

# PROFESSIONALISM INNOVATION AND EXCELLENCE

| 专业 | 创新 | 卓越 |

雄韬氢雄  
HYDRAV

FUEL CELL

GLOBAL LEADER OF  
FUEL CELL SOLUTIONS

全球燃料电池解决方案引领者



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# 公司简介

## COMPANY PROFILE

雄韬氢雄由深圳市雄韬电源科技股份有限公司（股票代码：002733）投资成立，致力于成为全球燃料电池解决方案引领者。奉行打造产品核心竞争力的经营理念，公司汇聚了一批资深行业从业者，立志提供高质量、安全可信赖的产品与服务。公司自主研发的30-90KW燃料电池发动机系统，各项性能处于国内领先水平，并已实现在公交车、物流车等多种车型上的应用；同时正开发用于重卡、船舶以及发电领域的100KW以上级大功率燃料电池发动机系统，推动国产燃料电池向全功率技术迈进。

雄韬氢雄在深圳、武汉、大同、广州均投建了产业园，旨在协同各地、全面发展。目前，深圳的首条电堆产线已落地，年产能2000套；武汉、大同两地的首条燃料电池发动机产线均已落成，年产能10000套。同时，公司在上海建立了产品监控中心，在华东、华南、华中和华北地区都组建了产品运维团队，提供全面的售后维保服务。

在“专业、创新、卓越”核心价值观的引领下，雄韬氢雄布局了一条从发动机系统集成到其核心零部件的完整的燃料电池国产化产业链，并积极促进氢能燃料电池汽车的推广与普及——投资建设的两座加氢站已落成并投入使用；装载公司燃料电池发动机系统的70辆氢能源公交车已展开示范运营，运营规模为全国前列。雄韬氢雄将坚持以安全环保为己任，用氢能建设清洁美丽世界。

Aiming at becoming a global leader in delivering reliable fuel cell solutions, HydraV was founded in 2017 by VISION GROUP (SZSE: 002733), a world-renowned smart energy storage solution service company. HydraV owns an experienced and expertized team and focuses on product-oriented core capabilities. The fuel cell engine systems independently developed and manufactured by our team have been applied to several environmentally friendly transportation solutions such as buses and trucks. Our team also dedicates in developing fuel cell solutions for sedan, heavy haulers, vessels and power generation.

HydraV owns four industrial parks respectively in Shenzhen, Wuhan, Datong, and Guangzhou. For the upkeep of our products, we build a remote monitoring & diagnostics center in Shanghai and a professional operation and maintenance team who provide 24/7 services throughout China.

Guiding by the core values of Professionalism, Innovation and Excellence, HydraV lays out a comprehensive domestic fuel cell supply chain and actively promotes fuel cell vehicle pilot demonstrations. At present, HydraV is the fuel cell engine system supplier of the biggest fuel cell buses pilot project in Hubei and Shanxi Province. For both projects, HydraV has also rationally deployed local hydrogen refueling stations.





# 产业布局

## INDUSTRY PROSPECT

☆ 已完成国产化燃料电池产业链关键环节卡位布局



红色字体为已投资或者拟投资/合作的领域

### 武汉氢能产业园

HydraV Industrial Park, Wuhan

- ◆ 项目总投资：51亿元  
Total Project Investment: 5,100,000,000 Yuan
- ◆ 规划年产能：10万套氢燃料电池发动机系统  
Planned Annual Capacity: 100,000 units of fuel cell engine system
- 10万套电堆  
100,000 units of fuel cell stack
- 50万㎡膜电极  
500,000 m<sup>2</sup> MEA

### 大同氢能产业园

HydraV Industrial Park, Datong

- ◆ 项目总投资：27亿元  
Total Project Investment: 2,700,000,000 Yuan
- ◆ 规划年产能：5万套氢燃料电池发动机系统  
Planned Annual Capacity: 50,000 units of fuel cell engine system
- 5万套电堆  
50,000 units of fuel cell stack

### 上海产品监控中心&电堆实验室

Product Remote Monitoring Center & Fuel Cell Laboratory

- ◆ 车辆运行及发动机状态实时反馈  
24 hour, 365 days a year monitoring of vehicle and fuel cell engine operation
- ◆ 燃料电池控制器产业化  
Manufacturing of Vehicle Control Units
- ◆ 金属板电堆研发  
R&D of fuel cell stack with coated metallic bipolar plates

### 广州氢能产业园

HydraV Industrial Park, Guangzhou

- ◆ 催化剂、电堆及大功率燃料电池发动机系统的研发与生产  
R&D and manufacturing of fuel cell engine, stack, and catalyst

### 深圳氢能科技园

HydraV Science Park, Shenzhen

- ◆ 复合板电堆的研发与生产  
R&D and manufacturing of fuel cell stack with polymer composites bipolar plates

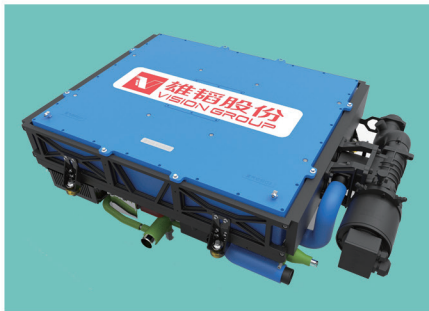


# 核心产品

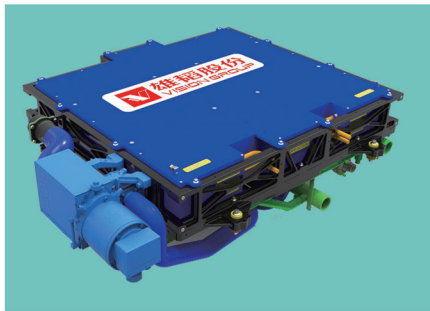
## CORE PRODUCT



XTQX-3045C燃料电池发动机系统



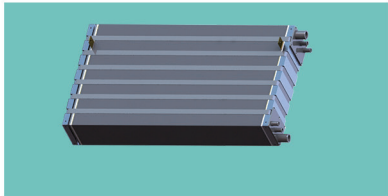
XTQX-6080A燃料电池发动机系统



XTQX-6080D燃料电池发动机系统

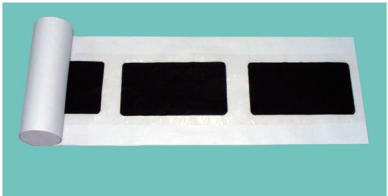
100KW以上级燃料电池发动机系统——敬请期待

型号 Product Serial Number	XTQX-3045C	XTQX-6080A	XTQX-6080D
额定功率(kW) Rated Power (kW)	45	60	90
额定电流(A) Rated Current (A)	320	320	320
额定电压(VDC) Rated Voltage (VDC)	130~260	250 ~ 450	330~550
效率(%) Efficiency (%)	≥45%	≥45%	≥45%
体积(L) Volume (L)	118	170	220
体积比功率密度(W/L) Power to Volume Ratio (W/L)	381	352	395
质量(kg) Weight (kg)	112	168	230
质量比功率密度(W/kg) Power to Weight Ratio (W/kg)	401	357	378
防护等级 Ingress Protection Rating	IP67		
抗振性能 Vibration Durability	符合SAE J2380 Conform to SAE J2380		
轮廓尺寸 Exterior Dimensions (mm)	834*525*355	1000*842*450	1120*1135*420



电堆

- 产品类型涵盖复合板与金属板
  - 额定功率覆盖18KW-100KW
- 18KW TO 100KW FUEL CELL STACKS WITH COATED METALLIC OR POLYMER COMPOSITES BIPOLAR PLATES



膜电极

- 基于CCM技术，功率密度高
  - 累计产量达百万片，国内唯一
- THE LARGEST CATALYST COATED MEMBRANE (CCM) SUPPLIER IN CHINA



# 解决方案

## SOLUTION



8.5米燃料电池城市客车 8.5m Fuel Cell Bus	
乘客座位 Passenger Seating	21
长*宽*高 (mm) Dimensions (mm)	8545*2440*3370
总质量 (kg) Gross Weight (kg)	13200
整备质量 (kg) Kerb Weight (kg)	8800, 9000
最高车速 (km/h) Maximum Speed (km/h)	69
续航里程 (km) Mileage per Refuel (km)	400
燃料电池系统 Fuel Cell System	
生产企业 Manufacturer	雄韬氢雄 HydraV
额定功率 (kW) Rated Power (kW)	42



10.5米燃料电池城市客车 10.5m Fuel Cell Bus	
乘客座位 Passenger Seating	26
长*宽*高 (mm) Dimensions (mm)	10500*2500*3470
总质量 (kg) Gross Weight (kg)	16500
整备质量 (kg) Kerb Weight (kg)	12000, 12500
最高车速 (km/h) Maximum Speed (km/h)	69
续航里程 (km) Mileage per Refuel (km)	500
燃料电池系统 Fuel Cell System	
生产企业 Manufacturer	雄韬氢雄 HydraV
额定功率 (kW) Rated Power (kW)	48



10.5米燃料电池城市客车 10.5m Fuel Cell Bus	
乘客座位 Passenger Seating	29
长*宽*高 (mm) Dimensions (mm)	10500*2550*3450
总质量 (kg) Gross Weight (kg)	16500
整备质量 (kg) Kerb Weight (kg)	10600, 11200
最高车速 (km/h) Maximum Speed (km/h)	69
续航里程 (km) Mileage per Refuel (km)	510
燃料电池系统 Fuel Cell System	
生产企业 Manufacturer	雄韬氢雄 HydraV
额定功率 (kW) Rated Power (kW)	45



12米燃料电池城市客车 12m Fuel Cell Bus	
乘客座位 Passenger Seating	32
长*宽*高 (mm) Dimensions (mm)	11995*2500*3470
总质量 (kg) Gross Weight (kg)	18000
整备质量 (kg) Kerb Weight (kg)	12600, 13200
最高车速 (km/h) Maximum Speed (km/h)	69
续航里程 (km) Mileage per Refuel (km)	650
燃料电池系统 Fuel Cell System	
生产企业 Manufacturer	雄韬氢雄 HydraV
额定功率 (kW) Rated Power (kW)	60

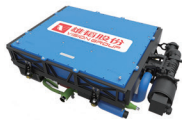


燃料电池厢式物流车 Fuel Cell Truck	
长*宽*高 (mm) Dimensions (mm)	7350*2200*2850
总质量 (kg) Gross Weight (kg)	8250
整备质量 (kg) Kerb Weight (kg)	4835
最高车速 (km/h) Maximum Speed (km/h)	90
续航里程 (km) Mileage per Refuel (km)	350
燃料电池系统 Fuel Cell System	
生产企业 Manufacturer	雄韬氢雄 HydraV
额定功率 (kW) Rated Power (kW)	30



12米燃料电池城市客车 12m Fuel Cell Bus	
乘客座位 Passenger Seating	33
长*宽*高 (mm) Dimensions (mm)	12000*2540*3400
总质量 (kg) Gross Weight (kg)	18000
整备质量 (kg) Kerb Weight (kg)	12300, 12000, 11700
最高车速 (km/h) Maximum Speed (km/h)	69
续航里程 (km) Mileage per Refuel (km)	650
燃料电池系统 Fuel Cell System	
生产企业 Manufacturer	雄韬氢雄 HydraV
额定功率 (kW) Rated Power (kW)	60

### 车用燃料电池 Fuel Cell for Vehicles



燃料电池公交车  
FC Bus



燃料电池通勤车  
FC Commuter Bus



燃料电池乘用车  
FC Sedan



燃料电池轻中卡  
FC Truck



燃料电池重卡  
FC Heavy Hauler



燃料电池环卫车  
FC Garbage Truck

### 船用燃料电池 Fuel Cell for Boats



### 基站电源燃料电池 Fuel Cell for Base Stations



# 售后运维

## AFTER-SALE OPERATION AND MAINTENANCE

我们拥有专业的燃料电池售后维保团队，全程参与了2008北京奥运会、2010上海世博会两次燃料电池汽车大规模示范运行项目。

Our professional operation and maintenance team has participated in Beijing 2008 Summer Olympics and Shanghai EXPO FCV pilot demonstration projects.

### 技术培训

Driving Trainings

- ◆ 车辆上线前维保人员跟车路试半个月  
Maintenance worker accompanied road test for two weeks
- ◆ 驾驶员专题培训及跟车培训  
Practical & theoretical knowledge trainings

### 车辆运行

Vehicle Operation

- ◆ 协助客户办理氢能源车辆牌照  
Assist customers in getting FCEV licensed
- ◆ 产品远程监控中心实时监测车辆行驶及发动机状态  
Real-time operating parameters feedback of vehicle and fuel cell engine
- ◆ 车辆日常巡检与维护（防冻液、电导率、水氢空三路管路等）  
Daily vehicle checks and upkeeps (the status of hydrogen, air, and coolant pipelines and coolant, etc.)

### 配件供应

Accessories Supply

- ◆ 维保中心配件储备充足，燃料电池发动机系统故障零部件及时更换  
Sufficient fuel cell engine spare parts supply at the maintenance center
- ◆ 非燃料电池发动机系统故障零部件主动联系相关厂家及时更换  
Contact relevant OEMs for timely replacement of other fault spare parts

### 故障反馈与处理

Fault Management

- ◆ 经验丰富的专业维保人员24/7全天候服务  
24/7 maintenance service
- ◆ 产品远程监控中心反馈问题预先检查处理，保障运营安全  
Precheck instant alerts sent by the product remote monitoring center
- ◆ 客户反馈问题即时响应，故障当日解决  
Instant respond to customer reported fault and resolve it on the same day



车辆运行监控  
Vehicle Operation Monitoring



信息管理  
Information Management



数据分析  
Data Analysis



能耗管理  
Hydrogen Consumption Management



报表生成  
History & Reports



## 氢能推广——武汉

### HYDROGEN FUEL PROMOTION IN WUHAN



#### 示范运营 Pilot Demonstration

2019年初，在武汉市汉南区合作投放20辆燃料电池公交车开展示范运营，为湖北省最大规模燃料电池公交车示范运营项目。

At the beginning of 2019, 20 fuel cell buses equipped with HydraV fuel cell engine system started operating in Hannan District, Wuhan, which is the largest fuel cell bus pilot project in Hubei Province.



#### 加氢站 Hydrogen Station

##### 汉南加氢站 Hannan Hydrogen Refueling Station

- 湖北省首座固定式加氢站  
The first stationary hydrogen refueling station in Hubei Province
- 日供氢能力1000kg  
Hydrogen supply capacity of 1000 kilograms per day
- 规模全国前三  
Hydrogen storage and supply ranking top 3 in China

## 氢能推广——大同

### HYDROGEN FUEL PROMOTION IN DATONG



#### 示范运营 Pilot Demonstration

2019年四月，在大同市合作投放50辆燃料电池公交车开展示范运营，为山西省最大规模燃料电池公交车示范运营项目。

In April 2019, 50 fuel cell buses equipped with HydraV fuel cell engine system started operating in Datong, which is the largest fuel cell bus pilot project in Shanxi Province.



#### 加氢站 Hydrogen Station

##### 大同制氢加氢一体站 Datong On-site Hydrogen Refueling Station

- 全国首座制氢加氢一体站  
The first hydrogen station with production on-site in China
- 日制氢/供氢能力500kg  
Hydrogen production and supply capacity of 500 kilograms per day



我们不断探索和创新，站在能源变革的最前沿。  
我们放眼城市的未来，地球的未来，人类的未来！  
我们致力于成为——全球燃料电池解决方案引领者

We are constantly exploring and innovating, standing at the forefront of energy reform.  
We look to the future of cities and the planet of our humankind.  
We are committed to becoming A Global Leader of Fuel Cell Solutions.