

EDWARDS

IN ASIA



WWW.EDWARDSVACUUM.COM

INNOVATIVE PRODUCTS

GLOBAL STRENGTH

LOCAL SUPPORT

VACUUM EXPERTISE

PERFORMANCE FOR THE WORLD

Performance for the World

*Edwards...
known and trusted for over 90 years*

Edwards is the leading global supplier of integrated vacuum and abatement solutions for the manufacture of semiconductors, flat panel displays, LEDs and solar cells. Edwards is also a world leader in vacuum technology for the industrial, pharmaceutical, chemical, scientific, process, glass coating and food packaging sectors, as well as a wide range of R&D applications.

Employing nearly 3,000 people around the world in the research, design, manufacture and support of high technology vacuum and exhaust management equipment, Edwards' wide range of innovative technologies is fully supported by an international sales and service organisation.

As well as delivering innovative vacuum pump and abatement systems to our customers, Edwards strives to reduce cost of ownership, increase productivity and enhance product quality. Products are based on a solid foundation of innovation, manufacturing excellence and field-proven technologies, all backed by a renowned global services network.

Top quality products, talented people and an organisation with exceptional integrity and strength - it all adds up to a customer experience which consistently exceeds expectations.

“The forecasts are clear that Asia will continue to represent the major growth opportunity for industrial vacuum and especially semiconductor, flat panel, LED and solar manufacturing. We believe that around 75% of future semiconductor and 100% of flat panel investment will be in Asia.

Edwards has been present in Asia for over 30 years and I'd like to thank all our customers, suppliers and other stakeholders for their continuing support and the part they have played in our success in Asia so far. We look forward to strengthening all these relationships, our capability in the region and growing our business in Asia in the future.”



*Matthew Taylor,
Chief Executive Officer, Edwards*

The facts

Edwards:

- is a leading supplier to Asia's most advanced electronics industries, especially semiconductor, solar, flat panel display and LED.
- is a global business with around 60% of its activities in the Asia Pacific region.
- has a very strong market position in the region, particularly in Korea, Taiwan and China, where industry spending is now heavily focused. Edwards also has a strong presence in Singapore and Japan.
- has invested in Asia for many years, providing customers with integrated vacuum and abatement solutions including installation, management, service and support.
- has grown through a network of distributors and joint ventures and has now moved to 100% ownership of all its entities in the region - a remarkable achievement and a strong platform for the future.
- has put enormous efforts into developing customer relationships and now conducts business with every one of Asia's top semiconductor manufacturers.
- has a real understanding of future industry trends, enabling customers to identify and maximise opportunities and gain substantial competitive advantage.

Edwards in Asia

Over the last thirty years the electronics industry has helped to transform Asia into a dynamic, diverse and vibrant region, from the cutting-edge technology of Japan to the vast opportunities of China and India, from the sophistication of Singapore to the rapid growth of Korea and Taiwan.

The same period has also seen extraordinary growth for Edwards in Asia. Since 1990 our business in the region has grown by a factor of nearly thirty. Edwards has never been better placed to serve our customers.

- Edwards was the first international vacuum pump manufacturer to operate in the region, establishing a business in Japan in 1971 to supply oil-sealed rotary pumps to the electronics industry.
- Edwards appointed its first Korean distributor in 1984, and after 25 years of exceptional growth the company transferred its global manufacturing activity for the semiconductor industry to Korea, a key strategic move.
- Edwards now has over 1,100 employees in Asia, working in manufacturing centres in Korea, Japan and China, remanufacturing centres in Taiwan, China, Korea, Japan and Singapore, and a network of service centres all across the region. Our workforce includes over 400 engineers and technologists.
- Edwards also has an impressive network of agents and distributors in Thailand, Hong Kong, Malaysia, Indonesia, the Philippines, Pakistan, Australia and New Zealand.
- A new operations centre opened in Japan in 2004 and local manufacturing opened in Korea in 2006.
- Edwards has been a leading supplier in Taiwan for many years, initially through a highly successful distributor, but with our own business there since 1998. In 2010 Edwards opened a new state-of-the-art service centre.
- In China, after establishing a service facility in Shanghai, a pump systemisation facility was added. This now includes the global manufacturing base for one of our range of pumps.
- A number of satellite facilities have also been established in China, reflecting the country's enormous potential.
- Edwards has wholly owned entities in India, Singapore and Malaysia, where growth was established through joint ventures and distributors.
- Samsung selected Edwards as its key supplier in 2001. Edwards won Samsung's 'Supplier Award of Excellence' in 2006 and their 'Best Supplier' award for 2009.
- The world's biggest-ever vacuum pumping system was manufactured and delivered by Edwards to a major steel customer in China.

EDWARDS IN ASIA

China
Employees: 160

Global manufacturing hub for liquid ring pumps

Korea
Employees: 400

Global manufacturing hub for dry pumps for the semiconductor, flat panel and solar industries

Japan
Employees: 250

Global manufacturing hub for turbomolecular pumps



India
Employees: 20

The focus for customers in India, Bangladesh, Sri Lanka and Pakistan

South-East Asia
Employees: 95

The focus for customers in Singapore and Malaysia. Edwards' regional HQ for Asia is also in Singapore

Taiwan
Employees: 180

The country's market leader in vacuum and abatement

The markets

Semiconductor

As a global market leader for vacuum and abatement equipment in the semiconductor and flat panel display industries, Edwards offers a complete range of value-adding solutions that maximise uptime and reduce cost of ownership. Our applications expertise in the semiconductor market is second to none, supported by an unrivalled global service network which includes on-site, hub service and remanufacturing facilities.

Flat panel

With panel sizes increasing year on year, Flat Panel Display (FPD) manufacturing is synonymous with generational shifts. Edwards has an established track record of experience and expertise in providing cost-effective solutions for each generation. We offer a comprehensive range of modular vacuum pump and exhaust management systems designed to improve FPD processes, minimise downtime, extend product life and reduce cost of ownership.

Renewable energy

Edwards has an extensive range of vacuum products for the solar and biofuels industries and can provide all the vacuum expertise needed to support the processes for these emerging technologies. Edwards is the only manufacturer able to supply solar cell producers worldwide, with an extensive range of vacuum and abatement systems for many stages of solar cell manufacture. With process and technical expertise in crystalline and thin film PV technologies, and a commitment to ongoing investment, Edwards is uniquely placed to support customers in the renewables sector and help to reduce their costs.

LEDs

Unlike traditional lighting, LEDs create light with reduced heat and their solid-state form increases lifespan significantly. LEDs can be 10 times more efficient than incandescent bulbs and significant savings can be achieved by introducing this technology. Expectations are that up to 50% of all general lighting will be LEDs by 2015. The manufacturing processes for LEDs are all vacuum based, and the associated abatement requirement means this is an area where Edwards' capability is perfectly aligned with customers' needs.

Research & Development

Edwards is a world leader in the design, technology and manufacture of vacuum products for laboratory applications. From small school laboratories to sophisticated international programmes, our products and services are designed to facilitate education, development and scientific projects. Our experience, coupled with innovative technologies and collaborative engineering, enables us to offer a broad range of pumping solutions that provide enhanced performance while reducing costs.

Scientific

Decades of experience with major analytical instrument makers have given Edwards a thorough understanding of the research process and the role that vacuum plays within that process. Our high quality vacuum pumps and controllers provide the ultra-clean environment, the enhanced performance and the excellent reliability that the scientific industry requires.





Chemical processing

As pioneers of environmentally friendly dry vacuum systems, Edwards contributes to the reduction of energy consumption and running costs in the chemical, pharmaceutical and biofuels industries. Systems are ideally suited for all applications where reliability, efficiency and low environmental impact are required from a clean and robust vacuum solution, together with low capital investment and running costs.



Industrial

With the broadest range of vacuum technologies in the market, Edwards can provide the optimum solution for a wide variety of industrial processes. From lighting and refrigeration to metallurgical and vacuum coating processes, we offer robust vacuum pumping systems with the emphasis on reliability and low cost of ownership. Whether you are operating a simple standalone pump or the latest multi-chamber coating system, Edwards is the trusted partner of choice for industrial vacuum.



Power

As the leader in vacuum technology, Edwards has grown with the power industry - from pioneering work in developing equipment for the early power stations to supplying sophisticated vacuum systems for thermal, nuclear and solar powered plants. Working with power sector engineers and operators, Edwards is able to maximise the benefits of vacuum system design, creating solutions that meet the demands of increasingly challenging applications.



Global service

Through a global network of service centres and stock locations, Edwards provides a fully-integrated portfolio of services including onsite support, equipment repair, product exchanges and applications expertise. We understand the importance of local support, and with over 70 service facilities worldwide and a team of nearly 1,000 engineers and technicians, Edwards is there when you need us.



The technology

Edwards spends around \$40 million on R&D each year, helping to maintain our position as the world leader in vacuum and abatement. Spending is primarily focused on major new product ranges ready to meet the challenges of tomorrow.

We continuously strive to solve customers' problems and deliver enhanced performance. That means continuously improving the expertise of our people and enhancing our reputation for innovation and excellence.

- We continually invest in new product technology, giving priority to projects tied to specific customers
- Our technology programmes focus always on reducing environmental impact and lowering ownership, service and maintenance costs.
- Our strategy is to deliver best-in-class products for the thin film solar, flat panel display and LED markets

The people

- We have a growing team of over 1,100 employees in Asia, spread over seven countries.
- Our diverse multi-cultural workforce is a mix of local and international talent who integrate well as a team and work towards shared goals.
- We recruit continually, seeking out enthusiastic graduates who thrive on challenge, teamwork and the need to be stretched.
- We enjoy excellent labour relations, with a highly motivated, flexible and loyal workforce.
- As well as professional expertise, many Asian staff have excellent language skills.
- We have a strong emphasis on training, not only in terms of product knowledge but also in gaining experience in other parts of the world.

Standards

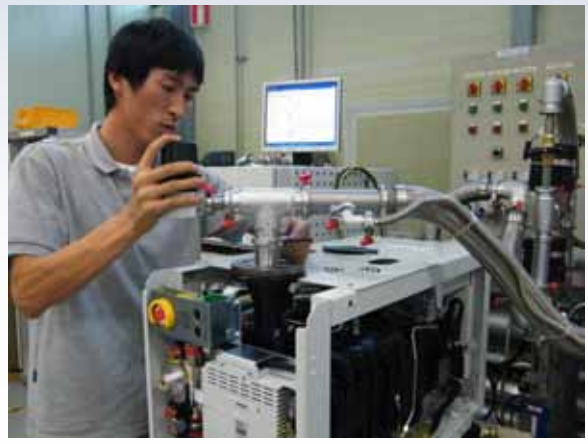
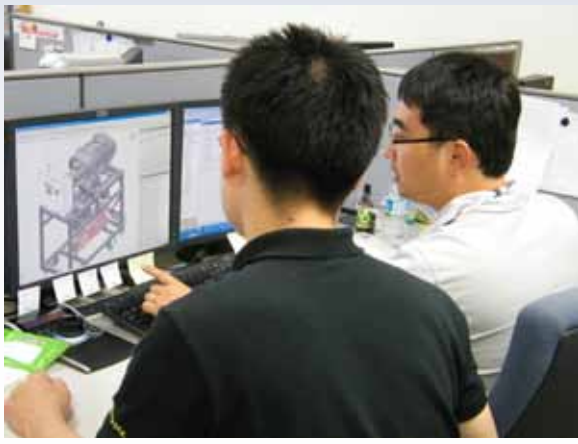
Edwards Ethics

- We place the highest priority on safety.
- Edwards complies with legal and regulatory obligations.
- Edwards' employees abide by a Code of Conduct which stresses the need to act ethically and with integrity. We strive to know and do the right thing.
- Our purchasing practices and standards are environmentally sound, efficient and well managed.
- We work in partnership with suppliers to ensure that they adhere to Edwards' standards.

The environment

- We are committed to constantly improving our environmental systems and improving performance.
- Most major sites are certified to ISO14001, the international standard for environmental management systems.
- Annual surveys at all sites cover key environmental impacts and controls.
- Edwards' abatement products capture, destroy or make safe materials used in manufacturing processes. Edwards also supplies combined abatement and pumping systems to achieve energy reductions up to 50% compared to separate products.
- Edwards is 'carbon negative'. Manufacturing, remanufacturing and product usage generates around 2 million tons of CO2 equivalent each year. However, our abatement products prevent the emission of three times that amount.
- Edwards is a member of SEMI Global Care™, the semiconductor industry programme which aims to build and strengthen commitment to the environment, health and safety.

Global Care™
An Environmental, Health & Safety Initiative



Quality

- All Edwards' major facilities are third party certified to the international quality management standard ISO 9001.
- Global procedures are being further upgraded to reach the new levels required by the Standardised Supplier Quality Assessment (SSQA), the assessment tool used for supplier approvals.
- We use the Kaizen methodology for driving continuous incremental improvement, whether at individual or team level.
- Our business process improvement programme integrates improvements and changes with customers, suppliers and business partners, adding value for all concerned.

Safety

- Edwards has strong product safety management systems, including:
 - *Rigorous product safety review process*
 - *Compliance with all relevant product safety laws and standards.*
- RoHS compliance for scientific and semiconductor pumps.
- Safety incidents are given priority and investigated promptly in accordance with the Product Safety Complaints Procedure.
- Edwards is a member of SEMI Global Care, the semiconductor industry programme encouraging improvement and excellence in safety management.

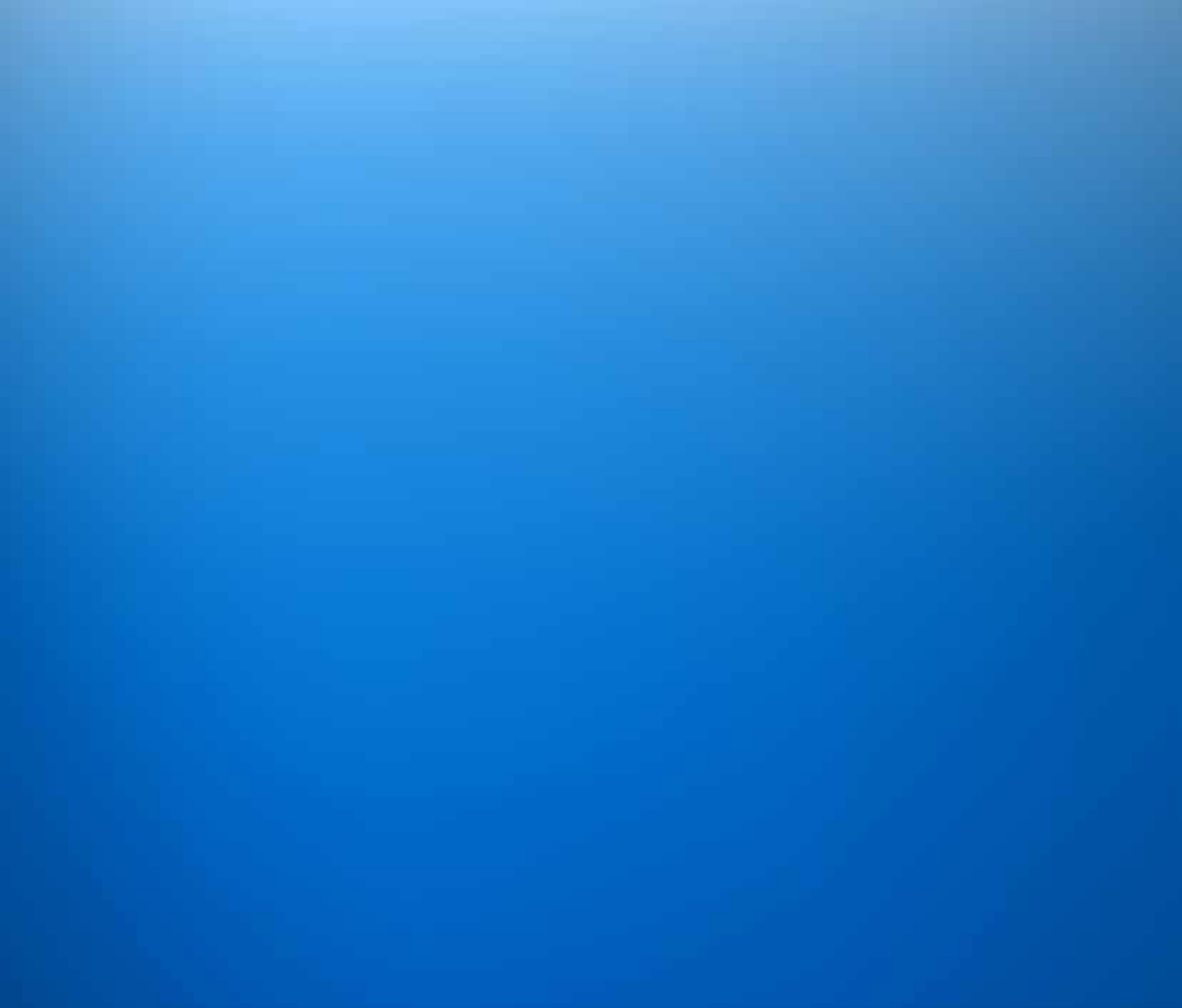
Community

We deliver our community strategy through:

- Running programmes which reflect the diversity of communities in which we operate.
- Encouraging employees to be involved in community activities such as volunteering.
- Building local education and training links, particularly in deprived areas.
- Partnering with community organisations and charities.
- Encouraging environmental sustainability on a corporate, community and individual level.

Edwards around the World...

- Edwards has over 90 years of experience in supplying vacuum systems and related products. In 2008 we had a turnover of around \$1 billion.
- We serve the world's most advanced industries including semiconductor, flat panel display, solar, chemical, pharmaceutical, metallurgical, R&D and analytical instrumentation.
- We became independent in May 2007 after 40 years as part of the BOC Group and latterly Linde. We are now owned by private equity group Unitas Capital/CCMP Capital.
- We employ nearly 3,000 staff in over 20 countries, including 250 dedicated vacuum technologists, providing innovative products and technologies, applications expertise and the highest levels of service.
- Technical experts work closely with leading process system manufacturers to develop innovative products that meet critical performance challenges.
- Edwards is the world's leading provider of vacuum equipment and solutions for the semiconductor, solar and flat panel display industries.
- We are the second largest sub-systems equipment supplier to the semiconductor industry globally.
- We are currently moving production to larger, more efficient and lower cost locations that are closer to customers. That means rationalising existing sites, investing in new centres, and optimising and restructuring supply chains.
- Our core values are Technology, Trust and Teamwork.
- There are no higher priorities than the health and safety of colleagues, contractors, customers and the protection of the environment.
- There are over 500,000 Edwards pumps installed world-wide.
- We hold more than 1,000 patents.
- We supply all of the world's top ten semiconductor manufacturers.
- In 2009 the business split was 52% semiconductor, 25% general vacuum and 23% services and spares.
- Edwards has dedicated key customer management teams in each area of the world. Samsung awarded Edwards its 'Supplier Award of Excellence' in 2006, and its 'Best Supplier' award for 2009.
- The edwardsvacuum.com website has an online shopping facility which handles a growing number of customer transactions.
- Edwards is focused on growth through innovation. We aim to be the world's leading supplier in core fields of business.
- The key to our growth is new products that meet the needs of our customers. Everything we do is geared to delivering value and performance.



Our vision

Our vision is to enable the world's key technologies with
Edwards vacuum and abatement equipment

Our mission

To be the preferred choice of our customers, our
employees and our shareholders

SINGAPORE (Regional Head Office)

Edwards Technologies Singapore Pte Ltd
42 Loyang Drive
Loyang Industrial Estate
Singapore 508962
Tel : +(65) 6546 8408
Fax : +(65) 6546 8407

CHINA

Edwards Technologies Trading (Shanghai) Co. Ltd.
23 Fu Te Road (North)
Wai Gao Qiao, Free Trade Zone
Pudong, Shanghai 200131, PRC
Tel : +(86) 21 5866 9618
Fax : +(86) 21 5866 9993

INDIA

Edwards India P Ltd.
T97/2, Opposite Saint Gobain
Bhosari MIDC, Pune 411026, India
Tel : +(91) 20 4075 2222
Fax : +(91) 20 4075 2212

JAPAN

Edwards Japan Limited
1078-1 Yoshihashi Yachiyo-shi
Chiba 276-8523
Japan
Tel : +(81) 47 458 8831
Fax : +(81) 47 458 8835

KOREA

Edwards Korea Limited
5F Hanwon Building, 6-1 Sunae-dong,
Bundang-gu, Seongnam-si,
GYEONGGI-DO, KOREA
Tel : +(82) 31 716 7070
Fax : +(82) 31 710 2222

TAIWAN

Edwards Technologies Limited
No.1, Renyi Street
Jhunan Town, Miaoli County 350
Taiwan R.O.C.
Tel : +(886) 37 581000
Fax : +(886) 37 581608

Global Locations:

UNITED KINGDOM - HEAD OFFICE

Tel: +44 8459 212223
Fax: +44 1293 534149

BRAZIL

Tel: +55 11 3952 5000
Fax: +55 11 3965 2766

GERMANY

Tel: 0800 000 1456
Fax: +49 899 919 1888

USA

Tel: +1 800 848 9800
Fax: +1 866 484 5218

BELGIUM

Tel: +32 2 300 0730
Fax: +32 2 300 0704

FRANCE

Tel: +33 1 4121 1256
Fax: +33 1 4121 1238

CANADA

Tel: +1 800 387 4076
Fax: +1 905 501 1225

ITALY

Tel: +39 02 48 4471
Fax: +39 02 48 401638

ISRAEL

Tel: +972 8 681 0633
Fax: +972 8 681 0640

Crawley Business Quarter, Manor Royal, Crawley, West Sussex, RH10 9LW



WWW.EDWARDSVACUUM.COM