

About the Singapore Economic Development Board

EDB is the lead government agency for planning and executing strategies to enhance Singapore's position as a global business centre and grow the Singapore economy. We dream, design and deliver solutions that create value for investors and companies in Singapore. In so doing, we generate economic opportunities and jobs for the people of Singapore; and help shape Singapore's economic future.

'Host to Home' articulates how EDB is sharpening its economic development strategies to position Singapore for the future. It is about extending Singapore's value proposition to businesses not just in helping them improve their bottom line, but also in helping them grow their top line. EDB plans to build on existing strengths and add new layers of capabilities to enable Singapore to become a 'Home for Business', a 'Home for Innovation' and a 'Home for Talent'.

For more information on how EDB can help your business, please visit www.sedb.com

Pictures courtesy of Agilent Technologies, Bodycote, Makino Asia, Melban, Panasonic Refrigeration Devices Singapore and Qjoptiq

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Precision
Engineering

On the Cutting Edge

Precision engineering (PE) forms the backbone of Singapore's complex manufacturing sector. A highly specialised field, it enables industries as diverse as aerospace, oil and gas, medical technology and electronics. Precision engineering plays a crucial role in the manufacture of everything from the smallest semiconductor chips and latest medical devices, to the largest oil exploration drill bits.



Precision engineering in Singapore has evolved significantly over the years. The industry has grown from supporting the consumer electronics and hard disk drive industries in the 1970s, to an industry of professional-solutions providers with design, prototyping, production and supply-chain management capabilities supporting the growth of a wide range of niche manufacturing activities in Singapore such as aerospace, semiconductor, oil & gas and medical technologies.

Today, there are some 2,700 companies in the precision engineering sector. They range from small and medium enterprises (SMEs) to large multinational corporations (MNCs), many of which have established their headquarters and R&D functions here. Together, they employ more than 100,000 people, contributing about US\$15 billion in manufacturing output, and US\$4.5 billion in value-added operations in 2008 alone.

The industry here comprises two main sub-sectors - machinery and systems (M&S), and precision modules and components (PMC). Companies from both sub-sectors participate in a wide range of activities from R&D to manufacturing. The M&S sector includes key machine tools, semiconductor and solar equipment makers the likes of Makino, Yamazaki Mazak, Applied Materials and KLA-Tencor.

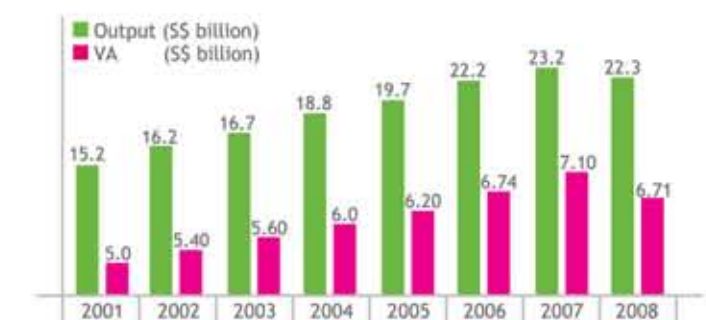
The PMC sector features companies involved in a wide range of manufacturing activities (such as tool and die making, casting, plastic/metal/ceramic injection moulding, ultra-precision machining) and specialised components as diverse as bearings, motors, vacuum pumps and optics. Companies from the PMC sector include local enterprises such as Hi-P, Amtek, Meiban and MNCs such as Minnebea, Molex, Wieland, Dorma and Qioptiq.



A Global PE Centre

The wide spectrum of PE products and services here has helped put Singapore on the global map. Singapore-based PE companies are involved in the manufacturing of components for hearing aids; jet engine blades and vanes; critical parts for the oil and gas industry; and high-accuracy instruments for the semiconductor equipment sector.

Singapore's well-established research and development infrastructure has also been key to its status as a regional PE hub. Companies looking to meet increasing market demand for efficiency and innovation will be able to leverage the city-state's strong R&D capabilities, gain competitive advantages, and position themselves at the forefront of technology development. In addition, Singapore has established research institutes to cater to the diverse R&D needs of companies. One such example is the Singapore Institute of Manufacturing Technology (SIMTech), a research institute of the Agency for Science, Technology and Research (A*STAR), whose aim is to develop and improve the technical expertise of Singapore's PE industry.



Highly Skilled Workforce

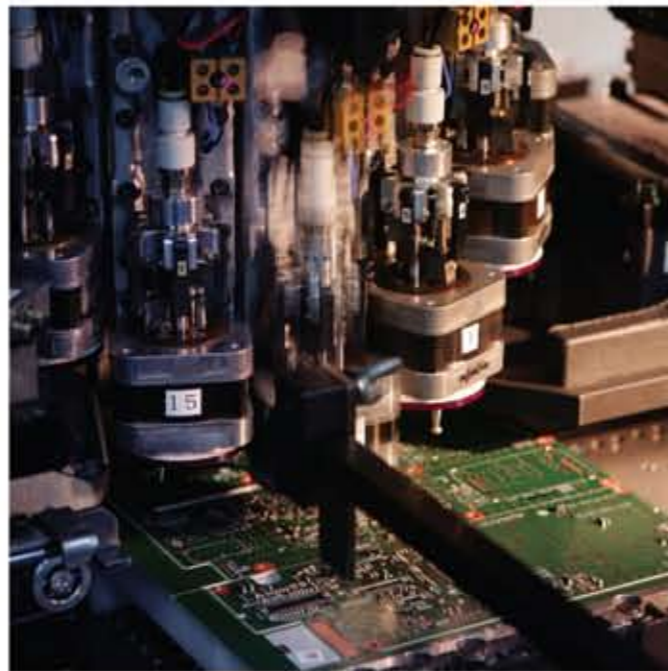
A vast, qualified talent pool is on hand to meet the needs of PE-related business activities. In October 2007, EDB¹ and SPRING² Singapore launched a US\$50 million manpower initiative to attract and groom a new generation of precision engineering talent. Supported by the Workforce Development Agency (WDA), Nanyang Polytechnic (NYP) and the Institute of Technical Education (ITE), the programme is designed to upgrade and deepen the capabilities of our precision engineering manpower base.

Furthermore, the industry can tap into manpower development programmes that include pre-employment training, and in-employment upgrading. This collective thrust aims to upgrade and retain local talent, retain foreign specialists and revamp the industry profile. It is also undertaken to attract talent with good hands-on skills, as well as design and multi-disciplinary integration capabilities.

Supplier Development

The PE sector in Singapore is supported by a vast network of supplier companies. To facilitate and encourage these suppliers to remain relevant to the changing demands of customers, EDB has introduced the Supplier Development Initiative (SDI). It enhances suppliers' capabilities and links them to larger manufacturing companies. Through SDI, suppliers can offer a more compelling value proposition to manufacturers across a broad range of industry clusters.

In 2010, a new 5-year S\$250 million programme called Partnerships for Capability Transformation (PACT) was launched to strengthen the collaborations between OEMs and Singapore-based suppliers. PACT aims to enable manufacturers from diverse sectors - M&S, aerospace, medical technology and marine & offshore - to establish strategic business relationships with Singapore-based suppliers. This encourages OEMs to work closely with Singapore-based suppliers, and help enhance the latter's capabilities, thereby allowing the suppliers to develop the competencies needed to meet stringent manufacturing, quality and certification requirements.



Companies such as the Dutch VDL-Enabling Technologies Group have already embarked on the programme. More from the various industries have expressed keen interest. With 5 to 10 suppliers matched to and working with each company, the multiplier effect will ensure that SDI reaches out to many more suppliers in the near future.

¹EDB is the lead government agency responsible for planning and executing strategies to enhance Singapore's position as a global business centre and grow the Singapore economy.

²SPRING Singapore is the enterprise development agency for growing innovative companies and fostering a competitive Small & Medium-sized Enterprises (SME) sector.

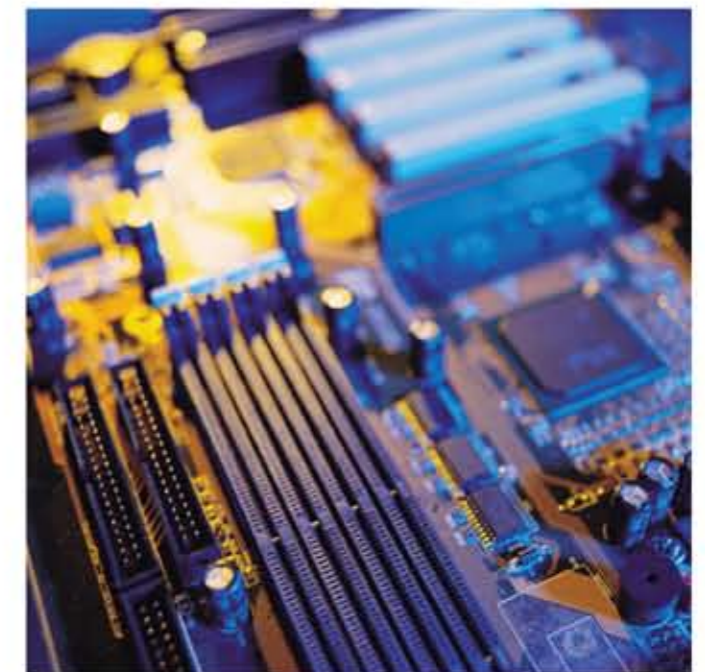
Primed for the Future

By 2015, the PE sector in Singapore can enjoy an established base of new equipment-building capabilities, especially in semiconductor and solar equipment, refurbishment and assembly, along with a strong and diverse precision modules and components industry, serving emerging sectors such as medical technology, aerospace and automotive.

Favourable regional conditions have primed the sector here for further growth. With good R&D infrastructure, quality manpower and supplier development programmes, Singapore aspires to become a centre of PE excellence, one that could stand shoulder to shoulder with leading PE countries like Germany, Japan and Switzerland.

Fast Facts

- The precision engineering industry employed 101,000 people in 2008, i.e. 25% of the total manufacturing workforce. It is made up of some 2,700 companies, ranging from SMEs to large local companies and Multi-National Companies.
- Singapore's unique strengths in precision engineering are the key reasons for its global leadership. For example, Singapore accounts for more than 10% of the global output for backend semiconductor equipment. In addition, the strong precision engineering capabilities in Singapore have attracted 9 of the top 10 wafer fabrication equipment companies to procure significantly from local-based suppliers.
- Singapore manufactures wafer inspection tools, which are engineered to identify nano-scale defects. This is comparable in magnitude to spotting a strand of white hair on the ground from about 600m above or at the height of the Eiffel Tower.



Machinery & Systems

The M&S sector in Singapore encompasses the design and assembly of semiconductor equipment, electronics assembly equipment, advanced machine tools, as well as other highly specialised machineries such as coordinate measuring machines, analytical equipment and advanced packaging equipment.

Situated in the heart of Asia, Singapore offers a great, convenient way for businesses to access the region. Our vast connectivity, strong supplier base and well-established R&D infrastructure ensure companies can easily source for critical materials and components in the region, thereby strengthening their manufacturing and assembly operations. And gain a valuable edge over their competitors.

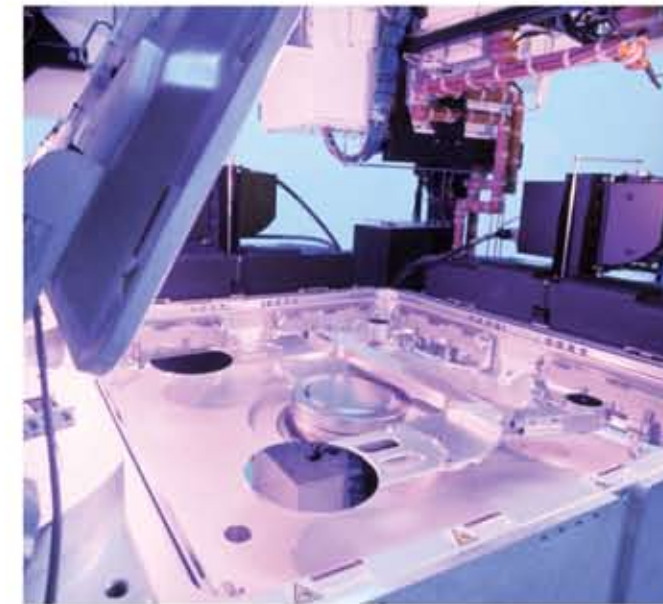
This is especially important for companies involved in complex equipment manufacturing. The expertise, quality and connectivity of the PE industry here have attracted some of the biggest names in high-sophistication manufacturing to house their regional operations in Singapore.

Applied Materials

Based in Santa Clara CA, USA, Applied Materials is a global leader in Nanomanufacturing Technology™ solutions supplying to the semiconductor, flat panel and solar industries. In July 2008, the company broke new ground with its state-of-the-art Green Mark Platinum-certified Singapore Operations Centre in Changi. This 32,000 square-metre facility will serve as a key manufacturing and consolidation centre for semiconductor fabrication equipment, that will be used to make some of the world's most advanced microchips.

KLA-Tencor

Headquartered in Silicon Valley, USA, KLA-Tencor Corporation is the world's fourth largest semiconductor equipment manufacturer. In May 2008, the company officially opened its new facility in Singapore, where it is currently expanding its high-precision manufacturing as well as its training, sales and corporate functions in Asia. The state-of-the-art facility serves as its global manufacturing hub in Asia, signalling an increased presence in the region, where approximately 80% of customers' operations are located. Today, at the KLA-Tencor Singapore factory, the company manufactures wafer inspection tools that can inspect defects down to the nanometer range, incorporating sophisticated UV lens assembly.



"Singapore is an important regional hub and offers compelling advantages for our future business operations..."

Rick Wallace,
CEO,
KLA-Tencor Inc

Makino Asia

In Singapore since 1973, Japanese machine tool builder, Makino Asia, has been manufacturing machine tools that serve a wide range of manufacturing industries from aerospace to medical technology. Through the years, Makino Asia has successfully grown from a build-to-print machine tool builder to one that is capable of offering turnkey engineering solutions to its customers, further differentiating the Singapore operations from other machine tools builders. Makino Asia, as the Asian headquarters, is fully integrated with manufacturing, design, R&D, turnkey solutions and business administration, under one roof. Today, the Singapore operation employs close to 450 employees and is responsible for the manufacturing and development of milling and EDM machines in Singapore.



Makino
Machines models vary with applications/materials

Kulicke & Soffa

Kulicke & Soffa ("K&S"), incorporated in 1951 and based in Pennsylvania, is the world's leading supplier of equipment, tools and materials used in the production of semiconductor devices. In 2000, K&S invested US\$20 million on a new IC ball bonding facility in Singapore. Today, K&S Singapore is a global manufacturing hub for K&S wire bonders and also a major R&D hub for developing next generations of wire bonders.

"In the case of building highly sophisticated, precise equipment, skilled labour and consistency in quality is critical. Singapore offers excellent infrastructure both in terms of trained manpower and a cosmopolitan environment; and with a multicultural workforce, has no limitations in language and communication. This makes doing business here fast and easy."

Dr Moh Chong Tau,
President and CEO,
Makino Asia

ASM International

ASM International N.V. is a leading supplier of semiconductor equipment, materials and process solutions addressing both the wafer processing and assembly and packaging markets.

ASM Pacific Technology ("ASMPT"), responsible for ASMI's semiconductor back-end business, is the world's largest assembly and packaging equipment supplier for the semiconductor industry. ASMPT operates in Singapore through ASM Technology Singapore ("ATS"), which has grown since its establishment in 1990. ATS today develops and manufactures gold wire bonders as well as equipment such as automold and in-line solutions for factory automation.

ASM Front End is a leading provider of deposition equipment for semiconductor wafer fabrication. In August 2004, the company announced the set up of its wafer processing equipment plant in Singapore as part of ASMI's strategy to strengthen its presence in Asia. ASM Front End started with producing its own parts (or local sourcing) and assembling the generic subsystems for vertical diffusion furnaces. By early 2010, the Singapore plant will manufacture the full vertical furnace product line, including a full manufacturing transfer from the Netherlands.



Agilent Technologies

Based in Santa Clara CA, USA, Agilent Technologies is the world's premier measurement company, providing core electronic and bio-analytical measurement tools to advance the electronics, communications, life science research, environmental and petrochemical industries.

Agilent Technologies Singapore develops a range of electronics and communications test products, from component level testers to complete systems that test communications services, communications networks, storage area networks and wireless network. The Singapore site also provides technology and solutions such as microDNA arrays and lab-on-a-chip analysis for life science research. In June 2009, Agilent opened its first Agilent Automation Solutions manufacturing facility outside of the US. Agilent Singapore employs about 450 people in R&D, sales and business hub activities.

"Singapore is our natural choice for our life sciences manufacturing site as the island-state is home to the world's top pharmaceuticals and biotechnology companies and is well positioned to be the leading global manufacturing site for innovative medicines. Coupled with the talented technical professionals and the close proximity to our Asia supply chain..."

Gooi Soon Chai,
President of Agilent Technologies,
Singapore and Malaysia

Contract Design Manufacturers for Machinery & Systems

Supporting the M&S manufacturing activities in Singapore is a group of highly skilled Contract Design Manufacturers (CDMs). CDMs are contract manufacturers who manufacture components or products as contracted by other companies but differentiate themselves by focusing on co-design with OEMs. Many of these companies have capabilities to handle high-mix-low-volume manufacturing as well as strong electromechanical capabilities. With these strengths, CDMs are able to serve the stringent demands of the complex equipment-building industry.

ETLA Limited (Member of Frencken Group Limited)

Founded in 1985 as Eng Tic Lee Engineering, ETLA Limited ("ETLA") is a vertically integrated solutions provider specialising in contract equipment manufacturing, precision machining and sheet metals components manufacturing. Complementing its technical capabilities, its competencies in value engineering, prototyping, program management and supply management makes ETLA a choice strategic partner for many OEM's and process equipment makers in data storage, semiconductor, medical and pharmaceutical and machine tools manufacturing industries.

In 2008, ETLA was awarded the Singapore's Fastest Growing 50 Certification by the DP Information Group, lauding the efforts of the company which boasts of strategic partnerships with industry leaders including Seagate, Kulicke & Soffa, Uhlmann and Makino.



VDL Enabling Technologies Group (Singapore) Pte Ltd

Part of the international VDL Group, VDL Enabling Technologies is spread over 75 companies with 7,100 employees. Its plant in Singapore operates in the business of system integration or mechatronic (sub) system and modules for OEMs in the high tech capital equipment industry and in the area of production and mechanisation. As a system supplier, VDL Enabling Technologies covers the value chain from engineering and co-engineering through to parts production, assembly and testing.

Precision Modules & Components

There is a whole range of activities and services that supports complex manufacturing in Singapore. This is a comprehensive value chain that includes a base of component OEMs (in areas such as optics, motors, bearings, hydraulics and pneumatics), specialist suppliers (including surface finishing and heat treatment) and contract design manufacturers. To date, these companies make up about 60% of the number of PE companies in Singapore. These companies have been critical to the success of Singapore's consumer electronics and hard disk drive industries. Increasingly, they are leveraging on their capabilities built up over the years to diversify into a wider range of sophisticated sectors such as complex equipment, aerospace, oil & gas and medical technology.



The high standards in manufacturing, availability of skilled manpower and accessibility to markets in the region, have resulted in foreign-based suppliers setting up regional operations in Singapore. This further augments the PE capabilities from the base of home-grown suppliers, allowing Singapore to be the one-stop solution for companies' sourcing needs.

Amtek Engineering Limited

Amtek Engineering Ltd is a leading provider of innovative turnkey manufacturing solutions to the global market. Based in Singapore, the company has 18 manufacturing facilities in nine countries across Europe, Asia and North America and 24 directly-owned subsidiaries.

Starting from its core competency in metal stamping, the company has grown into an end-to-end solutions provider with capabilities in design, tooling, metal processing, plastics and rubber manufacturing, secondary processes and assembly.

The company currently serves a wide variety of industries from consumer electronics, storage, enterprise servers, etc. It continues to look for growth opportunities, and differentiates itself with strong design and manufacturing capabilities.



Nypro Singapore

US-based plastics company, Nypro Inc. is a leading designer of plastics products and fabricator of moulds and injection moulds plastics parts and assembly. Established in 1988, Nypro Singapore has grown to be a key manufacturing and design centre for the group's operations. With a strong global customer base from some of the best companies in the healthcare, electronics, telecommunications, industrial, automotive, packaging and consumer markets, Nypro has built up capabilities to provide the highest quality design, development and global production solution for precision injection moulding and related manufacturing solutions.

Supporting Singapore's Industry Verticals



Component OEMs

Component OEMs are companies which manufacture and market precision components under own-brand names. These include the suppliers of interconnects, pumps, lasers and optics which are critical modules found in many niche products. The strong manpower capabilities and IP protection regime are key reasons why Component OEMs continue to carry out niche manufacturing activities in Singapore.

Qioptiq

A subsidiary of the Qioptiq Group, Qioptiq Singapore is a one-stop optics solution provider with more than 30 years of experience in the design and manufacture of optical components and sub-assemblies for a broad range of defence and commercial market applications. Today, Qioptiq Singapore is the leading company for the Group's precision optics division, housing a team of approximately 700 dedicated professionals with the accumulated experience and expertise to develop optimal solutions for the most complex and demanding optics applications.

The company has invested an estimated US\$20 million over the last 5 years in its Research & Development and Capital investments excluding the new facility investment. With its new plant in Tractor Road, in 2008, Qioptiq today has doubled its size to serve its global customers' demand for precision engineering solutions.

Qioptiq Singapore today hosts deep capabilities on design and manufacturing of optical components and electro-optical assemblies which are found in a wide range of

diversified products. In the commercial sector, Qioptiq produces bio-tech filters, endoscopy couplers, ophthalmic modular assembly, and semi-con sub-assemblies in clean-room environments as well as large venue projection components. For the defence market, Qioptiq produces night-vision equipment, vehicle displays, lasers and fire control systems.

Panasonic Refrigeration Devices Singapore

Incorporated in 1972, Panasonic Refrigeration Devices Singapore ("PRDS") has grown to become the largest facility for the design, manufacture and export of household refrigerator compressors for Panasonic globally. Housing an Advanced Compressor Development Centre, PRDS designs some of the world's smallest and most energy efficient motors, which are subsequently manufactured in Singapore.

Apart from its strengths in new product design, the local team has vast experience in developing new manufacturing technologies enabling them to automate high-precision assembly lines of minute metal components making PRDS the most state-of-the-art compressor manufacturing plant for Panasonic.



Singapore, with a strong foundation in Precision Engineering, is well-equipped to accommodate various major industries on its shores. It is the largest centre in Asia for aerospace maintenance, repair and overhaul, with more than 25% market share. It is a trusted and competitive site for leading medical technology companies to develop and manufacture innovative products. It is the largest manufacturer of jack-up oil rigs and commands 70% of the world market. It is a vibrant hub in the electronics industry. Singapore is likewise in the cusp of success in clean technology as it pushes solar energy, capitalising on its strategic location in the tropical sunbelt. With Precision Engineering enabling these industries, the business environment continues to expand in the country.



Electronics/ Semiconductors

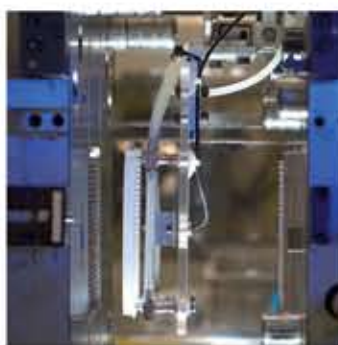
Electronics is one of the major industries underpinning Singapore's economic growth, and contributes 30.6% of the city-state's manufacturing value-added. Of S\$11.8 billion in fixed asset investments in 2009, electronics accounted for 41.5% of the total investments. Employment for the industry stands at 76,000, which is 19% of total manufacturing jobs. In addition, the manufacturing of finished electronics products creates many spin-offs to other segments of the economy, such as precision component manufacturers, electronic manufacturing systems companies and logistics service providers.

Singapore's semiconductors industry was worth S\$37 billion in manufacturing output in 2009, which saw a 10.7% growth (CAGR) since 2001. Singapore is also home to many semiconductor equipment companies. For example, Singapore accounts for more than 10 per cent of the global output for backend semiconductor equipment. The city-state also holds a 70% global market share for semiconductor wire/ball bonder units and 60% global market share for auto-insertion machines. The manufacturing activities of these semiconductor equipment OEMs are also strongly supported by our Singapore-based contract manufacturers such as Kinergy, MMI and VDL-ETG.

In addition to the semiconductor industry, Singapore also houses a myriad of activities in the hard disk drive data storage and consumer electronics industries. Leveraging on the rich ecosystem of Singapore-based suppliers, MNCs are able to undertake the manufacturing of products such as HDD hard disk media, LED chips and high-end vacuum cleaners.

Hi-P

Founded in 1980, Hi-P International Limited has grown from small tool-maker to a leading supplier of electro-mechanical modules to the telecommunications, consumer electronics and computing industries. With operations globally, Hi-P is able to offer a range of diversified services such as industrial and product design, manufacture, assembly, ancillary value-added services such as surface decoration finishing and precision metal stamping as well as turnkey contract manufacturing.



Meiban

Meiban began as a humble plastic injection moulder based in a small local workshop in 1987, working hard to expand business with consumer products and business equipment during its initial years. Moving on to bring herself into Malaysia and China, and subsequently capturing a portfolio of US and European clientele, Meiban today has grown into a global player in mold making, injection moulding and contract manufacturing. Moving forward, Meiban today has developed a name for itself in commercial design, attested by its RED DOT awards for product concepts in "Rollertoaster" and an in-house designed personal navigation system in 2006 and 2007 respectively.

Marine & Offshore

Singapore is the top player in the global market for oil and gas drilling platforms and offshore support vessels. Local conglomerates Keppel Offshore & Marine and SembCorp Marine are renowned names in the global offshore and marine industry. Today, Singapore is the largest manufacturer of jack-up rigs, and commands 70% of the world market. It also has 70% of the global market for the conversion of Floating Production Storage Offloading vessels. In ship repair, it has a 20% share of the world market. In 2007, Singapore's marine & offshore industry output grew to US\$9 billion and its value-added was over US\$1.8 billion.

This industry also reaps significant gains from the country's robust and dynamic supply chain and precision engineering infrastructure. A growing base of PE suppliers such as JEP Precision Engineering, Cactus Engineering and A & One Precision is now moving into large format, multi-axis machining and other value-added services. These will support growing outsourcing demands of key players such as Schlumberger, Cameron and Halliburton. One such example is Bodycote Testing Group, which set up its materials testing laboratory in 2007. Its Singapore operation provides a range of services including mechanical testing, fracture mechanics, corrosion testing, chemical analysis, technical training and failure analysis.





Bodycote

Located at the forefront of surface engineering technology, Bodycote Singapore provides ceramic and thermal spray coatings for a wide range of industries, including aerospace, automotive, oil & gas, and power generation markets. Bodycote is an acknowledged leader and the world's largest thermal processing services provider, offering heat treatments, metal joining, hot isostatic pressing and surface technology. Its plant in Singapore houses one of Asia's largest thermal spray and ceramic coating booths and a grit blast facility. Also available is a 7-metre long carbide stripping tank and a fully automatic computerised High Velocity Oxy Fuel system for industrial applications. Bodycote provides a range of coating solutions for customers, including coating and application development.

UMS Group

Established in 2001, UMS Group's core business is in high precision machining of large platform parts, special and chemical processes and contract manufacturing/system integrations and testing. The company serves the OEMs of semiconductor wafer fabrication equipment, oil exploration, aerospace and solar sectors.

The Group is headquartered in Singapore with an additional 480,000 sq ft (44,600 sq m) facility in Penang, Malaysia. It also has an office in Fremont, USA and a vast network of global supply chains. Both its plants are equipped with state-of-the-art facilities and equipment, including cleanroom cleaning lines and cleanroom assembly and test operations.



Aerospace

Backed by a large pool of over 100 aerospace companies, Singapore has garnered a quarter of the Asian MRO market. In 2008, the aerospace industry achieved an output of US\$4.8 billion. Leading players such as SIA Engineering Company, Pratt & Whitney and Hamilton Sunstrand carry out comprehensive nose-to-tail MRO services from airframe maintenance to engine overhaul to aircraft modifications and conversion. Aside from MRO, Singapore is also seeing a growing number of aerospace design and manufacturing operations.

Singapore's commitment to the aviation industry has drawn the likes of Rolls-Royce, the world's leading manufacturer of aircraft engines, to our shores. Rolls-Royce will set up an aero-engine manufacturing operation in Singapore - its first in Asia. Large commercial aircraft engines for the new B787 and Airbus XWB aircraft will be assembled and tested at the new facility. As aircraft engine manufacturing is a highly complex activity with uncompromising demands on quality and reliability, the Singapore plant will also be a "Factory of the Future", where cutting-edge engine assembly techniques are developed and incorporated. Rolls-Royce will also be manufacturing the hollow titanium fan blades in Singapore - its first outside of the UK. This move will bring the firm's total investment into Singapore to

more than US\$460 million, creating over 300 new jobs and enabling potential spin-offs for other supporting industries.

To support the growing aerospace industry, PE suppliers are building up the necessary capabilities such as multi-axis machining of exotic alloys and composite materials processing, with the necessary qualification and certification to capture these outsourcing opportunities. Companies such as Singapore Aerospace Manufacturing, MMI and UMS have set up dedicated facilities to provide niche machining service to capture the opportunities presented by the growing aerospace market in Singapore.



MMI Holdings

Founded in 1989, MMI is a leading precision engineering components company and contract manufacturer serving global market leaders in technology-driven industries. The company's unique strengths lies in its ability to provide customized strategic manufacturing solutions for electro-mechanical parts, assemblies and equipment. Its precision mechanical manufacturing technologies include mechanical engineering design, precision casting, machining and metrology, precision assembly and testing, materials and surface treatment and industrial automation.



Singapore Aerospace Manufacturing Pte Ltd

Singapore Aerospace Manufacturing (SAM) is a subsidiary of Accuron Technologies and headquartered in Singapore. With 1,200 employees across Asia and Europe servicing the aerospace and industrial equipment industries, SAM is equipped with cutting edge manufacturing capabilities to service leading global companies in these respective industries. The company provides quality aerostructural parts and assemblies for global players, focusing primarily on actuators, engine mouths, airfoils, engine cases and landing gears.

Tomorrow Comes with Precision

With unique strengths in precision engineering, Singapore offers one of the world's most advanced R&D and manufacturing infrastructures for businesses on the cutting edge of technology.

It's where companies from the electronics, aerospace, semiconductor, medical technology and oil and gas industries can leverage our prime location in the region, and tap into a vast network of experienced suppliers, all offering precision engineered products and services of the highest quality.

Coupled with a strong commitment to growth, the city-state is poised to become a centre of PE excellence in Asia, one where you, your product and your business, will stand amongst the very best in the world.

Be a part of that future today.



Medical Technology

The medical technology sector in Singapore contributed about US\$2 billion to the economy in 2008, and created over 8,000 new jobs. Figures have risen since, and PE companies now help to produce everything from diagnostics and imaging products, scientific tools, to eye care and cardiovascular devices.

Recent years have seen key players in medical devices increase their outsourcing volume in Singapore. And PE companies in Singapore have kept up, working always to adhere to the stringent quality and process requirements of the sector. This means acquiring Good Manufacturing Practices (GMP) and ISO:13485 certification, and investing in cleanroom infrastructure.

Companies that have done so include Nypro, Meiban, Kato Spring, Univac and Sunningdale Tech, just to name a few. They have also begun manufacturing inhaler components, drug delivery products and components for diagnostic equipment for key players like Edwards Lifesciences, Baxter and Becton Dickinson.



Sunningdale Tech Ltd

Sunningdale Tech is a leading manufacturer of precision plastic components. The Group provides one-stop turnkey plastic solutions with capabilities ranging from product design, mould fabrication, injection moulding and secondary processing, through to the precision assembly of complete products. It focuses on four key business segments: automotive, consumer/IT/telco, healthcare and toolings.

Univac Precision Engineering Pte Ltd

Univac was founded more than 20 years ago and now ranks among the global market leaders in the field of high precision mould making. It offers customers a one-stop solution with the advantage of its world-class engineering technology centre, state-of-the-art moulding facilities in Singapore, Malaysia and China, as well as capabilities in providing full turnkey solutions. It offers a complete range of services from mould conceptualisation and design, prototyping, test and maintenance of precision engineering moulds, to the production of plastic injection types. It is also fully equipped to undertake full turnkey projects in semi and fully automatic sub-assembly of plastic and metal parts.

The company serves a wide range of global manufacturers from varied industries including electronics and telecommunications, electrical and computer peripherals, medical and healthcare, packaging and automotives.

