

# GKN



GKN is an ever changing empire of aerospace and automotive interests that includes a 50% share of the world's second largest helicopter company, AgustaWestland, and an aerospace group that supplies components and services for a wide range of military and civil aircraft. In 2000, military sales made up 20% of GKN's turnover

## Introduction

GKN has seen a lot of changes over the past few years. It has been a player in the consolidation of the military and aerospace market and in 2001 its industrial services businesses were demerged and subsequently merged with Brambles Industries Ltd of Australia.

In 2000 GKN signed an agreement with Finmeccanica of Italy to merge the two companies' helicopter divisions. Both companies have a 50% stake in the newly formed AgustaWestland, the world's second largest helicopter company. Prior to that, GKN sold its armoured vehicle division to Alvis Vehicles, retaining a 29.9% stake in Alvis and a seat on the board.

ADD is GKN's automotive driveline company, it is a global company that supplies to a wide variety of car and other vehicle manufacturers. Virtually all of its business is civil so it features little in this briefing but, after the Brambles deal, automotive industry accounts for approximately 66% of GKN's sales of £4.34 billion. However this part of the business is under pressure due to the downturn in the US automotive sector in 2001.

This report is concerned with the military aspect of GKN's business. Hence it considers [GKN AEROSPACE SERVICES](#) and [AGUSTAWESTLAND](#).

## History

The founding of the Dowlais Iron Company in Merthyr Tydfil in 1759 was the birth of GKN. Upon the merger of this iron works company with Arthur Keen's Patent Nut and Bolt Company, Guest, Keen & Co. Ltd came into existence, becoming Guest, Keen and Nettlefolds Ltd in 1902 after a merger with the Birmingham firm of Nettlefold and Chamberlain. It became one of the largest manufacturing businesses in the world, extracting coal and ore, making iron and steel and finished products such as nuts, bolts, screws and fasteners.

In the last quarter of the twentieth century, GKN acquired many famous industrial names in the UK, Europe and USA. It increasingly focused its activities on Automotive Products, Aerospace and Industrial Services (the latter only until the demerger of its industrial services businesses). After it had exited from its traditional businesses the company formally became GKN plc in 1986.

## BASIC FIGURES

1996-1999 sourced from SIPRI Yearbooks. 2000 sourced from Defense News, 30 July - 5 August 2001

Year	Number of employees	Total Sales (US\$m)	Arms Sales (US\$m)	World Arms Rank	Arms Sales as % of Total
2000		7,203	1,415	20	19.6
1999	39,790	7,514	1,860	16	25
1998	35,520	6,139	1,160	29	19
1997	32,680	5,540	1,150	28	21
1996	30,000	5,212	1,500	26	29

# GKN Aerospace Services

Approximately 60% of GKN Aerospace's work is military and it employs 5,600 people. GKN's sales in this division were £630 million in 2001.

The company supplies airframe, engine and other components, including cockpit canopies, to many of the world's major manufacturers including Boeing, Airbus, Sikorsky, Pratt & Whitney, Rolls-Royce and Lockheed Martin. GKN see this as a real growth market; as major players such as Boeing look to concentrate on their core activities, GKN will look to outsource more aero structures work and they feel well placed to benefit. Currently they estimate that 80% of this business is in-house but that this will fall over the coming years. The strategy is to make GKN Aerospace Services an important first tier supplier to the global aerospace industry.

The following are the products and services offered by GKN Aerospace, they have been broken down by site because of a lack of exact contract information.

## UK

**COWES** Production of nacelles and major air-frame structures including engine pylons, tailplanes and elevators, a range of doors and panels, composite helicopter structures and nacelles for both turboprop and turbofan engines.

**PORTSMOUTH - FPT** Production of fuel tanks and systems for military and civilian aerospace; and emergency flotation systems for helicopters. FPT fuel cells are fitted to over 75 different fixed and rotary wing aircraft, for example the BAE Systems Hawk and the EH101 medium lift helicopter. FPT flotation systems are fitted to many different civil and military helicopters including the Sikorsky Blackhawk. As well as production, FPT offer repair and overhaul services for their fuel cells and flotation equipment.

**LUTON - Aerospace Composite Technologies** Production of transparency technologies and ice protection systems. This includes aircraft canopies and GKN have a contract to supply for both Eurofighter Typhoon and the SAAB/BAES Gripen advanced fighter aircraft.

## ACRONYMS

<b>ADD</b> Automotive Driveline Division	<b>EMS</b> Emergency Medical Services
<b>ADVISOR</b> Air Defence Vehicle Situational Overview and Relay	<b>FLIR</b> Forward Looking Infra Red
<b>AEI</b> Aerosystems International	<b>MEDEVAC</b> Medical Evacuation
<b>AEW</b> Airborne Early Warning	<b>NFH</b> NATO Frigate Helicopter
<b>ASW</b> Anti Submarine Warfare	<b>SAR</b> Search and Rescue
<b>CMHP</b> Chinese Medium Helicopter Programme	<b>TDL</b> Tactical Data Link
<b>CSAR</b> Combat Search and Rescue	<b>TJC</b> Thermal Joining Centre
<b>ECM</b> Electronic Counter Measures	<b>TTH</b> Tactical Transport Helicopter
<b>EMD</b> Engineering-Manufacturing-Development	<b>VTOL</b> Vertical Take-Off and Landing

## YEOVIL - Aerosystems International

AEI is a 50:50 joint venture between BAE Systems and GKN Aerospace. They specialise in data links and last year fitted the Link 16 Tactical Data Link (TDL) to some of the UK's VC-10 and Tristar tanker aircraft. In May 2001 AEI unveiled its Air Defence Vehicle Situational Overview and Relay (ADVISOR) system. The system is designed to be carried in a 4x4 or 6x6 vehicle and will allow mobile management of several TDLs. The system is aimed at two UK requirements and a growing European market. AEI is considering marketing ADVISOR in France by teaming up with local companies.

## US

**SAN DIEGO - GKN Aerospace Services Chem-tronics** Chem-tronics fabricates light weight metallic engine components. The company is broken up into divisions for the production of components for commercial, military and space sectors, in the areas of propulsion and aerostructures. They also offer a repair service for engines already in service.

**ST LOUIS** This plant is a recent acquisition from Boeing, in January 2001, and was formerly the Fabrications Operation of Boeing's Military Aircraft and Missile Systems Group. This makes GKN a key supplier in many of Boeing's military programs, including the F-18E/F, C-17 and the Lockheed/Boeing F-22. Since the purchase, Boeing accounts for 30% of the aerospace division's business in contrast to 3% previously.

**TALLASSEE** Production of composite engine components using Advanced Resin Transfer Moulding techniques. This offers lower cost and weight than conventional machined and cast components.

GKN Aerospace Services was awarded a \$15million contract to develop and manufacture Resin Transfer Moulding components for the Boeing/Sikorsky Comanche helicopter. The contract was awarded by Boeing. This could lead to considerable profit for GKN in the future, 13 aircraft are to be produced in the EMD phase, but it is estimated that 1,205 will be produced over the next 25 years.

**KENT** In January 2002, GKN aerospace acquired the Thermal Joining Centre (TJC) from Boeing for \$4.8 million. TJC produces 'an important titanium assembly' for the F22 Raptor and increases GKN's work on that program. Kevin Smith, GKN managing director aerospace said after this agreement, 'The F22 programme is now worth \$1.4 billion to GKN'. TJC will become part of GKN Aerospace Chem-tronics.

## Europe

**MUNICH** Manufacture of large composite aerospace structures for civil, military, helicopter and space applications.

# Agusta Westland

After the merger of their Westland helicopter business with Finmeccanica's Agusta, GKN have a 50% interest in the newly formed AgustaWestland. In the UK, AgustaWestland is still based at the GKN site in Yeovil, and in Italy it is based at Vergiate. As well as the core business of the two companies, including that of the 100%-owned EH Industries, AgustaWestland have the following interests:

**32%** of NH Industries, with Eurocopter and Fokker  
**45%** of Bell Agusta Aircraft Company (55% owned by Bell Textron)  
**50%** of Agusta Aerospace BV (Italy/Belgium)  
**50%** of Aviation Training International (50% owned by Boeing)  
PFI contract for Apache Helicopter training

## AgustaWestland Helicopters

### ● EH101

EH101 is a military utility medium lift helicopter that can be used for a number of roles - Search and Rescue (SAR), Combat Search and Rescue (CSAR), Amphibious Assault, Anti Submarine Warfare (ASW), Airborne Early Warning (AEW) and transport. The EH101 is available in military, naval and civil configurations. It can be fitted with a chin turret for a 12.7mm machine and can be equipped with rocket pods. As a troop transport it can carry 30 people seated or 45 standing.

The EH101 is on order or in service with the [UK](#) (designated Merlin), [Canada](#) (designated Cormorant), [Italy](#), [Denmark](#), [Sweden](#) and [Portugal](#) (up to 12 SAR and two Fishery Protection).

### ● US101

In October 2001 AgustaWestland and Lockheed Martin Integrated Systems teamed up to offer the EH101 to the [US](#) market, hoping to meet various requirements of the US military. One hope is to take advantage of the ever troubled CV-22 Osprey tiltrotor being developed by Bell Textron/Boeing. As well as needing a CSAR aircraft, the US Marine Corps are awaiting the Osprey as a ship to shore assault transport.

### ● A109

A light utility helicopter that is used in a number of military roles (designated A109M), including utility, Electronic Counter Measures (ECM), ambulance, scout, attack, air defence and antitank. The A109 is also available in a number of non-military configurations; however some of these have been supplied to police forces and can be used for aerial surveillance.

As part of its strategic defence procurement package, [South Africa](#) has ordered 20 A109Ms with an option on a further 10. First delivery is expected in April 2003. The first five of these helicopters will be produced and assembled in Italy, with the remainder being part, or wholly, produced under licence by Denel in South Africa. In early 2002 Denel

and AgustaWestland signed a deal for the licensed production of both the A109 and A119 Koala, Denel will be allowed to market and sell both helicopters to specified markets in [South East Asia](#), the [Middle East](#) and [Africa](#). Johann Holdt of AgustaWestland claimed 'We have already identified clients in Africa and elsewhere to whom we will supply both helicopters and spares utilising Denel'. Denel predict sales potential to reach \$30 million dollars a year from this deal alone.

A109M was selected by the [Swedish](#) Military in September 2002, mainly as a tactical education and training aircraft, but it is also expected that the helicopters will be used for other missions including utility, ASW, SAR and MEDEVAC. Initial deliveries are expected in September 2002, and the contract is valued in excess of 130 million Euros.

The A109 Power/MH-68A was selected by the [US](#) Coast Guard in March 2001 to fulfil its Airborne Use of Force program. Eight aircraft are to be leased from the Agusta Aerospace Corporation of Philadelphia. The MH-68A has a night vision device, a FLIR system with video recording and is armed with machine guns. The contract is valued at approximately \$18 million.

The A109 is in service in 'law enforcement' roles in [Australia](#), [Austria](#), [Belgium](#), [Ghana](#), [Italy](#), [Japan](#), [Slovenia](#), [Spain](#), [Switzerland](#), [UAE](#), [UK](#) and the [US](#).

In [Venezuela](#) the army operate 8 A109s as attack helicopters and a further 4 are operated by the National Guard. One A109 MkII is in use with the [Turkish](#) Coast Guard.

The A119 Koala is mostly seen as a civil helicopter; it is based on the A109 but is single engined, lighter and cheaper. Whereas the A109 has a landing gear, to reduce cost and allow more space for fuel tanks the Koala has skids. AgustaWestland heavily market the Koala for EMS roles.

### ● A129

The A129 is an attack helicopter, so far the only customer has been the [Italian](#) military. It has lost out in competitions in both [Turkey](#) and [Australia](#). AgustaWestland are offering the A129 International to [Poland](#) in collaboration with local firm PZL-Swidnik. The International variant is five bladed and has a more powerful engine. The A129 has seen service with the Italians in [Somalia](#) and [Angola](#).

### ● AB412

The AB412 is a military utility helicopter and is the latest in a long line of Bell helicopters produced under licence by Agusta. Agusta have exported these helicopters to a number of markets.

Traditionally Agusta supplied the [Turkish](#) Navy with Bell products, although lost out to Sikorsky in recent years as the Turkish have opted for the Seahawk. However, they are still supplying to the coastguard. Nine AB412EPs are due for delivery and in the interim AgustaWestland have donated a A109 MkII to the coastguard.

AB412 variants are in service in [Bahrain](#), [Ghana](#), [Italy](#), [Lesotho](#), [Sweden](#), [UAE](#), [Uganda](#) and [Zimbabwe](#).

Other Bell helicopters produced under licence by Agusta:

● AB204/5 - operated by [Greece](#), [Iran](#), [Italy](#), [Libya](#), [Morocco](#), [Oman](#), [Sweden](#), [Tunisia](#), [Turkey](#), [UAE](#), [Yemen](#) & [Zambia](#).

- AB212/4 - operated by [Bahrain](#), [Greece](#), [Iran](#), [Italy](#), [Lebanon](#), [Libya](#), [Morocco](#), [Oman](#), [Peru](#), [Spain](#), [Sudan](#), [Turkey](#), [Yemen](#) and [Zambia](#).

#### ● Lynx/Super Lynx

GKN claim that over 350 Lynx of different variants are in service world wide. They are used as a scout/attack helicopter by the UK army, but they are primarily used in Naval roles by the UK and many overseas forces. In service or on order with [Brazil](#), [Denmark](#), [Germany](#), [Malaysia](#), [Oman](#), [Portugal](#), [Thailand](#) and the [UK](#),

The latest variant is the Super Lynx 300, which so far has three export customers. It has new engines, the LHTEC CTS800, developed by Rolls Royce and Honeywell which is 37% more powerful than the previous Rolls Royce Gem 42. The 300 also features a new cockpit and avionics.

[South Africa](#) selected the Super Lynx 300 for its naval helicopter requirement, but that programme was put on hold. Reports in late 2001, however, suggest that South Africa will move ahead with the project. It seems that the Lynx will still be selected but it is possible that competition could be reopened.

Although the Royal [Thailand](#) Navy had said they preferred the Kaman Super Seasprite, in 2001 AgustaWestland got the contract to supply two Super Lynx. It has been suggested that the prestige of the Lynx being the helicopter of the UK Royal Navy influenced the decision of the Thais. When asked about this influence, David Bath of Westland said, 'That's a tremendous boost'.

In January 2002 [Oman](#) agreed to buy 16 Super Lynx 300. Richard Case of Westland said that, 'This is the third overseas selection for Super Lynx 300 and is the first to be placed by a Middle East customer'. The deal is valued at an estimated \$430million.

#### ● WAH-64 Apache

In 1996 Westland won the contract to supply 67 Apache attack helicopters to the British army. The Boeing aircraft was to be built under licence by Westland in the [UK](#). This variant of the Apache is fitted with Longbow fire control radar. Delivery began in 2000 and will continue through 2003. The two companies formed a joint venture, Aviation Training International, which run a PFI contract to supply training for the Apache.

**Other Westland military helicopters**, no longer in production:

- WASP – operated by [Indonesia](#), [New Zealand](#)
- Sea King – operated by [Egypt](#), [India](#)

## NH Industries - NH90

NH Industries is collaboration between AgustaWestland (32%), Eurocopter (62.5%) and Fokker (5%), to develop the NH90 9 ton class helicopter for four European nations. It is available in two variants; the NATO Frigate Helicopter (NFH) and the Tactical Transport Helicopter (TTH). Orders from the initial four countries involved are; [France](#) 27 NFH, [Germany](#) 80 TTH (with an option on another 54), [Italy](#) 46 NFH and 70 TTH and the [Netherlands](#) 20 NFH. In June 2001, [Portugal](#) joined the programme and ordered 10 TTH. The Industrial

partner in Portugal is OGMA. In September 2001 the NH90 won the competition for the Nordic Standard Helicopter Programme. This added requirements for [Sweden](#) (13 TTH and 5NFH), [Finland](#) 20 TTH and [Norway](#) 14 NFH.

The NH90 is on offer to the [Singapore](#) government, a competition in which it has already beaten off the Super Lynx and the EH101. It is now favourite for a contract to supply four NFH with an option for another four. It has also been suggested that the winner will have the inside track on a separate contract for six land based utility helicopters. The overall contract may be worth as much \$250 million. Also in the running are the Eurocopter Cougar and the Sikorsky Seahawk.

## Bell Agusta Aerospace Company

Bell and Agusta have a long-standing relationship, as discussed above. Currently the two companies are developing the AB139 as a civil and military utility helicopter and the BA609 tiltrotor. This predates the AgustaWestland joint venture, but is included in the deal. Therefore GKN have a 22.5% interest in BAAC.

- **AB139 Military** - No customers have yet been announced, but they are expected soon. Described as a 'Multi-Mission Military Helicopter' the AB139 can carry up to 15 troops, gun pods, rocket launchers and air to air missiles. It also claims low infra-red, acoustic and radar signatures; and the largest cabin in the 5-8 tonne class.

- **BA609**

Mainly seen as a civil venture it is, however, promoted as a possible SAR and coastguard aircraft. The idea behind tilt rotor technology is to provide the speed and fuel economy of a turboprop with the VTOL capability of a helicopter. Bell Agusta claim orders for over 80 aircraft to more than 15 countries. Slightly surprising since the aircraft is yet to fly and considering the many problems that have beset the Bell/Boeing military tiltrotor, the Osprey.

## Rotorsim Consortium

In July 2001 Agusta and CAE of [Canada](#) formed a consortium to offer training and simulation solutions for AgustaWestland helicopters. The two companies already worked together in Team Cormorant, the consortium successful in offering the EH101 to Canada. CAE is a global defence, aerospace and forestry company.

## Chinese Medium Helicopter Programme

In 1999 Agusta teamed up with [Chinese](#) company AVIC to provide transmissions and technical support to the CMHP. The helicopter is being developed for both military and civil sectors and will be in the 5.5 tonne class. The first aircraft is due to fly in late 2003. Agusta had previously sold A109 Powers to the municipality of Dailan police force. At the time, it was reported that Agusta were close to signing a deal for the licenced production of the A109K2, a version of the A109 Power designed to operate in 'hot and high' conditions.

## Board of directors

**Sir David Lees** Chairman. Also non-executive Deputy Chairman of Brambles Industries plc and non-executive Chairman of Tate & Lyle plc and Royal Opera House Covent Garden

**Marcus Beresford** Chief Executive. Also non-executive Director of Spirent plc

**Richard Clowes** Managing Director Powder Metallurgy, OffHighway and AutoComponents. Previously worked for the TI Group

**Dick Etches** Human Resources Director

**Ian Griffiths** Managing Director Automotive Driveline

**Nigel Stein** Finance Director

**Kevin Smith** Managing Director Aerospace. Previously Group Managing Director - New Business BAE Systems

**Roy Brown** Non-executive Director. Director of Brambles Industries plc

**Baroness Hogg** Non-executive Director

**Dr Klaus Murmann** Non-executive Director

**Sir John Parker** Non-executive Director. Director of Brambles Industries plc

**Sir Peter Williams** Non-executive Director

**Grey Denham** Group Secretary

## Company Locations

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Written by  
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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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