AND FUELING:

Fueling pressure 35 MPa

Capacity 90 kg

Pressure 40 MPa

Fueling capacity 16 kg

Orca 1



# ORCA 2 MICRO HYDROGEN REFUELING STATION

#### Features

Orca 2 Micro hydrogen refueling station

Orca 2 is a micro hydrogen refueling station that puts hydrogen generation, storage,

pressurization, and refueling together. It can produce hydrogen through hydrolysis.

Lightweight and small-sized, Orca 2 is quite portable KEY FEATURES

- · Easy installation and maintenance
- · Low operating costs
- · Automatic operation
- · Support off-grid hydrogeneration and refueling
- · Can be equipped in a complicated environment

Product Details

SPECIFICATIONS:

Source Tap water Electrolysis

Filling pressure 35 MPa

Voltage 220 V

Operating power 4.5 Kw

Dimension 1.4m\*1.06m\*1.06m

Purity 99.999%

Orca 2



# HYDROGEN COMPRESSOR LOW-PRESSURE

## HYDROGEN INTO HIGH-PRESSURE GAS

#### Features

Hydrogen compressor can easily and quickly pump low-pressure hydrogen into high-pressure gas storage cylinder, supplying hydrogen for fuel cell system. The compressor system is based on electric supercharger, sparing air compressor and gas source. The system includes booster bump, high-pressure hose, valve, meter, pipeline.

Product Details

SPECIFICATIONS

Output pressure 35 MPa

Input pressure 2 MPa

Safety High safety, automatic termination

Convenience Easy and convenient to supply

Mobility High mobility

HydrogenCompressor



# HYDROGEN CYLINDER 400 BAR WRAPPED IN CARBON FIBER 12L TO 3.5L FUEL TANK

#### Features

The cylinder is wrapped by carbon fiber from Toray with high performance and stability. Then it is simulated to conform design with aircraft. It is based on thin-walled aluminum alloy liner molding technology and reduction technology from Germany LEIFELD backside grinding which is accurately

controlled by CNC procedure.

Product Details

**SPECIFICATIONS** 

Working pressure 35 MPa

Working temperature -40—+85 °C

Burst pressure 70 MPa

Fatigue life ≥500 times

PRESSURE REGULATOR

The regulator is based on highly reliable aerospace technology. It is lightweight, easy to install, tightly sealed,

and with long life service as well as stable output pressure, greatly

enhancing UAV flight time.

Rated Input pressure 400 bar

Minimum input pressure 5 bar

Output pressure 40-70 kpa

Medium Hydrogen

Weight <200 g

Package size 78\*77\*47 mm

Service life >10000 time

3.5L hydrogen tank & Nozzle for \$1700

9L hydrogen tank & Nozzle for \$2600

12L hydrogen tank & Nozzle for \$2860

12L Hydrogen Cylinder 400 bar



FUEL TANK IS VERRY IMPORTANT FOR STORAGE OF HYDROGEN FUEL 600BAR CARBON RAPED 3.5 TO 20 LETERS.ELECTRONICLY CONTROLED VALVE SYSTEM IS ALSO REQUIERD.

Fuel cell stacks only are available with no accessory or compete plug and play Hydrogen fuel cell solution:

# HYDROGEN FUEL CELL

This system is a compact and lightweight hydrogen powered fuel cell system made for all applications. It can provide long-time and continuous power supply.

Customization with a wide selection: 200W / 500W / 800W / 1000W.



#### **Specifications**

Power rating 200w 500w 800w 1000w

Output range 21-35V 27-45V 24.6-41V 27.6-46V

Voltage rating 21V 27V 24.6V 27.6V Current rating 9.5A 18.5A 34A 36A

Dimension 95\*92\*95 130\*120\*185 146\*112\*260 146\*134\*260

Weight (fan included) 0.7kg 1.1kg 1.5kg 1.7kg

Hydrogen purity >99.9%

Oxidizer Oxygen from the air

Temperature 0 C—35 C

Humidity 10%-90% RH

Local LED and Buzzer

Remote RS232 serial port / CAN transmission



Support self-check start, quick start, and one-button reset function



Supply 232 serial port communication, for monitoring function



Better environmental suitability



Power module can offer low-voltage and over-current protection



Complete fail-safe and warning function



Longer duration

The best selling fuel cell for drone is also the lightest fuel cell available per KW· 2000W hydrogen fuel sell and controller: This hydrogen fuel cell stack for UVA is featured with 950w/kg power density. Our lightweight, power-dense UAV fuel cell modules allow customers to bypass the constraints of traditional battery technology, significantly extending drone flight times and ranges while producing clean DC power in a robust and lightweight package Our drone Fuel Cell Power Modules (FCPMs) are ideal for a wide range of professional commercial applications, including offshore inspection, search and rescue, aerial photography and mapping, precision agriculture and more· 2000 W Air Cooling Fuel Cell Stack for UAV

#### 1. Product Introduction

- •This hydrogen fuel cell stack for UVA is featured with 950 w/kg power density·
- · Operation on dry hydrogen and ambient air
- · Robust metal Full cell construction
- · Ideal for hybridization with battery and/or super-capacitors
- · Proven durability and reliability for
- · Multiple configuration options providing modular and salable solutions
- · Range of stack options to fit different application requirements
- · Low thermal and acoustic signature
- · Series and parallel connections possible

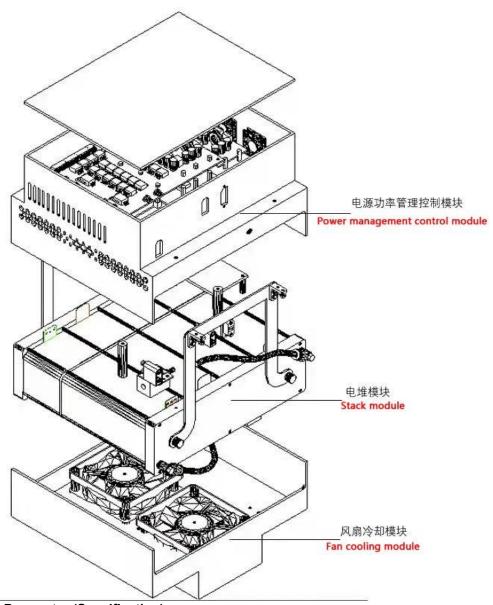
#### 2000 W Air Cooling Fuel Cell System

Fuel cell system includes: stack, power management unit, fan, solenoid valve, temperature sensor, temperature and humidity Sensor and control software

2kw Air Cooling Fuel Cell system Diagram

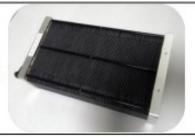


Structure diagram of Fuel Cell system



2. Product Parameter (Specification)

## 2.1 2000W Air Cooling Fuel Cell Stack Parameter



This fuel cell stack is featured with 950 w/kg power density.

It can be used on light weighted, low power consumption applications or on portable power source.

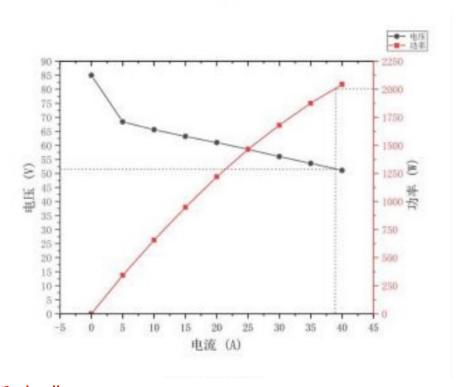
The small size does not limit it to small applications.

Multiple stacks can be connected and scaled up under our proprietary BMS technology to support high power consumption applications.

	H-48-2000 Parameters					
	Rated Power		2000W			
	Rated Voltage		51 V			
Output Parameters	Rated Current		39A			
rarameters	DC Voltage Range		48-85V			
	Efficiency		≥50%			
. 175.21	H2 Purity		≥99.99% (CO<1PPM)			
Fuel Parameters	H2 Pressure		0.045~0.07Mpa			
Tarameters	H2 Consumption		28.5L/min			
	Operating Ambi	ent Temp.	-5~35℃			
Ambient	Operating Ambi	ent Humidity	10%~95%			
Parameters	Storage Ambient Temp.		-10∼50°C			
	Noise		≤50 dB@3n	1		
Physical	FC Stack	24.2(L)*14.9(W)*6.9(H)	FC Stack	2.4KG		

Parameters	Dimensions (cm)		Weight (kg)		
	System	the state of the same	System	3.7KG	
	Dimensions (cm)	24.2(L)*15.5(W)*22.9(H)	Weight (kg)	(including fans and BMS)	
	Power Density	800W/L	Power Density	950W/KG	
	by Volume	0001112	by Weight	7.50 11 11 11 11 11 11 11 11 11 11 11 11 11	

#### 2kw Stack polarization curve



#### 2.2 Fuel cell system components

2.2.1 Key auxiliary components (BMS)--Fuel cell management system
The special power management system for hydrogen powered UAV stack
can realize the remote control and information acquisition of fuel cell
system· it can be intelligent hybrid with secondary battery, and also
adaptive charge for secondary battery, It is a core technology in the
field of fuel cell battery application·

#### 2.2.1 Standard parameters of Chivet2022 fuel cell management system







	Maximum input current at FC end	80A	
	Maximum input voltage at FC end	80V	
	Maximum input current of hybrid battery end	80A	
	Maximum input voltage of hybrid battery end	80V	
Performance	Four channel temperature input end	-60°C-150°C	
input	One channel ambient temperature and humidity input end	-60°C-150°C,RH30~100%	
	Two channel pressure input end	0-100MPa	
	Two channel speed pulse signal receiving end	Used to measure the speed of the fan or pump	
	Hybrid output current	Maximum 80A for long-term operation, instantaneous peak value150A(5min)	
	Maximum voltage of hybrid output end	80V	
	Two PWM pulse width speed regulation output	0 ~ 100% speed regulation, control cooling air Fan or cooling circulating pump.	
	One humidification power output	Voltage 5V, maximum current 5A	
Performance	One cooling fan power output	Voltage 12V ~ 36V, maximum current 10A	
output	Power output of one cooling circulating water pump	Voltage 12V ~ 36V, maximum current 10A	
	Power output of one-way stack gas inlet solenoid valve	Voltage 12V ~ 36V, maximum current 3A	
	Power output of one-way stack gas outlet solenoid valve	Voltage 12V ~ 36V, maximum current 3A	
	External load power output	Voltage 12V ~ 36V, maximum current 6A	
	Flight control power output	Voltage 12V ~ 48V, maximum current 3A	
	Stand by power output port	Maximum current 5A	
	Two communication ports	485/TTL	
	Display: fuel cell voltage, current, output		
	power and temperature; Hybrid Electric		
	Cell voltage, charge discharge current and		
	output power; Total output power of the		
	system; environment		
	Temperature and humidity; Cooling fan		

Supporting gas pressure in battery software power		of hydrogen storage tank and pattery	Constant current or fuel cell performance adaptive charging can be selected, and the maximum charging current is 25A (the
functions	Control: gas into Secondary batte charging Current value, c Setting of coolir control condition Fixed; Setting of	et and outlet solenoid valves; ry charging mode and harging condition setting; ng fan speed and temperature ns f cooling water pump speed control conditions; Gas	charging module is equipped with coolin fan)
Environmental	Working Tempe	rature	-45-60°C
characteristics	Humidity of wo	rking environment	0-100%
	Humidity of sto	rage environment	-75°C-75c
Physical	size		160*120*45mm
parameters	Weight		480g
2.2.2 Hydrogen Working	storage bottle 35MPa		
pressure			
volume	12L		
size	D196*L532		
weight	3.85KG		
lifetime	Inflate and defla	ite 500 times	
2.2.3 Solenoid	valve		
Rated voltage		DC24V	
Rated current		120+-15%mA	
Pressure range		0-90Kpa	
power		<2w	The same of the sa
working tempera	ature	0C-55℃	1
weight		50g	
lifetime		Switch 100000 times	
2.2.4 Cooling f	an		
Rated power		57.6w DC48V/1,2A	
working temper	ature	-20°C-70 °C	
speed		14900R/min	
size		91*91*38mm	
Rate of flow		5.1m3/min	
		40dB	

lifetime	70000h/40°C	
2.2.5 Control system co	oling small fan	
Rated power	1.44w DC24V/0.06A	
speed	5000R/min	
size	30*30*10mm	
weight	8g	
noise	16dB	
lifetime	28000h/40°C	

#### 3. Product application and working principle

Development of drone power pack that PEM fuel cell (Operates at temperatures between -10 ~ 45°C)

Our drone Fuel Cell Power Modules (FCPMs) are ideal provide power for a wide range of professional UAV commercial applications, including offshore inspection UAV, search and rescue UAV, aerial photography and mapping UAV, precision agriculture UAV and more.

Fuel cells use electrochemical reactions to produce electricity without combustion. Hydrogen fuel cells combine hydrogen with oxygen from the air, emitting only heat and water as by-products. They are more efficient than internal combustion engines, and unlike batteries, do not need recharging and will continue to operate as long as they are provided with fuel.



Our drone fuel cells are air-cooled, with heat from the fuel cell stack conducted to

cooling plates and removed through airflow channels, resulting in a simplified and cost-effective power solution. One of the main components of hydrogen fuel cell is graphite Bipolar plate mature technology for producing air cooling 10w-6000w Hydrogen fuel cells, UAV hydrogen fuel cell 800w-3000w, As

for the biggest energy storage problem of new energy, we put forward the idea that PEM converts electric energy into hydrogen for storage and hydrogen fuel cell generates electricity with hydrogen. It can be connected with photovoltaic power generation and hydropower generation.

# Fuel cell stacks only from 30W-12V Hydrogen Fuel Cell Stack

	Inspecton Item	s & Para	meter	
	Sta	andard	-	
	Rated power		30W	
	Rated voltage		12V	
Output	Rated current		2.5A	
performance	DC voltage range		60-120V	
	Efficiency		≥50%	
Fuel	Hydrogen purity		≥99.99% (CO<1PPM)	
	Hydrogen pressure		0.045~0.06Mpa	
	Hydrogen consumption		300mL/min	
	Working temperature		-5~35℃	
Environmental characteristics	Working environment humidity		10%~95%(No mist)	
	Storage ambient temperature		-10~50℃	
	Noise		≤60dB	
Physical parameter	Stack size (mm)	155*8	30*110mm	Weight (kg) 890g

30W-12V Hydrogen Stack Picture



60W-12V Hydrogen Fuel Cell Stack

	Inspecton Items & Par	ameter
	Standard	
	Rated power	60W
	Rated voltage	12V
Output	Rated current	5A
performance	DC voltage range	8-17V
	Efficiency	≥50%
	Hydrogen purity	≥99.99% (CO<1PPM)
Fuel	Hydrogen pressure	0.04~0.06Mpa
	Hydrogen consumption	600mL/min
	Working temperature	-5~35℃
Environmental characteristics	Working environment humidity	10%~95%(No mist)
	Storage ambient temperature	-10~50°C
	Noise	≤60dB

60W-12V Hydrogen Stack Picture



220W-24V Hydrogen Fuel Cell Stack

	Inspecton Items & Par	ameter
	Standard	
	Rated power	220W
	Rated voltage	24V
Output	Rated current	9.16A
performance	DC voltage range	20-36V
	Efficiency	≥50%
	Hydrogen purity	≥99.99% (CO<1PPM)
Fuel	Hydrogen pressure	0.04~0.06Mpa
	Hydrogen consumption	3L/min
	Working temperature	-5~35℃
Environmental characteristics	Working environment humidity	10%~95%(No mist)
	Storage ambient temperature	-10∼50°C
	Noise	≤60dB

220W-24V Hydrogen Stack Picture



500W-220V Hydrogen Fuel Cell Stack

	Inspecton Items	& Para	meter	
	Sta	ndard	579	
	Rated power		600W	
Output	Rated current		25A	
berronnance	AC Output voltage ra	nge	220V	
	Efficiency		≥50%	
Fuel	Hydrogen purity		≥99.99% (CO<1PPM)	
	Hydrogen pressure		0.045~0.06Mpa	
	Hydrogen consumption		6.5L/min	
	Working temperature		-5~35℃	
Environmental characteristics	Working environment humidity		10%~95%(No mist)	
	Storage ambient temperature		-10~50°C	
	Noise		≤60dB	
Physical parameter	Stack size (mm)	180*1	164*98mm	Weight (kg) 2.1KG



# 600W-24V Hydrogen Fuel Cell Stack

	Inspecton Items	ndard	incer	
	Rated power	indar a	600W	
	Rated voltage		24V	
Output	Rated current		25A	
performance	DC voltage range		18-36V	
	Efficiency		≥50%	
Fuel	Hydrogen purity		≥99.99% (	CO<1PPM)
	Hydrogen pressure		0.045~0.06Mpa	
	Hydrogen consumption		7.8L/min	
	Working temperature		-5~35℃	
Environmental characteristics	Working environment humidity		10%~95%(No mist)	
	Storage ambient temperature		-10∼50°C	
	Noise	50.0	≤60dB	
Physical parameter	Stack size (mm)	180*	164*98mm	Weight (kg) 2.5KG

# 1000W-42V Hydrogen Fuel Cell Stack

	Inspe	cton Items & P	aram	eter	
	100	Standard			
	Rated power		100	00W	
	Rated voltage		42	V	
Output	Rated current		23.	8A	
performance	DC voltage range		35-	-60V	
	Efficiency		≥50%		
	Hydrogen purity		≥99.99% (CO<1PPM)		
Fuel	Hydrogen pressure		0.045~0.06Mpa		
	Hydrogen consumption		12L/min		
	Working temperature		-5~35℃		
Environmental	Working environment humidity		10%~95%(No mist)		
characteristics	Storage ambient temperature		-10~50℃		
	Noise		≤60dB		
Physical parameter	Stack size (mm)	291*160*98mm Weight(kg) 3.			3.5Kg

1000W-42V Hydrogen Stack Picture



## 1500W-42V Hydrogen Fuel Cell Stack

	Inspe	cton Items & P	arame	eter	
		Standard			
	Rated power		150	00W	
	Rated voltage		421	V	
Output	Rated current		23.	8A	
performance	DC voltage range		35-	60V	
	Efficiency		≥50%		
	Hydrogen purity		≥99.99% (CO<1PPM)		
Fuel	Hydrogen pressure		0.045~0.06Mpa		
	Hydrogen consumption		18L/min		
	Working temperature		-5~35℃		
Environmental	Working environment humidity		10%~95%(No mist)		
characteristics	Storage ambient temperature		-10~50℃		
	Noise		≤60dB		
Physical parameter	Stack size (mm)	291*160*98m	m	Weight(kg)	3.5Kg

# 2000W-25V Hydrogen Fuel Cell Stack

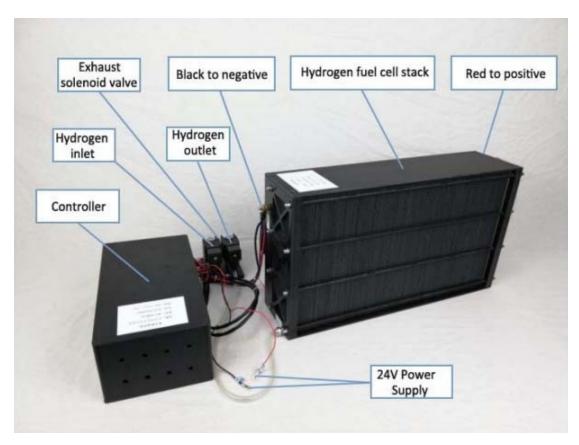
	Inspe	cton Items & Pa	arameter		
		Standard			
Output performance	Rated power		2000W		
	Rated voltage		25V		
	Rated current		80A		
	DC voltage range		24-40V		
	Efficiency		≥50%		
Fuel	Hydrogen purity		≥99.99% (CO<1PPM)		
	Hydrogen pressure		0.05~0.07Mpa		
	Hydrogen consumption		25L/min		
	Working temperature		-5~35℃		
Environmental	nvironmental Working environment humidity		10%~95%(No mist)		
characteristics	Storage ambient temperature		-10~50℃		
	Noise		≤60dB		
Physical parameter	Stack size (mm)	266*215*157	Weight(kg)	5.8Kg	

# 3000W-48V Hydrogen Fuel Cell Stack

	Inspe	cton Items & P	aram	eter	
	0	Standard	Ŋ.		
Output performance	Rated power		3000W		
	Rated voltage		48V		
	Rated current		62.5A		
	DC voltage range		40-72V		
	Efficiency		≥50%		
Fuel	Hydrogen purity		≥99.99% (CO<1PPM)		
	Hydrogen pressure		0.05~0.07Mpa		
	Hydrogen consumption		35L/min		
	Working temperature		-5~35℃		
Environmental characteristics	Working environment humidity		10%~95%(No mist)		
	Storage ambient temperature		-10~50℃		
	Noise		≤60dB		
Physical parameter	Stack size (mm)	320*268*115r	nm	Weight(kg)	7Kg

# 5000W-60V Hydrogen Fuel Cell Stack

	Inspe	cton Items & P	aram	eter	
		Standard			
Output performance	Rated power		5000W		
	Ratedvoltage		60V		
	Rated current		83.4A		
	DC voltage range		50-72V		
	Efficiency		≥50%		
Fuel	Hydrogen purity		≥99.99% (CO<1PPM)		
	Hydrogen pressure		0.05~0.07Mpa		
	Hydrogen consumption		58L/min		
	Working temperature		-5~35℃		
Environmental	Working environment humidity		10%~95%(No mist)		
characteristics	Storage ambient temperature		-10∼50°C		
	Noise		≤60dB		
Physical parameter	Stack size (mm)	496*264*160r	nm	Weight(kg)	13 Kg



## 6000W-72V Hydrogen Fuel Cell Stack

	Inspe	ecton Items & F	arame	eter	
		Standard			
Output performance	Rated power		6000W		
	Rated voltage		72V		
	Rated current		83.3A		
	DC voltage range		60-120V		
	Efficiency		≥50%		
Fuel	Hydrogen purity		≥99.99% (CO<1PPM)		
	Hydrogen pressure		0.05~0.07Mpa		
	Hydrogen consumption		70L/min		
Environmental characteristics	Working temperature		-5~35°C		
	Working environment humidity		10%~95%(No mist)		
	Storage ambient temperature		-10∼50℃		
	Noise		≤60dB		
Physical parameter	Stack size (mm)	660*268*167r	nm	Weight(kg)	15 Kg



HYDROGEN FUEL CELL AIR COOLED 800 Watt KIT

800W Package:

1unit\*800W hydrogen fuel cell

1pc\*3.5L tank

1set\*valve connection

Power rating 200w 500w 800w 1000w

Output range: 21-35V 27-45V 24.6-41V 27.6-46V

Voltage rating 21V 27V 24.6V 27.6V

Current rating: 9.5A 18.5A 34A 36A Dimension: 95\*92\*95

130\*120\*185 146\*112\*260 146\*134\*260

Weight (fan: 0.7kg 1.1kg 1.5kg 1.7kg

included): >99.9%

Hydrogen purity: Oxygen from the air

Oxidizer: 0 °C−35 °C

TEMP: 10%-90% RH

humidity: LED and Buzzer

REMOTE: RS232 serial port / CAN transmission

Flight Endurance on (Notuzi H100 MMCUAV drone) = 120m/2hrs





# HYDROGEN FUEL CELL AIR COOLED 1800 WATT KIT WITH 20L TANK&VALVE

HYDROGEN FUEL CELL AIR COOLED 1800 Watt KIT with 20L

tank &

valve for DRONE

1800W Package 2:

1unit\*1800W hydrogen fuel cell

1pc\*20L tank

1set\*valve connection

Flight Endurance on Skylle H100 = 253m/4.2hrs without payload

Power rating 200w 500w 800w 1000w

Output range: 21-35V 27-45V 24.6-41V 27.6-46V

Voltage rating 21V 27V 24.6V 27.6V

Current rating: 9.5A 18.5A 34A 36A Dimension: 95\*92\*95

130\*120\*185 146\*112\*260 146\*134\*260

Weight (fan: 0.7kg 1.1kg 1.5kg 1.7kg

included): >99.9%

Hydrogen purity: Oxygen from the air

Oxidizer: 0 °C −35 °C TEMP: 10%-90% RH

humidity: LED and Buzzer



Best use case For boat car, UAV or ship: 50kw fuel cell, fuel cell stacks come with a controller and fuel valve regulator to control the flow of fuel regulating out but voltage, Active cooling is also required using fans to move air across the cells, Regulate temp sensor & PWM fan to control air flow across the cells.cell stacks alone do not provide a comprehensive control of voltage out put! We do offer cell stacks alone but customer needs to understand what extra components are required BEYOND PME stack..

Max current density: 2.0 A/cm<sup>2</sup>

Max power of single cell: 250W

Power range of whole stack:

18-60kW (rated)

20-70kW (peak)

Max working pressure: 2.0 bar

Max working temperature: 90 ℃

Power density: 2.8kW/l (@ 60kW)

Service life: 15000 hours or 5000 start-stops



Ultra thin plate	Long service life	High power density
High speed voltage inspection	Automatic bulk production	Customized

Can customize the power by adjusting the quantity of single cells

For 40kW, the unit price is: \$96,600 USD , Delivery time: 45 days