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Power Your Vision*



World-Leading Smart Energy Solution Provider  
**Vision Group Product Brochure**

**VISION GROUP**

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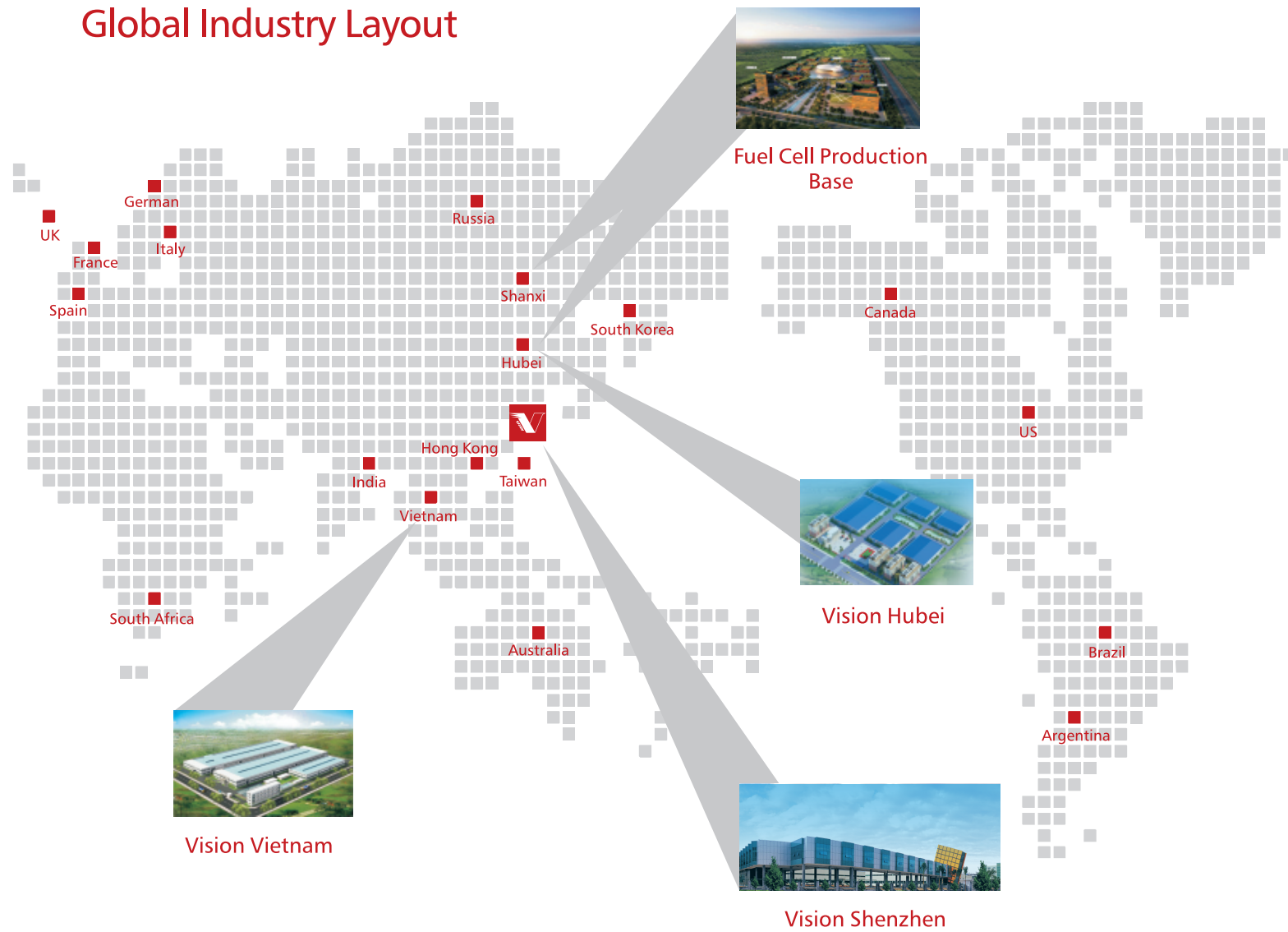
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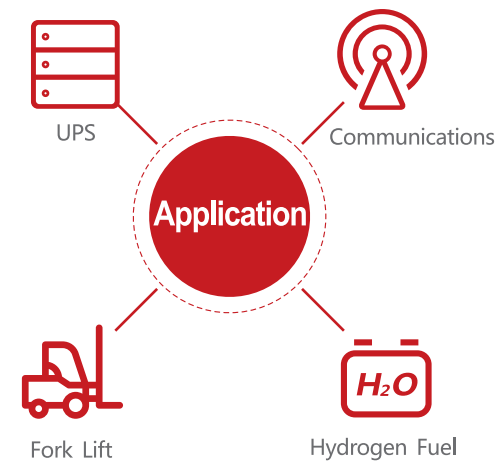
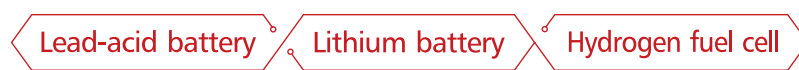


## Global Industry Layout



## About Vision Group

Vision Group has four research and production bases, located in Shenzhen, Hubei, Datong, and Vietnam. As one of renowned battery exporters in China, Vision Group is engaged in the energy industry with a staff of nearly 4000 and offers lead-acid battery, lithium battery, and hydrogen fuel cell systems. Vision Group is dedicated to providing valve-regulated lead-acid battery, lithium ion battery, fuel cell battery, and zinc battery products and solutions for a variety of sectors, including UPS, communications, forklift, hydrogen fuel and energy storage. We will provide competitive, secure, and reliable products, solutions, and services for you.



# Gel Battery CG Series



## Overview

The CG series products are manufactured with nano silica gel technology, one of the two valve-regulated battery production technologies used in the industry, and have porous PVC separators and colloidal electrolyte inside. This series can work under high and low temperature, supports cyclic deep discharge, and has a long service life.



## Characteristics

- + Ultra-long discharge cycle
- + Used for power backup and energy storage
- + Special polar plate design, which ensures a long cycle file and a service life of over 20 years
- + Special lead calcium alloy composition, which improves corrosion resistance of grids and increases the battery service life
- + Manufactured with high-porosity PVC-SiO<sub>2</sub> separators and world-leading SiO<sub>2</sub> gel technology
- + High heat capacity, reducing risks of thermal runaway and dehydration, suitable for use in rigorous environments
- + High gas recombination efficiency
- + Good deep discharge performance



## Applications

- + Outdoor energy storage systems
- + Low-temperature environments
- + Electric power systems
- + Deep cycle systems
- + Electric vehicles

Model	Rated Voltage (V)	Rated Capacity (10 hr/Ah)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
CG12-135PEX	12	135	482*170*240	240	F12	46
CG12-160PEX	12	160	530*209*215	220	F12	56.5
CG12-180PEX	12	180	522*238*218	223	F12	63
CG12-200PEX	12	200	520*269*203	208	F12	70
CG12-220PEX	12	220	521*269*220	227	F12	75.5
CG2-200PE	2	200	173*111*329	364	F10	15.2
CG2-300PE	2	300	171*151*330	364	F10	20
CG2-400PE	2	400	211*176*329	367	F10	27
CG2-500PE	2	500	242*173*330	365	F10	31
CG2-600PE	2	600	302*175*331	367	F10	40
CG2-800PE	2	800	410*175*330	367	F10	53.5
CG2-1000PE	2	1000	475*175*328	367	F10	63.5
CG2-1500PE	2	1500	400*350*345	382	F10	105
CG2-2000PE	2	2000	490*350*345	382	F10	120
CGT12-100PEX	12	100	436*108*317	317	F15	39.4
CGT12-160PEX	12	160	546*125*317	323	F15	53.5

# Long-Life CP Series



## Overview

The CP series products are small-sized portable batteries with a designed service life of 5 years. As AGM batteries with a lean design, they are sealed, maintenance-free, and can be installed in any direction.

## Characteristics

- + Maintenance-free (no need for Replenishment in use)
- + A long service life of 5 years
- + Low internal resistance and high output power
- + Excellent tightness (no leakage of liquid or acid gas)
- + Low self-discharge
- + Installable in any direction, facilitating safe transportation

## Applications

- + Communication and electric machines, emergency lighting devices, and fire protection systems
- + Security systems, office computers, microcomputer processors, and OA devices
- + UPS lighting, security, fire protection, and other electric devices for emergency use
- + Hand-held power supplies, backup power supplies, robots, and control machines

Model	Rated Voltage (V)	Rated Capacity (10 hr/Ah)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
CP645	6	4.5	70*47*101	107	F1/F2	0.77
CP6120	6	12	151*50*94	100	F1/F2	1.85
CP1212	12	1.2	97*43*52	58	F1	0.53
CP1223	12	2.3	178*35*61	67	F1	0.99
CP1229	12	2.9	79*55,5*98,5	104	F1	1.05
CP1250HY	12	5	90*70*101	107	F1/F2	1.72
CP1270	12	7	151*65*93,5	100	F1/F2/+F2-F1	2.32
CP1290	12	9	151*65*94	100	F1/F2	2.8
CP12120	12	12	151*98*95	101	F1/F2	3.67
CP12170-X	12	17	181*77*167	167	F13	5.5
CP12240E-X	12	24	166*175*125	125	F13	7.6
CP12240-X	12	24	166*175*125	125	F13	8.1
CP12280S	12	28	165*125*175	175	F13	9.3
CP12380F-X	12	38	197,5*165,5*170	170	F11	12
CP12650F-X	12	65(10hr)	350*167*179	179	F11	20.4



# Long-Life FM Series



## Overview

The FM series products are medium-sized valve-regulated batteries with a long designed service life of 10 years. As AGM batteries with a lean design, they are sealed, maintenance-free, and can be installed in any direction.

## Characteristics

- + Maintenance-free, replenishment free, and reusable when used in a safe environment
- + A long service life of 10 years
- + High safety, special low impedance, and strong charge acceptance
- + Excellent tightness (no leakage of liquid or acid gas)
- + Extremely low self-discharge, making the product highly reliable
- + Installable in any direction, facilitating safe transportation

## Applications

- + Communication and electric machines, emergency lighting devices, and fire protection systems
- + Security systems, office computers, microcomputer processors, and OA devices
- + UPS, lighting, security, fire protection, and other electric devices for emergency use
- + Hand-held power supplies, backup power supplies, robots, and control machines

Model	Rated Voltage (V)	Rated Capacity (10 hr/Ah)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
3FM180D-X	6	180	306*168*220	225	F12	28.6
3FM200-X	6	200	240*185*275	275	F12	32.5
3FM225D	6	225	320*176*225	247	F16	30.5
6FM33-X	12	33	195*130*155	168	F11	11
6FM40-X	12	40	197.5*165.5*170	170	F11	14.7
6FM45-X	12	45	197.5*165.5*170	170	F11	14.6
6FM55D-X	12	55(20hr)	239*132*205	210	F11	17.3
6FM55-X	12	55	239*132*205	210	F11	17.3
6FM60-X	12	60	258*166*206	215	F11	24
6FM65-X	12	65	350*167*179	179	F11	23.4
6FM75TE	12	75	258*168*211	230.5	F50	21.2
6FM80-X	12	80	350*167*179	179	F11	22.5
6FM90T-X	12	90	306*169*210	215	F21	28
6FM100D	12	100(20hr)	330*171*214	220	F5	32
6FM100E-X	12	100	330*171*214	222	F11/F12	29
6FM100-X	12	100	330*171*214	222	F11/F12	32
6FM100RY-X	12	100	339*173*214.5	220	F11/F12	28
6FM120E-X	12	120	410*176*224	224	F12	33.5
6FM120-X	12	120	410*176*224	224	F12	38
6FM134-X	12	134	341*173*283	287	F15	40
6FM150-X	12	150	482*170*240	240	F12	48.4
6FM175-X	12	175	530*209*215	220	F12	55.5
6FM200SE-X	12	200	522*238*218	223	F10	59.1
6FM200-X	12	200	522*238*218	223	F12	65

# Deep Cycle Series



## Overview

This series is designed for cyclic use. Batteries of this series are made of special alloy and paste of lead, and allow for deep discharge cycles. With a lean design, the batteries are sealed, maintenance-free, and can be installed in any direction.

## Characteristics

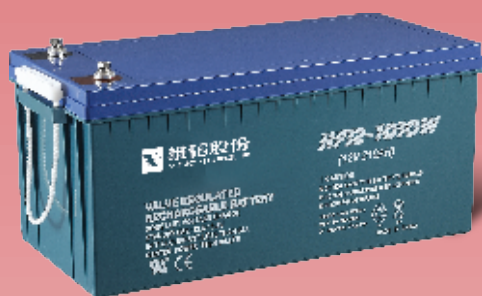
- + Ultra-long discharge cycle
- + Used for power backup and energy storage
- + Special polar plate design, which ensures a long cycle life
- + High heat capacity, reducing risks of thermal runaway and dehydration, suitable for use in rigorous environments
- + High power density
- + Good deep discharge performance

## Applications

- + Communication and electric machines, emergency lighting devices, and fire protection systems
- + Security systems, office computers, microcomputer processors, and OA devices
- + UPS, lighting, security, fire protection, and other electric devices for emergency use
- + Hand-held power supplies, backup power supplies, robots, and control machines

Model	Rated Voltage (V)	Rated Capacity (10 hr/Ah)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
6FM33D-X	12	33(20hr)	195*130*155	168	F11	11
6FM40D-X	12	40(20hr)	197.5*165.5*170	170	F11	14.7
6FM45D-X	12	45Ah(20hr)	197.5*165.5*170	170	F11	14.6
6FM55D-X	12	51.7	239*132*205	210	F11	16.7
6FM55TD-X	12	51.7	229*138*208	213	F11/F12	18.5
6FM65D-X	12	65(20hr)	350*167*179	179	F11	23.4
6FM75D-X	12	75(20hr)	258*166*206	215	F11/F12	23.5
6FM75TD-X	12	75(20hr)	258*166*210	215	F21	24
6FM80D-X	12	75.6(20hr)	350*167*179	179	F11	22.5
6FM100D-X	12	100(20hr)	330*171*215	220	F11/F12	32
6FM120D-X	12	120(20hr)	410*176*224	224	F12	36.5
6FM134D-X	12	134(20hr)	341*173*283	287	F15	42.5
6FM150D-X	12	150(20hr)	482*170*240	240	F12	47
6FM175D-X	12	175(20hr)	530*209*215	220	F12	55.5
6FM200D-X	12	200(20hr)	522*238*218	223	F12	65

# High-Power HFS Series



## Overview

The HFS series products are valve-regulated batteries designed for UPS products with high discharge rates. These batteries feature excellent short-term discharge performance and low cost, and therefore are competitive among battery products. With a lean design, the batteries are sealed, maintenance-free, and can be installed in any direction.

## Characteristics

- + Manufactured by advanced automatic equipment
- + Cast welding and welding through the partition used in production, reducing the internal resistance and improving the discharge performance
- + New automatic heat sealing process, which reduces the manufacturing cost and enhances the safety and reliability of batteries
- + Small size, low weight, and high power efficiency, suitable for products requiring high-precision power supplies
- + Made of special lead-calcium alloy under a fully automated process, ensuring stable quality and eliminating the risk of hazardous gas emission
- + High safety, special low impedance, and easy recharging, maximizing the output energy

## Applications

- + Large-sized UPS, telecommunications equipment, and emergency power supply systems in power stations
- + Computers' backup power supply, automatic vending machines, and OA devices
- + Electric power systems, data centers, and base transceiver stations

Model	Rated Voltage (V)	15 min, 1.67 V (W/cell)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
HFS12-115W-X	12	115	165*125*175	175	F13	9.6
HFS12-150W-X	12	150	195*130*155	168	F11	11.5
HFS12-200W-X	12	200	229*138*208	213	F11	17
HFS12-320W-X	12	320	258*166*210	215	F11	24.5
HFS12-400WR-X	12	400	306*170*220	225	F12	29.2
HFS12-420WR-X	12	420	339*173*214.5	220	F12	31.3
HFS12-450W-X	12	450	410*176*224	224	F12	36.5
HFS12-500WR-X	12	500	341*172.5*279	283	F48	39.5
HFS12-540WR-X	12	540	341*172.5*279	283	F48/F15	41
HFS12-560W-X	12	560	482*170*240	240	F10	45
HFS12-710WS-X	12	710	530*209*215	220	F10	57
HFS12-820WS-X	12	820	522*238*218	223	F38	67.5
HFS12-850WR-X	12	850	526*238*246	246	F38	71

# High-Power HF/HP Series



## Overview

The HF/HP series products are high-power valve-regulated batteries designed for short-term power backup. These batteries use a lean design and are sealed and maintenance-free.



## Characteristics

- + Adsorbed glass fiber separators, with a gas recombination efficiency of 99%, removing the need for replenishment
- + Compliance with special article A67 in IATA/ICAO standard, suitable for air transportation
- + Extremely low self-discharge, allowing for a long rest period
- + Designed service life of 5-10 years
- + Computer aided design and lead-calcium-tin alloy grids, suitable for high-power discharge



## Applications

- + Computers' backup power supply and automatic vending machines
- + OA devices and electric power systems
- + Data centers and base transceiver stations

Model	Rated Voltage (V)	15 min, 1.67 V (W/cell)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
HP12-116W-X	12	116	181*77*167	167	F13	6.2
HF12-135W-X	12	135	166*175*125	125	F13	8.6
HF12-155W-X	12	155	165*125*175	175	F13	9.6
HF12-165W-X	12	165	195*130*155	168	F11	11.1
HF12-211W-X	12	211	197.5*165.5*170	170	F11	14.8
HF12-260W-X	12	260	229*138*208	213	F11	17.2
HF12-320W-X	12	320	258*166*206	215	F11	23
HF12-370W-X	12	370	350*167*179	179	F11	26.2
HF12-420W-X	12	420	306*169*210	215	F12/F21	28
HF12-470W-X	12	470	330*171*215	220	F11/F12/F45	33
HF12-560W-X	12	560	410*176*224	224	F12	37.7
HF12-600W-X	12	600	341*173*283	287	F15	41.5
HF12-650W-X	12	650	482*170*240	240	F12	46.4
HF12-890WS-X	12	890	522*238*218	223	F10	67.5
HF12-1010W-X	12	1010	522*238*218	223	F38	67



# Front-connected CT Series

## CT

### Overview

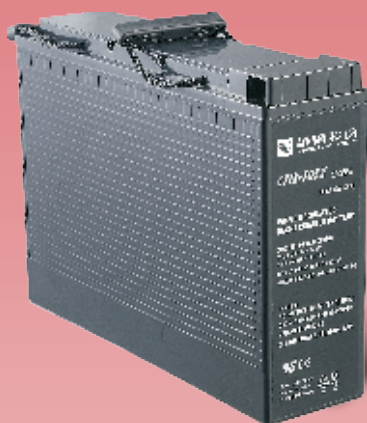
The CT series products are valve-regulated batteries designed for the telecommunications industry. With terminals at the front, these batteries are easy to install and maintained. Dimensions of the terminals fit in a 19-inch standard power cabinet.

### Characteristics

- + Adsorbed glass fiber separators, with a gas recombination efficiency of 99%, removing the need for replenishment
- + Compliance with special article A67 in IATA/ICAO standard, suitable for air transportation
- + Extremely low self-discharge, allowing for a long rest period
- + Standard structure design suitable for 19-inch and 23-inch battery cabinets, and a narrow and high structure with good heat dissipation performance
- + A designed floating charge life of 12 years
- + Computer aided design and lead-calcium-tin alloy grids, suitable for high-power discharge
- + Unique handle structure, facilitating handling and installation

### Applications

- + Telecommunications equipment and emergency power supply systems in power stations
- + Computers' backup power supply, automatic vending machines, and electric power systems
- + Data centers and base transceiver stations



Model	Rated Voltage (V)	Rated Capacity (10 hr/Ah)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
CT12-50X	12	50	277*106*229	243	F11	17.3
CT12-50EX	12	50	277*106*229	243	F11	16.3
CT12-80X	12	80	564*115*189	189	F11/F19	28.2
CT12-90X	12	90	395*110*286	293	F12	30.5
CT12-100EX	12	100	508*110*223	238	F18	28.5
CT12-100SX	12	100	508*110*231	231	F15	32.5
CT12-100X	12	100	508*110*223	238	F18	32.5
CT12-105X	12	105	395*110*286	293	F12	35
CT12-105EX	12	105	395*110*286	293	F12	31.5
CT12-125EX	12	125	436*108*317	317	F15	36
CT12-125X	12	125	436*108*317	317	F15	40
CT12-150EX	12	150	548*105*316	316	F15	45.5
CT12-150X	12	150	548*105*316	316	F15	48.8
CT12-150Y-X	12	150	548*105*316	316	F15	45.5
CT12-150Z-X	12	150	552*110*288	295	F12	48.2
CT12-155X	12	155	551*110*316	316	F15	51.5
CT12-180EX	12	180	546*125*317	323	F15	53
CT12-180X	12	180	546*125*317	323	F15	58.5
CT12-180Y-X	12	180	546*125*317	323	F15	53
CT12-200X	12	200	522*238*218	223	M8	68.8

# CL 2V Series



## Overview

The CL 2V series products are large-sized fixed batteries with a designed service life of 20 years. Each battery has a large capacity and can be used for a long time. These batteries use a lean design and are sealed and maintenance-free. The batteries use thick tin plates made of high-tin alloy and contain AGM separators, providing superb performance.



## Characteristics

- + Maintenance-free, replenishment free, and reusable when used in a safe environment
- + High corrosion resistance and a long service life of 20 years
- + High safety, special low impedance, and strong charge acceptance
- + Excellent tightness (no leakage of liquid or acid gas)
- + Extremely low self-discharge, making the product highly reliable
- + Installable in any direction, facilitating safe transportation

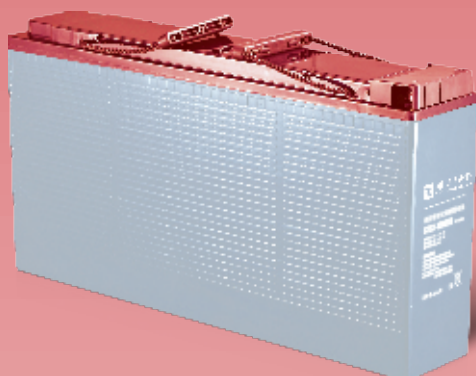


## Applications

- + Communication and electric machines, fire protection systems, and security systems
- + UPS, lighting, security, fire protection, and other electric devices for emergency use
- + Backup power supply for solar and wind power stations, nuclear power stations, and other types of power stations
- + Large-sized UPS and emergency power supply systems in power stations
- + Computers' backup power supply, automatic vending machines, and data center equipment
- + Base transceiver stations, communication power supply systems, and railway systems
- + Wind-solar hybrid systems and engine start systems, tolerable to harsh environments

Model	Rated Voltage (V)	Rated Capacity (10 hr/Ah)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
CL100	2	100	171*72*206	211	F10	6.4
CL150	2	150	172*102*205	217	F10	8.2
CL200	2	200	173*111*329	364	F10	14.2
CL300	2	300	171*151*330	364	F10	20
CL400	2	400	211*176*329	367	F10	28
CL500	2	500	242*173*330	365	F10	33
CL600	2	600	302*175*331	367	F10	40
CL800	2	800	410*175*330	367	F10	57
CL1000	2	1000	475*175*328	367	F10	66.5
CL1200	2	1200	400*350*345	382	F10	88.5
CL1500	2	1500	400*350*345	382	F10	100
CL2000	2	2000	490*350*345	382	F10	132
CL3000	2	3000	710*350*345	382	F10	210

# High-Temperature Battery Series



## Overview

The high-temperature battery (HTB) series is designed for use in outdoor environments without air conditioners, reducing costs of equipment installation and use. Batteries of this series have a designed service life of 10 years under a temperature of 35°C. The HTB series VRLA batteries are new products developed by Vision Group for equipment used in high-temperature environments. This series overcomes the impact of high temperature on the performance and service life of VRLA batteries and increases the working temperature of lead-acid batteries from 25°C to 35°C without compromising the service life. You can raise the temperature of air conditioners to 35°C or install the batteries in a straightly ventilated cabinet, reducing the operation expenses and emissions.



## Characteristics

- + Wide working temperature range (-40°C to +80°C)
- + A designed service life of 10 years under 35°C
- + Highly corrosion-resisting alloy
- + Shell made of special high temperature resistant material
- + Unique electrolyte additives



## Applications

- + Base stations in high-temperature areas, areas facing frequent power outages, and harsh environments
- + Solar and wind power stations, telecommunications equipment, and emergency power supply systems in power stations

Model	Rated Voltage (V)	Rated Capacity (10 hr/Ah)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
CT12-100X-HTB	12	100	508*110*223	238	M6	32.5
CT12-150X-HTB	12	150	552*110*288	295	M8	48.8
CT12-180X-HTB	12	180	558*125*317	323	M8	58.5



# Driving Power EV Series



## Overview

The EV series is designed for electric vehicles and other devices that require deep-cycle batteries. Batteries of this series provide good deep discharge performance, have a long cycle life, and are resistant to vibration. These batteries use a lean design and are sealed and maintenance-free.

## Characteristics

- + Large capacity and high specific energy
- + Made of lead-calcium-tin-aluminum alloy free of antimony, no emission of toxic gases
- + Produced by using Germany's A-EV technology, with ultra-high deep discharge performance and a long service life
- + Installable in any direction, without leakage of any acid liquid
- + Advanced static packing technology, which greatly increases the service life of battery packs
- + Strong charge acceptance

## Applications

- + Electric cars and golf carts
- + Sightseeing buses and electric buses
- + Electric cleaning vehicles and elderly electric scooters
- + Electric toy cars and other driving power supplies

Model	Rated Voltage (V)	Rated Capacity (10 hr/Ah)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
EV6-200A-X	6	190	244*188*275	275	F12	30
EVGC-220A-AM	6	220(20hr)	260*180*254	274	AM	30
EVGC-220B-AM	6	220(20hr)	260*180*254	274	AM	28
EVGH6-210A-AM	6	209	260*180*254	275	AM	35
EVGT6-280A-AM	6	280(20hr)	260*180*273	295	AM	38
EV305-360A-AM	6	360(20hr)	295*180*347	368	AM	48.2
EVL16-400A-AM	6	400(20hr)	295*180*405	426	AM	55.5
EVGC8-165A-AM	8	165(20hr)	260*180*255	275	AM	29
EVGT8-185A-X	8	185(20hr)	260*182*295	301	F12	40.6
EV34-65A-X	12	65(20hr)	260*168*178	183	F21	20.5
EV27-100A-AM	12	100(20hr)	323*172*206	226	AM	29.5
EV24-85A-AM	12	85(20hr)	272*172*206	226	AM	25.1
EV31-115A-AM	12	105	330*169*216	236	AM	32
EV12-155A-AM	12	110	327*176*254	274	AM	40.6
EVGT12-110A-X	12	110	260*182*295	300	F12	41.5
SC4D-180A-AT	12	170	528*222*229	250	A1T1+A2T1-	52.5
EV4D-240A-AT	12	240(20hr)	528*222*229	250	A1T1+A2T2-	64.6
EV185-250A-AM	12	250(20hr)	386*180*346	367	AM	67.1
EV8D-330A-AT	12	330(20hr)	528*282*229	250	A1T1+A2T2-	82.9
6-EVF-100-X	12	100(3hr)	330*172*213	220	F12	33.5
6-EVF-150-X	12	150(3hr)	482.5*170.5*238.5	238.5	F12	50.5



# Lead-Carbon Battery Series



## Overview

Lead carbon batteries of this series use a new design of grids, active substance, shell, and electrolyte based on the advanced lead-acid battery production technology. These batteries support deep cycles and have a long service life, and are one of optimal solutions for the energy storage industry.



## Characteristics

- + A designed service life of 20 years
- + Excellent cycle performance in unsaturated state of charge
- + A long service life attributed to the excellent cycle performance
- + Easy installation and maintenance



## Applications

- + New energy systems, such as solar energy, wind energy, and wind-solar hybrid systems
- + Peak cut systems for power grids
- + Frequency modulation and load tracking systems
- + Smart grid and micro grid systems
- + Power storage systems in areas without mains power supply or with poor-performing power grids

Model	Rated Voltage (V)	Rated Capacity (10 hr/Ah)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
6FM100ZC-X	12	100	330*171*215	220	M8	30
6FM200ZC-X	12	100	522*238*218	223	M8	62.5
CG12-100ZCA-X	12	100	330*171*215	220	M8	30
CG12-200ZCA-X	12	100	522*238*218	223	M8	62.5
CL300C	2	300	171*151*330	364	M8	19.7
CL400C	2	400	211*176*329	367	M8	28

# OPzV Series



## Overview

The OPzV series uses long-life tubular plates and gel electrolyte, and has an ultra-long cycle life and floating charge life. Batteries of this series are suitable for outdoor and high-temperature environments. The batteries are composed of tubular plates with die-cast frames, PVC separators, and gel electrolyte, which mitigate problems of grid corrosion, material softening, and acid layering. This design increases the designed floating charge life of the batteries to 20 years. OPzV series batteries are suitable for outdoor base stations, new energy systems, and power grid facilities in harsh environments.



## Characteristics

- + Die-cast tubular positive plates with a long service life
- + Gel electrolyte, tolerable to high temperature
- + Special PVC separators and nano silica gel, ensuring high thermal stability
- + High resistance to low temperature, ice-free in winter



## Applications

- + Power supply for communications equipment
- + Key communication hubs, base stations, and other facilities that use floating-charged backup batteries
- + Energy storage scenarios requiring deep-cycle batteries, such as wind and solar energy systems, and hybrid power supply systems used in areas without mains power supply or with poor-performing power grids

Model	Rated Voltage (V)	Rated Capacity (10 hr/Ah)	L x W x H (mm)	Total Height (mm)	Terminal Type	Weight (kg)
4OPzV200	2	200	103*206*356	389	M8	20
6OPzV300	2	300	145*206*356	389	M8	28
6OPzV400	2	400	145*206*473	505	M8	35
6OPzV600	2	600	145*206*646	505	M8	41
7OPzV500	2	500	166*206*473	678	M8	49
8OPzV800	2	800	191*210*646	678	M8	65
10OPzV1000	2	1000	233*210*646	678	M8	80
12OPzV1200	2	1200	275*210*646	678	M8	93
12OPzV1500	2	1500	275*210*795	827	M8	117
16OPzV2000	2	2000	399*212*770	802	M8	155
20OPzV2500	2	2500	487*212*770	802	M8	192
24OPzV3000	2	3000	576*212*770	802	M8	228

# IRON-V 12V24V



## Overview

The Iron-V series provides a high IP rating to ensure safe and reliable system operations in the whole lifecycle. Its smart management structure can accurately monitor the status of each component in the system to ensure stable system performance and safety of users.

## Characteristics

- + Lithium batteries developed by Vision Group for start of electric devices
- + Using high-rate LiFePO<sub>4</sub> (LFP) cells and BMS system of Vision Group, and integrating a remote real-time monitoring system and an intelligent management module

## Applications

- + All fields using VRLA batteries
- + Energy storage systems
- + Start systems
- + Electric vehicles

## 12V Series

	LFP12-5EV	LFP12-10EV	LFP12-15EV	LFP12-20EV	LFP12-30EV	LFP12-40EV	LFP12-50EV	LFP12-60EV	LFP12-80EV	LFP12-100SEV	LFP12-100EV	LFP12-200EV	LFP12-300EV
	12V5Ah	12V10Ah	12V15Ah	12V20Ah	12V30Ah	12V40Ah	12V50Ah	12V60Ah	12V80Ah	12V100Ah	12V100Ah	12V200Ah	12V300Ah
Voltage (V)	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
0.5C/25°C Capacity (Ah)	5	10	14.5	20	30	40	50	60	80	100	100	200	300
Energy (Wh)	64	128	185.6	256	384	512	640	768	1024	1280	1280	2560	3840
Weight (kg)	0.82	1.5	1.9	3.3	4.7	5.15	8.1	9.3	9.68	10.3	13.4	24.5	34
Dimensions (mm)	90*70 *107	151*65 *100	151*98 *101	181*77 *167	166*175 *125	195*130 *168	229*138 *213	229*138 *213	258*166 *215	306*169 *215	330*172 *220	527*222 *249	527*283 *249
BCI Group No.	/	/	/	/	/	U1	22	22	24	27	31	4D	8D
Terminal	F2	F2	F2	M5	M5	M6	M6	M6	M8	M8	M8	M8	M8
Max. continuous discharge current (A)	10	20	20	30	30	40	50	60	80	100	100	200	300
Max. continuous charge current (A)	5	10	15	20	30	40	50	60	80	100	100	200	300
Shell material	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS

24V Series						
	LFP24-30EV	LFP24-40EV	LFP24-50SEV	LFP24-50EV	LFP24-60EV	LFP24-100EV
	24V30Ah	24V40Ah	24V50Ah	24V50Ah	24V60Ah	24V100Ah
Voltage (V)	25.6	25.6	25.6	25.6	25.6	25.6
0.5C/25°C Capacity (Ah)	30	40	50	50	60	100
Energy (Wh)	768	1024	1280	1280	1536	2560
Weight (kg)	9.4	10.5	13	13.4	17.5	24
Dimensions (mm)	239*132*210	258*166*215	306*169*215	330*172*220	436*108*317	527*222*249
BCI. Group No.	22	24	27	31	/	4D
Terminal	M6	M8	M8	M8	M8	M8
Max. continuous discharge current (A)	30	40	50	50	60	100
Max. continuous charge current (A)	30	40	50	50	60	100
Shell material	ABS	ABS	ABS	ABS	ABS	ABS

Starter Battery Series				
	LFP12-50SS	LFP12-75SS	LFP12-90SS	LFP12-100SS
	12V50Ah	12V75Ah	12V100Ah	12V100Ah
Voltage (V)	12.8	12.8	12.8	12.8
0.5C/25°C Capacity (Ah)	50	75	100	100
Energy (Wh)	640	960	1280	1280
Weight (kg)	8.3	10.5	10	13.4
Dimensions (mm)	258*166*215	258*166*215	306*169*215	330*172*220
BCI. Group No.	24	24	27	31
Terminal	M8	M8	M8	M8
Max. continuous discharge current (A)	50	75	100	100
Max. continuous charge current (A)	50	75	100	100
Shell material	ABS	ABS	ABS	ABS



# REVO Single-Phase Lithium Battery Series



## Overview

The REVO series is developed by Vision Group for various UPS products. Lithium batteries of this series use high-rate LFP cells and BMS system developed by Vision Group, and integrates a remote cloud management system and an intelligent fire protection module. These batteries feature high reliability, high stability, long service life, and outstanding safety.

## Advantages

- + Modular design, suitable for both interior and exterior installation
- + Two-grade or three-grade management architecture, which supports external parallel connection and subsequent capacity expansion
- + Support for communication through CANBUS or MODBUS
- + High-precision control under a voltage of 5 mV and temperature of 0.5°C

## Characteristics

- + High discharge rate, up to 30C
- + Over 90% of discharge efficiency
- + A designed service life of 20 years
- + A long cycle life, no less than 1000 cycles of 4C discharging and 1C charging
- + High compatibility, applicable to various low-power UPS or other inverter devices

## Applications

- + Data centers
- + Financial organizations
- + Rail transportation
- + Wind-solar hybrid systems
- + Power backup in areas without mains power supply

Model	Cell	Module	Pack	System	Standard Voltage	Max. Output Power	Weight	Dimensions (mm)
SP500	1.1Ah	12V3.3Ah	12V3.3Ah	12V3.3Ah	12.8V	500W	0.6kg	152*65*95
SP1000	1.1Ah	24V3.3Ah	24V3.3Ah	24V3.3Ah	25.6V	1000W	1.5kg	140*300*40
SP2000	1.1Ah	48V3.3Ah	48V3.3Ah	48V3.3Ah	51.2V	2000W	3.0kg	280*300*40
SP3000	1.1Ah	72V3.3Ah	72V3.3Ah	72V3.3Ah	76.8V	3000W	4.5kg	420*300*40
SP10000	1.1Ah	192V10Ah	192V10Ah	192V10Ah	204.8V	10KW	32kg	443*620*133
SP30000	20Ah	240V20Ah	240V20Ah	240V20Ah	240V	30KW	100kg	430*630*370

# REVO Three-Phase Lithium Battery Series



## Overview

The REVO series is developed by Vision Group for various UPS products. Lithium batteries of this series use high-rate LFP cells and BMS system developed by Vision Group, and integrates a remote cloud management system and an intelligent fire protection module. These batteries feature high reliability, high stability, long service life, and outstanding safety.



## Characteristics

- + Four-level safety protection to guarantee reliable and safe system operations (cell level, module level, pack level, and system level)
- + High discharge rate, up to 10C, over 95% of discharge efficiency
- + All-state management and 100% cell management + functional part control
- + A designed service life of 20 years
- + A long cycle life, over 2500 cycles of 1C charging and discharging or over 1000 cycles of 4C discharging and 0.5C charging
- + Intelligent cloud management system, which predicts system status to support system O&M, monitors O&M operations on cloud, and provides multi-role management
- + Built-in intelligent fire protection control system (optional), providing 24/7 guarantee of system and facility safety



## Applications

- + Low-power UPS of different brands or other inverter devices
- + Data centers
- + Financial organizations
- + Rail transportation
- + Wind-solar hybrid systems
- + Power backup in areas without mains power supply

### Pack

Model	Capacity	Cell Model	Battery Modules	Dimensions (mm)			Weight (kg)	Max. Output Power (kW)
				W	D	H		
TPM200	512.0V 20AH	1.1AH	10	600	1000	2000	320	200.1
TPH100B	512.0V 20AH	20AH	10	600	1000	2000	270	110.0
TPH200	512.0V 40AH	20AH	10	600	1000	2000	430	220.0
TP80	409.6V 50Ah	50Ah	8	600	1000	2000	480	86.7
TP100	512.0V 50Ah	50Ah	10	600	1000	2000	550	108.4
TP120	614.4V 50Ah	50Ah	12	600	1000	2000	620	130.1
TP140	716.8V 50Ah	50Ah	14	600	1000	2000	690	151.8
TP160	409.6V 100Ah	50Ah	8	600	1000	2000	760	173.4
TP200	512.0V 100Ah	50Ah	10	600	1000	2000	900	216.8
TP240	614.4V 100Ah	50Ah	12	600	1000	2300	1040	260.2

### Module

Model	Cell Model	Dimensions (mm)			Weight (kg)	Max. Output Power (kW)	Standard Backup Time (min)
		W	D	H			
51.2V20Ah	1.1Ah	650	442	88	27	20.01	3
51.2V20Ah	20Ah	800	442	108	22	11	5
51.2V40Ah	20Ah	650	442	132	40	22	5
51.2V50Ah	50Ah	650	442	108	35	10.8	15
51.2V100Ah	50Ah	800	442	154	65	21.6	15



# Communications V-LFP48V Large-Capacity Series




## Overview

The V-LFP series of lithium battery systems are high-tech products developed by Vision Group. This series has significant advantages as backup batteries for communication equipment, such as high power density, small size, long service life, resistance to high temperature, fast charging and discharging, and modular design.



## Characteristics

- + Positive electrode made of LiFePO<sub>4</sub> (LFP), ensuring high safety and a long service life
- + Compatible with a variety of communication power supply devices
- + Maintenance-free design, fitting in a 19-inch communications cabinet
- + Built-in BMS system with multiple protection and communication functions, which ensures high reliability of the battery pack and enables real-time monitoring of battery data over a long distance
- + Low internal resistance, with efficient internal balance of the battery control circuit
- + Wide working temperature range and high reliability
- + Support for parallel connection of battery packs



## Applications

- + Communications equipment room
- + Outdoor base stations

Model	Rated Capacity (Ah)	Rated Voltage (V)	Dimensions (mm)			Weight (kg)	Terminal Type
			W	D	H		
V-LFP48V10Ah	10	48	442	285	44	8	DSTB8-2-2-M6
V-LFP48V20Ah	20	48	442	300	88	13	DSTB8-2-2-M6
V-LFP48V30Ah	30	48	442	380	88	23	DSTB8-2-2-M6
V-LFP48V40Ah	40	48	442	430	88	25	DSTB8-2-2-M6
V-LFP48V50Ah	50	48	442	440	135	31	DSTB8-2-2-M6
V-LFP48V80Ah	80	48	442	480	177	42	DSTB8-2-2-M6
V-LFP48V100Ah	100	48	442	480	177	44	DSTB8-2-2-M6

# Communications

## V-LFP48V

### High-Rate Series



#### Overview

This series is a distributed base station battery system with an integrated design, which is developed by Vision Group for 5G applications and other scenarios requiring high-current backup batteries. Batteries of this series can be installed on a pole or wall to provide uninterrupted power supply to wireless communication devices in shopping malls, railway stations, airports, parking lots, office buildings, and other buildings.

#### Characteristics

- + Positive electrode made of LiFePO<sub>4</sub> (LFP), ensuring high safety and a long service life
- + Compatible with a variety of communication power supply devices
- + Built-in BMS system with multiple protection and communication functions, which ensures high reliability of the battery pack and enables real-time monitoring of battery data over a long distance
- + Low internal resistance, with efficient internal balance of the battery control circuit
- + Wide working temperature range and high reliability
- + Support for parallel connection of battery packs

#### Applications

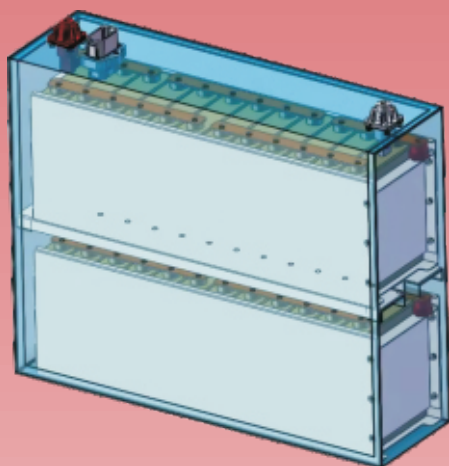
- + Outdoor small base stations
- + Hotspot coverage in urban areas
- + Wall-mounting or pole-mounting

Model	Rated Capacity (Ah)	Rated Voltage (V)	Dimensions (mm)			Weight (kg)	Terminal Type
			W	D	H		
V-LFP48V5Ah	5	48	380	220	145	9	DSTB8-2-2-M5
V-LFP48V10Ah	10	48	380	220	145	11	DSTB8-2-2-M5
V-LFP48V20Ah	20	48	455	290	145	17	DST22-2-2-M6

Note: Deviation of weights is  $\pm 0.3$  kg.



# Forklift Lithium Battery Series



## Overview

This series is applicable to all electric forklifts in the world. Vision Group can customize the battery design based on customers' needs. Lithium batteries of this series feature a high charge efficiency, high energy efficiency, long service life, zero pollution and emission, and high safety. In addition, they can work under high and low temperatures, do not need maintenance, and can be used while being charged.

## Characteristics

- + Modular design: compatibility with multiple vehicle models and lower design and development costs
- + Smart battery: real-time monitoring of each module's health in the battery pack, facilitating design optimization and battery maintenance
- + Secondary use: hardware and software designs suitable for secondary use

## Applications

- + Forklifts of all brands in the world, including European, Japanese, South Korean, and US brands

Model		24 V forklift lithium battery ( 25.6V 150Ah, 25.6V 200Ah, 25.6V 300Ah, 25.6V 400Ah )	48 V forklift lithium battery ( 51.2V 200Ah, 51.2V 300Ah, 51.2V 400Ah, 51.2V 450Ah )	80 V forklift lithium battery ( 83.2V 200Ah, 83.2V 300Ah, 83.2V 400Ah, 83.2V 450Ah )
Item		Parameter		
Cell	Material	LiFePO4	LiFePO4	LiFePO4
	Specifications	36130162-50Ah	36130162-50Ah	36130162-50Ah
	Nominal Voltage (V)	3.2	3.2	3.2
	Discharge cut-off voltage (V)	2.5	2.5	2.5
	Charge cut-off voltage (V)	3.65	3.65	3.65
	Rated capacity (Ah)	50	50	50
Battery System	Rated voltage (V)	25.6	51.2	83.2
	Serial/Parallel connection of cells	8S / (3~8) P	16S / (4~9) P	26S / (4~9) P
	Rated capacity (Ah)	150 ~ 400	200 ~450	200 ~450
	Total power (kW)	3.84 ~ 10.24	10.24 ~ 23.04	16.64 ~ 37.44
	Charge Max. continuous current (A)	200A	300A	300A
	Discharge Max. continuous current (A)	200A	300A	300A
	Working temperature (°C)	-20~45	-20~45	-20~45
	Charging temperature (°C)	0~45	0~45	0~45
	Discharging temperature (°C)	-20~55	-20~55	-20~55
	IP rating	IP67	IP67	IP67
Service life	5 years or 10,000 hours	5 years or 10,000 hours	5 years or 10,000 hours	

# XTQX-3045C Fuel Cell Engine System



## Overview

This product is the first-generation fuel cell engine system developed by HydraV for small- and medium-sized passenger vehicles, delivery vehicles, and sanitation trucks. With a proper system design and highly integrated architecture, this product features high power density, good durability, high stability, fast start-up, strong environmental adaptability, and easy maintenance.



## Characteristics

- + High integration, high power density, and fast start-up
- + Wide range of output power, applicable to multiple types of vehicles
- + Modular design for easy maintenance
- + High stability and environmental adaptability proven by more than 100 system tests and experiments
- + Clear control policy, benefiting from cooperation with vehicle manufacturers for assembly



## Applications

- + Medium- and small-sized passenger vehicles
- + Delivery vehicles
- + Sanitation trucks

### Performance Specifications

Model	XTQX-3045C
Rated power (kW)	45
Rated current (A)	320
Rated voltage (VDC)	130-260
Efficiency (%)	≥ 45%
Volume (L)	118
Volume-specific power density (W/L)	381
Weight (kg)	112
Weight-specific power density (W/kg)	401
Oxidant	Air
Fuel	Hydrogen
Coolant	Commercial coolant

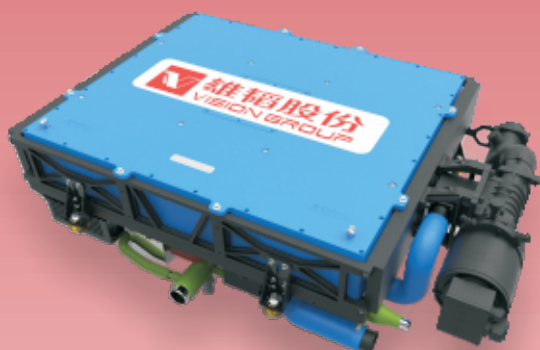
### Physical Specifications

Dimensions (mm)	834 x 525 x 355
IP rating	IP67
Shock resistance	Complies with SAE J2380
Control interface	CAN BUS

### Working Conditions

Hydrogen inlet pressure (Mpa)	2
Air inlet pressure (kPa)	10 to 80
Coolant inlet pressure (kPa)	10 to 80
Coolant inlet temperature (°C)	-20 to 60
Ambient temperature (°C)	-20 to 45
Working humidity (%RH)	5 to 95
Storage temperature (°C)	-30 to 45
Altitude (m)	≤ 3000

# XTQX-6080A Fuel Cell Engine System



## Overview

This product is the first-generation fuel cell engine system developed by HydraV for large-sized passenger vehicles and some special-purpose vehicles. This system features high efficiency, high hydrogen utilization, and a compact structure that facilitates maintenance. The system stability has been proven by reliability tests, and its modular design facilitates upgrading and optimization of modules.



## Characteristics

- + High system efficiency
- + High hydrogen utilization
- + High system stability
- + Modular design and compact structure



## Applications

- + Large-sized passenger vehicles
- + Some special-purpose vehicles

### Performance Specifications

Model	XTQX-6080A
Rated power (kW)	60
Rated current (A)	320
Rated voltage (VDC)	250 to 450
Efficiency (%)	≥ 45%
Volume (L)	170
Volume-specific power density (W/L)	352
Weight (kg)	168
Weight-specific power density (W/kg)	357
Oxidant	Air
Fuel	Hydrogen
Coolant	Commercial coolant

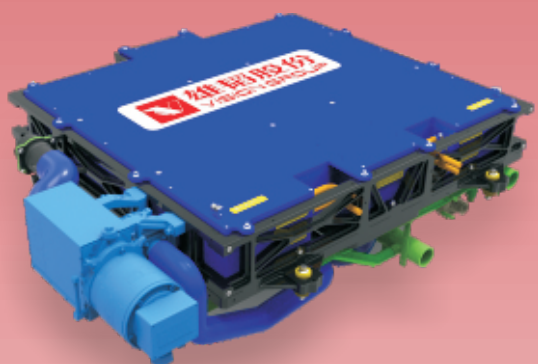
### Physical Specifications

Dimensions (mm)	1000 x 842 x 450
IP rating	IP67
Shock resistance	Complies with SAE J2380
Control interface	CANBUS

### Working Conditions

Hydrogen inlet pressure (Mpa)	2
Air inlet pressure (kPa)	10 to 100
Coolant inlet pressure (kPa)	10 to 80
Coolant inlet temperature (°C)	-20 to 60
Ambient temperature (°C)	-20 to 45
Working humidity (%RH)	5 to 95
Storage temperature (°C)	-30 to 45
Altitude (m)	≤ 3000

# XTQX-6080D Fuel Cell Engine System



## Overview

This product is the first-generation fuel cell engine system developed by HydraV for heavy-duty trucks, light rail trains, and stationary power stations. This system features high efficiency, high hydrogen utilization, and a compact structure that facilitates maintenance. The system stability has been proven by reliability tests, and its modular design facilitates upgrading and optimization of modules.



## Characteristics

- + High system efficiency
- + High hydrogen utilization
- + High system stability
- + Modular design and compact structure



## Applications

- + Heavy-duty trucks
- + Light rail trains
- + Stationary power stations

### Performance Specifications

Model	XTQX-6080D
Rated power (kW)	90
Rated current (A)	320
Rated voltage (VDC)	330 to 550
Efficiency (%)	≥ 45%
Volume (L)	220
Volume-specific power density (W/L)	395
Weight (kg)	230
Weight-specific power density (W/kg)	378
Oxidant	Air
Fuel	Hydrogen
Coolant	Commercial coolant

### Physical Specifications

Dimensions (mm)	1120 x 1135 x 420
IP rating	Ip67
Shock resistance	Complies with SAE J2380
Control interface	CANBUS

### Working Conditions

Hydrogen inlet pressure (Mpa)	1.5 to 2
Air inlet pressure (kPa)	10 to 100
Coolant inlet pressure (kPa)	10 to 80
Coolant inlet temperature (°C)	-20 to 60
Ambient temperature (°C)	-30 to 45
Working humidity (%RH)	5 to 95
Storage temperature (°C)	-40 to 60
Altitude (m)	≤ 3000