方盛换热器

致力于换热器产业发展，矢志创新

提供领先的热交换技术解决方案

倡导低碳科技，实现能源的优化利用

FANGSHENG

Committed to the development and innovation of heat exchanger industry

Providing worldwide customers with leading heat exchange technology solutions

Advocating low carbon technology to achieve optimum utilization of energy

无锡方盛换热器股份有限公司

Wuxi Fangsheng Heat Exchanger Corp., Ltd.

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Gonsen方盛

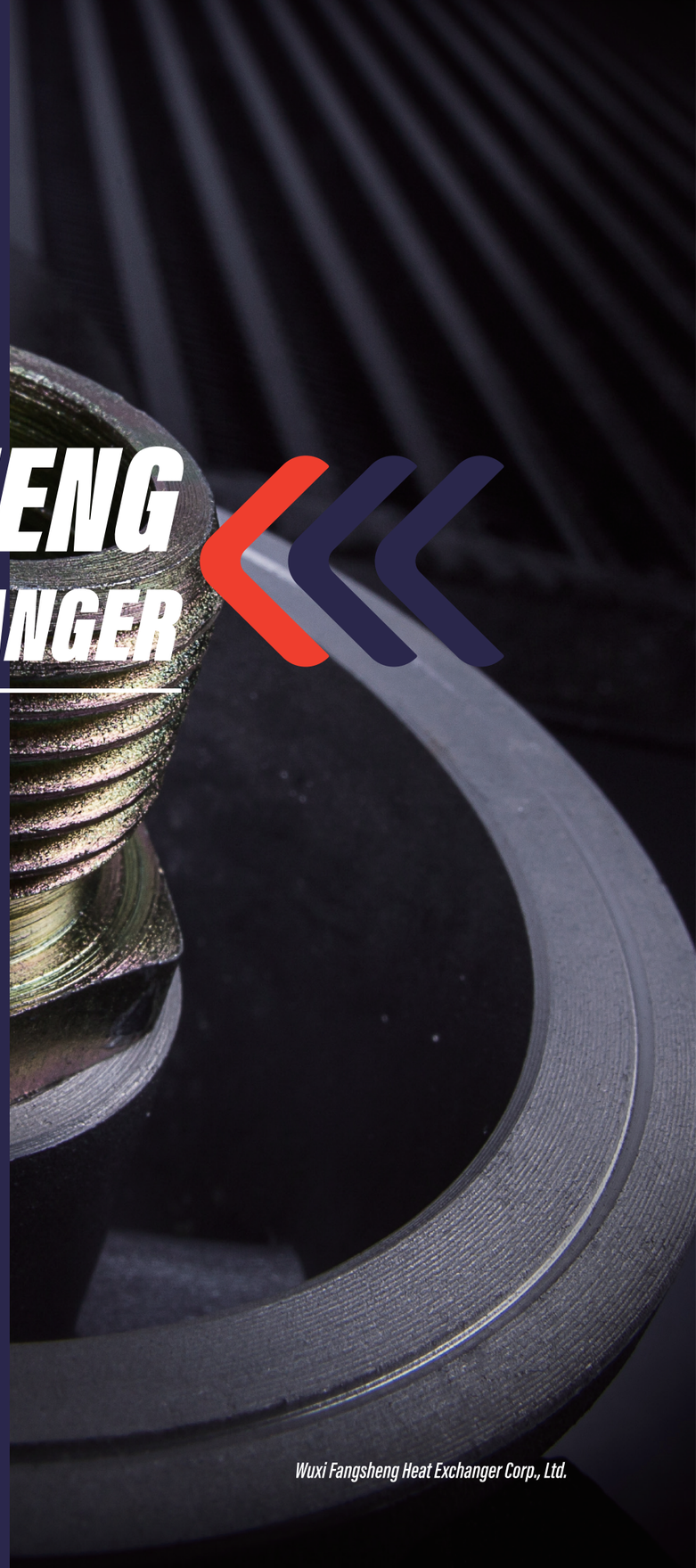
方圆之间 | 盛交天下

FANGSHENG HEAT EXCHANGER

方盛换热器

冷却技术优势供应商

Dominant Cooling Solutions Supplier



Wuxi Fangsheng Heat Exchanger Corp., Ltd.

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COMPANY PROFILE

/ 公司简介

无锡方盛换热器股份有限公司是各热交换领域解决方案的供应商，主要从事于铝制板翅式换热器的研发、制造与测试。我们向全球企业及各专业领域提供完善的冷却解决方案，我们的客户中不乏各行业的领军企业。经过多年的探索，我们已经在所涉及的领域中取得了较高的市场地位。

Fangsheng is a specialized cooling solution supplier in China, mainly engaged in R&D, manufacturing and testing of aluminum bar & plate (Plate-fin) heat exchangers. FS provides excellent products for relevant businesses worldwide, many of whom are industry leaders. FS brand has been well recognized and respected in our principal markets through many years of exploration.

BUSINESS MISSION

/ 经营使命

面向全球提供领先的产品、解决方案与专业优质服务的换热器集成供货商。

Premium global supplier of heat exchanger assembly with leading products, solutions and professional services.

ENTERPRISE SPIRIT

/ 企业精神

以精益求精的精神， 专注聚焦于向全球客户提供系统换热方案！

In the spirit of excellence, we focus on providing global customers with cooling system solutions!

QUALITY POLICY

/ 质量方针

优质高效、持续改进、顾客至上、精心服务

High quality and efficiency, continuous improvement, customer first & meticulous service

COMPANY HISTORY

方盛十年 风雨同行 辉煌历程 -

2007

01 / JANUARY

无锡方盛换热器制造有限公司成立

Wuxi Fangsheng Heat Exchanger Corp., Ltd. was established

2010

12 / DECEMBER

荣获马山地区首批江苏省高新技术企业认定

Honored with the first batch of high-tech enterprises in Mashan,Jiangsu Province

2011

03 / MARCH

EN15085-2欧洲机车焊接工艺标准评定

EN15085-2 European Locomotive Welding Process Standard Assessment

2012

05 / MAY

成功申报“江苏省板翅式换热器工程技术研究中心”

Successful declaration of "Engineering Technology Research Center for Plate-fin Heat Exchanger in Jiangsu Province"

12 / DECEMBER

获得“江苏省名牌产品”荣誉

Acquired the honor of "Jiangsu Famous Brand Products"

2013

10 / JANUARY

方盛公司进一步扩大生产经营规模，新增厂房占地面积30000平米。

Relocated from No.19 to No.30 Changkang Road；New Factory covers an area of 30000m²

12 / DECEMBER

评为”江苏省科技型中小企业”

Awarded "Science and Technology SMEs in Jiangsu Province"

2014

05 / MAY

成功申报江苏省两化融合试点企业

成功申报无锡市知识产权优势企业

Successful declaration of Pilot Enterprise with integration of informatization and industrialization in Jiangsu Province

Successful declaration of Superior Intellectual Property Enterprise in Wuxi

10 / JANUARY

成功申报“国家重点新产品”

Successful declaration of "National Key New Products"

2015

06 / JUNE

全国中小企业股份转让系统（“新三板”）正式挂牌，

The National Share Transfer System for Small and Medium-sized Enterprises ("New Third Board") was officially listed.
Stock code 832662

12 / DECEMBER

销售收入首次突破亿元

评为“无锡市企业认定技术中心”

Sales revenue exceeded 100 million yuan for the first time

Named"Enterprise recognition Technology Center in Wuxi"

2016

04 / APRIL

评为“无锡市信用管理示范企业”

Awarded "Wuxi Credit Management Demonstration Enterprise"

06 / JUNE

荣获“江苏省企业知识产权管理标准化示范先进单位”称号

Awarded the title of "Standardization and Demonstration Advanced Unit of Enterprise Intellectual Property Management in Jiangsu Province"

11 / NOVEMBER

通过“马德里国际商标”注册许可

获得德国实用新型专利授权

License for registration through"Madrid International Trademark"

Obtaining German Authorization for Utility Model Patent

2017

08 / AUGUST

成功进行清洁能源风电领域机组散热总成生产线技术改造项目

Successfully carried out technical renovation project of cooling assembly production line in the field of clean energy wind power

03 / MARCH

评为“无锡市知名商标”

Awarded "Wuxi Famous Trademark"

2018

07 / JULY

公司董事长荣获“江苏省科技企业家”认定

The chairman of the company was awarded the recognition of "Jiangsu Science and Technology Entrepreneur"

12 / DECEMBER

荣获“江苏省信用示范企业”

Won "Jiangsu Credit Demonstration Enterprise"

2019

09 / SEPTEMBER

江苏省两化融合管理体系贯标试点企业

Named Standard Pilot Enterprise of Mangement System with Integration of Informatization and Industrialization in Jiangsu Province

WONDERFUL NOW

精彩正在演绎~

Fonsen方盛

方圆之间 | 盛交天下

COMPANY
HONOR
/ 公司荣誉

荣誉的积累伴随着企业的发展，公司一贯秉持诚信经营、以质为本，经营理念不断发展。
信用体系的建设道路漫长，从2009年的AAA重合同守信用企业、2016年的无锡市信用管理示范企业到2018年的江苏省信用示范企业，诚信始终伴随着企业的不断壮大。
企业诚信经营可以为公司带来客户与市场，可靠的产品质量可以为企业建立良好的口碑。江苏省名牌产品、国家重点新产品、ISO9001、欧盟CE、EN-15085、OHSAS18001、ISO4001每本证书都见证企业的成长和实力。以质为本的脚步不会停留，我们将越走越快，越走越好。

The accumulation of honor is accompanied by the development of the enterprise. Our company has always adhered to the integrity management and quality-oriented principle with continuous development of business philosophy.

The construction of credit system has a long way to go. From AAA's Contract-abiding Enterprise in 2009, Wuxi Credit Management Demonstration Enterprise in 2016 to Jiangsu Credit Demonstration Enterprise in 2018, credit has always been accompanied by the continuous growth of enterprise.

Enterprise credit management can bring customers and markets to the company, and reliable product quality can build a good reputation for the enterprise. Jiangsu Famous Brand Products, National Key New Products, ISO 9001, EU CE, EN-15085, OHSAS 18001 as well as ISO4001, each certificate witnesses the growth and strength of the enterprise. Quality-based footsteps will not stay, and we will go faster and better.

210
知识产权申请数量
Intellectual Property Applications

56
实用新型专利授权
Utility Model Patent Authorization

10
发明专利授权
Invention Patent Authorization

4
德国实用新型专利
German Utility Model Patents

10
商标注册证书
Trademark Registration Certificates

27
高新技术产品
High-tech Products

荣誉证书
Honor Certificates

江苏省高新技术企业
江苏省板翅式换热器工程技术研究中心
国家重点新产品
江苏省两化融合试点企业
江苏省信用管理示范企业
江苏省信用管理贯标示范企业
江苏省科技型中小企业
江苏省民营科技企业
无锡市企业认定技术中心

质量体系
Quality System

EN-15085-2机车焊接体系
OHSAS-18001职业健康安全管理体系
ISO-14001环境管理体系
欧盟CE体系
ISO-9001质量管理体系
安全生产标准化-三级

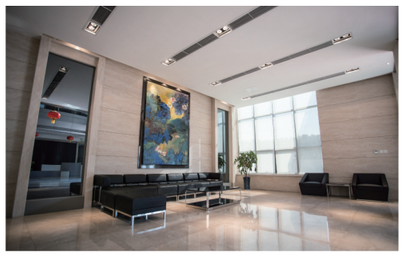
知识产权
Intellectual Property

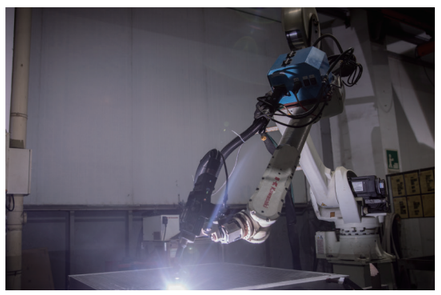
德国实用新型专利
发明专利-IGBT混合散热器
发明专利-打压充气装置用接头机构
发明专利-散热模块集成一体化的散热器
发明专利-一体化钎焊板式换热器
发明专利-一种便储运式换热器
发明专利-一种高压铝制板翅式换热器
发明专利-真空泵用滤油装置

FACTORY
PRESENCE
/ 厂区风采

公司成立于2007年，十多年的发展成长为一家研发制造能力突出的换热器供应商。目前公司占地35000平方米，拥有员工360余名，技术研发团队40余人，年产值250000台套，销售市场遍及全球，优质客户不乏行业佼佼者，全球500强客户逐年递增，方盛始终致力于为客户提供最优化的散热解决方案，为市场提供优质的产品及服务是方盛人永恒的追求。

Founded in 2007, our company has grown into an excellent heat exchanger supplier with outstanding research and manufacturing capabilities over the past 10 years. At present, our company covers an area of 35,000 square meters with more than 360 employees and 40 technicians in R&D team, its annual output reaching 250,000 sets. Moreover, it boasts a broad global market with lots of high-quality customers, among whom are some industry leaders and World Top 500 clients increasing year by year. Fangsheng has always been committed to providing customers with the optimized cooling solutions, and it's Fangsheng people's eternal pursuit to offer the market with high-quality products and services.





TECHNOLOGY
DEVELOPMENT
/ 技术研发

研发设计在整个企业发展过程中扮演着重要的角色，优秀的研发设计能力能维持企业的竞争力并且帮助企业实现快速成长。因此方盛创建并发展了一支富有成效的研发团队。方盛的研发团队长期参与众多的项目研究，拥有丰富的经验。

方盛现拥有41人的优秀研发团队，于2014年投资创建了江苏省板翅式换热器工程技术研究中心。可根据客户要求测试新产品，以及检查和调整产品。目前工程技术研究中心配备换热器综合性能试验台、电磁振动试验台、冷热交换脉冲试验、盐雾试验台等研发测试设备，自主研发测试能力全面。

方盛积极同主要供应商一起寻找新的解决方案和技术以此来延长产品的使用寿命，使得我们的产品在诸如盐雾环境、废气环境、高压和高温环境下能减少腐蚀和减小机械阻力，从而节省材料和能源消耗,减少温室气体的排放。

R&D design plays an important role in the whole process of enterprise development. Excellent R&D design ability can maintain the competitiveness of enterprises and help them achieve rapid growth. Therefore, Fangsheng has created and developed a fruitful R&D team, which has long participated in many project research and has rich experience.

Fangsheng now has an excellent R&D team of 41 engineers and invested in the establishment of Jiangsu Plate-Fin Heat Exchanger Engineering Technology Research Center in 2014. New products can be tested according to customers' requirements, and products can be checked and adjusted. At present, the engineering and technical research center is equipped with wind tunnel, vibration testbed, temperature cycle testbed, salt spray testbed and other research and development testing equipment, whose independent research and development testing capacity is comprehensive.

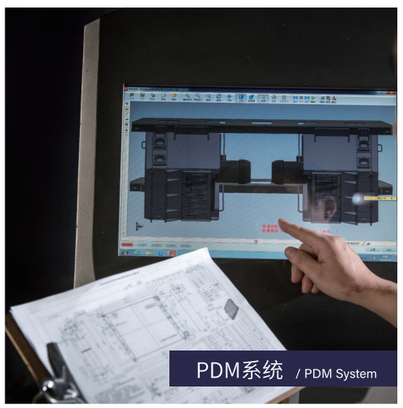
Fangsheng actively works with major suppliers to find new solutions and technologies to extend the service life of our products, so that corrosion and mechanical resistance can be reduced in such environments as salt spray, exhaust gas, high pressure and high temperature, thereby saving material and energy consumption and reducing greenhouse gas emissions.

换热器综合性能测试台 / WIND TUNNEL

冷热交变脉冲试验台 / Temperature Cycle Testbed

激光光谱仪 / Laser Spectrometer

换热器综合性能测试台 / WIND TUNNEL


PDM系统 / PDM System

SERVICE AREA / 服务领域

方盛为世界领先主机厂量身打造高效、节能和可靠的冷却及热交换系统解决方案，并提供全球化优质服务。
服务对象涉及风力发电、轨道交通、道路工程机械、汽车、农用机械、船舶制造、航空航天等多个领域。

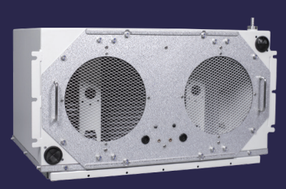
Fangsheng tailors for the world's leading main engine plants with efficient, energy saving and reliable cooling and heat exchange system solutions, and provides excellent globalization services, which involves wind power, locomotive, road machinery, automobile, agricultural machinery, shipbuilding, aerospace and other fields.

散热器本体
Aluminum Cooler

水冷板
Cold Plate

液压油散热器
Hydraulic Oil Cooler

冷却集成系统
Cooling Assembly System



风力发电
Wind Power

轨道交通
Locomotive

工程机械
Construction Machinery

农林机械
Agricultural & Forestry Machinery

压缩机
Air Compressor

冷干机
Air Dryer

汽车工业
Automotive

能源化工及空气分离
Energy Chemical Industry & Air Separation

客户定制
Customization

WIND
POWER
/ 风力发电

换热器在整个风力发电机组中起着重要的作用，为**发电机、变流器**和**齿轮箱**提供冷却。由于风力发电设备安装环境以及安装结构的特殊性，对换热器长期稳定运行的能力有很高的要求。考虑到各项可能存在的风险因素比如雨水的腐蚀，风沙的堵塞，方盛通过各项性能试验以及客户使用的反馈不断调整设计和生产工艺，从而满足风电客户的各项要求。

由于可供开发的陆地风场资源有限，未来沿海甚至海上的风场开发将逐步成为主流。海上风电由于其环境的特殊性，除了对于产品的设计稳定，质量把控之外更加要求产品对潮湿、酸碱环境的适应性要很高。

为此方盛使用抗腐蚀新材料，抗腐蚀表面处理，以及特殊的结构设计来适应未来的行业需求。

Heat exchangers play an important role in the whole wind turbine, providing cooling for generators, converters and gearboxes. Because of the particularity of installation environment and structure of wind power generation equipment, there are high requirements for the long-term stable operation ability of heat exchangers. Considering the possible risk factors such as rain water corrosion and sand blockage, Fangsheng constantly adjusts the design and production process through various performance tests and feedback from customers, so as to meet the requirements of wind power customers.

Due to the limited land wind field resources available for development, the exploitation of coastal and even offshore wind field will gradually become the mainstream in the future. Offshore wind power has very particular environment, so it requires the product of stable design, quality control and stronger adaptability to wet, acid and alkali environment.

To this end, Fangsheng uses new anti-corrosion materials, anti surface treatment, as well as special structural design to meet future industry needs.

1 齿轮箱油冷却器
Gearbox Oil Cooler

齿轮箱是机组中最为重要的传动部件，也是风力发电机组中故障率最高的部件。机组运行过程中，齿轮箱的润滑系统须正常运行，否则齿轮箱齿面或轴承将会损坏；方盛风机齿轮箱提供稳定可靠的冷却系统，有效地将齿轮动力传输过程中发出的热量散发出去 以保障润滑油温度稳定在一个合理的区间，从而保证润滑系统的平稳运行。

2 发电机及变流器水冷系统
Generator and Converter Water Cooling System

随着内陆、沿海等地方优良风资源的不断开发，普通平原地区可用的优良风资源越来越少，为寻求风机的持续发展，将风机内陆平原沿海等地转移到风速相对好的高海拔及海洋上。
随着海拔的升高，空气密度减小从而冷却性能降低，方盛提供适应高海拔应用的水冷系统以保障发电机及变流器的稳定运行。
海上风电对水冷系统的对潮湿、酸碱环境的适应性提出了更高的要求。方盛通过多年经验积累，和合作伙伴一起研发出一套稳定可靠的防腐蚀解决方案，产品符合C5-H防腐要求，从而长期保障风力发电机及变流器的稳定运行。

3 变流器柜内水冷却器及水冷板
Water Cooler and Water Cooling Plate in Converter Cabine

风电变流器可以优化风力发电系统的运行，提升风能利用率。其工作正常与否很大程度上取决于其功率柜内IGBT模块的工作状态. 方盛功率柜水冷却器及IGBT模块水冷板有效地带走IGBT模块中的损耗热量，有利于实现设备的小型化及轻量化并保障IGBT模块的平稳运行。

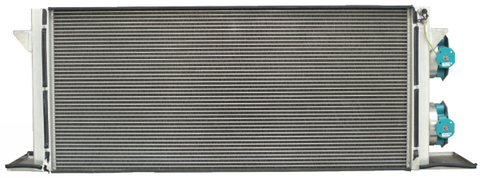
RAILWAY
CEHICLE
/ 铁路机车

如今电力机车发展迅速，主变压器和变流器的冷却器要求也大大提高。老款电力机车主要采用铜质散热器，铜质散热器体积大，换热能力差，重量重且成本高，方盛为了满足市场需求设计并开发了结构紧凑，性能优异，可靠性高的铝制散热器并在设计中考虑到了潜在的风险比如震动，腐蚀及尘土堵塞造成传热效率降低等。并根据整个冷却系统的风扇特性曲线和冷却器的流体阻力特性曲线进行匹配计算，在保证冷却器散热能力的前提下，使通风系统和油、水系统的性能最优化。

With the rapid development of electric locomotives, the requirements of coolers for main transformers and converters have been greatly improved. In order to meet the market demand, Fangsheng has designed and developed an aluminium radiator with compact structure, excellent performance and high reliability. Potential risks such as vibration, corrosion and dust blockage were taken into account in the design. According to the fan characteristic curve of the whole cooling system and the fluid resistance characteristic curve of the cooler, the matching calculation is made to optimize the performance of the ventilation system and the oil and water system on the premise of guaranteeing the cooling capacity of the cooler.

1 牵引变压器油冷
Traction Transformer Oil Cooling

机车牵引变压器是电力机车上的一个重要部件，用来把接触网上取得的25KV高压电压变换为供给牵引电机及其他电机、电器工作所适合的电压，牵引变压器将转变电压的过程中会产生热损耗，引起电气元件温度上升。方盛牵引变压器油冷却器将工作时产生的热 量带走，将所有元气件的温度稳定在合理的温度范围从问保障变压器的正常工作及机车的平稳安全运行。



2 机车变流器水冷却器及水冷板
Converter Water Cooling System & Cold Plate

牵引变流器是列车关键部件之一，牵引变流器功率模块（IGBT模块）是构成变流器的核心部件。随着列车运行速度越来越快，变流器的的功率模块及其发热功率也越来越大，从而对冷却系统提出了更高的要求。根据功率范围不同，方盛为牵引变流器系统提供风冷却,油冷却,及水冷板加水冷组合冷却系统，从而保证了变流器稳定工作及列车的平稳运行。

CONSTRUCTION MACHINERY

/ 工程机械

对于工程机械来说发动机的冷却以及液压系统的冷却尤为重要。对于使用在工程机械上面的换热器来说，使用中震动的防护，泥沙堵塞的风险，以及极端环境的防护很重要。方盛公司在研发过程中就充分考虑了上述因素，并在试制阶段对产品进行各项严格测试并定型，为客户提供结构紧凑，模块化设计，坚固耐用，便于安装维护，及特殊防堵翅片设计的冷却系统解决方案，保障工程机械在恶劣炎热的工况下稳定运行。

For construction machinery, the cooling of the engine and hydraulic system are particularly important. For heat exchangers used on construction machinery, the vibration protection, the risk of silt blockage and extreme environmental protection during use are very important. Fangsheng has fully considered the above factors in the research and development process, and carried out various rigorous testing and stereotypes on the products during the trial production stage, providing customers with the sturdy and durable cooling system solution of compact structure, modular design and special anti-blocking fins, which is easy for installation and maintenance, so as to guarantee the stable operation of the construction machinery under severe and hot conditions.

1 燃油驱动工程机械
Fuel-driven Construction Machinery

发动机是工程机械的核心部件是机械运行的原动力。工程机械一般靠液压系统驱动做功，液压油在液压油系统中起着传递压力、润滑、密封、冷却作用。工程机械行驶速度低，常采用发动机后置，环境恶劣，对发动机及液压系统的冷却问题更为敏感。方盛充分考虑上述因素为发动机及液压系统提供可靠的水箱、中冷、液压油冷、燃油冷等冷却系统，从而保证发动机及液压系统在任何负荷条件下和用户所必需的任何环境工况下均能正常和可靠地工作，保证工程机械平稳运行。

2 新能源工程机械
New Energy Construction Machinery

随着新能源的发展，电动工程机械正在逐步发展和完善。各种各样的电动工程机械不断的在上市，而大功率的电池工作电流大，产热量大，同时电池包处于一个相对封闭的环境，就会导致电池的温度上升。为了有效解决发热问题，方盛为新能源电池组定制完善的水冷板散热器系统，以保证大功率电池组在极端工况下长期稳定工作。

新产品、新领域、新希望

New Product , New Industry and New Hope

方盛始终致力于冷却系统的技术革新，利用最优的料达到最好的散热效果，为客户节约成本实现双赢。同时方盛公司引进了最专业的人才和设备，积极开发应用于信息科技，新能源汽车，新能源发电等新领域的冷却系统，积极助力于绿色环保的可持续发展是方盛公司最大的责任，也是我们的愿景。

Fangsheng has always been committed to technological innovation of the cooling system, supplying the best cooling solution for all clients and saving their purchasing costs so as to make a win-win situation. Meanwhile, Fangsheng has introduced lots of professional design talents and advanced R&D equipment to help positively develop cooling system in new fields like information technology, new energy vehicles, new energy generation, etc. Active contribution to the sustainable development of green and environmental protection has been our biggest responsibility as well as vision.

COOPERATIVE PARTNERS

/ 合作伙伴

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ELITE CULTURE
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Emphasize on employee cultivation of critical thinking and encourage the pragmatism of application.

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Deconstruct traditional method and create new ecology.

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/ 无边界沟通

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