

## 公司简介

迈向智能社会的前方

以真空技术支撑起丰富多彩的未来

**Towards the smart society and beyond**

**Vacuum technology supports our abundant future**



ULVAC GROUP



总公司、相模原工厂

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我们坚持在“真空技术”这一关键技术上精益求精，为打造智能社会的未来而做贡献。

By refining our key vacuum technology, we will contribute to building a future beyond the smart society.

昭和真空从1953年创业时开始，便以诚实坦直的态度应对广大客户随社会变迁而日趋多样化的需求，为助力于建设富裕的社会而推动着事业发展。

“真空技术”作为昭和真空的关键技术在各领域范围内均有广泛应用，蕴藏着无限的可能性。特别是在尖端的电子产业中，“真空技术”更被认为是一种不可或缺的技术。

我们昭和真空将“迈向智能社会的前方，以真空技术支撑起丰富多彩的未来”作为口号，不断学习日益进步的新技术，努力提供超出客户期望的真空设备和服务，同时以成为能让所有员工轻松工作并感到有工作价值的企业为目标而不断发起挑战。

Since its founding in 1953, SHOWA SHINKU has been developing its businesses in order to contribute to building an abundant society, through its sincere and earnest commitment to coping with customer needs diversifying due to changes in society.

Vacuum Technology, which is SHOWA SHINKU's key technology, has wide-ranging applications and unlimited potential. Especially in the advanced electronics industry, vacuum technology is recognized as a vital technology.

With our corporate slogan "Towards the smart society and beyond, vacuum technology supports our abundant future," we will constantly learn new technologies advancing every day, and strive to provide vacuum equipment and services that exceed the expectations of our customers. SHOWA SHINKU will continue to take on new challenges, aiming to be a company that provides a pleasant and satisfying working environment for everyone.

董事代表执行董事总经理 小俣邦正  
President (Officer) Kunimasa Omata

经营理念 Management Philosophy

我们的存在为“建设丰富多彩的世界”提供助力。  
We contribute to making our society abundant.

全心全意地致力于工作以获得“创造事物的喜悦和自豪感”。  
We gain pleasure and pride in creating things by making a true commitment to work.

在工作中实现“人格的成长”。  
We achieve our personal growth through work.

昭和真空集团能够在广袤无限的领域中活跃地绽放光彩。我们努力磨炼技术、开拓新市场和现有技术应用领域以求实现更大的发展。

The field in which the SHOWA SHINKU Group can excel is unlimited. We will strive to achieve growth by refining our technology and developing new markets and existing fields of technical application.



“真空技术”作为一项为产业领域提供广泛支持的基础技术，目前被实际广泛运用于各种领域，包括食品储存这一与人们生活息息相关的领域以及电子零件、环境、能源等相关领域。

Vacuum technology is used as the basic technology that supports a wide range of industrial fields from familiar fields such as food preservation to electronic components, environment, energy-related fields, and more.

我们的技术作为许多人生活的一部分融入到智能社会中。

Our technology is integrated into the smart society as a part of the lives of many people.

### 智能手机 Smartphone



- 摄像头模块**
  - 防反射膜
  - 陀螺仪传感器
  - 抖动校正
- Camera modules**
  - Anti-reflection films
  - Gyro sensors
  - Camera shake correction
- 触摸屏**
  - 防反射膜
  - 防止光反射和反射眩光
  - 透明导电膜
  - 可通电的透明薄膜
  - 晶体谐振器
- Touch panels**
  - Anti-reflection films
  - 将声音转换为数字信号
  - Prevention of light reflection and glare
  - Transparent conductive films
  - Thin, transparent film that conducts electricity
  - Crystal units
- 无线电通信模块**
  - SAW过滤器
  - 在自由来往的电波中,仅允许需要使用的特定频率通过
  - TCXO(温度补偿晶体振荡器)
  - 通过温度补偿电路减少因温度引起的频率变化
  - 在无线电路和GPS电路上使用
- Wireless communication modules**
  - SAW filters
  - Select and pass only the ones that need to be used from among the frequencies in the area.
  - TCXO (Temperature Compensated Crystal Oscillators)
  - Temperature-compensated circuits reduce frequency changes due to temperature
  - Used in wireless circuits and GPS circuits

### 汽车 Automobile



- 1 安全、安保类**
  - 无遥控门锁 / ABS / 安全气囊
  - (1) Safety and security system**
    - Keyless entry, ABS, air bags
- 2 内部装饰、外部装饰类**
  - 车门后视镜(亲水膜) / 内后视镜(防炫目镜) / 车标、前照灯等
  - (2) Interior and exterior**
    - Door mirrors (hydrophilic film), room mirrors (antiglare mirrors), emblems, headlights, etc.
- 3 信息通信类**
  - 微型计算机 / GPS导航、无线电路 / 电视调谐器 / ETC
  - (3) Information and telecommunications**
    - Microcontrollers, GPS navigation, wireless circuits, TV tuners, ETC (electronic toll collection)
- 4 辅助驾驶等**
  - 倒车(前方、侧方)监视器
  - (4) Driver assistance and other support**
    - Back (front, side) monitors
- 5 红外线传感器**
  - 红外线传感器
  - (5) Infrared sensors**
- 6 产品外部装饰**
  - 装饰性薄膜、电磁屏蔽膜
  - (6) Product exterior**
    - Decorative films, electromagnetic shield films
- 7 无线电通信模块**
  - SAW过滤器 / TCXO
  - (7) Wireless communication modules**
    - SAW filters/TCXO
- 8 接目镜**
  - 防反射膜
  - (8) Eyepiece lens**
    - Anti-reflection films
- 9 晶体器件**
  - 陀螺仪传感器 / 音叉型谐振器 / AT谐振器
  - (9) Quartz devices**
    - Gyro sensors, tuning fork units, AT units

### HMD Head Mounted Display



- 1 投影仪**
  - 滤光片 / 防反射膜
  - (1) Projector**
    - Optical filter, anti-reflection films
- 2 相机、深度传感器**
  - 防反射膜
  - (2) Cameras and depth sensors**
    - Anti-reflection films
- 3 LED**
  - LED
  - (3) LED**
- 4 屏幕**
  - 防反射膜 / 镜子等
  - (4) Screen**
    - Anti-reflection films, mirrors, etc.
- 5 红外线传感器**
  - 红外线传感器
  - (5) Infrared sensors**
- 6 产品外部装饰**
  - 装饰性薄膜、电磁屏蔽膜
  - (6) Product exterior**
    - Decorative films, electromagnetic shield films
- 7 无线电通信模块**
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- 9 晶体器件**
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  - (9) Quartz devices**
    - Gyro sensors, tuning fork units, AT units

### LED Light Emitting Diode



- 1 电极膜**
  - (1) Electrode films
- 2 保护膜**
  - (2) Protective films
- 3 透明导电膜**
  - (3) Transparent conductive films
- 4 高反射膜(DBR)**
  - (4) Enhanced reflection mirror films (DBR)
- 5 反射膜(AI)**
  - (5) Reflection mirror films (AI)

### 内窥镜 Endoscope



- 1 镜头**
  - 保护膜
  - 防反射膜
  - (1) Lens**
    - Protective films
    - Anti-reflection films
- 2 分色片**
  - 可分解三原色的滤色片
  - (2) Color separation filters**
    - Three primary color resolution filters
- 3 分色棱镜**
  - 可分解三原色的镜子
  - (3) Color separation prism**
    - Three primary color resolution mirrors

为了支持客户的应用制作而提供真空设备

To provide vacuum equipment that contributes to application production by customers

应用开发 Application Development	为了实现应用而进行硬件开发 Hardware Development to Realize Applications	进行确保质量、提高生产率的开发工作 Development for Quality Assurance and Productivity Improvement	自动化开发 Development for Automation
从客户的应用开发阶段开始参与其中,包括极小型器件的制作、针对高附加值商品的成膜以及应对新的制造方法等。 We are involved from our customers' application development phase, covering a whole range of issues including production of microscopic devices and film coating onto high-value added products, and coping with new manufacturing methods.	开发新型的成膜源、控制监视器以及高速排气、高精度传送机构等。 Development of new deposition sources, control monitors, and mechanisms for high-speed exhaust and high-accuracy transport.	指的是通过稳定运行来减少停机时间,从而提高生产率并提升设备价值的开发工作。 Development to achieve improved productivity and higher value of equipment through reduction of downtime by stable operation.	为了设备的运转状况和预防性维护,开发具备信息通信功能且能够应对智能工厂和IoT的设备。 Development of equipment compatible with smart factories and IoT, featuring information and communications functions for monitoring operational status of equipment and preventive maintenance.

尖端技术的发展速度令人惊叹不已。昭和真空认为,企业所追求的应该是“时常保持领先于时代的步伐”这种强烈的意志,这才是企业创造的出发点。即使在研究开发活动中,我们也会通过汲取真正的需求,将其开发成独有的技术并赋予其设备的形态,以提高我们在客户心目中必不可少的企业地位。另外,为了让客户放心、舒适地使用产品,我们还将下一代的传感技术等加入设备中,并致力于开展以始终保持最佳运转状态的服务为目标的研究开发。

The speed at which advanced technologies are evolving is nothing short of eye-opening. What is expected of a company is a strong will to be always a step ahead of the times, and this is what SHOWA SHINKU believes is lying at the root of creation by companies. In R&D activities as well, we are elevating our position as a company required by customers by understanding true needs, developing our own proprietary technologies, and forming them into equipment. To make our equipment safe and user-friendly, we incorporate next-generation sensing technologies into our equipment, working on research and development aimed at realizing services that constantly maintain optimum operational status.

在应用真空技术的设备领域,为了不断发挥独创性,我们一直致力于技术创新和研究开发活动。

In the field of equipment that applies vacuum technology, we are always working on technological innovations and R&D activities in order to demonstrate our originality.

研究开发以技术开发部门为中心,在考虑到市场需求趋势的基础上,进行基础技术、设备开发和工序开发。我们通过紧密的交流来共享信息,以求能提高研究开发活动的效率。此外,针对尤为重要的开发项目,我们还会成立由所有部门组成的特别行动型项目小组来推进研究开发活动,以便能对市场需求作出迅速反应。这种灵活的开发体制也是昭和真空的强项。

为了让客户对我们的商品制造感到满意,我们致力于不断打造出具有创新性以及有价值的技术和设备。

特别行动型  
项目小组  
Task force-type  
project team









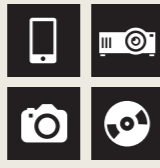
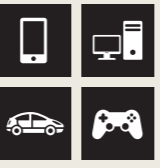





Our Technology Development Division takes the initiative in our R&D activities, engaged in the development of element technologies, equipment, and processes, while taking into account trends in market needs. We are working to improve efficiency in the R&D activities by information sharing through close communication. For an especially important development project, we organize a task force-type project team with all divisions working together, pushing forward with the R&D activities in order to quickly respond to market requirements. This flexible development system is one of the advantages of SHOWA SHINKU.

We are constantly striving to create innovative and valuable technologies and equipment in order to manufacture products appreciated by our customers.

各行各业采用昭和真空的设备生产出“最尖端”的商品,为整个社会提供支持。

SHOWA SHINKU's equipment has generated state-of-the-art technologies in a wide variety of fields and supports our society.

昭和真空在不同的事业、领域中的应用阵列  
Application Matrix by Business and Field that Supports SHOWA SHINKU

	 <b>水晶设备</b> for Quartz Devices	 <b>光学设备</b> for Optical Devices	 <b>电子零件设备、其他设备</b> for Electronic Devices and Others	 <b>服务事业</b> Service Businesses
	<p>晶体谐振器、晶体振荡器和SAW过滤器等作为以水晶为基板的晶体器件来使用。</p> <p>This equipment is used for quartz devices based on crystal substrate, such as crystal units, crystal oscillators, and SAW filters.</p>	<p>用于光电领域,摄像头模块、分色片和光学拾取镜头等。</p> <p>This equipment is used in the opto-electronics field, such as camera modules, color separation filters, and optical pickup lenses.</p>	<p>在电极膜、保护膜、装饰膜等为信息化社会提供支持的所有领域均被广泛使用。</p> <p>This equipment is used in all kinds of fields that support our information society, such as electrode films, protective films, and decorative films.</p>	<p>我们进行正品零件和消耗品的销售及维护保养、改造工程等事业活动,以便能最大限度地发挥本公司制造的真空设备的性能。</p> <p>To ensure that our vacuum equipment can demonstrate its capacity to the fullest extent, we conduct sales and maintenance of genuine parts and supplies, and provide remodeling services.</p>
 <b>家用设备领域</b> Home appliance fields	 智能手机 个人电脑 汽车 家用游戏机  Smartphones PCs Automobile Game consoles	 智能手机 投影仪 相机 LD、CD、DVD  Smartphones Projectors Cameras LDs, CDs, DVDs	 智能手机 个人电脑 液晶显示器 汽车 家用游戏机  Smartphones PCs LCDs Automobile Game consoles	 维护保养 / 改造工程 搬迁施工 / 检查 零件销售  Maintenance/Remodeling Relocation/Inspection Parts Sales
 <b>社会基础领域</b> Social infrastructure fields	 交通 电波基站  Traffic Radio wave base stations	 交通 内窥镜  Traffic Endoscope	 交通 / 医疗设备 能源 / IC、LSI、MPU、内存卡  Traffic/Medical Equipment/ Energy/ICs, LSIs, MPUs/ Memory Devices	

# 1



晶体器件用设备部门  
Quartz Device Equipment



在被称为“产业之盐”的晶体器件的制造工序中,昭和真空的设备也同样能大放光彩。

Equipment by SHOWA SHINKU plays a key role in the manufacturing process for quartz devices, which are also called the “salt of industry.”

晶体谐振器和晶体振荡器等晶体器件利用水晶带有的电气特性即压电现象,生成作为正确的动作标准的电信号,以实现机械装置的准确动作。晶体器件也被称为“产业之盐”,是与我们的生活息息相关的电子设备中不可或缺的零件。

而在制造这些晶体器件的过程中,最关键的技术就是真空技术。昭和真空作为该领域的先驱,以电极形成工序和频率调整工序等为首,拥有能应对各种制造工序的丰富的晶体器件制造用设备,在该领域建立了压倒性的地位。

Quartz devices such as crystal units and crystal oscillators create electrical signals that serve as a reference for accurate operation by employing the piezoelectric effect, which is an electrical characteristic found in crystals, and achieve accurate operations of mechanisms. Quartz devices, also called the “salt of industry,” are indispensable for the electronic devices that support our daily lives.

Vacuum technology is the key technology in the manufacturing process of these quartz devices. As a pioneer in this field, SHOWA SHINKU provides an extensive lineup of equipment for manufacturing quartz devices for a wide range of processes, such as electrode formation processes and frequency adjustment processes, and has built a top brand reputation in this field.



连续式频率微调机SFE-B03-II  
Ion Beam Frequency Adjust System SFE-B03-II

搭载了新型离子枪,可同时处理24个(最多32个),具有节省空间、高精度、高生产率和高稳定性的优点,是在晶体器件制造工序中不可或缺的昭和真空的代表性型号。

This system is equipped with a new ion gun that allows for simultaneous processing of 24 workpieces (maximum 32) and features a compact design, high accuracy, high productivity, and high stability. As one of the models that represent SHOWA SHINKU, it is essential for quartz device manufacturing processes.

# 2



光学器件用设备部门  
Optical Device Equipment



即使在光电学领域,真空技术也能够发挥出巨大的作用,蕴藏着巨大的潜力。

Also in the opto-electronics field, vacuum technology plays a significant role and has tremendous potential.

光学领域以高分辨率、小型化和低成本化为关键词有着多种多样的需求,而今后随着IoT的发展,预计各种商品上均会搭载相机等光学零件,其进一步的增长也指日可待。

昭和真空在光电领域也积累了丰富的经验和切实的业绩,特别是智能手机微型相机镜头的防反射膜成膜用设备得到了很高的评价。

昭和真空将切实把握市场需求,致力于提供运用真空技术的解决方案。

The optics field has indeed a wide variety of needs, centering on keywords such as higher image quality, miniaturization, and lower costs. Going forward, a variety of goods are expected to become loaded with cameras and other optical components due to the development of IoT, and this will lead to further growth.

SHOWA SHINKU also has extensive experience and proven track record in the opto-electronics field and has earned a high reputation especially for its film formation equipment for the anti-reflection film on micro-camera lenses for smartphones.

SHOWA SHINKU will accurately assess market needs and strive to provide solutions using vacuum technology.



## 超高性能光学薄膜用镀膜机Sapio1300/1550/1700 Ultra-high Spec Vacuum Coater for Optical Multilayer Sapio 1300 / 1550 / 1700

其特点在于高效的排气系统和高精度的膜厚控制系统,能够提高从防反射膜到多层滤光片的广泛领域的产品质量,是重现性高,间隔时间短的最高性能型号。

Featuring the high efficiency exhaust system and the high precise optical thickness control system, this is SHOWA SHINKU's highest performance model which enables high reproducibility and short takt time, allowing for higher quality of a wide range of items from anti-reflection films to multilayer optical filters.

# 3



电子器件用设备部门  
Electronic Device Equipment



利用真空成膜的高度技术,满足各种领域的的多样化需求。

With advanced thin-film formation technology using vacuum, we will respond to a wide variety of needs in a broad range of fields.

在不断的技术创新中,正如智能手机已成为人们生活的中心一样,今后,新的技术将继续创造新的价值,而真空技术作为昭和真空的关键技术,其应用范围也将变得越来越广泛。

昭和真空为各种电子器件和对象物提供电极膜、保护膜和装饰膜等产品的真空成膜设备。

我们昭和真空相信,通过满足电子器件的多样化、缩短交付期和低成本化的需求,提供超出客户期望的真空设备,就能够持续成为对社会有帮助的且具有存在价值的企业。

As smartphones have become widespread until they become central to people's lives in the midst of ceaseless technological innovations, the trend where new technologies create new values will continue in the future, and the range of application of vacuum technology, which is SHOWA SHINKU's key technology, will be further expanded.

SHOWA SHINKU provides vacuum equipment that forms electrode films, protective films, decorative films, and other films for a wide range of electronic devices and objects.

SHOWA SHINKU believes that it can continue to be a company with existential value that contributes to the world by responding to a variety of needs such as diversification of electronic devices, quick turn around, and low cost, and providing vacuum equipment that exceeds customer expectations.



## 高性能溅射系统SPM系列 High-performance Sputtering System SPM Series

这是可以应对从电极膜到功能膜等高精度的成膜作业并且能实现产品的高成品率的系统。采用多室系统,可实现多用途应用。

This system can respond to a range of highly accurate thin-film formation, from electrode film formation to functional film formation, achieving a high yield in production. By the adoption of multi-chamber system, it is capable of multipurpose applications.

从开发、设计到订单交付后的维护保养，  
我们坚持以客户利益为中心的一贯体制为客户提供支持

From development and design to post-delivery maintenance services,  
we provide support under a consistent system focused on customer advantages.



提供最佳维护保养周期中的“部件管理”和“提案型售后服务”。

We provide parts management services and proposal-based after-sales services based on optimum maintenance cycles.

**部件销售**

以合理的价格提供能发挥出昭和真空产设备最佳性能而设计的正品部件。集团公司及合作公司的充实配置可以迅速应对整个亚洲地区的业务。

**Parts Sales**

We offer genuine parts designed for drawing optimum performance from SHOWA SHINKU equipment at reasonable prices. We can quickly deliver these parts across Asia using the strong network of our group companies and business partners.

**维护保养**

为了让客户放心、舒适地使用昭和真空的设备，我们采用预防性维护模式，按照最佳的保养周期定期对各设备开展检查、大修等提案型服务。发生故障时，客户可与专门的窗口联系，同时昭和真空集团和各国销售代理店合作，形成能够迅速覆盖亚洲全境的体制。由精通真空设备的资深服务工程师负责作业。

**Maintenance**

For preventive maintenance purposes, we periodically offer proposal-based services for inspections and overhauls based on the optimum cycle for each device, in order to ensure that customers can use SHOWA SHINKU equipment safely and comfortably. In cases of any troubles, we have a system in place whereby customers can contact a dedicated point of contact for receiving quick assistance jointly provided by the SHOWA SHINKU group companies and sales agents in each country covering the entire Asian region. The actual work is provided by service engineers with extensive experience and knowledge and well-versed in vacuum equipment.

我们贯彻质量、成本、交付期的管理，并接单生产能够为顾客创造利益的产品。

We ensure thorough management of quality, costs, and delivery time,  
and implement built-to-order manufacturing of products that create customer advantages.

昭和真空所生产的大部分设备，均为能满足顾客定制需求的真空设备。因此，在生产设备时，我们采用的是多品种少量接单生产的方式。昭和真空属于装配厂商，由于大部分的材料和零件均从外部采购，因此尤其重视零部件的入库检查以及组装后的设备测试。

The majority of equipment handled by SHOWA SHINKU consists of vacuum equipment customized to meet the needs of individual customers. For this reason, in the manufacturing of equipment, we adopt a high-mix, low-volume (HMLV) built to order system. SHOWA SHINKU is an assembly manufacturer, and because a large portion of its materials and components are procured from external sources, we place a strong emphasis especially on acceptance inspections for parts and materials and on equipment testing after assembling them.

为了对客户的生产做出贡献，我们在质量、成本和交付期方面进行彻底的管理。

We ensure thorough management of quality, costs, and delivery time in order to contribute to the productivity of our customers.

推动全球经营，  
加强应对快速增长的亚洲市场

We will push forward with global management and  
expand our services in the rapidly growing Asian market.



昭和真空机械(上海)有限公司  
生产工厂  
SHOWA SHINKU MACHINERY (SHANGHAI) CO., LTD.  
Production plant

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销售、服务  
SHOWA SHINKU MACHINERY TRADING (SHANGHAI) CO., LTD.  
Sales and service

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**国内据点**  
Domestic Bases

总公司、相模原工厂  
总公司职能、开发和生产  
Head Office and  
Sagamihara Factory  
Headquarters functions, development and  
production



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株式会社FEC  
无齿齿轮“Magtran(磁齿轮)”的生产、  
销售  
FEC Corporation  
Production and sales of toothless gear “Magtran”



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**环境宣言 Environmental Declaration**

**基本理念**

昭和真空集团认为保护地球环境是人类共同的课题之一，因此在事业活动的生产工序、商品等各个方面都考虑到环境保护，另外还通过向社会提供有助于环境保护的商品，为建设宜居的地球和丰富多彩的社会做出贡献。

**Basic Principles**

The SHOWA SHINKU Group consider the preservation of global environment as a common issue for all humanity, and contribute to the development of the earth comfortable to live in and abundant society by taking into account environmental preservation in all aspects of our business operations including manufacturing processes and products, and by delivering to society products that can contribute to environmental preservation.

口号“让地球永远保持美丽”

Corporate Slogan “Beautiful Earth Forever”