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KUS TECHNOLOGY CORPORATION

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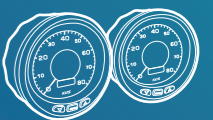
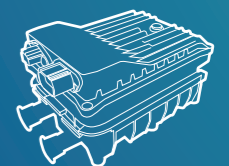
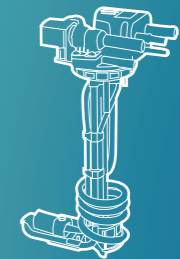
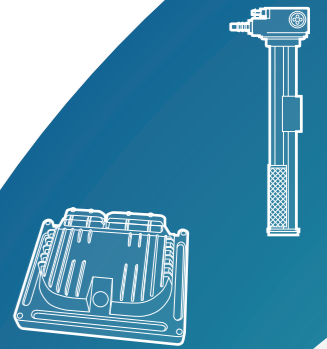
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全球化传感器及 集成方案供应商

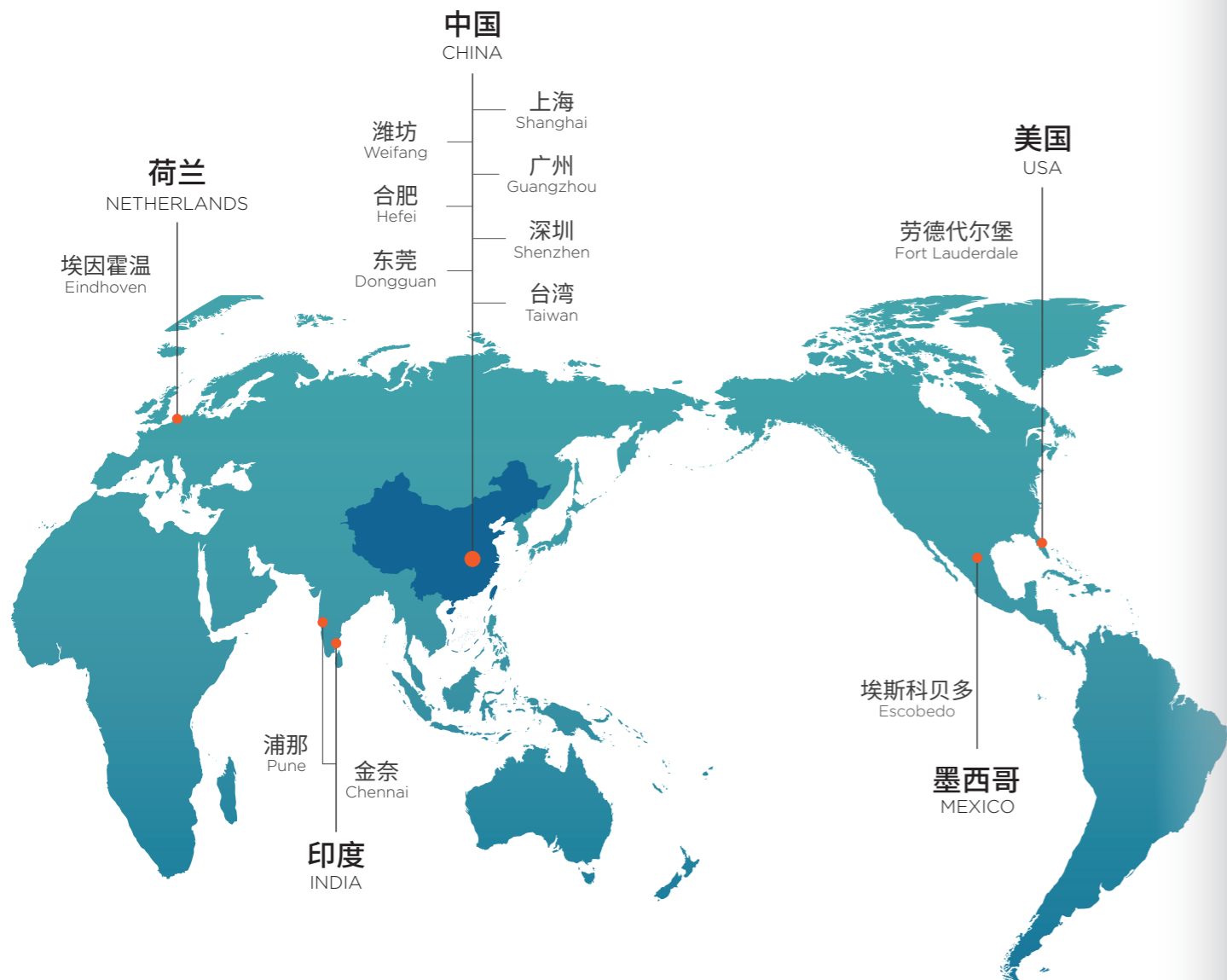
THE GLOBAL SUPPLIER OF SENSORS AND
INTEGRATION SOLUTIONS



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公司简介

Company Profile



正扬科技是一家集研发、生产、销售、服务为一体的全球化汽车零部件供应商。

正扬科技主营产品包括尿素品质/液位传感器、尿素箱总成、VCU/FCU、PTC加热器、水冷机组、冷板、管路、仪表、发动机传感器等，产品广泛应用于商用车、乘用车、非道路机械等多个行业和领域，致力于为运输行业和工业客户提供SCR尾气后处理系统解决方案和新能源汽车系统方案。

正扬科技立足中国，布局全球，在中国、美国、墨西哥、荷兰、印度设有生产基地或子公司，全球员工超4000人，可为全球客户提供专业的产品和优质的服务。

KUS is a global automotive parts supplier integrating R&D, production, sales and service and integrated solutions.

The main products of KUS include AdBlue quality/level sensor, AdBlue tank assembly, VCU/FCU, PTC heater, battery thermal management system, cold plate, pipeline, instrument, engine unit sensor, etc. The products are widely used in commercial vehicles, passenger vehicles, non-road machinery and other industries and fields, is committed to providing SCR exhaust after-treatment system solutions and new energy vehicle system solutions for the transportation industry and industrial customers.

KUS is based in China and has a global presence. It has production bases or subsidiaries in China, the United States, Mexico, the Netherlands, and India. It has more than 4,000 employees worldwide and can provide professional products and high-quality services to customers around the world.



里程碑 Milestones



2004

在东莞成立公司，成为产研一体化企业。
干簧管单管燃油传感器、多功能燃油传感器、尿素液位传感器进入量产。

Established a company in Dongguan and became an integrated enterprise of production, marketing and research. Reed switch single-tube fuel sensor, multi-function fuel sensor, and AdBlue level sensor entered mass production.



2005-2007

通过ISO/TS 16949:2002、ISO 14001:2004、TUV北德 PED&AD2000国际认证

KUS passed ISO/TS 16949:2002, ISO 14001:2004, TUV North Germany PED&AD2000 international certification respectively.



2008

尿素箱总成产品投入市场,由旧厂房迁至新厂房。

KUS AdBlue tank assembly products were put on the market and moved from the old factory to the new factory.



2015

设立东莞国锐，保障集团内部的自动化设备需求，为行业客户提供定制化自动设备服务。

KUS Automation was established to ensure the automation equipment needs within the group and also provide customized automation equipment services for industry customers.



2013

尿素品质传感器和高精度液位传感器投入市场

AdBlue quality sensor and high-precision liquid level sensor are put on the market.



2010

“KUS”品牌推向市场，尿素喷射系统配件产品投入市场

“KUS” brand was launched on the market, and AdBlue injection system accessories products were launched on the market.



2016

新设KUS印度和KUS欧洲子公司，为客户提供高效的在地化服务。

Newly established KUS India and KUS Europe to provide customers with efficient localized services.



2017

成立KUS合肥工厂及正钢公司；尿素箱集成方案投入市场；成为东莞市名誉倍增企业。

KUS Hefei Factory and Zhenggang Company was established; the AdBlue tank integration solution was put into the market; became a reputation doubled enterprise.



2019

设立墨西哥工厂，拓展全球市场，提供尿素箱总成的产品解决方案。

Set up a factory in Mexico to expand the global market and provide product solutions for AdBlue tank assembly.



2023

新建欧洲工厂并设立上海研发中心，加快全球化、在地化服务。

Build a new European factory and set up a Shanghai R&D center to accelerate globalization and localization of services.



2022

东莞总部三期工厂完工；在欧洲购置工厂用地，并设立KUS Americas、深圳分公司、广州分公司、东莞正扬环境。

The third-phase factory of Dongguan headquarters was completed; factory land was purchased in Europe, and KUS Americas, Shenzhen Branch, Guangzhou Branch, and Dongguan Zhengyang Environment were established.



2020

设立山东潍坊工厂；墨西哥工厂投产；扩建印度二厂。

The Weifang factory in Shandong was established; the Mexican factory was put into operation; the second factory in India was expanded.

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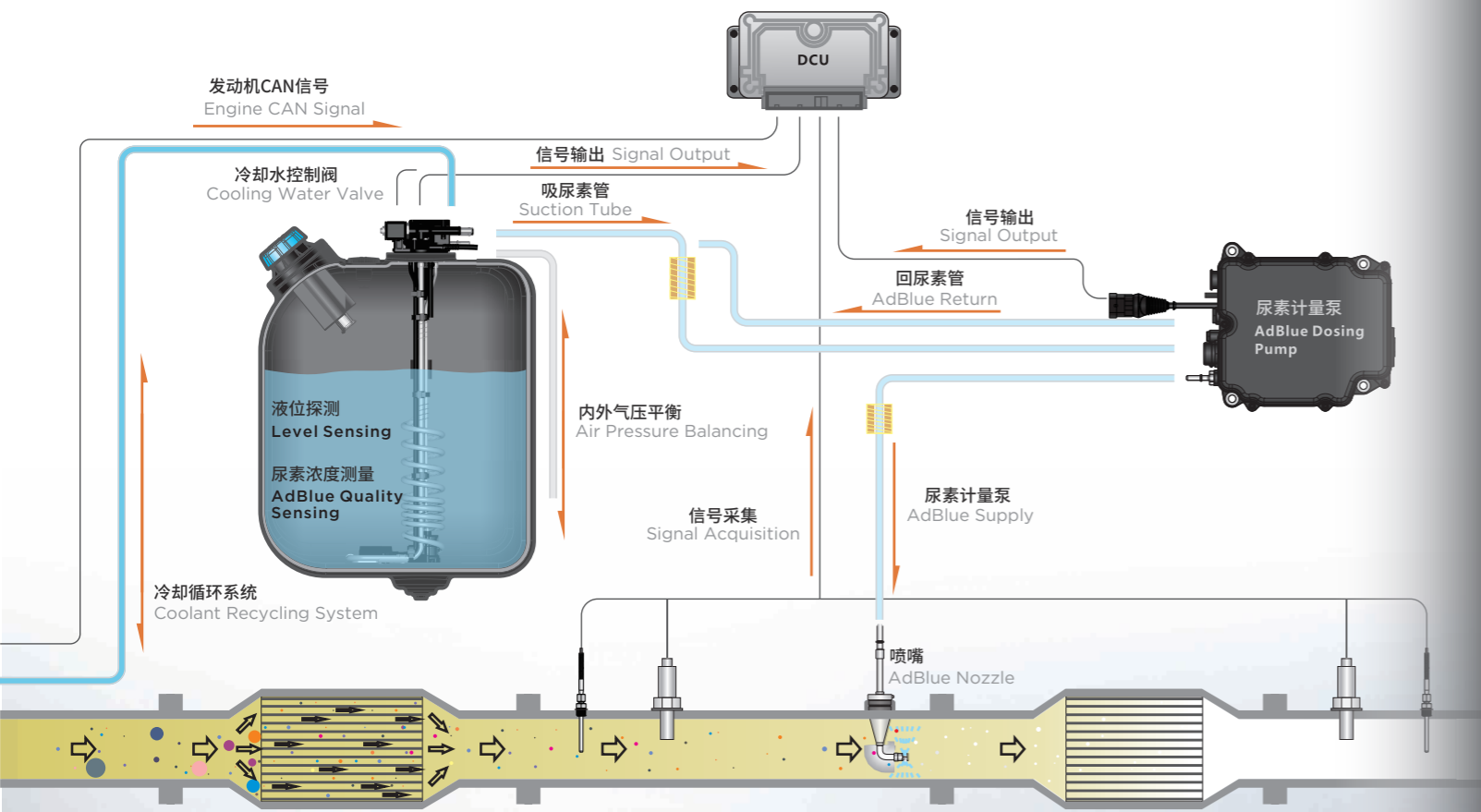
CHAPTER

SCR系统应用

SCR System Application

为减少柴油机尾气中有害气体的排放，目前国际上广泛采用SCR（选择性催化还原）尾气处理技术。SCR系统原理是利用车用尿素水溶液分解出的氨气与氮氧化物NOx 进行反应，生成无污染的氮气（N₂）和水（H₂O）。

SCR (Selective Catalytic Reduction) exhaust treatment system is adopted worldwide to reduce air pollution and emissions from vehicles. The principle of the SCR system is to use the ammonia gas decomposed from the vehicle's urea aqueous solution to react with nitrogen oxides NOx to generate non-polluting nitrogen (N₂) and water (H₂O).



CHAPTER

尿素品质传感器

AdBlue Quality Sensors

正扬科技的尿素传感器广泛应用于各种道路车辆和非道路机械的SCR系统中。

尿素品质传感器可实时监控尿素溶液的品质（浓度），并能及时提醒用户尿素箱内的尿素浓度是否有异常，以确保车辆尾气排放符合欧六及更严格的排放法规要求。

正扬科技尿素传感器提供多种功能集成的解决方案：尿素浓度探测、液位测量、冷却水循环加热、温度测量、吸/回尿素、尿素过滤、冷却水电磁阀控制（选配）等。公司可按客户的要求定制尿素传感器，以适用于全球各种不同气候条件下的工作环境。

The AdBlue sensor of KUS is widely used in the SCR system of various road vehicles and non-road machinery.

The AdBlue quality sensor can accurately monitor the concentration and quality of the AdBlue solution, and alert the user if the AdBlue concentration with deviation or any contaminated fluids in the tank. To ensure the vehicle emissions can comply with Euro VI and more stringent emission laws and regulations.

KUS AdBlue sensor provides multiple functional integrated solutions: AdBlue concentration detection, liquid level measurement, cooling water circulation heating, temperature measurement, suction/return AdBlue, AdBlue filtration, cooling water solenoid valve control (optional), etc. The company can also customize AdBlue sensors according to customer requirements, which are suitable for working environments under various climate conditions around the world.



● 测量原理：超声波式
Measuring principle: Ultrasonic

正扬科技产品优势

- 精确的信号输出
- 输出信号稳定性和连续性好
- 可经受严苛的环境考验
- 集多种功能于一体
- 不同长度可选择
- 不同接头可选择
- 不同形状可定制

Advantages:

- Signal output with high precision
- Stable and continuous output signal
- Resistant to environmental variations
- Integrated key features
- Selectable length subject to users' application
- Options of different electronic connectors
- Custom design formation optimized for different tank design

CHAPTER

尿素品质传感器

AdBlue Quality Sensors

超声波探测原理

Principle of Ultrasonic Wave

超声波在不同的介质、不同浓度液体中有不一样的传播速度；利用超声波在液体中固定距离往返时间，比较该时间的差异，可以得知该液体浓度差异值。

Ultrasonic wave in different medium, different concentration of liquid has different propagation speed; By using ultrasonic wave to travel a fixed distance in the liquid and comparing the difference of the time, the difference value of the concentration of the liquid can be obtained.

信号: CAN(SAE J1939)

精度: $\pm 2\%$ (25%-36%尿素浓度)

$\pm 3\%$ (<25%尿素浓度, >36%尿素浓度)

分辨率: 0.25%尿素浓度

Signal: CAN(SAE J1939)

Accuracy: $\pm 2\%$ (25%-36%AdBlue)

$\pm 3\%$ (<25%AdBlue, >36%AdBlue)

Resolution: 0.25%AdBlue

带阀尿素品质传感器

AdBlue Quality Sensor with Valve

- 集成阀传感器，减少整个SCR的管路连接，降低密封泄漏风险的同时也降低成本；
- 减少冷却水阀对安装空间的要求，布置简单；
- 断水阀维修保养更简单方便，可单独拆卸；
- Sensor head with a valve integrated, which can reduce the SCR pipeline connection, lower the leakage risk and also save costs.
- Reduce the installation space of the cooling water valve with simple layout.
- The water valve maintenance is easier and more convenient.

螺旋形尿素品质传感器

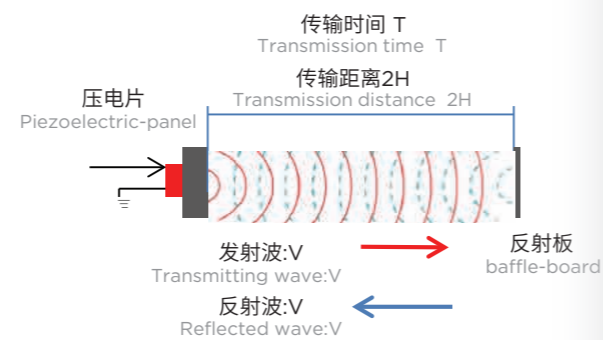
Spiral Shape AdBlue Quality Sensors

标准尿素溶液在-11°C左右时易结冰，影响SCR系统的正常工作。因此，如在严寒地区使用，我们推荐螺旋形尿素传感器，此类传感器加热迅速，可在短时间内解冻尿素，使SCR系统快速进入正常工作状态。

与尿素箱装配方式：卡口、螺丝固定；齿形卡口安装，头部可带空气管通气（选配）

AdBlue solution will be frozen at temperature below -11°C. It will affect the operation of the SCR system. Hence, we recommend the spiral shape AdBlue sensor for cold region operation. The spiral design could provide better heating efficiency to thaw frozen AdBlue solution, and allow the SCR system to work normally within specific time after engine cold start.

Assembly with AdBlue tank: bayonet, screw fixed; Toothed bayonet installation, head can be equipped with air pipe ventilation (optional).



CHAPTER

尿素品质传感器

AdBlue Quality Sensors

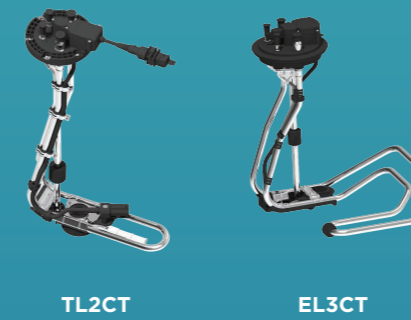
L形尿素品质传感器

L-shape AdBlue Quality Sensors

L形尿素传感器适用于大容积或呈L形箱体，可有效增加尿素溶液的加热面积，加热迅速，可在短时间内解冻尿素，受热均衡，使车辆在寒冷地区可长时间稳定的正常工作。

与尿素箱的装配方式：SAE E-ring锁紧及齿形卡口等多种装配方式，同时头部可带空气管通气（选配）。

The L-shape AdBlue Quality Sensors is suitable for large-volume or L-shaped boxes, which can effectively increase the heating area of the AdBlue solution. It can be heated quickly and can thaw AdBlue in a short time, the heating is balanced, so that the vehicle can be used for a long time in cold areas. Stable and normal work. A variety of mounting methods including bayonet, SAE screw pattern with air vent or non-vented respectively.



非加热款尿素品质传感器

AdBlue Quality Sensors without Heating Function

在温暖地区，SCR系统无需加热，传感器只需提供浓度、液位探测、吸回尿素功能。CNAAT传感器方案，接头与塑胶头集成一体式，是非加热款尿素品质传感器中成本较低的产品。

与尿素箱装配方式为齿形卡口安装，头部可带空气管通气（选配）。

In warm area, SCR system does not require heating function, the AdBlue sensors only have the features of level indication and integrated suction/return for AdBlue. CNAAT sensor solution, the connector is integrated with a plastic head, which is a low-cost product among non-heating AdBlue quality sensors. A variety of mounting methods including bayonet with air vent or non-vented respectively.



尿素品质传感器（大卡口）

AdBlue Quality Sensors (Large Bayonet)

尿素传感器大卡口结构是目前尿素箱安装传感器比较常用的一种方式，也是一种标准的安装方式，具有拆装方便、互换性强的特点，广泛运用于容量较大、结构空间宽松的尿素箱总成上。

The large bayonet structure of the AdBlue sensor is currently a common way to install sensors in AdBlue tanks, and it is also a standard installation method. It has the characteristics of easy disassembly and assembly and strong interchangeability, and is widely used in AdBlue tank assemblies with large capacity and loose structural space.

非道路尿素品质传感器

Non-road AdBlue Quality Sensors

非道路尿素品质传感器采用电磁感应原理进行尿素液位探测，广泛用于国内外知名卡车的SCR系统，输出信号的精度高，稳定性和连续性好。产品结构简洁牢靠，移动部件仅有浮筒，耐磨损，使用寿命长，加热效果好。

The non-road AdBlue quality sensor uses the principle of electromagnetic induction to detect AdBlue level. It is widely used in SCR systems of well-known trucks at home and abroad. The output signal has high accuracy, stability and continuity. The product structure is simple and reliable. Only the float is a moving part. It is wear-resistant, has a long service life and has good heating effect.

- 多种功能集成于一体
- 液位探测、报警
- 冷却水循环加热
- 吸、回尿素溶液
- 检测尿素浓度
- 温度探测
- 尿素过滤
- Multiple functions integrated into one
- Liquid level detection and alarm
- Cooling water circulation heating
- Suction and return of AdBlue solution
- Test AdBlue concentration
- Temperature detection
- AdBlue filtration

技术参数 Technical Parameters			
产品型号 Product number	RD7CT	RDAAT	RS9AT
长度范围 length range	285-600mm	285-600mm	285-900mm
	长度范围可根据客户要求定制 Length range can be customized according to customer requirements		
主要材质 Main material	尼龙、橡胶、不锈钢 Nylon, rubber, stainless steel		
安装方式 Installation method	卡箍式，装卸方便 Clamp type, easy to install and remove		
连接器 Connector	可选配Amp、delphi、Tyco或其它品牌 Optional Amp, delphi, Tyco or other brands		
输出信息 Output information	电阻信号、电压信号 Resistance signal, voltage signal		
额定功率 Rated power	125mW		
精度范围 Accuracy range	10-40mm		
工作温度 Operating temperature	-40°C-85°C		
防护等级 Protection level	IP67		

CHAPTER 尿素品质传感器 AdBlue Quality Sensors



RD7CT

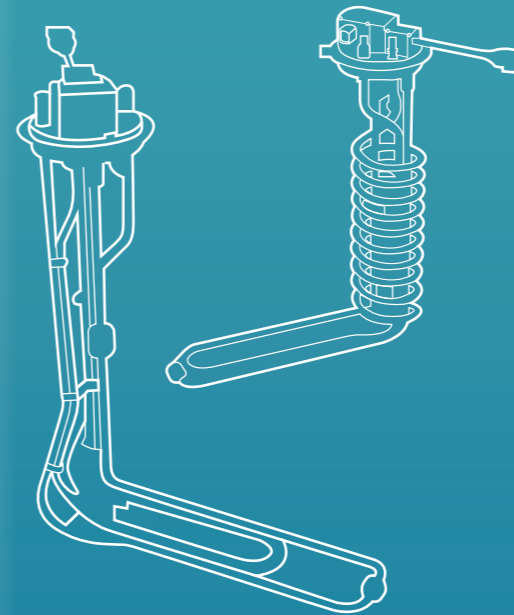


RDAAT



RS9AT

CHAPTER 尿素品质传感器 AdBlue Quality Sensors



PTC+冷却水加热 (欧七/国七电加热产品)

PTC+Cooling Water Heating (Euro-7/China-7 Electric Heating Product)

1. 液位探测
2. 温度探测
3. 吸回尿素
4. 尿素过滤
5. 加热解冻尿素 (PTC电加热+发动机冷却水混合加热)
6. 检测尿素浓度 (超声波探测)

1. AdBlue level measurement
2. AdBlue temperature measurement
3. AdBlue pick up & return
4. AdBlue filtering
5. Heating and thawing AdBlue (PTC electric heating + engine cooling water mixed heating)
6. Detection of AdBlue concentration (ultrasonic detection)

传感器长度: L=300-750 mm (可按客户箱体匹配)

Sensor length: L=300-750 mm (can be matched according to customer tank)

安装方式: E-ring ø125mm, 大小卡口

Installation method: E-ring ø125mm, Size bayonet

电子规格: 电压 24-48 V, 电流 16-32A, 功率 600-1500W

Electronic Specifications: Voltage: 24-48 V, electric current 16-32A, power 600-1500W

常规水加热+箱体集成PTC加热 (欧七/国七电加热产品)

Conventional Water Heating + Cabinet Integrated PTC Heating (Euro-7/China-7 Electric Heating Product)

1. 尿素存储
2. 液位探测
3. 温度探测
4. 吸回尿素
5. 尿素过滤
6. 加热解冻尿素 (PTC水电混合加热)
7. 检测尿素浓度 (超声波探测)

1. AdBlue storage
2. AdBlue level measurement
3. AdBlue temperature measurement
4. AdBlue pick up & return
5. AdBlue filtering
6. Heating and thawing AdBlue (PTC water and electricity mixed heating)
7. Detection of AdBlue concentration (ultrasonic detection)

箱子尺寸: 20L-100L

Box size: 20L-100L

安装方式: 支架, 底盘固定

Installation method: bracket, chassis fixed

电子规格: 电压 24-48 V, 电流 16-32A, 功率 600-1500W

Electronic Specifications: Voltage: 24-48 V, electric current 16-32A, power 600-1500W



CHAPTER

尿素箱总成

AdBlue Tank Assemblies

尿素箱总成

AdBlue Tank Assemblies

尿素箱选用工程塑料PE，产品强度高，耐碱性液体腐蚀。根据车辆的安装要求及客户的需求，我们可以定制不同形状、不同容积的尿素箱。

The AdBlue tank is made of engineering plastic PE, which has high product strength and corrosion resistance to alkaline liquid. According to various vehicle mounting requirements, we offer different shape and cubage tanks for options.

- 丰富的尿素箱总成研发设计经验;
- 完善的尿素箱测试能力;
- 快速的交付及充足的产能;
- 满足ISO 22241标准的自动/手动/限位/加注控制要求。

- Rich experience in R&D and design of AdBlue tank assembly;
- Perfect AdBlue tank testing capability;
- Fast delivery and sufficient production capacity;
- Meet ISO 22241 standard automatic/manual/limit/filling control requirements.

正扬科技提供3L-500L尿素箱供客户选择，尿素箱的形状及容积可定制。

We supply 3L-500L AdBlue tanks. Tank size and shape can be customized.

正扬科技尿素箱集多功能于一体：尿素储存、平衡箱体内外气压、手动加注、自动加注控制和加注防错等功能。可根据需求选择不同的传感器进行适配，应用于各种严苛的工作环境。

KUS AdBlue tank functions include: AdBlue storage, pressure balance, manual and automatic refilling control, refilling nozzle control.

Sensors are matched with different tanks to serve in various application and severe environments.

延长加注型尿素箱

Extended Filling Type AdBlue Tank

- 延长加注口方便安装在位置复杂的空间;
- 可根据客户需求集成尿素泵;
- 产品广泛应用于轻型车辆、SUV和皮卡;

Tanks designs for integrating AdBlue supply modules are available upon request.

Also we can integrate AdBlue pump to meet customers requires.

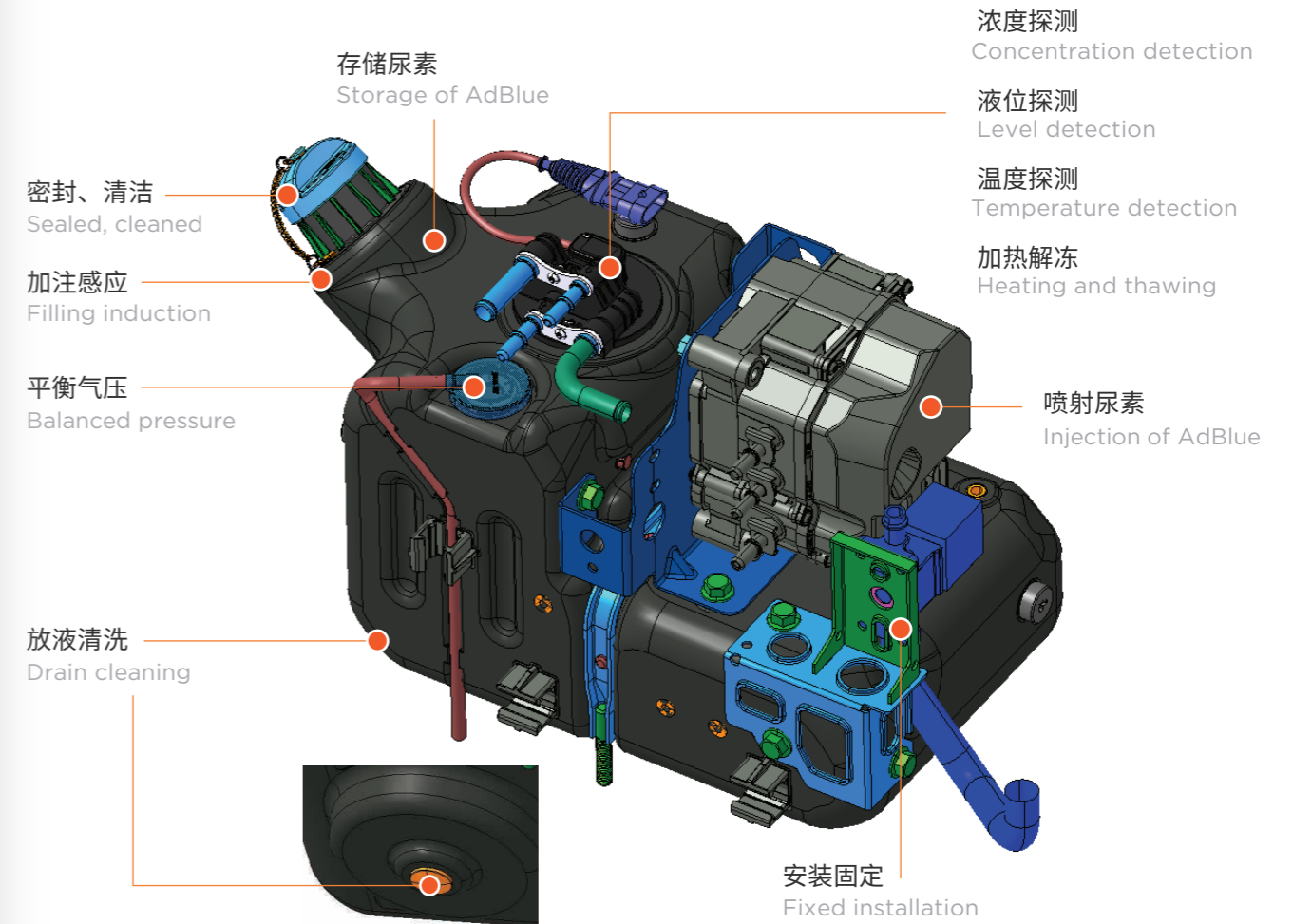
These tanks are widely applied to light duty vehicles, SUVs and pickup trucks.



CHAPTER

尿素箱总成

AdBlue Tank Assemblies



正扬科技尿素箱可以实现集成多种成型工艺中复杂多样的镶件设计。

KUS AdBlue tank can realize the integration of complex and diverse insert design in various molding processes.

尿素箱体参数 AdBlue Tank Parameters		
储存介质 Storage medium	尿素 AdBlue	腐蚀性、低温结晶 Corrosive, low temperature crystallization
材质 Material	PE	强度高、耐腐蚀 High strength and corrosion resistance
颜色 Colour	黑色 Black	阻碍藻类滋生、尿素分解 Prevent algae growth and AdBlue decomposition
制作工艺 Craftsmanship	吹塑/滚塑 Blow molding/ Rotational molding	吹塑产能高; 滚塑成型形状复杂 Blow molding production capacity is high; Rotational molding is complex in shape.

尿素箱总成选配功能

AdBlue Tank Assemblies

集成阀

Integrated Solenoid Valve



电磁阀
Solenoid Valve

箱体支架

With Bracket



集成滤网

Integrated Filter



过滤网
Filter

项目

压敏电阻: DC24V(≤20.4V)/ DC12V(≤10.2V)
最大开阀压差: ≥2.5Bar
电压: DC24V/ DC12V
功率: 11.5W(DC12V)/ 13W(DC12V)
主要材质: 铜/不锈钢
流量: 15L/min(±10%), 压差1Bar
流体中允许的最大颗粒度: 200μm
工作压力: 0-5Bar
内外泄漏: ≤2cc/min air,测试压力AT 7Bar ±5%
环境温度: -40-85°C
流体温度: -40-90°C

Project

MOV: DC24V(≤20.4V)/ DC12V(≤10.2V)
MOPD: ≥2.5Bar
Voltage: DC24V/ DC12V
Power: 11.5W(DC12V)/ 13W(DC12V)
Main material: Copper/stainless steel
Flow: 15L/min(±10%), Pressure difference 1Bar
Maximum particle size allowed in the fluid: 200μm
Work pressure: 0-5Bar
Internal and external leakage: ≤2cc/min air, Test pressureAT 7Bar ±5%
Ambient temperature: -40-85°C
Fluid temperature: -40-90°C

尿素箱盖

Filler Cap



延长加注口

Extended Filler Neck



电控喷嘴

Electronically Controlled Nozzle



集成泵

Integrated Pump



磁性加注口

Inlet Adapter



通气阀

Vent Valve



放液口螺丝

Drain Screw



尿素喷嘴

AdBlue Nozzle



CHAPTER

尿素喷嘴

AdBlue Nozzles

喷嘴

Nozzle

正扬科技拥有专业的研发团队和生产设备，可协助客户开发各种应用的尿素喷嘴。

KUS is equipped with professional R&D team and manufacturing capabilities. KUS can assist customers to develop AdBlue nozzles for different applications.

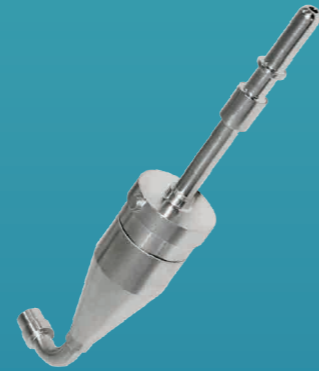
- 丰富的喷嘴设计经验
- 高效制作样品
- 全面的验证能力
- 资深的技术人员
- 专业的结构及性能优化能力
- 专业的成本优化能力

- Rich nozzle design experience
- Efficient production of samples
- Comprehensive verification capability
- Senior technician
- Professional structure and performance optimization capabilities
- Professional cost optimization

各类制作工艺：制管、弯管、冲压、CNC、焊接、钎焊等
快速的生产和交货能力
丰富的喷嘴生产经验及完整的产线

Various production processes: pipe making, bending, stamping, CNC, welding, brazing, etc.
Fast production and delivery capabilities
Rich nozzle production experience and complete production line

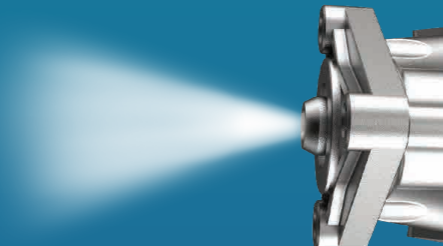
技术参数 Technical Parameter	
孔数 Hole Number	4pcs
孔径 Hole Diameter	Φ0.5
喷射角度 Spray Angle	≈33°
雾化粒径 Droplet Diameter	SMD (D3.2) ≤ 40um



CHAPTER

尿素喷嘴

AdBlue Nozzles



电控喷嘴

Electronically Controlled Nozzle

规格参数

- 额定电压：12V/24V
- 系统压力：9Bar
- 频率：10Hz
- 喷雾角度：≈30°
- 雾化粒径：SMD(D3,2)<60um
- 工作温度：-40°C-120°C
- 流量范围：100g/h-6800g/h
- 尿素管及冷却水管接头直径为Φ7.89和Φ9.49

Specification

- Normal voltage: 12V/24V
- System pressure: 9Bar
- Frequency: 10Hz
- Spraying angle: ≈30°
- Atomized particle size: SMD(D3,2)<60um
- Working temperature: -40°C-120°C
- Flow range: 100g/h-6800g/h
- The diameter of the urea pipe and the cooling water pipe joint are Φ7.89 and Φ9.49

环形冷却水通道，均匀冷却

Annular cooling water channel, uniform cooling

良好的喷雾效果

Favorable spraying effect

参数Parameter	值Value	备注Remarks
喷孔数Nozzle holes	3	
喷孔间的角度 Nozzle angle	120°	
锥形雾化 Conical atomization (α)	30°	尿素压力900kPa, 环境温度21±2°C AdBlue pressure 900kPa, ambient temperature 21 ±2°C
径向偏差角 Radial deviation angle (δ)	--	
轴向偏差角 Axial deviation angle (γ)	--	
雾化粒径 Atomization particle size (D32)	60um	去离子水，压力900kPa Deionized water, pressure 900kPa

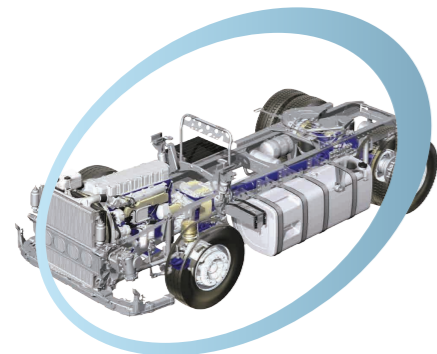
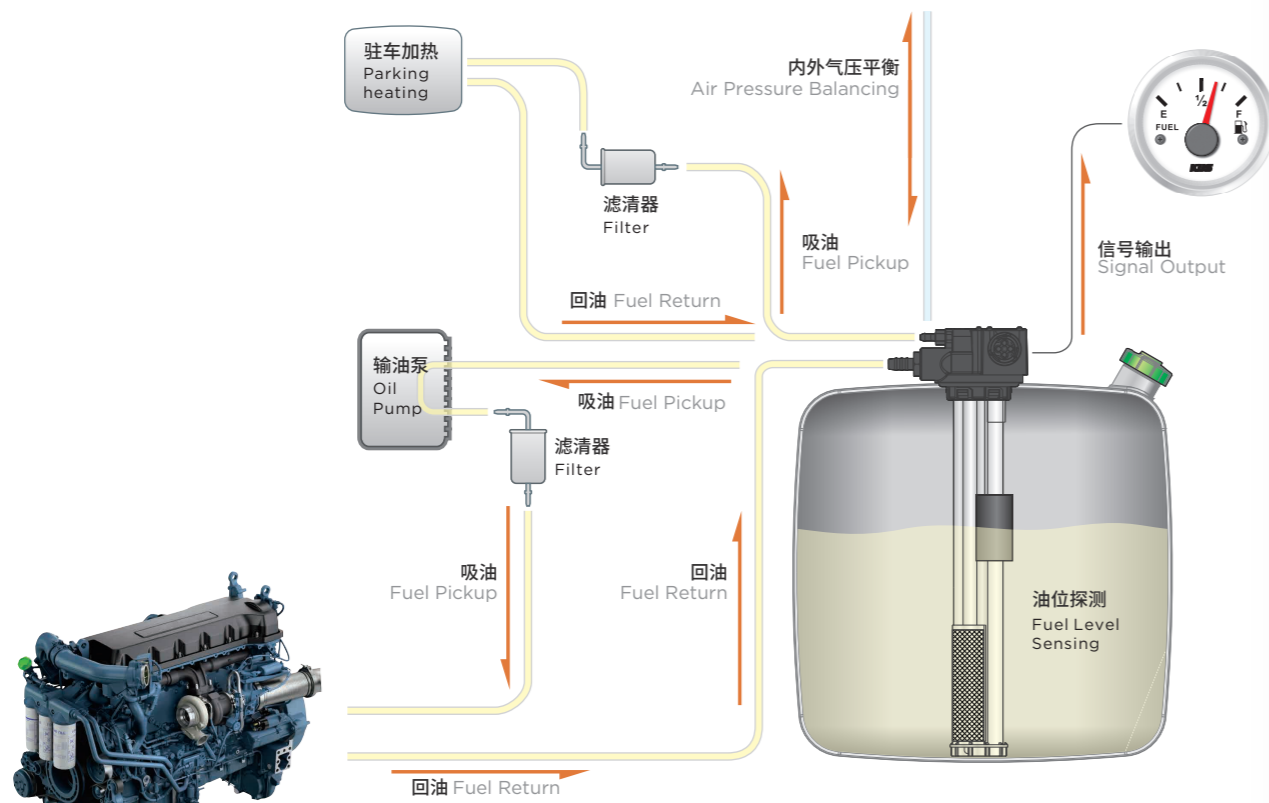
CHAPTER

燃油系统应用

Fuel System Application

正扬科技现有多种油水位探测的解决方案，可快速地为客户提供定制化方案。正扬科技还提供各类发动机转速及压力传感器，可配合正扬科技同类仪表一起工作。

KUS has a variety of oil and water level detection solutions, which can quickly provide customers with customized solutions. KUS also provides various engine speed and pressure sensors, which can work with similar instruments of KUS.



CHAPTER

燃油液位传感器

Fuel Level Sensors

多管燃油传感器

Multi-Tube Fuel Sensor

多管燃油传感器主要用于卡车和巴士，除测量油位功能外，还带有引擎进/回油路、驻车加热系统进/回油路，并装有空气阀以平衡油箱内外的压力，防止侧翻漏油。

- 结构选型：铝合金基座组装金属接头/塑胶头注塑一体成型/管路一体成型
- 主体材料：铝合金ADC12或者PA66+GF30
- 装配方式：齿形卡口旋入，装卸十分方便
- 信号输出：电阻、电压、电流或CAN总线信号

Multi-tube fuel sensors are mainly used in trucks and buses. In addition to measuring oil level, they are equipped with engine inlet/outlet, parking heating system inlet/outlet, and air valves to balance the pressure inside and outside the tank and prevent oil leakage from rolling over.

- Structural selection: aluminum alloy base assembly metal joints/plastic head injection molding integrated molding/piping integrated molding
- Main material: Aluminum alloy ADC12 or PA66+GF30
- Installation: Bayonet twisted for easy assembly.
- Signal output: Resistance, voltage, current or CAN-BUS signal.

多管燃油电容高精度传感器—无线/有线

Multi-Tube High Precision Capacitive Fuel Sensor - Wireless/Wired

此系列传感器除了继承上述多管燃油传感器的产品特性外，同时还具备的功能特点有：

- 传感器可与汽车可无线/有线连接；
- 2%的高探测精度和≤1mm的分辨率。

In addition to the characteristics of above mentioned Multi-Tube Fuel Sensor, this series of capacitance sensor functions are:

- it can link to vehicle by wireless or wired;
- high accuracy of 2% and high resolution of ≤1mm.



SAFT

KPDL



KAD

SAPK



KPDW-有线
KPDW-Wired

KPDW-无线
KPDW-Wireless

燃油加热传感器

Heating Fuel Sensors

采用PTC加热或发动机冷却液循环加热，加热效率高，可自动控温；燃烧效率可有效提高，同时降低尾气排放的污染。

KUS fuel heating sensor adopts PTC heating or engine coolant circulation heating, which has high heating efficiency and can automatically control temperature; the combustion efficiency can be effectively improved, and the pollution of exhaust emissions can be reduced at the same time.



高精度传感器

High Precision Sensors

集成多种功能，包含液位测量、发动机及车辆加热系统的吸回油、平衡箱内与大气间的压力、温度报警等。

- 主体材料：进口铝合金
- 分辨率：0.1mm
- 精度：2mm
- 测量原理：AMR, 电容式
- 信号输出：电阻、电压、CAN、SENT、RS-232 或 RS-485

The sensors combine Multi-functions, including measuring liquid level, suction/return pipes for engine and vehicle heating system, balancing the pressure of the tank and the atmosphere, temperature alarm, etc.

- Main material: High quality aluminum alloy
- Resolution: 0.1mm
- Accuracy: 2mm
- Measuring principle: AMR, Capacitance
- Signal output: Resistance, Voltage, CAN, SENT, RS-232, RS-485.

CLS电容传感器是以燃油的上升或降低引起电容值的变化，来连续检测油位的水平高度；产品具有精度高、稳定性强、使用寿命长的特性。

- 传感器长度：300mm-1500mm，可客制化；
- 装配方式：SAE标准5孔，其它的装配方式。

The Capacitance Level Sensor (CLS), is used to continuously detect fuel level by measuring the capacitance variations as the level changes, it has the characteristics of high precision, strong stability and long service life.

- Sensor length range is 300mm-1500mm and can be customized.
- Installation: SAE standard 5 holes flange, other installation methods are available.

CHAPTER 燃油液位传感器 Fuel Level Sensors



SPEHH

SAH



KAB

SADR



CLS2

CLS4

CHAPTER 燃油液位传感器 Fuel Level Sensors

不锈钢传感器

Sensors Of Stainless Steel Type

TN系列主要应用于轻型卡车、工程机械、游艇等，集液位探测、吸油、回油、过滤功能为一体，减少油箱开孔数量，降低泄露风险。

- 主体材料：不锈钢
- 装配方式：可选用SAE标准5孔法兰、6孔法兰，亦可选用齿形卡口旋入
- 信号输出：电阻、电压、电流或CAN总线信号

TN series are mainly used for light trucks, construction machines, yachts, etc. Besides measuring the level, an additional suction/return pipe or air ventilation for engine can be customized.

- Main material: Stainless steel
- Installation: SAE standard 5 holes flange or 6 holes flange, bayonet twisted is also available.
- Signal output: Resistance, voltage, current or CAN-BUS signal.



TN

单管传感器类

Single-tube Sensor Types

S5和S3系列广泛应用于各类油箱、水箱以及化学药剂箱等箱体。结构简单，从4英寸开始，每隔半英寸均有一款标准长度供您选择。

- 主体材料：不锈钢316、304
- 装配方式：SAE标准五孔装配或BSP，NPT螺纹装配

S5 & S3 series are widely used in various fuel, water or chemical tanks. With a simple yet reliable structure, starting from 4 inches, every half inch is a standard length.

- Main material: SS 316 & SS 304
- Installation: SAE standard 5 holes, BSP or NPT thread

PS5 & PS5D传感器广泛应用于油箱、水箱等箱体。产品具有重量轻，抗振性强的特点。

PS5 & PS5D sensors are widely used in fuel tanks, water tanks and other liquid tanks. The sensor has the characteristics of light weight and strong vibration resistance.



PS5D

PS5

S5

S3

油箱盖

Fuel Tank Caps

燃油箱盖具有自动调节油箱内外压力平衡的功能，适合两卡口或三卡口油箱使用。材料可选用工程塑料或金属材料制作。有带锁、带通气和不带通气供选择。

KUS fuel tank caps have the function of balancing the air pressure between the interior and exterior of the tank. The cap can be made out of engineering plastic or metal. The cap can be equipped with a key and lock ventilation and without ventilation based on customer preference.



CHAPTER

燃油液位传感器

Fuel Level Sensors

耐甲醇传感器

Methanol Resistant Sensor

耐甲醇传感器所用零部件的材质均耐甲醇，具有引擎吸液、回液、液位探测、杂质过滤、防静电的功能。

The parts and components used in the methanol-resistant sensor are all methanol-resistant, and have the functions of engine liquid absorption, liquid return, liquid level detection, impurity filtration, and anti-static

- 吸、回管路采用弯管一体成型的结构，降低泄露
- 固定部件使用高强度材料，抗压、抗振
- 滤网主体一体成型，网孔分布均匀，受压不易变形，耐用
- 过滤结构布局合理，使过滤面积增大，吸油回路压力损失小
- 滤网与浮筒可拆装，方便维护

- The suction and return pipeline adopts an integrally formed elbow structure to reduce leakage
- The fixed parts are made of high-strength materials, which are resistant to compression and vibration
- The main body of the filter is integrally formed, the mesh is evenly distributed, it is not easy to deform under pressure, and it is durable
- Reasonable layout of the filter structure increases the filter area and reduces the pressure loss of the oil suction circuit
- The filter screen and buoy can be disassembled for easy maintenance



油泵传感器

Oil Pump Sensor

油泵传感器是一款解冻效率高，产品操作简单，成本较低的加热传感器，传感器采用“压力驱动”解决启动时柴油低温流动性问题，并通过回油余热对油箱内的燃油温度提升。

The oil pump sensor is a heating sensor with high thawing efficiency, simple product operation and low cost. The sensor adopts "pressure drive" to solve the problem of low-temperature fluidity of diesel oil at start-up, and raises the temperature of the fuel in the fuel tank through the residual heat of oil return.

- 利用泵的压力来驱动管路燃油流动，无需再利用能源转换
- “一键式的电控方式”调整工作模式，操作方式简单
- 无需通过不同环境温度加注不同标号柴油，降低使用成本

- Use the pressure of the pump to drive the flow of fuel in the pipeline, eliminating the need to use energy conversion
- "One-button electronic control mode" to adjust the working mode, the operation mode is simple
- There is no need to add different grades of diesel oil at different ambient temperatures, reducing the cost of use



CHAPTER

燃油箱总成

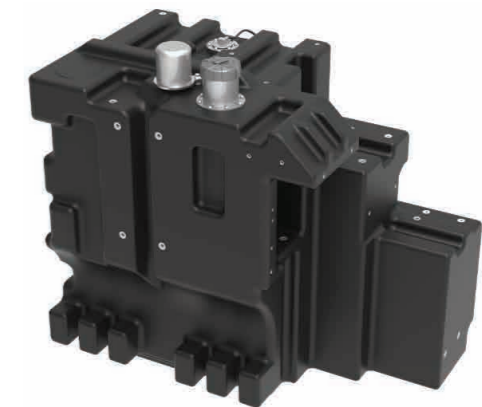
Fuel Tank Assemblies

随着国家对机动车辆性能要求的逐步提高，机动车辆的燃油箱正由铁油箱向塑料油箱方向发展。KUS燃油箱采用PE材质制成，安全可靠，使用寿命长，形状设计自由度高，可以提供箱体、传感器、支架等一整套的集成方案。

With the gradual improvement of the country's performance requirements for motor vehicles, the fuel tank of motor vehicles is developing from iron fuel tank to plastic fuel tank. KUS fuel tank is made of PE material, high safety and reliability, long service life, shape design freedom, can provide a complete set of integrated solutions such as tank, sensor, bracket.



90L



600L

产品优势

重量轻，一体成型，无缝连接
可塑性强：适用于特殊形状
安全性高：优异的耐冲击和强度性能
耐腐蚀性能优异

Product Advantage

Light weight, integrated shape, seamless connection
Strong plasticity: suitable for special shapes
High safety: excellent impact and strength resistance
Excellent corrosion resistance

箱体参数

Cabinet Parameters

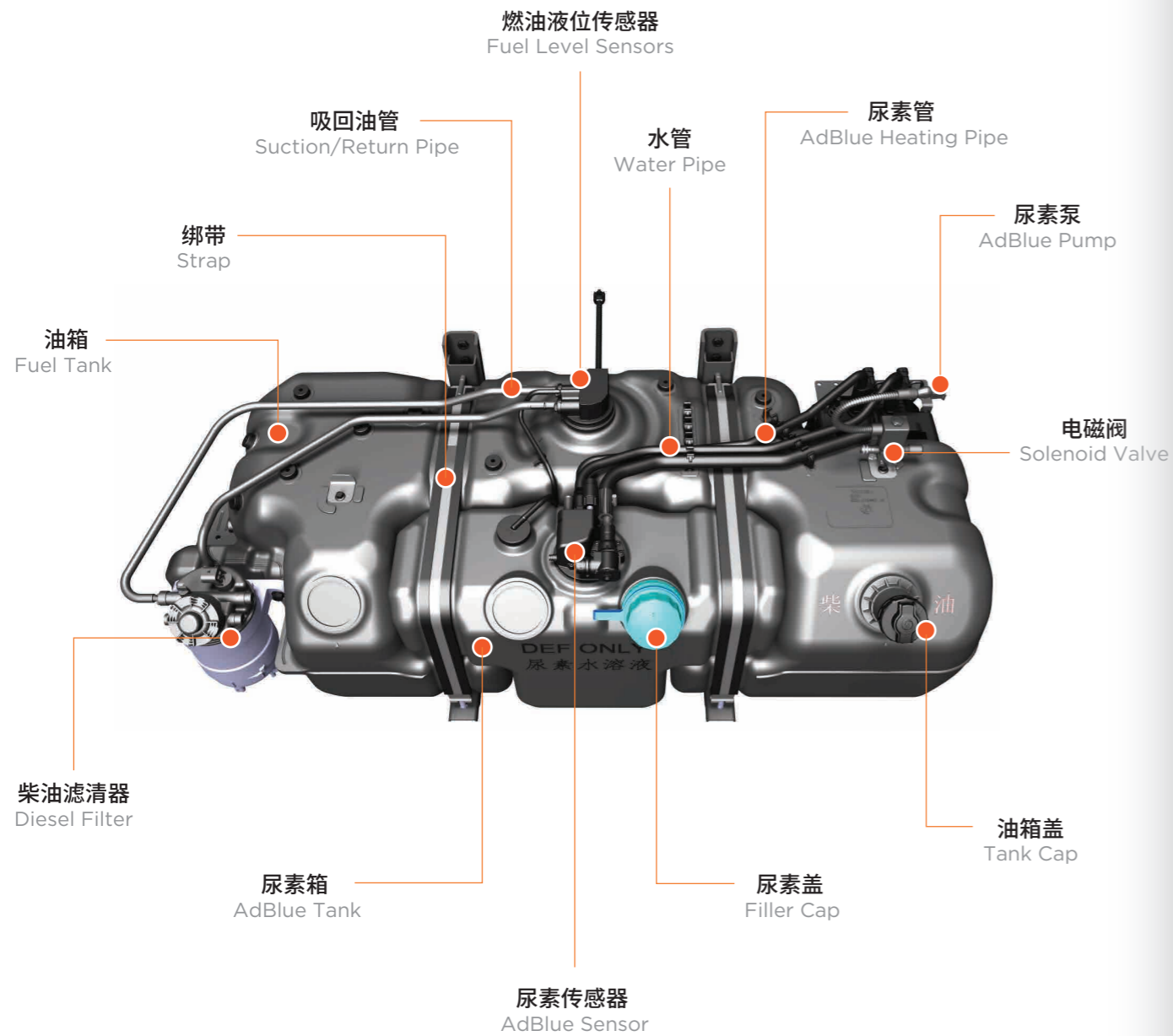
储存介质 Storage medium	柴油 Diesel oil	渗透性，低温结蜡 Permeability, low temperature waxing
材质 Material	PE	强度高，耐渗透性 High strength, permeation resistance
颜色 Colour	黑色 Black	良好的抗UV性能 Good UV resistance
制作工艺 Craftsmanship	吹塑/滚塑 Blow molding/ Rotational molding	吹塑产能高；滚塑成型形状复杂；可制作大于300L的箱体 High blow molding capacity; complex rotational molding shapes; can produce boxes larger than 300L
工作温度 Operating temperature	环境温度：-40°C ~ +85°C，峰值温度：90°C Ambient temperature: -40°C ~ +85°C, peak temperature: 90°C	

尿素箱油箱一体化

Tank Integrated Solutions

汽车轻量化持续发展，集成化箱体应运而生。公司基于高度垂直整合的生产研发能力，为客户提供成熟的尿素箱油箱一体化解决方案，集成了油箱、燃油传感器、柴油滤清器、尿素箱、尿素传感器、尿素泵等配件，满足轻量化的需求，灵活匹配客户各种平台车型。

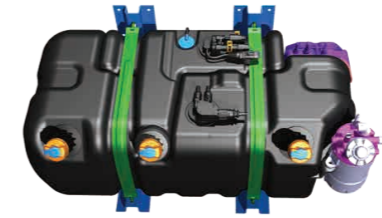
With the continuous development of automobile lightweight, integrated cabinets emerge as the times require. Based on highly vertically integrated production and R&D capabilities, KUS provides customers with mature AdBlue tank and fuel tank integration solutions, integrating fuel tanks, fuel sensors, diesel filters, AdBlue tanks, AdBlue sensors, AdBlue pumps and other accessories to meet light Quantified demand, flexible matching of various platform models of customers.



CHAPTER

尿素箱油箱一体化

Tank Integrated Solutions



尿素箱镶嵌在油箱后面
The AdBlue tank is inlaid behind the tank



尿素箱镶嵌在油箱侧面
The AdBlue tank is inlaid on the side of the tank



尿素箱、主副油箱一体成型
AdBlue tank, main and auxiliary fuel tanks integrated forming

产品优势

尿素箱油箱一体化轻量化，高度集成；
可模块化组装，提升整车生产效率；
车身空间布置整洁美观；
降低客户的供应商管理成本。

Product Advantage

Urea tank tank integration lightweight, highly integrated;
Modular assembly, improve vehicle production efficiency;
Body space layout neat and beautiful;
Reduce supplier management costs for customers.

箱体参数 Cabinet Parameters		
储存介质 Storage medium	尿素 AdBlue	腐蚀性、低温结晶 Corrosive, low temperature crystallization
材质 Material	PE	强度高、耐腐蚀 High strength and corrosion resistance
颜色 Colour	黑色 Black	阻碍藻类滋生、尿素分解 Prevent algae growth and AdBlue decomposition
制作工艺 Craftsmanship	吹塑/滚塑 Blow molding/ Rotational molding	吹塑产能高；滚塑成型形状复杂 Blow molding production capacity is high; Rotational molding is complex in shape.
尺寸 Size	根据客户需求定制尺寸、形状 Size and shape can be customized according to customer needs	

CHAPTER

膨胀水箱

Expansion Tanks

膨胀水箱

Expansion Tank

膨胀水箱主要用于冷却液、去离子水的储存，调节系统压力，集成水箱与水位开关/液位传感器于一体，可根据车辆的安装要求及客户的需求定制不同形状、不同容积的水箱总成。

Expansion tank is mainly used for coolant and deionized water storage, regulating system pressure, integrated water tank and water level switch/level sensor in one, can be customized according to the vehicle installation requirements and customer needs of different shapes, different volumes of water tank assembly.

工艺：注塑成型
 材质：PP材质
 颜色：半透明
 溢流管长：1.2米

Process: Injection molding
 Material: PP material
 Color: translucent
 Overflow pipe length: 1.2 meters

总成部件

Assembly Parts



水位开关
Water Switch



压力阀盖
Pressure Valve Cover

水箱盖
Tank Cover



温度传感器
Temperature Sensor

液位传感器
Level Sensor



CHAPTER

新能源产品

New Energy Products

控制器产品

Controller Products

整车控制器(VCU) 是新能源汽车动力系统的总成控制器，协调发动机、驱动电机、动力电池等各部件的工作，具有提高车辆的动力性能、安全性能和经济性等作用。

燃料电池控制器(FCU) 是燃料电池发动机系统(FCE)的总成控制器，涉及到燃料电池系统各个环节的管理、协调和通信，以确保系统可靠和高效的运行。

氢系统控制器具备氢SOC及质量计算、对外接传感器开路/短路故障诊断、下电延时、加氢次数记录、在线刷写及标定、配合优化整车系统性能等功能。

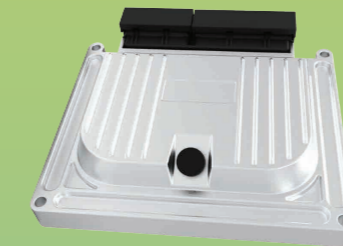
网关控制器通过UDS对应的服务上报各网段的实时通讯状态和故障信息，并转发不同网段的寻址信息，对整车各个区域不同网段的ECU顺畅完成间接通讯起到至关重要的作用。

Vehicle Control Unit (VCU) is the assembly controller of the power system of new energy vehicles. It is responsible for coordinating the work of the engine, driving motor, power battery and other components, which has the role of improving the vehicle's power performance, safety performance and economy.

Fuel Cell Control Unit (FCU) is the assembly controller of the fuel cell engine system (FCE), which involves the management, coordination and communication of each link of the fuel cell system to ensure the reliable and efficient operation of the system.

Hydrogen system controller has functions such as hydrogen SOC and mass calculation, open/short circuit fault diagnosis of external sensor, power off delay, hydrogenation times recording, online writing and calibration, and coordination and optimization of vehicle system performance.

Gateway controller reports the real-time communication status and fault information of each network segment through the services corresponding to UDS, and forwards the addressing information of different network segments, which plays a crucial role in smooth indirect communication between ECUs of different network segments in different regions of the vehicle.



产品平台 Product platform	FCU	水星 Mercury	地球国产/进口 Earth domestic/import	木星(小域控) Jupiter (small domain control)	网关 Gateway
功能安全等级 Functional safety level	ASIL D	ASIL C	ASIL-B	ASIL D	ASIL-B
主芯片 Main chip	英飞凌 Infineon TC275	英飞凌 Infineon TC1728	国芯 NationalChip PowerPC/ 瑞萨 Renesas RH850-F1K	瑞萨 Renesas RH850-U2A8	瑞萨 Renesas G3KH
工作频率 (MHz) Working frequency (MHz)	200	128	120	400	120
核心数量 Number of cores	3+2锁步 3+2 Lockstep	1	1	2+2锁步 2+2 Lockstep	1
Flash大小 (MB) Flash size (MB)	4	1.5	1.5 / 2	8	1
CAN	4	3	5	6	6
5V 供电 Power supply	5	7	9/10	5	-

CHAPTER

新能源产品

New Energy Products

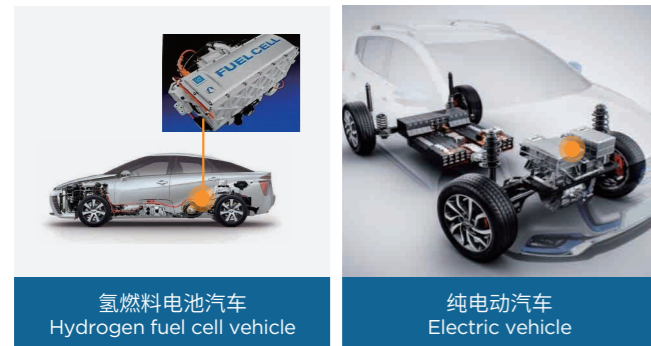
PTC水加热器

PTC Coolant Water Heater

PTC水加热器主要应用于纯电动、混合动力、燃料电池的车辆，通过PTC加热芯片加热冷却水，为电动汽车电池模组升温，为新能源汽车整车驾驶室空调提供暖风，给氢燃料电池模组冷启动加热。其整体结构由散热器（包含PTC加热包）、主控板、高压连接器、低压连接器和上壳等组成，能保证车用PTC水加热器安全稳定的工作，且功率变化不会由于骤增骤减而对车身系统造成干扰。

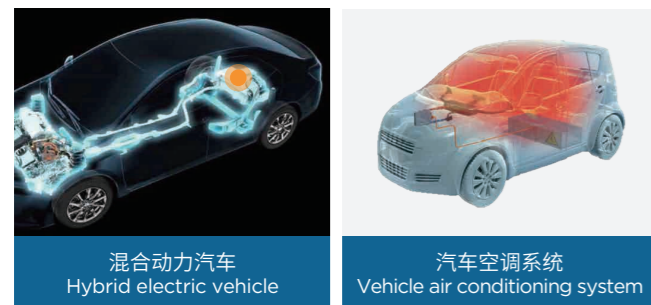
PTC Coolant Water heater is mainly used in pure electric, hybrid and fuel cell vehicles. Through PTC heating chip, the cooling water is heated to improve the performance of the battery module of electric vehicles, provide warm air for the whole vehicle cab air conditioning of new energy vehicles, and cold start heating for the hydrogen fuel cell module. Its overall structure is composed of radiator (including PTC heating package), main control panel, high voltage connector, low voltage connector and upper shell, etc., which can ensure the safe and stable operation of the vehicle PTC water heater, and the power change will not cause interference to the body system due to the sudden increase and decrease.

- 控制与加热主体集成，系统占用空间小
- 功率控制采用PWM无极调节，系统适用性强
- 自带电压、电流、温度采集，过压、过流、过温保护，功能安全ASIL-A，更安全
- The control and heating body are integrated, and the system takes up little space.
- The power control adopts PWM stepless adjustment, and the system has strong applicability.
- It has built-in voltage, current, and temperature acquisition, overvoltage, overcurrent, and overtemperature protection, and functional safety ASIL-A, making it safer.



氢燃料电池汽车
Hydrogen fuel cell vehicle

纯电动汽车
Electric vehicle



混合动力汽车
Hybrid electric vehicle

汽车空调系统
Vehicle air conditioning system



PHU 1.0 (600V 7KW)



PHU 1.0 (600V 7KW)



PHU 1.0 (600V 800V 10KW-15KW)



PHU 2.0 (800V 7KW)

CHAPTER

新能源产品

New Energy Products

PTC风加热器

PTC Air Heater

PTC风加热器是一种正温度系数加热器，由先进陶瓷材料制成的专门加热盘组成。在燃料电池、电动和混合动力汽车空调系统中，PTC风加热器替代传统燃料车暖风芯体，并安装在HVAC总成中。PTC风加热器由整车供电并控制制热，鼓风机吹风与PTC风加热器进行热交换，通过风管送暖实现采暖、除霜除雾功能。

The PTC air heater is a positive temperature coefficient heater which consists of specialized heating discs built from advanced ceramic materials. In fuel cell, electric, and hybrid vehicle air conditioning systems, the PTC air heater replaces a traditional fuel vehicle heater core and is installed in the HVAC assembly. The air heater is powered and controlled by the vehicle. The function of the air heater is to blow warm air through the air ducts to heat the cabin and defrost or defog windows.

高压一体式风加热器特点：

- 控制与加热主体集成，系统占用空间小；
- 功率控制采用PWM无极调节，舒适性更高；
- 自带电压、电流、温度采集，过压、过流、过温保护，更安全。

Features of high pressure integrated air heater:

- Integrated control and heating body, the system takes up little space;
- The power control adopts PWM stepless adjustment for higher comfort;
- It has built-in voltage, current, and temperature collection, as well as overvoltage, overcurrent, and overtemperature protection, making it safer.

高压分体式风加热器特点：

- 控制与加热主体分开，安装布置更灵活；
- 开发周期短，制造工艺简单；
- PWM控制，I/O控制两种方式可选。

Features of high pressure split air heater:

- The control and heating bodies are separated, making the installation arrangement more flexible;
- The development cycle is short and the manufacturing process is simple;
- PWM control and I/O control are optional.

电子水泵

Electronic Water Pump

电子水泵是汽车热管理系统的关键部件。电子水泵由无刷电机带动叶轮旋转，使液体压力升高，带动水、冷却液等液体进行循环，从而实现冷却液散热。

Electronic water pumps are key components of automotive thermal management systems. The electronic water pump is driven by a brushless motor to rotate the impeller, which increases the pressure of the liquid and drives the circulation of water, coolant and other liquids, thereby realizing the heat dissipation of the coolant.



高压一体式风加热器
High Pressure Integrated Air Heater



高压分体式风加热器
High Pressure Split Air Heater

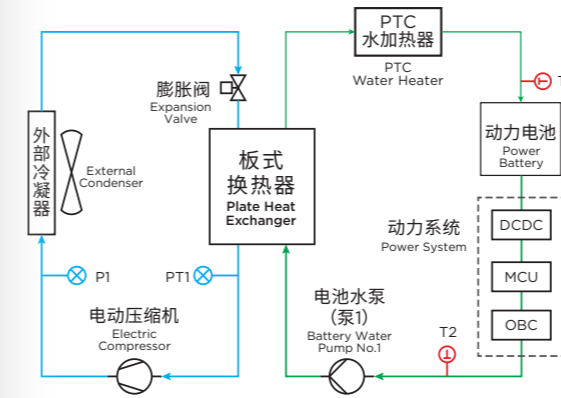
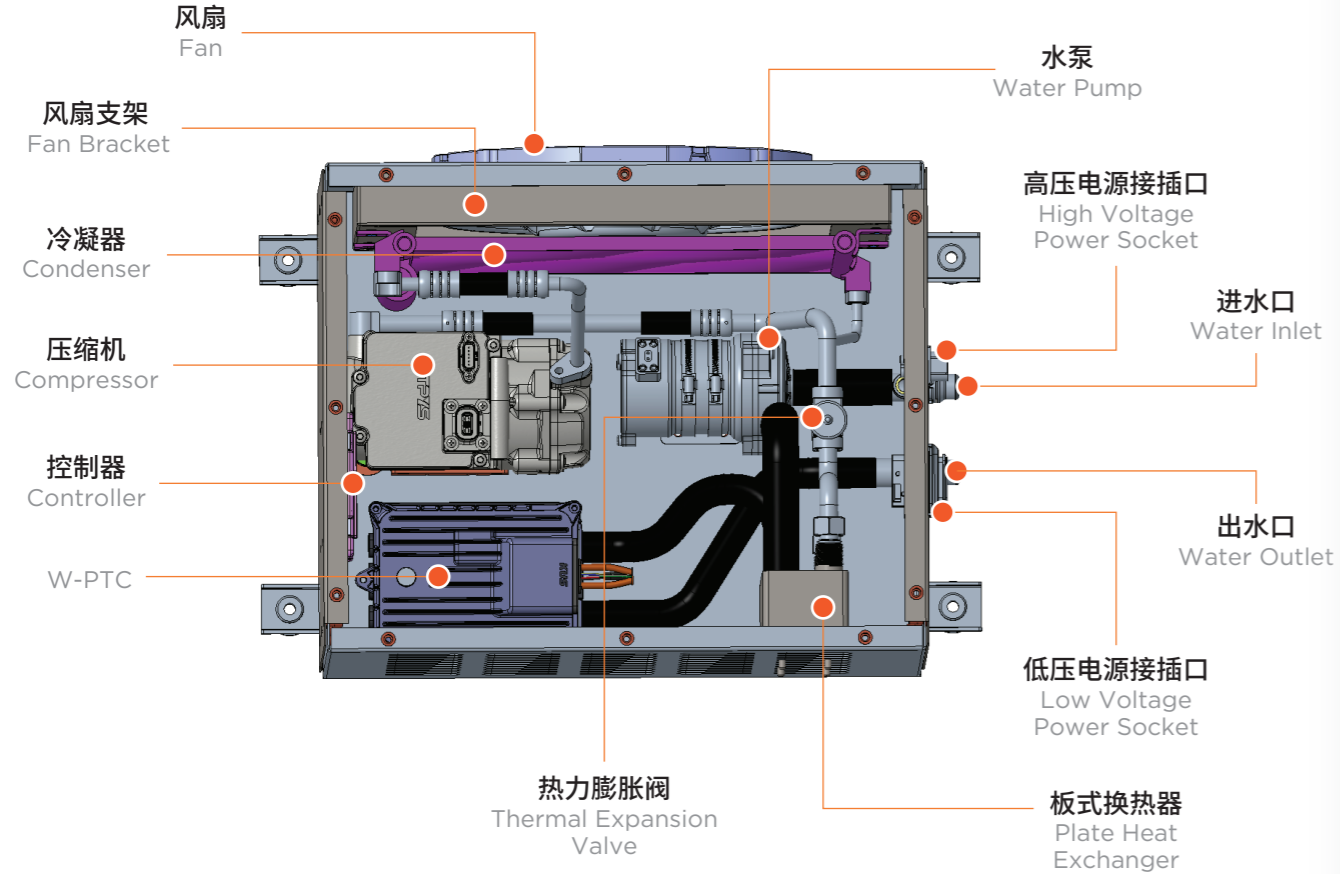


水冷机组

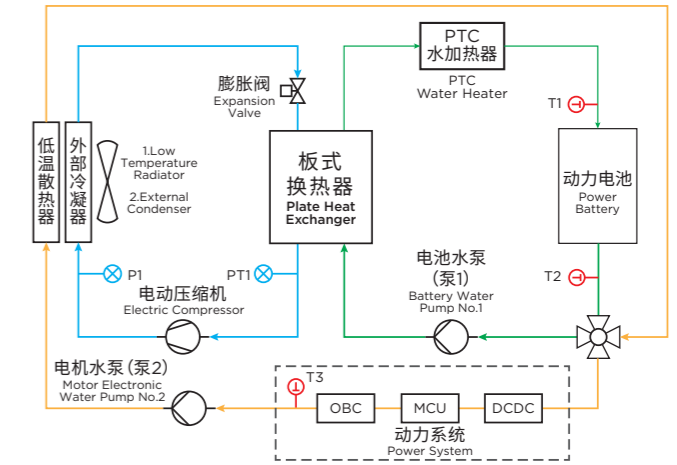
Battery Thermal Management System

水冷机组是新能源车型热管理系统重要的零部件之一，用来满足电池包的持续制冷需求，让锂电池组工作在适合的温度范围，延长电池使用寿命，提高电池安全性。水冷机组主要由压缩机、ECU、PTC加热器（选配）、风扇、水泵、冷凝器、板式换热器、膨胀阀、管路等组成。可按客户需要定制不同外形尺寸及3KW-50KW的制冷/制热功率范围产品。

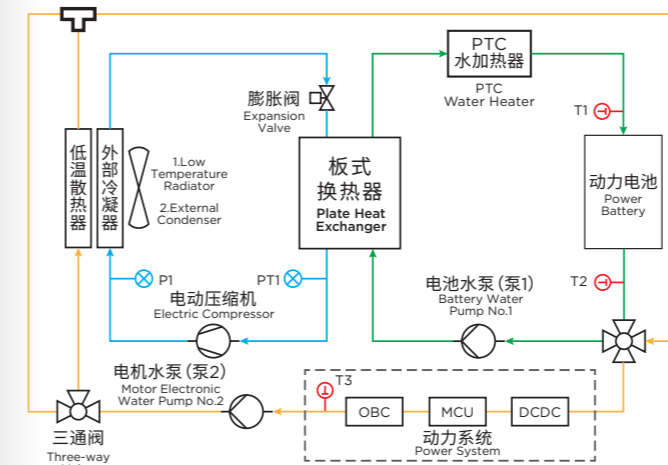
The battery thermal management system is one of the important components of the thermal management system of new energy vehicles. It is used to meet the continuous cooling needs of the battery pack, allowing the lithium battery pack to work in a suitable temperature range, extending the battery life and improving battery safety. It is mainly composed of compressor, ECU, PTC heater (optional), fan, water pump, condenser, plate heat exchanger, expansion valve, pipeline, etc. Products with different dimensions and cooling/heating power ranges from 3KW to 50KW can be customized according to customer needs.



方案1: 单电池冷却方案
Solution 1: Single battery cooling solution



方案2: 带低温散热器方案
Solution 2: With low temperature radiator solution



方案3: 综合热管理方案
Solution 3: Comprehensive thermal management solution

工作环境温度: -25-50°C
制冷量: 5KW/6KW
通讯CAN: 250kbps
冷却液类型: 50%乙二醇水溶液
制冷剂类型: R134a
低压范围: 18-32VDC
高压电源: 400-720VDC
外形尺寸: L580×W407×H374mm

Operating Temperature: -25-50°C
Refrigerating Capacity: 5KW/6KW
Communication CAN: 250kbps
Coolant Type: 50% ethylene glycol aqueous solution
Refrigerant Type: R134a
Low Pressure Range: 18-32VDC
High-voltage Power Supply: 400-720VDC
Overall Dimension: L580×W407×H374mm

应用场景 Application Scenarios



CHAPTER

新能源产品

New Energy Products

冷板

Cold Plate

冷板主要用于新能源汽车及储能系统的电池包，通过内部循环流动的液体来与动力/储能电池进行热交换，使其始终保持在合适的工作温度区间，从而提升电池的寿命和工作效率。

The cold plate is mainly used in battery packs for new energy vehicles and energy storage systems. It uses internal circulating liquid to exchange heat with the power/energy storage battery so that it is always maintained in a suitable operating temperature range, thus extending the battery life and work efficiency.

- 均温性设计以提高动力电池使用寿命
- 提供液冷、直冷系统解决方案
- 低流阻方案，降低液冷系统的能耗
- 提供均温均流设计方案，保证不同工况下动力电池模组的温度均匀性
- 大幅面尺寸，减少液冷系统内部管路连接和潜在泄露风险
- 高强度和高耐腐蚀性材料，提高产品寿命，减小产品的壁厚和重量

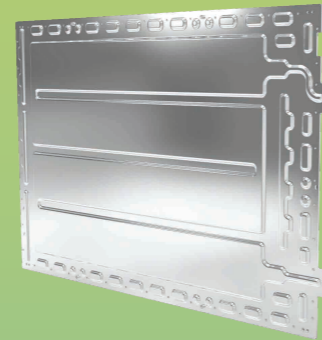
- Uniform temperature design to improve the battery life
- Provides liquid cooling for direct cooling system solutions
- Low flow resistance design, reduces the energy consumption of the liquid cooling system
- Uniform temperatures and current ensures the temperature stability of battery powered modules under various conditions
- Large footprint reduces the amount of additional connection ports needed and lowers the risk of leakage in the system
- High strength and corrosion resistant materials improve product life, and reduce the wall thickness and weight of products

域控冷板

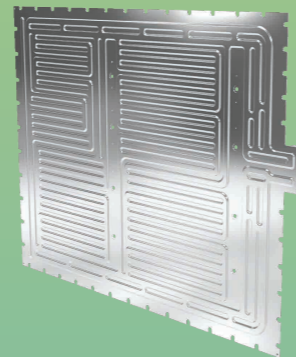
Domain Control Cold Plate

车载域控制器运行时会产生多余的热量，而且随着功能集成度越来越高，功耗及发热量也逐渐增加，需要进行有效的主动散热。域控冷板可用于车载域控制器的冷却，通过汽车内部的液冷回路提供冷却介质，以吸收车载域控制器的热量，确保系统可靠和高效的运行。

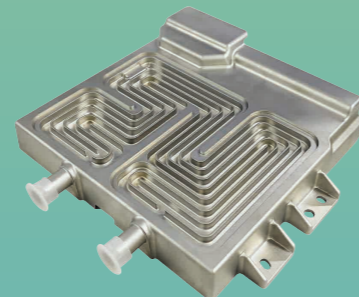
Vehicle domain controller will generate excess heat during operation, and as the function integration becomes higher and higher, the power consumption and heat generation will gradually increase, so effective active cooling is required. The domain control cold plate can be used for the cooling of the vehicle domain controller, and the cooling medium is provided through the liquid cooling circuit inside the vehicle to absorb the heat of the vehicle domain controller to ensure the reliable and efficient operation of the system.



储能液冷板
Energy Storage Liquid Cold Plate



动力电池液冷板
Power Battery Liquid Cold Plate



CHAPTER

新能源产品

New Energy Products

超级水壶

Super Kettle

超级水壶采用三个五通阀、三个水泵、一个三通阀的高度集成设计，此外还包括水路流道板、膨胀水箱、连接器，主要功能是利用冷却液与冷媒侧通过热交换器进行热量交换，来调节电机电控、电池包、乘员舱的温度。超级水壶可实现多达12种工作模式，满足25种场景的温控调节方式，在车辆运行过程中，保证热量的高效利用，实现能效提升。

The super kettle adopts a highly integrated design of three five-way valves, three water pumps, and one three-way valve. It also includes a water channel plate, expansion tank, and connectors. Its main function is to use the coolant and refrigerant sides to exchange heat through the heat exchanger to adjust temperatures of the motor electronic control, battery pack, and passenger compartment. The super kettle can realize up to 12 working modes and meet the temperature control adjustment mode of 25 scenarios, ensuring the efficient use of heat and achieving energy efficiency improvement during the operation of the vehicle.



电子三通温控阀

Electronic Three-way Temperature Control Valve

电子三通温控阀是一款智能型电动比例控制调节阀，采用阀集成驱动控制器，可根据电堆温度需求，将来自不同温度管路的两个入口冷却液通过阀芯按适当比例混合，主动控制阀门出口处的冷却液温度，从而控制燃料电池的温度，使燃料电池在适宜的温度范围内工作，具有响应速度快、智能控温、使用寿命长等特点。

The electronic three-way temperature control valve is an intelligent electric proportional control valve that adopts a valve integrated drive controller. According to the stack temperature requirements, the two inlet coolants from different temperature pipelines can be mixed in appropriate proportions through the valve core to actively control the coolant temperature at the valve outlet, thereby controlling the temperature of the fuel cell so that the fuel cell can work within a suitable temperature range. It has the characteristics of fast response speed, intelligent temperature control, and long service life.



氢气过滤器

Hydrogen Filter

氢气过滤器是由双卡套接头、滤芯、底盖、主体等部件组成，可根据系统要求选择不同规格的滤芯来过滤系统粒子状颗粒物，保证系统内氢气的清洁度，减少粉尘、颗粒对燃料电池的危害，过滤效率高，产品质量稳定，可用于乘用车和商用车的燃料电池系统领域。

Hydrogen filter is composed of double sleeve joint, filter element, bottom cover, main body and other components, according to the system requirements to select different specifications of the filter element to filter the system particulate matter, to ensure the cleanliness of hydrogen in the system, and reduce the harm of dust and particles to the fuel cell. The products have high filtration efficiency and stable quality, and can be used in the field of fuel cell systems for passenger cars and commercial vehicles.



CHAPTER

其它传感器

Other Sensors

温湿度/温湿压传感器

Temperature and Humidity/
Temperature and Humidity Pressure Sensor

温湿度传感器通过数字温湿度芯片检测空气的湿度和温度，再经D/A或I2C输出，由MCU采集和转换为CAN通信输出。

温湿压传感器通过数字温湿度芯片检测空气的湿度和温度，再经D/A或I2C输出；压力芯片将输入压力在压力敏感体上产生的机械形变，转变成电压信号输出。最终，MCU采集湿度、温度、压力物理量信号，并转换为CAN通信输出。

The temperature and humidity sensor detects the humidity and temperature of the air through a digital temperature and humidity chip, and then outputs it through D/A or I2C, which is collected and converted by the MCU into CAN communication output.

The temperature and humidity pressure sensor detects the humidity and temperature of the air through a digital temperature and humidity chip, and then outputs it through D/A or I2C; the pressure chip converts the mechanical deformation caused by the input pressure on the pressure sensitive body into a voltage signal output. Finally, the MCU collects humidity, temperature, and pressure physical quantity signals and converts them into CAN communication output.



氢浓度传感器

Hydrogen Leakage Sensor

氢浓度传感器是氢燃料电池发动机、氢气储气罐及供气管路系统对氢气泄漏进行监测的关键安全部件，其原理是利用氢气的热导率随浓度变化的特性来进行检测氢气浓度，对氢气的浓度变化具有较快的响应速度，能够提供实时精准的浓度监测结果。

The hydrogen leakage sensor is a key safety component for monitoring hydrogen leakage in hydrogen fuel cell engines, hydrogen storage tanks and gas supply pipeline systems. Its principle is to detect hydrogen concentration by utilizing the characteristics of hydrogen's thermal conductivity changing with concentration. It has a fast response speed to hydrogen concentration changes and can provide real-time and accurate concentration monitoring results.



电导率传感器

Conductivity Sensor

燃料电池发动机对冷却液的电导率有很高的要求，因为在冷却液在循环过程中，杂质会不断增加，导致其电导率会不断上升，系统绝缘性能随之下降。为保障安全，需要电导率传感器监控冷却液的电导率，根据电解导电原理采用电阻测量法对电导率实现测量。

Fuel cell engines have high requirements on the conductivity of coolant. This is because impurities will continue to increase during the circulation process of the coolant, causing its conductivity to continue to increase and the insulation performance of the system to decrease. To ensure safety, a conductivity sensor is required to monitor the conductivity of the coolant, and the conductivity is measured using the resistance measurement method based on the principle of electrolytic conduction.



CHAPTER

其它传感器

Other Sensors

电流传感器

Current Sensor

电流传感器是基于磁感应原理的一种电流测量装置，具有高精度、宽量程、响应快等特点，支持电池充放电电流检测和电机电流等检测，具有过流、防反接功能，可用于纯电动、氢燃料车、混动等新能源车辆的电池组、DC/DC变换器的电流监测，以保证系统的安全和稳定。

The current sensor is a current measuring device based on the principle of magnetic induction. It has the characteristics of high precision, wide range and fast response, and supports battery charge and discharge current detection and motor current detection. It has overcurrent and anti-reverse connection functions and can be used for current monitoring of battery packs and DC/DC converters of pure electric, hydrogen fuel vehicles, hybrid and other new energy vehicles to ensure the safety and stability of the system.

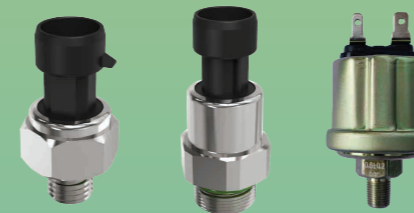


压力传感器

Pressure Sensor

压力传感器主要测量水、机油、气体、冷媒等介质的压力，广泛用于发动机管理系统、新能源汽车水路系统、传动系统和安全系统。产品可靠性高，测量精度高，采用严格的工艺控制确保优良品质，接口可根据客户需求制作，输出信号可根据客户要求配置。

The pressure sensor mainly measures the pressure of water, oil, gas, refrigerant and other media. It is widely used in engine management systems, new energy vehicle waterway systems, transmission systems and safety systems. The product has high reliability, high measurement accuracy, and adopts strict process control to ensure excellent quality. The interface can be made according to customer needs, and the output signal can be configured according to customer requirements.

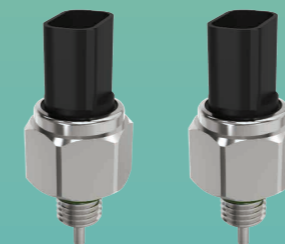


温压传感器

Temperature-Pressure Integrated Sensor

温压一体式传感器不仅能通过陶瓷电容式芯体测量压力，还能通过NTC热敏电阻测量温度，利用热敏电阻值随着温度的变化而变化的特性，从而实现对温度的测量。可同时检测液体或气体的压力和温度，测量介质为发动机机油、制冷剂等等。

The temperature-pressure integrated sensor can not only measure pressure through a ceramic capacitive core, but also measure temperature through an NTC thermistor. It utilizes the characteristic that the thermistor value changes with temperature to achieve temperature measurement. It can detect the pressure and temperature of liquid or gas at the same time, and the measurement medium is engine oil, refrigerant, etc.



CHAPTER

其它传感器

Other Sensors

温度传感器

Temperature Sensor

温度传感器用于测量新能源汽车的冷却水、管路、电池包、充电设备等的温度，还能测量高压线束、机油、挖掘机液压油、发电机等的温度。温度传感器的响应时间快，测量精度高，稳定性能好，客制化程度高，可根据客户需要增加超温报警开关。

Temperature sensors are used to measure the temperature of cooling water, pipelines, battery packs, charging equipment, etc. of new energy vehicles. They can also measure the temperature of high-voltage wiring harnesses, engine oil, excavator hydraulic oil, generators, etc. The temperature sensor has fast response time, high measurement accuracy, good stability and high degree of customization. Over-temperature alarm switches can be added according to customer needs.



转速传感器

Tacho Sensor

转速传感器用于齿轮转速测量，并将这些信息传递给发动机控制单元（ECU）或车辆的电子控制系统，以确保发动机在正常运行状态下运转。其外形、材质和螺纹接口均可根据客户要求制作。

测量原理：霍尔式、磁电式

The tacho sensor is used to measure gear rotation speed and transmit this information to the engine control unit (ECU) or the vehicle's electronic control system to ensure that the engine is operating under normal operating conditions. Its shape, material and threaded interface can be made according to customer requirements.

Measuring principle: Holzer, Magnetolectric



水位开关

Water Level Switch

水位开关应用于发电机、发动机的水箱或冷却水箱中，主要为了测量发动机冷却水位。水位开关，具有低液位报警功能，当液位低于预设位置时，延时10s后发出报警，并将开关量信号提供给外置设备；延时报警是为了防止液面晃动而导致误报警，报警持续时间0-25s（出厂设置）。

The water level switch is used in the water tank or cooling water tank of the generator, engine, mainly to measure the engine cooling water level. The water level switch has a low liquid level alarm function. When the liquid level is lower than the preset position, the alarm is issued and the switch signal is provided to the external device after a delay of 10 seconds; the delay alarm is to prevent the liquid level from shaking and causing false alarm and alarm. Duration 0-25s (factory setting).



CHAPTER

汽车配件

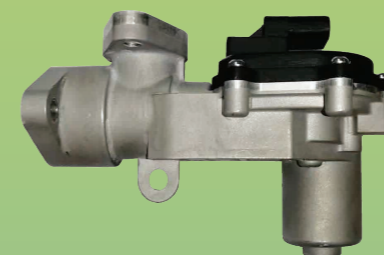
Auto Parts

EGR阀

EGR Valve

EGR阀是一种降低氮氧化物排放量技术方案的关键部件，其原理是将发动机的排放尾气循环再利用，通过降温、调压、调流量等方法控制尾气，使尾气以更佳比例进入发动机燃烧室，起到降低氮氧化物排放、减少发动机爆震的作用。

The EGR valve is a key component of a technical solution to reduce nitrogen emissions. Its principle is to recycle and reuse the engine's exhaust gas, and control the exhaust gas through cooling, pressure regulation, flow rate adjustment, etc., so that the exhaust gas enters the engine combustion chamber at a better proportion, thereby reducing nitrogen compound emissions and engine knocking.



风管

Air Duct

汽车风管由管道和通风口组成，用于车辆的供暖、空调和通风，可以将冷热空气分别送到需要的区域来调节车内温度，并控制车辆内的空气进出、流向和速度，改善空气质量，提高车内乘坐舒适度。风管连接紧密、无泄漏，采用HDPE、PP材质，具有较高的耐磨性和耐腐蚀性能，维修保养成本低。

Automotive air ducts are made up of pipes and vents used for heating, air conditioning and ventilation in your vehicle. The air duct can send hot and cold air to the required areas respectively to adjust the temperature inside the car, and control the air in and out, flow direction and speed in the vehicle, improving the air quality and the comfort of the car. The air duct has tight connections and no leakage. It is made of HDPE and PP material, which has high wear resistance and corrosion resistance, and low maintenance costs.

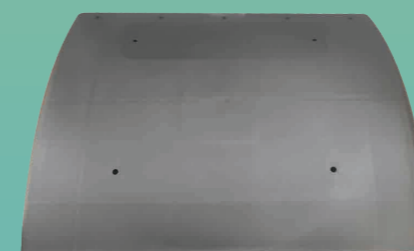


挡泥板

Fender

挡泥板的主要功能是保护轮胎和制动系统免受泥土或其他杂质的影响，使其更安全、更高效。挡泥板还有助于防止轮胎滚动时泥土、污垢、灰尘颗粒和其他液体被抛到空中。该零件为弧形形状，有多种型号和尺寸可供选择。

The primary function of fenders is to protect the tires and braking system from mud or other impurities, making them safer and more efficient. Fenders also help prevent mud, dirt, dust particles and other fluids from being thrown into the air as the tires roll. The part has a curved shape, and is available in a variety of models and sizes.



CHAPTER

管路产品

Pipeline Products

电机&电池包冷却液管路

Motor & Battery Pack Coolant Water Pipe

电机电池冷却液管路用于混动或电动车上热管理系统，承载输送汽车冷却液的通道，通过冷却液在管路中的流动为发动机提供升温或者降温，让电池包在寒冷环境中快速升温，同时也带走余热，提供冷却系统的流通功能。

Motor & Battery pack coolant water pipe is used for the thermal management system of hybrid vehicle or electric vehicle, carrying the channel for conveying automotive coolant. Through the flow of coolant on the pipeline, the engine is provided with temperature rise or temperature drop, so that the battery pack can quickly warm up in the cold environment. At the same time, it also takes away the waste heat and provides the circulation function of the cooling system.

轻量化 Lightweight

相对于金属管和胶管，重量减轻

Compared with metal pipes and rubber hoses, the weight is reduced

高效生产 Efficient production

直管挤出，热塑成型，接头快插

Straight tube extrusion, thermoplastic molding, quick-fit coupling

性能良好 Good performance

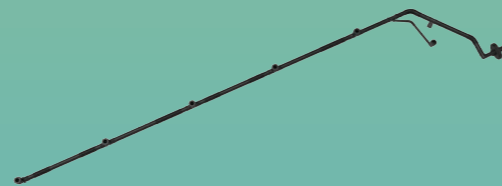
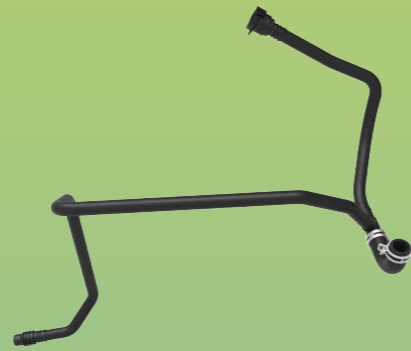
良好的机械性能，耐化学性及耐水解性能

Good mechanical properties, chemical resistance and hydrolysis resistance

成本优势 Cost advantage

有竞争力的系统加工成本以及原材料成本

Competitive system tooling costs, as well as raw material costs



CHAPTER

管路产品

Pipeline Products

尿素加热管

AdBlue Heating Pipe

尿素加热管用于传输、加热柴油车上的尿素，具有工艺性能好、电安全性能佳、阻隔性能强等特点。

The AdBlue heating pipe is used for transmission and heating AdBlue in diesel vehicles. It has the characteristics of good process performance, good electric safety performance and strong barrier performance.



储能系统冷却水管

Energy Storage System Cooling Water Pipe

储能系统冷却水管为储能系统（工商业储能，数据中心等）提供液冷通道，通过冷却水管路运输冷却液，为电池包和数据中心服务器快速传递热量，平衡系统性能。

The energy storage system cooling water pipe provides a liquid cooling channel for the energy storage system (industrial and commercial energy storage, data center, etc.), transports the cooling liquid through the cooling water pipe and quickly transfers heat to the battery pack and data center server to balance system performance.



机油标尺管

Oil Dipstick Pipe

机油标尺的作用是通过目视测量发动机油底壳内的机油容量，将机油液面以标尺刻度的形式表现出来。机油标尺管主要作用是给机油标尺提供安装空间，保证机油标尺安装可靠。

The function of the oil dipstick is to visually measure the oil capacity in the engine oil pan and display the oil level in the form of a scale. The main function of the oil dipstick tube is to provide installation space for the oil dipstick to ensure reliable installation of the oil dipstick.



CHAPTER

管路产品

Pipeline Products

尿素/燃油加注管

AdBlue/Fuel Filling Pipe

尿素/燃油加注管用于车用尿素箱、油箱，传输流体（尿素或者燃油），将尿素箱或者油箱的加注口位置延长至方便加注的地方，并在加注时带有通气功能。

The AdBlue/fuel filling pipe is used for vehicle AdBlue tanks and fuel tanks to transmit fluids (AdBlue or fuel), extend the position of the filling port of the AdBlue tank or fuel tank to a convenient place for filling, and have a ventilation function during filling.



发动机进/回油管

Engine Intake/Return Oil Pipe

发动机进/回油管用于汽车燃油系统，从油箱将油运输到发动机中给汽车提供动力；产品具有良好的耐极端温度、耐老化、耐腐蚀、耐燃油渗透等特点。

Engine intake/return oil pipe are used in the automotive fuel system to transfer fuel from the tank to the engine to provide power to the vehicle; Products have good extreme temperature resistance, aging resistance, corrosion resistance, fuel penetration resistance and so on.



管路接头

Pipe Connector

管路接头是用于连接管路的零部件，具有安装方便、性能优越、使用寿命长等特点，可广泛应用于汽车燃油系统、SCR系统、动力系统、冷却系统、空调系统等。

Pipe Connectors are parts used to connect pipelines. They have the characteristics of convenient installation, superior performance, and long service life. They can be widely used in automotive fuel systems, SCR systems, power systems, cooling systems, and air-conditioning systems.



CHAPTER

带截止阀快接接头

Quick Connector With Shut-off Valves



带截止阀快接接头常用于流体的传输系统中，能实现快速连接和断开，并且具备双向截止功能，防止泄露，在热管理系统中有着广泛的应用，耐高温、耐腐蚀和高压承载能力使得带截止阀快接接头能适用于复杂工作环境。

Quick connectors with shut-off valves are often used in fluid transmission systems to achieve quick connection and disconnection, and have a two-way shut-off function to prevent leakage. They are widely used in thermal management systems. Their high temperature resistance, corrosion resistance and high pressure bearing capacity make quick connectors with shut-off valves suitable for complex working environments.

产品设计

- 无滴漏设计保证系统安全
- 内部结构优化设计提升流量
- 多种口径、连接方式可供选择

Product Design

- No-drip design ensures system safety
- Optimized design of internal structure increases flow rate
- A variety of paths and connection modes are available

产品材质

- 本体材质：316L不锈钢、铜镍镀、铝合金
- 密封：EPDM标准配置，NBR、FVMQ可选
- 具有良好的耐腐蚀性

Product Material

- Body material: 316L stainless steel, copper nickel plating, aluminum alloy
- Seal: EPDM standard configuration, NBR, FVMQ optional
- Good corrosion resistance



10系列

10 Series

- 接头本体：316L不锈钢
- 单手操作，易于插拔
- 双向截止阀

- Connector body: 316L stainless steel
- One-hand operation, easy to plug and unplug
- Two-way stop valve



20系列

20 Series

- 接头本体：铝合金
- 双手操作，连接安全
- 双向截止阀

- Connector body: aluminum alloy
- Two-handed operation, secure connection
- Two-way stop valve



11A04 (UQD) 系列

11A04 (UQD) Series

- 接头本体：316L不锈钢
- 推入式单手连接
- 符合OCP性能标准

- Connector body: 316L stainless steel
- Push-in one-hand connection
- Meets OCP performance standards



60A (UQDB)系列

60A (UQDB) Series

- 接头本体：316L不锈钢
- 浮动盲插
- 符合OCP性能标准

- Connector body: 316L stainless steel
- Floating blind plug
- Meets OCP performance standards

应用场景 Application Scenarios



CHAPTER

线束/连接器

Wire Harnesses/Connectors

高压连接器

High Voltage Connector

产品特性

额定电流高达 750A @25°C
 额定电压 1000V
 快速声音锁定夹
 从2.5mm²到150mm²电缆尺寸
 3.6、5.7、8、10、12 和 14 毫米 RADSOK
 360°电磁屏蔽
 可现场压接或包覆成型
 RADSOK® 触点
 金属和塑料版本
 5 个机械按键和颜色编码
 IP67 已配对 - IP2X 未配对
 1 至 4 极

Product Features

Current rating up to 750A @25°C
 Voltage rating 1000V
 Quick audible locking clip
 From 2.5mm² TO 150mm² cable size
 3.6, 5.7, 8, 10, 12, and 14mm radsok
 360°EMI shielding
 Field crimpable or overmolded
 RADSOK® contacts
 Metal & plastic version
 5 mechanical keys & color coding
 IP67 mated - IP2X unmated
 1 to 4 poles



高压线束

High Voltage Wiring Harness

产品特性

电流最大可达 750A @25°C
 电压等级可达 1000V
 电线适配范围2.5mm²-150mm²
 满足 360°EMI
 IP67 (装配) - IP2X (未装配)

Product Features

Current up to 750A @25°C
 Voltage class up to 1000V
 Wire adaptation range 2.5mm² - 150mm²
 Meet 360°EMI
 IP67 (assembled) - IP2X (unassembled)



CHAPTER

线束/连接器

Wire Harnesses/Connectors

低压连接器

Low Voltage Connector

产品特性

额定电流: 电源 13A MAX, 信号 5A MAX
 线缆尺寸: 电源 14-18AWG, 信号 20-22AWG
 绝缘耐压: 3000VDC
 工作温度: -40°C-+125°C
 防护等级: IP67 (配对)
 对接周期: 100分钟
 提供 A、B、C 键
 漏气量: 60Kpa

Product Features

Current Rating: Power 13A MAX, Signal 5A MAX
 Cable Size: Power 14-18AWG, Signal 20-22AWG
 Dielectric Withstanding Voltage: 3000VDC
 Operating Temperature: -40°C-+125°C
 Protection Class: IP67(mated)
 Mating Cycle: 100Min
 Available in A,B,C key
 Air leakage: 60Kpa
 Annual shipments: 1M Sets



低压线束

Low Voltage Wire Harness

产品特性

多达200+回路
 防水IP67 IP69X
 防油
 发动机, 变速箱穿缸件
 耐震动

Product Features

Up to 200+ loops
 Waterproof IP67 IP69X
 Oil-proof
 Engine, gearbox piercing parts
 Vibration resistance



动力总成线束
Powertrain Wire Harness



变速箱穿缸线
Gearbox Cylinder Line

CHAPTER

线束/连接器

Wire Harnesses/Connectors

高速连接器

High Speed Connector

高速连接器可用于传输高速数据、电源和信号，其传输速率比普通连接器更快，保证数据传输的稳定性和可靠性，公司提供高速连接器定制服务以满足客户的不同需求。

High-speed connectors can be used to transmit high-speed data, power and signals. Its transmission rate is faster than ordinary connectors, ensuring the stability and reliability of data transmission. KUS provides high-speed connector customization services to meet the different needs of customers.

产品特性

Fakra & Mini Fakra

- 50Ω系统，到6GHz
- 满足SAE/USCAR-17 Rev 5
- CPA/非防水/防水
- 二级锁

Minil/O

- 小型化只有1/4的RJ45
- 公母连接间隙非常小
- 高可靠性
- 支持10Mbps-10Gbps数据速率

Product characteristics

Fakra & Mini Fakra

- 50Ω system, up to 6GHz
- Meets SAE/USCAR-17 Rev 5
- CPA/ Non-waterproof/waterproof
- Secondary lock

Minil/O

- Miniaturized only 1/4 RJ45
- The gap between male and female is very small
- High reliability
- Support 10Mbps to 10Gbps data rate



Fakra 连接器
Fakra Connectors



Mini Fakra 连接器
Mini Fakra Connectors

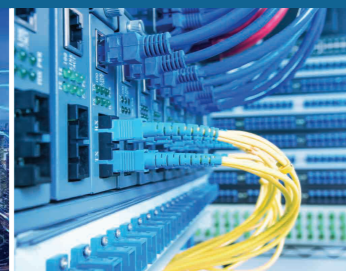


Mini I/O 连接器
Mini I/O Connectors

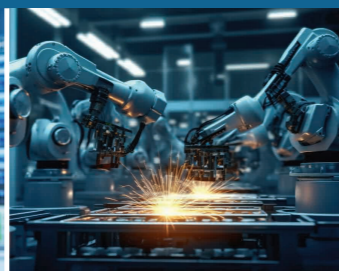
应用Applications



工业信号通讯
Industrial Signal Communication



以太网接口
Ethernet Interface



机器人
Robot



无人驾驶
Self-Driving

CHAPTER

线束/连接器

Wire Harnesses/Connectors

充电枪

Charging Gun

产品特性

- 输入电压范围: 85Vac~265Vac; 220Vac(type)
- 输入工作频率: 47~63Hz; 50Hz(type)
- 线芯材料: 纯铜
- 线缆长度: 5米 (可根据客户需求定制)
- 绝缘电阻: 50MΩ (type)
- 工作环境: -25°C~50°C

Product Features:

- Input voltage range: 85Vac~265Vac; 220Vac (type)
- Input working frequency: 47~63Hz; 50Hz (type)
- Core material: pure copper
- Cable length: 5 meters (can be customized according to customer needs)
- Insulation resistance: 50MΩ (type)
- Working environment: -25°C~50°C

- 显示屏状态指示，外观精美，可靠性强；
- 过温、过压、欠压、过流、漏电、短路、未接地保护等；
- 可采用小型挂壁方式。

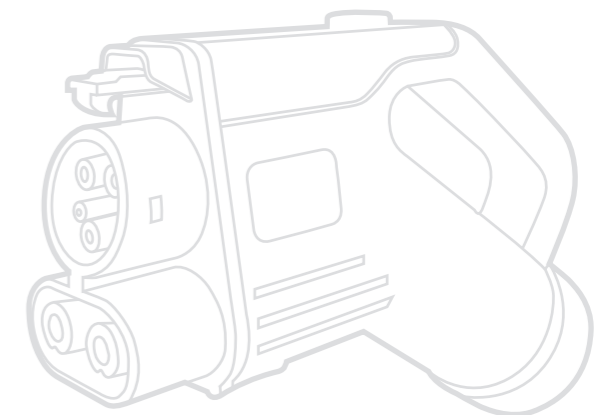
- Display status indication, exquisite appearance and strong reliability;
- Over-temperature, over-voltage, under-voltage, over-current, leakage, short circuit, ungrounded protection, etc.;
- A small wall-mounting method can be used.



充电枪
Charging Gun



充电枪底座
Charging Gun Base



CHAPTER

仪表系列

Gauge Series

KMB-70GE 多功能仪表

KMB-70GE Multi-Function Instrument

KMB-70GE是一款专门为纯电动舷外机应用开发的方形多功能液晶仪表。该仪表集电池电量、速度、转速、舵角、平衡等功能于一体；可兼容NMEA2000与J1939信号，支持多种风格切换。

The MKB-70GE is a square multifunctional LCD instrument developed specifically for electric outboard engine. It integrates battery power, speed, engine speed, rudder angle, trim and other functions. It is compatible with NMEA2000 and J1939 signals, and supports different display styles.

- 两种风格可选，可适配单，双船外机。
- 操作简单，支持中英文语言切换。
- 兼容NMEA2000与J1939仪表
- 自定义报警，保证安全驾驶
- 背光调节10%-100%
- IP67防水

● Two display styles for option, compatible with single or dual engine

- Simple operation, support Chinese/English language switching
- Compatible with NMEA2000 and J1939 signals
- Self-defined alarm to ensure safe driving
- Background brightness adjustment: 10%-100%
- IP67 Protection

KMB-1025GE 多功能仪表

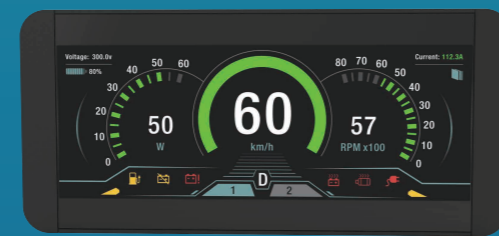
KMB-1025GE Multi-Function Meter

KMB-1025GE是一款专门为纯电动舷外机应用开发的具有监控功能的多功能仪表。屏幕可以用数字及图形直观的显示电池、电机、速度等参数，以及各种报警指示灯。仪表采用同尺寸的电容触摸屏，方便用户调取视频监控和进行设置参数的设定。

The KMB-1025GE is a multi-function instrument with monitoring function developed specifically for electric outboard engines. The screen can be used to display the battery, motor, speed and other parameters, as well as a variety of alarm indications. The instrument adopts a capacitive touch screen, which is convenient for users to access video monitoring and set parameters.

- 多种风格任意切换
- SOC+实时操作系统+MCU，高速可靠运行
- OBD固件升级,选配蓝牙升级功能，降低维护成本，操作简单方便
- USB升级UI
- 兼容J1939和NMEA 2000协议
- 多路摄像头可自由切换，完美支持FHD、HD、D1分辨率

- Various styles can be switched arbitrarily
- SOC + real-time operating system + MCU, high-speed and reliable operation
- OBD firmware upgrade, reduce maintenance cost
- Universal USB interface for soc firmware upgrade
- Compatible with J1939 and NMEA 2000 protocols
- Cameras can be switched freely, and support FHD, HD, D1 resolution



CHAPTER

仪表系列

Gauge Series



KMG多功能仪表

KMG Multifunctional LCD instrument

- NMEA2000，信号序列号可在KMG上设定
- 兼容J1939和NMEA2000，支持4种不同的模拟输入信号（转速器，油位，水温，油压）
- 防水等级：IP67
- 运行速度快，低功耗、主频高

- For NMEA2000, the signal sequence number can be set on KMG;
- Compatible with J1939 & NMEA2000, supporting 4 different of Analog signals input (Tacho sensor, Fuel, Water temperature and Oil pressure sensor)
- IP67 protecting rating
- Fast running speed, low power consumption, high main frequency

KMB多功能显示屏

KMB Integrated Data Monitor

KMB是一种数据集成式的先进的TFT控制器。TFT仪表盘可兼容J1939和NMEA2000网络协议。KMB可实时显示从网络获取的信息，包括发动机输出信号、液位以及速度。KUS可提供定制化规格以便满足客户不同需求。

KMB is an integrated data monitor with an advanced TFT(Thin film tansistor) screen. The unit is compatible with J1939 and NMEA2000 systems. The KMB displays real time network information including engine output, fluid levels and speed. KUS can also customize the unit to meet customer requirements.

SQ系列

Sea Q Series

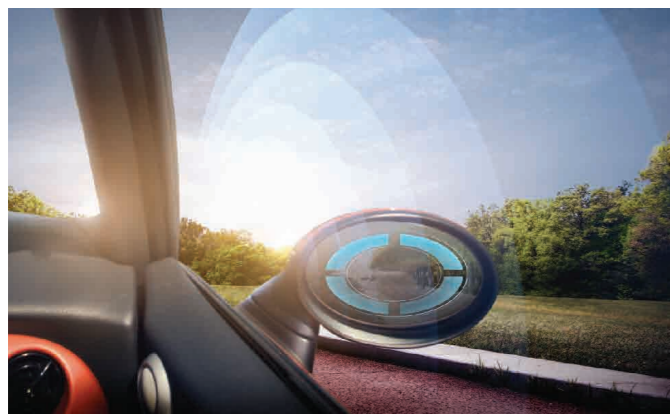
- 适用于卡车、巴士、工程机械、发电机组等领域。
- 前盖材质：SS316不锈钢前盖
- 仪表带极性保护及双层防雾玻璃
- 连接方式：6.3*0.8mm端子片可快速连接。
- 背景灯：红、黄双色可选。
- 显示精度：<3°
- 防护等级：表盘IP67

- Applicable to truck, bus, engineering machinery, generator set, etc fields.
- Bezel material: Stainless steel bezel.
- With reverse polarity connection protection and double layers anti-fog lens.
- Connecting way: 6.3*0.8mm terminal strip, can be connected quickly.
- Light: Red and yellow for your option.
- Display accuracy: <3°
- Protection grade: Surface IP67

CHAPTER

企业文化

Group Culture



企业愿景 KUS Vision
让呼吸更洁净
Make Breathing Cleaner



企业使命 KUS Mission
持续为客户创造最大价值
Maximize customers' value continuously



核心价值观 KUS Core Values
正直、当责、创新、团队
Integrity, Accountability, Innovation, Team



人才理念 Talent Concept
让好人要出头的当责文化
An accountability culture where allows good people to be appreciated.

CHAPTER

研发能力

R & D Capability



环境测试实验室
Environment Test Laboratory

正扬科技不断创新，拥有近20年汽车电子零部件设计制造经验，共获得300余项专利，强大的研发能力奠定了KUS集团高科技企业的基石。

KUS is constantly pursuing innovation, has nearly 20 years of experience in the design and manufacture of automotive electronic components, and has obtained more than 300 patents. The strong research and development capabilities have laid the cornerstone of KUS Group's high-tech enterprise.

正扬科技研发队伍在金属加工工艺、自动化设备研发、热管理、模具设计、金属冲压、超声波探测、流体力学分析、信号传输等领域积累了丰富的经验；同时，公司建立了良好的技术团队建设体系，每年针对研发人员制定专项技术培训。

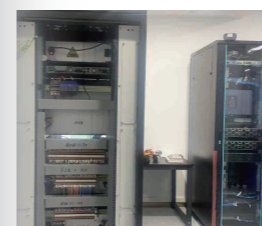
The R&D team of KUS has accumulated rich experience in metal processing technology, automation equipment research and development, thermal management, mold design, metal stamping, ultrasonic detection, fluid mechanics analysis, signal transmission and other fields; at the same time, the company has established a good technical team construction system, formulate special technical training for R&D personnel every year.

经过多年发展，正扬科技研发团队日渐壮大，并引入国际化的合作理念，与世界各大知名商用车及非道路车辆厂商共同进行产品研发、测试，为客户提供优质的产品解决方案。

KUS R&D team has nearly 500 people. With the introduction of international cooperation concepts, it conducts product development and testing with the world's leading commercial vehicle and non-road vehicle manufacturers to provide customers with the most optimized product solutions.

为确保产品品质，正扬科技实验室获得了CNAS授权。实验室设有环境实验室、振动实验室、电子实验室、老化实验室、物理实验室、化学实验室以及量测中心，配备来自机械、自动化、电子、材料等相关专业的人才。

In order to ensure product quality, the laboratory of KUS has been authorized by CNAS. The laboratory has an environmental test room, a vibration test room, an electronic test room, an aging test room, a physical test room, a chemical test room and a measurement center, equipped with talents from related majors such as machinery, automation, electronics and materials.



HIL台架实验室
HIL Bench Laboratory



振动实验室
Vibration Laboratory



测量中心
Measurement Center



寿命测试实验室
Lifetime Test Laboratory



化学实验室
Chemical Laboratory



物理实验室
Physics Laboratory

CHAPTER

生产能力

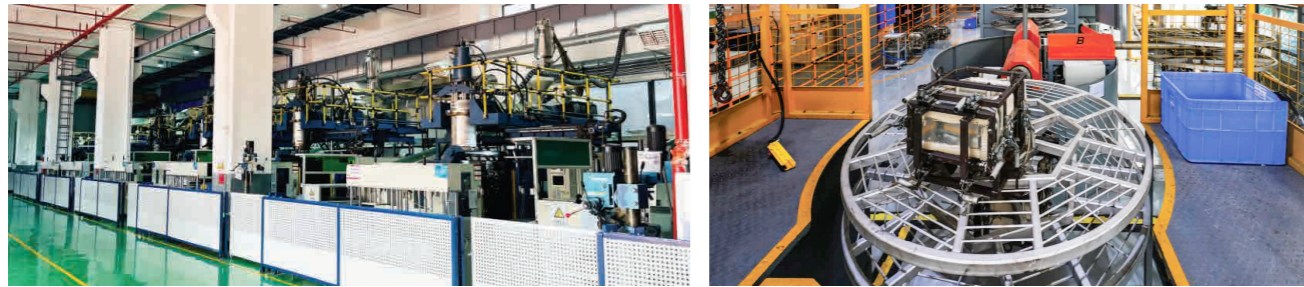
Manufacturing Capability

通过多年的高速发展及公司持续不断地投入，正扬科技拥有了多种先进的生产工艺和设备：德国TüV认证的制管线、注塑机、CNC机、先进的吹塑机、高品质的钎焊线、自动化的SMT、高性能的自动波峰焊等。大部分关键零部件实现了自制，具备从原料加工到成品组装一条龙的产品生产制造能力，确保公司产品可以满足客户的各类柔性化需求。

Through years of rapid development and the company's continuous investment, Zhengyang has a variety of advanced production processes and equipment: German TÜV certified pipelines, injection molding machines, CNC machines, advanced blow molding machines, high-quality brazing wire, automated SMT, high-performance automatic wave soldering, etc. Most of the key components have been self-made, and we have one-stop product manufacturing capabilities from raw material processing to finished product assembly, ensuring that the company's products can meet various flexible needs of customers.

公司导入的MES (Manufacturing Execution System)系统，通过维护和利用实时精确的信息来引导、发起、响应和报告生产活动，帮助公司作出快速的响应以应对变化，减少无附加价值的生产活动，提高操作及流程的效率。

The MES (Manufacturing Execution System) system introduced by KUS guides, initiates, responds and reports production activities by maintaining and utilizing real-time accurate information, which helps KUS to respond quickly to changes, reduce production activities without added value, and improve the efficiency of operations and processes.



吹塑 Blow molding

滚塑 Rotational molding



TQS自动化产线 TQS automated production line

SMT



CNC数控加工 CNC machining

注塑 Injection molding

制管 Pipe forming



钎焊 Brazing

模具制作 Tooling manufacturing

波峰焊 Wave soldering

CHAPTER

企业荣誉

Company Honor

公司以创新为发展基石。公司先后获得了“省著名商标”和“省名牌产品”等自我品牌以及“高新技术企业”、“国家知识产权优势企业”、“倍增企业”、“省创新型企业”等上百项荣誉。以质量求生存，在行业内部通过了ISO26262, IATF16949, ISO14001, CE, PED+AD2000等认证。

Company innovation is the cornerstone of development. KUS has successively won self-brands such as "Provincial Famous Trademark" and "Provincial Famous Brand Product", as well as hundreds of honors such as "High-tech Enterprise", "National Intellectual Property Advantage Enterprise", "Multiplication Enterprise", and "Provincial Innovative Enterprise". Survive by quality, passed ISO26262, IATF16949, ISO14001, CE, PED+AD2000 and other certifications in the industry.



我们的客户 Our Customers

(部分客户，排名不分先后)
Some customers, in no particular order



公司产品远销欧洲、北美、亚洲、澳洲等主要国家与地区，与全球客户多渠道紧密联系，凭借专业的行业经验和高品质的产品，获得一系列的企业荣誉认证和来自客户的嘉奖。

KUS products are sold to Europe, America, Asia and Australia, etc. By working with our partners through multiple channels and continuously providing customers valuable products and services, KUS is in line with international customer certification requirements.

