



河北南风汽车设备（集团）有限责任公司

Hebei Nanfeng Automobile Equipment (Group) Co., Ltd

电动客车零部件产品

ELECTRIC BUS PARTS PRODUCTS



HEBEI NANFENG AUTOMOBILE EQUIPMENT (GROUP) CO., LTD

BEIJING GOLDEN NANFENG INTERNATIONAL TRADING CO., LTD



河北南风汽车设备（集团）有限责任公司

Hebei Nanfeng Automobile Equipment (Group) Co., Ltd

企业介绍 Company Profile

Hebei Nanfeng Automobile Equipment (Group) Co., Ltd is a group company with 6 factories, that specially produce parking heaters and heater parts for more than 30 years. We are the leading parking heater manufacturers in China, and currently the only designated parking heater suppliers for Chinese military vehicle.

Our factory's production units are equipped with high tech machineries, strict quality control testing devices and a team of professional technicians and engineers endorsing the quality and authenticity of our products.

In 2006, our company has passed ISO/TS16949:2002 quality management system certification. We also bagged the CE certificate and Emark certificate making us amongst the only few companies in the world acquiring such high level certifications. Currently being the largest stakeholders in China, we hold a domestic market share of 40% and then we export them around the globe particularly in Asia, Europe and Americas.

Meeting the standards and demands of our customers have always been our top priority. It always encourages our experts to continuously brain storm, innovate, design and manufacture new products, impeccably suitable for the Chinese market and our customers from every nook of the world.





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高低温湿热交变振动三综合试验箱 Temp/Humid/Vibration Chamber

品质保证 Quality Assurance



沙尘试验箱/淋雨试验箱
Box Dust Test Chamber/Box Rain Test Chamber



质量方针

Quality policy

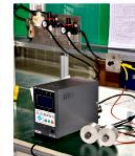
精品优质，控制有效，顾客认同
全员参与，遵纪守法，持续改进
Excellent quality, effective control, customer recognition, full participation, compliance, continuous improvement



盐雾试验箱 Salt Spray Tester



水泵性能综合测试系统
Comprehensive test system for water pump performance



气密检测仪
Airtightness Tester



温度冲击试验箱
High and Low Temperature Shock Test Chamber



马达特性综合测试系统
Comprehensive testing system for motor characteristics



伺服电脑式万能材料试验机
Servo computer universal material testing machine



二次元投影仪
Two dimensional projector





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双源一体式永磁同步电机泵（EHPS） Dual source integrated permanent magnet synchronous motor pump (EHPS)	31
12V 智能集成泵优势 Advantages of 12V intelligent integrated pump	33
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1、电动客车水泵系列 Electric Bus Water Pump Series

It is mainly used for the cooling, and dissipation of heat of electric motors, controllers, batteries and other electrical appliances in new energy (hybrid and pure electric vehicles).

- Brushless motor, long life time
- High level of efficiency
- Easy to install

电子水泵 Electronic water pump



规格型号 Model	额定电压 Rated voltage	额定功率 Rated power	防护等级 Protection level
HS-030-151A	DC12V/24V	30W/50W/80W	IP68
HS-030-201A	DC12V/24V	80W	IP68



规格型号 Model	额定电压 Rated voltage	额定功率 Rated power	防护等级 Protection level
HS-030-512	DC24V	220~270W	IP68
HS-030-522	DC24V	180~270W	IP68
HS-030-602	DC12V/24V	120~160W	IP68

2、电动客车加热器 Electric bus heater

产品应用：

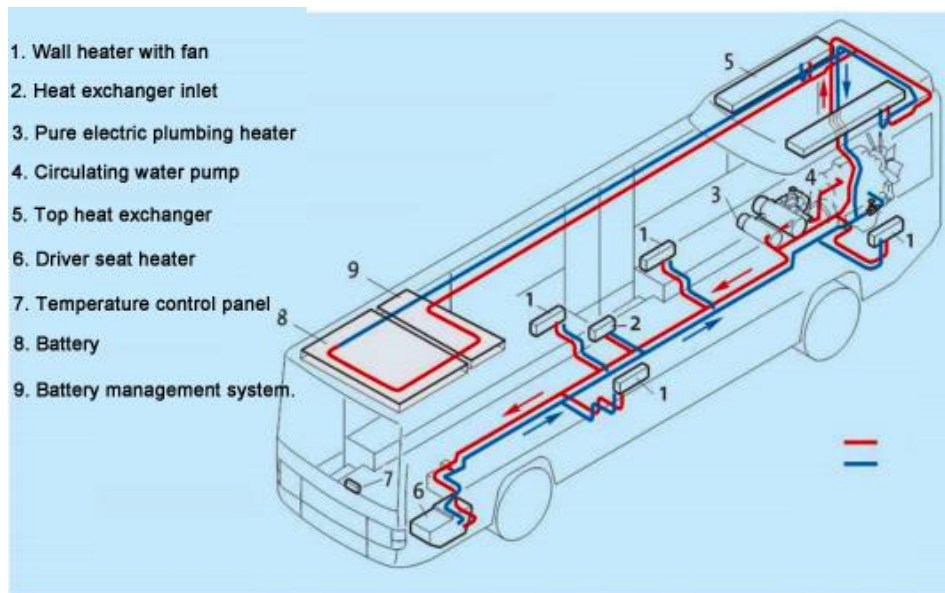
该产品是电动客车液体加热器，专为纯电动客车设计。加热器依靠车载电源为纯电动客车提供热源。产品额定电压为500V~750V，功率为20KW，可适配各类纯电动客车车型。制热功率强大，提供充足充沛的热量，为司机和乘客提供舒适的驾乘环境。

本产品可单独使用，替代传统燃油液体加热器，达到完全的节能减排、降低成本的目的。极寒冷地区，考虑到电量不足的情况，可辅助燃油液体加热器使用，使用方法是将纯电加热器与燃油加热器串联，按实际需求确认是否需要增加水泵，提高循环效率。

Applications:

This product is a liquid heater for electric buses, specially designed for pure electric buses. The heater relies on the on-board power supply to provide a heat source for the pure electric bus. The rated voltage of the product is 500V~750V, and the power is 20KW, which can be adapted to various pure electric passenger car models. The heating power is strong and it provides sufficient heat to provide a comfortable driving environment for the driver and passengers.

This product can be used alone to replace the traditional fuel oil liquid heater to achieve complete energy saving, emission reduction, and cost reduction. In extremely cold areas, considering the lack of electricity, it can be used as an auxiliary fuel liquid heater. The method of use is to connect the pure electric heater and the fuel heater in series, and confirm whether it is necessary to add a water pump according to actual needs to improve circulation efficiency.





35A过流保护

9.5L超大水室

20kw最大功率

- 35A overcurrent protection
- 9.5L large water chamber
- 20kw maximum power

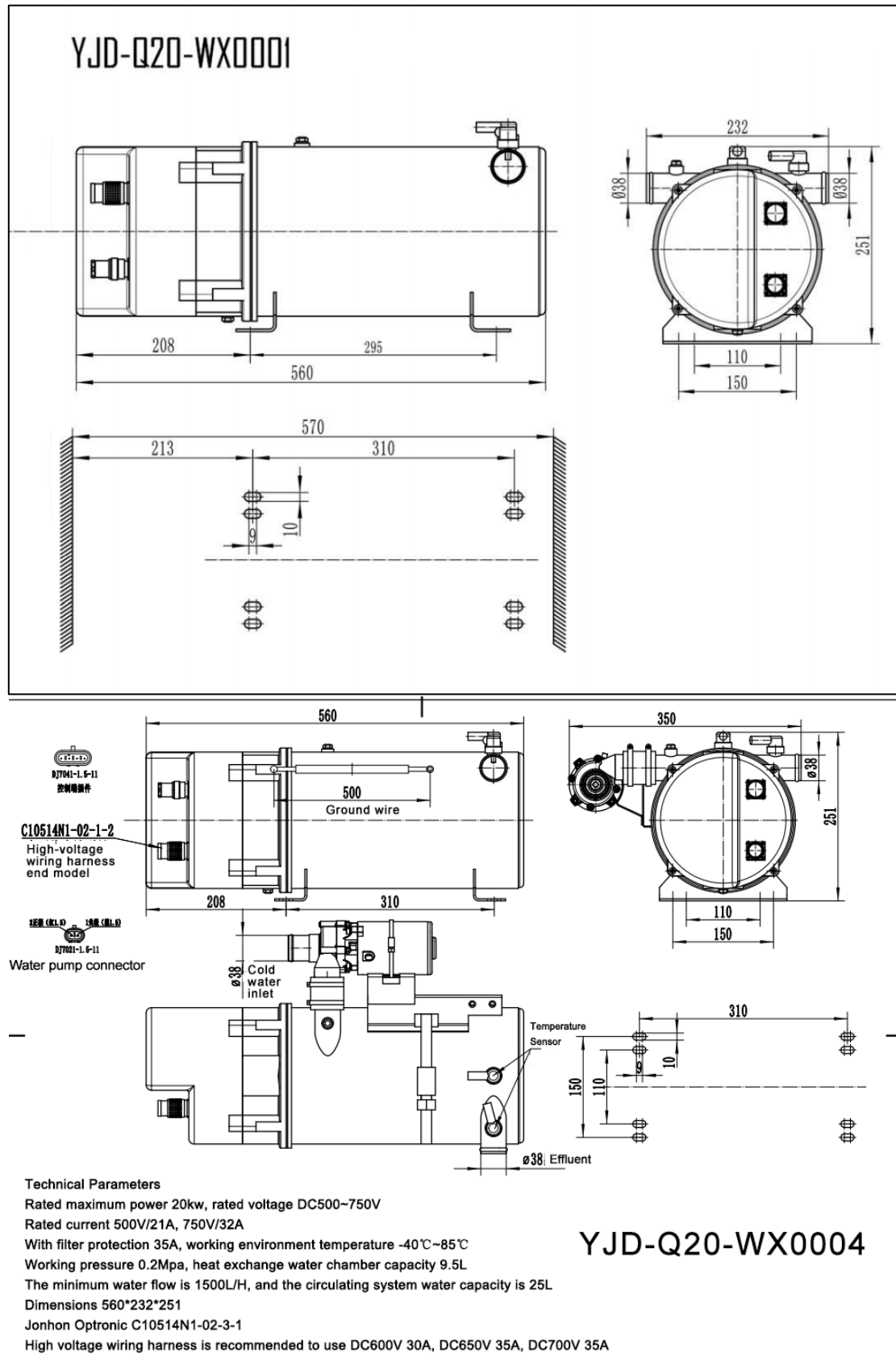
YJD-Q20-WX0001



技术参数

Technical Parameters

额定电压 Rated voltage	DC500V-750V
额定电流 Rated current	500V/21A750V/32A
最大功率 Maximum power	20kW
适用范围 Scope of application	Electric bus, zero emission and pollution-free



3、电动客车除霜器、散热器 Electric bus defroster, radiator

DCS 系列高压电除霜 DCS series high voltage electric defrost

- Suitable for defrosting and defogging the windshield of electric passenger cars
- Using PTC heating components, high safety
- With temperature protection and overheating alarm function, control the temperature in a safe range.
- Heating body power range: 1.5KW-----6KW; heating body voltage: 300V---700V

DCS-900B-WX008



DCS-900B-WX033




鼓风机额定电压 Rated voltage of blower	DC12V/24V
电机功率 Motor Power	170W
加热体功率 Heating body power	4.0kW
排风量 Exhaust volume	900m3/h
适用范围 Scope of application	Suitable for large and medium-sized new energy electric buses with large instrument panel space and high defrosting effect requirements



DSR 系列高压电散热器 DSR series high voltage electric radiator

- Suitable for heating the interior of electric passenger cars
- Using PTC heating components, high safety
- With temperature protection function, control the temperature in a safe range.
- Heating body power range: 1KW-----4KW; heating body voltage: 300V---700V

<div><div><p>DSR-600</p></div><div><p>Defroster controller</p></div><div><p>1. Heating button 2. Heating status indicator (lights up when heating) 3. The blower wind speed adjustment knob 4. Blower working status indicator (lights up when working)</p></div></div>	
鼓风机额定电压 Rated voltage of blower	DC12V/24V
电机功率 Motor Power	100W
加热体功率 Heating body power	1.5kW
排风量 Exhaust volume	600m ³ /h
适用范围 Scope of application	Suitable for heating large and medium-sized new energy electric buses

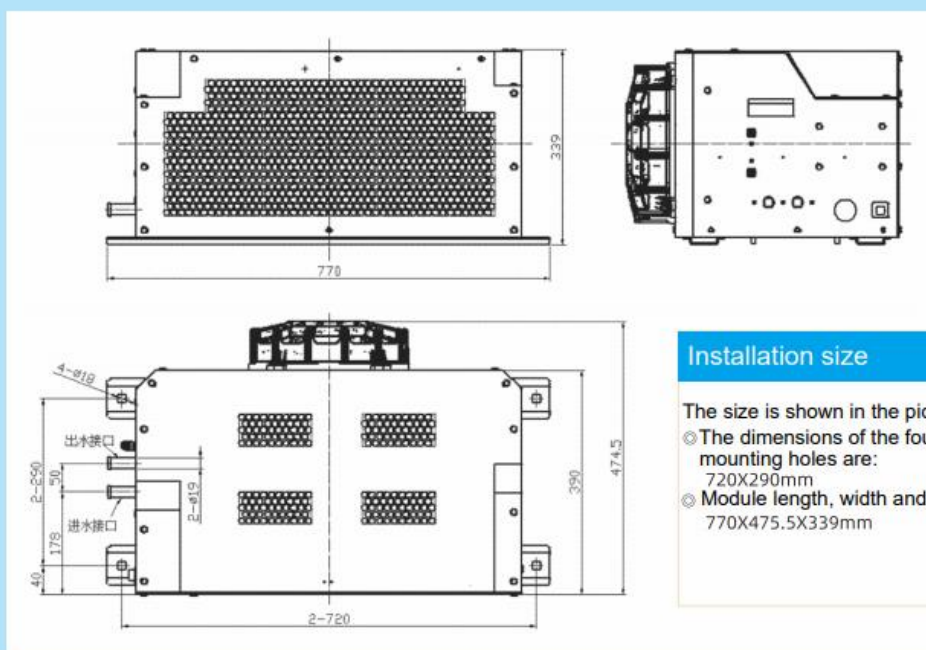


4、电动客车电池热管理系统 Electric Bus Battery Thermal Management System

电池热管理机组 Battery thermal management unit



Dimensions



Installation size

The size is shown in the picture

- ⊙ The dimensions of the four mounting holes are: 720X290mm
- ⊙ Module length, width and height: 770X475.5X339mm

Battery management water cooling unit



Applicable electric logistics model and parameter

Function description		parameter
Voltage	Rated voltage	540V
	control voltage	24V
Power and heat exchange	Rated heat exchanger	6Kw
	Maximum heat exchange	11.6kw
	Maximum compressor power	2.5Kw
Coolant flow	Maximum flow of water pump	50L/min
Condensing air volume	Maximum air volume of fan	2200m ³ /h
Refrigerant	R134a	
Applicable models	4.5-10 ton electric logistics vehicle	

新能源车散热水箱 New energy vehicle cooling water tank

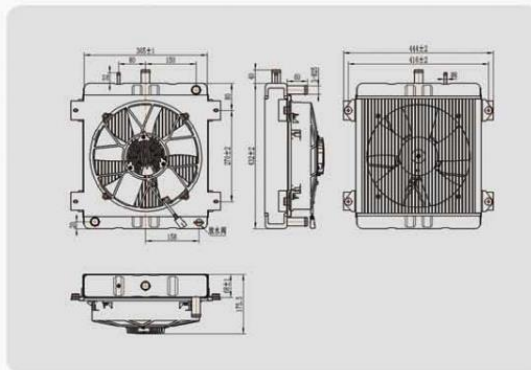
适用于各种纯电动汽车的驱动电机和控制器的散热采用优质进口风扇，使用寿命长结构简单，易于拆装
工装尺寸可根据客户需求更改

Suitable for all kinds of pure electric vehicles. The heat dissipation of the drive motor and controller adopts high-quality imported fans, which have long service life, simple structure, and easy disassembly and assembly.

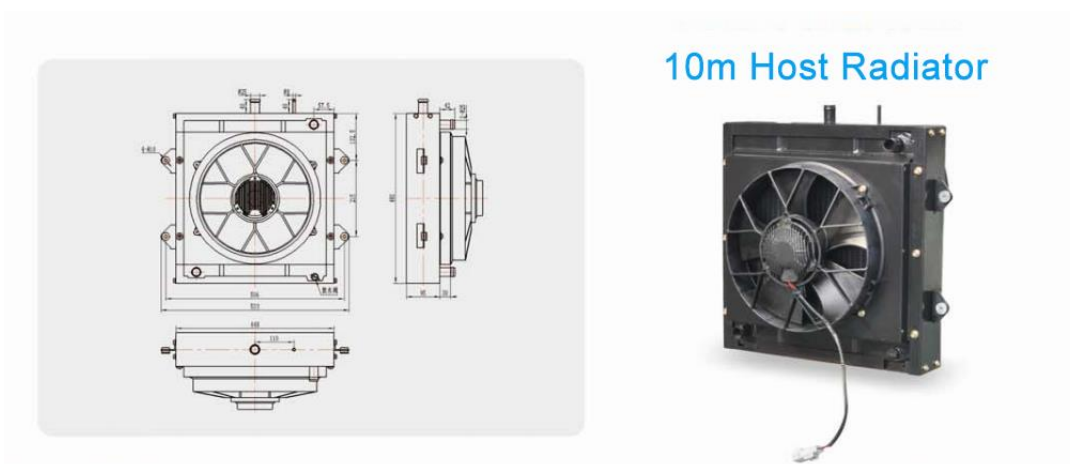
Tooling size can be changed according to customer needs



8m Host Radiator



额定电压 Rated voltage	DC12V/24V
散热面积 Cooling area	8.7m ²
散热功率 Cooling power	12kW
适用范围 Scope of application	Suitable for 6--8m models



额定电压 Rated voltage	DC12V/24V
散热面积 Cooling area	9.4m ²
散热功率 Cooling power	19kW
适用范围 Scope of application	Suitable for 8--10m models

电动客车电池加热器 Electric bus battery heater

PTC水加热器：

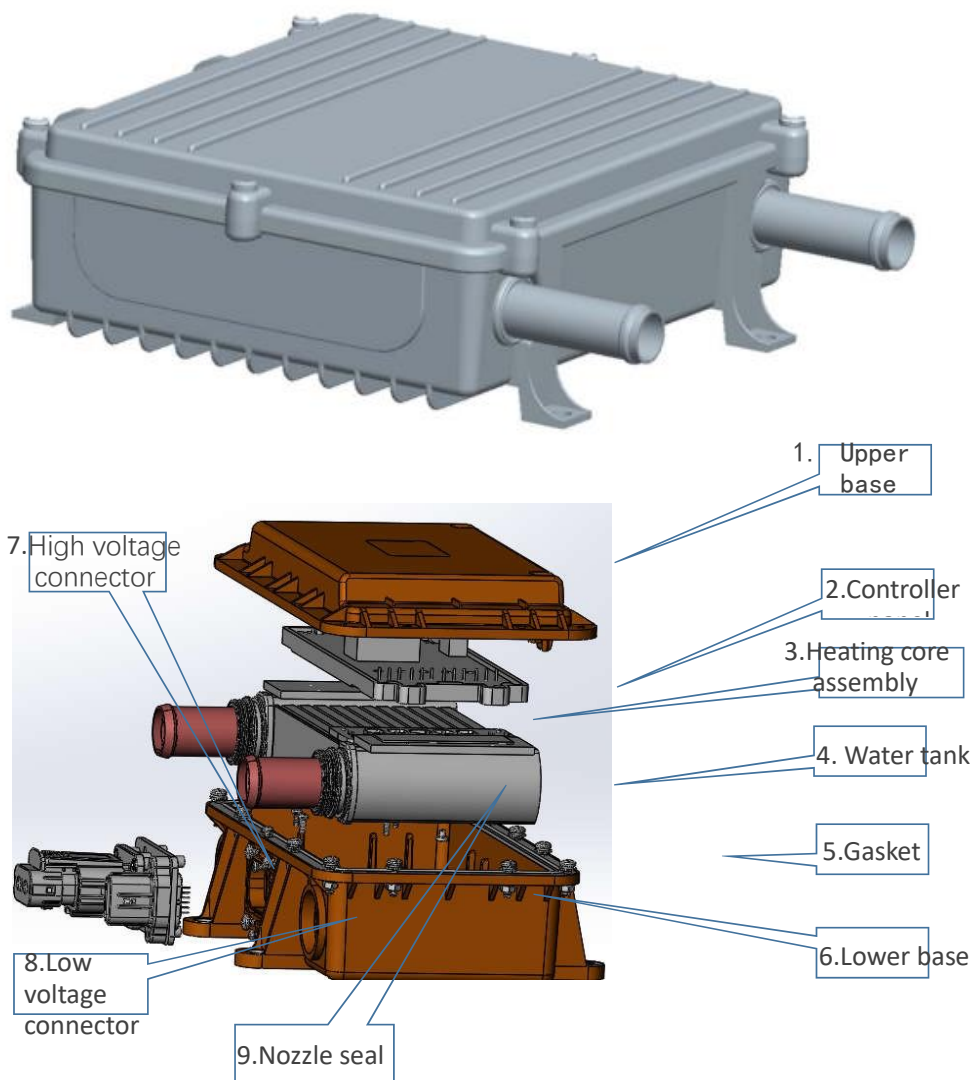
PTC水加热器是以电为能源加热防冻液，向客车提供热源的电加热器。

加热器件使用PTC半导体（正温度系数热敏电阻），壳体使用铝合金精铸，具有极佳的防干烧、抗干扰，防撞击，防爆性能，安全可靠，值得信赖。

PTC water heater:

The PTC water heater is an electric heater that uses electricity as an energy source to heat the antifreeze and provide a heat source for the passenger car.

The heating device uses PTC semiconductor (positive temperature coefficient thermistor), and the shell uses aluminum alloy precision casting, which has excellent anti-dry burning, anti-interference, anti-collision, explosion-proof performance, safe and reliable, and trustworthy.





PTC电加热器可以调整额定电压，匹配不同电压的电池。

The PTC electric heater can adjust the rated voltage to match batteries with different voltages.



Basic electrical parameters

Description	Condition	Minimum	typical	maximum	unit
power	a) Test voltage: control voltage: DC24V; load voltage: 600VDC b) ambient temperature: 20°C±2°C; water inlet temperature: 0°C±2°C; flow rate: 10L/min c) Air pressure: 70kPa~106kPa No coolant, no connecting wire		8000		W
weight	No coolant, no connecting wire		2.7		KG
Antifreeze volume			170		mL

Temperature

Description	Condition	Minimum	typical	maximum	unit
Storage temperature		-40		105	°C
Working temperature		-40		105	°C
environment humidity		5%		95%	RH



Low pressure

Description	Condition	Minimum	typical	maximum	unit
Control voltage VCC		18	24	32	V
Ground			0		V
Supply current	Steady state current	90	120	160	mA
Starting current				1	A

High pressure

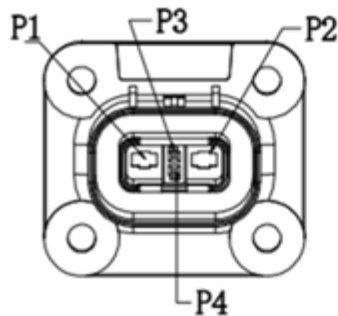
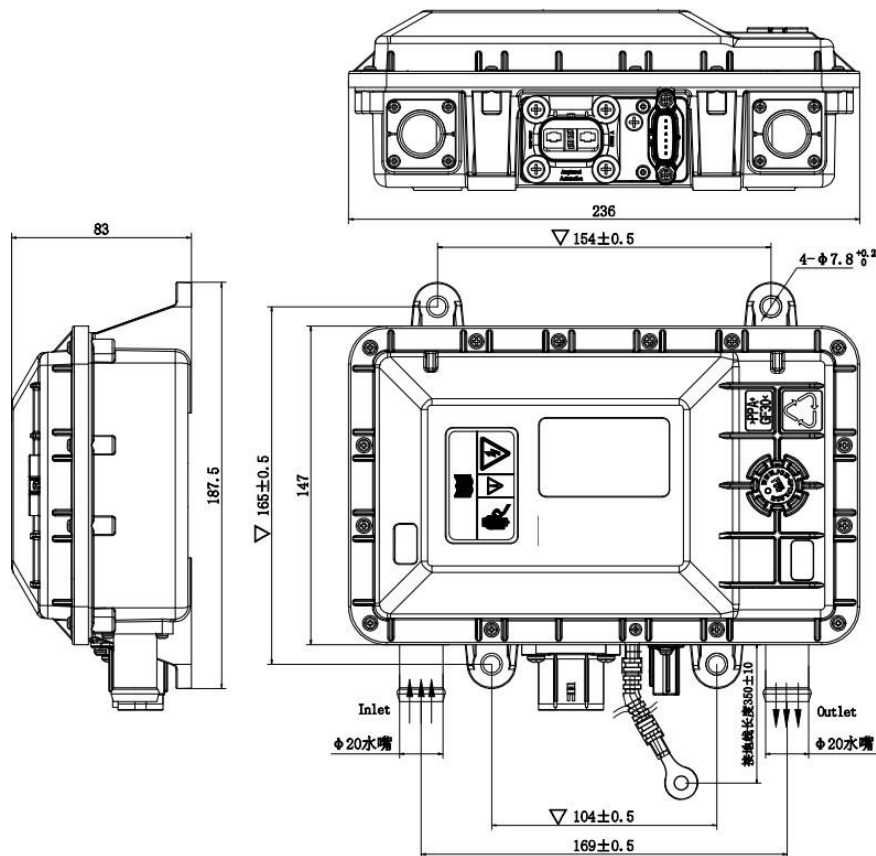
Description	Condition	Minimum	typical	maximum	unit
Supply voltage	Turn on heating	480	600	720	V
Supply current	Nominal condition		13.3		A
Inrush current	Nominal condition			17.3	A
stand-by current	Nominal condition			1.6	mA

High voltage safety

1	High voltage warning label	have
2	Flame-retardant plastic insulation shell protection to prevent access to high-voltage live parts	have
3	Basic insulation of high voltage live parts	have
4	Provide potential equalization grounding point	have
5	Insulation resistance>50MΩ	have
6	Passive discharge	have
7	High voltage interlock	have
8	High voltage terminals comply with IPXXB protection	have
9	Meets IP67 protection	have
10	Comply with 2U+1000V withstand voltage test	have
11	High pressure and overpressure turn off heating	have
12	PTC over temperature protection	have
13	PCB over temperature protection	have
14	IGBT over temperature protection	have
15	PTC overcurrent protection	have
16	PTC short circuit protection	have
17	IGBT breakdown feedback	have
18	PTC temperature sensor failure detection, no heating when failure	have
19	IGBT temperature sensor failure detection, no heating when failure	have



20	PCB temperature sensor failure detection, no heating when failure	have
21	Even if the IGBT control fails, the heater temperature does not exceed 200+°C due to PTC's own characteristics	have
22	Low voltage anti-reverse connection	have
23	High voltage reverse connection feedback (reverse connection will cause uncontrolled heating and cause PTC damage)	have
24	Controller power on and self-check, no heating if there is a fault	have
25	Communication is interrupted and heating is stopped	have
26	High voltage acquisition real-time feedback	have

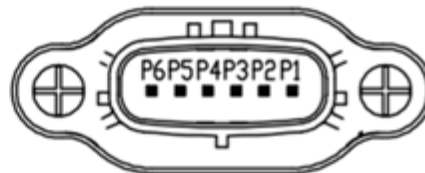


High voltage two-core connector
HVC2P28MV102
Brand: Amphenol

Opposite connector

Connector	HVC2P28FS102	Quantity	1
Terminal	适配端子	Quantity	2

Adapter terminal



Low voltage connector
A02-ECC 320Q60A1 -LVC-4
Brand: Sumitomo

Opposite connector

connector	6189-1083	Quantity	1
Terminal	8240-0287	Quantity	6
Sealing ring	7165-0796	Quantity	6



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The port definition is shown in the table below:

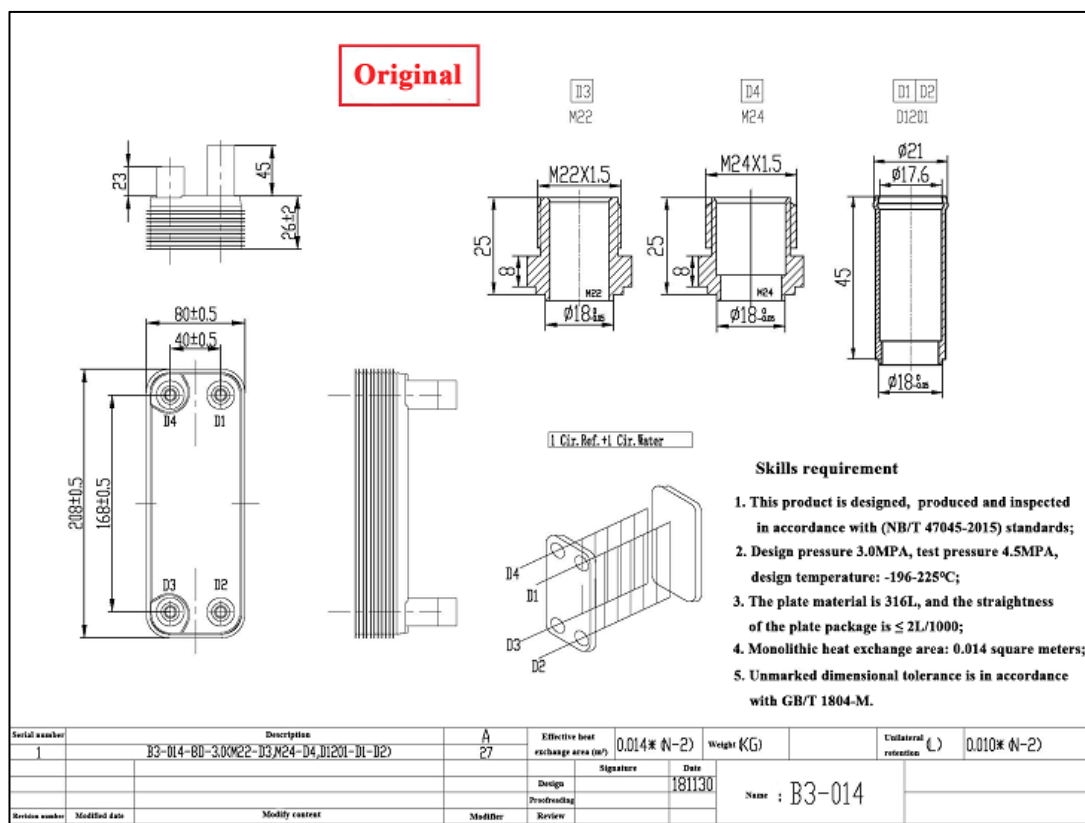
		Interface definition	color	Wire diameter (mm2)	Description	
Power	P1	High voltage +	red	2.5	high voltage power supply	high voltage connector
	P2	High voltage-	black	2.5		
	P3	HVIL1	brown	0.5	Interlock	HVC2P28MV102
	P4	HVIL2	white	0.5		
Low voltage connector	P6	Low voltage positive input	red	0.5	Low voltage power supply	Low voltage connector A02-B0C 320980A1 -LVC-4
	P5	GND Low pressure	black	0.5		
	P4	HVIL1	brown	0.5	Interlock	
	P3	HVIL2	white	0.5		
	P2	CAN_L	Gray	0.5	CAN communication	
	P1	CAN_H	Blue	0.5		
Shell wiring terminal	D	wiring terminal		0-type terminal	The controller shell is grounded (body), with the vehicle high and low voltage insulation detection, leakage protection function	
		yellow-green				



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板式换热器 Plate heat exchanger





5.电动客车空气压缩机 Electric Bus Air Compressor

无油活塞式空压机 Oil-free piston air compressor

机组优势 Preponderance of unit

A.结构紧凑

采用永磁电机与缸筒机架一体化, 因此整机体积小、重量轻, 大大减少外观尺寸。

B.低噪音

活塞式空压机的噪音主要来自于进气环节, 通过对缸盖、缸筒以及进气系统的优化设计, 将噪音降低至72db以下, 更符合环保要求。

C.轻量化设计

铝制主机, 整体重量仅为52公斤, 从而减轻整车重量, 为客户节省电能。

D.高适应性

对环境温度有着优良的适应性和可靠性, 可适应-45℃~+65℃工作环境。

E.超级涂层

气缸内壁采用超级涂层, 气密性好磨损小, 延长整机使用寿命。

G.低成本保养费

主机零件少, 易损件更少, 维护保养费用低, 同时不用润滑油、节省机油消耗, 无需频繁维护, 省钱又省心。

F.寿命更长

机器采用国外进口高温轴承, 保证润滑脂不会流失, 确保整机寿命。

A. Compact structure

The permanent magnet motor is integrated with the cylinder frame, so the whole machine is small in size and light in weight, which greatly reduces the appearance size.

B. Low noise

The noise of the piston air compressor mainly comes from the air intake link. Through the optimized design of the cylinder head, cylinder tube and air intake system, the noise is reduced to below 72db, which is more in line with environmental protection requirements.

C. Lightweight design

The aluminum main engine weighs only 52 kg, which reduces the weight

Web: www.auto-parkingheater.com



of the entire vehicle and saves energy for customers.

D. High adaptability

It has excellent adaptability and reliability to the ambient temperature, and can adapt to the working environment of $-45^{\circ}\text{C}\sim+65^{\circ}\text{C}$.

E. Super coating

The inner wall of the cylinder adopts super coating, which has good air tightness and little wear, which can prolong the service life of the whole machine.

F. Longer life

The machine adopts imported high-temperature bearings to ensure that the grease will not be lost and the life of the whole machine.

G. Low cost maintenance fee

The main engine has fewer parts, fewer wearing parts and low maintenance costs. At the same time, it does not require lubricating oil, saves oil consumption, does not need frequent maintenance, and saves money and worry.

洁净无油压缩空气 Clean and oil Free compressed air

A. 无需添加润滑油

无需添加润滑油，排出的气体不含油，消除了含油气体对生产工艺带来的不良后果，不会污染用户的终端产品

B. 不含润滑油

不含润滑油，不会产生低温工程中润滑油凝固和高温潮湿环境中的润滑油乳化的不良影响

C. 气体不带油

气体不带油，减少和消除了油污沉积在热交换器管壁上的可能，使换热效率提高，气体的阻力损失也可减少。

A. No need to add lubricating oil

No need to add lubricating oil, the exhaust gas does not contain oil, which eliminates the adverse consequences of oily gas on the production process, and will not pollute the user's end product

B. No lubricating oil



Does not contain lubricating oil, will not produce the adverse effects of lubricating oil solidification in low-temperature engineering and lubricating oil emulsification in high-temperature and humid environments

C. Gas without oil

The gas does not carry oil, which reduces and eliminates the possibility of oil deposits on the wall of the heat exchanger, improves the heat exchange efficiency and reduces the resistance loss of the gas.

Application range:

- Brake system
- Air suspension system
- Can open the door
- Windshield wiper



HV series



KTZ60W03F2



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	HV oil-free piston engine	
	1.5KW	2.2KW
排气量 Displacement (m ³ /min)	0.15	0.2
额定转速 Rated speed (r/min)	1500	1500
工作压力 Work pressure (Mpa)	1.0	1.0
最高压力 Maximum pressure (Mpa)	1.2	1.2
振动 Vibration (mm/s)	28	28
噪声 Noise dB (A)	72	75
允许环境温度 Allowable ambient temperature (°C)	-40~65	-40~65
防护等级 Protection level	IP68	IP68
重量 Weight (kg)	32	45
排气口尺寸 Exhaust port size	M22*1.5	M22*1.5
安装尺寸 Installation size (mm)	260*190	330*260
外形尺寸 Dimensions (mm)	495*308*396	495*370*377



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	HVG oil-free live rich machine	
	3.0KW	4.0KW
排气量 Displacement (m ³ /min)	0.26	0.38
额定转速 Rated speed (r/min)	1100	1100
工作压力 Work pressure (Mpa)	1.0	1.0
最高压力 Maximum pressure (Mpa)	1.2	1.2
振动 Vibration (mm/s)	28	28
噪声 Noise dB (A)	75	75
允许环境温度 Allowable ambient temperature (°C)	-40~65	-40~65
防护等级 Protection level	IP68	IP68
重量 Weight (kg)	46	52
排气口尺寸 Exhaust port size	M22*1.5	M22*1.5
安装尺寸 Installation size (mm)	330*260	330*260
外形尺寸 Dimensions (mm)	495*370*377	522*383*385



二级有油活塞空气压缩机 Two-stage oil piston air compressor

机组优势 Preponderance of unit

A.高可靠性

采用二级压缩降低了单级压缩比，从而减少了活塞受到的气体力，运动机构受力减小，通过两级之间的配比平衡，降低了合成往复惯性力，振动减小，提高可靠性，摩擦磨损降低，机械效率更高、更安全。

B.低能耗

缸盖上设置有级间，降低了二级进气温度，减少了二级的压缩功。

C.低噪音

活塞式空压机的噪音主要来源于进、排气阀，耐力通过对进气系统，进排气阀等进行优化设计，使空压机噪音更低。

D.低振动

耐力二级有油活塞空压机，采用一体化设计，使空压机振动降至最低。

A. High reliability

The use of two-stage compression reduces the single-stage compression ratio, thereby reducing the gas force on the piston, and the force on the motion mechanism. Through the balance between the two stages, the composite reciprocating inertia force is reduced, the vibration is reduced, and the reliability is improved. Performance, reduced friction and wear, higher mechanical efficiency and safety.

B. Low energy consumption

The cylinder head is provided with an interstage, which reduces the temperature of the secondary intake air and reduces the compression work of the secondary.

C. Low noise

The noise of the piston type air compressor mainly comes from the intake and exhaust valves. Endurance optimizes the design of the intake system, intake and exhaust valves, etc. to make the air compressor noise lower.

D. Low vibration

The endurance grade two oil piston air compressor adopts an integrated design to minimize the vibration of the air compressor.



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Application range:

- Brake system
- Air suspension system
- Can be a windshield wiper for opening the door



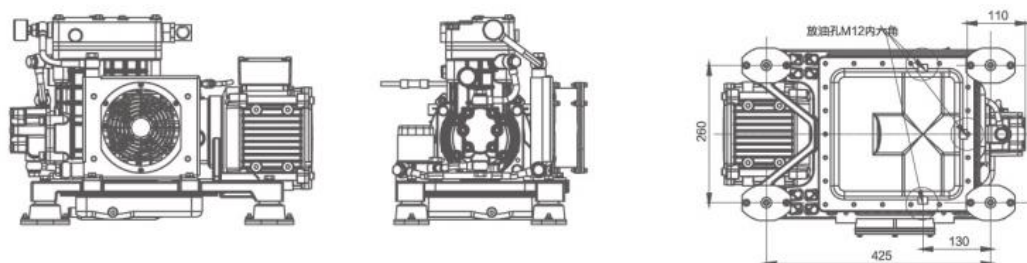
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Demension



	APTO two oil piston air compressor		
	2.2KW	3.0KW	4.0KW
排气量 Exhaust volume (m ³ /min)	0.2	0.26	0.38
额定转速 Rated speed (r/min)	1500	1500	1500
工作压力 Working pressure (Mpa)	1.0	1.0	1.0
最高压力 Maximum pressure (Mpa)	1.2	1.2	1.2
振动 Vibration (mm/s)	28	28	28
噪声 dB Noise dB (A)	73	73	75
允许环境温度 Allowable ambient temperature (°C)	-40-65	-40~65	-40~65
防护等级 Protection level	IP67	IP67	IP67
重量 Weight (kg)	53	53	57
排气口尺寸 Exhaust port size	M22×1.5	M22×1.5	M22×1.5
外形尺寸 Dimensions (mm)	575*357*370	575*357*370	575*357*395

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AZ 系列滑片式空压机 AZ series sliding vane air compressor



AZE系列



AZF系列

创新技术

机组采用整体化设计，将主机、油路系统、进气系统、油气分离系统等设计成一个压缩模块，以提供最好的性能、最高的效率以及最方便的维护保养。模块化设计降低了机组内部的泄漏和压力损失，使机组快速升温避免了油乳化，提高了机组的运行效率和稳定性，并使维护保养更为简便。

Innovative Technology

The unit adopts an integrated design, and the main engine, oil system, air intake system, and oil and gas separation system are designed into a compression module to provide the best performance, the highest efficiency and the most convenient maintenance. The modular design reduces the leakage and pressure loss inside the unit, makes the unit heat up quickly to avoid oil emulsification, improves the operating efficiency and stability of the unit, and makes maintenance easier.



应用范围

可用于以下公路及铁路车辆压缩气体供应，如无轨电车，地铁，有轨电车，机场通勤巴士等。

Scope of application

It can be used for the compressed gas supply of the following road and railway vehicles, such as trolleybuses, subways, trams, and airport commuter buses.

核心优势

高可靠性：低速直接驱动，受力最小，为系统提供可靠的气源

重量最轻：主机结构件均采用铝合金材料铸造

体积最小：采用模组化嵌入新技术，油管、气管内置在主机内

优质空气：自动运行，连续运行模式，输送纯净的压缩空气

静音设计：转速1410r/min且无运动部件的敲击声和气流爆破声

Core advantages

- High reliability: low-speed direct drive, minimum force, providing reliable air source for the system
- The lightest weight: the main engine structural parts are all made of aluminum alloy casting
- Smallest size: adopts modular embedded new technology, oil pipe and air pipe are built in the main engine
- High-quality air: automatic operation, continuous operation mode, Conveying pure compressed air
- Quiet design: speed 1410r/min and no knocking sound of moving parts and air bursting sound

Compressed air application

- Brake system
- Air suspension system
- Can be used for opening doors, windshield wipers,
- Powered by pantograph

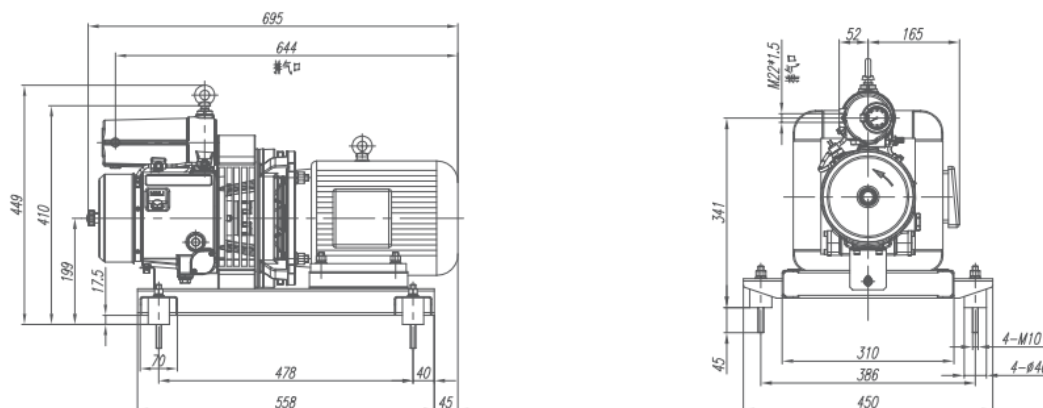


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AZE公交专用机组外形图

Outline drawing of AZE bus dedicated unit



型号 Model	AZE1.5	AZE2.2	AZE3.0	AZE4.0
排气压力 Exhaust pressure (bar)	7~10	7~10	7~10	7~10
排气量 Displacement (L/min)	160	220	320	420
电机功率 Motor Power (kw)	1.5	2.2	3.0	4.0
转速 Rotating speed (rpm)	1390	1410	1410	1410
电源范围 Power range	By customer Request customization			
接口尺寸 Connection size	M22*1.5	M22*1.5	M22*1.5	Rp1/2
重量 (kg) (不含电机) Weight (kg) (Excluding motor)	16	16	16	16

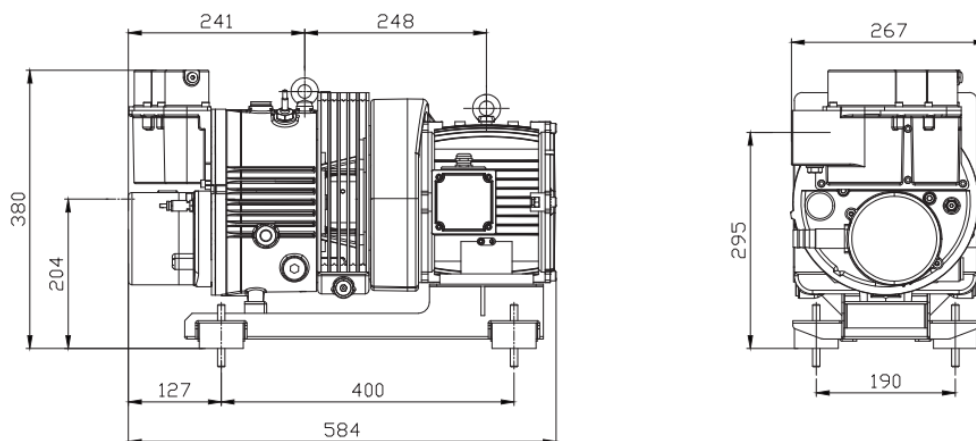


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AZF公交专用机组外形图

Outline drawing of AZF bus dedicated unit

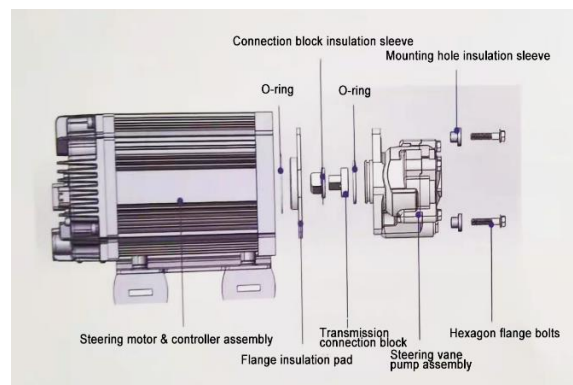


型号 Model	AZF1.5H	AZF2.2H	AZF3.0H	AZF4.0H
排气压力 Exhaust pressure (bar)	7~12	7~12	7~12	7~12
排气量 Displacement (L/min)	160	240	320	380
电机功率 Motor Power (kw)	1.5	2.2	3.0	4.0
转速 Rotating speed (rpm)	1430~3000			
电源范围 Power range	By customer Request customization			
接口尺寸 Connection size	M22*1.5	M22*1.5	M22*1.5	M22*1.5
重量 (kg) (不含电机) Weight (kg) (Excluding motor)	18	18	18	18



6.电动客车转向泵 Electric passenger car steering pump

双源一体式永磁同步电机泵 (EHPS) Dual source integrated permanent magnet synchronous motor pump (EHPS)



产品特点

- 1.结构紧凑，体积小、重量轻；
- 2.结构简单，性价比高，使用寿命长；
- 3.防护等级：IP67及以上，绝缘等级：H；
- 4.噪音小，节能环保；
- 5.功率因素高，自然风冷散热好；
- 6.控制方式简单，过载能力强；
- 7 双源一体机产品应急能力强，切换无延时；

Features

- Compact structure, small size and light weight;
- Simple structure, high cost performance and long service life;
- Protection class: IP67 and above, insulation class: H;
- Low noise, energy saving and environmental protection;
- High power factor, good natural air cooling;
- Simple control mode, strong overload capacity;



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- The dual-source all-in-one product has strong emergency response capability and no delay in switching;

技术参数 Technical data

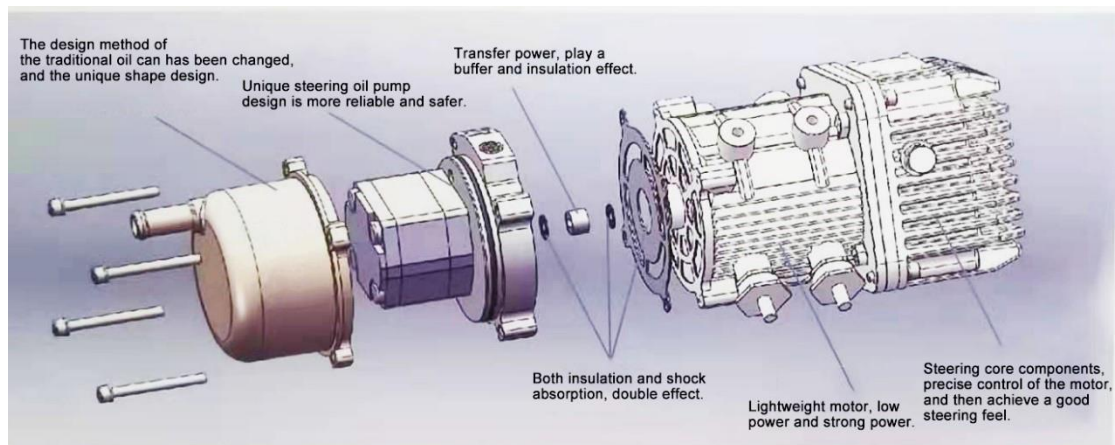
Model	Motor rated power	Motor rated voltage	Motor phase current	Rated torque	Level
EHPS-1010R1.5/89C	1.5KW	237VAC	5A	8.5N·m	Level 10
EHPS-0908R1.5/52	1.5kw	353VAC	6.5A	8.5N·m	Level 10
EHPS-1313R1.5/11A	1.5kw	353VAC	4A	11.9N·m	Level 10
EHPS-1112R1.5/11B	1.5kw	237VAC	8A	11.9N·m	Level 10
EHPS-1313R2.2/23A	2.2kw	353VAC	6.5A	17.5N·m	Level 8
EHPS-1316R2.2/23	2.2kw	237VAC	10A	17.5N·m	Level 8
EHPS-1521R3/21	3kw	353VAC	10A	30N·m	Level 8
EHPS-1416R3/19	3kw	237VAC	12A	30N·m	Level 8
EHPS-1523R5/27A	5kw	353VAC	15A	31.83N·m	Level 8
EHPS-1010R0.5/30	0.5kw	12VDC	50A	5N·m	Level 8
EHPS-1311R1.5/79	1.5kw	240-450VDC	6.5A	11.9N·m	Level 10
EHPS-1417R3/43A (Dual source one machine)	3kw(High pressure side)	353VAC	8A	19.1N·m	Level 8
	1kw (low pressure side)	17VAC	60A	6.5N·m	Level 8



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12V 智能集成泵优势 Advantages of 12V intelligent integrated pump





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Model		Dimensions	Installation size	Weight	Applicable pressure
	1.5kw89#	280*151*175	87*146mm	12kg	Below 11MPa Maximum flow 10L/min
	1.5kw11A	330*200*210	140*160mm	17kg	Below 13MPa Maximum flow 12L/min
	2.2kw	310*200*230	140*160mm	17.5kg	Below 14MPa Maximum flow 13L/min
	3kw	360*230*240	140*190mm	25kg	Below 19MPa Maximum flow 19L/min
	5kw	360*230*240	140*190mm	25kg	20MPa or less Maximum flow 28L/min
	0.5kw	173*130*290	46*86mm	6.5kg	Below 11MPa Maximum flow 10L/min
	1.5kw	334*186*181.5	87*146mm	13kg	Below 13MPa Maximum flow 10L/min
	3kw	430*230*240	140*190mm	23.5kg	Below 19MPa Maximum flow 19L/min

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双源电动转向油泵 Dual source electric steering oil pump

控制策略

控制器同时连接高压、低压蓄电池，且24VDC使能有效。

·高压蓄电池组输出电压小于400VDC时，双源控制器处于低压蓄电池组供电状态，控制器输出100-300VAC三相电源，驱动电动机旋转，可保证电机在满载工况下短时运行；

·当高压蓄电池组输出电压恢复到400VDC以上时，双源控制器处于高压蓄电池组供电状态，控制器输出180-400VAC三相电源，驱动电动机旋转，可保证电机在满载工况下长时运行；低压供电模块无输出，并处于升压状态。

Control Strategy

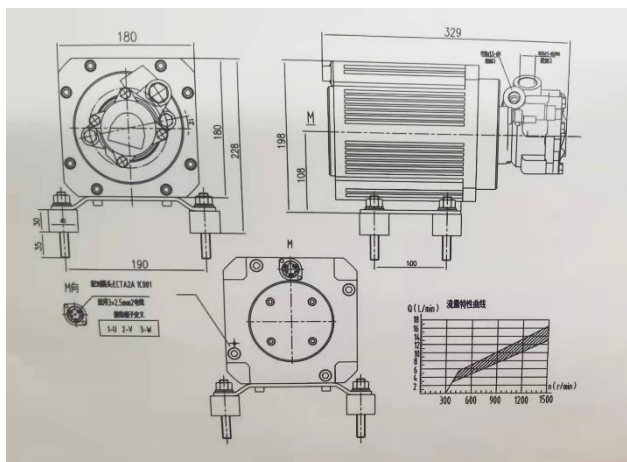
The controller is connected to high-voltage and low-voltage storage groups at the same time, and the 24VDC enable is effective.

- When the output voltage of the high-voltage battery pack is less than 400VDC, the dual-source controller is in the power supply state of the low-voltage battery pack, and the controller outputs 100-300VAC three-phase power to drive the motor to rotate, which can ensure the short-term operation of the motor under full load conditions;
- When the output voltage of the high-voltage battery pack is restored to more than 400VDC, the dual-source controller is in the power supply state of the high-voltage battery pack, and the controller outputs 180-400VAC three-phase power to drive the motor to rotate, which can ensure that the motor runs for a long time under full rescue conditions. ; The low-voltage power supply module has no output and is in a boost state.



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种类 species	项目 Project	参数 Parameter
油泵 Oil pump	流量 Flow	16L/min
	转速范围 Range of rotation	15MPa
	油泵转向 Oil pump rotation	Right
电机 Motor	额定功率 Rated power	3KW
	防护等级 Protection level	IP67
	绝缘等级 Insulation class	H
	重量 Weight	23KG
电机控制 Motor Controller	额定电压 Rated voltage	DC24V/DC540V
	额定功率 Rated power	4KW
	防护等级 Protection level	IP67



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电动转向油泵 Electric steering oil pump

产品用途：

本产品广泛应用于新能源纯电动和混合动力的公交客车的动力转向系统。

Product Usage:

This product is widely used in the power steering system of new energy pure electric and hybrid buses.



性能特点：

油泵与电机采用直联。传动平稳、准确，传动效率高，结构紧凑，便于装配和维护，产品重量轻，噪音小，节能环保，油泵与电机间绝缘保护，极大地提高了产品的安全性。

Performance characteristics:

The oil pump and the motor are directly connected. Smooth and accurate transmission, high transmission efficiency, compact structure, easy assembly and maintenance, light weight, low noise, energy saving and

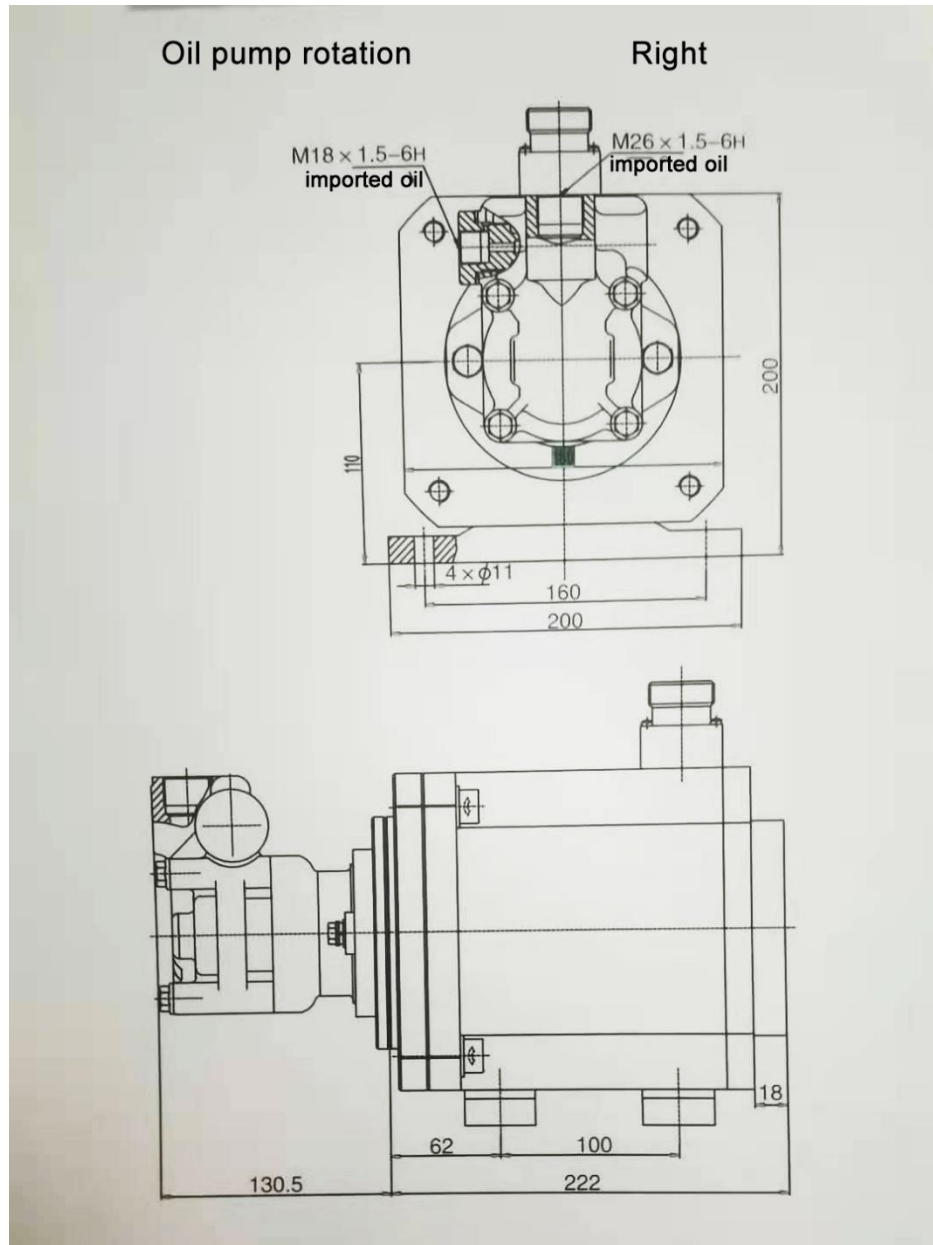
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environmental protection, insulation protection between the oil pump and the motor, greatly improving the safety of the product.





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项目 Project	参数 Parameter
电机功率 Motor Power	4KW
电机电压 Motor voltage	AC380V
电机电流 Motor current	10A
电机转速 Motor speed	1500rpm
油泵流量 Oil pump flow	20L/min
油泵压力 Oil pump pressure	14Mpa
油泵旋向 Oil pump rotation	Right



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应用实例 Applications





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Thank you for your interest and cooperation!

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