

Vacuum Technology
真空技术事业

FerroTec

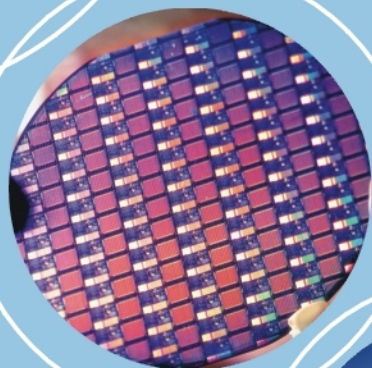
杭州大和热磁电子有限公司
HANGZHOU DAHE THERMO-MAGNETICS CO.,LTD

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FerroTec

杭州大和热磁电子有限公司
HANGZHOU DAHE THERMO-MAGNETICS CO.,LTD

A Diversified Technology Company



半导体 / 平板显示
Semiconductor / FPD Business



太阳能
Solar Cell Business



电子材料
Electric materials Business



精密机械
Precision Mechanics Business

Contents

关于我们 / About Us

Ferrotec (中国)	01
Vacuum Technology 真空技术事业	02
Development Course 发展历程	03

我们的起源 / The Origin

Vacuum Seals Experts 磁流体密封技术专家	05
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我们的优势 / The Superiority

Large-scale Vacuum Chamber Manufacturer 大型腔体制造专家	07
Precision Experts Machining 精密加工技术专家	11
Making A Part the Same Way Every Time 品质精良 / 始终如一	13
You can find us everywhere in the world 全球分布	15

Ferrotec (中国)

Ferrotec Corporation(日本磁性流体技术株式会社)自1992年进入中国,相继在杭州和上海地区设立了多家子公司,总雇员数达3000余人。主要生产:热电半导体制冷材料及组件、精密真空部件、石英制品、陶瓷制品、单晶硅及晶圆、太阳能发电专用设备、数控设备、锯片等。产品通过ISO9002、ISO9001、ISO14001、EN46001和TS16949等体系认证并在半导体、太阳能、电子材料和精密机械等诸多高科技产业领域得到广泛应用。

Hangzhou Dahe Thermo-magnetics Co., Ltd. (Ferrotec Hangzhou) was wholly invested by Japanese Ferrotec Corporation in 1992. It is located in Hangzhou Hi-tech Industrial Development Zone (Binjiang District). The main products include: thermo-electronics materials and modules, precision vacuum parts, quartz products, ceramics, silicon ingot & wafers, solar power plant, NC machinery, carbide saw blades, etc., We are ISO9002, ISO9001, ISO14001, EN46001 and TS16949 certified and has wide application in high-tech industries like semiconductor, solar cell, electronic materials, precision mechanics, etc.



▶ 杭州大和热磁电子有限公司第一工厂
Hangzhou Dahe Thermo-Magnetics Co., Ltd. (1st factory)



▶ 杭州大和热磁电子有限公司第二工厂
Hangzhou Dahe Thermo-Magnetics Co., Ltd. (2nd factory)



▶ 杭州和源精密工具有限公司
Hangzhou Wagen Precision Tooling Co., Ltd.

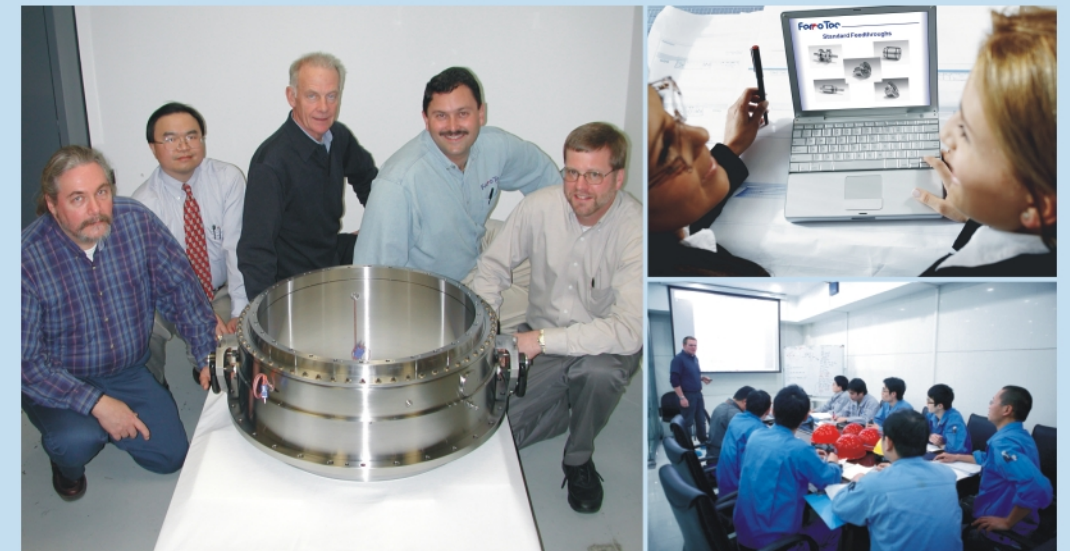


▶ 上海申和热磁电子有限公司
Shanghai Shenhe Thermo-Magnetics Electronics Co., Ltd.



▶ 上海汉虹精密机械有限公司
Shanghai Hanhong Precision Machinery Co., Ltd.

Vacuum 真空技术事业 Technology



真空技术事业部总面积30000余平方米,员工600余名。事业部下设制造部、销售部、技术部、设计开发部、品质保证部、生产管理部,拥有先进的加工设备100余台。

With an area of 30000 s.q.m and more than 600 employees, Vacuum Technology Division owns lots of professional engineers and about 100 sets of advanced manufacturing equipments.

真空技术事业部在磁性流体真空密封传动装置、真空零部件、真空腔体、电子束蒸发器等的开发和制造方面,具备强大的加工能力和丰富的加工经验,能为太阳能、光学应用、半导体、TFT-LCD制造行业提供各种真空密封技术解决方案以及精密加工配套服务。是诸多国际知名半导体和光伏产业设备制造商首选的固定合作伙伴。

It mainly engages in vacuum feedthroughs developing and manufacturing, vacuum components, vacuum chamber, electron beam evaporator. Possessing strong machining capability and rich experience, it can offer vacuum sealing solution and precision machining services and is the reliable partner in high priority of famous home and abroad semiconductor and PV industry manufacturers.

Development 发展历程 Course

1968'

美国Ferrofluidics公司成立，磁性流体技术从NASA的宇宙航天计划正式进入商业化应用领域。
Ferrofluidics company (USA) founded for the purpose of developing commercial applications for ferrofluid from NASA.

1970'

Ferrofluidic®密封技术正式注册专利。
Ferrofluidics patents the Ferrofluidic® magnetic liquid seal for rotary applications

1996'

导入磁性流体惯性阻尼器
Ferrofluid technology transferring to China

1997'

导入磁性流体真空传动装置
Started production of vacuum feedthrough.

1998'

导入精密真空零部件的生产
Started production of precision vacuum parts.

2000'

半导体OEM
Semiconductor OEM.

2002'

真空技术事业部正式成立
VF Division foundation
参与国家重大科学工程——中科院兰州近物所重离子加速器冷却储存环项目
Participation in State key scientific project: Lanzhou HIRFL-CSR Project

2004'

单晶炉
Single crystal furnace
中国真空学会全国代表团
参观真空技术事业部

2005'

导入单晶炉真空腔体及零部件项目
导入分子泵项目
导入博世包装项目

2006'

导入电子束蒸发器项目
导入电子束焊工艺

2007'

导入多晶炉真空腔体及零部件项目。
导入法国Sidel项目

2008'

导入德国海德堡项目
导入美国Brooks项目
导入AMEC项目
导入切方机项目

2009'

导入复旦大学项目
导入TIG自动焊工艺

2010'

导入等离子自动焊工艺
导入G多项目

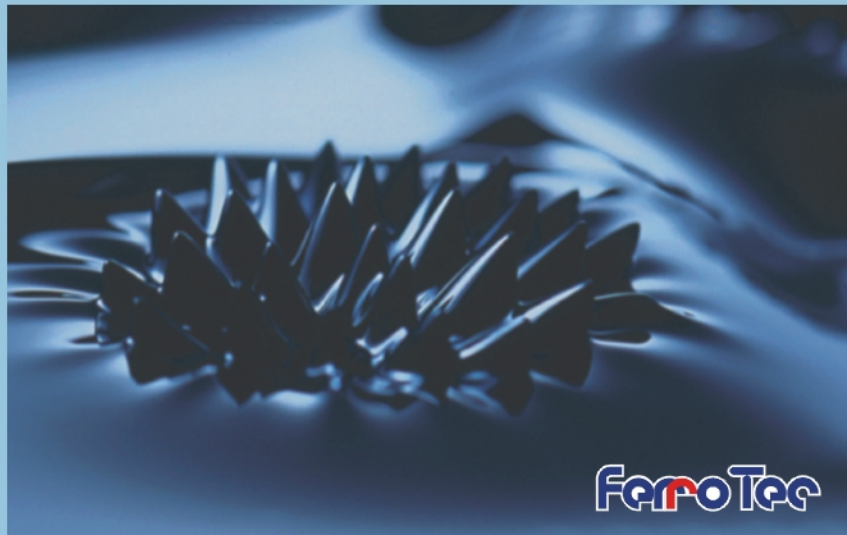
2011'

导入镀膜机项目、波纹管项目。
获得六项实用新型国家专利

Vacuum Seals

磁流体密封技术专家 Experts

磁性流体真空传动装置是一种把旋转运动传入真空容器的装置，其基本构成为一个永久磁场，两个磁极，一个磁性转动轴和磁性流体。传动轴是一个多极结构，由磁极和转轴组成。在每级环形间隙中，充满了磁性流体。在理想状态下，所有磁性流体密封在每一级极间与磁极之间，形成一系列的“磁性流体密封圈”。每级“磁流体密封圈”能承受的压差0.15-0.2个大气压，整个区域的承受能力为密封圈总的承压能力，为适应真空环境，磁性流体密封圈标准设计压力大于两个大气压。并具有长寿命、可靠性、无污染、低阻力和适应高速旋转能力等特性。



Ferrofluidic Seals and Vacuum Feedthroughs is a device that transmits rotary motion into a vacuum chamber. The basic components are a permanent magnet, two pole pieces, a magnetic shaft and magnetic fluid. The driving shaft is a multi-stage structure, consisted of magnetic poles and shafts. In the ideal situation the ferrofluid is trapped and held between poles of each stage and between each magnetic pole, forming a series of "magnetic fluid seal rings" with intervening regions that are filled with air. The "ferrofluid seal rings" of each stage can typically sustain a pressure differential of 0.15-0.2 atmosphere pressure. The total pressure capability of the whole region equals to the whole sealing rings. The magnetic fluid seal rings are standard designed to sustain a pressure of greater than two atmosphere pressures, so as to apply to vacuum applications. It has a long service life, and several features including: high reliability, free of contamination, low damping and high-speed.

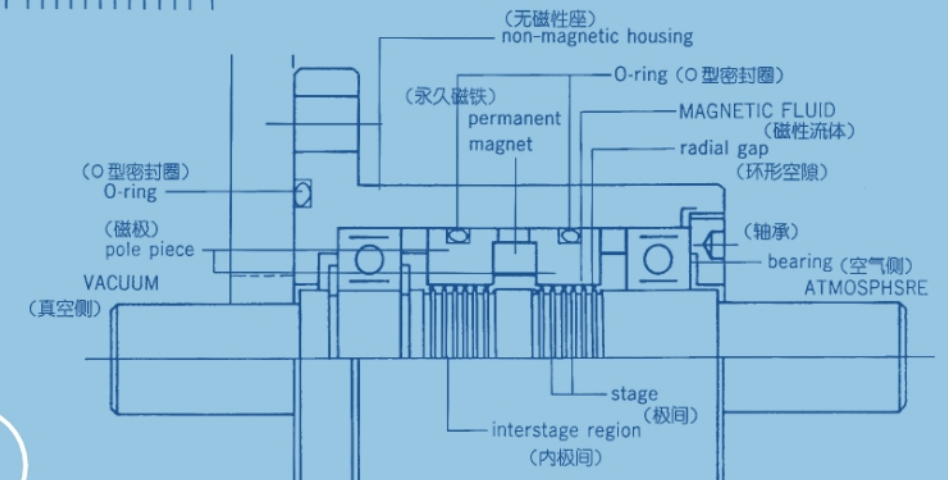
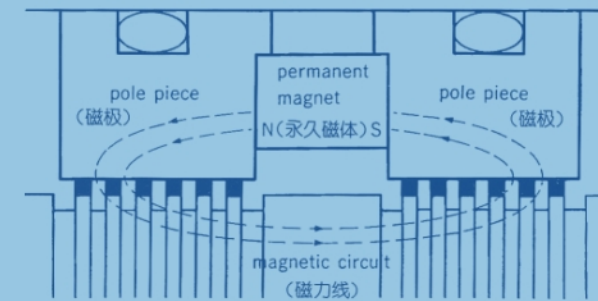
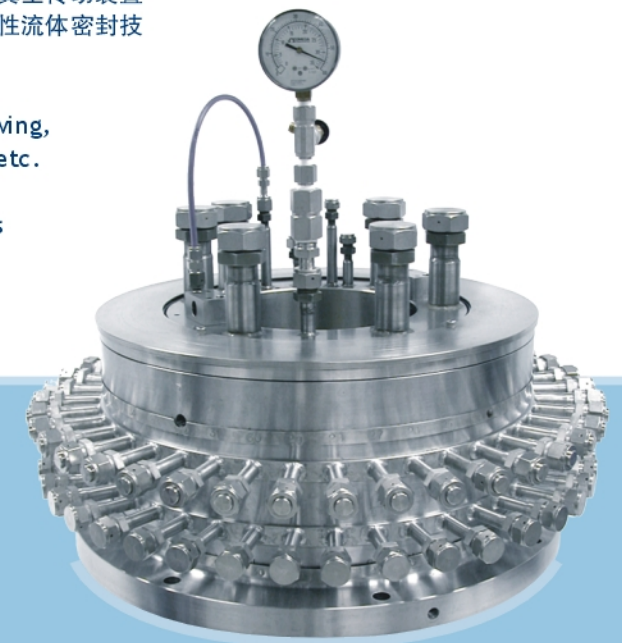


Ferrofluidic Seals & Vacuum Feedthroughs

磁性流体真空传动装置

磁性流体真空传动装置广泛应用于硅生长、目标位置电子指示器、溅射、等离子刻蚀、化学气相沉积、液晶再生过程等。我 公司是全球最大的磁性流体真空传动装置供应商。可以根据不同需求，为客户提供与工作环境相适应的高品质磁性流体密封技术应用产品及真空密封技术全套解决方案。

Vacuum feedthrough equipment has been widely used in silicon growing, EPI, sputtering, plasma etching, CVD and liquid crystal re-growing, etc. Nowadays, as the world's largest vacuum feedthrough supplier, Ferrotec can provide you with a full set of solutions on vacuum seals technology.



大型铝腔体 / The Superiority

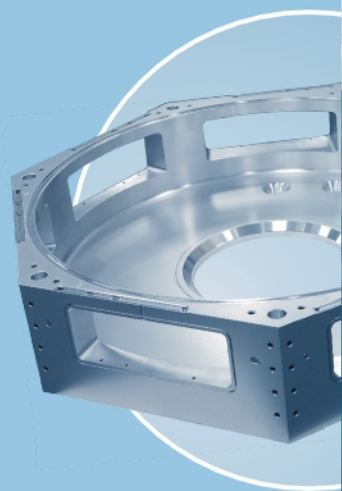
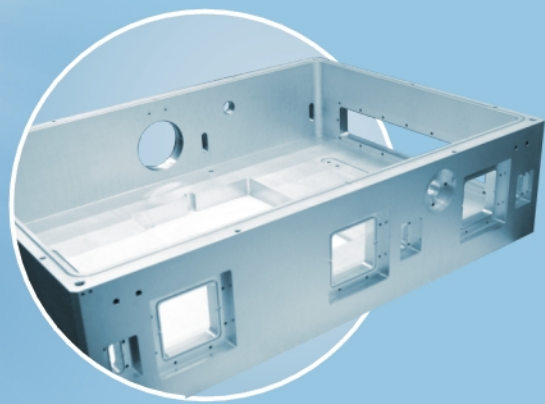
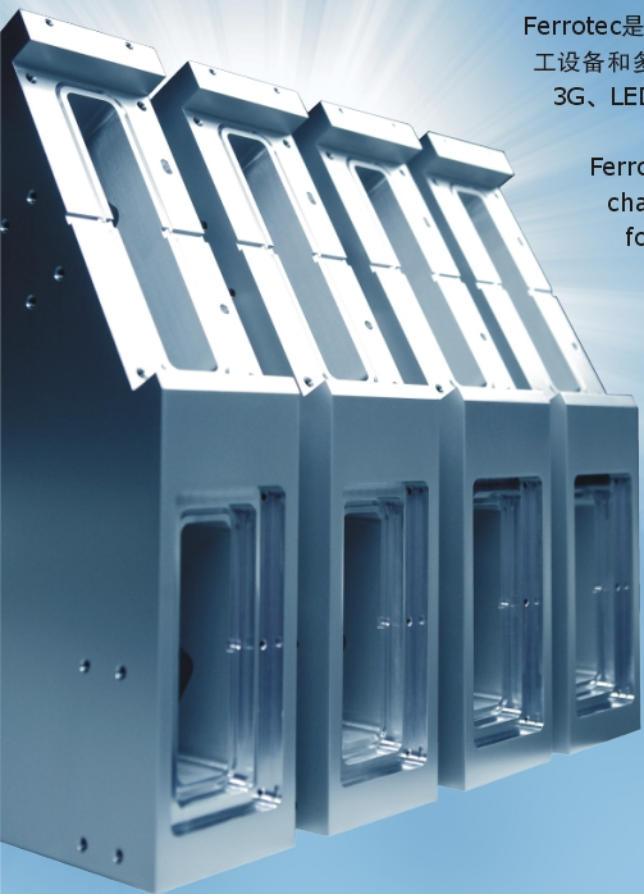
Large-scale Vacuum Chamber Manufacturer



型腔体制造专家

Ferrotec是中国最大的铝腔体和真空不锈钢焊接腔体制造商之一。拥有5台大型腔体加工设备和多条UHV洗净生产线，主要配套于如下行业：半导体、液晶显示、OLED、3G、LED、光纤制造业。

Ferrotec is one of the biggest stainless steel and aluminum vacuum chamber machining companies in China. It possesses 5 big machines for chamber machining and multiple UHV cleaning lines, mainly applied to industries such as semiconductor, LCD, OLED and 3G etc.



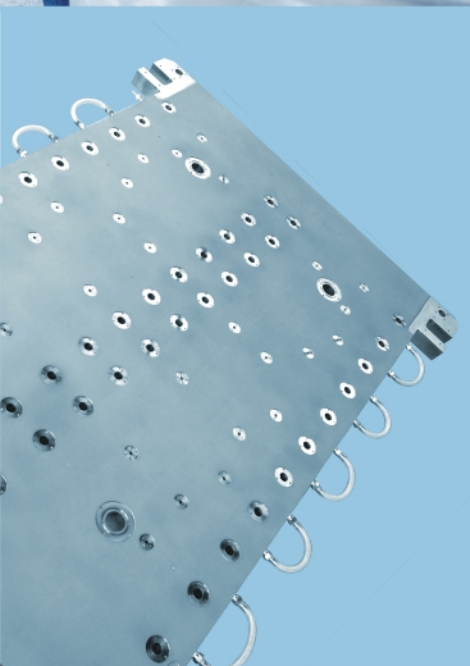
承接各类真空子系统组装单元
Vacuum sub-system module&units can be achieved



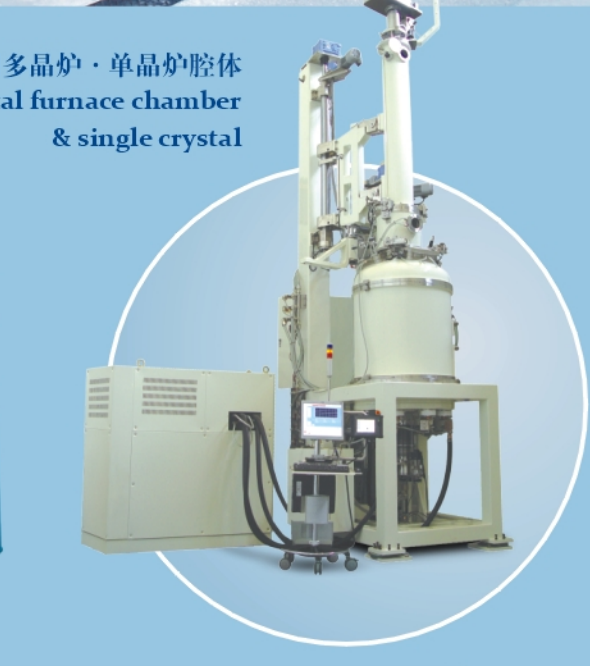
UHV 洗净生产线 / UHV cleaning line

1000 级净空房 / 1000 class clean room

大型不锈钢腔体 / The Superiority



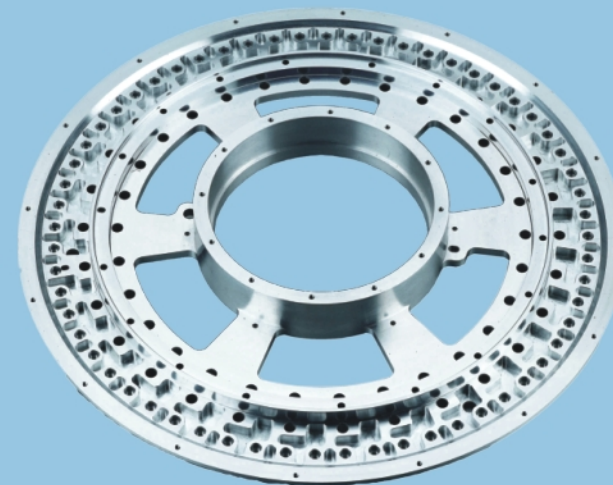
PV用多晶炉·单晶炉腔体
PV multi crystal furnace chamber
& single crystal



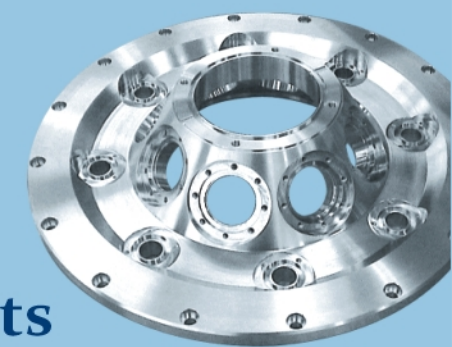
我们的优势 / The Superiority

Precision Machining Experts

精密加工技术专家



精密零部件
Precision parts



根据客户需求，按图纸加工制造
Capability of manufacturing according to what customers required

为客户提供设计、制造、咨询等全套精密加工技术解决方案
Solutions of designing, manufacturing, consulting of full sets of precision machining for customers etc.

Making A Part the Same Way 品质精良 / 始终如一 Every Time



- 精益求精的制造管理 — 精益制造

Ever-improving manufacturing management —Lean Manufacturing

采用精益化管理，结合日美先端的制造管理理念，在降低成本、提高生产制造效率、缩短交货期方面，不断改善，从而为客户赢得价值最大化持续增长。

Lean management, advanced Japanese and European management concept is adopted to reduce cost, improve manufacturing efficiency, reduce lead time, continuously improve and maximize customers value.

- 精准高效的资源管理 — ERP（企业资源计划）

Accurate and efficient resource management—ERP(Enterprise Resources Planning)

专业完善的生产管理团队，加之强大的ERP系统支持，能实现业务数据的集成化和业务流程体系的标准化管理，从而监控生产进度和合理安排订单、库存、采购等单元。对重要客户还能提供生产进度查询接口。

Possessing professional production management team and strong ERP system support, it can realize integration of business data and standardization management for reasonable production progress monitoring; PO, inventory, purchasing arrangement and production inquiries interface.

- 追求完美的品质管理 — 6σ

Pursuit of perfect quality management—6σ

关注客户需求，严格实行COPY EXACT，应用SPC进行过程控制，追求零缺陷，精准对接全球顶级半导体，太阳能设备等行业的要求。

Attention to customer needs; application of COPY EXACT, SPC; Pursuit of Zero defect; Precision standard aiming at the world's top semiconductor and solar industry requirement.

- 科学规范的文件管理——DCC文件控制中心

(DOCUMENT CONTROL CENTRE)

Scientific and standardized document management—DCC (Document Control Center)

不断创新、升级、审核的动态文件控制系统。由DCC统一进行管理，包含ISO9001质量体系文件、客户资料保密体系(TCP)、EDM图纸管理系统等，以满足客户资料保密和安全管理的需求。

Innovate, upgrade and verification of dynamic document control system; DCC contains ISO9001 quality system documents, the confidentiality of customer information(TCP), EDM management system which can meet the confidentiality of customer information and security management needs.



动态测试仪 /



检漏仪 /



光谱分析仪 /



三坐标测量仪 /

You can find us everywhere 全球分布 in the world

遍布全球的销售网点。在欧洲、美洲、亚洲，在世界的每个角落，都有Ferrotec的技术专家恭候您的光临。

With global sales network in Europe, America, Asia, technical experts of Ferrotec are always available to you.



Quality makes excellence Technology realizes dreams 品质彰显卓越，技术成就梦想。

