

Rolls-Royce



Rolls-Royce plc is an engineering company that specialises in the design, manufacture and integration support of engines. It has provided gas turbine aero-engine facilities to 100 armed forces, including human rights abusing regimes such as China, Indonesia, Saudi Arabia and Turkey. Around a quarter of its sales are military and, in terms of revenue, its contribution to the UK's arms trade is second only to BAE Systems

Introduction

Rolls-Royce operates in the highly lucrative markets of military and civil aerospace, marine and energy. The company has around 43,000 employees in 48 countries, providing gas turbine aero-engine facilities to 135 different countries and 100 armed forces. Its engines presently power around 25% of the world's military aircraft fleet. Rolls-Royce has long been more inclined toward the North American markets than many of their UK competitors, but in recent years there has been a noticeable intensification in the development of their US links, demonstrated by the acquisitions they have made and their present order book.

After the attacks of 11th September, Rolls-Royce announced the imminent loss of 6,000 jobs (Independent 20/10/01) due to the sharp down turn in the civil aviation market. To claim that these redundancies were entirely due to the attacks seems rather dubious, in that the demand for civil aero-engines was already poised for a downturn. It is also interesting that Rolls-Royce have been shedding around 2,000 jobs a year for the last three years, possibly in response to the indifferent state of their share price despite the apparent health of their order book. They may therefore have seen the sudden global downturn in trade as an opportunity to make these unusually large cuts with the minimum amount of resistance from the unions.

By way of contrast, as armed forces around the world seek to upgrade their equipment, the military weapons and machinery sector appears in line for an upturn.

A brief history (Sourced primarily from the Rolls-Royce website)

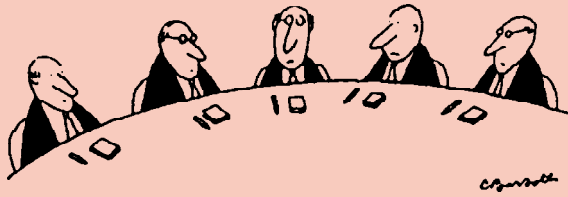
Rolls-Royce began life as a collaborative venture around 1904 when Henry Royce, who had been building cars for some years, met Charles Rolls who sold quality cars in London. The success of this partnership led to the establishment of the Rolls-Royce company in 1906 and the launch of the 'Silver Ghost'. Their expansion into the defence

BASIC FIGURES

(1996-1999 sourced from SIPRI Yearbooks. 2000 sourced from Rolls-Royce Annual Reports except 'World Military Rank' - *Defence News*, 30 July-5 Aug 2001)

Year	Number of employees	Total Sales (US\$m)	Military Sales (US\$m)	World Military Rank	Military Sales as % of Total
2000	43,200	8,982	2,105	15	24
1999	49,900	8,925	2,410	15	27
1998	42,000	7,447	2,150	14	29
1997	42,600	7,098	2,130	17	30
1996	42,900	6,702	2,010	21	30

Recent Acquisitions



- **(2001) Interim GmbH** The acquisition of the German engineering company, for an undisclosed sum, provided further evidence of Rolls-Royce's intention to diversify into marine services. (Rolls-Royce News 30/05/01)
- **(1999) Vickers Defence Systems** This major acquisition brought two of the most high profile names in British engineering together, at a cost to Rolls-Royce of £576 million plus £200 million in Vickers debt. This seemed to some to be far more than it was worth (Daily Telegraph 21/09/99). The deal was struck in order to be at the forefront of the growing market for marine power systems, a sector in which Vickers became prominent after the acquisition of the Norwegian engine marine group Ulstein for £304m. The armoured vehicles that have traditionally been the strength of Vickers is nowadays considered by analysts to be something of a burden, due to the rapid decline in global demand. Consequently, Rolls-Royce are expected to sell this area of the business in the near future.
- **(1999) Cooper Rolls**, the gas and oil company, and **Cooper Energy Services** who manufacture rotating compression equipment. This again highlighted the apparent desire of Rolls-Royce to secure a very strong presence throughout the U.S. (Rolls-Royce website 16/11/01)
- **(1997) Lucas Western General Systems** The company was acquired with the intention of merging with Allison and the further enhancement of a strategically crucial presence in the American military market. This move seems to have already reaped great rewards with the involvement of Rolls-Royce in the highly lucrative Joint Strike Fighter contract that was recently won by a consortium led by Lockheed Martin, and is already worth over £1 billion to Rolls-Royce. (Flight International 4-10/6/97)
- **(1995) Allison Engine Company** Acquired for £320 million, the purchase of this US military engine supplier was supposedly made in order to promote Allison aero-engines in the civil aerospace market which they would have been unable to do on their own (Financial Times 25/3/95). It was fairly obvious, however, that this was an acquisition made with an eye towards establishing themselves in the commercial and military American markets.

industry was instigated in response to the First World War with the design and production in 1914 of their first aero-engine, 'The Eagle'. The involvement of Rolls-Royce in the fledgling aviation industry left them ideally placed to become a considerable force in the development of aero-engine technology during the Second World War, powering both the Supermarine Spitfire and the Hawker Hurricane with their Merlin engine.

A significant shift in emphasis, however, was taking place at the same time through the work of Sir Frank Whittle in developing the aero gas turbine, a field in which Rolls-Royce are still very prominent. During the next two decades Rolls-Royce set about promoting the gas turbine engine as the accepted cornerstone of the civil and military aviation industry. After a series of mergers between the major and lesser players during the sixties, the two emergent forces in the UK aero-engine industry were Rolls-Royce and Bristol Siddeley. These two companies then consolidated their dominant position by themselves merging in 1966. In 1973, after the initial failure of Rolls-Royce's RB211 engine used in the Lockheed L-1011 Tri-Star, the company was taken into state ownership and the motor car business was floated on the stock-market as a separate entity. Exactly why the Conservative government of the time decided to prop up a company that was financially moribund is still a mystery, but for what ever reasons, Rolls-Royce Plc was rescued and remained in state ownership until 1987. After this helpful government intervention, the company was ideally placed as the state's primary producer of aero-engines for both civil and military use to enter the private market.

In 1990, Rolls-Royce furthered its global presence by establishing an aero engine joint venture with BMW, a venture of which they took full control in 2000 and which is now named Rolls-Royce Deutschland & Co Ltd KG. Five years later, Rolls-Royce took a major step into the highly significant American market with the acquisition of the Allison Engine Company, providing not only new engine technology but also profitable on-going military orders.

1999 was also a big year for Rolls-Royce. It began with the full acquisition of the US oil and gas company Cooper Rolls, and of Cooper Energy Services who deal with rotating compression equipment. Add to this the repair and overhaul facility of National Automotive in California and it was already a good year. However, the year's largest deal was yet to come, with the acquisition of the tank and marine equipment manufacturers, Vickers, in September. This was a deal worth £576m, and combined with all their other acquisitions during the nineties, left Rolls-Royce in an extremely strong position to progress in both the civil and military engine industries.

Rolls-Royce Products

In 2001, the military sector constituted 24% of the total annual sales for Rolls-Royce (Rolls-Royce Annual Report 2001). Their military business consists of the design and manufacture of mainly aero-engines and a prolonged after-care and maintenance service. This service has been increasingly developed in recent years in an effort to

maintain their reputation for longevity and reliability, and equally because of the potential revenue that can be gained from an after-care contract that may continue for up to ten years. It seems that the company manages to compete with its larger American rivals by selling the actual engines for little or no initial profit, hoping to increase their income through after care. An example of this apparent trend is the contract recently won by the Marine department of Rolls-Royce to continue the maintenance and refurbishment of the Royal Navy nuclear submarine flotilla. This contract, worth up to £400 million over the next ten years, also serves to enhance the already well established links between Rolls Royce and the Ministry of Defence (Rolls-Royce News 14/11/01, available on the Rolls-Royce website).

In the modern globalised world of weapons transfers, most major contracts involve a degree of collaboration between companies. This is very much the case for Rolls-Royce. A recent high profile example of this is their involvement in the Joint Strike Fighter programme, potentially the largest single arms deal ever made. Due to their leading position in the technology of Short Take-off and Vertical Landing (STOVL) - as used in the Harrier Jump Jet - they were integral in both of the main bids made by Boeing and Lockheed Martin. Lockheed Martin turned out to be the eventual winners of the contract and although the project is only at the development stage, it is already worth more than £1 billion to Rolls-Royce (Rolls-Royce News 26/10/01).

In acquiring Vickers, Rolls Royce took on a company that was struggling due to the severe downturn in demand for conventional combat vehicles. This downturn had left Vickers with only one significant customer, namely the UK Ministry of Defence. Its facilities for marine engine manufacture are what made the acquisition attractive to a company like Rolls-Royce, whose area of expertise has up to now been concentrated in the volatile and exceptionally competitive market of aerospace.

Recent deals

Most of Rolls-Royce's deals are directly with aircraft manufacturers, such as Lockheed Martin for the massive Joint Strike Fighter programme. However, some activity is carried out directly with governments and some recent examples are given below:

● February 2002: INDIA

Rolls-Royce launched a new marine support operation in India to maintain their products already in service. Despite the increasing tensions in the region, Rolls-Royce sees Asia as one the most lucrative markets that is still to be targeted. (Rolls-Royce News 17/02/02)

● September 2001: UK

Vickers Defence Systems were awarded a contract to maintain the Deltic engines used in the Royal Navy's hunt class mine warfare vessels. The contract is worth £20m. (Fighting Talk 09/01)

● August 2001: BRAZIL

The Brazilian Navy will be provided with 42 Gem engines plus spares for their AgustaWestland Lynx helicopters. The deal is worth £10 million to Rolls-Royce. (Flight International 28/08/01)

● August 2001: UK

Rolls-Royce will provide propulsion systems for three Astute-class Royal Navy submarines. Delivery is expected to commence in 2003 and should finish by 2006. (Defence News 6/8/01)

● August 2001: CHINA

After the initial order was made during the 1970s, 80 to 90 Spey Turbo fan engines were delivered to be used in FBC-1 Flying Leopards. The engines had been left in storage for over 20 years. (Airforce Monthly, 8/01)

● July 2001: UNITED STATES

In a joint venture with Data Systems and Solutions, Rolls-Royce won the contract to supply Jetscan hardware and support for engine condition monitoring on the F16's of the US Airforce. (Flight International 17 - 23 July 01)

● March 2001: UK

Vickers Defence Systems won a contract worth £250m to supply the British Army with a fleet of Trojan obstacle clearing vehicles and Titan bridge laying vehicles. Deliveries are expected to begin in 2005. (Times 14/03/01)

● February 2000: TAIWAN, UNITED STATES, FRANCE

These three countries placed orders worth \$133.4 million for 52 engines to power the Northrop Grumman E-2C+ Hawkeyes. These are all weather, carrier-based tactical airborne warning and control aircraft. (Rolls-Royce News 24/02/01)

● February 2000: UNITED STATES

After the Asian Aerospace 2000 arms fair, Rolls-Royce sealed a major deal with the US Navy to supply turboprop engines and parts. It also gained a provisional order to provide their model 250 engine to power a new type of unmanned vertical take-off and landing aerial vehicle. These contracts together are worth over \$150 million. (Rolls-Royce News 24/02/01)

Military Aero-Engines Supplied by Rolls-Royce

Engine	Aircraft	Notable Aircraft Customers*
TURBOSHAFT RANGE		
Model 250	Bell 407 - utility helicopter MD Helicopters MD600N - utility helicopter	Many, including Turkey US
AE1107C	V-22 Osprey	Portugal, Denmark, UK, Canada, Italy, Sweden, Japan
RTM322	European Helicopter Industries EH101 NATO Helicopter Industries NH90 - naval and transport helicopter	France, Germany, Netherlands, Sweden, Finland, Portugal, Norway
T800	GKN Westland WAH-64 Apache - attack helicopter Boeing-Sikorsky RAH-66 Comanche - attack helicopter Bell UH-1H - military utility aircraft GKN Westland Super Lynx 300	UK USA Many, including US and Colombia Thailand, Oman
Gem	Agusta A129 International Agusta A129 Mangusta - attack helicopter	None Italy
MTR390	GKN Westland Lynx/Super Lynx Eurocopter Tiger	Malaysia, Brazil, Pakistan, Nigeria France, Germany, Australia
TURBOPROP RANGE		
AE2100	Lockheed C-130J - transport aircraft Lockheed/Alenia C-27J - transport aircraft ShinMaywa US-1A Kai - amphibious aircraft	US, Australia, Italy Italy Japan
T56	Lockheed Martin C-130A-H - transport aircraft P-3C Orion - ASW and maritime patrol aircraft E-2C Hawkeye Northrup Grumman E-2C+ - maritime surveillance aircraft	Many, including US, Colombia, Indonesia, Turkey, Brazil, Malaysia, Spain US US US, Taiwan
TURBOFAN RANGE		
EJ200	Eurofighter Typhoon - fighter aircraft	UK, Germany, Italy, Spain
Pegasus	BAE Systems Harrier/Sea Harrier - STOVL fighter aircraft Boeing/BAE Systems Harrier II variants	UK US
Spey	Italian/Brazilian AMXs - light military jet/trainer	Italy, Brazil, Venezuela
RB199	Panavia Tornado IDS/ADV/ECR	UK, Italy, Saudi Arabia
Adour	BAE Systems Hawk - trainer/ fighter ground attack Boeing T-45A Goshawk SEPECAT Jaguar - ground attack aircraft	Indonesia, Dubai, United Arab Emirates, Kuwait, Oman, Saudi Arabia, Zimbabwe, Australia, UK, South Africa US UK, Ecuador, Oman, India, France
Tay	Gulf stream IV-SP	
BR700	BAE Systems Nimrod MRA4 - maritime patrol aircraft	UK
FJ44	Saab SK-60 - trainer aircraft	Sweden, Austria
AE 3007	Northrup Grumman Ryan Aeronautical Centre Global Hawk - surveillance UAV	US
TURBOJET RANGE		
Viper Turbojet	Aermacchi MB339 Avioane Craiova IA-99 S01M	

* While it is unambiguous that the listed countries have purchased the relevant aircraft, we cannot be sure that all those specific aircraft carry Rolls-Royce engines.

Sources 'Engine' and 'Aircraft' columns are sourced from Rolls-Royce News; 'Notable Aircraft Customers' is primarily sourced from Flight International 20-26 February 2001, but also from Rolls-Royce sources.

Board of directors

Sir Ralph Robins, Chairman (£345,000)

Also Chairman of the Defence Industries Council.

Mr John E V Rose, Chief Executive (£539,000)

Mr Colin H Green, President - Defence Aerospace (£314,000)

Mr James M Guyette, President and Chief Executive Officer of Rolls-Royce North America Inc. (£355,000)

Mr Paul Heiden, Finance Director (£322,000)

Mr Philip Ruffles, Director - Engineering and Technology (£299,000)

Mr Richard Turner, Group Marketing Director (£247, 000)

Lord Moore of Lower Marsh, non-executive Deputy Chairman and Senior Independent non-executive Director

Sir Robin Moore, non-executive Director

Also a non-executive director of BP and on the UK Government's Council for Science and Technology.

Mr Carl Symon, non-executive Director

Formerly Chairman and Chief Executive of IBM UK Ltd.

Sir John Weston, non-executive Director

Formerly Deputy Secretary to the Cabinet and Political Director in the Foreign Office. He served as Ambassador to NATO (1992-5) and as British Ambassador to the UN until 1998.

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February 2002



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Vickers Defence Systems Scotswood Road, Newcastle-Upon-Tyne NE99 1BX. Tel: 0191 273 8888 Fax: 0191 273 2324

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The Campaign Against Arms Trade is working for the reduction and ultimate abolition of the international arms trade, together with progressive demilitarisation within arms-producing countries. For more information about CAAT's work and how you can be involved, contact:

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