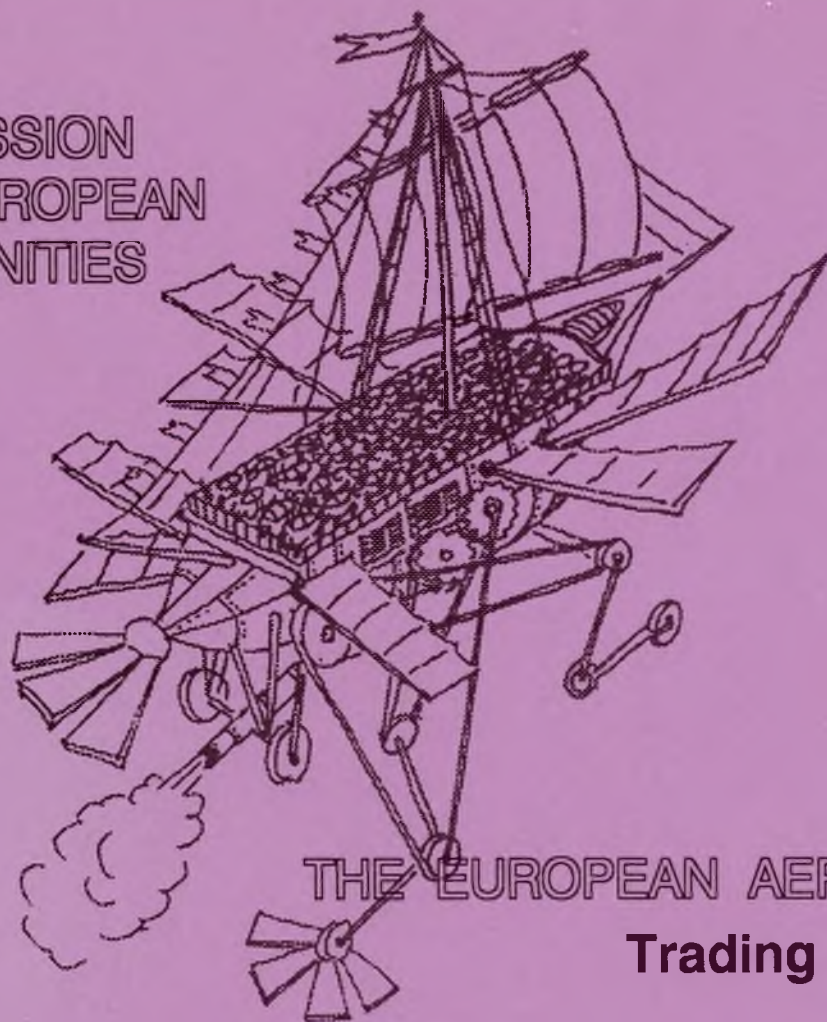


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THE EUROPEAN AEROSPACE INDUSTRY

Trading Position and Figures

**1993**

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Directorate-General  
Internal Market and Industrial Affairs

III/6801/93-EN

Brussels, 1st March 1993.

# **The European Aerospace Industry Trading Position and Figures**

(Commission Staff Working Paper)

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## PREFACE

We have the pleasure to present you with the 1993 edition of the document

*"The European aerospace industry - Trading position and figures"*.

This document is based on the most relevant statistics available to the Commission of the European Communities on the world aerospace industry.

The Directorate-General for the *Internal Market and Industrial Affairs* has been compiling and collating these statistics since 1972.

Since the 1992 edition, two new subjects are covered: civil turbine engine fleets (to be found at the end of Chapter 2) and the financial situation of the aerospace industry (to be found at the end of Chapter 6 - in this edition updated for the USA only).

Moreover, *the 1993 edition* includes a summary of European links in aerospace industry (beginning Chapter 2) and two new tables on business aircraft and civil helicopter deliveries (Chapter 3). The former Chapter 9 (Public Financing of R&D) of the 1992 edition has been integrated into Chapter 6 (Turnover).

If you wish to receive the next edition, we request you to send the ad hoc form (leader sheet) as soon as possible to the following address:

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\* *Additional information:* Erwin Melaerts [ Phone: 32-2-295.40.51/295.77.16 - Fax: 32-2-236.09.16 ]



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# CIVIL AIR TRAFFIC

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## CIVIL AIR TRAFFIC

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The data referring to the world civil air traffic correspond to scheduled operations of airlines of *ICAO* States and are published in the *ICAO* Bulletin.

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The data referring to the scheduled operations of *AEA* member airlines, according to the *AEA* Annual Report, are broken down between the following groups of routes:

- **domestic routes**

routes commencing and ending within the national frontiers of the *AEA* reporting carrier's country of registration

- **International Short/medium Haul**

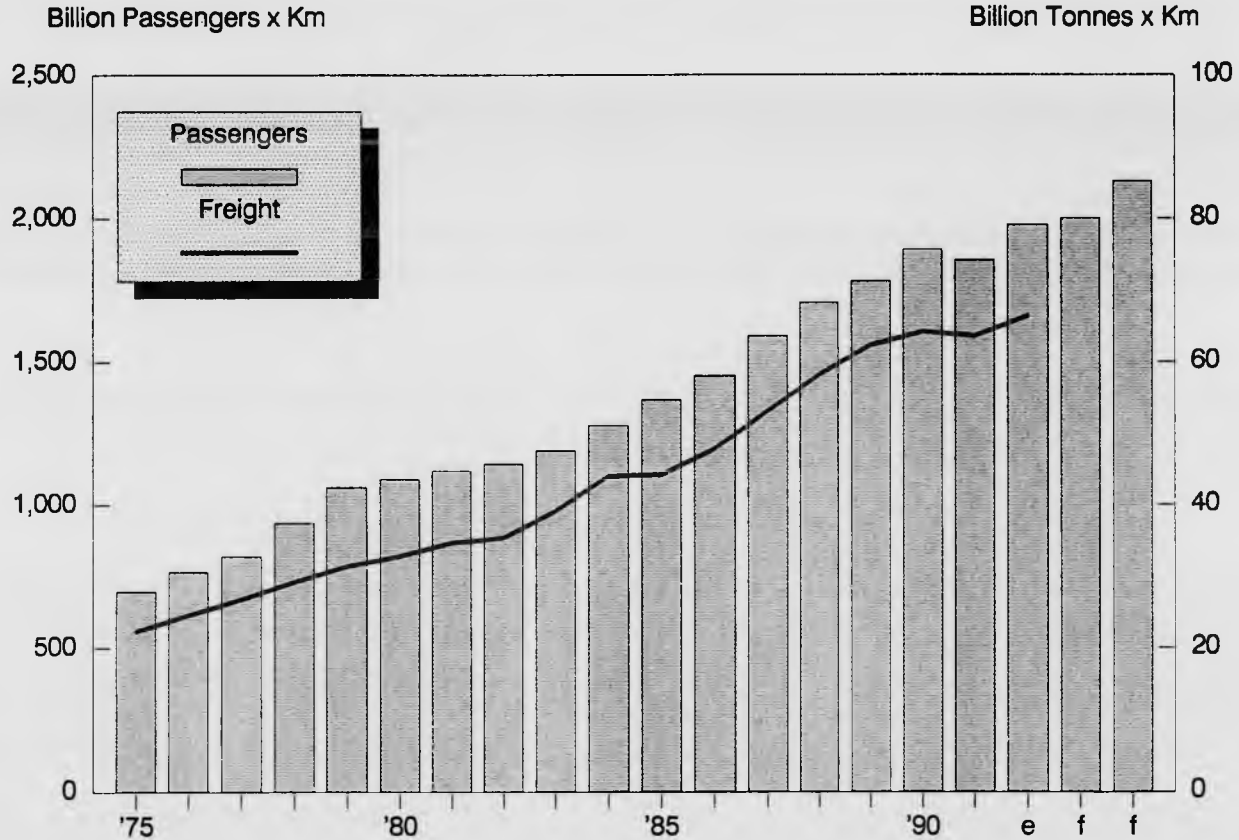
international routes originating and ending within Europe (including Turkey and ex-USSR up to 55°E), Azores, Canary Islands, Madeira, Cyprus, North Africa (Algeria, Egypt, Libya, Morocco, Sudan and Tunisia) and the Middle East (Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen).

- **Long-Haul**

other international routes

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# World Scheduled Air Traffic



■ SOURCE: ICAO

## WORLD SCHEDULED AIR TRAFFIC (INCLUDING EX-USSR)

	PASSENGER TRAFFIC (BILLIONS)				CARGO TRAFFIC (MILLIONS)			
	PASSENGERS CARRIED	PASSENGER KMS	AVAILABLE SEATS KMS	LOAD FACTOR	FREIGHT TONS CARRIED	TOTAL CARGO TON KMS	FREIGHT	MAIL
1975	0.534	697	1,175	59%	8.7	22,270	87.0%	13.0%
1980	0.748	1,089	1,735	63%	11.1	32,813	88.8%	11.2%
1985	0.899	1,367	2,070	66%	13.7	44,240	90.1%	9.9%
1986	0.960	1,452	2,235	65%	14.7	47,740	90.5%	9.5%
1987	1.027	1,589	2,370	67%	16.1	53,050	91.2%	8.8%
1988	1.082	1,706	2,545	67%	17.3	58,190	91.7%	8.3%
1989	1.118	1,782	2,610	68%	18.1	62,310	91.9%	8.1%
1990	1.164	1,893	2,785	68%	18.3	64,189	91.7%	8.3%
1991	1.134	1,854	2,810	66%	17.5	63,560	92.0%	8.0%
1992 E	1.172	1,980	2,955	67%	17.3	66,420	92.2%	7.8%
1993 F	-	2,002	-	-	-	-	-	-
1994 F	-	2,130	-	-	-	-	-	-

## ANNUAL GROWTH RATE (AS %)

	PASSENGER TRAFFIC				CARGO TRAFFIC			
	PASSENGERS CARRIED	PASSENGER KMS	AVAILABLE SEATS KMS	LOAD FACTOR (+/-POINTS)	FREIGHT TONS CARRIED	TOTAL CARGO TON KMS	FREIGHT TON KMS	MAIL TON KMS
1975	3.7	6.3	5.9	0	0.0	1.7	1.8	0.7
1980	-0.8	2.7	8.4	-3	0.8	4.4	4.0	7.6
1985	6.0	7.0	5.3	1	2.2	0.6	0.4	2.1
1986	6.8	6.2	8.0	-1	7.3	7.9	8.4	3.4
1987	7.0	9.4	6.0	2	9.5	11.1	12.0	2.9
1988	5.4	7.4	7.4	-0	7.5	9.7	10.3	3.2
1989	3.3	4.5	2.6	1	4.6	7.1	7.3	4.6
1990	4.1	6.2	6.7	-0	1.0	3.0	2.8	5.3
1991	-2.6	-2.1	0.9	-2	-4.3	-1.0	-0.7	-4.3
1992 E	3.4	6.8	5.2	1	-1.1	4.5	4.8	1.6
1993 F	-	1.1	-	-	-	-	-	-
1994 F	-	6.4	-	-	-	-	-	-

■ SOURCE: ICAO

## BREAKDOWN OF WORLD SCHEDULED PASSENGER TRAFFIC

## REVENUE: PASSENGER KMS (BILLIONS)

	TOTAL	AEA	USA	EX-USSR	REST OF THE WORLD
1975	697	17.8%	37.6%	17.6%	27.1%
1980	1,089	16.7%	37.6%	14.7%	31.0%
1981	1,119	16.9%	35.4%	15.3%	32.4%
1982	1,142	16.7%	35.8%	15.1%	32.4%
1983	1,190	16.1%	37.3%	14.8%	31.8%
1984	1,278	15.9%	37.5%	14.3%	32.3%
1985	1,367	15.8%	38.9%	13.7%	31.6%
1986	1,452	15.0%	40.2%	13.4%	31.4%
1987	1,589	15.5%	40.4%	12.6%	31.5%
1988	1,706	15.4%	39.8%	12.5%	32.3%
1989	1,782	15.9%	38.9%	12.7%	32.5%
1990	1,893	16.1%	38.6%	12.9%	32.4%
1991	1,854	15.4%	-	-	-

## REVENUE: PASSENGER KMS (ANNUAL GROWTH RATE - AS %)

	TOTAL	AEA	USA	EX-USSR	REST OF THE WORLD
1975	6.3	5.2	-0.1	12.7	12.7
1980	2.7	1.4	-0.6	6.4	6.1
1981	2.7	4.0	-3.2	6.9	7.3
1982	2.1	0.8	3.4	0.5	2.0
1983	4.2	0.3	8.5	2.4	2.3
1984	7.4	6.2	7.9	4.0	9.0
1985	7.0	6.4	10.9	2.3	4.8
1986	6.2	1.1	9.7	3.6	5.6
1987	9.4	12.8	10.0	3.0	9.8
1988	7.4	6.8	5.7	6.5	10.1
1989	4.5	7.6	2.2	6.4	5.0
1990	6.2	7.6	5.4	7.7	6.0
1991	-2.1	-6.2	-	-	-

■ SOURCE: ICAO / AEA

## AEA SCHEDULED PASSENGER TRAFFIC

	REVENUE: PASSENGER KMS (BILLIONS)			AVAILABLE SEATS KMS (BILLIONS)			LOAD FACTOR (%)		
	DOMESTIC	S-M HAUL	LONG HAUL	DOMESTIC	S-M HAUL	LONG HAUL	DOMESTIC	S-M HAUL	LONG HAUL
	1975	10.9	34.4	78.7	18.1	62.6	138.7	60.5	55.0
1980	19.3	48.1	114.2	30.2	86.3	185.1	63.9	55.8	61.7
1981	19.8	49.4	119.7	29.9	84.9	185.3	66.2	58.2	64.6
1982	20.7	49.2	120.6	31.3	85.7	185.6	66.3	57.4	64.9
1983	21.7	49.1	120.1	33.0	85.6	184.2	65.9	57.4	65.2
1984	22.3	53.3	127.1	32.8	89.5	187.2	67.8	59.6	67.9
1985	22.9	57.2	135.5	34.0	93.7	199.2	67.2	61.1	68.0
1986	23.8	57.0	137.3	35.3	96.8	208.3	67.5	58.8	65.9
1987	26.5	63.9	155.7	37.4	101.6	221.9	70.9	62.9	70.1
1988	28.4	69.2	165.3	41.2	111.2	235.9	68.8	62.2	70.1
1989	29.7	76.1	177.0	44.0	121.9	249.3	67.4	62.4	71.0
1990	31.2	81.3	191.7	46.1	130.6	272.6	67.6	62.2	70.3
1991	29.6	73.6	182.0	45.7	127.6	267.6	64.8	57.7	68.0

## ANNUAL GROWTH RATE (AS %)

	REVENUE: PASSENGER KMS			AVAILABLE SEATS KMS		
	DOMESTIC	S-M HAUL	LONG HAUL	DOMESTIC	S-M HAUL	LONG HAUL
1975	4.9	8.1	4.0	1.3	5.6	3.7
1980	-2.3	-3.3	4.3	1.9	2.6	9.4
1981	2.6	2.7	4.8	-1.0	-1.7	0.1
1982	4.5	-0.5	0.7	4.4	1.0	0.2
1983	4.9	-0.2	-0.4	5.5	-0.1	-0.8
1984	2.4	8.6	5.8	-0.6	4.5	1.7
1985	2.8	7.3	6.6	3.8	4.8	6.4
1986	4.2	-0.5	1.3	3.6	3.3	4.5
1987	11.1	12.2	13.4	5.9	4.9	6.6
1988	7.1	8.3	6.2	10.3	9.5	6.3
1989	4.7	10.0	7.1	6.9	9.6	5.7
1990	5.1	6.7	8.3	4.8	7.1	9.3
1991	-5.0	-9.4	-5.1	-0.9	-2.3	-1.8

■ SOURCE: AEA (ASSOCIATION OF EUROPEAN AIRLINES)

## AEA SCHEDULED TOTAL CARGO (FREIGHT + MAIL) TRAFFIC

	REVENUE: CARGO TON KMS (MILLIONS)			AVAILABLE TON KMS (MILLIONS)			LOAD FACTOR (%)		
	DOMESTIC	S-M HAUL	LONG HAUL	DOMESTIC	S-M HAUL	LONG HAUL	DOMESTIC	S-M HAUL	LONG HAUL
1975	148	652	4,557	411	1,787	8,802	35.9	36.5	51.8
1980	279	882	7,530	723	2,495	12,355	38.6	35.4	60.9
1981	289	874	7,917	739	2,349	12,816	39.0	37.2	61.8
1982	319	892	8,045	770	2,357	13,635	41.4	37.8	59.0
1983	343	949	9,042	773	2,417	14,049	44.4	39.2	64.4
1984	351	1,080	10,385	783	2,594	15,399	44.8	41.6	67.4
1985	362	1,131	10,836	856	2,825	16,837	42.3	40.0	64.4
1986	360	1,150	11,871	940	2,915	18,349	38.3	39.5	64.7
1987	393	1,163	13,089	1,061	3,105	19,899	37.1	37.4	65.8
1988	409	1,183	14,371	1,221	3,268	22,030	33.5	36.2	65.2
1989	396	1,269	15,534	1,353	3,738	23,546	29.3	33.9	66.0
1990	450	1,330	16,283	1,420	4,014	25,410	31.7	33.1	64.1
1991	427	1,183	15,953	1,418	4,052	25,876	30.1	29.2	61.7

## ANNUAL GROWTH RATE (AS %)

	REVENUE: CARGO TON KMS			AVAILABLE TON KMS		
	DOMESTIC	S-M HAUL	LONG HAUL	DOMESTIC	S-M HAUL	LONG HAUL
1975	-3.3	0.2	-1.0	4.2	12.2	9.3
1980	-0.7	-2.0	5.0	6.2	0.4	7.0
1981	3.5	-0.9	5.1	2.2	-5.9	3.7
1982	10.4	2.0	1.6	4.2	0.4	6.4
1983	7.7	6.4	12.4	0.4	2.5	3.0
1984	2.3	13.9	14.8	1.3	7.3	9.6
1985	3.1	4.8	4.3	9.3	8.9	9.3
1986	-0.5	1.7	9.6	9.8	3.2	9.0
1987	9.2	1.1	10.3	12.8	6.5	8.4
1988	4.0	1.8	9.8	15.1	5.2	10.7
1989	-3.1	7.2	8.1	10.8	14.4	6.9
1990	13.7	4.8	4.8	5.0	7.4	7.9
1991	-5.2	-11.0	-2.0	-0.1	0.9	1.8

■ SOURCE: AEA (ASSOCIATION OF EUROPEAN AIRLINES)



# CIVIL TRANSPORT AIRCRAFT

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## CIVIL TRANSPORT AIRCRAFT

The figures relating to the *civil jet aircraft* orders, deliveries and backlogs [aircraft ordered but not yet delivered] are partly provided by individual EC manufacturers (Airbus, BAe, Fokker), partly reproduced from BOEING's "World Jet Airplane Inventory - Year-End 1991". So, 1992 cancellations of previous orders are not taken into account.

The figures relating to the *civil transport aircraft* fleet, deliveries, orders and fleet age are provided by AÉROSPATIALE, and cover almost all the civil transport aircraft produced in the western world. The origin of these statistics is the "Etat des flottes commerciales", database on civil transport aircraft of more than 18 seats.

The statistics relate to *civil transport aircraft*. Therefore, civil transport aircraft used by public authorities are included, while such aircraft may also be included in the statistics relating to military aircraft, which are given in Chapter 4.

The *civil transport aircraft* breakdown is carried out using the following criteria:

- **aircraft category**
  - ☒ short-haul turboprop
  - ☒ short- and medium-haul jet
  - ☒ long-haul jet
- **design origin:** *Europe, USA and rest of the world*

The *geographical market areas* are defined as follows:

- *EC*
- *Other Europe:* Austria, Czechoslovakia, Finland, Gibraltar, Hungary, Iceland, Liechtenstein, Malta, Monaco, Norway, Poland, Romania, Sweden, Switzerland, ex-USSR and Yugoslavia
- *USA*
- *Rest of the world*

For each category of *civil transport aircraft*, the tables show *aircraft in service* at year-end and *aircraft deliveries* as follows:

- the *number* of aircraft,
- the *number of seats* (aircraft x capacity),
- the *present value*, which is estimated using a linear depreciation on 20 years and the following value per seat (in 1991\$):
  - ☒ \$225,000 for the short-haul turboprops,
  - ☒ \$270,000 for the short- and medium-haul jets,
  - ☒ \$310,000 for the long-haul jets.

For each category of *civil transport aircraft*, the following tables are given:

- *absolute value*,
- *geographical breakdown of total aircraft*,
- *market share of EC-built aircraft*,
- *geographical breakdown of EC-built aircraft*.

## Major Joint European Civil Aircraft Programmes

Consortium Programme	Airbus	ATR	Airtech CN 235	AAA	P 120 L	Eurofar
Type	commercial aircraft	regional aircraft	regional aircraft	amphibian aircraft	light helicopter	tiltrotor aircraft
Aérospatiale (Fr)	37.9%	50%			54%	29.0%
Agusta (It)						14.5%
Alenia (It)		50%		X		14.5%
British Aerospace (UK)	20.0%					
CASA (Es)	4.2%		50%			6.5%
DASA (De)	37.9%			X		29.0%
H.A.I. (Gr)				X		
Per Udsen (Dk)				X		
Westland (UK)						6.5%
Singapore Aerospace					16%	
IPTN (Indonesia)			50%			
CATIC (China)					30%	

## Major Joint European Military Aircraft Programmes

Consortium Programme	AMX	Harrier II	Panavia Tornado	Euro-fighter EFA	Euroflag FLA	Europatrol AEW aircraft	Eurocopter Tiger	NH90	EHI EH101
Type	attack aircraft	attack aircraft	bomber/interdictor	attack aircraft	transport aircraft	AEW aircraft	attack helicopter	transport helicopter	transport helicopter
Aérospatiale (Fr)					X		50%	42.4%	
Agusta (It)								26.9%	50%
Aermacchi (It)	21%								
Alenia (It)	49%		15.0%	21%	X	X			
British Aerospace (UK)		40%	42.5%	33%	X	X			
CASA (Es)				13%	X	X			
Dassault Aviation (Fr)						X			
DASA (De)			42.5%	33%	X	X	50%	24.0%	
Fokker (NI)						X		6.7%	
Westland (UK)									50%
McDonnell Douglas (US)		60%							
Embraer (Brazil)	30%								

## Major Joint European Space and Missiles Programmes

Consortium	Arianespace	Eurosatellite	Satcom International	Euromissile	Euromissile Dynamics Group
Type	launcher	satellite	satellite	missile	missile
Aérospatiale (Fr)	X	24%		50%	33.3%
Alenia (It)	X				
British Aerospace (UK)	X		50%		33.3%
CASA (Es)	X				
DASA (De)		36%		50%	33.3%
Matra (Fr)	X		50%		
Others	X	40%			

## Major Joint European Engine Programmes

consortium programme	CFM	IAE V2500	Eurojet EJ200	TurboUnion RB199	MTR	RTM
type	turbofan	turbofan	turbofan	turbofan	turboshaft	turboshaft
Fiat (It)		6%	21%	20%		
MTU (De)		11%	33%	40%	33.3%	
Rolls-Royce (UK)		30%	33%	40%	33.3%	50%
SENER (Es)			13%			
SNECMA (Fr)	50%					
Turbomeca (Fr)					33.3%	50%
General Electric (US)	50%					
P&W (US)		30%				
JAEC (Japan)		23%				

A list of *civil transport aircraft* and their categories is given here-  
under.

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### Short-haul Civil Transport Aircraft

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<i>Model</i>	<i>Design</i>	<i>Seats</i>
Argosy	Europe	80
ATR 42	Europe	46
ATR 72	Europe	66
BAe Jetstream 31	Europe	19
BAe Jetstream 41	Europe	28
HS 748 (100/200)	Europe	46
BAe ATP	Europe	64
Beech 1900	USA	19
CASA 212	Europe	19
CASA CN235	Europe	38
CV 580/600/640	USA	51
DHC-6	Other	18
DHC-7 (100)	Other	50
DHC-8	Other	36
Dornier DO 228	Europe	19
Dornier DO 328	Europe	30
Embraer 110 Bandeirante	Other	17
Embraer 120 Brasilia	Other	30
Fokker F 27/FH 227	Europe	46
Fokker F 50	Europe	50
TP Herald	Europe	50
Fairchild Metro II/III	USA	19
Mohawk/Nord 262	Europe	27
Shorts SD 320/330	Europe	30

Shorts SD 360		Europe	36
Saab SF 340	Europe		35
Saab 2000	Europe		50
VFW 614	Europe		36
TP Viscount	Europe		69
YS 11A	Other		61

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### Short/medium-haul Civil Transport Aircraft

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<i>Model</i>	<i>Design</i>	<i>Seats</i>
A 300	Europe	260
A 310	Europe	216
A 320	Europe	150
A 321	Europe	175
A 330	Europe	328
BAC 111	Europe	92
BAe 146	Europe	95
Belfast	Europe	200
Britannia	Europe	200
B 720	USA	150
B 727	USA	151
B 737-100/200/500	USA	115
B 737-300	USA	125
B 737-400	USA	135
B 747-SR	USA	530
B 757	USA	189
B 767	USA	211
B 777	USA	300
Caravelle	Europe	100
CL 44	Europe	160



**Short/medium-haul Civil Transport Aircraft (continued)**

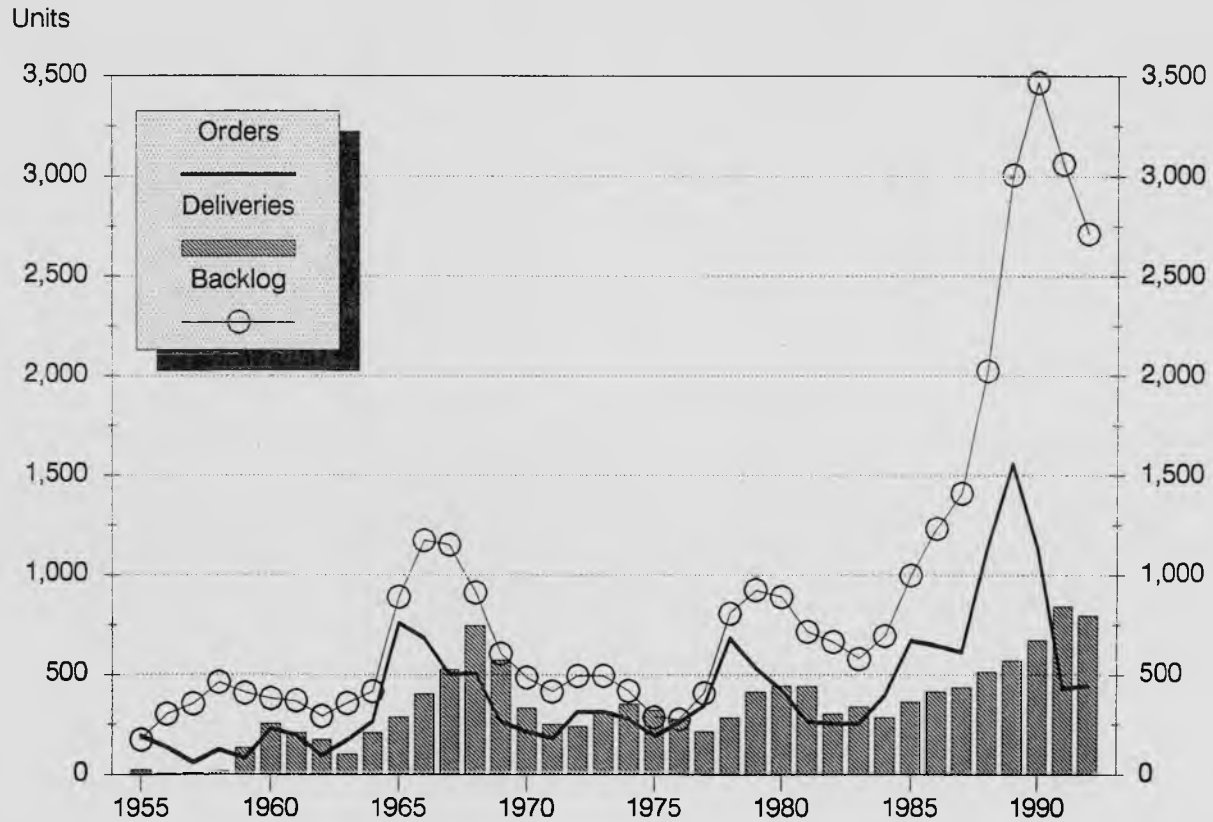
<i>Model</i>	<i>Design</i>	<i>Seats</i>
CV 880/990	USA	120
DC 10-10/15/10F	USA	259
DC 9	USA	110
MD 80	USA	144
MD 92	USA	150
TP Electra	USA	78
Fokker F 28	Europe	76
Fokker F 100	Europe	100
Gulfstream	USA	37
Hercules	USA	120
Mercure	Europe	150
Transall	Europe	120
Trident	Europe	118
Tristar L1011-1(F)/100/150	USA	288
Vanguard	Europe	140

**Long-haul Civil Transport Aircraft**

<i>Model</i>	<i>Design</i>	<i>Seats</i>
A 340	Europe	295
B 707	USA	155
B 747 SP	USA	267
B 747	USA	407
B 747 300 (SC/SCD/SR)	USA	440
Comet	Europe	80
Concorde	Europe	100
DC 8	USA	190
DC 10-30(F)/40	USA	259
MD 11	USA	287
Tristar L1011-50/200/250/500	USA	250
VC 10	Europe	120

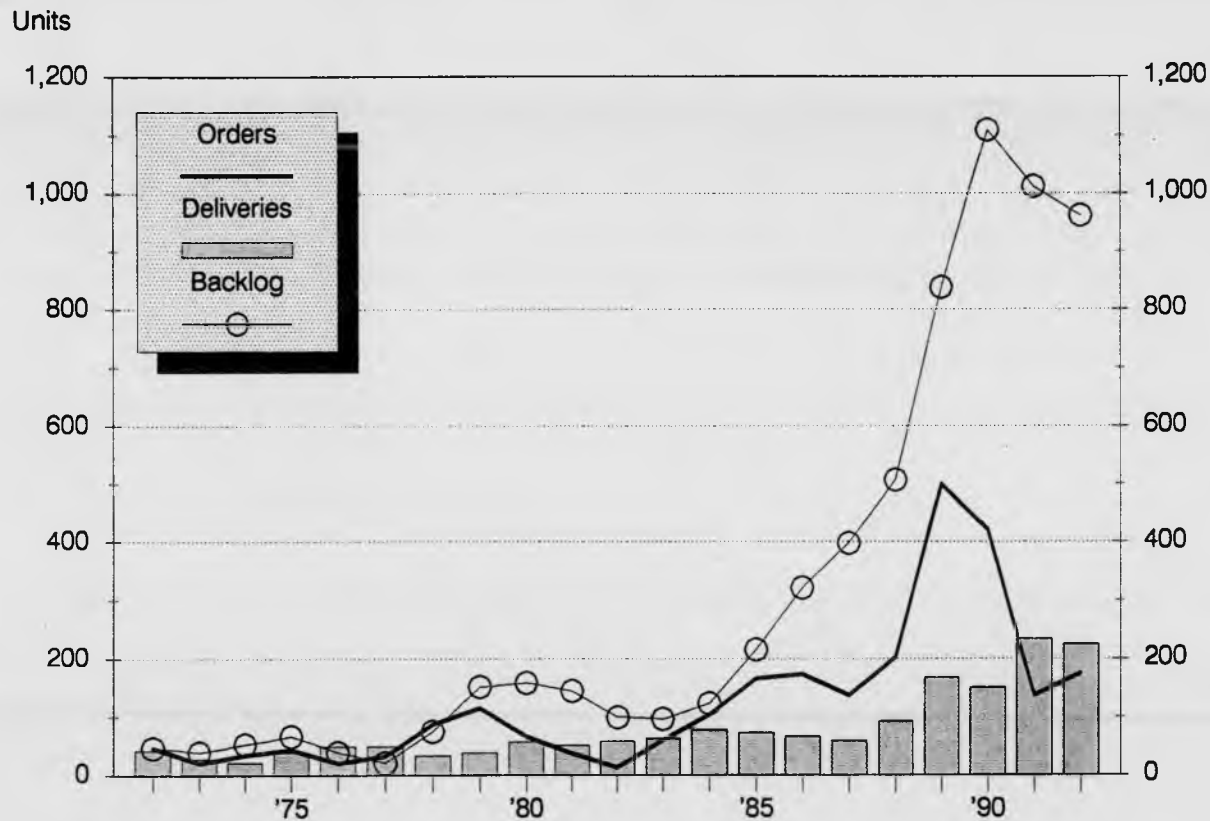


### Civil Jet Aircraft World Market



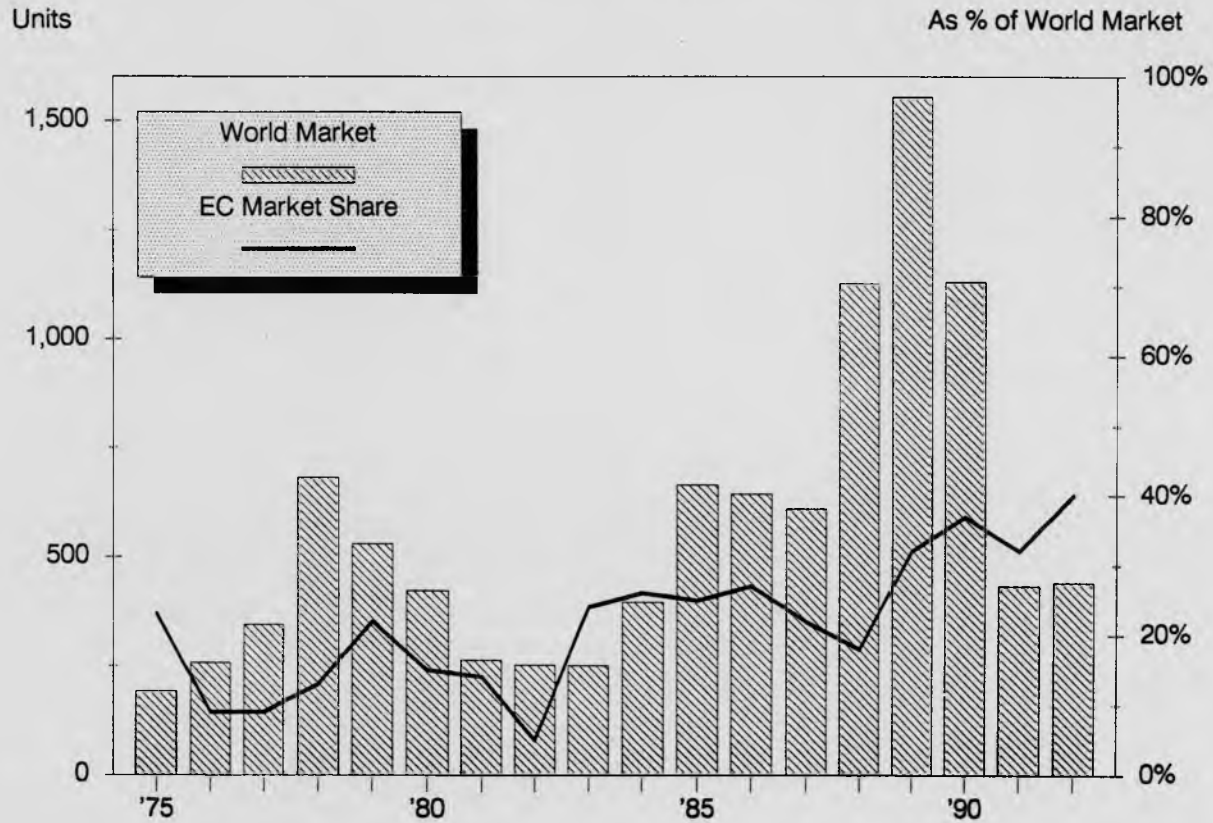
■ SOURCE: BOEING "WORLD JET AIRPLANE INVENTORY"

## EC-designed Civil Jet Aircraft World Market



■ SOURCE: Airbus, BAe, Fokker

### Civil Jet Aircraft Orders



■ SOURCE: BOEING \* WORLD JET AIRPLANE INVENTORY\*

## CIVIL AIRCRAFT ORDERS (UNITS)

	BEFORE 1980	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1980 - 1992	GRAND TOTAL
A-300	186	36	15	3		11	24	7	29	21	54	31	40	18	289	475
A-310	37	10	4	2	10	12	35	19	27	22	20	38	12	14	225	262
A-320						51	39	93	55	107	100	131	15	65	656	656
A-319/321										4	20	117	3	15	159	159
A-330										4	110	25	4	1	144	144
A-340										2	57	8	23	22	112	112
<b>AIRBUS</b>	<b>223</b>	<b>46</b>	<b>19</b>	<b>5</b>	<b>10</b>	<b>74</b>	<b>98</b>	<b>119</b>	<b>111</b>	<b>160</b>	<b>361</b>	<b>350</b>	<b>97</b>	<b>135</b>	<b>1,585</b>	<b>1,808</b>
BAC 111	227	3		1	1	2	6								13	240
BAE 146/RJ			4	4	24	9	16	21	24	34	32	26	27	21	242	242
CONCORDE	11	3													3	14
F.28	155	13	14	3	24	11	19	2							86	241
F.100						8	26	30	1	8	106	44	13	19	255	255
MERCURE	10				1										1	11
<b>EUROPE</b>	<b>626</b>	<b>65</b>	<b>37</b>	<b>13</b>	<b>60</b>	<b>104</b>	<b>165</b>	<b>172</b>	<b>136</b>	<b>202</b>	<b>499</b>	<b>420</b>	<b>137</b>	<b>175</b>	<b>2,185</b>	<b>2,811</b>
B-707	787	21		5	15			6	11			11			69	856
B-727	1,713	68	38	11	1										118	1,831
B-737	758	98	122	71	64	130	283	211	181	339	454	162	71	114	2,300	3,058
B-747	508	49	23	14	24	22	42	83	69	49	68	172	38	28	681	1,189
B-757	38	64	3	2	26	2	45	13	45	159	227	97	49	38	770	808
B-767	118	13	7	2	16	10	21	23	57	82	125	52	72	21	501	619
B-777												49	27	42	118	118
<b>BOEING</b>	<b>3,922</b>	<b>313</b>	<b>193</b>	<b>105</b>	<b>146</b>	<b>164</b>	<b>391</b>	<b>336</b>	<b>363</b>	<b>629</b>	<b>874</b>	<b>543</b>	<b>257</b>	<b>243</b>	<b>4,557</b>	<b>8,479</b>
DC-9	968	6	2												8	976
MD-80	64	14	19	87	43	117	106	120	88	248	150	53	28	16	1,089	1,153
MD-90												61			61	61
DC-10	358	12	8	48	2	6	3	5	2	2					88	446
MD-11								11	20	47	30	54	10	7	179	179
<b>MC DD</b>	<b>1,390</b>	<b>32</b>	<b>29</b>	<b>135</b>	<b>45</b>	<b>123</b>	<b>109</b>	<b>136</b>	<b>110</b>	<b>297</b>	<b>180</b>	<b>168</b>	<b>38</b>	<b>23</b>	<b>1,425</b>	<b>2,815</b>
L.1011	228	11	5			5									21	249
<b>TOTAL</b>	<b>6,166</b>	<b>421</b>	<b>264</b>	<b>253</b>	<b>251</b>	<b>396</b>	<b>665</b>	<b>644</b>	<b>609</b>	<b>1,128</b>	<b>1,553</b>	<b>1,131</b>	<b>432</b>	<b>441</b>	<b>8,188</b>	<b>14,354</b>

■ SOURCE: BOEING WORLD JET AIRPLANE INVENTORY YEAR-END 1991 / MANUFACTURERS-PRESS: 1992

## CIVIL AIRCRAFT ORDERS (UNITS)

## MARKET SHARE OF EC BUILT AIRCRAFT (AS % OF WORLD TOTAL)

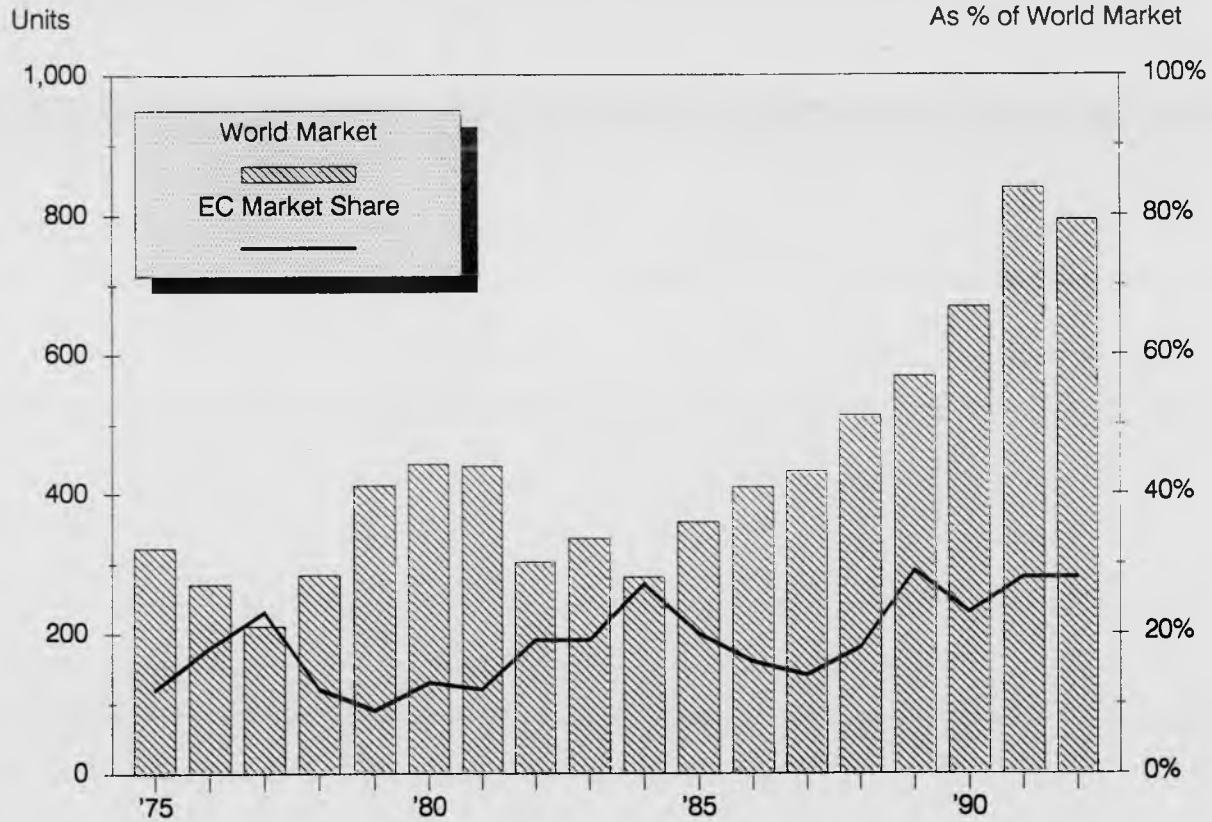
	BEFORE 1980	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1980- 1992	GRAND TOTAL
S-M HAUL	14	19	16	7	29	27	26	36	26	18	32	46	32	40	29	24
... NARROW BODY	10	6	9	4	27	23	19	34	19	16	23	46	28	42	25	19
... WIDE BODY	65	78	73	71	38	70	73	53	50	36	60	48	37	34	52	54
LONG HAUL	1	3	0	0	0	0	0	0	0	2	36	2	35	39	10	4
... NARROW BODY	1	13	-	0	0	-	-	0	0	-	-	0	-	-	4	2
... WIDE BODY	0	0	0	0	0	0	0	0	0	2	36	3	35	39	10	5
TOTAL	10	15	14	5	24	25	24	30	22	17	32	37	32	40	27	20
... NARROW BODY	9	7	9	4	25	23	19	34	19	16	23	45	28	42	24	17
... WIDE BODY	16	35	31	7	19	35	47	18	27	21	52	23	36	36	33	26

## BREAKDOWN INTO CATEGORIES (AS % OF WORLD TOTAL)

	BEFORE 1980	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1980- 1992	GRAND TOTAL
S-M HAUL	69	77	86	74	84	92	93	85	83	91	90	78	83	87	86	79
... NARROW BODY	64	63	77	71	73	83	81	77	64	80	70	61	47	65	70	68
... WIDE BODY	6	14	10	3	10	8	12	7	19	11	20	17	36	22	16	11
LONG HAUL	31	23	14	26	16	8	7	15	17	9	10	22	17	13	14	21
... NARROW BODY	13	6	0	2	6	0	0	1	2	0	0	1	0	0	1	6
... WIDE BODY	18	17	14	25	10	8	7	15	15	9	10	21	17	13	13	15
ALL NARROW BODY	77	69	77	73	79	83	81	78	66	80	70	62	47	65	71	74
... WIDE BODY	23	31	23	27	21	17	19	22	34	20	30	38	53	35	29	26

■ SOURCE: BOEING WORLD JET AIRPLANE INVENTORY YEAR-END 1991 / MANUFACTURERS-PRESS: 1992

### Civil Jet Aircraft Deliveries



■ SOURCE: BOEING "WORLD JET AIRPLANE INVENTORY"



## CIVIL AIRCRAFT DELIVERIES (UNITS)

	BEFORE 1980	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1980 - 1992	GRAND TOTAL
A-300	84	37	37	46	19	19	16	11	10	17	24	19	25	22	302	386
A-310					17	29	26	19	21	28	23	18	19	24	224	224
A-320										16	58	58	119	111	362	362
A-319/321																
A-330																
A-340																
AIRBUS	84	37	37	46	36	48	42	30	31	61	105	95	163	157	888	972
BAC 111	224	3	2	2	1	2	2	2	3		1				16	240
BAE 146/RJ					10	10	18	23	23	21	36	25	26	13	205	205
CONCORDE	10	4													4	14
F.28	148	13	12	10	16	17	12	11	2						93	241
F.100										11	25	31	45	54	166	166
MERCURE	10						1								1	11
EUROPE	476	57	51	58	63	77	73	66	59	93	167	151	234	224	1,373	1,849
B-707	782	3	2	8	8	8	3	4	9		5	4	14	5	73	855
B-727	1,561	131	94	26	11	8									270	1,831
B-737	623	92	108	95	82	67	115	141	161	165	146	166	215	223	1,776	2,399
B-747	414	73	53	25	23	16	24	35	23	24	45	67	64	60	532	946
B-757				2	25	18	36	35	40	48	51	78	80	97	510	510
B-767				20	55	29	25	27	37	53	37	60	62	64	469	469
B-777																
BOEING	3,380	299	257	176	204	146	203	242	270	290	284	375	435	449	3,630	7,010
DC-9	932	18	16	10											44	976
MD-80		5	62	33	51	44	71	85	94	120	117	139	139	80	1,040	1,040
MD-90																
DC-10	299	40	25	11	12	10	11	17	10	10	1				147	446
MD-11												3	31	40	74	74
MC DD	1,231	63	103	54	63	54	82	102	104	130	118	142	170	120	1,305	2,536
L.1011	171	24	28	14	6	4	2								78	249
TOTAL	5,258	443	439	302	336	281	360	410	433	513	569	668	839	793	6,386	11,644

■ SOURCE: BOEING WORLD JET AIRPLANE INVENTORY YEAR-END 1991 / MANUFACTURERS-PRESS: 1992

## CIVIL AIRCRAFT DELIVERIES (UNITS)

## MARKET SHARE OF EC BUILT AIRCRAFT (AS % OF WORLD TOTAL)

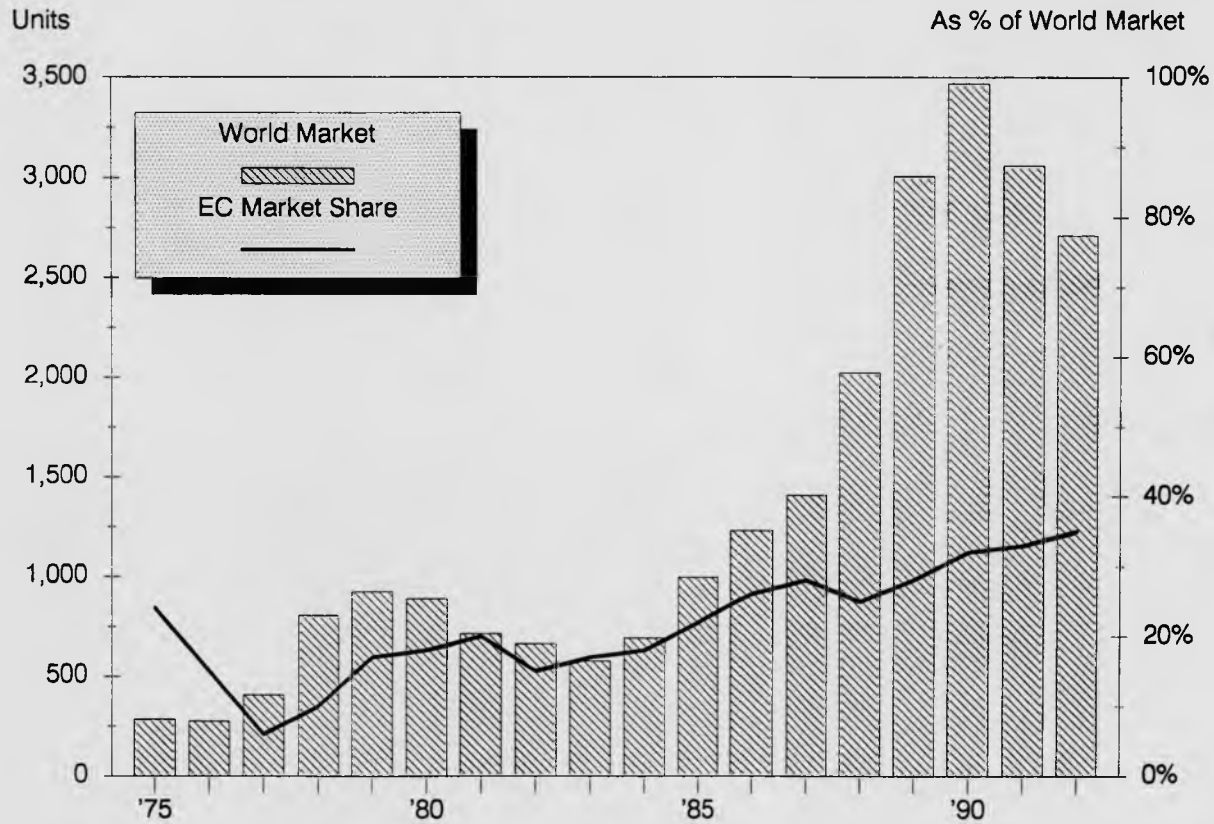
	BEFORE 1980	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1980- 1992	GRAND TOTAL
S-M HAUL	13	18	15	24	22	32	23	19	15	19	32	25	32	33	25	20
... NARROW BODY	11	6	5	7	14	17	12	12	9	13	28	23	30	31	19	15
... WIDE BODY	100	100	100	70	40	62	63	53	46	46	56	38	42	42	53	57
-----																
LONG HAUL	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1
... NARROW BODY	1	57	0	0	0	0	0	0	0	-	0	0	0	0	5	2
... WIDE BODY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-----																
TOTAL	9	13	12	19	19	27	20	16	14	18	29	23	28	28	22	16
... NARROW BODY	9	7	5	6	13	17	12	12	8	13	27	23	30	31	19	14
... WIDE BODY	9	21	26	40	27	45	40	28	31	34	36	22	22	22	29	22

## BREAKDOWN INTO CATEGORIES (AS % OF WORLD TOTAL)

	BEFORE 1980	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1980- 1992	GRAND TOTAL
S-M HAUL	68	67	75	81	85	86	89	86	90	93	91	89	87	87	86	78
... NARROW BODY	67	59	67	59	58	59	70	72	75	74	76	74	74	73	70	69
... WIDE BODY	2	8	8	22	27	27	19	14	16	19	15	15	13	14	16	9
-----																
LONG HAUL	32	33	25	19	15	14	11	14	10	7	9	11	13	13	14	22
... NARROW BODY	15	2	0	3	2	3	1	1	2	0	1	1	2	1	1	7
... WIDE BODY	17	31	24	17	12	11	10	13	8	7	8	10	11	13	13	15
-----																
ALL NARROW BODY	82	61	67	62	61	62	71	73	77	74	77	75	76	74	71	76
... WIDE BODY	18	39	33	38	39	38	29	27	23	26	23	25	24	26	29	24

■ SOURCE: BOEING WORLD JET AIRPLANE INVENTORY YEAR-END 1991 / MANUFACTURERS-PRESS: 1992

### Civil Jet Aircraft Backlog



■ SOURCE: BOEING "WORLD JET AIRPLANE INVENTORY"

## CIVIL AIRCRAFT BACKLOG (UNITS)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
A-300	101	79	36	17	9	17	13	32	36	66	78	93	89
A-310	47	51	53	46	29	38	38	44	38	35	55	48	38
A-320					51	90	183	238	329	371	444	340	294
A-319/321									4	24	141	144	159
A-330									4	114	139	143	144
A-340									2	59	67	90	112
<b>AIRBUS</b>	<b>148</b>	<b>130</b>	<b>89</b>	<b>63</b>	<b>89</b>	<b>145</b>	<b>234</b>	<b>314</b>	<b>413</b>	<b>669</b>	<b>924</b>	<b>858</b>	<b>836</b>
BAC 111	3	1				6	4	1	1				
BAE 146/RJ		4	8	22	21	19	17	18	31	27	28	29	37
CONCORDE													
F.28	7	9	2	10	4	11	2						
F.100					8	34	64	65	62	143	156	124	89
MERCURE				1	1								
<b>EUROPE</b>	<b>158</b>	<b>144</b>	<b>99</b>	<b>96</b>	<b>123</b>	<b>215</b>	<b>321</b>	<b>398</b>	<b>507</b>	<b>839</b>	<b>1,108</b>	<b>1,011</b>	<b>962</b>
B-707	23	21	18	25	17	14	16	18	18	13	20	6	1
B-727	89	33	18	8									
B-737	141	155	131	113	176	344	414	434	608	916	912	768	659
B-747	70	40	29	30	36	54	102	148	173	196	301	275	243
B-757	102	105	105	106	90	99	77	82	193	369	388	357	298
B-767	131	138	120	81	62	58	54	74	103	191	183	193	150
B-777											49	76	118
<b>BOEING</b>	<b>556</b>	<b>492</b>	<b>421</b>	<b>363</b>	<b>381</b>	<b>569</b>	<b>663</b>	<b>756</b>	<b>1,095</b>	<b>1,685</b>	<b>1,853</b>	<b>1,675</b>	<b>1,469</b>
DC-9	24	10											
MD-80	73	30	84	76	149	184	219	213	341	374	288	177	113
MD-90											61	61	61
DC-10	31	14	51	41	37	29	17	9	1				
MD-11							11	31	78	108	159	138	105
<b>MC DD</b>	<b>128</b>	<b>54</b>	<b>135</b>	<b>117</b>	<b>186</b>	<b>213</b>	<b>247</b>	<b>253</b>	<b>420</b>	<b>482</b>	<b>508</b>	<b>376</b>	<b>279</b>
L.1011	44	21	7	1	2								
<b>TOTAL</b>	<b>886</b>	<b>711</b>	<b>662</b>	<b>577</b>	<b>692</b>	<b>997</b>	<b>1,231</b>	<b>1,407</b>	<b>2,022</b>	<b>3,006</b>	<b>3,469</b>	<b>3,062</b>	<b>2,710</b>

■ SOURCE: BOEING WORLD JET AIRPLANE INVENTORY YEAR-END 1991 / MANUFACTURERS-PRESS: 1992

## CIVIL AIRCRAFT BACKLOG (UNITS)

## MARKET SHARE OF EC BUILT AIRCRAFT (AS % OF WORLD TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
S-M HAUL	22	23	18	20	20	24	30	33	29	30	36	36	38
... NARROW BODY	2	4	3	10	17	20	28	31	27	25	32	32	34
... WIDE BODY	53	49	43	44	38	49	49	51	43	53	54	51	50
-----													
LONG HAUL	0	0	0	0	0	0	0	0	1	16	12	18	24
... NARROW BODY	0	0	0	0	0	0	0	0	0	0	0	0	0
... WIDE BODY	0	0	0	0	0	0	0	0	1	16	13	18	24
-----													
TOTAL	18	20	15	17	18	22	26	28	25	28	32	33	35
... NARROW BODY	2	4	3	9	16	20	27	30	27	25	32	32	34
... WIDE BODY	35	38	30	29	22	28	22	22	18	36	33	35	38

## BREAKDOWN INTO CATEGORIES (AS % OF WORLD TOTAL)

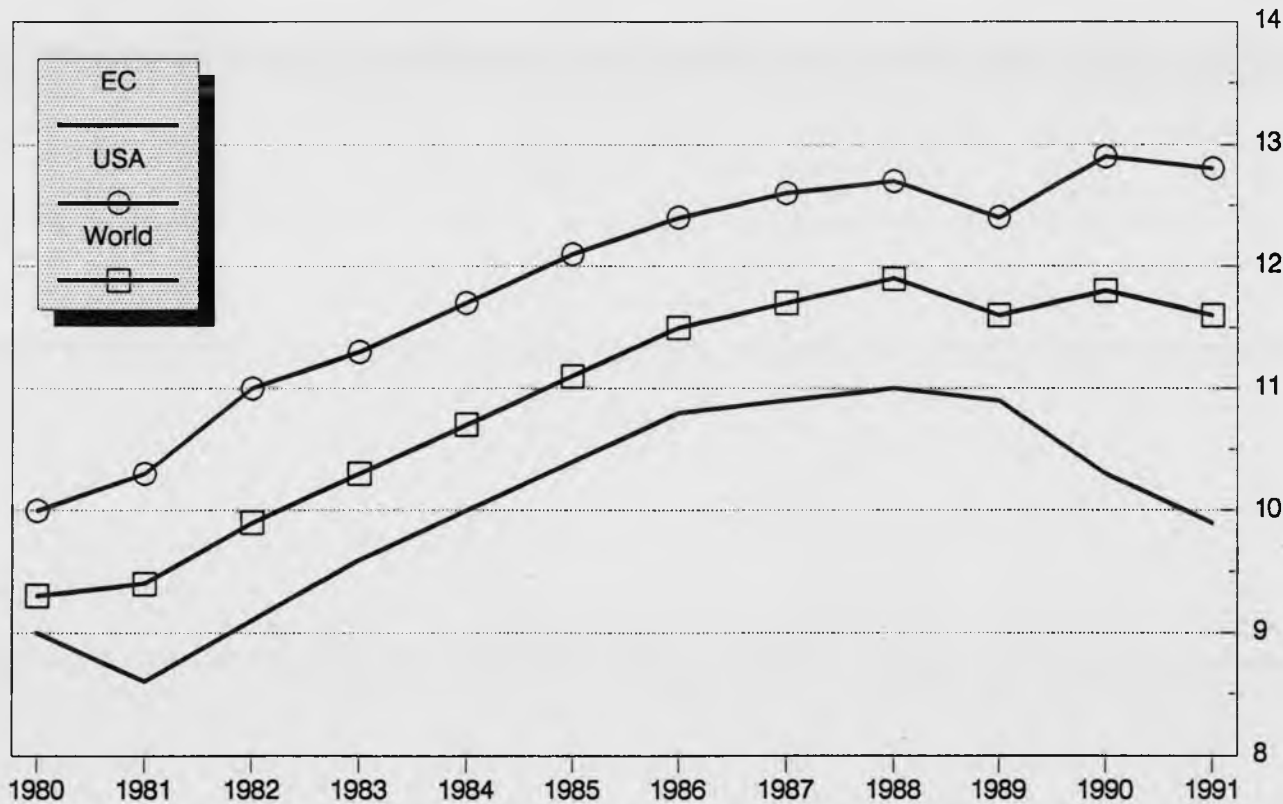
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
S-M HAUL	81	86	84	83	87	90	88	85	87	87	84	83	83
... NARROW BODY	50	49	53	58	72	79	80	75	78	74	70	65	63
... WIDE BODY	31	38	32	25	14	11	9	11	9	14	15	18	20
-----													
LONG HAUL	19	14	16	17	13	10	12	15	13	13	16	17	17
... NARROW BODY	3	3	3	4	2	1	1	1	1	0	1	0	0
... WIDE BODY	16	11	13	12	11	8	11	13	13	12	15	16	17
-----													
ALL NARROW BODY	52	52	55	63	75	80	81	76	78	74	70	66	63
... WIDE BODY	48	48	45	37	25	20	19	24	22	26	30	34	37

■ SOURCE: BOEING WORLD JET AIRPLANE INVENTORY YEAR-END 1991 / MANUFACTURERS-PRESS: 1992

# CIVIL AIRCRAFT FLEET AGE

According to Seats

Years



■ SOURCE: AEROSPATIALE

## CIVIL AIRCRAFT FLEET AGE (AT YEAR-END)

## ACCORDING TO UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
BELGIUM	8.0	9.1	9.1	9.8	11.1	10.6	11.1	11.5	11.5	12.5	11.5	11.7	10.8
DENMARK	8.7	10.1	8.5	9.3	10.1	10.8	10.9	10.4	9.9	11.4	11.6	12.1	10.3
FRG	6.3	8.3	6.7	6.9	7.6	8.0	8.2	8.6	7.9	8.2	7.7	7.0	6.7
SPAIN	6.5	8.1	8.5	9.2	10.1	10.8	11.5	12.5	13.2	12.3	12.6	12.3	10.9
FRANCE	8.8	10.5	10.6	11.0	11.6	12.4	13.1	13.6	13.8	13.7	13.5	13.3	11.9
GREECE	8.7	9.8	8.3	8.5	9.3	9.3	9.6	10.6	11.7	12.5	13.5	12.0	12.3
IRELAND	10.0	12.3	12.4	13.7	13.2	13.0	13.6	13.8	11.0	13.2	12.9	13.2	10.6
ITALY	8.0	9.7	9.1	10.1	10.9	11.6	11.1	10.4	10.2	10.2	10.6	10.7	10.5
LUXEMBOURG	11.7	10.0	10.7	12.4	13.6	12.1	13.6	13.7	11.2	13.0	10.7	10.3	11.0
NETHERLANDS	8.6	10.5	10.9	11.1	11.0	11.3	11.4	10.9	10.8	11.1	9.5	8.5	7.9
PORTUGAL	4.5	8.6	9.4	10.1	8.6	9.4	10.6	11.5	11.6	11.4	10.5	9.6	9.8
UK	10.9	10.7	10.4	10.8	11.0	11.5	11.5	11.9	11.7	11.4	11.4	10.8	10.9
EC	8.7	9.8	9.5	10.0	10.5	11.0	11.3	11.7	11.5	11.5	11.3	10.9	10.3
REST OF EUROPE	6.8	9.2	9.0	9.6	10.0	10.6	10.8	10.6	10.7	10.6	10.1	9.7	8.9
USA	8.4	10.2	10.3	10.9	11.2	11.3	11.5	11.7	11.7	11.8	11.4	11.9	11.6
REST OF THE WORLD	8.0	9.3	9.5	9.8	10.2	10.7	11.2	11.6	12.0	12.2	11.9	12.2	12.1
WORLD	8.3	9.7	9.8	10.3	10.6	11.0	11.3	11.6	11.7	11.8	11.5	11.7	11.4

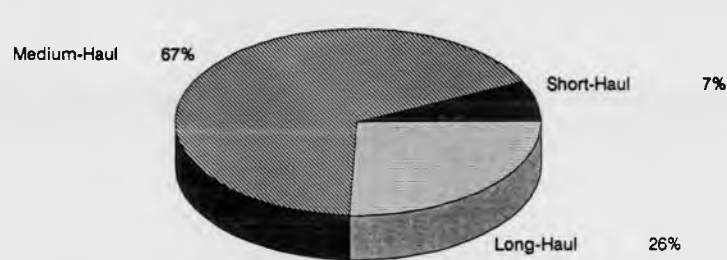
## ACCORDING TO SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
BELGIUM	7.6	9.5	9.5	10.1	11.2	10.6	11.0	11.1	11.0	12.0	11.5	11.6	10.6
DENMARK	9.3	10.8	9.7	10.0	11.4	12.8	12.6	11.3	10.4	11.5	10.6	10.3	8.2
FRG	6.1	7.2	6.2	6.6	7.4	8.0	8.2	8.5	8.1	8.7	8.1	7.2	7.1
SPAIN	7.1	8.9	8.8	9.4	10.3	11.0	11.7	12.9	12.8	11.8	12.5	11.5	10.1
FRANCE	8.3	9.0	8.8	9.0	9.7	10.5	11.4	11.6	12.5	12.5	12.7	12.5	11.4
GREECE	8.5	10.0	8.6	8.8	9.7	9.8	10.2	11.0	12.1	12.8	13.8	13.4	13.2
IRELAND	10.2	12.7	12.8	14.0	14.5	15.0	15.9	16.0	12.9	15.8	15.5	14.7	12.8
ITALY	7.4	8.4	7.0	7.8	8.4	9.0	8.5	8.7	9.1	9.6	10.0	10.3	10.3
LUXEMBOURG	11.8	6.9	7.2	9.5	11.2	6.3	7.4	12.5	9.8	13.5	12.2	11.7	14.0
NETHERLANDS	6.9	8.6	9.0	9.5	9.3	9.6	10.0	9.9	10.1	10.4	8.7	8.2	8.1
PORTUGAL	5.7	11.0	11.5	11.8	8.9	9.3	10.3	11.3	11.1	9.1	8.0	6.7	6.7
UK	9.9	9.6	9.4	10.1	10.2	10.6	10.6	11.3	11.3	11.0	11.1	10.3	10.4
EC	8.1	9.0	8.6	9.1	9.6	10.0	10.4	10.8	10.9	11.0	10.9	10.3	9.9
REST OF EUROPE	6.3	9.1	8.8	9.6	9.8	10.1	10.5	10.4	10.6	10.6	9.9	9.4	8.4
USA	7.8	10.0	10.3	11.0	11.3	11.7	12.1	12.4	12.6	12.7	12.4	12.9	12.8
REST OF THE WORLD	7.5	8.6	8.8	9.0	9.5	10.0	10.4	10.7	11.2	11.4	11.2	11.4	11.3
WORLD	7.7	9.3	9.4	9.9	10.3	10.7	11.1	11.5	11.7	11.9	11.6	11.8	11.6

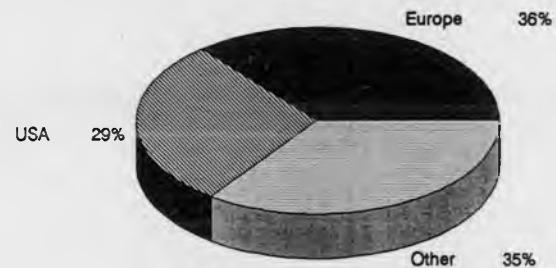
■ SOURCE: AEROSPATIALE

# CIVIL AIRCRAFT IN SERVICE

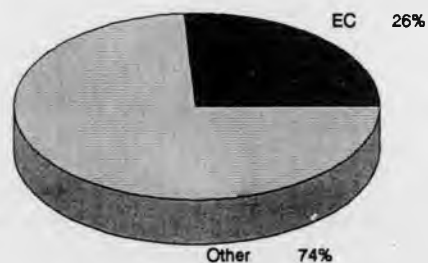
(IN VALUE - 1991)



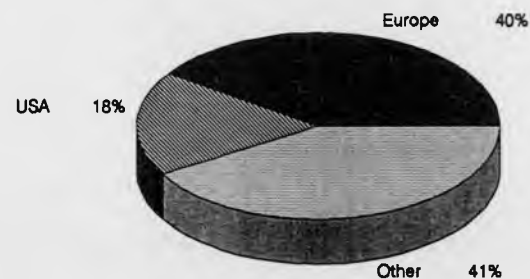
BREAKDOWN BY TYPE



BREAKDOWN BY AREA



EC MARKET SHARE



BREAKDOWN OF EC MARKETS

■ SOURCE: AEROSPATIALE



## SHORT HAUL AIRCRAFT FLEET (AT YEAR-END)

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	18%	18%	18%	18%	17%	16%	16%	15%	15%	17%	16%	17%
REST OF EUROPE	3%	3%	3%	3%	4%	4%	4%	5%	4%	4%	4%	4%
USA	25%	26%	28%	30%	32%	34%	36%	36%	36%	36%	35%	35%
OTHER WORLD	53%	53%	51%	49%	48%	46%	44%	45%	44%	42%	44%	44%
TOTAL	2,546	2,716	2,870	2,997	3,135	3,367	3,656	4,035	4,398	4,712	5,567	6,015

## SEATS (X 1,000)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	19%	19%	18%	18%	18%	17%	17%	16%	18%	19%	18%	18%
REST OF EUROPE	2%	3%	3%	3%	4%	4%	4%	5%	5%	5%	5%	5%
USA	24%	25%	27%	28%	29%	31%	34%	34%	33%	34%	33%	33%
OTHER WORLD	54%	53%	52%	50%	49%	48%	46%	45%	44%	43%	45%	44%
TOTAL	87	90	94	96	99	106	116	126	137	147	175	187

## CONSTANT VALUE - MIO 1991 ECU

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	17%	17%	16%	16%	15%	14%	14%	14%	16%	18%	17%	19%
REST OF EUROPE	2%	3%	3%	3%	4%	4%	5%	6%	6%	6%	6%	7%
USA	26%	27%	29%	31%	34%	37%	40%	41%	41%	41%	40%	40%
OTHER WORLD	55%	54%	53%	50%	48%	45%	41%	39%	38%	36%	36%	35%
TOTAL	4,924	6,380	7,382	8,097	9,243	10,098	9,008	8,967	10,422	13,118	14,379	16,478

■ SOURCE: AEROSPATIALE

## SHORT HAUL AIRCRAFT FLEET (AT YEAR-END)

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	81	78	78	79	82	80	79	73	72	74	80	78
REST OF EUROPE	37	38	34	33	43	49	55	59	60	63	66	71
USA	25	23	26	26	28	33	33	35	38	39	43	41
OTHER WORLD	48	48	47	48	49	50	49	49	49	45	49	45
TOTAL	48	47	46	47	48	49	48	48	49	49	52	50

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	88	86	85	86	88	86	84	80	79	80	85	84
REST OF EUROPE	53	52	46	45	53	61	64	69	70	72	74	78
USA	30	29	32	31	34	38	36	39	41	42	48	47
OTHER WORLD	63	62	62	62	63	63	61	60	59	56	58	55
TOTAL	59	58	57	57	58	59	57	56	57	57	60	59

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	76	72	72	73	76	74	75	71	72	74	82	81
REST OF EUROPE	38	29	22	21	36	52	59	67	70	74	79	82
USA	24	22	24	27	32	41	44	47	51	49	51	51
OTHER WORLD	52	53	53	56	56	56	56	55	56	53	57	52
TOTAL	49	47	47	48	50	52	54	55	57	56	60	59

■ SOURCE: AEROSPATIALE

## SHORT HAUL AIRCRAFT FLEET (AT YEAR-END)

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	31	30	30	30	29	27	26	22	23	26	25	26
REST OF EUROPE	2	3	2	2	3	4	5	6	6	6	5	6
USA	13	13	15	16	19	22	24	26	28	29	29	29
OTHER WORLD	54	54	52	51	49	47	45	46	44	39	41	40

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	28	27	27	27	27	25	25	23	24	26	25	26
REST OF EUROPE	2	2	2	2	3	4	5	6	6	6	6	6
USA	12	12	15	15	17	20	22	23	24	25	26	26
OTHER WORLD	58	58	56	55	53	51	49	48	46	43	43	41

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	26	26	25	24	23	20	19	19	20	23	23	26
REST OF EUROPE	2	2	1	1	3	4	6	7	7	8	8	9
USA	13	12	14	17	21	29	33	35	37	35	34	34
OTHER WORLD	59	60	60	58	53	48	42	39	37	34	34	30

■ SOURCE: AEROSPATIALE

## MEDIUM HAUL AIRCRAFT FLEET (AT YEAR-END)

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	17%	16%	16%	16%	15%	15%	15%	15%	16%	18%	18%	18%
REST OF EUROPE	5%	5%	5%	5%	4%	4%	5%	5%	5%	5%	5%	5%
USA	48%	48%	48%	50%	52%	53%	52%	52%	52%	50%	50%	49%
OTHER WORLD	30%	30%	31%	30%	29%	28%	28%	27%	27%	28%	27%	28%
TOTAL	4,551	4,770	4,935	5,213	5,437	5,731	5,994	6,420	6,968	7,040	7,711	8,485

## SEATS (X 1,000)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	16%	16%	15%	15%	15%	14%	15%	15%	15%	17%	17%	17%
REST OF EUROPE	4%	4%	4%	4%	3%	4%	4%	4%	4%	4%	4%	4%
USA	50%	50%	50%	51%	52%	53%	52%	53%	52%	50%	50%	49%
OTHER WORLD	29%	30%	31%	30%	30%	29%	29%	29%	28%	29%	28%	29%
TOTAL	638	674	703	748	783	828	868	933	1,016	1,018	1,127	1,249

## CONSTANT VALUE - MIO 1991 ECU

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	16%	17%	16%	16%	16%	16%	16%	16%	17%	18%	20%	21%
REST OF EUROPE	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%	6%
USA	48%	47%	46%	47%	47%	48%	47%	48%	48%	46%	44%	43%
OTHER WORLD	31%	32%	34%	33%	33%	33%	33%	31%	30%	30%	30%	31%
TOTAL	65,079	85,020	97,193	110,195	125,437	133,081	112,742	101,985	105,190	123,782	119,836	137,702

■ SOURCE: AEROSPATIALE

### MEDIUM HAUL AIRCRAFT FLEET (AT YEAR-END)

#### EC MARKET SHARE BY AREA (AS % OF TOTAL)

##### UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	38	37	35	34	35	33	32	31	30	31	33	32
REST OF EUROPE	20	19	18	20	21	22	23	20	22	20	19	19
USA	4	4	4	4	5	6	7	7	7	8	7	7
OTHER WORLD	22	22	24	25	25	25	27	27	27	31	29	31
TOTAL	16	16	16	16	16	16	17	17	17	19	18	19

##### SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	38	38	37	37	37	36	35	34	33	34	35	35
REST OF EUROPE	17	17	14	18	20	22	22	19	21	19	17	17
USA	3	4	4	4	5	6	7	6	7	8	7	7
OTHER WORLD	20	20	23	24	26	26	28	28	29	33	30	32
TOTAL	14	15	16	16	16	17	18	17	17	20	19	20

##### VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	36	35	36	35	37	35	34	31	29	31	34	36
REST OF EUROPE	18	18	13	21	21	24	24	21	23	21	18	17
USA	4	4	5	5	6	8	9	9	10	11	11	11
OTHER WORLD	20	21	25	27	30	30	33	33	33	37	35	39
TOTAL	15	15	17	18	19	20	21	20	21	23	23	25

■ SOURCE: AEROSPATIALE

## MEDIUM HAUL AIRCRAFT FLEET (AT YEAR-END)

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	41	39	35	34	33	30	28	29	29	29	32	31
REST OF EUROPE	6	6	6	6	5	6	6	6	6	5	5	5
USA	11	13	13	14	16	20	22	22	21	21	20	19
OTHER WORLD	41	42	46	46	45	44	44	44	44	45	43	46

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	43	40	36	35	34	31	29	29	29	29	32	32
REST OF EUROPE	5	5	3	4	4	5	5	4	5	4	4	4
USA	12	13	14	14	15	18	20	20	20	20	19	17
OTHER WORLD	40	42	46	47	47	46	47	47	46	47	45	47

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	40	38	34	31	31	28	25	25	24	25	29	31
REST OF EUROPE	5	5	3	4	4	5	5	5	5	5	4	4
USA	12	13	12	13	14	18	20	21	23	23	20	18
OTHER WORLD	44	45	51	51	51	49	50	50	48	48	46	47

■ SOURCE: AEROSPATIALE

## LONG HAUL AIRCRAFT FLEET (AT YEAR-END)

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	22%	20%	20%	19%	19%	19%	20%	20%	19%	20%	19%	20%
REST OF EUROPE	4%	4%	4%	4%	4%	4%	4%	4%	4%	3%	2%	2%
USA	33%	30%	29%	29%	29%	29%	28%	29%	30%	32%	36%	35%
OTHER WORLD	42%	46%	47%	47%	48%	48%	48%	47%	47%	46%	43%	43%
TOTAL	1,644	1,593	1,555	1,560	1,543	1,558	1,591	1,650	1,695	1,775	1,960	2,015

## SEATS (X 1,000)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	23%	22%	21%	21%	20%	21%	22%	22%	21%	22%	21%	21%
REST OF EUROPE	4%	4%	3%	4%	4%	4%	4%	4%	3%	3%	2%	2%
USA	32%	30%	29%	29%	29%	29%	28%	28%	29%	29%	34%	33%
OTHER WORLD	42%	45%	46%	46%	47%	47%	47%	46%	47%	46%	43%	44%
TOTAL	402	405	402	411	411	420	433	450	467	499	551	577

## CONSTANT VALUE - MIO 1991 ECU

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	24%	24%	24%	23%	23%	24%	25%	25%	25%	26%	26%	25%
REST OF EUROPE	3%	4%	3%	4%	4%	4%	4%	4%	3%	2%	2%	3%
USA	27%	25%	23%	23%	23%	21%	20%	19%	17%	16%	22%	21%
OTHER WORLD	45%	48%	50%	50%	51%	51%	51%	52%	55%	55%	50%	52%
TOTAL	47,587	59,423	63,676	67,884	72,008	71,414	57,407	48,362	46,540	51,402	51,398	55,633

■ SOURCE: AEROSPATIALE

## LONG HAUL AIRCRAFT FLEET (AT YEAR-END)

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	10	11	11	10	12	11	11	11	12	10	4	3
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	2	2	2	2	2	2	2	2	2	1	1

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	4	4	4	4	5	4	4	4	4	4	1	1
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1	1	1	1	1	1	1	1	1	1	0	0

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	3	3	3	2	2	2	2	1	1	1	1	1
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1	1	1	1	0	0	0	0	0	0	0	0

■ SOURCE: AEROSPATIALE



## LONG HAUL AIRCRAFT FLEET (AT YEAR-END)

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	92	95	94	94	95	94	94	95	95	95	100	100
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	8	5	6	6	5	6	6	5	5	5	0	0

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	93	95	95	94	97	95	95	98	98	95	100	100
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	7	5	5	6	5	5	5	5	5	5	0	0

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	98	100	100	100	100	100	100	100	100	100	100	100
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	2	0	0	0	0	0	0	0	0	0	0	0

■ SOURCE: AEROSPATIALE

## TOTAL CIVIL AIRCRAFT FLEET (AT YEAR-END)

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	18%	18%	17%	17%	16%	16%	16%	16%	16%	18%	17%	18%
REST OF EUROPE	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%	4%	4%
USA	39%	38%	39%	41%	42%	43%	44%	44%	44%	43%	43%	43%
OTHER WORLD	39%	40%	40%	38%	38%	37%	36%	36%	35%	35%	35%	36%
TOTAL	8,741	9,079	9,360	9,770	10,115	10,656	11,241	12,105	13,061	13,527	15,238	16,515

## SEATS (X 1,000)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	19%	18%	18%	17%	17%	17%	17%	17%	17%	19%	18%	19%
REST OF EUROPE	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
USA	42%	41%	41%	42%	43%	44%	43%	44%	44%	42%	44%	43%
OTHER WORLD	36%	37%	38%	37%	37%	36%	36%	35%	35%	35%	34%	35%
TOTAL	1,126	1,169	1,199	1,254	1,293	1,354	1,417	1,509	1,620	1,663	1,853	2,012

## CONSTANT VALUE - MIO 1991 ECU

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	20%	19%	19%	19%	18%	18%	19%	19%	19%	20%	22%	22%
REST OF EUROPE	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	4%	5%
USA	39%	37%	36%	38%	38%	39%	38%	39%	39%	38%	38%	37%
OTHER WORLD	38%	39%	41%	40%	40%	39%	39%	38%	38%	37%	36%	36%
TOTAL	117,589	150,823	168,252	186,176	206,688	214,593	179,157	159,314	162,152	188,302	185,613	209,813

■ SOURCE: AEROSPATIALE

## TOTAL CIVIL AIRCRAFT FLEET (AT YEAR-END)

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	44	44	44	44	46	44	43	41	41	43	45	44
REST OF EUROPE	20	21	19	20	24	27	30	30	32	33	35	36
USA	7	8	8	9	10	12	13	14	15	16	17	17
OTHER WORLD	28	28	28	29	30	30	31	31	32	32	33	33
TOTAL	23	23	23	23	24	25	25	25	26	27	28	28

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	27	28	27	28	29	28	27	26	27	27	28	29
REST OF EUROPE	13	13	11	14	16	18	19	19	20	21	22	22
USA	4	4	5	5	5	6	7	7	8	9	8	8
OTHER WORLD	17	16	18	18	19	20	20	21	21	22	22	23
TOTAL	13	13	14	14	15	15	16	16	16	17	17	18

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	21	21	21	21	23	22	21	21	21	23	26	28
REST OF EUROPE	12	12	9	13	14	18	20	19	22	23	23	22
USA	3	4	4	5	6	8	9	10	11	13	12	13
OTHER WORLD	13	13	15	16	18	19	20	20	21	23	24	25
TOTAL	10	11	12	13	14	15	16	16	17	19	20	21

■ SOURCE: AEROSPATIALE

## TOTAL CIVIL AIRCRAFT FLEET (AT YEAR-END)

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	36	35	33	32	31	29	28	26	26	28	27	28
REST OF EUROPE	4	4	3	4	4	5	5	5	6	6	5	5
USA	12	13	14	15	18	21	23	24	25	26	26	25
OTHER WORLD	48	49	49	49	47	45	44	45	44	41	42	42

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	39	37	35	34	33	30	29	28	29	29	30	30
REST OF EUROPE	4	4	3	4	4	4	5	5	5	5	5	5
USA	11	13	14	14	16	19	20	20	21	21	21	20
OTHER WORLD	45	46	49	49	48	47	47	47	46	45	45	45

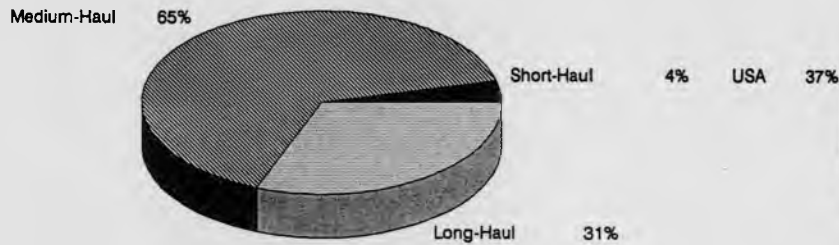
## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	39	37	34	31	30	27	24	24	24	25	28	30
REST OF EUROPE	4	4	3	4	4	5	5	5	6	5	5	5
USA	11	12	12	14	15	20	22	23	26	25	24	22
OTHER WORLD	45	46	51	51	51	49	48	47	45	45	43	43

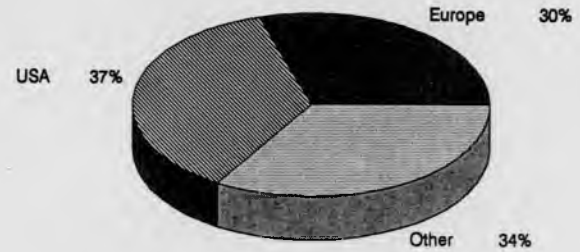
■ SOURCE: AEROSPATIALE

# CIVIL AIRCRAFT DELIVERIES

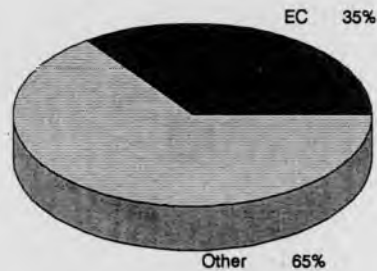
(IN VALUE - 1991)



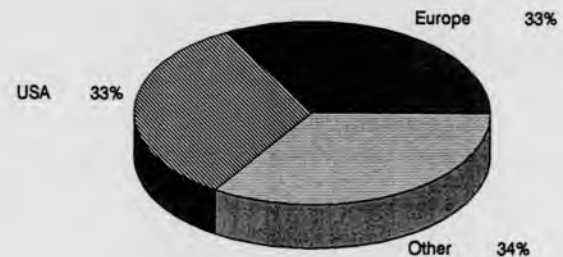
BREAKDOWN BY TYPE



BREAKDOWN BY AREA



EC MARKET SHARE



BREAKDOWN OF EC MARKETS

■ SOURCE: AEROSPATIALE

## SHORT HAUL AIRCRAFT DELIVERIES

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	15%	14%	16%	12%	12%	8%	11%	19%	16%	17%	17%	22%
REST OF EUROPE	4%	5%	3%	4%	6%	5%	6%	4%	4%	6%	8%	5%
USA	42%	41%	37%	49%	57%	67%	66%	54%	48%	39%	48%	53%
OTHER WORLD	40%	40%	43%	36%	25%	20%	17%	23%	32%	39%	26%	20%
TOTAL	258	256	182	185	235	281	282	320	379	431	463	437

## SEATS (X 1,000)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	13%	17%	14%	10%	13%	8%	13%	21%	20%	22%	19%	28%
REST OF EUROPE	3%	3%	2%	8%	7%	5%	7%	5%	5%	7%	11%	5%
USA	44%	39%	35%	44%	48%	64%	62%	49%	43%	34%	41%	46%
OTHER WORLD	38%	41%	47%	40%	28%	23%	17%	23%	32%	37%	27%	20%
TOTAL	6	7	5	5	6	8	9	10	12	14	16	15

## CONSTANT VALUE - MIO 1991 ECU

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	13%	15%	15%	12%	15%	8%	12%	21%	20%	21%	21%	27%
REST OF EUROPE	4%	4%	2%	6%	6%	7%	8%	5%	5%	7%	11%	6%
USA	44%	38%	35%	43%	50%	63%	62%	49%	42%	34%	41%	46%
OTHER WORLD	40%	41%	47%	37%	29%	22%	18%	25%	32%	37%	28%	20%
TOTAL	715	989	817	913	1,261	1,686	1,543	1,588	2,032	2,780	2,710	2,719

■ SOURCE: AEROSPATIALE

## SHORT HAUL AIRCRAFT DELIVERIES

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	16	40	59	91	93	86	77	73	69	75	72	78
REST OF EUROPE	40	23	0	29	85	93	88	86	88	83	92	76
USA	30	19	15	40	34	55	51	53	55	37	50	51
OTHER WORLD	25	52	49	88	75	53	49	45	56	40	49	34
TOTAL	26	36	36	63	54	59	56	57	59	47	57	54

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	25	45	57	100	100	100	82	76	75	81	80	83
REST OF EUROPE	50	0	0	25	75	100	100	80	100	90	94	87
USA	37	19	18	48	45	62	55	56	61	41	55	60
OTHER WORLD	30	59	57	89	65	56	53	48	63	46	55	43
TOTAL	33	41	43	69	60	65	60	59	66	55	64	64

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	27	50	60	87	92	89	87	77	77	81	78	86
REST OF EUROPE	33	0	0	25	80	86	90	88	91	85	92	81
USA	36	20	17	48	44	63	56	57	61	41	54	60
OTHER WORLD	30	59	58	92	67	57	50	45	61	47	55	42
TOTAL	33	41	42	69	60	65	61	60	66	55	64	65

■ SOURCE: AEROSPATIALE

## SHORT HAUL AIRCRAFT DELIVERIES

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	9	15	26	17	20	11	15	24	18	27	22	31
REST OF EUROPE	6	3	0	2	9	8	9	7	7	10	13	7
USA	48	22	15	31	36	62	61	51	44	30	42	50
OTHER WORLD	37	59	59	50	35	18	15	18	30	33	23	13

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	10	19	19	15	22	12	17	28	23	32	24	36
REST OF EUROPE	5	0	0	3	8	8	12	7	8	11	16	7
USA	50	19	14	30	36	61	56	47	40	25	35	43
OTHER WORLD	35	59	62	52	31	20	15	19	31	32	23	13

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	11	19	21	15	22	12	17	27	23	32	26	36
REST OF EUROPE	4	0	0	2	8	9	12	8	8	11	16	8
USA	48	19	14	30	37	61	57	47	39	26	35	43
OTHER WORLD	37	59	64	50	33	19	14	19	30	32	24	13

■ SOURCE: AEROSPATIALE



## MEDIUM HAUL AIRCRAFT DELIVERIES

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	24%	23%	12%	19%	18%	16%	11%	22%	23%	26%	29%	33%
REST OF EUROPE	4%	7%	3%	4%	2%	6%	10%	6%	7%	7%	6%	7%
USA	40%	36%	44%	49%	50%	52%	51%	53%	51%	38%	38%	32%
OTHER WORLD	31%	35%	41%	29%	31%	26%	28%	19%	19%	30%	27%	29%
TOTAL	349	368	296	305	276	355	362	419	509	624	649	785

## SEATS (X 1,000)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	22%	21%	11%	18%	19%	16%	11%	22%	21%	24%	28%	31%
REST OF EUROPE	4%	6%	2%	4%	2%	6%	10%	5%	6%	7%	6%	6%
USA	39%	36%	42%	49%	44%	50%	49%	51%	52%	37%	37%	33%
OTHER WORLD	35%	37%	45%	29%	35%	28%	31%	22%	22%	32%	29%	30%
TOTAL	56	57	49	49	44	54	53	63	79	95	99	119

## CONSTANT VALUE - MIO 1991 ECU

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	22%	21%	11%	18%	19%	16%	11%	22%	21%	25%	28%	31%
REST OF EUROPE	4%	6%	2%	4%	2%	6%	10%	5%	6%	7%	6%	6%
USA	39%	36%	42%	49%	44%	50%	49%	51%	52%	37%	37%	33%
OTHER WORLD	35%	37%	45%	29%	35%	29%	31%	21%	22%	32%	29%	30%
TOTAL	9,465	12,054	11,754	13,004	13,134	16,697	13,710	13,996	16,780	22,167	21,022	25,759

■ SOURCE: AEROSPATIALE

## MEDIUM HAUL AIRCRAFT DELIVERIES

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	21	19	42	28	35	18	18	18	24	35	36	38
REST OF EUROPE	29	12	38	42	40	20	35	16	38	26	8	9
USA	7	8	5	7	11	20	19	8	10	20	13	15
OTHER WORLD	22	22	34	40	53	32	36	32	26	48	41	48
TOTAL	16	15	23	22	29	23	25	16	18	32	27	32

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	33	33	54	34	45	22	20	24	26	35	35	39
REST OF EUROPE	39	11	22	50	37	28	38	9	35	27	7	11
USA	8	9	7	8	11	19	15	7	15	22	11	13
OTHER WORLD	26	28	44	39	54	38	41	34	30	47	42	51
TOTAL	21	21	29	23	33	26	26	17	22	33	27	32

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	33	33	53	34	45	22	20	24	26	35	35	39
REST OF EUROPE	38	12	26	51	31	28	39	9	36	27	7	11
USA	8	9	7	8	11	19	15	8	15	22	11	13
OTHER WORLD	25	27	44	39	54	38	41	34	29	47	42	51
TOTAL	21	21	29	23	33	26	26	17	22	33	26	32

■ SOURCE: AEROSPATIALE

## MEDIUM HAUL AIRCRAFT DELIVERIES

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	32	28	22	24	22	12	8	26	30	28	39	40
REST OF EUROPE	7	5	4	8	3	5	14	6	14	5	2	2
USA	18	18	10	15	19	46	38	28	29	23	18	15
OTHER WORLD	43	49	63	53	57	37	40	40	27	44	41	43

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	35	33	21	26	26	14	8	31	25	26	37	37
REST OF EUROPE	8	3	1	8	2	7	14	3	9	6	2	2
USA	15	16	11	17	14	38	29	22	36	24	15	13
OTHER WORLD	43	48	68	48	58	42	49	44	30	45	45	47

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	35	33	20	26	26	14	8	32	25	26	38	37
REST OF EUROPE	8	3	2	9	2	6	15	3	10	6	2	2
USA	15	16	10	17	15	38	29	23	36	24	15	13
OTHER WORLD	43	48	68	49	58	42	48	43	30	45	46	47

■ SOURCE: AEROSPATIALE

## LONG HAUL AIRCRAFT DELIVERIES

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	28%	24%	23%	29%	19%	25%	24%	21%	13%	27%	28%	27%
REST OF EUROPE	2%	3%	6%	13%	0%	0%	0%	3%	0%	0%	1%	9%
USA	22%	10%	0%	3%	14%	3%	24%	15%	15%	25%	26%	18%
OTHER WORLD	49%	62%	71%	55%	67%	72%	52%	62%	72%	48%	45%	46%
TOTAL	130	86	35	31	21	32	46	34	40	60	85	115

## SEATS (X 1,000)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	27%	26%	26%	25%	13%	22%	27%	23%	13%	28%	30%	26%
REST OF EUROPE	1%	4%	4%	15%	0%	0%	0%	3%	0%	0%	1%	7%
USA	19%	8%	0%	3%	15%	3%	19%	15%	14%	22%	22%	15%
OTHER WORLD	53%	62%	70%	57%	72%	76%	54%	60%	73%	50%	47%	52%
TOTAL	42	28	12	12	7	12	17	13	15	23	33	40

## CONSTANT VALUE - MIO 1991 ECU

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	27%	26%	26%	25%	13%	22%	27%	23%	13%	29%	30%	26%
REST OF EUROPE	1%	4%	4%	15%	0%	0%	0%	3%	0%	0%	1%	7%
USA	19%	8%	0%	3%	15%	2%	19%	14%	14%	22%	22%	15%
OTHER WORLD	53%	62%	70%	56%	73%	76%	54%	60%	72%	50%	47%	52%
TOTAL	8,341	7,065	3,505	3,599	2,538	4,293	5,171	3,409	3,922	6,319	8,113	9,853

■ SOURCE: AEROSPATIALE

## LONG HAUL AIRCRAFT DELIVERIES

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	6	0	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	-	-	-	0	-	-	0	0
USA	0	0	-	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	0	0	0	0	0	0	0	0	0	0	0

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	2	0	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	-	-	-	0	-	-	0	0
USA	0	0	-	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	2	0	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	-	-	-	0	-	-	0	0
USA	0	0	-	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1	0	0	0	0	0	0	0	0	0	0	0

■ SOURCE: AEROSPATIALE

## LONG HAUL AIRCRAFT DELIVERIES

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	100	0	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	100	0	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	100	0	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0

■ SOURCE: AEROSPATIALE

## TOTAL CIVIL AIRCRAFT DELIVERIES

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	22%	20%	14%	17%	15%	13%	12%	21%	19%	23%	25%	29%
REST OF EUROPE	4%	6%	3%	4%	3%	5%	8%	5%	5%	6%	6%	6%
USA	38%	35%	39%	46%	52%	56%	56%	52%	48%	37%	41%	38%
OTHER WORLD	37%	40%	44%	33%	30%	26%	25%	23%	27%	34%	28%	27%
TOTAL	737	710	513	521	532	668	690	773	928	1,115	1,197	1,337

## SEATS (X 1,000)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	24%	23%	14%	19%	18%	16%	14%	22%	20%	25%	28%	29%
REST OF EUROPE	3%	5%	2%	6%	2%	5%	7%	5%	5%	6%	5%	7%
USA	31%	27%	34%	40%	41%	44%	44%	45%	45%	34%	34%	30%
OTHER WORLD	42%	45%	50%	35%	39%	36%	35%	28%	30%	35%	33%	34%
TOTAL	104	92	66	65	57	73	79	86	106	132	147	173

## CONSTANT VALUE - MIO 1991 ECU

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	24%	23%	14%	19%	18%	17%	15%	22%	20%	25%	28%	29%
REST OF EUROPE	3%	5%	2%	6%	2%	5%	7%	5%	5%	6%	5%	7%
USA	30%	26%	32%	39%	40%	42%	42%	44%	44%	33%	33%	29%
OTHER WORLD	43%	46%	51%	35%	41%	37%	36%	29%	31%	36%	33%	35%
TOTAL	18,520	20,108	16,077	17,516	16,933	22,676	20,423	18,993	22,734	31,265	31,846	38,331

■ SOURCE: AEROSPATIALE

## TOTAL CIVIL AIRCRAFT DELIVERIES

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	16	22	44	41	53	34	38	38	39	44	43	45
REST OF EUROPE	31	15	19	30	72	51	52	40	55	46	49	25
USA	15	12	9	19	22	38	34	27	28	26	29	31
OTHER WORLD	18	29	36	55	56	34	34	34	37	41	39	38
TOTAL	17	21	26	35	39	37	36	32	34	36	37	36

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	18	22	35	28	45	21	18	26	29	33	30	35
REST OF EUROPE	33	8	13	26	50	36	45	17	42	35	26	13
USA	8	10	8	11	15	26	20	13	19	21	15	18
OTHER WORLD	13	18	33	32	42	26	27	24	23	36	29	33
TOTAL	13	16	25	23	32	26	24	19	23	30	24	28

## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	17	20	33	26	43	19	15	24	27	30	28	33
REST OF EUROPE	30	8	16	25	43	34	43	15	41	33	22	13
USA	7	9	8	10	13	24	18	12	18	20	14	17
OTHER WORLD	12	16	31	29	40	24	26	22	21	34	28	31
TOTAL	12	15	23	21	30	24	22	18	22	28	23	26

■ SOURCE: AEROSPATIALE



## TOTAL CIVIL AIRCRAFT DELIVERIES

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	21	20	24	20	21	12	12	25	22	27	29	35
REST OF EUROPE	6	4	2	4	6	7	11	7	9	8	9	4
USA	34	20	13	25	30	57	53	45	40	27	33	32
OTHER WORLD	39	55	61	51	43	24	24	24	29	38	30	28

## SEATS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	32	30	20	24	25	13	11	30	24	27	34	37
REST OF EUROPE	7	3	1	7	3	7	14	4	9	7	6	3
USA	20	16	11	20	19	44	36	31	37	24	21	19
OTHER WORLD	42	50	67	49	52	36	39	35	30	42	39	41

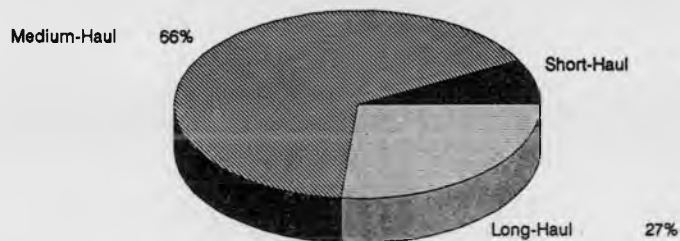
## VALUE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
EC	33	31	20	24	25	13	10	30	24	27	35	37
REST OF EUROPE	7	3	2	7	3	7	14	4	9	7	5	3
USA	18	16	11	19	18	42	35	30	37	24	20	18
OTHER WORLD	42	49	67	49	54	38	41	36	30	43	40	41

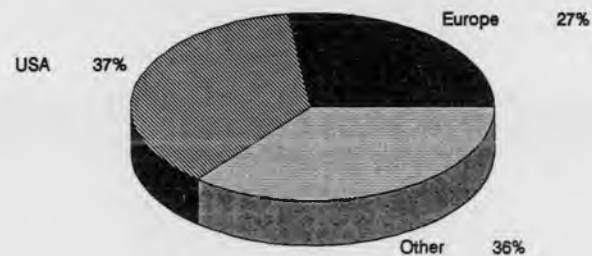
■ SOURCE: AEROSPATIALE

# CIVIL AIRCRAFT ORDERS (BACKLOG)

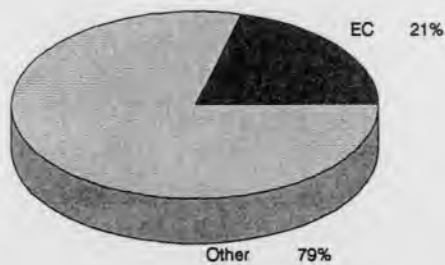
(IN VALUE - 1991)



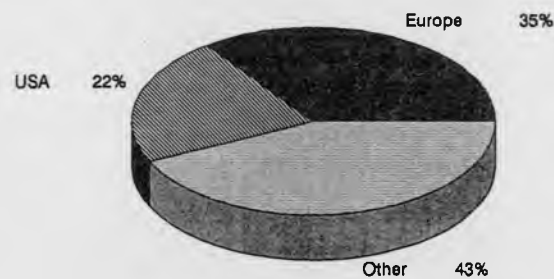
BREAKDOWN BY TYPE



BREAKDOWN BY AREA



EC MARKET SHARE



BREAKDOWN OF EC MARKETS

■ SOURCE: AEROSPATIALE

## SHORT HAUL AIRCRAFT ORDERS

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	17%	17%	21%	29%	22%	20%
REST OF EUROPE	5%	5%	8%	6%	7%	5%
USA	26%	36%	34%	37%	42%	44%
OTHER WORLD	51%	43%	37	28	29	31
TOTAL	449	509	643	773	878	916

## SEATS (X 1,000)

	1986	1987	1988	1989	1990	1991
EC	18%	17%	25%	32%	27%	24%
REST OF EUROPE	7%	6%	9%	7%	8%	7%
USA	24%	34%	29%	33%	37%	37%
OTHER WORLD	51%	43%	37	28	27	32
TOTAL	16	20	26	32	33	34

## CONSTANT VALUE - MIO 1991 ECU

	1986	1987	1988	1989	1990	1991
EC	19%	17%	25%	32%	27%	24%
REST OF EUROPE	7%	5%	9%	7%	9%	7%
USA	23%	34%	29%	33%	53%	37%
OTHER WORLD	52%	44%	37	27	12	32
TOTAL	2,949	3,208	4,438	6,069	5,896	6,085

■ SOURCE: AEROSPATIALE

## SHORT HAUL AIRCRAFT ORDERS

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	83	76	83	72	71	78
REST OF EUROPE	100	96	94	100	90	84
USA	42	45	34	58	43	50
OTHER WORLD	55	70	64	67	73	78
TOTAL	59	63	60	67	61	66

## SEATS

	1986	1987	1988	1989	1990	1991
EC	90	85	88	79	80	82
REST OF EUROPE	100	91	96	100	93	87
USA	49	52	40	63	55	63
OTHER WORLD	58	74	70	72	80	84
TOTAL	65	69	68	74	72	76

## VALUE

	1986	1987	1988	1989	1990	1991
EC	89	83	88	80	80	83
REST OF EUROPE	100	100	95	100	92	89
USA	49	52	40	63	68	63
OTHER WORLD	58	74	70	73	54	84
TOTAL	65	69	68	74	72	77

■ SOURCE: AEROSPATIALE

## SHORT HAUL AIRCRAFT ORDERS

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	25	20	30	31	26	23
REST OF EUROPE	9	7	12	10	10	7
USA	19	26	19	32	30	34
OTHER WORLD	48	47	40	28	34	36

## SEATS

	1986	1987	1988	1989	1990	1991
EC	25	21	32	35	30	25
REST OF EUROPE	10	7	13	10	11	8
USA	18	26	17	28	28	30
OTHER WORLD	46	46	38	27	30	36

## VALUE

	1986	1987	1988	1989	1990	1991
EC	26	20	32	35	30	25
REST OF EUROPE	10	7	13	10	11	8
USA	17	26	17	28	50	31
OTHER WORLD	46	47	38	27	9	36

■ SOURCE: AEROSPATIALE

## MEDIUM HAUL AIRCRAFT ORDERS

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	18%	22%	23%	31%	30%	25%
REST OF EUROPE	5%	6%	6%	5%	5%	5%
USA	60%	53%	53%	48%	43%	45%
OTHER WORLD	17%	20%	18	17	22	25
TOTAL	1,257	1,321	1,654	2,873	3,217	2,735

## SEATS (X 1,000)

	1986	1987	1988	1989	1990	1991
EC	17%	21%	22%	30%	29%	25%
REST OF EUROPE	5%	5%	6%	5%	5%	5%
USA	58%	51%	52%	47%	43%	44%
OTHER WORLD	19%	22%	19	18	23	26
TOTAL	181	195	252	445	519	463

## CONSTANT VALUE - MIO 1991 ECU

	1986	1987	1988	1989	1990	1991
EC	17%	21%	22%	30%	29%	25%
REST OF EUROPE	5%	5%	6%	5%	5%	5%
USA	58%	52%	53%	48%	43%	44%
OTHER WORLD	19%	22%	19	18	23	26
TOTAL	46,548	43,195	53,171	104,025	110,786	100,855

■ SOURCE: AEROSPATIALE

## MEDIUM HAUL AIRCRAFT ORDERS

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	40	39	11	29	42	38
REST OF EUROPE	25	40	6	26	43	50
USA	30	41	29	27	26	29
OTHER WORLD	36	41	34	54	53	49
TOTAL	32	40	24	32	38	37

## SEATS

	1986	1987	1988	1989	1990	1991
EC	45	41	13	31	44	41
REST OF EUROPE	24	38	7	28	46	53
USA	28	41	28	29	28	31
OTHER WORLD	36	43	36	59	57	52
TOTAL	32	41	25	35	40	40

## VALUE

	1986	1987	1988	1989	1990	1991
EC	44	41	13	31	44	41
REST OF EUROPE	25	38	7	27	46	53
USA	28	41	28	29	28	31
OTHER WORLD	36	43	36	59	57	52
TOTAL	32	41	25	35	40	40

■ SOURCE: AEROSPATIALE

## MEDIUM HAUL AIRCRAFT ORDERS

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	22	21	11	28	34	26
REST OF EUROPE	4	6	1	4	6	7
USA	55	53	63	41	29	35
OTHER WORLD	19	20	25	28	31	33

## SEATS

	1986	1987	1988	1989	1990	1991
EC	24	21	12	27	32	26
REST OF EUROPE	4	5	2	4	6	6
USA	51	51	58	40	29	34
OTHER WORLD	21	23	28	30	33	34

## VALUE

	1986	1987	1988	1989	1990	1991
EC	23	20	12	27	32	26
REST OF EUROPE	4	5	2	4	6	6
USA	51	51	58	40	29	34
OTHER WORLD	21	23	28	30	33	34

■ SOURCE: AEROSPATIALE



## LONG HAUL AIRCRAFT ORDERS

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	31%	43%	31%	32%	30%	29%
REST OF EUROPE	2%	4%	5%	4%	5%	2%
USA	12%	22%	21%	22%	23%	22%
OTHER WORLD	55%	31%	42	42	43	46
TOTAL	149	300	318	459	595	547

## SEATS (X 1,000)

	1986	1987	1988	1989	1990	1991
EC	32%	42%	31%	31%	29%	27%
REST OF EUROPE	1%	3%	4%	4%	4%	2%
USA	13%	20%	19%	21%	21%	21%
OTHER WORLD	54%	35%	45	45	46	49
TOTAL	54	106	116	157	205	191

## CONSTANT VALUE - MIO 1991 ECU

	1986	1987	1988	1989	1990	1991
EC	32%	42%	32%	31%	29%	27%
REST OF EUROPE	1%	3%	4%	3%	4%	2%
USA	13%	20%	20%	21%	21%	21%
OTHER WORLD	54%	35%	45	45	46	49
TOTAL	16,018	27,590	29,861	42,904	50,610	47,716

■ SOURCE: AEROSPATIALE

## LONG HAUL AIRCRAFT ORDERS

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	0	33	17	30	26	31
REST OF EUROPE	67	0	0	0	0	15
USA	0	31	4	32	22	26
OTHER WORLD	0	5	0	4	9	13
TOTAL	1	23	6	18	16	21

## SEATS

	1986	1987	1988	1989	1990	1991
EC	0	28	14	27	23	28
REST OF EUROPE	33	0	0	0	0	14
USA	0	28	4	29	20	23
OTHER WORLD	0	4	0	3	7	10
TOTAL	0	19	5	16	14	18

## VALUE

	1986	1987	1988	1989	1990	1991
EC	0	28	14	27	23	28
REST OF EUROPE	0	0	0	0	0	16
USA	0	28	4	29	20	23
OTHER WORLD	0	4	0	3	7	10
TOTAL	0	19	5	16	14	18

■ SOURCE: AEROSPATIALE

## LONG HAUL AIRCRAFT ORDERS

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	0	63	85	54	48	42
REST OF EUROPE	100	0	0	0	0	2
USA	0	29	15	38	30	28
OTHER WORLD	0	7	0	8	22	28

## SEATS

	1986	1987	1988	1989	1990	1991
EC	0	63	85	54	48	42
REST OF EUROPE	100	0	0	0	0	1
USA	0	29	15	38	30	27
OTHER WORLD	0	7	0	8	22	28

## VALUE

	1986	1987	1988	1989	1990	1991
EC	0	63	85	54	48	42
REST OF EUROPE	0	0	0	0	0	2
USA	0	29	15	38	30	28
OTHER WORLD	0	7	0	8	22	28

■ SOURCE: AEROSPATIALE

## TOTAL CIVIL AIRCRAFT ORDERS

## ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	19%	23%	24%	31%	29%	25%
REST OF EUROPE	5%	5%	7%	5%	5%	5%
USA	48%	44%	44%	43%	40%	42%
OTHER WORLD	28%	27%	26	21	26	29
TOTAL	1,855	2,130	2,615	4,105	4,690	4,198

## SEATS (X 1,000)

	1986	1987	1988	1989	1990	1991
EC	21%	28%	25%	30%	29%	26%
REST OF EUROPE	4%	5%	6%	4%	5%	4%
USA	46%	40%	41%	40%	37%	37%
OTHER WORLD	29%	28%	28	25	30	33
TOTAL	251	321	394	633	758	687

## CONSTANT VALUE - MIO 1991 ECU

	1986	1987	1988	1989	1990	1991
EC	21%	29%	26%	30%	29%	26%
REST OF EUROPE	4%	4%	6%	4%	5%	4%
USA	46%	39%	40%	39%	37%	37%
OTHER WORLD	29%	28%	29	26	30	34
TOTAL	65,515	73,993	87,470	152,997	167,292	154,656

■ SOURCE: AEROSPATIALE

## TOTAL CIVIL AIRCRAFT ORDERS

## EC MARKET SHARE BY AREA (AS % OF TOTAL)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	44	44	28	36	44	44
REST OF EUROPE	45	47	30	41	49	56
USA	31	41	28	33	29	33
OTHER WORLD	38	46	38	46	48	48
TOTAL	36	43	31	37	39	41

## SEATS

	1986	1987	1988	1989	1990	1991
EC	32	36	18	33	40	39
REST OF EUROPE	32	33	14	28	40	51
USA	27	40	25	31	28	31
OTHER WORLD	24	30	22	35	37	36
TOTAL	28	36	22	32	34	36

## VALUE

	1986	1987	1988	1989	1990	1991
EC	29	35	17	32	39	38
REST OF EUROPE	29	31	13	26	38	50
USA	27	39	24	30	28	31
OTHER WORLD	22	27	19	32	34	35
TOTAL	26	34	20	31	33	35

■ SOURCE: AEROSPATIALE

## TOTAL CIVIL AIRCRAFT ORDERS

## BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

## UNITS

	1986	1987	1988	1989	1990	1991
EC	23	24	22	30	33	26
REST OF EUROPE	6	6	6	6	7	6
USA	40	42	40	38	29	34
OTHER WORLD	30	29	31	27	31	34

## SEATS

	1986	1987	1988	1989	1990	1991
EC	24	28	21	31	33	28
REST OF EUROPE	5	4	4	4	5	6
USA	45	44	47	38	29	33
OTHER WORLD	25	23	28	27	32	34

## VALUE

	1986	1987	1988	1989	1990	1991
EC	24	29	22	31	34	28
REST OF EUROPE	5	4	3	4	5	5
USA	47	45	48	38	31	33
OTHER WORLD	24	22	27	27	30	34

■ SOURCE: AEROSPATIALE

## NON-WESTERN CIVIL AIRCRAFT DELIVERIES

## IN UNITS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
HELICOPTERS	1	2	1	0	4	4	0	1	1	2	0	0
TURBOPROP AIRCRAFT	0	0	7	4	11	13	11	14	14	25	19	15
NARROW BODY JETS	116	78	62	50	32	29	37	33	26	38	46	17
WIDE BODY JETS	6	2	5	16	7	5	10	7	5	12	6	1
CARGO JETS	22	31	35	28	19	33	26	26	41	36	12	5
TOTAL JET AIRCRAFT	122	80	67	66	39	34	47	40	31	50	52	18
GRAND TOTAL	145	113	110	98	73	84	84	81	87	113	83	38

## IN SEATS (AS % OF TOTAL - WITHOUT CARGO AIRCRAFT)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
HELICOPTERS	0.1	0.4	0.3	0.0	1.6	1.7	0.0	0.3	0.4	0.5	0.0	0.0
TURBOPROP AIRCRAFT	0.0	0.0	1.5	0.8	4.9	8.1	4.3	6.4	8.9	8.5	6.3	14.7
NARROW BODY JETS	89.4	94.8	82.5	56.0	61.8	65.5	61.7	65.5	66.4	56.1	74.4	77.2
WIDE BODY JETS	10.5	4.8	15.7	43.2	31.8	24.6	34.1	27.8	24.3	34.9	19.3	8.0
TOTAL JET AIRCRAFT	99.9	99.6	98.3	99.2	93.6	90.2	95.7	93	91	91	94	85
GRAND TOTAL (SEATS)	20,006	14,500	11,112	12,959	7,708	7,103	10,274	8,825	7,009	11,888	10,891	3,729

(\* ) INCLUDES MIL (MIL8, MIL17), ANTONOV (AN26, AN28, AN32, AN124, AN225), ILIOUSHIN (IL114, IL62, IL76, I L86, IL96), LET (LE410, LE610), TUPOLEV (T 134, TU154, TU204), YAKOLEV (YAK40, YAK42)

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL





## CIVIL TURBINE ENGINES

Data relating to *civil engines* are extracted from *JP Airline Fleets International* and cover the number of deliveries of *civil turbine aircraft engines* in the world.

*Civil engines deliveries* are broken down according to: *category of engines, design origin, and geographical areas.*

*Civil engines deliveries* are broken down into the following *thrust categories:*

- *Turbofan* ..... above 14 Tons
- *Turbofan* ..... between 7 and 14 Tons
- *Turbofan* ..... between 3 and 7 Tons
- *Turbofan* ..... below 3 Tons
- *Turboprop and Turboshaft*

For each category, the tables show the manufacturers' market shares according to the number and thrust of *civil engines delivered:*

- |                              |                                     |
|------------------------------|-------------------------------------|
| ● <i>CFM International</i>   | ● <i>IAE</i>                        |
| ● <i>Rolls-Royce</i>         | ● <i>Turbomeca</i>                  |
| ● <i>Allison</i>             | ● <i>Garrett</i>                    |
| ● <i>General Electric</i>    | ● <i>Textron Lycoming</i>           |
| ● <i>Pratt &amp; Whitney</i> | ● <i>Pratt &amp; Whitney Canada</i> |

*Manufacturer reflects the company that originated the design (or has significantly redesigned /developed the engine) and not necessarily indicate production and/or assembly origin.*

A list of *Civil engines* is given hereafter.

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### Turbofan below 3 Tons

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- *GARRETT* ..... ATF3  
TFE731
- *GENERAL ELECTRIC* ..... CF700  
CJ610
- *PRATT & WHITNEY Canada* ..... JT15D

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### Turbofan between 3 and 7 Tons

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- *GENERAL ELECTRIC* ..... CF34
- *PRATT & WHITNEY* ..... JT8D-9A
- *ROLLS-ROYCE* ..... Spey  
Tay
- *TEXTRON LYCOMING* ..... ALF502

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### Turbofan between 7 and 14 Tons

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- *CFM Intl* ..... CFM56
- *IAE* ..... V2500
- *PRATT & WHITNEY* ..... JT8D-15/17  
JT8D-209/217/219

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**Turbofan between 7 and 14 Tons (continued)**

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- *ROLLS-ROYCE* ..... Tay-670
- 

**Turbofan above 14 Tons**

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- *GENERAL ELECTRIC* ..... CF6
  - *PRATT & WHITNEY* ..... JT9D-7  
PW2000/4000
  - *ROLLS-ROYCE* ..... RB211
- 

**Turboprop and Turboshaft**

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- *ALLISON* ..... 250  
501  
T56
- *GARRETT* ..... TPE331
- *GENERAL ELECTRIC* ..... CT58  
CT7
- *PRATT & WHITNEY Canada* ..... PT6  
PW100
- *ROLLS-ROYCE* ..... Dart  
Gem  
Gnome  
Tyne

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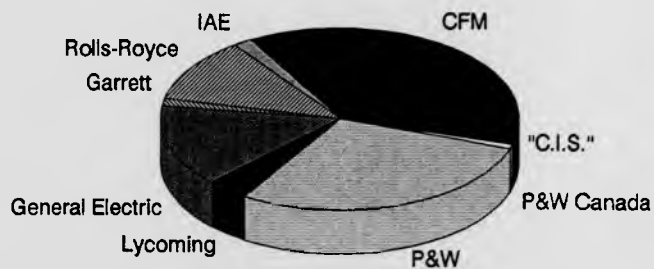
**Turboprop and Turboshaft (continued)**

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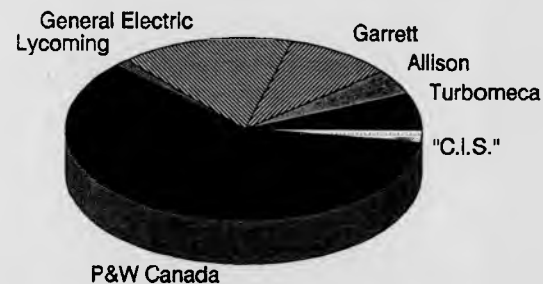
- *TEXTRON LYCOMING* ..... 5512  
LTS101  
T53-13B/-17A  
T5508D
  - *TURBOMECA* ..... Arriel  
Artouste  
Astazou  
Makila  
Turmo
-

# CIVIL TURBINE ENGINES DELIVERIES

(UNITS - 1991)



**TURBOFAN**



**TURBOPROP/SHAFT**

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

## CIVIL TURBINE ENGINES DELIVERIES

## MARKET SHARE BY MANUFACTURER (UNITS - AS % OF TOTAL)

## TURBOFAN - THRUST BELOW 3 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IAE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROLLS-ROYCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GARRETT	55.4	62.3	55.4	59.5	57.5	46.2	52.1	61.4	63.9	80.9	63.6	60.0
GENERAL ELECTRIC	12.0	5.7	2.9	5.4	7.5	7.7	0.0	0.0	0.0	0.0	0.0	0.0
LYCOMING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRATT-WHITNEY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-W CANADA	32.5	32.1	41.7	35.1	35.0	46.2	47.9	38.6	36.1	19.1	36.4	40.0
"C.I.S." (*)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL (UNITS)	166	212	139	74	80	78	71	57	72	115	66	35

## TURBOFAN - THRUST OF 3 TO 7 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IAE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROLLS-ROYCE	30.7	38.0	23.3	47.2	39.2	23.3	33.9	25.4	26.3	25.8	43.0	40.9
GARRETT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENERAL ELECTRIC	0.0	0.0	0.0	0.0	15.7	6.7	15.3	0.0	2.6	3.1	1.3	1.6
LYCOMING	6.7	8.5	21.9	26.4	31.4	66.7	50.8	71.6	68.4	71.1	51.9	50.4
PRATT-WHITNEY	46.0	47.2	34.2	8.3	5.9	3.3	0.0	3.0	2.6	0.0	0.0	0.0
P-W CANADA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
"C.I.S." (*)	16.7	6.3	20.5	18.1	7.8	0.0	0.0	0.0	0.0	0.0	3.8	7.1
TOTAL (UNITS)	150	142	146	144	102	120	118	134	152	194	158	127

(\*) INCLUDES GLUSHENKOV, ISOTOV, IVCHENKO, KUZNETSOV, LOTAREV, SOLOVIEV AND WALTER

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

## CIVIL TURBINE ENGINES DELIVERIES

## MARKET SHARE BY MANUFACTURER (UNITS - AS % OF TOTAL)

## TURBOFAN - THRUST OF 7 TO 14 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
CFM	0.0	0.0	0.0	0.0	6.1	31.0	40.8	42.4	51.5	42.6	50.7	66.2
IAE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	2.5	3.1
ROLLS-ROYCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GARRETT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENERAL ELECTRIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LYCOMING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRATT-WHITNEY	64.0	67.1	64.1	53.8	61.4	40.2	33.9	35.2	32.8	27.6	31.0	25.1
P-W CANADA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
"C.I.S." (*)	36.0	32.9	35.9	46.2	32.5	28.9	25.3	22.4	15.7	22.4	15.8	5.6
TOTAL (UNITS)	941	872	529	452	363	478	661	660	738	827	891	828

## TURBOFAN - THRUST ABOVE 14 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
IAE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROLLS-ROYCE	16.9	37.6	26.7	22.3	12.5	21.4	19.1	17.7	13.5	27.1	27.6	21.0
GARRETT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENERAL ELECTRIC	47.2	39.1	42.7	39.1	30.2	37.4	42.7	39.6	45.7	36.2	35.5	35.9
LYCOMING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRATT-WHITNEY	35.9	23.3	30.6	38.6	57.3	38.4	34.6	35.9	28.6	33.6	36.9	39.5
P-W CANADA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
"C.I.S." (*)	0.0	0.0	0.0	0.0	0.0	2.8	3.6	6.8	12.2	3.1	0.0	3.0
TOTAL (UNITS)	540	447	330	376	255	281	335	351	475	458	659	668

(\*) INCLUDES GLUSHENKOV, ISOTOV, IVCHENKO, KUZNETSOV, LOTAREV, SOLOVIEV AND WALTER

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

## CIVIL TURBINE ENGINES DELIVERIES

## MARKET SHARE BY MANUFACTURER (UNITS - AS % OF TOTAL)

## TURBOFAN - TOTAL

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
CFM	0.0	0.0	0.0	0.0	2.7	15.5	22.8	23.3	26.4	22.1	25.5	33.3
IAE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	1.2	1.6
ROLLS-ROYCE	7.6	13.3	10.7	14.5	9.0	9.2	8.8	8.0	7.2	10.9	14.1	11.6
GARRETT	5.1	7.9	6.7	4.2	5.7	3.8	3.1	2.9	3.2	5.8	2.4	1.3
GENERAL ELECTRIC	15.3	11.2	12.7	14.4	12.4	12.4	13.6	11.6	15.4	10.8	13.3	14.6
LYCOMING	0.6	0.7	2.8	3.6	4.0	8.4	5.1	8.0	7.2	8.7	4.6	3.9
PRATT-WHITNEY	48.1	45.2	42.8	38.2	46.9	31.8	28.7	30.1	26.6	24.0	29.3	28.5
P-W CANADA	3.0	4.1	5.1	2.5	3.5	3.8	2.9	1.8	1.8	1.4	1.4	0.8
"C.I.S." (*)	20.3	17.7	19.2	22.5	15.7	15.3	15.1	14.3	12.1	12.5	8.3	4.5
TOTAL (UNITS)	1,797	1,673	1,144	1,046	800	957	1,185	1,202	1,437	1,594	1,774	1,658

## TURBOPROP AND TURBOSHAFT

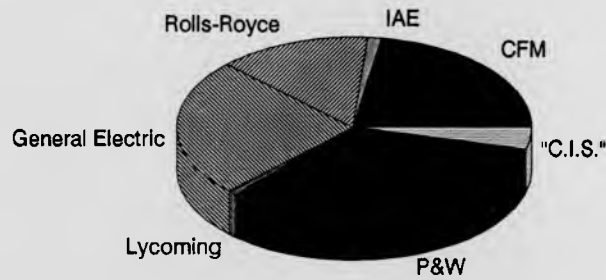
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ROLLS-ROYCE	2.2	3.2	5.3	4.5	5.5	2.7	3.2	2.0	0.4	0.0	0.0	0.0
TURBOMECA	7.1	7.0	12.3	17.8	12.2	9.6	7.6	6.7	3.9	4.3	5.5	6.6
ALLISON	30.0	32.3	30.5	24.9	18.9	14.6	7.7	5.9	7.2	7.8	10.5	4.5
GARRETT	13.1	13.1	14.5	22.6	16.0	20.9	21.9	24.1	18.7	12.1	12.9	9.7
GENERAL ELECTRIC	0.7	0.0	0.7	1.0	4.4	7.9	8.1	8.2	7.3	8.5	10.4	15.6
LYCOMING	4.3	2.7	2.1	2.9	3.2	3.8	8.4	4.8	1.8	2.0	1.7	1.3
P-W CANADA	39.9	40.9	32.6	24.9	35.6	37.0	41.9	47.1	59.1	62.6	56.9	60.1
"C.I.S." (*)	2.7	0.8	2.0	1.3	4.4	3.4	1.2	1.3	1.6	2.6	1.9	2.2
TOTAL (UNITS)	1,387	1,423	1,198	762	689	813	868	905	1,015	989	1,035	639

(\*) INCLUDES GLUSHENKOV, ISOTOV, IVCHENKO, KUZNETSOV, LOTAREV, SOLOVIEV AND WALTER

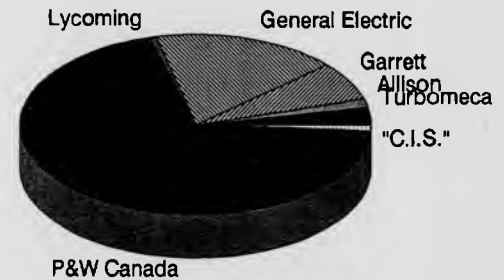
■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

# CIVIL TURBINE ENGINES DELIVERIES

(THRUST - 1991)



**TURBOFAN**



**TURBOPROP/SHAFT**

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

## CIVIL TURBINE ENGINES DELIVERIES

## MARKET SHARE BY MANUFACTURER (THRUST - AS % OF TOTAL)

## TURBOFAN - THRUST BELOW 3 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IAE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROLLS-ROYCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GARRETT	60.1	68.7	63.7	66.2	64.8	54.5	63.5	71.5	73.6	86.5	72.8	72.5
GENERAL ELECTRIC	16.2	7.8	4.1	7.3	9.9	10.6	0.0	0.0	0.0	0.0	0.0	0.0
LYCOMING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRATT-WHITNEY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-W CANADA	23.7	23.6	32.2	26.5	25.4	34.9	36.5	28.5	26.4	13.5	27.2	27.5
"C.I.S." (*)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL (MIO LB ST)	554	696	440	245	274	256	235	202	258	443	238	130

## TURBOFAN - THRUST OF 3 TO 7 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IAE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROLLS-ROYCE	25.6	32.4	19.9	46.6	42.2	29.8	43.3	35.3	39.5	41.4	60.0	56.7
GARRETT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENERAL ELECTRIC	0.0	0.0	0.0	0.0	14.7	7.5	16.1	0.0	2.7	3.2	1.1	1.3
LYCOMING	3.9	4.9	13.2	16.9	22.3	56.8	40.7	59.5	53.5	55.5	33.8	32.5
PRATT-WHITNEY	51.4	55.3	41.3	11.3	8.7	5.9	0.0	5.2	4.3	0.0	0.0	0.0
P-W CANADA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
"C.I.S." (*)	19.1	7.3	25.6	25.2	12.0	0.0	0.0	0.0	0.0	0.0	5.1	9.4
TOTAL (MIO LB ST)	1,947	1,756	1,757	1,545	999	981	1,029	1,124	1,354	1,735	1,690	1,371

(\*) INCLUDES GLUSHENKOV, ISOTOV, IVCHENKO, KUZNETSOV, LOTAREV, SOLOVIEV AND WALTER

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL



## CIVIL TURBINE ENGINES DELIVERIES

## MARKET SHARE BY MANUFACTURER (THRUST - AS % OF TOTAL)

## TURBOFAN - THRUST OF 7 TO 14 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
CFM	0.0	0.0	0.0	0.0	6.4	30.1	39.2	41.6	51.3	41.8	50.9	67.3
IAE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	2.8	3.5
ROLLS-ROYCE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GARRETT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENERAL ELECTRIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LYCOMING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRATT-WHITNEY	53.6	58.0	55.0	44.0	53.2	36.0	30.8	32.1	30.6	25.0	28.5	23.0
P-W CANADA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
"C.I.S." (*)	46.4	42.0	45.0	56.0	40.4	33.9	30.1	26.3	18.0	24.9	17.8	6.1
TOTAL (MIO LB ST)	17,806	16,502	10,368	9,512	7,361	10,115	14,053	14,128	15,979	18,703	19,786	18,348

## TURBOFAN - THRUST ABOVE 14 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
CFM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
IAE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROLLS-ROYCE	16.4	36.8	25.4	20.6	11.6	20.4	18.7	16.7	11.5	24.9	26.8	19.8
GARRETT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENERAL ELECTRIC	47.1	39.4	43.7	39.1	29.9	38.2	44.1	41.8	49.6	39.1	37.8	38.4
LYCOMING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRATT-WHITNEY	36.4	23.8	30.9	40.3	58.6	38.4	33.4	34.4	27.0	33.4	35.4	38.8
P-W CANADA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
"C.I.S." (*)	0.0	0.0	0.0	0.0	0.0	3.1	3.8	7.1	12.0	2.6	0.0	2.7
TOTAL (MIO LB ST)	27,590	22,785	16,533	18,609	12,460	13,483	16,357	17,497	24,284	24,392	35,157	35,963

(\*) INCLUDES GLUSHENKOV, ISOTOV, IVCHENKO, KUZNETSOV, LOTAREV, SOLOVIEV AND WALTER

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

## CIVIL TURBINE ENGINES DELIVERIES

## MARKET SHARE BY MANUFACTURER (THRUST - AS % OF TOTAL)

## TURBOFAN - TOTAL

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
CFM	0.0	0.0	0.0	0.0	2.2	12.3	17.4	17.8	19.6	17.3	17.7	22.4
IAE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	1.0	1.2
ROLLS-ROYCE	10.5	21.5	15.7	15.2	8.8	12.2	11.1	10.1	7.9	15.0	18.4	14.1
GARRETT	0.7	1.1	1.0	0.5	0.8	0.6	0.5	0.4	0.5	0.8	0.3	0.2
GENERAL ELECTRIC	27.3	21.6	24.9	24.4	18.5	21.1	23.3	22.2	28.8	21.2	23.4	24.8
LYCOMING	0.2	0.2	0.8	0.9	1.1	2.2	1.3	2.0	1.7	2.1	1.0	0.8
PRATT-WHITNEY	43.0	38.2	39.6	39.6	53.6	35.7	30.9	32.2	27.5	28.3	31.8	32.6
P-W CANADA	0.3	0.4	0.5	0.2	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.1
"C.I.S." (*)	18.0	16.9	17.6	19.1	14.7	15.5	15.3	15.0	13.9	11.7	6.3	4.0
TOTAL (MIO LB ST)	47,898	41,739	29,098	29,911	21,093	24,835	31,674	32,951	41,875	45,272	56,871	55,813

## TURBOPROP AND TURBOSHAFT

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
ROLLS-ROYCE	5.0	7.3	12.1	8.2	11.6	8.0	4.0	1.7	0.6	0.0	0.0	0.0
TURBOMECA	5.3	5.6	11.4	19.3	12.8	8.2	4.3	4.4	2.1	2.1	3.3	3.2
ALLISON	25.8	26.4	28.4	24.7	11.2	13.2	3.0	5.2	2.4	2.6	7.9	1.6
GARRETT	13.1	13.9	13.6	20.5	15.5	18.2	17.9	18.4	13.5	8.7	9.0	6.9
GENERAL ELECTRIC	1.1	0.0	1.0	1.6	7.5	12.2	12.0	11.3	9.1	10.1	11.8	16.9
LYCOMING	4.7	4.4	3.0	2.4	2.1	2.1	4.2	2.4	0.8	0.9	0.7	0.6
P-W CANADA	39.4	41.7	28.9	21.9	36.1	35.4	53.3	55.9	69.5	73.3	66.3	69.8
"C.I.S." (*)	5.6	0.8	1.6	1.3	3.1	2.6	1.4	0.8	1.9	2.4	1.1	1.0
TOTAL (MIO SHP)	1,250	1,309	1,279	832	684	907	1,012	1,135	1,397	1,450	1,597	1,033

(\*) INCLUDES GLUSHENKOV, ISOTOV, IVCHENKO, KUZNETSOV, LOTAREV, SOLOVIEV AND WALTER

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

# GENERAL AVIATION & CIVIL HELICOPTERS

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## LIGHT & BUSINESS AIRCRAFT

The data on the EC *light aircraft* fleet of single-engine aircraft, twin-engine aircraft and executive jets are compiled by *BUREAU VERITAS*.

The EC fleet of light aircraft (less than 15,000 kg.) is broken down into three categories:

- *single-engine aircraft* ..... : less than 5.7 Tons
- *twin-engine aircraft* ..... : less than 5.7 Tons
- *executive jets* ..... : from 5.7 to 15 Tons

Data for Belgium (1988), Denmark (1988, 1990), Greece (1986) and Spain (1986,1987) are estimated.

The data on the *business aircraft fleet* (in value and units) are prepared by *ITA* (Air Transport Institute, Paris).

There is no definition of what is a "*business aircraft*". These terms relate, however, to the transport of passengers travelling for business reasons. In this study, a "*business aircraft*" is defined as follows:

- aircraft that is not used on scheduled routes,
- aircraft whose services are not marketed to the public (via travel agencies, for example), the available capacity (generally limited) being bought for a sole use, linked to professional reasons. Therefore there is *double counting* of some large transport aircraft, which are also included in the *transport aircraft* fleet (Chapter 2) and that are specially equipped for the V.I.P.,

- aircraft that is not specifically equipped for other activities.

The study is limited to "*air taxi*" (e.a. commercial transport on request), or to private transport for companies or institutions having an aircraft fleet for their own needs (governments, businesses, etc.).

The study excludes piston aircraft, which by nature are designed for activities such as general aviation, leisure transport, training, etc.

The study distinguishes 3 main *business aircraft* categories:

- *large jet aircraft* whose initial use is not business transport, but that are specially equipped for that use and are called "V.I.P."
- *small jet aircraft* specially build for business transport (their high costs imply that they are seldom used on scheduled routes)
- *turboprop aircraft* that are used for air taxi.

For the last 2 categories, and because of the large number of aircraft models, the study excludes those of which less than 10 units were in service for business transport (less than 1% of the market).

The price of the business jets and turboprops is the standard price, e.a. the average selling price, excluding the cost of the equipment.

The value of the fleet is computed as follows:

- for *aircraft that are no longer built*, an average price is computed between the aircraft maximum price, its minimum price and its price after some improvements, between the first year of manufacturing and the last one.
- for *aircraft still in production and put into service for more than 5 years*, the average price is estimated between the new aircraft price, weighted by a factor 2, its maximum price and its price after some improvements on aircraft of the first year of production.
- for *aircraft in production for less than 5 years*, the price of new aircraft is used.

The source for the new table covering *business aircraft deliveries*, is *INTERAVIA AEROSPACE REVIEW* (figures provided by the US GAMA, supplemented by manufacturers and Interavia itself).

A list of *business aircraft* and their categories is given in the following pages.

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**Business aircraft of EC design**

Manufacturer	Model	Seats	Year	Value 1991 (Mio ECUS)
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**Business jets**

<i>AIRBUS</i>	A300-600 .....		1984-- .....	42.926
<i>AEROSPATIALE</i>	Caravelle .....		1958-73 .....	1.455
	Corvette 100 .....	6/12	1972-79 .....	0.307
<i>BRITISH AEROSPACE</i>	BAC 111 .....	79	1963-82 .....	1.334
	HS-125-400/600 .....	7/8	1962-76 .....	0.566
	HS-125-700 .....	8/10	1977-84 .....	3.032
	HS-125-800 .....	2 + 8	1984-- .....	6.548
<i>DASSAULT BREGUET</i>	Falcon 10/100 .....	2 + 7	1973-- .....	2.344
	Falcon 20/200 .....	2 + 9	1965-- .....	3.557
	Falcon 50 .....	2 + 10	1978-- .....	8.892
	Falcon 900 .....	2 + 12/14	1986-- .....	16.977
<i>FOKKER</i>	F-28 .....		1967-- .....	5.578
<i>MBB</i>	Hansa Jet .....	9/15	1966-73 .....	0.243
<i>SOCATA</i>	Paris Jet .....	4	1958-64 .....	0.121

**Business Turboprops**

<i>BRITISH AEROSPACE</i>	Jetstream 31 .....	2 + 18	1967-- .....	2.021
	HS-748 .....	40/50	1961-- .....	2.045
<i>SHORT</i>	Skyvan .....	19	1966-- .....	0.364
<i>FOKKER</i>	F-27 .....	40/60	1957-85 .....	0.889
<i>PILATUS</i>	Porter .....	8/11	1965-- .....	0.170

**Business aircraft of US design**

Manufacturer	Model	Seats	Year	Value 1991 (Mio ECUS)
<b>Business jets</b>				
<i>BOEING</i>	B-707/720 .....		1957-79 .....	1.859
	B-727 .....		1963-84 .....	2.975
	B-737 .....		1967-- .....	4.608
	B-747SP .....		1969-- .....	20.210
<i>McDONNELL DOUGLAS</i>	DC-8 .....		1959-- .....	1.051
	DC-9 .....		1965-81 .....	2.627
<i>BEECH</i>	Beechjet (Diamond II) .....	2 + 7/9	1985-- .....	3.072
<i>CESSNA</i>	Citation I .....	2 + 5/7	1972-85 .....	0.873
	Citation II .....	2 + 10	1978-- .....	2.304
	Citation III .....	2 + 13	1982-- .....	4.770
<i>GATES LEARJET</i>	Learjet 23/24/25 .....	2 + 6	1964-85 .....	0.728
	Learjet 35/36 .....	2 + 10	1974-- .....	2.223
	Learjet 55 .....	2 + 10	1980-- .....	3.476
<i>GULFSTREAM</i>	G II .....	10/19	1966-80 .....	4.204
	G III/IV .....	3 + 19	1979-- .....	11.318
<i>LOCKHEED</i>	Jetstar 6/8/731 .....	2 + 10	1960-73 .....	0.614
	Jetstar II .....	2 + 10	1976-80 .....	1.859
<i>ROCKWELL</i>	Jet Commander .....	2 + 8	1965-68 .....	0.150
	Saber 40 .....	2 + 8	1964-74 .....	0.323
	Saber 60/65/75/80 .....	2 + 10	1967-78 .....	1.091



## Business aircraft of US design (continued)

Manufacturer	Model	Seats	Year	Value 1991 (Mio ECUS)
<b>Business Turboprops</b>				
<i>BEECH</i>	Beech 18 .....	10	1946-66 .....	0.033
	King Air 90 .....	1 + 9	1964-- .....	0.788
	King Air 100 .....	1 + 10	1969-83 .....	0.566
	King Air 200 .....	1 + 10	1973-- .....	1.455
	King Air 300 .....	1 + 10	1984-- .....	2.264
	Beech 1900 .....	2 + 19	1982-- .....	2.466
<i>CESSNA</i>	C-421 .....	1 + 7	1967-85 .....	0.150
	C-425/441 .....	1 + 10	1980-- .....	0.808
<i>CONVAIR</i>	CV 580/640 .....	56	1960-69 .....	0.631
<i>FAIRCHILD</i>	F-27/FH-227 .....	40	1958-68 .....	0.493
	Merlin II .....	2 + 6	1967-68 .....	0.162
	Merlin III .....	2 + 9	1970-83 .....	0.485
	Merlin IV .....	2 + 15	1971-- .....	1.196
<i>GULFSTREAM/ ROCKWELL</i>	Turbo-Commander .....	11	1966-69 .....	0.081
	COM 681/690 .....	9	1970-79 .....	0.238
	COM 900/980/840 .....	1 + 7/10	1980-85 .....	0.728
	COM 1000 .....	1 + 7/10	1981-85 .....	1.067
	Gulfstream I .....	12/26	1959-69 .....	0.485
	Gosse .....	7/11	1933-45 .....	0.137
	<i>PIPER</i>	P-31T-1 .....	1 + 8	1974-- .....
P-31T-2/2XL .....		1 + 10	1981-- .....	0.728
P-42/400 .....		11	1980-- .....	1.374

**Business aircraft of other design**

Manufacturer	Model	Seats	Year	Value 1991 (Mio ECUS)
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**Business jets**

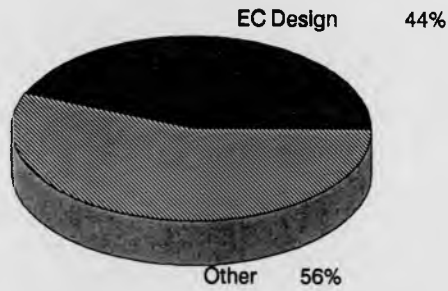
<i>CANADAIR</i>	CL-600 .....	2 + 19	1980-83	4.770
	CL-601 .....	2 + 19	1982--	11.318
<i>LAI</i>	Westwind 1/2 .....	2 + 10	1965--	2.223
	Astra .....	2 + 10	1985--	4.446
<i>MITSUBISHI</i>	Diamond .....	9/11	1981-85	1.617

**Business Turboprops**

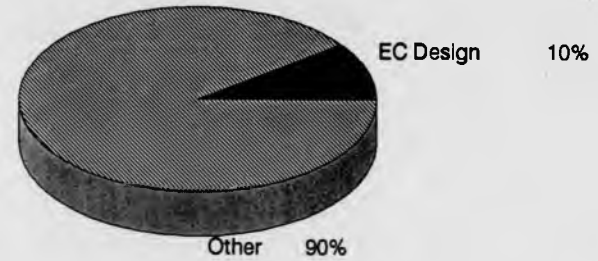
<i>DE HAVILLAND</i>	Twin Otter .....	22	1965--	0.404
	Dash-7 .....	54	1977--	2.829
	Turbo Beaver .....	8	1948-68	0.039
<i>EMBRAER</i>	EMB-110 .....	2 + 18	1973--	1.011
	EMB-120/121 .....	2 + 9	1979--	5.255
<i>MITSUBISHI</i>	MU-2 .....	9	1967-85	0.307
	Marquise .....	11	1979-85	0.728

# EC Light Aircraft Fleet

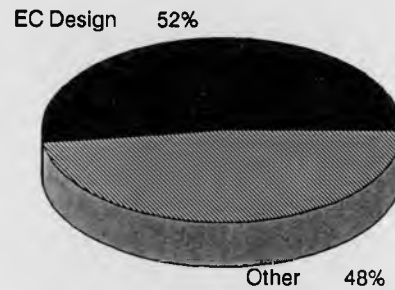
In units (1991)



SINGLE-ENGINE AIRCRAFT



TWIN-ENGINE AIRCRAFT



EXECUTIVE JET

■ SOURCE: BUREAU VERITAS

## LIGHT AIRCRAFT FLEET (UNITS)

## 1) SINGLE-ENGINE

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	715	668	5,607	4,838	121	246	1,193	41	413	4,475	18,317	-	-	-
1984	652	690	5,546	4,756	130	218	1,201	43	395	4,548	18,179	-	-	-
1985	625	702	5,470	4,728	107	239	1,221	43	393	4,771	18,299	224	212	18,735
1986	599	679	5,488	4,846	106	249	1,235	43	408	4,745	18,398	432	232	19,062
1987	635	685	5,578	4,913	109	196	1,239	43	439	5,081	18,918	657	237	19,812
1988	658	725	5,739	4,932	105	273	1,246	50	435	4,246	18,409	842	251	19,502
1989	730	819	5,902	5,037	110	290	1,296	53	467	4,587	19,291	875	272	20,438
1990	824	737	6,663	5,263	113	326	1,319	54	513	5,038	20,850	1,053	295	22,198
1991	881	703	6,554	5,420	142	294	1,367	54	513	4,890	20,818	1,114	332	22,264

## 2) TWIN-ENGINE

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	68	127	695	571	10	40	227	5	69	973	2,785	-	-	-
1984	72	144	670	559	5	38	231	6	59	937	2,721	-	-	-
1985	51	183	652	561	10	28	234	7	63	958	2,747	31	31	2,809
1986	76	190	674	619	10	37	262	9	82	776	2,735	64	33	2,832
1987	67	195	718	623	11	31	265	8	71	784	2,773	98	34	2,905
1988	71	185	738	691	6	38	273	8	89	756	2,855	137	35	3,027
1989	75	173	722	719	6	38	282	9	89	798	2,911	194	36	3,141
1990	94	155	719	780	21	41	288	11	92	863	3,064	222	37	3,323
1991	94	174	882	795	34	41	285	14	104	788	3,211	203	37	3,451

## 3) EXECUTIVE JET

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	11	8	58	50	6	2	49	0	4	131	319	-	-	-
1984	4	8	58	52	0	2	54	1	4	84	267	-	-	-
1985	3	14	48	65	0	3	64	1	13	72	283	0	1	284
1986	6	10	48	71	0	3	80	0	5	70	293	6	0	299
1987	4	10	70	73	0	2	86	1	7	75	328	13	0	341
1988	5	16	62	87	0	3	109	1	7	79	369	21	1	391
1989	5	21	56	98	0	2	123	0	8	73	386	25	3	414
1990	5	14	150	132	0	3	127	0	9	86	526	30	3	559
1991	5	24	86	129	0	4	139	0	9	89	485	67	3	555

■ SOURCE: BUREAU VERITAS

## LIGHT AIRCRAFT FLEET: MARKET SHARE OF EC-BUILT AIRCRAFT (AS %)

## 1) SINGLE-ENGINE

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	36.6	27.2	39.0	67.9	14.0	49.2	56.6	31.7	14.5	39.8	46.9	-	-	-
1984	38.7	26.8	38.6	68.0	36.2	35.8	56.5	27.9	10.1	47.4	48.5	-	-	-
1985	38.1	26.1	38.4	67.8	36.4	56.5	55.4	30.2	14.5	48.6	49.0	28.1	24.5	48.5
1986	37.9	22.2	38.6	72.8	26.4	54.2	54.6	51.2	15.2	48.0	50.1	28.2	27.6	49.4
1987	38.7	19.7	39.4	71.2	16.5	46.9	54.5	51.2	15.3	45.8	49.0	28.2	27.8	48.1
1988	38.3	20.4	31.3	71.6	19.0	34.8	52.2	48.0	15.6	34.4	43.7	28.1	27.1	42.8
1989	38.2	21.1	30.8	70.7	21.8	14.1	48.1	41.5	16.1	37.0	43.1	28.1	26.8	42.2
1990	38.2	21.2	44.0	69.3	38.9	29.8	47.9	37.0	18.1	37.1	47.0	28.1	25.1	45.8
1991	38.3	16.2	32.3	75.6	19.7	38.8	49.0	27.8	17.7	36.2	44.9	29.4	26.5	43.9

## 2) TWIN-ENGINE

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	23.5	10.2	8.9	14.7	40.0	20.0	24.7	0.0	14.5	19.0	15.7	-	-	-
1984	20.8	9.7	9.0	8.9	80.0	18.4	25.5	0.0	3.4	20.3	14.7	-	-	-
1985	7.8	16.4	8.6	7.5	90.0	14.3	26.1	0.0	6.3	19.5	14.5	9.7	0.0	14.2
1986	7.9	10.0	8.2	6.1	80.0	18.9	24.8	11.1	8.5	14.9	11.8	9.4	15.2	11.8
1987	3.0	11.3	7.7	5.8	63.6	19.4	24.9	0.0	8.5	13.1	10.9	9.2	14.7	10.9
1988	5.6	9.7	7.6	5.5	0.0	18.4	24.5	0.0	10.1	11.8	10.1	9.5	14.3	10.1
1989	6.7	8.1	7.8	5.6	0.0	23.7	24.1	11.1	10.1	11.7	10.1	9.8	13.9	10.2
1990	6.4	8.4	9.6	5.1	42.9	17.1	24.3	27.3	9.8	11.9	10.7	9.5	10.8	10.7
1991	6.4	13.8	7.1	6.2	26.5	14.6	24.6	28.6	9.6	10.8	10.2	13.3	5.4	10.3

## 3) EXECUTIVE JET

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	18.2	62.5	37.9	66.0	0.0	50.0	61.2	-	50.0	82.4	63.6	-	-	-
1984	25.0	50.0	34.5	67.3	-	50.0	64.8	100.0	50.0	81.0	62.5	-	-	-
1985	33.3	28.6	43.8	73.8	-	66.7	57.8	100.0	30.8	77.8	61.5	-	0.0	61.3
1986	0.0	40.0	29.2	81.7	-	66.7	51.2	-	60.0	75.7	59.7	83.3	-	60.2
1987	0.0	40.0	27.1	80.8	-	50.0	47.7	100.0	57.1	69.3	55.2	76.9	-	56.0
1988	0.0	50.0	41.9	80.5	-	66.7	39.4	100.0	57.1	75.9	58.0	81.0	0.0	59.1
1989	0.0	52.4	39.3	80.6	-	0.0	50.4	-	50.0	65.8	58.5	80.0	100.0	60.1
1990	0.0	28.6	42.0	84.1	-	0.0	30.7	-	44.4	64.0	52.5	80.0	100.0	54.2
1991	0.0	16.7	30.2	86.0	-	0.0	37.4	-	44.4	66.3	52.8	46.3	100.0	52.3

■ SOURCE: BUREAU VERITAS

## BUSINESS AIRCRAFT FLEET

## TOTAL (IN UNITS - AT YEAR-END)

## WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	6.5%	2.1%	2.7%	2.8%	5.1%	2.8%	76.7%	1.2%	13,597
1987	7.6%	2.2%	2.8%	2.9%	5.5%	2.8%	74.7%	1.5%	13,798
1988	8.5%	2.6%	2.9%	2.9%	6.1%	3.1%	72.1%	1.7%	14,067
1989	9.2%	2.7%	2.9%	3.1%	6.6%	3.5%	70.4%	1.8%	14,374
1990	10.2%	2.7%	3.1%	3.1%	7.3%	3.7%	68.2%	1.6%	14,789
1991	10.3%	2.9%	3.3%	3.3%	7.9%	4.1%	66.7%	1.6%	14,957

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	27.8	14.8	23.7	20.8	2.7	11.5	9.6	13.2	11.3
1987	26.3	14.8	23.2	20.6	2.9	11.2	9.9	15.8	11.7
1988	26.0	16.4	21.5	18.8	2.6	10.5	10.2	14.0	11.9
1989	26.8	16.9	20.3	19.1	2.8	9.2	10.3	11.9	12.1
1990	27.0	18.2	18.4	19.4	3.0	8.8	10.4	11.2	12.2
1991	28.4	17.7	16.8	18.8	3.4	9.9	10.4	9.0	12.3

## BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (%)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	16.0	2.8	5.6	5.2	1.2	2.8	64.9	1.4
1987	17.1	2.8	5.4	5.2	1.4	2.7	63.4	2.0
1988	18.6	3.5	5.2	4.7	1.3	2.7	61.9	2.0
1989	20.4	3.7	4.9	4.8	1.6	2.7	60.2	1.7
1990	22.5	4.0	4.6	4.9	1.8	2.7	58.0	1.5
1991	23.7	4.2	4.5	5.0	2.2	3.2	56.1	1.1

■ SOURCE: ITA

## BUSINESS AIRCRAFT FLEET

TOTAL (IN MIO ECUS - AT YEAR-END)

WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	7.0%	2.5%	3.1%	4.9%	4.2%	2.2%	74.8%	1.2%	25,941
1987	7.7%	2.4%	3.1%	5.3%	4.3%	2.1%	73.6%	1.5%	23,554
1988	8.8%	3.3%	3.2%	5.0%	4.3%	2.2%	71.6%	1.7%	24,552
1989	9.6%	3.5%	3.2%	5.5%	4.5%	2.4%	69.6%	1.8%	29,683
1990	11.1%	3.5%	3.3%	5.4%	5.1%	2.5%	67.4%	1.6%	29,442
1991	11.6%	3.7%	3.5%	5.7%	5.5%	2.8%	65.7%	1.5%	31,054

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	47.8	31.5	33.4	26.2	4.1	23.9	21.3	34.4	23.5
1987	45.6	35.3	33.7	31.2	5.0	23.2	21.8	38.9	24.4
1988	47.8	39.3	32.7	30.0	5.0	21.3	23.8	38.4	26.4
1989	48.9	35.8	33.7	30.7	6.0	19.5	23.2	41.0	26.3
1990	46.5	36.2	32.3	33.0	8.1	16.8	22.8	38.7	26.1
1991	47.9	35.8	33.0	32.1	9.5	19.0	22.7	31.8	26.3

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (%)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	14.2	3.4	4.4	5.5	0.7	2.3	67.7	1.8
1987	14.3	3.5	4.2	6.8	0.9	2.0	65.8	2.5
1988	16.0	4.9	3.9	5.7	0.8	1.8	64.5	2.5
1989	17.8	4.8	4.1	6.4	1.0	1.8	61.4	2.9
1990	19.7	4.9	4.1	6.8	1.6	1.6	58.8	2.4
1991	21.2	5.0	4.3	6.9	2.0	2.0	56.7	1.8

■ SOURCE: ITA

**BUSINESS AIRCRAFT FLEET****TOTAL (IN UNITS - AT YEAR-END)****TOTAL EC - BREAKDOWN BY MEMBER STATE (%)**

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	2.2	5.1	21.1	3.8	24.5	0.2	1.3	13.9	0.1	2.9	0.2	24.5
1987	2.0	5.4	20.7	4.6	24.3	0.1	1.2	16.1	0.2	2.1	0.3	23.0
1988	2.3	4.9	18.8	4.9	26.3	0.1	1.1	16.3	0.2	2.3	0.6	22.4
1989	2.3	4.0	17.5	5.1	30.4	0.1	1.0	16.9	0.2	2.4	0.7	19.5
1990	2.1	3.6	18.0	5.0	32.7	0.1	1.2	15.8	0.2	2.6	0.6	18.2
1991	2.2	3.6	19.7	5.2	31.8	0.1	1.0	15.6	0.2	2.4	0.7	17.5

**MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)**

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	8.9	16.0	26.5	36.7	0.0	25.0	32.3	100.0	26.9	0.0	33.5
1987	0.0	8.8	14.7	37.5	35.3	0.0	23.1	26.6	100.0	27.3	0.0	31.0
1988	3.7	8.5	16.0	40.7	32.7	0.0	7.7	22.1	50.0	25.0	14.3	33.6
1989	10.0	11.3	16.1	38.8	32.0	0.0	7.7	23.9	66.7	25.8	33.3	33.5
1990	9.4	9.3	14.4	35.5	32.9	0.0	5.6	22.2	66.7	23.1	33.3	37.6
1991	26.5	7.3	13.5	37.5	35.4	0.0	0.0	20.8	66.7	27.0	50.0	42.0

**BREAKDOWN OF EC-BUILT AIRCRAFT BY EC MEMBER STATE (%)**

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	1.6	12.1	3.6	32.4	0.0	1.2	16.2	0.4	2.8	0.0	29.6
1987	0.0	1.8	11.6	6.5	32.6	0.0	1.1	16.3	0.7	2.2	0.0	27.2
1988	0.3	1.6	11.5	7.7	33.0	0.0	0.3	13.8	0.3	2.2	0.3	28.8
1989	0.8	1.7	10.5	7.4	36.3	0.0	0.3	15.0	0.6	2.3	0.8	24.4
1990	0.7	1.2	9.6	6.6	39.8	0.0	0.2	13.0	0.5	2.2	0.7	25.3
1991	2.1	0.9	9.4	6.9	39.6	0.0	0.0	11.4	0.5	2.3	1.1	25.9

■ SOURCE: ITA



## BUSINESS AIRCRAFT FLEET

## TOTAL (IN MIO ECUS - AT YEAR-END)

## TOTAL EC - BREAKDOWN BY MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	2.5	3.5	17.9	3.0	25.6	0.2	1.2	19.0	0.5	3.3	0.1	23.3
1987	2.1	3.5	17.2	4.4	24.2	0.1	1.7	21.6	1.1	2.6	0.1	21.5
1988	2.5	2.9	14.9	4.7	26.2	0.1	1.8	21.3	0.8	2.6	0.4	21.9
1989	2.7	2.4	13.2	4.2	28.3	0.1	1.5	23.4	0.8	2.6	0.6	20.1
1990	2.3	2.2	13.8	3.9	29.7	0.0	2.4	21.0	0.6	2.5	0.5	21.1
1991	1.8	2.0	14.9	4.6	29.1	0.0	2.2	19.8	0.6	2.2	0.8	22.0

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	17.1	33.9	42.9	60.0	0.0	25.0	60.0	100.0	59.4	0.0	44.5
1987	0.0	13.8	31.5	60.9	61.3	0.0	13.0	48.6	100.0	63.9	0.0	40.5
1988	8.4	13.6	36.7	68.2	63.2	0.0	7.5	46.7	96.0	61.2	56.5	42.9
1989	23.8	17.1	34.4	66.7	62.0	0.0	7.5	49.4	96.7	63.4	79.5	40.9
1990	22.2	13.6	28.0	58.5	60.7	0.0	3.9	44.2	96.4	58.7	78.1	46.1
1991	20.1	10.1	27.5	63.1	61.6	0.0	0.0	42.1	96.2	60.5	93.7	52.1

## BREAKDOWN OF EC-BUILT AIRCRAFT BY EC MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	1.3	12.7	2.7	32.1	0.0	0.6	23.9	1.0	4.1	0.0	21.6
1987	0.0	1.1	11.9	5.9	32.6	0.0	0.5	23.0	2.4	3.7	0.0	19.1
1988	0.4	0.8	11.5	6.6	34.6	0.0	0.3	20.8	1.6	3.3	0.4	19.6
1989	1.3	0.8	9.3	5.7	35.9	0.0	0.2	23.7	1.7	3.4	1.0	16.8
1990	1.1	0.6	8.3	5.0	38.7	0.0	0.2	19.9	1.3	3.1	0.8	20.9
1991	0.8	0.4	8.5	6.1	37.4	0.0	0.0	17.4	1.2	2.7	1.6	23.9

■ SOURCE: ITA

**BUSINESS AIRCRAFT FLEET****V.I.P. (IN UNITS - AT YEAR-END)****WORLD TOTAL - GEOGRAPHICAL BREAKDOWN**

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	4.5%	3.7%	11.2%	23.1%	0.7%	5.2%	50.7%	0.7%	134
1987	5.1%	2.9%	12.4%	24.8%	0.7%	5.1%	46.7%	2.2%	137
1988	3.8%	3.1%	10.7%	25.2%	0.8%	4.6%	50.4%	1.5%	131
1989	3.8%	3.0%	9.8%	25.0%	0.8%	4.5%	50.8%	2.3%	132
1990	5.3%	3.0%	10.5%	25.6%	0.8%	3.8%	49.6%	1.5%	133
1991	5.1%	2.9%	10.3%	27.2%	0.7%	3.7%	47.8%	2.2%	136

**MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)**

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	0.0	20.0	20.0	0.0	0.0	0.0	1.5	0.0	3.7
1987	14.3	0.0	17.6	5.9	0.0	0.0	1.6	0.0	5.1
1988	20.0	0.0	0.0	6.1	0.0	0.0	1.5	0.0	3.1
1989	0.0	0.0	0.0	6.1	0.0	0.0	1.5	0.0	2.3
1990	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	1.5
1991	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	1.5

**BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (%)**

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	0.0	20.0	60.0	0.0	0.0	0.0	20.0	0.0
1987	14.3	0.0	42.9	28.6	0.0	0.0	14.3	0.0
1988	25.0	0.0	0.0	50.0	0.0	0.0	25.0	0.0
1989	0.0	0.0	0.0	66.7	0.0	0.0	33.3	0.0
1990	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0

■ SOURCE: ITA

## BUSINESS AIRCRAFT FLEET

V.I.P. (IN MIO ECUS - AT YEAR-END)

## WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	4.2%	3.3%	7.7%	31.2%	1.2%	5.8%	45.9%	0.7%	565
1987	3.8%	2.5%	7.2%	42.6%	1.0%	4.9%	36.2%	1.8%	571
1988	3.0%	2.4%	6.4%	44.1%	0.9%	4.2%	37.8%	1.2%	508
1989	2.8%	2.5%	5.9%	45.0%	0.9%	4.0%	37.2%	1.7%	611
1990	3.5%	2.4%	6.3%	47.2%	0.9%	3.3%	35.5%	1.0%	561
1991	3.3%	2.2%	5.8%	50.4%	0.8%	3.0%	33.4%	1.2%	594

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	0.0	9.3	12.0	0.0	0.0	0.0	0.7	0.0	1.5
1987	7.0	0.0	11.2	37.4	0.0	0.0	0.7	0.0	17.3
1988	9.6	0.0	0.0	39.4	0.0	0.0	0.8	0.0	18.0
1989	0.0	0.0	0.0	35.0	0.0	0.0	0.7	0.0	16.0
1990	0.0	0.0	0.0	31.7	0.0	0.0	0.0	0.0	15.0
1991	0.0	0.0	0.0	28.7	0.0	0.0	0.0	0.0	14.5

## BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (%)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	0.0	20.0	60.0	0.0	0.0	0.0	20.0	0.0
1987	1.5	0.0	4.6	92.3	0.0	0.0	1.5	0.0
1988	1.6	0.0	0.0	96.8	0.0	0.0	1.6	0.0
1989	0.0	0.0	0.0	98.4	0.0	0.0	1.6	0.0
1990	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0

■ SOURCE: ITA

## BUSINESS AIRCRAFT FLEET

## V.I.P. (IN UNITS - AT YEAR-END)

## TOTAL EC - BREAKDOWN BY MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
1987	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	85.7
1988	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0
1989	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0
1990	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	85.7
1991	0.0	0.0	0.0	0.0	42.9	0.0	0.0	0.0	0.0	0.0	0.0	57.1

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## BREAKDOWN OF EC-BUILT AIRCRAFT BY EC MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	-	-	-	-	-	-	-	-	-	-	-	-
1987	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	-	-	-	-	-	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	-	-	-	-	-	-
1991	-	-	-	-	-	-	-	-	-	-	-	-

■ SOURCE: ITA

## BUSINESS AIRCRAFT FLEET

V.I.P. (IN MIO ECUS - AT YEAR-END)

TOTAL EC - BREAKDOWN BY MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
1987	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	93.0
1988	0.0	0.0	0.0	0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0	90.4
1989	0.0	0.0	0.0	0.0	20.2	0.0	0.0	0.0	0.0	0.0	0.0	79.8
1990	0.0	0.0	0.0	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0	84.9
1991	0.0	0.0	0.0	0.0	46.1	0.0	0.0	0.0	0.0	0.0	0.0	53.9

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

BREAKDOWN OF EC-BUILT AIRCRAFT BY EC MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	-	-	-	-	-	-	-	-	-	-	-	-
1987	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	-	-	-	-	-	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	-	-	-	-	-	-
1991	-	-	-	-	-	-	-	-	-	-	-	-

■ SOURCE: IATA

## BUSINESS AIRCRAFT FLEET

JETS = V.I.P. + OTHER JETS (IN UNITS - AT YEAR-END)

## WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	7.2%	2.3%	2.3%	3.6%	3.1%	3.2%	77.3%	1.1%	5,987
1987	8.0%	2.3%	2.4%	3.5%	3.5%	3.3%	75.7%	1.3%	6,183
1988	9.0%	2.8%	2.5%	3.3%	4.0%	3.7%	73.3%	1.4%	6,379
1989	9.6%	3.0%	2.4%	3.4%	4.4%	4.2%	71.5%	1.3%	6,609
1990	10.9%	3.1%	2.5%	3.4%	5.0%	4.6%	69.2%	1.2%	6,910
1991	11.2%	3.4%	2.5%	3.6%	5.5%	5.1%	67.6%	1.1%	7,062

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	52.2	27.4	50.7	32.4	7.5	20.8	20.9	33.3	24.1
1987	50.8	27.5	48.7	33.9	7.9	20.0	21.2	39.2	24.6
1988	49.7	30.2	45.0	31.6	6.7	18.1	21.5	37.1	24.7
1989	50.4	29.1	43.5	32.6	7.5	15.4	21.5	32.6	24.7
1990	49.6	30.9	39.2	33.5	8.1	14.1	21.3	30.6	24.7
1991	50.4	31.3	37.9	32.2	9.1	15.9	21.1	25.0	24.6

## BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (%)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	15.5	2.6	4.9	4.8	1.0	2.8	67.0	1.5
1987	16.5	2.6	4.8	4.9	1.1	2.7	65.4	2.0
1988	18.0	3.4	4.6	4.3	1.1	2.7	63.8	2.1
1989	19.6	3.6	4.3	4.5	1.3	2.6	62.3	1.8
1990	21.8	3.9	4.0	4.6	1.6	2.6	59.8	1.5
1991	22.8	4.4	3.9	4.7	2.0	3.3	57.8	1.1

■ SOURCE: ITA

## BUSINESS AIRCRAFT FLEET

JETS = V.I.P. + OTHER JETS (IN MIO ECUS - AT YEAR-END)

## WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	7.0%	2.8%	3.0%	6.0%	2.3%	2.3%	75.5%	1.2%	18,368
1987	7.4%	2.6%	2.9%	6.3%	2.3%	2.1%	74.8%	1.5%	17,160
1988	8.7%	3.6%	3.0%	5.7%	2.4%	2.2%	72.7%	1.6%	18,461
1989	9.5%	3.9%	2.9%	6.2%	2.6%	2.4%	70.8%	1.8%	22,693
1990	11.1%	3.9%	3.0%	6.1%	3.3%	2.5%	68.6%	1.5%	22,671
1991	11.9%	4.0%	3.0%	6.4%	3.7%	2.8%	66.8%	1.3%	23,945

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	63.8	39.4	45.7	29.6	10.2	32.4	29.6	50.4	32.6
1987	61.9	44.8	46.1	35.6	12.1	31.3	29.3	53.9	33.0
1988	62.0	46.7	44.1	34.3	11.2	27.8	30.9	53.1	34.6
1989	62.7	41.6	46.0	34.8	13.1	25.1	29.7	55.7	34.0
1990	58.8	42.5	44.5	37.4	16.3	21.2	28.9	54.1	33.5
1991	59.5	41.6	47.3	36.4	18.6	24.0	28.8	46.7	33.8

## BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (%)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	13.7	3.4	4.2	5.5	0.7	2.3	68.5	1.8
1987	13.9	3.5	4.1	6.7	0.9	2.0	66.4	2.5
1988	15.6	4.9	3.8	5.6	0.8	1.8	65.0	2.5
1989	17.5	4.7	3.9	6.3	1.0	1.8	61.9	2.9
1990	19.5	4.9	4.0	6.8	1.6	1.6	59.2	2.5
1991	21.1	5.0	4.2	6.9	2.0	2.0	57.0	1.8

■ SOURCE: IATA

## BUSINESS AIRCRAFT FLEET

JETS = V.I.P. + OTHER JETS (IN UNITS - AT YEAR-END)

TOTAL EC - BREAKDOWN BY MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	1.2	3.5	15.2	4.0	23.8	0.2	1.9	22.1	0.2	3.5	0.0	24.5
1987	1.6	3.2	15.4	5.5	22.3	0.0	1.8	24.1	0.4	2.0	0.0	23.7
1988	1.6	3.1	13.5	5.8	22.4	0.0	1.6	24.1	0.2	2.3	0.3	25.2
1989	1.7	3.1	12.1	6.0	23.5	0.0	1.4	26.0	0.3	2.4	0.6	22.8
1990	1.7	2.8	12.9	5.2	25.6	0.0	1.9	24.3	0.3	2.5	0.5	22.3
1991	1.8	2.8	13.8	5.7	25.1	0.0	1.4	23.5	0.3	2.5	0.6	22.5

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	26.7	30.8	52.9	74.5	0.0	37.5	42.1	100.0	40.0	0.0	61.9
1987	0.0	31.3	28.9	66.7	77.3	0.0	33.3	36.1	100.0	50.0	0.0	58.1
1988	11.1	27.8	33.8	72.7	77.3	0.0	11.1	29.7	100.0	46.2	50.0	54.9
1989	27.3	25.0	32.5	68.4	80.5	0.0	11.1	30.3	100.0	46.7	75.0	53.8
1990	23.1	19.0	27.8	69.2	79.7	0.0	7.1	27.5	100.0	42.1	75.0	56.3
1991	21.4	18.2	27.5	66.7	82.3	0.0	0.0	25.4	100.0	45.0	100.0	58.8

BREAKDOWN OF EC-BUILT AIRCRAFT BY EC MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	1.8	8.9	4.0	33.9	0.0	1.3	17.9	0.4	2.7	0.0	29.0
1987	0.0	2.0	8.8	7.2	33.9	0.0	1.2	17.1	0.8	2.0	0.0	27.1
1988	0.4	1.8	9.2	8.5	34.9	0.0	0.4	14.4	0.4	2.1	0.4	27.8
1989	0.9	1.6	7.8	8.1	37.5	0.0	0.3	15.6	0.6	2.2	0.9	24.4
1990	0.8	1.1	7.3	7.3	41.1	0.0	0.3	13.4	0.5	2.2	0.8	25.3
1991	0.8	1.0	7.6	7.6	41.1	0.0	0.0	11.8	0.5	2.3	1.3	26.2

■ SOURCE: IATA



**BUSINESS AIRCRAFT FLEET**

JETS = V.I.P. + OTHER JETS (IN MIO ECUS - AT YEAR-END)

## TOTAL EC - BREAKDOWN BY MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.6	2.9	14.1	3.2	26.6	0.2	1.3	24.7	0.7	3.7	0.0	22.0
1987	0.6	2.2	13.7	5.3	24.2	0.0	2.1	27.4	1.5	2.8	0.0	20.2
1988	1.5	1.8	11.7	5.4	25.4	0.0	2.2	26.1	1.0	2.7	0.4	21.6
1989	2.0	1.7	9.8	4.8	25.9	0.0	1.8	28.7	1.1	2.8	0.8	20.7
1990	1.6	1.6	11.0	4.2	26.7	0.0	2.9	25.6	0.8	2.5	0.5	22.5
1991	1.0	1.5	11.9	5.0	26.4	0.0	2.7	23.5	0.7	2.2	1.0	24.0

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	29.6	46.6	57.4	81.1	0.0	31.3	65.2	100.0	74.4	0.0	59.3
1987	0.0	31.0	45.3	71.3	86.3	0.0	15.0	54.1	100.0	84.1	0.0	56.1
1988	18.7	29.3	53.5	78.7	87.4	0.0	8.3	51.4	100.0	76.8	71.1	53.0
1989	43.5	25.6	51.6	76.6	89.3	0.0	8.4	53.1	100.0	79.3	88.6	49.2
1990	40.2	18.5	39.4	70.6	86.9	0.0	4.2	46.7	100.0	74.6	88.2	53.6
1991	44.5	16.7	38.9	73.2	85.5	0.0	0.0	44.8	100.0	75.9	100.0	58.4

## BREAKDOWN OF EC-BUILT AIRCRAFT BY EC MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	1.3	10.3	2.8	33.8	0.0	0.7	25.2	1.1	4.3	0.0	20.5
1987	0.0	1.1	10.0	6.1	33.8	0.0	0.5	23.9	2.5	3.8	0.0	18.3
1988	0.5	0.9	10.1	6.9	35.8	0.0	0.3	21.6	1.6	3.4	0.5	18.4
1989	1.4	0.7	8.1	5.9	36.9	0.0	0.2	24.3	1.7	3.5	1.1	16.3
1990	1.1	0.5	7.3	5.1	39.5	0.0	0.2	20.4	1.4	3.2	0.8	20.5
1991	0.8	0.4	7.8	6.2	38.0	0.0	0.0	17.7	1.2	2.8	1.7	23.5

■ SOURCE: ITA

## BUSINESS AIRCRAFT FLEET

## TURBOPROPS (IN UNITS - AT YEAR-END)

## WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	6.1%	2.0%	2.9%	2.2%	6.7%	2.4%	76.3%	1.4%	7,610
1987	7.3%	2.1%	3.0%	2.5%	7.1%	2.5%	73.8%	1.6%	7,615
1988	8.2%	2.4%	3.2%	2.6%	7.9%	2.6%	71.2%	2.0%	7,688
1989	8.8%	2.4%	3.3%	2.8%	8.4%	2.8%	69.4%	2.1%	7,765
1990	9.6%	2.3%	3.6%	2.9%	9.4%	2.9%	67.4%	2.0%	7,879
1991	9.5%	2.4%	4.0%	3.0%	10.1%	3.1%	65.8%	2.0%	7,895

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	5.0	3.9	6.7	5.9	1.0	1.6	0.6	1.0	1.2
1987	4.5	3.7	6.5	5.3	0.9	1.6	0.6	0.8	1.3
1988	4.5	2.8	6.1	5.4	0.8	1.5	0.6	0.6	1.3
1989	4.8	3.8	5.8	5.1	0.8	1.4	0.5	0.6	1.3
1990	4.6	3.3	5.3	4.9	0.7	1.3	0.5	0.6	1.3
1991	5.3	0.5	5.0	4.6	0.6	1.2	0.6	0.6	1.4

## BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (%)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	24.2	6.3	15.8	10.5	5.3	3.2	33.7	1.1
1987	26.0	6.3	15.6	10.4	5.2	3.1	32.3	1.0
1988	28.3	5.1	15.2	11.1	5.1	3.0	31.3	1.0
1989	31.7	6.7	14.4	10.6	4.8	2.9	27.9	1.0
1990	33.3	5.7	14.3	10.5	4.8	2.9	27.6	1.0
1991	37.4	0.9	15.0	10.3	4.7	2.8	28.0	0.9

■ SOURCE: ITA

## BUSINESS AIRCRAFT FLEET

## TURBOPROPS (IN MIO ECUS - AT YEAR-END)

## WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	7.0%	2.0%	3.3%	2.3%	8.9%	2.1%	73.0%	1.4%	7,574
1987	8.3%	2.1%	3.5%	2.6%	9.6%	2.1%	70.2%	1.6%	6,394
1988	9.2%	2.3%	3.7%	2.9%	9.8%	2.2%	68.0%	1.9%	6,091
1989	9.9%	2.3%	4.0%	3.1%	10.5%	2.4%	65.8%	2.1%	6,989
1990	10.9%	2.5%	4.3%	3.0%	11.4%	2.3%	63.5%	2.1%	6,771
1991	10.6%	2.6%	4.9%	3.1%	11.9%	2.6%	62.1%	2.1%	7,108

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	8.8	4.5	6.6	4.5	0.4	1.4	0.4	1.1	1.4
1987	6.3	3.8	5.6	3.5	0.3	1.3	0.4	0.8	1.2
1988	7.1	3.4	5.4	4.5	0.3	1.3	0.5	0.7	1.5
1989	5.7	4.8	4.8	3.9	0.2	0.9	0.5	0.7	1.4
1990	4.7	3.9	3.9	3.4	0.2	0.8	0.4	0.6	1.2
1991	4.0	4.7	3.2	2.9	0.1	0.6	0.4	0.6	1.1

## BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (%)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	43.2	6.3	15.6	7.3	2.2	2.1	22.3	1.0
1987	42.1	6.4	15.7	7.4	2.3	2.1	22.8	1.1
1988	44.2	5.2	13.7	8.8	2.0	1.8	23.3	0.9
1989	42.0	8.3	14.4	8.8	1.8	1.6	22.0	1.1
1990	43.1	8.3	14.2	8.6	1.7	1.5	21.4	1.1
1991	39.3	11.2	14.6	8.5	1.6	1.4	22.1	1.2

■ SOURCE: ITA

## BUSINESS AIRCRAFT FLEET

## TURBOPROPS (IN UNITS - AT YEAR-END)

## TOTAL EC - BREAKDOWN BY MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	3.3	6.5	26.7	3.7	25.2	0.2	0.9	6.3	0.0	2.4	0.4	24.5
1987	2.3	7.4	25.5	3.8	26.0	0.2	0.7	9.0	0.0	2.2	0.5	22.4
1988	2.9	6.5	23.6	4.1	29.8	0.2	0.6	9.1	0.2	2.4	0.8	19.8
1989	2.8	4.8	22.5	4.3	36.9	0.1	0.6	8.4	0.1	2.3	0.7	16.4
1990	2.5	4.3	22.9	4.9	39.7	0.1	0.5	7.5	0.1	2.6	0.7	14.1
1991	2.7	4.4	25.9	4.7	38.9	0.1	0.7	7.3	0.1	2.3	0.7	12.3

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	0.0	8.1	0.0	3.4	0.0	0.0	0.0	0.0	9.1	0.0	7.1
1987	0.0	0.0	7.0	0.0	3.4	0.0	0.0	4.0	0.0	8.3	0.0	5.6
1988	0.0	0.0	6.8	0.0	2.1	0.0	0.0	3.5	0.0	6.7	0.0	8.9
1989	0.0	3.0	7.8	0.0	3.2	0.0	0.0	5.3	0.0	6.3	0.0	7.1
1990	0.0	3.0	6.9	0.0	3.0	0.0	0.0	5.3	0.0	5.0	0.0	8.4
1991	30.0	0.0	5.7	0.0	3.4	0.0	0.0	5.5	0.0	5.9	0.0	9.8

## BREAKDOWN OF EC-BUILT AIRCRAFT BY EC MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	0.0	43.5	0.0	17.4	0.0	0.0	0.0	0.0	4.3	0.0	34.8
1987	0.0	0.0	40.0	0.0	20.0	0.0	0.0	8.0	0.0	4.0	0.0	28.0
1988	0.0	0.0	35.7	0.0	14.3	0.0	0.0	7.1	0.0	3.6	0.0	39.3
1989	0.0	3.0	36.4	0.0	24.2	0.0	0.0	9.1	0.0	3.0	0.0	24.2
1990	0.0	2.9	34.3	0.0	25.7	0.0	0.0	8.6	0.0	2.9	0.0	25.7
1991	15.0	0.0	27.5	0.0	25.0	0.0	0.0	7.5	0.0	2.5	0.0	22.5

■ SOURCE: ITA

## BUSINESS AIRCRAFT FLEET

## TURBOPROPS (IN MIO ECUS - AT YEAR-END)

## TOTAL EC - BREAKDOWN BY MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	6.9	5.1	27.2	2.6	23.1	0.2	0.8	5.2	0.0	2.4	0.3	26.2
1987	5.6	6.6	25.8	2.2	24.2	0.2	0.8	7.6	0.0	2.2	0.3	24.6
1988	5.3	6.0	24.2	2.4	28.2	0.2	0.7	7.7	0.1	2.1	0.3	22.7
1989	5.1	4.5	23.7	2.2	35.9	0.2	0.7	6.8	0.1	2.2	0.3	18.3
1990	4.5	4.0	23.6	3.0	39.8	0.2	0.7	5.2	0.1	2.3	0.2	16.4
1991	4.7	3.8	26.1	3.0	39.2	0.2	0.4	5.8	0.1	2.1	0.3	14.3

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	0.0	17.9	0.0	1.0	0.0	0.0	0.0	0.0	2.4	0.0	14.1
1987	0.0	0.0	13.8	0.0	0.9	0.0	0.0	1.2	0.0	2.1	0.0	9.8
1988	0.0	0.0	13.5	0.0	0.6	0.0	0.0	1.1	0.0	2.0	0.0	15.5
1989	0.0	7.2	12.3	0.0	0.7	0.0	0.0	1.5	0.0	1.5	0.0	11.5
1990	0.0	6.7	9.9	0.0	0.6	0.0	0.0	1.4	0.0	1.1	0.0	10.7
1991	0.0	0.0	7.6	0.0	0.6	0.0	0.0	1.2	0.0	1.1	0.0	11.9

## BREAKDOWN OF EC-BUILT AIRCRAFT BY EC MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1986	0.0	0.0	55.0	0.0	2.5	0.0	0.0	0.0	0.0	0.6	0.0	41.8
1987	0.0	0.0	56.3	0.0	3.6	0.0	0.0	1.5	0.0	0.7	0.0	37.9
1988	0.0	0.0	46.1	0.0	2.4	0.0	0.0	1.2	0.0	0.6	0.0	49.7
1989	0.0	5.6	50.6	0.0	4.7	0.0	0.0	1.7	0.0	0.6	0.0	36.8
1990	0.0	5.8	49.8	0.0	4.8	0.0	0.0	1.6	0.0	0.5	0.0	37.5
1991	0.0	0.0	49.4	0.0	5.6	0.0	0.0	1.7	0.0	0.6	0.0	42.7

■ SOURCE: ITA

## DELIVERIES OF BUSINESS AIRCRAFT (IN UNITS)

## BREAKDOWN BY DESIGN ORIGIN

## JETS

	1986	1987	1988	1989	1990	1991	1992 (6MONTHS)
EC	25.0%	35.6%	28.6%	27.8%	23.2%	19.5%	21.8%
USA	58.7%	53.4%	59.8%	61.1%	61.6%	69.7%	66.1%
OTHER WORLD	16.3%	11.0%	11.6%	11.1%	15.1%	10.9%	12.1%
TOTAL	208	219	259	252	271	267	124

## TURBOPROPS

	1986	1987	1988	1989	1990	1991	1992 (6MONTHS)
EC	2.7%	4.2%	5.4%	5.2%	5.9%	14.8%	18.3%
USA	92.8%	95.0%	93.5%	92.4%	91.3%	82.1%	70.4%
OTHER WORLD	4.5%	0.8%	1.1%	2.4%	2.8%	3.1%	11.3%
TOTAL	221	239	261	251	253	223	71

## PISTON ENGINES

	1986	1987	1988	1989	1990	1991	1992 (6MONTHS)
EC	5.5%	6.1%	4.3%	3.1%	4.8%	4.2%	6.3%
USA	94.5%	93.9%	95.7%	96.9%	95.2%	95.8%	93.7%
OTHER WORLD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	380	361	322	391	355	286	127

GRAND TOTAL	809	819	842	894	879	776	322
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■ SOURCE: INTERAVIA

## CIVIL HELICOPTERS

The figures on the *civil and para-public helicopter* fleet are provided by *AEROSPATIALE*.

The data on the *commercial helicopter fleet* (in value and units) are prepared by *ITA*. (Air Transport Institute, Paris).

The study includes the "*civil helicopters*". Therefore some helicopters used by public authorities are included while they may also be included in the *military helicopters* fleet given in chapter 4.

The analysis covers the following *geographical areas*:

- *EC*
- *Other Europe*: Austria, Cyprus, Finland, Gibraltar, Greenland, Iceland, Liechtenstein, Malta, Monaco, Norway, Sweden, Switzerland, Turkey
- *USA*
- *Rest of the world*

*Aviation Data Wichita* is the source, except *Bureau Veritas* for the EC.

The value of the *civil helicopter* fleet is computed as follows:

- for *helicopters that are no longer built*, an average price is computed between the helicopter maximum price, its minimum price and its price after some improvements, between the first year of manufacturing and the last one.

- for *helicopters still in production*, the average price is estimated between the new helicopter price, weighted by a factor 2, and its maximum price, its minimum price and its price after some improvements on helicopters of the first year of production.
- for *helicopters in production for less than 5 years*, the price of new helicopter is used.

The source for the new table covering *commercial helicopter deliveries*, is also *ITA*.

A list of *commercial helicopters* covered by the study is given in the following pages.

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**Helicopters of EC design**


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Manufacturer	Model	Seats	Year	Value 1991 (Mio ECUS)
<i>AEROSPATIALE</i>	Lama (SA315B) .....	5	1971--	0.323
	Alouette III (SA316) .....	7	1966-81	0.243
	Alouette II (SA318) .....	5	1969-75	0.089
	Alouette III (SA319) .....	7	1974-76	0.251
	Puma (SA330J) .....	18-22	1974-80	1.415
	SuperPuma (SA332C) .....	23	1982--	2.829
	SuperPuma (SA332L) .....	22	1982--	3.840
	Gazelle (SA341/342) .....	5	1972-80	0.162
	Ecureuil (AS350) .....	6	1978--	0.388
	Ecureuil/2 (AS355) .....	6	1981--	0.663
	Dauphin (SA360) .....	14	1976-80	0.437
	Dauphin/2 (SA365) .....	14	1977-81	0.663
	Dauphin/2 (SA365N) .....	14	1981-	2.021
<i>AGUSTA</i>	A 109A .....	8	1975--	0.970
<i>MBB</i>	BO-105 .....	5	1973--	0.647
	BK-117 .....	11	1983--	1.334
<i>WESTLAND</i>	WG-30 .....	20	1983--	2.587
	Wessex 60 .....	19	1965--	0.404

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**Helicopters of US design**


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<i>AGUSTA BELL</i>	A-204/205 .....	10	1965-67	0.299
	A-206B .....	5	1966-77	0.307
	A-212 .....	15	1971---	1.374
	A-412 .....	15	1981---	2.486

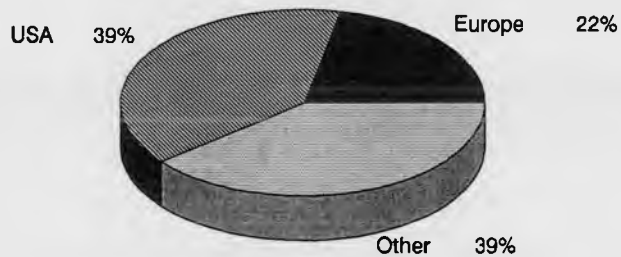


## Helicopters of US design (continued)

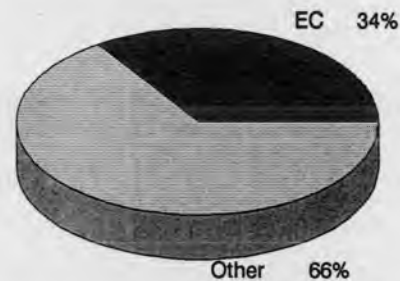
Manufacturer	Model	Seats	Year	Value 1991 (Mio ECUS)
<i>BELL</i>	47 (series - including Agusta Bell 47)	3-4	1957-73	0.035
	B-204B	10	1965-67	0.299
	B-205A	15	1968-80	0.525
	Jet Ranger B-206 A/B	5	1966---	0.307
	Long Range B-206L	7	1975---	0.461
	B-212	15	1971---	1.374
	B-214B	16	1976-81	0.970
	B-214ST	20	1982---	3.395
	B-222	8-10	1980---	0.889
	B-412	15	1981---	2.486
<i>BOEING VERTOL</i>	B-107	28	1961-65	4.042
	B-234	47	1981---	11.318
<i>ENSTRÖM</i>	F-28 (series)	3	1966--	0.057
	F-280	3	1974--	0.077
<i>FAIRCHILD</i>	FH-1100	5	1966-72	0.070
<i>HILLER</i>	UH-12 (series)	3-4	1959---	0.079
<i>HUGHES (McDD)</i>	269/300	2-3	1961---	0.061
	369/500	7	1969--	0.283
<i>ROBINSON</i>	R-22 (series)	2	1979--	0.061
<i>SIKORSKY</i>	S-55	12	1949-61	0.046
	S-58	20	1953-77	0.283
	S-61	30	1968-79	1.617
	S-62	12	1960-70	0.089
	S-64	3-5	1972--	4.689
	S-76A	14	1979--	2.183

# Civil Helicopter Fleet

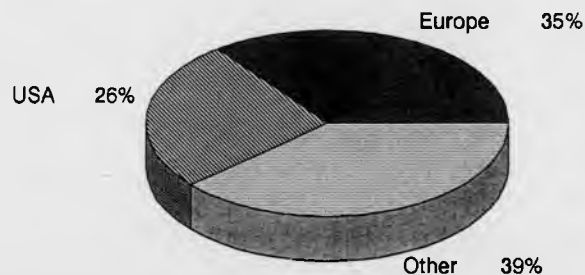
(in value - 1991)



BREAKDOWN BY AREA



EC MARKET SHARE



BREAKDOWN OF EC MARKETS

■ Source: ITA

## CIVIL AND PARA-PUBLIC HELICOPTER FLEET

UNITS (AT YEAR-END)

	EC				USA			
	TOTAL	AS % OF TOTAL			TOTAL	AS % OF TOTAL		
		DESIGN ORIGIN		LICENCE (1)		DESIGN ORIGIN		
		EC	USA			EC	USA	
1960	176	22.7	77.3	48.3	-	-	-	
1965	406	33.0	67.0	30.0	1,854	0.6	99.4	
1970	598	27.6	72.4	32.4	2,980	1.1	98.9	
1975	1,023	32.7	67.3	22.0	4,803	3.3	96.7	
1980	1,477	36.4	63.6	23.0	7,259	6.3	93.7	
1981	1,614	37.7	62.3	20.8	7,735	7.4	92.6	
1982	1,709	38.4	61.6	20.6	7,947	8.5	91.5	
1983	1,775	40.5	59.5	20.1	8,192	8.7	91.3	
1984	1,829	42.2	57.8	19.5	8,469	9.1	90.9	
1985	1,840	43.5	56.5	18.5	8,540	9.7	90.3	
1986	1,918	43.8	56.2	17.2	8,577	10.6	89.4	
1987	2,067	44.1	55.9	16.3	8,409	11.0	89.0	
1988	2,308	42.7	57.3	14.8	8,210	11.2	88.8	
1989	2,610	41.0	59.0	13.7	8,323	11.1	88.9	
1990 (2)	2,891	39.6	60.4	12.2	8,522	11.3	88.7	
1991 (3)	3,052	39.7	60.3	10.5	8,669	11.2	88.8	

(1) HELICOPTERS OF US DESIGN MANUFACTURED IN THE EC UNDER LICENCE (AS % OF TOTAL)

(2) DOES NOT INCLUDE 22 'EX-USSR'-DESIGNED HELICOPTERS REGISTERED IN FRG

(3) DOES NOT INCLUDE 10 'EX-USSR'-DESIGNED HELICOPTERS REGISTERED IN FRG

■ SOURCE: AEROSPATIALE

## EC CIVIL AND PARA-PUBLIC HELICOPTER FLEET

## UNITS (AT YEAR-END)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1960	10	0	14	0	82	0	0	32	0	3	0	35
1965	2	6	75	16	148	2	2	49	0	7	3	96
1970	13	11	121	31	155	4	6	66	0	17	1	173
1975	26	22	247	59	227	8	6	85	0	29	9	305
1980	26	37	334	68	383	18	13	133	0	26	6	433
1981	28	44	356	76	407	19	15	158	0	31	8	472
1982	26	41	368	83	451	23	14	181	0	31	7	484
1983	28	36	383	91	467	22	13	201	0	36	9	489
1984	25	34	399	92	487	25	14	218	0	39	8	488
1985	24	37	400	86	475	25	16	224	0	41	8	504
1986	27	37	425	99	496	25	15	227	0	42	11	514
1987	25	40	436	119	555	31	16	264	0	33	14	534
1988	27	43	430	131	628	31	22	315	0	32	22	627
1989	31	42	433	163	701	41	25	367	0	35	25	747
1990 (1)	35	46	457	194	791	42	31	406	0	37	29	823
1991 (2)	41	50	526	235	838	44	36	404	0	38	35	805

(1) DOES NOT INCLUDE 22 'EX-USSR'-DESIGNED HELICOPTERS REGISTERED IN FRG

(2) DOES NOT INCLUDE 10 'EX-USSR'-DESIGNED HELICOPTERS REGISTERED IN FRG

■ SOURCE: AEROSPATIALE

## EC CIVIL AND PARA-PUBLIC HELICOPTER FLEET

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF FLEET AT YEAR-END)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1960	0.0	-	7.1	-	41.5	-	-	6.3	-	100.0	-	0.0
1965	50.0	0.0	40.0	0.0	61.5	0.0	0.0	10.2	-	57.1	100.0	0.0
1970	38.5	0.0	30.6	9.7	63.9	50.0	33.3	7.6	-	41.2	0.0	2.9
1975	34.6	0.0	37.7	25.4	67.0	75.0	33.3	16.5	-	65.5	11.1	7.9
1980	34.6	0.0	44.6	30.9	60.1	33.3	7.7	43.6	-	53.8	0.0	11.5
1981	32.1	0.0	48.6	32.9	62.9	31.6	6.7	43.0	-	54.8	0.0	11.2
1982	34.6	0.0	46.2	32.5	62.1	30.4	7.1	42.0	-	48.4	0.0	14.7
1983	32.1	5.6	43.9	35.2	63.0	40.9	15.4	40.8	-	50.0	11.1	20.9
1984	36.0	5.9	45.1	41.3	63.0	32.0	14.3	41.7	-	48.7	12.5	23.6
1985	41.7	8.1	45.5	40.7	67.2	32.0	18.8	41.5	-	48.8	12.5	25.0
1986	40.7	10.8	44.0	44.4	66.1	24.0	20.0	45.4	-	42.9	18.2	26.3
1987	44.0	10.0	45.0	47.9	63.8	19.4	18.8	49.6	-	39.4	28.6	24.9
1988	40.7	11.6	47.2	50.4	59.1	19.4	18.2	48.3	-	31.3	59.1	23.1
1989	38.7	11.9	44.8	48.5	57.9	24.4	20.0	46.6	-	31.4	68.0	21.4
1990 (1)	34.3	13.0	42.5	45.4	55.6	26.2	16.1	46.1	-	32.4	58.6	21.1
1991 (2)	24.4	14.0	39.0	46.8	55.8	25.0	11.1	47.8	-	26.3	54.3	21.9

(1) DOES NOT INCLUDE 22 'EX-USSR'-DESIGNED HELICOPTERS REGISTERED IN FRG

(2) DOES NOT INCLUDE 10 'EX-USSR'-DESIGNED HELICOPTERS REGISTERED IN FRG

■ SOURCE: AEROSPATIALE

## CIVIL HELICOPTER FLEET

## IN UNITS - AT YEAR-END

## WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	1984	1985	1986	1987	1988	1989	1990	1991
EC	11.4%	11.4%	11.5%	11.8%	13.0%	14.3%	14.9%	15.4%
REST OF EUROPE	2.8%	3.0%	3.2%	3.4%	3.6%	3.6%	3.9%	3.8%
USA	59.5%	58.1%	56.8%	55.2%	52.3%	51.1%	49.2%	48.3%
OTHER WORLD	26.3%	27.4%	28.5%	29.6%	31.1%	31.1%	32.0%	32.4%
<b>TOTAL</b>	<b>15,328</b>	<b>16,087</b>	<b>16,865</b>	<b>17,172</b>	<b>17,838</b>	<b>18,273</b>	<b>19,142</b>	<b>20,047</b>

## MARKET SHARE OF EC-BUILT HELICOPTERS (AS % OF TOTAL)

	1984	1985	1986	1987	1988	1989	1990	1991
EC	38.5	39.7	40.7	40.1	39.5	38.6	37.4	37.8
REST OF EUROPE	21.7	26.0	27.2	28.0	28.2	29.6	31.3	32.1
USA	10.0	10.2	10.4	10.6	10.6	11.0	11.0	11.1
OTHER WORLD	13.7	14.5	15.7	16.5	18.3	19.6	20.4	21.3
<b>TOTAL</b>	<b>14.6</b>	<b>15.2</b>	<b>15.9</b>	<b>16.5</b>	<b>17.4</b>	<b>18.2</b>	<b>18.7</b>	<b>19.3</b>

## BREAKDOWN OF EC-BUILT HELICOPTERS INTO GEOGRAPHICAL ZONES (%)

	1984	1985	1986	1987	1988	1989	1990	1991
EC	30.2	29.8	29.3	28.7	29.6	30.2	29.9	30.2
REST OF EUROPE	4.1	5.2	5.5	5.8	5.8	5.8	6.4	6.3
USA	40.9	39.0	37.0	35.7	31.9	30.7	28.9	27.7
OTHER WORLD	24.8	26.1	28.1	29.8	32.7	33.4	34.8	35.8

■ SOURCE: ITA

## CIVIL HELICOPTER FLEET

## IN UNITS - AT YEAR-END

## TOTAL EC - BREAKDOWN BY MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1984	1.1	1.9	22.7	2.9	23.9	1.3	0.7	14.1	0.1	1.9	0.6	28.8
1985	1.0	2.2	22.4	3.6	23.7	1.2	0.7	14.1	0.1	1.9	0.7	28.4
1986	1.0	2.0	22.4	3.6	23.7	1.3	0.8	14.6	0.0	2.0	0.7	27.9
1987	1.0	1.5	21.9	4.1	23.8	1.4	0.8	15.2	0.0	1.6	0.9	27.7
1988	0.9	1.4	18.9	5.7	25.5	1.5	1.0	15.0	0.0	1.3	0.8	28.1
1989	0.8	1.2	17.1	7.1	24.8	1.5	0.8	14.8	0.0	1.2	0.8	29.9
1990	0.8	1.5	16.3	6.2	25.8	1.2	1.1	15.0	0.0	1.2	0.9	30.0
1991	0.7	1.7	17.1	6.7	26.1	1.1	1.2	14.8	0.0	1.2	0.9	28.5

## MARKET SHARE OF EC-BUILT HELICOPTERS (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1984	5.0	9.1	46.3	49.0	52.3	36.4	16.7	37.2	100.0	39.4	9.1	25.0
1985	11.1	9.8	46.6	48.5	55.4	31.8	23.1	37.5	100.0	42.9	8.3	25.7
1986	15.0	7.7	46.3	47.8	55.3	32.0	25.0	41.5	-	43.6	14.3	27.0
1987	15.0	12.9	46.3	47.0	53.3	28.6	23.5	43.2	-	34.4	22.2	25.7
1988	15.0	12.1	47.2	42.4	52.5	26.5	20.8	44.5	-	32.3	22.2	23.5
1989	13.6	12.5	45.0	40.5	51.9	28.9	22.7	43.9	-	25.8	30.0	24.1
1990	13.6	14.0	43.4	42.4	51.2	27.3	15.6	43.5	-	29.4	29.6	21.9
1991	13.6	13.5	39.6	42.2	52.8	27.3	13.2	44.1	-	25.0	34.5	22.9

## BREAKDOWN OF EC-BUILT HELICOPTERS BY EC MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1984	0.1	0.4	27.3	3.7	32.4	1.2	0.3	13.6	0.1	1.9	0.1	18.7
1985	0.3	0.5	26.3	4.4	33.1	1.0	0.4	13.3	0.1	2.1	0.1	18.4
1986	0.4	0.4	25.5	4.2	32.2	1.0	0.5	14.8	0.0	2.2	0.3	18.5
1987	0.4	0.5	25.2	4.8	31.7	1.0	0.5	16.4	0.0	1.4	0.5	17.7
1988	0.3	0.4	22.6	6.1	33.9	1.0	0.5	16.9	0.0	1.1	0.4	16.7
1989	0.3	0.4	20.0	7.5	33.4	1.1	0.5	16.8	0.0	0.8	0.6	18.7
1990	0.3	0.6	18.9	7.0	35.2	0.8	0.5	17.5	0.0	0.9	0.7	17.6
1991	0.3	0.6	17.9	7.4	36.4	0.8	0.4	17.3	0.0	0.8	0.9	17.3

■ SOURCE: ITA

## CIVIL HELICOPTER FLEET

## IN MIO ECUS - AT YEAR-END

## WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	1984	1985	1986	1987	1988	1989	1990	1991
EC	17.7%	16.6%	16.8%	15.8%	16.4%	16.6%	16.6%	17.2%
REST OF EUROPE	4.9%	4.6%	5.0%	4.8%	4.9%	4.4%	4.8%	4.6%
USA	50.3%	51.4%	46.8%	46.9%	44.2%	43.5%	40.3%	39.0%
OTHER WORLD	27.2%	27.4%	31.3%	32.4%	34.5%	35.5%	38.2%	39.1%
TOTAL	7,268	7,516	7,099	6,423	6,553	7,418	7,532	8,290

## MARKET SHARE OF EC-BUILT HELICOPTERS (AS % OF TOTAL)

	1984	1985	1986	1987	1988	1989	1990	1991
EC	53.1	53.1	56.6	56.5	58.6	60.6	58.3	58.9
REST OF EUROPE	27.7	37.3	35.8	35.5	36.0	42.8	43.1	44.1
USA	16.6	16.3	19.4	19.3	19.5	20.8	21.5	23.1
OTHER WORLD	21.6	22.2	24.7	25.9	29.5	28.7	31.9	33.8
TOTAL	24.9	25.0	28.1	28.1	30.1	31.2	32.6	34.4

## BREAKDOWN OF EC-BUILT HELICOPTERS INTO GEOGRAPHICAL ZONES (%)

	1984	1985	1986	1987	1988	1989	1990	1991
EC	37.6	35.2	33.9	31.8	31.8	32.3	29.6	29.4
REST OF EUROPE	5.4	6.9	6.3	6.1	5.9	6.0	6.4	5.9
USA	33.5	33.5	32.3	32.2	28.6	29.0	26.6	26.2
OTHER WORLD	23.5	24.4	27.5	29.8	33.7	32.6	37.4	38.5

■ SOURCE: ITA



## CIVIL HELICOPTER FLEET

## IN MIO ECUS - AT YEAR-END

## TOTAL EC - BREAKDOWN BY MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1984	0.3	2.3	14.8	2.6	13.6	0.7	1.0	9.4	0.0	3.7	0.1	51.4
1985	0.3	3.3	15.4	2.9	12.3	0.4	0.8	10.1	0.0	4.1	0.1	50.2
1986	0.4	3.2	16.1	2.9	11.9	0.6	1.0	11.3	0.0	4.2	0.1	48.2
1987	0.4	2.4	17.6	3.3	12.2	0.6	1.0	12.7	0.0	3.0	0.3	46.5
1988	0.4	2.4	16.8	4.2	14.3	0.7	1.3	13.7	0.0	2.7	0.2	43.4
1989	0.4	2.1	16.5	5.8	15.3	0.8	0.6	16.0	0.0	2.3	0.3	40.0
1990	0.3	2.7	16.1	4.8	16.2	0.6	0.9	16.3	0.0	2.5	0.5	39.1
1991	0.3	2.8	16.7	5.7	16.2	0.5	0.9	17.1	0.0	2.2	0.5	37.1

## MARKET SHARE OF EC-BUILT HELICOPTERS (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1984	7.7	38.3	67.8	61.4	83.6	40.8	7.5	59.5	100.0	38.7	25.5	42.1
1985	44.2	25.2	67.7	64.1	83.8	71.2	9.1	57.6	100.0	38.7	24.7	43.3
1986	44.1	27.0	70.0	64.6	82.7	43.5	13.4	59.1	-	39.4	38.6	49.3
1987	40.8	35.7	68.0	63.4	79.9	57.4	14.3	60.9	-	28.4	42.4	48.4
1988	42.5	33.0	71.7	64.9	77.8	58.1	15.8	60.4	-	25.9	43.1	51.0
1989	44.1	35.2	65.2	63.7	75.1	66.2	37.0	57.9	-	21.9	54.9	57.8
1990	44.0	26.5	63.0	66.0	73.8	73.2	22.4	56.7	-	32.8	37.8	54.5
1991	43.2	32.7	61.0	60.0	77.0	75.4	22.8	55.4	-	26.9	45.1	56.2

## BREAKDOWN OF EC-BUILT HELICOPTERS BY EC MEMBER STATE (%)

	BE	DK	DE	ES	FR	HE	IR	IT	LX	NL	PO	UK
1984	0.0	1.7	18.9	3.0	21.5	0.5	0.1	10.6	0.0	2.7	0.1	40.8
1985	0.3	1.6	19.6	3.5	19.5	0.5	0.1	10.9	0.1	3.0	0.1	40.9
1986	0.3	1.5	19.9	3.3	17.4	0.5	0.2	11.8	0.0	2.9	0.1	42.0
1987	0.3	1.5	21.1	3.7	17.3	0.6	0.3	13.7	0.0	1.5	0.2	39.9
1988	0.3	1.3	20.5	4.6	19.0	0.7	0.4	14.1	0.0	1.2	0.2	37.8
1989	0.3	1.2	17.7	6.1	18.9	0.9	0.4	15.3	0.0	0.8	0.3	38.1
1990	0.3	1.2	17.3	5.5	20.6	0.7	0.3	15.8	0.0	1.4	0.3	36.5
1991	0.2	1.6	17.3	5.8	21.2	0.7	0.3	16.1	0.0	1.0	0.4	35.4

■ SOURCE: ITA

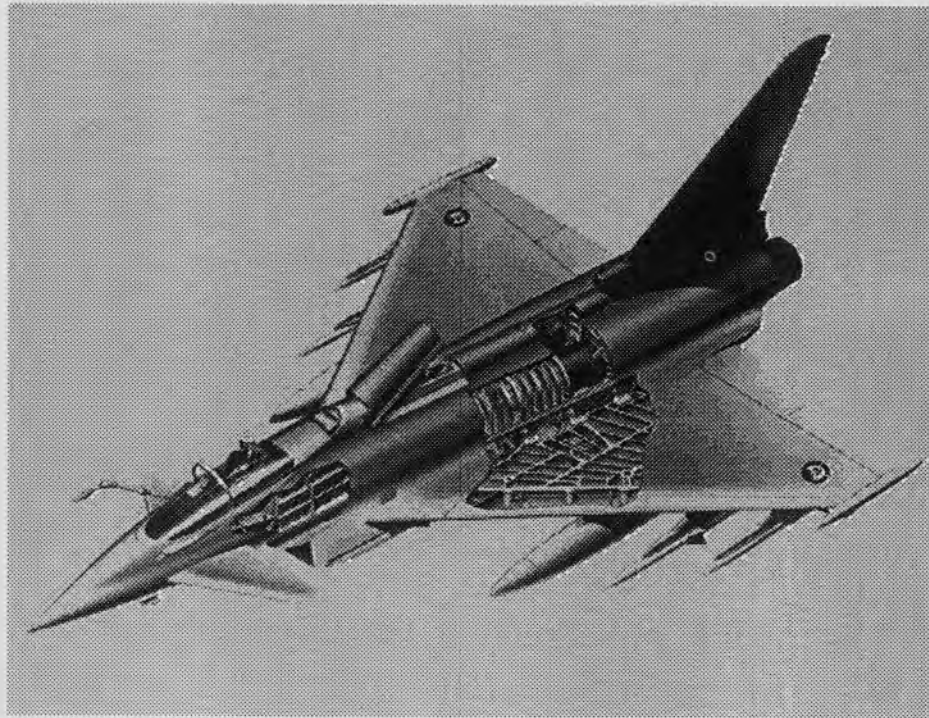
**CIVIL HELICOPTER DELIVERIES (IN UNITS)****BREAKDOWN BY DESIGN ORIGIN**

	1987	1988	1989	1990	1991
EC	43.5%	36.3%	29.7%	26.2%	24.7%
USA	56.5%	63.7%	70.3%	73.8%	75.3%
OTHER WORLD	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	664	697	863	997	1,070

■ SOURCE: ITA

# MILITARY AIRCRAFT

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## MILITARY AIRCRAFT

Data relating to *military aircraft* cover the number of military aircraft in service in the world. Assessment of fleets excludes aircraft in long term storage unless replacement outstanding. Warsaw Pact and P.R.China fleets have been excluded throughout, however military aircraft exported by these countries have been included in the relevant category under "OTHER" design origin.

The criteria used to define a *military aircraft* is that it is not registered on a civil register. Therefore a commercial aircraft used by public authorities may be included while it is already included in the *civil transport aircraft* fleets presented in Chapters 2 or 3.

*Military aircraft* are broken down into the following categories:

- *Interceptor/air superiority*
- *Fighter/attack*
- *Attack*
- *Bomber/interdictor*
- *AEW/Maritime Patrol/Electronics*
- *Advanced Trainer/Light Attack*
- *Elementary/Basic Trainer*
- *Transport - tactical/Strategic/Tanker*
- *Transport - VIP/liaison/communication*
- *Helicopters*

Flight refuelling tankers have been included in the tactical/strategic transport category since the majority have dual

transport role. Transports and trainers have been sub-categorised to provide more useful data.

*Military aircraft* are also broken down according to *design origin*: EC, USA and OTHER. Design origin reflects country of original design and not necessarily the country of production and/or assembly.

*Military aircraft* are broken down into the following *geographical areas*: EC, EUR (Austria, Cyprus, Finland, Iceland, Malta, Norway, Sweden, Switzerland, Turkey, Yugoslavia), USA, CANADA, LATIN AMERICA & CARIBBEAN, MIDDLE EAST & NORTH AFRICA, AFRICA (south of Sahara), REPUBLIC OF SOUTH AFRICA, ASIA and AUSTRALASIA.

Programme unit costs (i.e. cost of replacement fleets, including flyaway costs of aircraft, initial spares, ground support equipment, R&D levies and other associated costs divided by the quantity of aircraft in the fleet) have been used in estimating average unit replacement values. This method yields more indicative unit procurement costs for fleet replacements than the use of estimated flyaway costs of individual aircraft.

A list of *military aircraft* is given in the following pages.

**Military Aircraft of EC design**

Manufacturer	Model	Typical price (Mio ECUS)(*)
<i>AERMACCHI</i>	MB-339 .....	5.66 - 8.54
<i>AEROSPATIALE</i>	Epsilon ..... TB-30 .....	0.74 - 0.95
	SuperPuma ..... AS-332 .....	7.95 - 9.62
	Gazelle ..... AS-341 .....	0.74 - 1.66
	Dauphin ..... SA-365 .....	2.45 - 4.17
<i>AGUSTA</i>	A-129 .....	5.45 - 8.02
<i>AERITALIA-AERMACCHI-EMBRAER</i>	AMX .....	12.72 - 14.54
<i>BRITISH AEROSPACE</i>	Hawk .....	8.58 - 10.77
<i>CASA</i>	C-101 ..... Aviojet .....	5.81 - 8.12
	C-212 ..... Aviocar .....	4.38 - 4.80
<i>DASSAULT-BREGUET</i>	Mirage 2000 .....	26.91 - 34.40
	Alpha Jet .....	8.79 - 10.90
<i>MBB</i>	BO-105 .....	1.37 - 1.64
<i>PANAVIA</i>	Tornado .....	45.44 - 67.23
<i>SIAI-MARCHETTI</i>	S-211 .....	2.73 - 3.66
	SF-260 TP .....	0.68 - 0.91
<i>WESTLAND</i>	Lynx .....	4.67 - 6.27

\* Prices quoted represent average programme unit costs of new-built aircraft in 1991. Programme unit costs comprise flyaway cost of aircraft, initial spares, ground support equipment, R&D levies and other associated costs divided by the number of aircraft procured.

### Military Aircraft of US design

Manufacturer	Model	Typical price (Mio ECUS) (*)
<i>BELL</i>	AH-1 ..... Cobra	7.78 - 11.78
<i>BOEING VERTOL</i>	CH-47C ..... Chinook	15.67 - 18.83
<i>GENERAL DYNAMICS</i>	F-16 ..... Fighting Falcon	21.60 - 34.04
<i>GRUMMAN</i>	A-6E ..... Intruder	30.56 - 34.04
	E-2C ..... Hawkeye	53.24 - 68.54
	F-14 ..... Tomcat	38.80 - 55.28
<i>LOCKHEED</i>	C-130 ..... Hercules	19.22 - 32.30
	P-3C ..... Orion	39.32 - 54.98
<i>McDONNELL DOUGLAS</i>	AH-64 ..... Apache	8.50 - 14.85
	F-15 ..... Eagle	37.89 - 48.12
	F/A-18 ..... Hornet	35.84 - 47.10
<i>SIKORSKY</i>	CH-53E ..... Super Stallion	15.71 - 25.33
	UH-60 ..... Blackhawk	7.07 - 15.46
	SH-60 ..... Seahawk	17.10 - 24.06

\* Prices quoted represent average programme unit costs of new-built aircraft in 1991. Programme unit costs comprise flyaway cost of aircraft, initial spares, ground support equipment, R&D levies and other associated costs divided by the number of aircraft procured.

**Military aircraft of other design**

Manufacturer	Model	Typical Price (Mio ECUS) (*)
<i>EMBRAER</i>	EMB-312 ..... Tucano .....	1.57 - 2.22
<i>ISRAEL AIRCRAFT INDUSTRIES</i>	Kfir .....	13.51 - 18.18
<i>PILATUS</i>	PC-7 ..... Turbo-trainer .....	1.34 - 2.23
	PC-9 .....	2.70 - 2.82
<i>SAAB</i>	JAS39 ..... Gripen .....	44.72 - 56.76
<i>MIKOYAN</i>	Mig-29 .....	32.01 - 40.56

\* Prices quoted represent average programme unit costs of new-built aircraft in 1991. Programme unit costs comprise flyaway cost of aircraft, initial spares, ground support equipment, R&D levies and other associated costs divided by the number of aircraft procured.



## MILITARY AIRCRAFT FLEET (AT YEAR-END)

## INTERCEPTOR/AIR SUPERIORITY (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	189	39	1,374	62	0	53	0	0	0	0	1,717
1980	101	0	1,226	40	0	194	0	0	24	0	1,585
1985	118	0	1,275	0	0	344	0	0	100	0	1,837
1986	139	0	1,314	0	0	335	0	0	161	0	1,949
1987	163	0	1,355	0	0	387	0	0	205	0	2,110
1988	240	0	1,310	0	0	425	0	0	254	0	2,229
1989	254	16	1,314	0	14	458	0	0	270	0	2,326
1990	331	16	1,317	0	14	521	0	0	287	0	2,486
1991	335	16	1,308	0	14	524	0	0	302	0	2,499

## FIGHTER/ATTACK (UNITS)

1975	3,362	1,673	3,904	301	566	2,243	287	78	3,687	103	16,204
1980	3,108	1,550	3,043	173	544	2,690	420	98	3,214	91	14,931
1985	2,475	1,458	3,206	154	668	3,332	527	95	3,282	80	15,277
1986	2,239	1,466	3,250	186	675	3,135	466	94	3,328	90	14,929
1987	2,288	1,529	3,239	199	674	3,298	487	92	3,387	80	15,273
1988	2,225	1,472	3,213	217	630	3,332	472	87	3,246	62	14,956
1989	2,204	1,459	3,082	217	625	3,250	479	87	3,244	72	14,719
1990	2,233	1,473	3,142	214	641	3,217	470	75	3,233	72	14,770
1991	2,153	1,505	3,032	214	643	3,121	488	72	3,258	72	14,558

## ATTACK (UNITS)

1975	422	90	2,825	0	83	647	6	9	253	31	4,366
1980	600	140	2,867	0	172	667	5	6	369	28	4,854
1985	476	211	2,862	0	169	743	33	6	515	22	5,037
1986	466	211	2,716	0	169	741	33	6	624	22	4,988
1987	457	195	2,633	0	168	726	40	6	685	22	4,932
1988	477	261	2,568	0	165	662	40	6	710	22	4,911
1989	481	258	2,480	0	136	648	39	6	703	21	4,772
1990	496	268	2,393	0	134	610	39	6	717	21	4,684
1991	490	266	2,176	0	134	544	39	0	725	21	4,395

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ..... ASA - ASIA  
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## MILITARY AIRCRAFT FLEET (AT YEAR-END)

## BOMBER/INTERDICTOR (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	306	2	925	0	122	139	29	9	217	36	1,785
1980	241	4	781	0	70	122	18	7	187	32	1,462
1985	593	0	699	0	52	89	4	7	152	24	1,620
1986	647	0	729	0	51	100	0	7	125	23	1,682
1987	652	0	758	0	51	94	0	7	121	22	1,705
1988	649	0	757	0	50	94	0	7	110	22	1,689
1989	661	0	813	0	26	77	0	7	103	22	1,709
1990	735	0	808	0	21	126	0	7	103	22	1,822
1991	751	0	737	0	21	115	0	0	92	22	1,738

## AEW/MARITIME PATROL/ELECTRONICS (UNITS)

1975	323	25	1,415	63	84	16	0	7	222	37	2,192
1980	220	30	1,138	46	88	12	1	7	227	43	1,812
1985	200	34	1,206	36	88	8	2	0	257	26	1,857
1986	192	42	1,206	36	82	11	4	0	255	26	1,854
1987	177	47	1,171	36	80	15	4	0	256	26	1,812
1988	179	45	1,160	36	75	15	6	0	249	26	1,791
1989	185	46	1,179	36	61	17	6	0	252	26	1,808
1990	187	46	1,161	18	70	16	6	0	262	26	1,792
1991	195	46	1,154	18	68	16	4	0	253	25	1,779

## ADVANCED TRAINER/LIGHT ATTACK (UNITS)

1975	794	470	1,637	209	416	418	127	188	609	101	4,969
1980	813	406	1,406	172	476	451	134	212	563	99	4,732
1985	942	608	1,288	145	493	515	214	217	586	97	5,105
1986	920	575	1,241	143	524	482	185	216	573	95	4,954
1987	929	527	1,153	143	525	519	198	215	549	94	4,852
1988	921	491	1,112	143	556	539	195	214	576	91	4,838
1989	905	477	1,100	143	534	669	197	214	576	90	4,905
1990	899	458	1,101	143	538	672	200	212	561	85	4,869
1991	879	460	1,061	143	551	649	194	209	528	89	4,763

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ..... ASA - ASIA  
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## MILITARY AIRCRAFT FLEET (AT YEAR-END)

## ELEMENTARY/BASIC TRAINER (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,761	531	1,766	25	1,280	745	245	75	1,513	68	8,009
1980	1,474	520	1,310	25	1,016	736	318	70	1,209	54	6,732
1985	1,410	496	1,204	20	1,058	846	303	50	1,255	63	6,705
1986	1,299	467	1,201	20	1,124	958	306	49	1,361	69	6,854
1987	1,324	473	1,176	20	1,126	963	284	49	1,466	72	6,953
1988	1,343	496	1,150	20	1,122	952	277	49	1,422	78	6,909
1989	1,327	485	1,164	20	1,081	976	270	49	1,410	96	6,878
1990	1,330	480	1,172	20	1,083	1,001	292	49	1,421	114	6,962
1991	1,284	488	1,123	20	1,084	1,000	283	49	1,458	130	6,919

## TRANSPORT - TACTICAL/STRATEGIC/TANKER (UNITS)

1975	852	215	2,792	70	633	474	270	61	1,078	98	6,543
1980	679	160	2,181	59	604	444	300	51	708	95	5,281
1985	618	160	2,163	59	597	508	359	55	702	91	5,312
1986	603	145	2,186	61	626	506	338	56	737	83	5,341
1987	587	119	2,152	61	633	528	333	58	733	86	5,290
1988	583	120	2,135	61	654	524	319	58	723	89	5,266
1989	589	119	2,109	62	644	511	319	58	729	89	5,229
1990	610	118	2,107	64	638	526	320	58	735	89	5,265
1991	593	123	2,131	62	629	505	315	57	717	91	5,223

## TRANSPORT - VIP/LIAISON/COMMUNICATION (UNITS)

1975	1,116	328	3,029	46	921	345	306	98	1,083	29	7,301
1980	877	293	891	45	759	346	349	123	753	36	4,472
1985	730	235	945	29	881	380	395	83	784	35	4,497
1986	776	231	869	28	906	389	380	83	808	36	4,506
1987	759	252	780	31	921	367	382	82	849	35	4,458
1988	747	256	771	31	889	367	384	124	824	46	4,439
1989	722	253	766	23	889	355	384	125	796	48	4,361
1990	739	235	785	25	880	363	387	101	800	48	4,363
1991	720	230	757	25	883	367	381	87	772	44	4,266

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ..... ASA - ASIA  
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## MILITARY AIRCRAFT FLEET (AT YEAR-END)

## HELICOPTERS (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	3,689	629	12,541	188	869	1,382	306	157	1,788	204	21,753
1980	3,703	711	10,609	181	782	2,087	419	156	2,189	172	21,009
1985	4,308	1,007	10,543	184	1,170	2,574	625	153	2,800	176	23,540
1986	4,238	1,025	10,756	184	1,244	2,642	649	152	2,940	176	24,006
1987	4,123	1,043	10,454	182	1,258	2,725	717	146	2,930	169	23,747
1988	4,103	1,065	10,205	181	1,225	2,699	718	143	3,073	158	23,570
1989	4,076	1,051	10,115	178	1,282	2,658	703	143	3,118	172	23,496
1990	4,200	1,064	10,337	178	1,368	2,669	692	127	3,203	194	24,032
1991	4,255	1,076	9,379	173	1,393	2,604	681	126	3,270	193	23,150

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ..... ASA - ASIA  
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### MILITARY AIRCRAFT FLEET - TYPE : INTERCEPTOR/AIR SUPERIORITY (UNITS)

#### DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	124	0	0	0	0	53	0	0	0	0	177
1980	71	0	0	0	0	30	0	0	0	0	101
1985	99	0	0	0	0	22	0	0	23	0	144
1986	120	0	0	0	0	4	0	0	40	0	164
1987	144	0	0	0	0	19	0	0	44	0	207
1988	221	0	0	0	0	19	0	0	47	0	287
1989	235	0	0	0	0	47	0	0	46	0	328
1990	292	0	0	0	0	72	0	0	46	0	410
1991	296	0	0	0	0	77	0	0	46	0	419

#### DESIGN ORIGIN : USA

1975	65	39	1,374	62	0	0	0	0	0	0	1,540
1980	30	0	1,226	40	0	100	0	0	24	0	1,420
1985	19	0	1,275	0	0	167	0	0	69	0	1,530
1986	19	0	1,314	0	0	175	0	0	101	0	1,609
1987	19	0	1,355	0	0	172	0	0	109	0	1,655
1988	19	0	1,310	0	0	167	0	0	125	0	1,621
1989	19	0	1,314	0	0	167	0	0	143	0	1,643
1990	19	0	1,317	0	0	191	0	0	160	0	1,687
1991	19	0	1,308	0	0	213	0	0	175	0	1,715

#### DESIGN ORIGIN : OTHER

1975	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	64	0	0	0	0	64
1985	0	0	0	0	0	155	0	0	8	0	163
1986	0	0	0	0	0	156	0	0	20	0	176
1987	0	0	0	0	0	196	0	0	52	0	248
1988	0	0	0	0	0	239	0	0	82	0	321
1989	0	16	0	0	14	244	0	0	81	0	355
1990	20	16	0	0	14	258	0	0	81	0	389
1991	20	16	0	0	14	234	0	0	81	0	365

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## MILITARY AIRCRAFT FLEET - TYPE : FIGHTER/ATTACK (UNITS)

## DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,441	416	0	0	165	397	32	66	465	103	3,085
1980	1,287	342	0	0	194	369	46	98	221	91	2,648
1985	1,064	248	0	0	245	552	44	95	237	75	2,560
1986	1,023	207	0	0	249	544	37	94	188	68	2,410
1987	988	206	0	0	246	521	41	92	187	47	2,328
1988	909	206	0	0	244	507	39	87	166	5	2,163
1989	888	206	0	0	234	504	38	87	169	0	2,126
1990	903	176	0	0	241	490	38	75	181	0	2,104
1991	871	174	0	0	252	459	38	72	187	0	2,053

## DESIGN ORIGIN : USA

1975	1,879	673	3,904	269	166	653	26	12	1,554	0	9,136
1980	1,778	588	3,043	165	110	728	26	0	1,173	0	7,611
1985	1,368	650	3,194	154	119	807	21	0	1,152	5	7,470
1986	1,173	679	3,238	186	107	818	12	0	1,144	22	7,379
1987	1,257	758	3,214	199	109	879	12	0	1,146	33	7,607
1988	1,273	681	3,200	217	123	889	10	0	1,187	57	7,637
1989	1,273	695	3,082	217	140	894	8	0	1,212	72	7,593
1990	1,287	738	3,142	214	140	891	8	0	1,209	72	7,701
1991	1,239	779	3,032	214	131	927	8	0	1,209	72	7,611

## DESIGN ORIGIN : OTHER

1975	42	584	0	32	235	1,193	229	0	1,668	0	3,983
1980	43	620	0	8	240	1,593	348	0	1,820	0	4,672
1985	43	560	12	0	304	1,973	462	0	1,893	0	5,247
1986	43	580	12	0	319	1,773	417	0	1,996	0	5,140
1987	43	565	25	0	319	1,898	434	0	2,054	0	5,338
1988	43	585	13	0	263	1,936	423	0	1,893	0	5,156
1989	43	558	0	0	251	1,852	433	0	1,863	0	5,000
1990	43	559	0	0	260	1,836	424	0	1,843	0	4,965
1991	43	552	0	0	260	1,735	442	0	1,862	0	4,894

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## MILITARY AIRCRAFT FLEET - TYPE : ATTACK (UNITS)

## DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	404	0	86	0	0	0	0	9	0	0	499
1980	540	0	70	0	12	11	0	6	18	0	657
1985	374	0	116	0	11	21	16	6	52	0	596
1986	366	0	73	0	11	22	16	6	64	0	558
1987	358	0	101	0	11	22	16	6	79	0	593
1988	379	0	141	0	10	22	16	6	88	0	662
1989	386	0	173	0	9	22	15	6	97	0	708
1990	402	0	202	0	8	22	15	6	105	0	760
1991	396	0	225	0	8	22	15	0	111	0	777

## DESIGN ORIGIN : USA

1975	18	0	2,739	0	77	312	0	0	91	31	3,268
1980	60	0	2,797	0	92	269	0	0	100	28	3,346
1985	102	0	2,746	0	45	253	0	0	156	22	3,324
1986	100	0	2,643	0	45	253	0	0	187	22	3,250
1987	99	0	2,532	0	44	253	0	0	185	22	3,135
1988	98	0	2,427	0	42	180	0	0	179	22	2,948
1989	95	0	2,307	0	35	145	0	0	168	21	2,771
1990	94	0	2,191	0	35	117	0	0	174	21	2,632
1991	94	0	1,951	0	35	115	0	0	178	21	2,394

## DESIGN ORIGIN : OTHER

1975	0	90	0	0	6	335	6	0	162	0	599
1980	0	140	0	0	68	387	5	0	251	0	851
1985	0	211	0	0	113	469	17	0	307	0	1,117
1986	0	211	0	0	113	466	17	0	373	0	1,180
1987	0	195	0	0	113	451	24	0	421	0	1,204
1988	0	261	0	0	113	460	24	0	443	0	1,301
1989	0	258	0	0	92	481	24	0	438	0	1,293
1990	0	268	0	0	91	471	24	0	438	0	1,292
1991	0	266	0	0	91	407	24	0	436	0	1,224

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ..... ASA - ASIA  
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### MILITARY AIRCRAFT FLEET - TYPE : BOMBER/INTERDICTION (UNITS)

#### DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	306	0	42	0	70	0	18	9	108	12	565
1980	241	0	17	0	59	0	13	7	87	12	436
1985	593	0	0	0	52	0	1	7	72	0	725
1986	647	0	0	0	51	6	0	7	45	0	756
1987	652	0	0	0	51	20	0	7	45	0	775
1988	649	0	0	0	50	20	0	7	38	0	764
1989	661	0	0	0	26	23	0	7	37	0	754
1990	735	0	0	0	21	38	0	7	37	0	838
1991	751	0	0	0	21	45	0	0	37	0	854

#### DESIGN ORIGIN : USA

1975	0	0	883	0	52	0	0	0	9	24	968
1980	0	0	764	0	11	0	0	0	0	20	795
1985	0	0	699	0	0	0	0	0	0	24	723
1986	0	0	729	0	0	0	0	0	0	23	752
1987	0	0	758	0	0	0	0	0	0	22	780
1988	0	0	757	0	0	0	0	0	0	22	779
1989	0	0	813	0	0	0	0	0	0	22	835
1990	0	0	808	0	0	0	0	0	0	22	830
1991	0	0	737	0	0	0	0	0	0	22	759

#### DESIGN ORIGIN : OTHER

1975	0	2	0	0	0	139	11	0	100	0	252
1980	0	4	0	0	0	122	5	0	100	0	231
1985	0	0	0	0	0	89	3	0	80	0	172
1986	0	0	0	0	0	94	0	0	80	0	174
1987	0	0	0	0	0	74	0	0	76	0	150
1988	0	0	0	0	0	74	0	0	72	0	146
1989	0	0	0	0	0	54	0	0	66	0	120
1990	0	0	0	0	0	88	0	0	66	0	154
1991	0	0	0	0	0	70	0	0	55	0	125

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ..... ASA - ASIA  
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### MILITARY AIRCRAFT FLEET - TYPE : AEW/MARITIME PATROL/ELECTRONICS (UNITS)

#### DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	225	0	0	0	0	0	0	7	14	0	246
1980	182	0	0	0	2	0	1	7	16	0	208
1985	173	0	41	0	2	0	1	0	21	0	238
1986	165	0	41	0	1	0	3	0	21	0	231
1987	149	0	41	0	0	0	3	0	21	0	214
1988	149	0	41	0	0	0	3	0	21	0	214
1989	149	0	41	0	0	0	3	0	22	0	215
1990	151	0	41	0	0	0	3	0	22	0	217
1991	149	0	41	0	0	0	3	0	22	0	215

#### DESIGN ORIGIN : USA

1975	98	25	1,415	32	84	6	0	0	190	37	1,887
1980	38	30	1,138	36	68	12	0	0	184	43	1,549
1985	27	30	1,165	36	69	8	0	0	194	26	1,555
1986	27	42	1,165	36	64	11	0	0	193	26	1,564
1987	28	47	1,130	36	63	15	0	0	201	26	1,546
1988	30	45	1,119	36	58	15	0	0	196	26	1,525
1989	36	46	1,138	36	44	17	0	0	192	26	1,535
1990	36	46	1,120	18	43	16	0	0	202	26	1,507
1991	46	46	1,113	18	41	16	0	0	193	25	1,498

#### DESIGN ORIGIN : OTHER

1975	0	0	0	31	0	10	0	0	18	0	59
1980	0	0	0	10	18	0	0	0	27	0	55
1985	0	4	0	0	17	0	1	0	42	0	64
1986	0	0	0	0	17	0	1	0	41	0	59
1987	0	0	0	0	17	0	1	0	34	0	52
1988	0	0	0	0	17	0	3	0	32	0	52
1989	0	0	0	0	17	0	3	0	38	0	58
1990	0	0	0	0	27	0	3	0	38	0	68
1991	0	0	0	0	27	0	1	0	38	0	66

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### MILITARY AIRCRAFT FLEET - TYPE : ADVANCED TRAINER/LIGHT ATTACK (UNITS)

#### DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	306	36	0	0	161	103	62	188	29	101	986
1980	498	38	0	0	218	112	74	212	26	99	1,277
1985	777	83	0	0	225	187	119	217	47	97	1,752
1986	772	82	0	0	227	182	113	216	42	95	1,729
1987	779	82	0	0	225	197	114	215	26	94	1,732
1988	771	81	2	0	226	228	119	214	26	91	1,758
1989	755	80	2	0	218	226	110	214	25	90	1,720
1990	749	61	4	0	221	218	110	212	25	85	1,685
1991	743	64	4	0	220	217	107	209	25	89	1,678

#### DESIGN ORIGIN : USA

1975	488	187	1,637	92	225	28	11	0	460	0	3,128
1980	315	130	1,406	70	226	12	10	0	360	0	2,529
1985	165	155	1,288	64	221	0	0	0	327	0	2,220
1986	148	126	1,241	64	252	0	0	0	309	0	2,140
1987	150	111	1,153	64	255	0	0	0	283	0	2,016
1988	150	105	1,110	64	279	0	0	0	283	0	1,991
1989	150	105	1,098	64	274	0	0	0	283	0	1,974
1990	150	105	1,097	64	272	0	0	0	248	0	1,936
1991	136	105	1,057	64	280	0	0	0	203	0	1,845

#### DESIGN ORIGIN : OTHER

1975	0	247	0	117	30	287	54	0	120	0	855
1980	0	238	0	102	32	327	50	0	177	0	926
1985	0	370	0	81	47	328	95	0	212	0	1,133
1986	0	367	0	79	45	300	72	0	222	0	1,085
1987	0	334	0	79	45	322	84	0	240	0	1,104
1988	0	305	0	79	51	311	76	0	267	0	1,089
1989	0	292	0	79	42	443	87	0	268	0	1,211
1990	0	292	0	79	45	454	90	0	288	0	1,248
1991	0	291	0	79	51	432	87	0	300	0	1,240

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ..... ASA - ASIA  
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**MILITARY AIRCRAFT FLEET - TYPE : ELEMENTARY/BASIC TRAINER (UNITS)****DESIGN ORIGIN : EUROPE**

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,051	145	0	0	34	194	109	0	118	0	1,651
1980	965	125	0	0	16	300	140	0	121	0	1,667
1985	973	98	0	0	44	332	147	0	139	0	1,733
1986	900	70	0	0	41	410	153	0	155	0	1,729
1987	928	69	0	0	41	408	152	0	188	0	1,786
1988	920	68	0	0	41	396	147	0	204	0	1,776
1989	890	68	0	0	41	398	150	0	189	0	1,736
1990	846	68	0	0	43	398	149	0	197	0	1,701
1991	818	101	0	0	43	363	144	0	215	0	1,684

**DESIGN ORIGIN : USA**

1975	478	120	1,766	25	948	100	86	75	779	20	4,397
1980	324	136	1,310	25	670	70	79	70	372	0	3,056
1985	260	137	1,204	20	539	70	64	50	289	0	2,633
1986	224	137	1,201	20	512	70	61	49	309	0	2,583
1987	222	143	1,176	20	474	70	49	49	292	0	2,495
1988	208	168	1,150	20	461	57	49	49	263	0	2,425
1989	207	168	1,164	20	407	70	42	49	254	0	2,381
1990	205	168	1,172	20	389	70	42	49	253	0	2,368
1991	187	168	1,118	20	386	90	40	49	253	0	2,311

**DESIGN ORIGIN : OTHER**

1975	232	266	0	0	298	451	50	0	616	48	1,961
1980	185	259	0	0	330	366	99	0	716	54	2,009
1985	177	261	0	0	475	444	92	0	827	63	2,339
1986	175	260	0	0	571	478	92	0	897	69	2,542
1987	174	261	0	0	611	485	83	0	986	72	2,672
1988	215	260	0	0	620	499	81	0	955	78	2,708
1989	230	249	0	0	633	508	78	0	967	96	2,761
1990	279	244	0	0	651	533	101	0	971	114	2,893
1991	279	219	5	0	655	547	99	0	990	130	2,924

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### MILITARY AIRCRAFT FLEET - TYPE : TRANSPORT - TACTICAL/STRATEGIC/TANKER (UNITS)

#### DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	538	31	0	0	54	69	39	10	89	23	853
1980	469	31	0	0	83	61	59	10	105	27	845
1985	420	31	21	0	125	87	94	10	138	29	955
1986	404	31	25	0	130	78	80	9	150	20	927
1987	385	33	27	0	132	81	87	9	147	24	925
1988	390	33	28	0	136	80	85	9	150	25	936
1989	391	33	28	0	139	79	87	9	148	25	939
1990	390	33	27	0	141	86	86	9	150	25	947
1991	396	34	37	0	136	86	89	8	154	28	968

#### DESIGN ORIGIN : USA

1975	302	158	2,690	56	454	235	167	51	775	50	4,938
1980	198	94	2,128	43	332	247	144	41	398	46	3,671
1985	167	88	2,114	43	272	256	128	45	298	43	3,454
1986	169	73	2,150	45	228	262	118	47	271	44	3,407
1987	172	63	2,114	45	224	267	113	49	281	43	3,371
1988	163	61	2,096	45	238	270	111	49	257	45	3,335
1989	168	61	2,070	44	224	267	111	49	228	45	3,267
1990	169	61	2,069	44	219	274	111	49	235	45	3,276
1991	170	64	2,083	42	219	273	106	49	231	44	3,281

#### DESIGN ORIGIN : OTHER

1975	12	26	102	14	125	170	64	0	214	25	752
1980	12	35	53	16	189	136	97	0	205	22	765
1985	31	41	28	16	200	165	137	0	266	19	903
1986	30	41	11	16	268	166	140	0	316	19	1,007
1987	30	23	11	16	277	180	133	0	305	19	994
1988	30	26	11	16	280	174	123	0	316	19	995
1989	30	25	11	18	281	165	121	0	353	19	1,023
1990	51	24	11	20	278	166	123	0	350	19	1,042
1991	27	25	11	20	274	146	120	0	332	19	974

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### MILITARY AIRCRAFT FLEET - TYPE : TRANSPORT - VIP/LIAISON/COMMUNICATION (UNITS)

#### DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	742	53	0	8	37	70	154	56	53	9	1,182
1980	673	33	0	7	39	105	170	62	45	6	1,140
1985	552	38	3	7	55	81	211	26	61	2	1,036
1986	564	38	3	7	58	89	198	26	63	3	1,049
1987	536	34	3	6	57	75	198	26	73	3	1,011
1988	529	36	3	6	58	73	198	63	68	3	1,037
1989	539	35	4	0	58	72	198	63	66	5	1,040
1990	542	35	9	0	57	73	199	39	74	5	1,033
1991	527	35	4	0	56	74	195	39	77	5	1,012

#### DESIGN ORIGIN : USA

1975	342	204	2,626	0	534	231	103	42	677	0	4,759
1980	186	195	881	0	445	199	134	30	418	0	2,488
1985	122	102	930	0	531	224	150	27	412	2	2,500
1986	157	98	854	0	553	227	154	27	420	2	2,492
1987	157	97	766	0	563	225	156	26	419	3	2,412
1988	156	99	757	0	580	227	158	26	412	3	2,418
1989	124	97	751	0	606	218	157	27	418	3	2,401
1990	126	97	765	2	605	225	158	27	419	3	2,427
1991	123	94	742	2	605	227	160	27	415	0	2,395

#### DESIGN ORIGIN : OTHER

1975	32	71	403	38	350	44	49	0	353	20	1,360
1980	18	65	10	38	275	42	45	31	290	30	844
1985	56	95	12	22	295	75	34	30	311	31	961
1986	55	95	12	21	295	73	28	30	325	31	965
1987	66	121	11	25	301	67	28	30	357	29	1,035
1988	62	121	11	25	251	67	28	35	344	40	984
1989	59	121	11	23	225	65	29	35	312	40	920
1990	71	103	11	23	218	65	30	35	307	40	903
1991	70	101	11	23	222	66	26	21	280	39	859

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## MILITARY AIRCRAFT FLEET - TYPE : HELICOPTERS (UNITS)

## DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,973	220	0	0	130	237	184	157	261	23	3,185
1980	2,159	261	0	0	203	396	219	156	466	23	3,883
1985	2,553	360	22	0	288	656	335	153	562	49	4,978
1986	2,524	379	50	0	331	679	338	152	571	49	5,073
1987	2,462	388	86	0	358	729	343	146	589	48	5,149
1988	2,453	405	90	0	366	697	328	143	622	37	5,141
1989	2,433	395	69	0	396	673	320	143	635	38	5,102
1990	2,466	398	96	0	439	664	322	127	641	38	5,191
1991	2,494	409	96	1	454	626	319	126	659	36	5,220

## DESIGN ORIGIN : USA

1975	1,716	372	12,541	188	624	790	77	0	1,259	181	17,748
1980	1,544	388	10,609	181	525	1,242	112	0	1,426	149	16,176
1985	1,755	573	10,521	184	746	1,412	167	0	1,842	127	17,327
1986	1,714	573	10,706	184	771	1,458	176	0	1,926	127	17,635
1987	1,661	571	10,368	182	755	1,464	177	0	1,891	121	17,190
1988	1,650	576	10,115	181	716	1,444	178	0	1,929	121	16,910
1989	1,643	572	10,046	178	716	1,429	183	0	1,982	134	16,883
1990	1,654	581	10,241	178	742	1,450	177	0	2,052	156	17,231
1991	1,682	584	9,283	172	744	1,447	171	0	2,109	157	16,349

## DESIGN ORIGIN : OTHER

1975	0	37	0	0	115	355	45	0	268	0	820
1980	0	62	0	0	54	449	88	0	297	0	950
1985	0	74	0	0	136	506	123	0	396	0	1,235
1986	0	73	0	0	142	505	135	0	443	0	1,298
1987	0	84	0	0	145	532	197	0	450	0	1,408
1988	0	84	0	0	143	558	212	0	522	0	1,519
1989	0	84	0	0	170	556	200	0	501	0	1,511
1990	80	85	0	0	187	555	193	0	510	0	1,610
1991	79	83	0	0	195	531	191	0	502	0	1,581

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### AVERAGE UNIT REPLACEMENT VALUE OF MILITARY AIRCRAFT IN SERVICE IN THE EC (MIO ECUS)

## DESIGN ORIGIN : EUROPE

	I/AS	F/AT	ATT	B/IN	AEW	A/L T	E/B T	T/S/T	V/L/C	HEL
1975	4.86	4.25	5.46	16.19	12.78	2.30	0.57	6.87	0.63	0.58
1980	24.14	10.93	11.67	21.89	16.84	4.17	0.65	8.75	0.75	0.93
1985	36.41	23.78	26.72	39.73	39.61	9.30	1.44	15.43	2.35	2.33
1986	37.78	25.26	29.97	42.66	42.01	10.98	1.49	16.43	2.42	2.56
1987	39.83	26.58	36.16	45.78	46.60	11.41	1.52	18.27	2.69	2.69
1988	42.41	30.72	39.29	47.89	47.77	11.79	1.75	19.36	3.38	2.89
1989	44.49	31.51	40.29	49.51	55.77	11.99	1.80	20.86	3.47	2.93
1990	39.70	28.12	31.29	44.18	49.77	10.70	1.39	18.61	2.69	2.61
1991	45.30	32.09	35.71	50.41	56.79	12.21	1.59	21.24	3.07	2.98

## DESIGN ORIGIN : USA

1975	4.71	5.08	5.12	-	16.21	2.51	0.44	6.94	0.15	1.23
1980	16.02	11.36	9.34	-	19.17	4.33	0.55	10.28	0.32	1.77
1985	42.21	27.16	29.11	-	64.78	8.88	1.05	22.77	1.86	5.91
1986	44.21	28.99	30.48	-	68.74	10.41	1.14	23.57	1.89	6.14
1987	46.31	30.20	32.32	-	76.56	10.63	1.15	24.30	1.94	6.54
1988	49.47	31.24	32.86	-	78.22	11.24	1.33	27.23	2.10	7.42
1989	50.81	32.09	36.78	-	79.34	11.55	1.36	27.70	2.16	7.51
1990	44.90	28.36	32.50	-	70.12	8.78	1.17	24.48	1.64	6.64
1991	50.62	31.97	36.64	-	79.05	9.90	1.32	27.60	1.85	7.49

## DESIGN ORIGIN : OTHER

1975	-	5.51	-	-	-	-	0.29	3.63	0.18	-
1980	-	11.18	-	-	-	-	0.40	4.68	0.52	-
1985	-	29.98	-	-	-	-	1.03	9.98	2.22	-
1986	-	31.93	-	-	-	-	1.09	10.60	3.62	-
1987	-	34.30	-	-	-	-	1.21	11.20	3.68	-
1988	-	38.38	-	-	-	-	1.23	12.05	4.13	-
1989	-	39.06	-	-	-	-	1.26	12.42	4.25	-
1990	34.61	34.94	-	-	-	-	1.13	9.64	3.30	5.28
1991	39.18	39.55	-	-	-	-	1.28	10.91	3.74	5.98

I/AS .. INTERCEPTOR/AIR SUPERIORITY ..... F/AT .. FIGHTER/ATTACK ..... ATT ... ATTACK  
 B/IN .. BOMBER/INTERDICTOR ..... A/L T . ADVANCED TRAINER/LIGHT ATTACK . HEL ... HELICOPTERS  
 AEW ... AEW/MARITIME PATROL/ELECTRONICS..... E/B T . ELEMENTARY/BASIC TRAINER  
 T/S/T . TRANSPORT - TACTICAL/STRATEGIC/TANKER . V/L/C . TRANSPORT - VIP/LIAISON/COMMUNICATION

## MILITARY HELICOPTER FLEET

UNITS (AT YEAR-END)

	EC				USA			
	AS % OF TOTAL							
	TOTAL	DESIGN ORIGIN		LICENCE (1)	TOTAL	DESIGN ORIGIN		
		EC	USA			EC	USA	
1960	1,742	35.3	64.7	41.4	4,423	0.0	100.0	
1965	2,478	41.3	58.7	38.3	6,185	0.0	100.0	
1970	3,335	37.2	62.8	39.9	15,874	0.0	100.0	
1975	3,637	43.6	56.4	37.2	15,338	0.0	100.0	
1980	3,559	55.9	44.1	26.0	8,749	0.0	100.0	
1981	3,665	57.0	43.0	25.0	8,190	0.0	100.0	
1982	3,743	58.1	41.9	24.3	7,640	0.0	100.0	
1983	3,863	60.1	39.9	23.2	7,760	0.0	100.0	
1984	3,894	61.2	38.8	22.2	7,848	0.0	100.0	
1985	3,917	61.3	38.7	22.5	7,658	0.0	100.0	
1986	3,977	61.5	38.5	22.8	7,646	0.0	100.0	
1987	3,961	61.0	39.0	23.2	7,924	0.0	100.0	
1988	4,018	58.3	41.7	26.1	8,019	0.0	100.0	
1989	4,059	59.0	41.0	25.5	7,817	0.0	100.0	
1990 (2)	4,002	59.4	40.6	24.7	7,783	0.0	100.0	

(1) HELICOPTERS OF US DESIGN MANUFACTURED IN THE EC UNDER LICENCE (AS % OF TOTAL)

(2) DOES NOT INCLUDE 50 'EX-USSR'-DESIGNED HELICOPTERS BASED IN FRG

■ SOURCE: AEROSPATIALE



## MILITARY HELICOPTER FLEET IN THE EC

## UNITS (AT YEAR-END)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1960	10	14	243	27	801	7	0	98	0	49	2	491
1965	43	25	490	39	758	7	3	227	0	90	32	764
1970	80	17	765	75	734	55	3	352	0	98	126	1,030
1975	79	32	714	196	805	64	8	548	0	91	113	987
1980	80	35	701	253	812	141	9	495	0	124	62	847
1981	80	33	742	303	829	126	11	493	0	122	62	864
1982	80	29	831	311	847	122	11	506	0	120	62	824
1983	79	29	915	310	860	116	10	514	0	120	62	848
1984	79	29	932	312	903	116	10	515	0	118	62	818
1985	78	28	922	308	922	128	10	509	0	117	64	831
1986	74	28	913	305	937	142	15	528	0	117	87	831
1987	73	29	915	311	953	140	15	543	0	117	39	826
1988	69	28	913	322	929	140	15	584	0	118	42	858
1989	68	29	913	323	954	140	15	596	0	118	41	862
1990 (1)	68	41	918	325	926	140	15	583	0	116	41	829

(1) DOES NOT INCLUDE 50 'EX-USSR'-DESIGNED HELICOPTERS BASED IN FRG

■ SOURCE: AEROSPATIALE

## MILITARY HELICOPTER FLEET IN THE EC

## MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF FLEET AT YEAR-END)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1960	100.0	35.7	65.8	44.4	38.3	0.0	-	0.0	-	16.3	100.0	22.6
1965	88.4	32.0	60.2	0.0	49.3	0.0	100.0	0.0	-	63.3	96.9	28.4
1970	90.0	47.1	33.5	0.0	61.6	0.0	100.0	0.0	-	85.7	99.2	23.2
1975	89.9	25.0	36.3	4.6	83.5	6.3	100.0	3.6	-	92.3	100.0	34.1
1980	93.8	37.1	40.4	12.6	100.0	2.8	100.0	1.0	-	100.0	100.0	67.3
1981	93.8	36.4	43.7	20.8	100.0	3.2	100.0	1.0	-	100.0	100.0	67.5
1982	93.8	27.6	49.8	28.0	100.0	3.3	100.0	1.0	-	100.0	100.0	65.9
1983	93.7	27.6	54.4	31.0	100.0	3.4	100.0	1.0	-	100.0	100.0	69.0
1984	93.7	27.6	55.3	31.4	100.0	3.4	100.0	1.0	-	100.0	100.0	71.9
1985	88.5	25.0	54.9	31.5	100.0	3.1	100.0	0.8	-	100.0	100.0	72.4
1986	93.2	25.0	54.5	31.8	100.0	2.8	100.0	3.2	-	100.0	100.0	71.8
1987	93.2	27.6	54.6	31.8	100.0	2.9	100.0	3.1	-	100.0	100.0	72.0
1988	92.8	25.0	54.7	33.5	100.0	2.9	100.0	7.0	-	100.0	100.0	59.9
1989	92.6	24.1	54.7	34.4	100.0	2.9	100.0	8.9	-	100.0	100.0	61.5
1990 (1)	92.6	29.3	54.9	34.8	100.0	2.9	100.0	9.9	-	100.0	100.0	63.4

(1) DOES NOT INCLUDE 50 'EX-USSR'-DESIGNED HELICOPTERS BASED IN FRG

■ SOURCE: AEROSPATIALE

## MILITARY TURBINE ENGINES

Data relating to *military engines* cover the number of *turbine aircraft engines in military service* in the world. Allowance has been made for spare engines held in reserve. Warsaw Pact and P.R.China fleets have been excluded throughout, however engines exported by these countries have been included in the relevant category under "OTHER" design origin.

*Military engines* are broken down according to: *category of engines, design origin, and geographical areas.*

Military engines are broken down into the following *categories*:

- *Turbofan* ..... above 14 Tons (\*)
- *Turbofan* ..... between 7 and 14 Tons (\*)
- *Turbofan* ..... between 3 and 7 Tons (\*)
- *Turbofan* ..... below 3 Tons (\*)
- *Turbojet* ..... between 7 and 14 Tons (\*)
- *Turbojet* ..... between 3 and 7 Tons (\*)
- *Turbojet* ..... below 3 Tons (\*)
- *Turboprop*
- *Turboshaft*

(\*)Maximum thrust, including reheat where applicable

*Military engines* are also broken down according to *design origin: EC, USA and OTHER.* Design origin reflects country of original design and not necessarily the country of production and/or assembly.

*Military engines* are also broken down according to *manufacturer*:

- *CFM International*    ● *General Electric*    ● *Pratt & Whitney*
- *Rolls-Royce*            ● *SNECMA*                    ● *Turbo-Union,*
- *other*

*Manufacturer reflects the company that originated the design (or has significantly redesigned /developed the engine) and not necessarily indicate production and/or assembly origin.*

*Military engines* are broken down into the following *geographical areas*:

- *EC*
- *EUR:* Austria, Cyprus, Finland, Malta, Norway, Sweden, Switzerland, Turkey, Yugoslavia
- *USA*
- *Canada*
- *Latin America and Caribbean*
- *Middle East and North Africa*
- *Africa (south of Sahara)*
- *Republic of South Africa*
- *Asia*
- *Australasia*

A list of *military engines* is given in the following pages.

## Turbine Aircraft Engines In Military Service

	EC Design	USA Design	Other Design
<b>Turbofans</b>	<i>CFM Int'L</i> .....CFM56(*)	<i>AVCO LYCOMING</i> ....ALF-502	<i>IHI</i> .....F-3
	<i>ROLLS-ROYCE</i> .....Conway	<i>GARRETT</i> .....ATF-3	<i>IVCHENKO</i> .....AI-25
	M54H	TFE 731	<i>KUZNETOV</i> .....NK-8
	Pegasus	<i>GENERAL ELECTRIC</i> ..CF6	<i>P&amp;W CANADA</i> .....JT15D
	RB-211	CF-34 (TF34)	<i>SOLOVIEV</i> .....D20
	Spey	CF-700	D30
	Tay	F-101/F-110	<i>TUMANSKY</i> .....R29
	<i>R-R/TURBOMECA</i> .....Adour	F-118/F-404	R33
	<i>SNECMA</i> .....M53	TF-39	
	<i>SNECMA/TURBOMECA</i> Larzac	<i>PRATT &amp; WHITNEY</i> ...F-100	
	<i>TURBOMECA</i> .....Aubisque	JT-3D (TF33)	
<i>TURBO-UNION</i> .....RB-199	JT-8D		
	JT-9D		
	TF-30		
<b>Turbojets</b>	<i>DE HAVILLAND</i> .....Goblin	<i>ALLISON</i> .....J-33/J-35	<i>IHI</i> .....J-3
	<i>HISPANO-SUIZA</i> .....Verdon	<i>FAIRCHILD</i> .....J-44	<i>INSTYTUT LOTNICTIVA</i> SO-3
	<i>ROLLS-ROYCE</i> .....Avon	<i>GENERAL ELECTRIC</i> ..CJ-610/ 805	<i>KLIMOV</i> .....VK-1
	Derwent	J-47	<i>KOLIEV</i> .....VD-7
	Nene	J-79	<i>LYULKA</i> .....AL-7F/21F
	Olympus	J-85	<i>MIKULIN</i> .....AM-3
Orpheus			
Viper			

\* EC/USA design

### Turbine Aircraft Engines In Military Service

	EC Design	USA Design	Other Design
<b>Turbojets</b> (continued)	<i>SNECMA</i> .....Atar	<i>PRATT &amp; WHITNEY</i> ...J-48/J-52	<i>MOTORLET</i> .....M701
	<i>TURBOMECA</i> .....Mabore	J-57/J-58	<i>ORENDA</i> .....11
		J-75	<i>TUMANSKY</i> .....RD9
		JT12 (60)	R13
		<i>TELEDYNE</i> .....J-69	RU19
		<i>WESTINGHOUSE</i> .....J-34	R25
	<i>WRIGHT</i> .....J-65	R31	
<b>Turboprops</b>	<i>NAPIER</i> .....Eland	<i>ALLISON</i> .....250	<i>IVCHENKO</i> .....AI-20
	<i>ROLLS-ROYCE</i> .....Dart	501 (T56)	AI-24
	Mamba	<i>AVCO LYCOMING</i> ....T53	<i>P&amp;W CANADA</i> .....PT-6A (T74)
	Tyne	LTP101	<i>WALTER</i> .....M601
	<i>TURBOMECA</i> .....Astazou	<i>GARRETT</i> .....TPE331 (T76)	
	Bastan	<i>GENERAL ELECTRIC</i> ..CT7	
	T-64		
<b>Turboshafts</b>	<i>NAPIER</i> .....Gazelle	<i>ALLISON</i> .....250 (T63)	<i>GLUSHENKOV</i> .....GTD-3
	<i>ROLLS-ROYCE</i> .....Gem	<i>AVCO LYCOMING</i> ....LTC4	TVD-10
	Gnome	LTS101	<i>ISOTOV</i> .....GTD-350
	Nimbus	T-53/T-55	TV-2
	<i>TURBOMECA</i> .....Arriel	<i>GENERAL ELECTRIC</i> ..T-58/T-64	TV-3
	Artouste	T-700	<i>LOTAREV</i> .....D136
	Astazou	<i>PRATT &amp; WHITNEY</i> ...T-73	<i>P&amp;W CANADA</i> .....PT-6T (T400)
	Makila		<i>SOLOVIEV</i> .....D25
	Turmo		

## MILITARY TURBINE ENGINES FLEET

## TURBOFAN - MAXIMUM THRUST ABOVE 14 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	-	0	372	0	0	51	0	0	-	0	-
1980	-	0	376	0	0	46	0	0	-	0	-
1985	-	0	512	0	0	28	0	0	-	0	-
1986	-	0	590	0	0	28	0	0	-	0	-
1987	-	0	673	0	4	32	0	0	-	0	-
1988	-	0	783	0	4	32	0	0	-	0	-
1989	-	0	802	0	7	32	0	0	-	0	-
1990	-	0	812	0	7	32	0	0	-	0	-
1991	39	0	817	0	7	32	0	0	16	0	911

## MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	-	-	0.0	-	-	0.0	-	-	-	-	-
1980	-	-	0.0	-	-	0.0	-	-	-	-	-
1985	-	-	0.0	-	-	17.9	-	-	-	-	-
1986	-	-	0.0	-	-	17.9	-	-	-	-	-
1987	-	-	0.0	-	0.0	28.1	-	-	-	-	-
1988	-	-	0.0	-	0.0	28.1	-	-	-	-	-
1989	-	-	0.0	-	42.9	28.1	-	-	-	-	-
1990	-	-	0.0	-	42.9	28.1	-	-	-	-	-
1991	79.5	-	0.0	-	42.9	28.1	-	-	0.0	-	4.7

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## MILITARY TURBINE ENGINES FLEET

## TURBOFAN - MAXIMUM THRUST OF 7 TO 14 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	769	160	5,911	25	15	271	0	0	5	60	7,216
1980	913	233	8,091	25	107	1,018	30	0	79	60	10,556
1985	2,519	364	10,997	180	208	1,632	77	0	566	93	16,636
1986	2,741	381	11,553	260	221	1,641	77	10	827	133	17,844
1987	2,963	426	13,072	298	239	2,104	149	20	1,013	158	20,442
1988	3,256	488	13,581	348	251	2,244	143	20	1,321	228	21,880
1989	3,411	516	14,362	348	306	2,344	130	20	1,449	265	23,151
1990	3,718	547	14,978	340	311	2,578	122	20	1,511	265	24,390
1991	3,712	567	15,096	340	321	2,549	119	20	1,607	260	24,591

## MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	87.6	0.0	17.9	0.0	0.0	1.8	-	-	0.0	0.0	24.1
1980	78.6	0.0	14.0	0.0	0.0	0.0	0.0	-	0.0	0.0	17.5
1985	81.8	0.0	10.8	0.0	0.0	0.0	0.0	-	7.1	0.0	19.8
1986	82.0	0.0	9.6	0.0	2.3	1.5	0.0	0.0	7.5	0.0	19.3
1987	80.7	0.0	8.8	0.0	6.3	3.6	0.0	0.0	6.6	0.0	18.1
1988	80.1	0.0	7.8	0.0	6.0	3.3	0.0	0.0	5.1	0.0	17.5
1989	78.1	0.0	7.2	0.0	4.9	6.1	0.0	0.0	5.0	0.0	17.0
1990	77.2	0.0	6.4	0.0	4.8	8.3	0.0	0.0	6.0	0.0	17.0
1991	75.1	0.0	5.0	0.0	4.7	9.5	0.0	0.0	5.7	0.0	15.8

## MARKET SHARE OF ENGINES OF INTERNATIONAL DESIGN ORIGIN (EC / USA) (AS % OF TOTAL)

1975	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0
1985	0.9	0.0	7.1	0.0	0.0	0.3	0.0	-	0.5	0.0	4.9
1986	1.9	0.0	8.4	0.0	0.0	1.4	0.0	0.0	0.4	0.0	5.9
1987	1.7	0.0	8.9	0.0	0.0	3.1	0.0	0.0	0.3	0.0	6.3
1988	1.6	0.0	9.9	0.0	0.0	2.9	0.0	0.0	0.2	0.0	6.7
1989	1.5	0.0	10.6	0.0	0.0	2.9	0.0	0.0	0.2	0.0	7.1
1990	1.4	0.0	11.4	0.0	0.0	2.7	0.0	0.0	0.2	0.0	7.5
1991	2.6	0.0	11.9	0.0	0.0	2.7	0.0	0.0	0.2	0.0	8.0

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## MILITARY TURBINE ENGINES FLEET

## TURBOFAN - MAXIMUM THRUST OF 3 TO 7 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,083	0	381	0	23	24	20	23	68	5	1,627
1980	1,410	0	1,622	0	78	63	37	15	405	5	3,635
1985	1,076	0	2,328	23	120	119	96	15	595	13	4,385
1986	1,075	0	2,302	23	130	124	95	15	636	13	4,413
1987	1,024	0	2,263	26	134	126	101	15	688	13	4,390
1988	1,001	5	2,398	40	127	124	98	15	740	13	4,561
1989	1,015	5	2,406	40	128	135	100	15	808	13	4,665
1990	1,077	5	2,363	40	118	136	103	15	848	8	4,713
1991	1,081	5	2,328	40	129	136	106	0	863	8	4,696

## MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	98.8	-	0.8	-	100.0	33.3	100.0	100.0	55.9	100.0	73.1
1980	99.1	-	0.2	-	75.6	61.9	73.0	100.0	83.0	100.0	51.7
1985	92.5	-	0.4	0.0	54.2	73.9	78.1	100.0	84.2	38.5	40.0
1986	91.8	-	0.7	0.0	54.6	74.2	76.8	100.0	84.3	38.5	40.7
1987	90.6	-	1.5	0.0	53.0	77.0	78.2	100.0	84.9	38.5	41.3
1988	90.5	100.0	1.8	0.0	53.5	78.2	77.6	100.0	86.1	38.5	40.6
1989	91.0	100.0	1.7	0.0	53.9	80.0	74.0	100.0	81.9	38.5	40.8
1990	90.2	100.0	1.8	0.0	61.9	81.6	74.8	100.0	80.4	0.0	41.9
1991	90.2	100.0	1.8	0.0	65.1	81.6	75.5	-	80.2	0.0	42.4

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## MILITARY TURBINE ENGINES FLEET

## TURBOFAN - MAXIMUM THRUST BELOW 3 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	65	384	0	20	3	29	12	0	3	8	524
1980	671	369	0	18	31	179	60	0	29	8	1,365
1985	1,386	463	313	18	138	449	244	0	162	5	3,178
1986	1,387	286	313	18	164	441	216	0	187	8	3,020
1987	1,383	286	322	15	175	503	233	0	238	8	3,163
1988	1,393	451	325	15	191	578	239	0	288	8	3,488
1989	1,414	453	325	0	215	820	243	0	363	20	3,853
1990	1,418	471	341	0	227	833	242	0	431	20	3,983
1991	1,417	475	328	0	235	815	249	0	474	20	4,013

## MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0.0	95.8	-	0.0	0.0	0.0	0.0	-	0.0	0.0	70.2
1980	83.9	94.9	-	0.0	0.0	21.2	35.0	-	27.6	0.0	71.8
1985	80.9	87.7	0.0	0.0	0.0	49.7	48.0	-	11.7	0.0	59.3
1986	80.2	80.1	0.0	0.0	0.0	52.8	52.8	-	10.2	0.0	56.6
1987	79.9	80.1	0.0	0.0	0.0	47.7	48.1	-	8.0	0.0	53.9
1988	79.0	87.4	0.9	0.0	0.0	46.9	48.1	-	6.6	0.0	54.6
1989	77.2	86.3	0.9	-	0.0	32.4	44.9	-	5.0	0.0	48.7
1990	76.7	86.8	1.8	-	0.0	31.1	45.0	-	4.2	0.0	47.4
1991	76.4	86.9	1.8	-	0.0	31.8	45.0	-	3.8	0.0	47.1

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## MILITARY TURBINE ENGINES FLEET

## TURBOJET - MAXIMUM THRUST OF 7 TO 14 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	2,943	978	9,536	180	106	2,300	100	20	1,731	0	17,894
1980	2,983	1,010	6,616	110	144	2,804	193	70	2,221	0	16,151
1985	1,877	1,022	5,237	0	259	3,460	293	69	2,210	0	14,427
1986	1,807	1,070	4,775	0	259	3,346	268	68	2,102	0	13,695
1987	1,655	1,141	3,992	0	259	3,357	265	65	2,120	0	12,854
1988	1,603	1,025	3,349	0	239	3,441	284	65	2,112	0	12,118
1989	1,518	977	2,595	0	257	3,380	287	79	2,219	0	11,312
1990	1,501	972	1,969	0	269	3,311	284	84	2,270	0	10,660
1991	1,549	1,015	1,230	0	269	3,108	320	90	2,326	0	9,907

## MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	29.2	38.5	0.0	0.0	0.0	6.4	0.0	100.0	0.0	-	7.8
1980	29.0	34.5	0.0	0.0	21.5	7.6	0.0	100.0	0.0	-	9.5
1985	29.8	23.8	0.0	-	15.1	12.4	0.0	100.0	0.0	-	9.3
1986	32.0	23.7	0.0	-	15.1	10.8	0.0	100.0	0.0	-	9.5
1987	30.4	17.2	0.0	-	15.1	10.8	0.0	100.0	0.0	-	9.1
1988	27.9	19.6	0.0	-	15.9	10.5	0.0	100.0	0.0	-	9.2
1989	28.9	18.6	0.0	-	14.4	11.0	0.0	100.0	0.0	-	9.8
1990	28.7	18.6	0.0	-	13.8	10.7	0.0	100.0	0.0	-	10.2
1991	27.4	17.7	0.0	-	13.8	10.2	0.0	100.0	0.0	-	10.6

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## MILITARY TURBINE ENGINES FLEET

## TURBOJET - MAXIMUM THRUST OF 3 TO 7 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,781	392	10,286	264	642	1,597	288	88	2,352	202	17,892
1980	1,335	295	8,756	134	648	1,270	356	73	2,182	184	15,233
1985	992	229	6,040	8	614	1,398	368	70	2,050	122	11,891
1986	871	228	5,664	8	616	1,283	336	70	2,342	113	11,531
1987	770	228	5,214	0	601	1,249	321	70	2,405	87	10,945
1988	657	228	4,936	0	595	1,179	311	64	2,086	36	10,092
1989	616	228	4,167	0	361	1,038	304	50	1,797	26	8,587
1990	602	226	3,845	0	348	1,003	304	30	1,751	26	8,135
1991	535	224	3,247	0	341	905	295	0	1,746	26	7,319

## MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	94.4	94.6	0.0	0.0	57.0	33.3	30.6	100.0	28.2	80.7	22.1
1980	96.4	100.0	0.0	0.0	53.1	27.3	24.7	100.0	22.7	80.4	20.2
1985	95.5	100.0	0.0	0.0	62.2	24.1	18.5	100.0	24.9	77.0	22.2
1986	94.8	100.0	0.0	0.0	62.3	25.8	17.6	100.0	15.6	75.2	20.4
1987	98.6	100.0	0.0	-	61.6	23.8	19.9	100.0	15.1	67.8	20.2
1988	100.0	100.0	0.0	-	61.5	23.7	19.6	100.0	15.2	22.2	19.6
1989	100.0	100.0	0.0	-	77.8	25.6	19.7	100.0	17.5	0.0	21.1
1990	100.0	100.0	0.0	-	77.0	26.4	19.7	100.0	18.0	0.0	21.7
1991	100.0	100.0	0.0	-	76.5	29.2	20.3	-	18.4	0.0	22.7

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## MILITARY TURBINE ENGINES FLEET

## TURBOJET - MAXIMUM THRUST BELOW 3 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	4,591	1,883	7,526	588	1,469	2,131	352	267	4,652	151	23,610
1980	3,734	1,744	6,058	419	1,406	2,084	347	277	3,937	124	20,130
1985	3,005	1,868	5,065	416	1,322	2,021	349	279	3,987	122	18,434
1986	2,693	1,696	4,922	414	1,326	1,964	308	278	3,896	119	17,616
1987	2,688	1,661	4,711	414	1,309	1,906	271	277	3,801	118	17,156
1988	2,537	1,746	4,578	409	1,368	1,817	251	281	3,701	114	16,802
1989	2,370	1,783	4,446	409	1,347	1,718	248	281	3,550	113	16,265
1990	2,389	1,750	4,414	409	1,326	1,716	253	278	3,420	107	16,062
1991	2,219	1,804	4,313	409	1,322	1,567	243	274	3,189	112	15,452

## MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	61.1	35.1	0.0	21.9	27.8	26.8	45.2	93.6	18.4	83.4	25.2
1980	60.8	35.7	0.0	23.4	30.4	26.8	43.8	100.0	16.9	100.0	25.8
1985	57.4	44.5	0.0	21.6	30.4	26.5	42.7	100.0	15.4	100.0	25.8
1986	53.4	41.6	0.0	21.7	30.4	26.4	43.5	100.0	15.7	100.0	24.4
1987	53.9	39.9	0.0	21.7	30.3	27.4	49.1	100.0	14.9	100.0	24.6
1988	53.9	43.6	0.0	22.0	28.1	27.8	51.4	100.0	13.5	100.0	24.6
1989	52.9	42.4	0.0	22.0	26.3	29.5	51.2	100.0	12.1	100.0	24.0
1990	51.1	38.1	0.0	22.0	26.6	29.5	50.2	100.0	11.7	100.0	23.3
1991	52.8	36.8	0.0	22.0	26.6	26.7	50.2	100.0	11.9	100.0	23.2

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### MILITARY TURBINE ENGINES FLEET

#### TURBOPROP (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,568	268	7,599	213	898	1,114	216	78	1,170	199	13,323
1980	1,807	334	7,725	246	1,511	1,355	445	73	1,712	356	15,564
1985	2,091	453	8,662	278	2,048	1,772	780	65	2,233	383	18,765
1986	2,076	453	8,815	280	2,192	1,774	821	62	2,506	353	19,332
1987	2,121	400	8,690	280	2,340	1,853	827	60	2,608	369	19,548
1988	2,184	413	8,517	280	2,468	1,997	826	60	2,852	409	20,006
1989	2,316	417	8,425	281	2,414	1,982	824	62	2,997	432	20,150
1990	2,439	409	8,480	291	2,461	2,023	853	62	3,112	459	20,589
1991	2,478	429	8,531	309	2,458	2,065	854	57	3,175	482	20,838

#### MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	63.1	22.8	0.3	8.5	21.2	5.3	22.7	35.9	19.9	14.1	12.6
1980	46.8	19.8	0.2	7.3	17.2	5.8	16.0	38.4	16.7	17.1	11.1
1985	41.6	15.9	0.4	6.5	17.4	6.0	8.3	43.1	14.6	17.2	10.4
1986	40.6	14.8	0.4	6.4	15.5	6.0	8.3	40.3	13.2	10.2	9.7
1987	40.4	16.7	0.4	6.4	14.4	5.7	8.3	41.7	12.5	14.4	9.7
1988	39.5	16.2	0.4	6.4	13.7	5.3	7.7	41.7	12.1	13.7	9.6
1989	37.4	16.1	0.4	6.4	11.8	5.3	7.8	40.3	11.5	13.0	9.3
1990	35.8	16.4	0.4	6.2	11.4	5.2	7.5	40.3	11.1	13.3	9.1
1991	35.6	15.6	0.5	5.8	11.4	5.1	7.1	35.1	10.8	13.3	9.0

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA..... ASA - ASIA  
 CDN - CANADA..... AFR - AFRICA SOUTH OF SAHARA..... AUS - AUSTRALASIA  
 LAT - LATIN AMERICA AND CARIBBEAN..... SAF - REPUBLIC OF SOUTH AFRICA

## MILITARY TURBINE ENGINES FLEET

## TURBOSHAFT (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	4,524	713	15,256	342	710	1,929	380	259	1,950	215	26,278
1980	5,361	894	15,679	330	977	3,200	672	285	2,938	211	30,547
1985	6,857	1,221	16,013	328	1,655	3,998	1,033	278	3,983	218	35,584
1986	6,794	1,242	16,622	328	1,855	4,097	1,090	276	4,262	217	36,783
1987	6,619	1,351	16,551	323	1,893	4,430	1,264	269	4,400	210	37,310
1988	6,702	1,400	16,624	322	1,879	4,420	1,302	262	4,661	205	37,777
1989	6,709	1,395	16,663	317	2,107	4,423	1,266	262	4,704	237	38,083
1990	6,994	1,419	17,220	317	2,278	4,441	1,247	212	4,953	289	39,370
1991	7,092	1,452	16,473	309	2,348	4,404	1,238	211	5,084	238	38,849

## MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	65.8	45.6	0.0	0.0	22.0	22.5	70.3	100.0	17.5	24.2	18.3
1980	64.0	41.6	0.0	0.0	27.8	21.0	44.6	100.0	20.1	20.9	19.5
1985	51.9	41.3	0.0	0.0	22.2	24.7	45.7	100.0	17.7	36.7	19.5
1986	52.1	40.3	0.0	0.0	23.2	25.1	44.8	100.0	17.2	35.9	19.2
1987	51.4	37.2	0.0	0.0	23.1	24.9	37.6	100.0	17.5	36.7	18.9
1988	51.1	37.1	0.0	0.0	23.5	23.3	34.5	100.0	17.3	31.2	18.5
1989	50.6	36.6	0.0	0.0	23.2	22.5	34.0	100.0	18.1	27.8	18.4
1990	49.7	36.5	0.0	0.0	24.9	22.4	35.0	100.0	18.0	22.8	18.2
1991	49.9	37.6	0.0	0.0	24.9	21.7	35.1	100.0	18.2	26.9	18.7

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA..... ASA - ASIA  
 CDN - CANADA..... AFR - AFRICA SOUTH OF SAHARA..... AUS - AUSTRALASIA  
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### MILITARY TURBINE ENGINES FLEET - MARKET SHARE BY MANUFACTURER

#### TURBOFAN - MAXIMUM THRUST ABOVE 14 TONS

	CFM	ROLLS-ROYCE	SNECMA	TURBO-UNION	GENERAL ELECTRIC	PRATT AND WHITNEY	OTHER	TOTAL (UNITS)
1975	0%	0%	0%	0%	88%	12%	0%	423
1980	0%	0%	0%	0%	89%	11%	0%	422
1985	0%	3%	0%	0%	92%	4%	0%	554
1986	0%	5%	0%	0%	92%	4%	0%	642
1987	0%	5%	0%	0%	92%	3%	0%	733
1988	0%	4%	0%	0%	93%	3%	0%	843
1989	0%	5%	0%	0%	93%	3%	0%	869
1990	0%	5%	0%	0%	93%	3%	0%	882
1991	0%	5%	0%	0%	92%	3%	0%	911

#### TURBOFAN - MAXIMUM THRUST OF 7 TO 14 TONS

1975	0%	24%	0%	0%	0%	73%	3%	7,216
1980	0%	17%	0%	0%	0%	75%	7%	10,559
1985	5%	11%	0%	8%	4%	63%	8%	16,636
1986	6%	10%	1%	8%	4%	62%	8%	17,844
1987	6%	9%	1%	8%	10%	56%	9%	20,442
1988	7%	8%	1%	8%	12%	54%	10%	21,880
1989	7%	8%	1%	8%	14%	51%	11%	23,151
1990	8%	7%	2%	9%	15%	50%	11%	24,390
1991	8%	5%	2%	9%	17%	49%	10%	24,591

#### TURBOFAN - MAXIMUM THRUST OF 3 TO 7 TONS

1975	0%	73%	0%	0%	16%	11%	0%	1,627
1980	0%	52%	0%	0%	41%	7%	0%	3,635
1985	0%	40%	0%	0%	49%	10%	1%	4,385
1986	0%	41%	0%	0%	48%	10%	1%	4,413
1987	0%	41%	0%	0%	47%	10%	1%	4,390
1988	0%	41%	0%	0%	48%	10%	1%	4,561
1989	0%	41%	0%	0%	48%	10%	1%	4,665
1990	0%	42%	0%	0%	47%	9%	1%	4,713
1991	0%	42%	0%	0%	47%	9%	1%	4,696

### MILITARY TURBINE ENGINES FLEET - MARKET SHARE BY MANUFACTURER

#### TURBOFAN - MAXIMUM THRUST BELOW 3 TONS

	CFM	ROLLS-ROYCE	SNECMA	TURBO-UNION	GENERAL ELECTRIC	PRATT AND WHITNEY	OTHER	TOTAL (UNITS)
1975	0%	0%	0%	0%	22%	0%	78%	524
1980	0%	15%	31%	0%	11%	0%	42%	1,359
1985	0%	11%	38%	0%	6%	0%	46%	3,178
1986	0%	11%	40%	0%	6%	0%	43%	3,020
1987	0%	11%	38%	0%	6%	0%	46%	3,163
1988	0%	11%	34%	0%	5%	0%	50%	3,488
1989	0%	9%	31%	0%	4%	0%	55%	3,853
1990	0%	10%	30%	0%	4%	0%	56%	3,983
1991	0%	10%	29%	0%	4%	0%	57%	4,013

#### TURBOJET - MAXIMUM THRUST OF 7 TO 14 TONS

1975	0%	7%	1%	0%	59%	18%	15%	17,894
1980	0%	7%	3%	0%	60%	9%	21%	16,151
1985	0%	3%	6%	0%	59%	4%	28%	14,427
1986	0%	3%	6%	0%	58%	3%	29%	13,695
1987	0%	2%	7%	0%	56%	3%	32%	12,854
1988	0%	2%	7%	0%	55%	1%	35%	12,118
1989	0%	2%	8%	0%	52%	1%	37%	11,312
1990	0%	2%	8%	0%	49%	1%	40%	10,660
1991	0%	2%	8%	0%	46%	1%	42%	9,907

#### TURBOJET - MAXIMUM THRUST OF 3 TO 7 TONS

1975	0%	11%	10%	0%	0%	59%	20%	17,892
1980	0%	10%	10%	0%	0%	61%	19%	15,233
1985	0%	10%	12%	0%	0%	55%	22%	11,897
1986	0%	9%	12%	0%	0%	54%	25%	11,531
1987	0%	9%	12%	0%	0%	53%	27%	10,945
1988	0%	9%	11%	0%	0%	54%	27%	10,092
1989	0%	9%	12%	0%	0%	53%	26%	8,592
1990	0%	9%	13%	0%	0%	51%	27%	8,135
1991	0%	9%	13%	0%	0%	49%	29%	7,319



### MILITARY TURBINE ENGINES FLEET - MARKET SHARE BY MANUFACTURER

#### TURBOJET - MAXIMUM THRUST BELOW 3 TONS

	CFM	ROLLS-ROYCE	SNECMA	TURBO-UNION	GENERAL ELECTRIC	PRATT AND WHITNEY	OTHER	TOTAL (UNITS)
1975	0%	14%	0%	0%	43%	3%	40%	23,610
1980	0%	15%	0%	0%	45%	3%	37%	20,130
1985	0%	16%	0%	0%	48%	2%	35%	18,434
1986	0%	17%	0%	0%	49%	2%	33%	17,616
1987	0%	17%	0%	0%	50%	1%	32%	17,156
1988	0%	17%	0%	0%	50%	1%	32%	16,802
1989	0%	17%	0%	0%	51%	1%	31%	16,265
1990	0%	16%	0%	0%	52%	1%	30%	16,062
1991	0%	17%	0%	0%	53%	1%	29%	15,452



# CIVIL AEROSPACE TRADE

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## CIVIL AEROSPACE TRADE

The figures on external trade in aerospace products are obtained using the *NIMEXE* tables supplied by the **Statistical Office of The European Communities (SOEC-Eurostat)**.

The statistical data only concern the *civil aircraft, goods for use in civil aircraft* and for incorporation therein during their manufacture, repair, maintenance, rebuilding, modification or conversion, and *ground flying-trainers and their parts, for civil use*. "*Civil aircraft*" means aircraft other than aircraft used in military or similar services in the Member States, which carry a military or non-civil registration.

Data concerning the United Kingdom are not complete and do not allow the subdivision as indicated below.

So as to simplify the presentation of the data concerning trade on these products, four groups of products have been created: *airframes, engines, equipment* and *other material*.

### ● airframes

- ☒ Balloons and dirigibles; gliders, hand gliders and other non-powered aircraft
- ☒ Helicopters
- ☒ Aeroplanes and other aircraft
- ☒ Propellers and rotors and parts thereof
- ☒ Under-carriages and parts thereof
- ☒ Ground flying trainers and parts thereof

### ● engines

- ☒ Spark-ignition internal combustion piston engines
- ☒ Compression-ignition internal combustion piston engines (diesel or semi-diesel engines)
- ☒ Parts suitable for use solely or principally with spark- or compression-ignition aircraft engines
- ☒ Turbo-jets, turbo-propellers and other gas turbines, and parts
- ☒ Other engines and motors (reaction engines other than turbo-jets, hydraulic and pneumatic power engines and motors, etc.) and parts

### ● equipment

- ☒ Automatic data-processing machines and units thereof
- ☒ Hydropneumatic batteries; mechanical actuators for thrust reversers; toilet units specially designed; air humidifiers and dehumidifiers; servo-mechanisms, non-electric; non-electric starter motors; pneumatic starters for turbo-jets, turbo-propellers and other gas turbines; windscreens wipers, non-electric; propeller regulators, non-electric
- ☒ Transmission shafts (including cam shafts and crank shafts) and cranks

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● **equipment (continued)**

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- ❑ Bearing housings, not incorporating ball or roller bearings; plain shaft bearings
- ❑ Gears and gearing, other than toothed wheels, chain sprockets and other transmission elements presented separately; ball screws; gear boxes and other speed changers, including torque converters
- ❑ Flywheels and pulleys, including pulley blocks
- ❑ Clutches and shaft couplings (including universal joints)
- ❑ Microphones and stands therefor; loudspeakers; telephones, earphones and combined microphone/speaker sets; audio-frequency electric amplifiers; electric sound amplifier sets
- ❑ Magnetic tape recorders and other sound recording apparatus
- ❑ Video magnetic tape recording or reproducing apparatus
- ❑ Transmission apparatus for radio-telephony or radio-teleggraphy
- ❑ Radar apparatus, radio navigational aid apparatus and radio remote control apparatus
- ❑ Reception apparatus for radio-telephony or radio-teleggraphy
- ❑ Aerials and aerial reflectors; parts suitable for use therewith
- ❑ Electric sound or visual signalling apparatus (fire alarms and similar apparatus, indicator panels incorporating liquid crystal devices (LCD) or light emitting diodes (LED), etc.)

- ❑ Flight recorders
- ❑ Ignition wiring sets and other wiring sets
- ❑ Optical elements
- ❑ Direction finding compasses
- ❑ Stall warning calculators
- ❑ Breathing appliances and gas masks (excluding parts thereof)
- ❑ Hydrometers and similar floating instruments, thermometers, pyrometers, barometers, hygrometers and psychrometers
- ❑ Instruments and apparatus for measuring or checking the flow, level, pressure or other variables of liquids or gases
- ❑ Revolution counters, speed indicators and tachometers
- ❑ Oscilloscopes, spectrum analysers and other instruments and apparatus for measuring or checking electrical quantities, measuring or detecting ionizing radiations
- ❑ Other measuring or checking instruments, appliances and machines
- ❑ Automatic regulating or controlling instruments and apparatus
- ❑ Instrument panel clocks
- ❑ Clock movements, complete and assembled

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● **Other material**

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- ❑ Tubes, pipes and hoses, and fittings therefor (for example, joints, elbows, flanges), of plastics
- ❑ Other articles of plastics for technical uses

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● Other material (continued)

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- ✘ Profile shapes, cut to size, of vulcanized rubber other than hard rubber
- ✘ Tubes, pipes and hoses, of vulcanized rubber other than hard rubber, with fittings, suitable for conducting gases or liquids
- ✘ New pneumatic tyres, of rubber
- ✘ Retreaded or used pneumatic tyres, of rubber
- ✘ Other articles of vulcanized rubber other than hard rubber
- ✘ Piping and tubing of hard rubber, with fittings attached, suitable for conducting gases or liquids
- ✘ Gaskets, washers and other seals of agglomerated cork
- ✘ Gaskets, washers and other seals of paper pulp, paper or paperboard
- ✘ Articles of asbestos or of asbestos and magnesium carbonate
- ✘ Friction material and articles thereof, not mounted, for brakes, for clutches or the like, with a basis of asbestos or other mineral substances
- ✘ Windshields of laminated safety glass, not framed
- ✘ Tubes, pipes and hollow profiles, of iron or steel, with fittings attached, suitable for conducting gases or liquids
- ✘ Stranded wire, ropes, cables, plaited bands, slings and the like, of iron or steel, not electrically insulated, with fittings attached
- ✘ Air heaters and hot air distributors (excluding parts thereof)
- ✘ Sanitary ware (excluding parts thereof), of iron and steel
- ✘ Other articles of iron or steel wire
- ✘ Stranded wire, cables, plaited bands and the like, of copper, not electrically insulated, with fittings attached
- ✘ Aluminium tubes and pipes, with fittings attached, suitable for conducting gases or liquids
- ✘ Titanium tubes and pipes, with fittings attached, suitable for conducting gases or liquids
- ✘ Base metal mountings, fittings and similar articles (hinges, castors, automatic door closers, etc.)
- ✘ Flexible tubing of base metal, with fittings attached
- ✘ Pumps for liquids; liquid elevators, and parts
- ✘ Air vacuum pumps, air or other gas compressors and fans, and parts
- ✘ Air conditioning machines and parts
- ✘ Refrigerators, freezers and other refrigerating or freezing equipment; heat pumps other than air conditioning machines
- ✘ Heat exchange units and parts
- ✘ Other machinery for making hot drinks or for cooking or heating food
- ✘ Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases
- ✘ Fire extinguishers
- ✘ Pulley tackle and hoists other than skip hoists; winches and capstans; jacks
- ✘ Cranes

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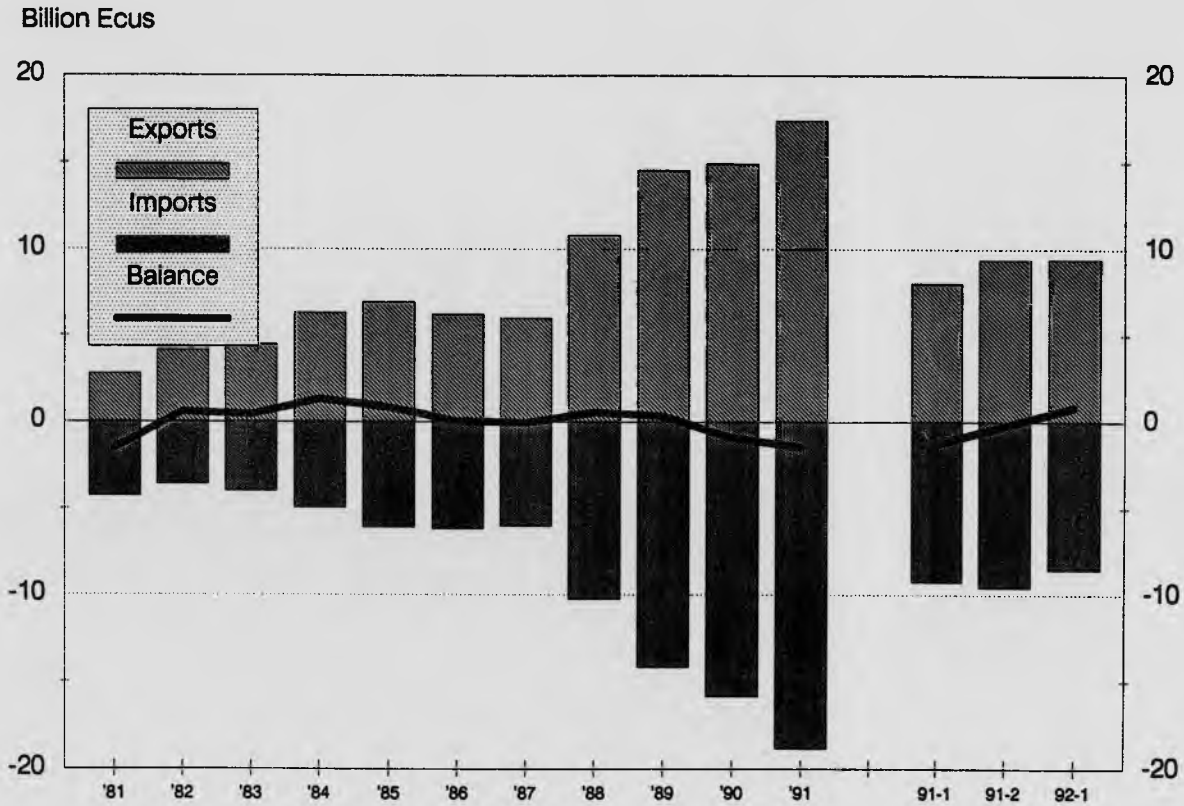
**● Other material (continued)**

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- ⌘ Other lifting, handling, loading or unloading machinery (for example, lifts, skip hoists, elevators and conveyors, etc.)
  - ⌘ Gaskets and similar joints of metal sheeting combined with other material or of two or more layers of metal
  - ⌘ Electric motors and generators (excluding generating sets)
  - ⌘ Electric generating sets and rotary converters
  - ⌘ Electric transformers, static converters and inductors
  - ⌘ Electric accumulators, including separators therefor
  - ⌘ Electrical ignition or starting equipment of a kind used for spark-ignition or compression-ignition internal combustion engines; generators and cut-outs of a kind used together with such engines
  - ⌘ Electric heating resistors, assembled only with a simple insulated former and electrical connections, used for anti-icing or de-icing
  - ⌘ Sealed beam lamp units
  - ⌘ Furniture
  - ⌘ Lamps and lighting fittings; illuminated signs and name-plates
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### EC Civil Aerospace Trade



■ SOURCE: EUROSTAT

## EC CIVIL AEROSPACE TRADE (\*)

## TOTAL EXTRA-EC (MIO ECUS)

## 1) IMPORTS

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1991 JAN-JUN	1991 JUL-DEC	1992 JAN-JUN
AIRFRAMES	1,454	1,491	1,721	2,660	2,817	2,633	5,754	8,763	10,064	12,624	6,240	6,383	5,550
ENGINES	1,567	1,879	2,504	2,644	2,555	2,648	2,970	3,592	3,869	4,124	1,979	2,145	1,871
EQUIPMENT	415	499	556	573	579	560	589	694	755	780	370	410	411
OTHER MATERIAL	139	153	192	234	225	194	933	1,147	1,175	1,311	664	648	695
<b>TOTAL</b>	<b>3,575</b>	<b>4,022</b>	<b>4,974</b>	<b>6,111</b>	<b>6,176</b>	<b>6,035</b>	<b>10,246</b>	<b>14,196</b>	<b>15,863</b>	<b>18,839</b>	<b>9,253</b>	<b>9,586</b>	<b>8,528</b>

## 2) EXPORTS

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1991 JAN-JUN	1991 JUL-DEC	1992 JAN-JUN
AIRFRAMES	3,031	2,791	3,962	3,704	2,956	2,651	6,228	8,959	8,072	10,350	4,560	5,790	5,745
ENGINES	757	1,285	1,875	2,649	2,655	2,806	2,901	3,684	4,788	4,909	2,387	2,523	2,541
EQUIPMENT	218	247	296	356	387	361	477	537	622	565	283	282	279
OTHER MATERIAL	146	145	164	205	189	169	1,183	1,360	1,462	1,554	760	784	820
<b>TOTAL</b>	<b>4,151</b>	<b>4,468</b>	<b>6,297</b>	<b>6,914</b>	<b>6,187</b>	<b>5,988</b>	<b>10,789</b>	<b>14,541</b>	<b>14,945</b>	<b>17,378</b>	<b>7,990</b>	<b>9,379</b>	<b>9,385</b>

## 3) BALANCE

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1991 JAN-JUN	1991 JUL-DEC	1992 JAN-JUN
AIRFRAMES	1,577	1,300	2,240	1,044	139	18	474	196	-1,992	-2,274	-1,681	- 593	194
ENGINES	- 810	- 594	- 629	5	100	159	-68	92	919	786	408	378	669
EQUIPMENT	- 198	- 252	- 260	- 217	- 193	- 199	- 112	- 157	- 133	- 215	-86	- 129	- 132
OTHER MATERIAL	7	-8	-28	-30	-36	-25	250	214	287	243	96	137	125
<b>TOTAL</b>	<b>576</b>	<b>445</b>	<b>1,323</b>	<b>803</b>	<b>11</b>	<b>-47</b>	<b>543</b>	<b>345</b>	<b>- 919</b>	<b>-1,460</b>	<b>-1,263</b>	<b>- 208</b>	<b>856</b>

(\*) 1982-85: EC 10 - 1986-92: EC 12

■ SOURCE: EUROSTAT

## EC CIVIL AEROSPACE TRADE (\*)

WITH USA (MIO ECUS)

## 1) IMPORTS

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1991 JAN-JUN	1991 JUL-DEC	1992 JAN-JUN
AIRFRAMES	1,297	1,282	1,484	2,338	2,604	2,236	3,826	6,846	8,134	10,092	4,992	5,100	3,972
ENGINES	1,459	1,702	2,124	2,226	2,196	2,252	2,574	3,081	3,363	3,598	1,755	1,843	1,581
EQUIPMENT	375	447	492	512	518	505	489	595	637	657	316	340	338
OTHER MATERIAL	124	132	163	208	204	166	370	459	465	512	260	252	256
TOTAL	3,255	3,563	4,262	5,285	5,522	5,159	7,259	10,981	12,599	14,859	7,323	7,535	6,148

## 2) EXPORTS

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1991 JAN-JUN	1991 JUL-DEC	1992 JAN-JUN
AIRFRAMES	727	609	879	1,507	806	1,035	2,008	2,635	2,340	2,789	1,073	1,716	1,457
ENGINES	454	803	1,201	1,852	1,844	1,823	1,965	2,556	3,481	3,671	1,800	1,871	1,957
EQUIPMENT	66	76	95	126	140	137	147	164	209	202	102	100	87
OTHER MATERIAL	34	29	39	60	62	52	293	315	310	327	158	169	164
TOTAL	1,281	1,517	2,214	3,544	2,852	3,047	4,412	5,669	6,340	6,989	3,133	3,856	3,664

## 3) BALANCE

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1991 JAN-JUN	1991 JUL-DEC	1992 JAN-JUN
AIRFRAMES	- 570	- 673	- 605	- 832	-1,798	-1,202	-1,818	-4,211	-5,794	-7,303	-3,918	-3,384	-2,515
ENGINES	-1,005	- 899	- 923	- 374	- 352	- 429	- 609	- 524	118	73	45	28	376
EQUIPMENT	- 309	- 372	- 397	- 387	- 378	- 367	- 343	- 431	- 428	- 455	- 214	- 240	- 252
OTHER MATERIAL	-89	- 103	- 124	- 148	- 143	- 114	- 77	- 145	- 155	- 185	- 102	-83	-93
TOTAL	-1,973	-2,047	-2,048	-1,741	-2,671	-2,112	-2,847	-5,312	-6,259	-7,870	-4,190	-3,680	-2,484

(\*) 1982-85: EC 10 - 1986-92: EC 12

■ SOURCE: EUROSTAT

## EC CIVIL AEROSPACE TRADE (\*)

WITH JAPAN (MIO ECUS)

## 1) IMPORTS

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1991	1991	1992
											JAN-JUN	JUL-DEC	JAN-JUN
AIRFRAMES	10	29	9	2	3	4	57	34	13	19	13	5	17
ENGINES	1	0	0	3	2	3	4	10	2	1	0	0	1
EQUIPMENT	1	1	1	1	3	3	3	5	6	10	4	6	7
OTHER MATERIAL	2	4	8	5	4	4	83	97	90	103	51	52	52
TOTAL	14	35	18	10	12	14	147	146	111	133	69	64	77

## 2) EXPORTS

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1991	1991	1992
											JAN-JUN	JUL-DEC	JAN-JUN
AIRFRAMES	100	181	18	135	119	46	166	223	365	699	459	239	153
ENGINES	7	4	6	12	18	49	42	41	46	24	14	11	23
EQUIPMENT	3	2	2	3	4	4	6	7	22	18	11	7	7
OTHER MATERIAL	1	1	1	7	4	3	30	35	41	42	20	22	20
TOTAL	111	188	27	158	145	102	245	306	474	784	504	280	203

## 3) BALANCE

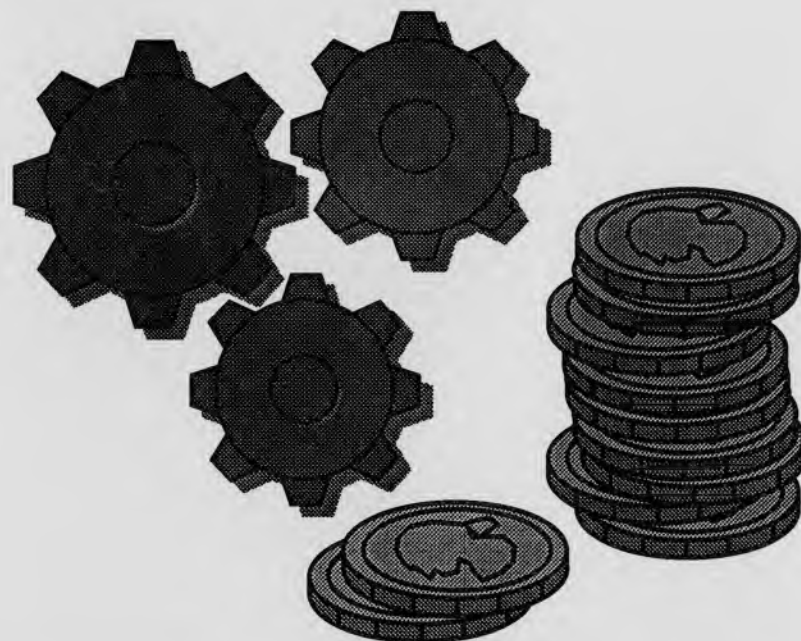
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1991	1991	1992
											JAN-JUN	JUL-DEC	JAN-JUN
AIRFRAMES	90	152	8	134	116	42	109	188	352	680	446	234	136
ENGINES	6	3	5	9	17	46	38	32	44	23	13	10	22
EQUIPMENT	2	2	2	2	1	1	3	3	16	8	7	2	1
OTHER MATERIAL	-1	-4	-7	3	-1	-0	-52	-62	-49	-61	-31	-30	-33
TOTAL	96	153	8	147	133	88	97	161	363	651	435	216	126

(\*) 1982-85: EC 10 - 1986-92: EC 12

■ SOURCE: EUROSTAT

# TURNOVER

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## TURNOVER

The **annual survey**, conducted by DG III together with the industrial associations of 7 EC Member States - A.I.A. (It), A.T.E.C.M.A. (Es), B.D.L.I. (Fr), G.E.B.E.C.O.M.A. (Be), G.I.F.A.S. (Fr), N.A.I. (Nl) and S.B.A.C. (UK) -, enables the *turnover* of the European aerospace industry to be broken down by type of *customer* and *sector*. Participants to this survey are the aerospace companies whose turnover concerns (partly or entirely) one or more of the 3 groups of aerospace products listed on the next page.

Data for Spain relating to the years 1984-86 have been estimated by linear regression to the turnover of the major Spanish aerospace company, Casa.

Turnover corresponding to **international co-operation programmes** (e.g. *Airbus*, *ATR*) is entered under the heading "*Final Users*". Only the part of these programmes that concerns the **national** industry (i.e. after deduction of the share of the turnover which concerns other countries) is included in the total turnover of a Member State. This applies both to the country that markets the product and to the country that supplies part of the product to the country which markets it.

However, standardization problems of the accounting methods remain and may affect turnover consolidated at the EC level.

Turnover corresponding to sales to **international public organizations** (e.g. *ESA*) is entered under the heading "*Na-*

*tional State*". Here too, only the part of these programmes that concerns the **national** industry is included in the total turnover of a Member State.

A distinction is made between the following:

- **Overall national turnover**

*Overall national turnover* includes transactions between national aerospace companies. Therefore, it does not show the output of the aerospace sector as such, since it includes intermediate exchanges at national level.

- **Turnover consolidated at national level**

*Turnover consolidated at national level* does not include transactions between national aerospace companies, and so represents the output of the aerospace sector as such.

The difference between *overall national turnover* and *turnover consolidated at national level* therefore represents the sale of aerospace goods and services between national companies in the various sub-sectors (aircraft, space, propulsion devices and equipment) and between national companies in the same subsectors (e.g. contracting between airframe manufacturers for certain sub-assemblies).

- **Turnover consolidated at Community level**

*Turnover consolidated at Community level* represents the output of the EC as a whole, since it does not include intra-Community transactions between aerospace companies.

The difference between *turnover consolidated at national level* and *turnover consolidated at EC level* therefore includes the sale of aerospace goods and services between companies located in the different EC Member States.

P.S.: in the case of the USA, JAPAN and CANADA, turnover is always the consolidated one.

The turnover is broken down by *group of products* and by *category of customer* (civil and military).

The *groups of products* considered are as follows:

- a. **Complete aerospace systems:**
  - ☒ *Aircraft* (aeroplane, helicopters and gliders), *Missiles*, their parts and spares.
  - ☒ *Space* (space vehicles, satellites, launchers, ground installations, etc.).
- b. **Propulsion devices**  
(Piston engines, turboprops, turbojets, etc.), their parts and spares, equipment and accessories, for installation in the aerospace systems mentioned under (a).
- c. **Equipment**  
Equipment for the aerospace systems mentioned under (a) (finished products, parts and spares, sub-as-

semblies) including test and ground-training equipment.

The breakdown of turnover between the different *categories of customer* is carried out as follows:

- *National State*: sales or services (including R&D) to the State (public authorities) in which the company is established;
- *Aerospace Manufacturers*: sales or services (including R&D) to other aerospace companies (generally sub-contracting);
- *Final Users*: sales or services (including R&D), i.e., neither to the State nor to other aerospace companies.

In the case of the "*Aerospace Manufacturers*" and the "*Final Users*", turnover is broken down between:

- *National*: sales or services in the country in which the company is established,
- *Other EC States*: sales or services in other EC countries,
- *Third Countries*: sales or services in a non-EC country.

The *activities* considered are:

- *R&D* contracts,
- *production* and assembly,
- post-delivery modifications, repairs and *maintenance* of material sold, where these operations are carried out by the company itself.

Repair and maintenance operations carried out by users, whether civil or military, are not covered by this survey.



Turnover relating to the category of customer "*National State*" is broken down between:

- *R&D contracts*,
- post-delivery modifications, repairs and *maintenance* of material sold, where these operations are carried out by the company itself and **not by the customer**, and
- *procurement*.

For the other two categories of customers, "*Aerospace Manufacturers*" and "*Final Users*", the data refer to all these activities.

#### PUBLIC FINANCING OF R&D

Data relating to *public financing of aerospace R&D* are supplied by the *EUROSTAT (Statistical Office of the European Communities)* and include funds for aerospace R&D granted to industry and to research centers, laboratories, universities, etc.

The data relating to space R&D comprise credits allocated to the *European Space Agency (ESA)*.

Although a comparison of statistics from different sources can sometimes produce misleading results, the difference between the figures originating from the industrial associations and those from *EUROSTAT* shows of the proportion of public funds granted to non-industrial bodies.

#### FINANCIAL DATA

As to the European companies, the financial data published at the end of this chapter are extracted from "*L'industrie Aéronautique et Spatiale Mondiale*", a study by *EUROSTAF*, in collaboration with *AEROSPATIALE*. The US global data are taken from A.I.A.'s "*Aerospace Facts & Figures*" (source: Bureau of the Census).

The European data are aggregated by country, each table summing the major national producers:

- EC = aggregate of the six following countries:
- France = *Aérospatiale* + *Dassault* + *Matra* + *Snecma* + *Thomson-Csf*
- FRG = *DASA (Dornier + MBB + MTU)*, without *TST* and *Deutsche Airbus*
- Italy = *Alenia (Aeritalia + Selenia)* + *Agusta*
- Netherlands = *Fokker*
- Spain = *CASA*
- UK = *British Aerospace* + *Rolls-Royce* + *Westland*

For each country, the following series are provided:

- **turnover**
- **value added** = turnover *minus* external costs and expenses, excluding wage costs
- **wage costs**
- **trading income** = value added *minus* wage costs
- **net income** = trading income *minus* investments, financial costs and income taxes
- **equity** = assets *minus* all liabilities, except to shareholders
- **long and medium term debt**

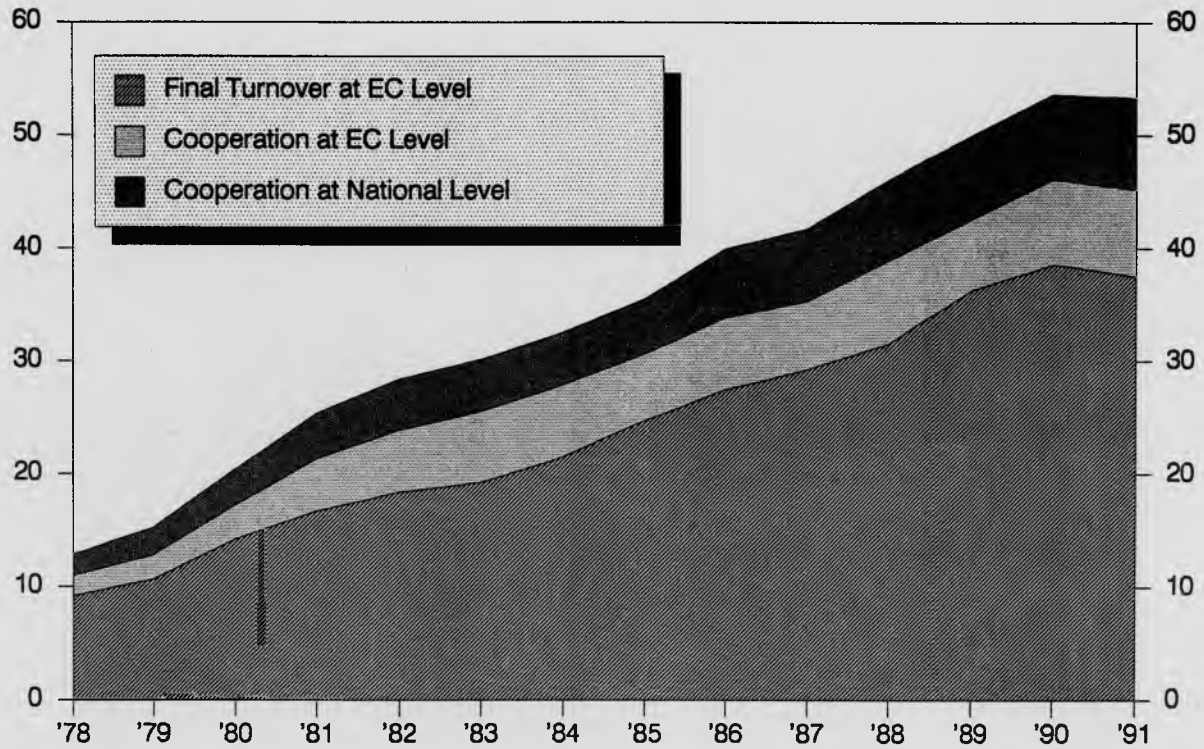
- **total permanent liabilities** = equity *plus* long and medium term debt
- **Permanent assets**
- **Total R&D**, out of which industry-funded R&D
- **Operating Investments**
- **Employment**

The ratios are defined as follows:

- **apparent labor productivity** = value added on wage costs and worker
  - **research effort** = total R&D and industry-funded R&D on Turnover
  - **Investments on Value Added**
  - **debt ratio**: long and medium term debt on permanent liabilities
  - **profitability**: trading income on value added and net income on value added, equity and assets
-

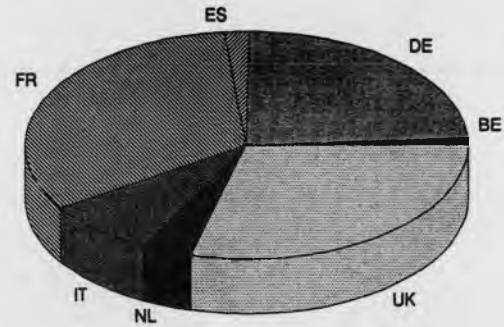
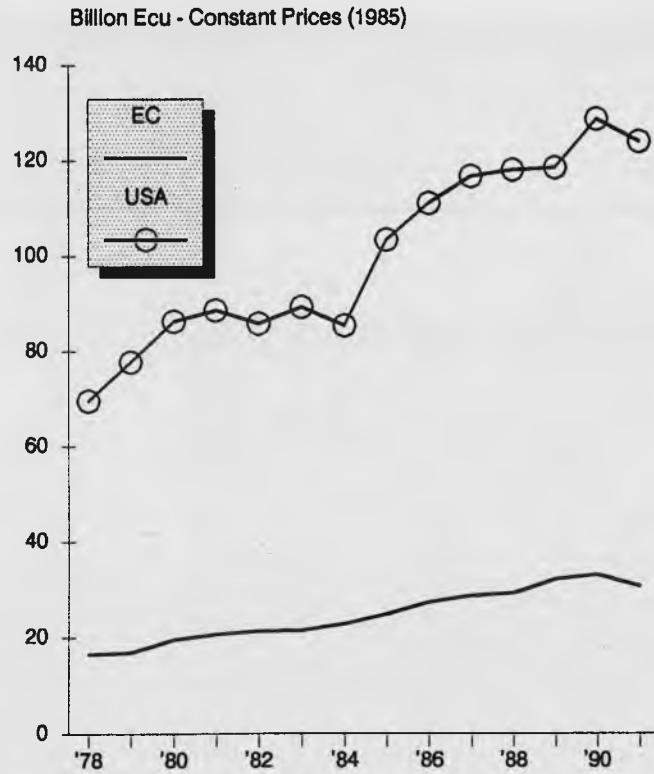
# EC Aerospace Turnover

Billion ECU - Current Prices



■ SOURCE: INDUSTRIAL ASSOCIATIONS

# Aerospace Turnover



Breakdown by Country - 1991  
( current prices )

## OVERALL NATIONAL AEROSPACE TURNOVER

## 1) MIO ECU - CURRENT PRICES

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	333	3,359	185	7,270	1,230	372	7,646	20,394	34,041	1,273	1,353
1981	429	4,114	262	8,821	1,757	445	9,581	25,409	49,118	1,685	2,078
1982	413	5,084	356	9,813	2,181	492	10,080	28,419	59,945	2,540	2,292
1983	344	5,380	348	10,827	2,661	605	10,015	30,179	72,021	2,914	2,353
1984	287	5,628	385	11,729	2,767	594	11,210	32,599	84,171	3,642	3,187
1985	361	6,524	433	12,555	3,070	533	12,034	35,512	103,325	4,652	3,914
1986	338	9,780	404	13,168	3,421	584	12,252	39,948	86,465	4,815	3,456
1987	339	10,079	426	13,145	3,649	452	13,600	41,691	77,089	5,225	3,680
1988	329	11,190	649	14,267	3,960	880	14,769	46,044	77,449	5,831	4,114
1989	363	11,895	806	15,782	4,422	1,199	15,486	49,953	88,029	6,653	5,280
1990	437	12,364	961	17,147	4,940	1,385	16,403	53,637	86,076	5,959	5,097
1991	429	13,053	839	17,367	5,087	1,650	14,907	53,331	92,278	7,120	6,002
1992 ESTIMATE	-	13,399	909	16,240	5,168	2,026	-	-	89,777	6,999	5,729
1993 FORECAST	-	14,481	-	14,707	5,368	2,347	-	-	-	-	6,380

## 2) COMPARISON OF TURNOVER BY GEOGRAPHICAL AREA (EC = 100)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	1.6	16.5	0.9	35.6	6.0	1.8	37.5	100.0	166.9	6.2	6.6
1981	1.7	16.2	1.0	34.7	6.9	1.8	37.7	100.0	193.3	6.6	8.2
1982	1.5	17.9	1.3	34.5	7.7	1.7	35.5	100.0	210.9	8.9	8.1
1983	1.1	17.8	1.2	35.9	8.8	2.0	33.2	100.0	238.6	9.7	7.8
1984	0.9	17.3	1.2	36.0	8.5	1.8	34.4	100.0	258.2	11.2	9.8
1985	1.0	18.4	1.2	35.4	8.6	1.5	33.9	100.0	291.0	13.1	11.0
1986	0.8	24.5	1.0	33.0	8.6	1.5	30.7	100.0	216.4	12.1	8.7
1987	0.8	24.2	1.0	31.5	8.8	1.1	32.6	100.0	184.9	12.5	8.8
1988	0.7	24.3	1.4	31.0	8.6	1.9	32.1	100.0	168.2	12.7	8.9
1989	0.7	23.8	1.6	31.6	8.9	2.4	31.0	100.0	176.2	13.3	10.6
1990	0.8	23.1	1.8	32.0	9.2	2.6	30.6	100.0	160.5	11.1	9.5
1991	0.8	24.5	1.6	32.6	9.5	3.1	28.0	100.0	173.0	13.4	11.3

■ SOURCE: INDUSTRIAL ASSOCIATIONS (EC: DG III ANNUAL SURVEY - USA: A.I.A.A. - JAPAN: S.J.A.C. - CANADA: A.I.A.C.)

## OVERALL NATIONAL AEROSPACE TURNOVER

## 3) MIO ECU - CONSTANT PRICES (1985)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	398	4,470	244	9,750	1,968	483	10,837	28,150	86,262	2,467	2,819
1981	498	5,237	319	10,935	2,513	551	11,260	31,314	88,604	2,452	3,218
1982	484	5,860	399	11,566	2,789	542	11,166	32,805	85,797	3,610	2,949
1983	388	5,727	414	12,245	3,014	634	11,029	33,452	89,284	3,543	2,620
1984	309	5,779	409	12,552	2,872	608	11,883	34,411	85,405	3,832	3,205
1985	361	6,524	433	12,555	3,070	533	12,034	35,512	103,325	4,652	3,914
1986	318	9,050	387	12,514	3,201	556	13,498	39,524	111,073	4,322	4,428
1987	307	8,906	399	12,355	3,296	420	14,967	40,650	116,619	4,735	5,041
1988	296	9,753	556	13,179	3,449	809	14,388	42,431	118,010	4,786	5,119
1989	312	10,082	613	14,064	3,567	1,088	14,300	44,025	118,442	5,378	5,620
1990	356	10,041	675	14,600	3,739	1,213	15,038	45,662	128,706	5,713	6,000
1991	339	10,172	548	14,513	3,613	1,403	12,601	43,189	123,946	6,073	6,579
1992 ESTIMATE	-	9,828	573	12,937	3,613	1,641	-	-	121,180	5,806	6,796
1993 FORECAST	-	10,204	-	11,360	3,580	1,840	-	-	-	-	7,406

## 4) GROWTH RATE OF TURNOVER (AS % - CONSTANT PRICES)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	49.0	4.6	33.1	13.7	8.0	4.4	26.0	-	10.9	-0.1	20.0
1981	25.2	17.1	30.7	12.2	27.7	14.1	3.9	11.2	2.7	-0.6	14.2
1982	-2.8	11.9	25.0	5.8	11.0	-1.7	-0.8	4.8	-3.2	47.2	-8.4
1983	-19.8	-2.3	3.8	5.9	8.1	17.0	-1.2	2.0	4.1	-1.9	-11.2
1984	-20.5	0.9	-1.1	2.5	-4.7	-4.1	7.7	2.9	-4.3	8.2	22.3
1985	17.1	12.9	5.8	0.0	6.9	-12.3	1.3	3.2	21.0	21.4	22.1
1986	-12.1	38.7	-10.5	-0.3	4.3	4.3	12.2	11.3	7.5	-7.1	13.1
1987	-3.4	-1.6	3.1	-1.3	3.0	-24.4	10.9	2.8	5.0	9.6	13.8
1988	-3.4	9.5	39.4	6.7	4.6	92.5	-3.9	4.4	1.2	1.1	1.5
1989	5.2	3.4	10.1	6.7	3.4	34.5	-0.6	3.8	0.4	12.4	9.8
1990	14.1	-0.4	10.2	3.8	4.8	11.6	5.2	3.7	8.7	6.2	6.8
1991	-4.7	1.3	-18.9	-0.6	-3.4	15.7	-16.2	-5.4	-3.7	6.3	9.7
1992 ESTIMATE	-	-3.4	4.6	-10.9	-0.0	16.9	-	-	-2.2	-4.4	3.3
1993 FORECAST	-	3.8	-	-12.2	-0.9	12.1	-	-	-	-	9.0
1980-91	-1.4	7.8	7.6	3.7	5.7	10.2	1.4	4.0	3.3	8.5	8.0

■ SOURCE: INDUSTRIAL ASSOCIATIONS (EC: DG III ANNUAL SURVEY - USA: A.I.A.A. - JAPAN: S.J.A.C. - CANADA: A.I.A.C.)

## AEROSPACE TURNOVER CONSOLIDATED AT NATIONAL LEVEL

## 1) MIO ECU - CURRENT PRICES

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	320	2,710	184	5,992	1,028	371	6,648	17,253	34,041	1,273	1,353
1981	426	3,317	262	7,245	1,526	441	8,153	21,370	49,118	1,685	2,078
1982	409	4,112	354	7,982	1,866	486	8,706	23,915	59,945	2,540	2,292
1983	339	4,272	346	8,904	2,220	595	8,895	25,572	72,021	2,914	2,353
1984	284	4,515	375	9,967	2,332	584	9,890	27,947	84,171	3,642	3,187
1985	360	5,319	418	10,782	2,611	533	10,661	30,683	103,325	4,652	3,914
1986	336	7,901	386	10,966	2,851	584	10,905	33,929	86,465	4,815	3,456
1987	337	8,292	360	10,924	3,028	452	11,924	35,316	77,089	5,225	3,680
1988	328	9,117	609	11,852	3,286	880	12,864	38,935	77,449	5,831	4,114
1989	363	9,929	789	13,317	3,675	1,199	13,340	42,612	88,029	6,653	5,280
1990	436	10,168	931	14,593	4,106	1,385	14,513	46,131	86,076	5,959	5,097
1991	428	10,757	808	14,758	3,640	1,650	13,114	45,155	92,278	7,120	6,002

## 2) COMPARISON OF TURNOVER BY GEOGRAPHICAL AREA (EC = 100)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	1.9	15.7	1.1	34.7	6.0	2.1	38.5	100.0	197.3	7.4	7.8
1981	2.0	15.5	1.2	33.9	7.1	2.1	38.2	100.0	229.8	7.9	9.7
1982	1.7	17.2	1.5	33.4	7.8	2.0	36.4	100.0	250.7	10.6	9.6
1983	1.3	16.7	1.4	34.8	8.7	2.3	34.8	100.0	281.6	11.4	9.2
1984	1.0	16.2	1.3	35.7	8.3	2.1	35.4	100.0	301.2	13.0	11.4
1985	1.2	17.3	1.4	35.1	8.5	1.7	34.7	100.0	336.7	15.2	12.8
1986	1.0	23.3	1.1	32.3	8.4	1.7	32.1	100.0	254.8	14.2	10.2
1987	1.0	23.5	1.0	30.9	8.6	1.3	33.8	100.0	218.3	14.8	10.4
1988	0.8	23.4	1.6	30.4	8.4	2.3	33.0	100.0	198.9	15.0	10.6
1989	0.9	23.3	1.9	31.3	8.6	2.8	31.3	100.0	206.6	15.6	12.4
1990	0.9	22.0	2.0	31.6	8.9	3.0	31.5	100.0	186.6	12.9	11.0
1991	0.9	23.8	1.8	32.7	8.1	3.7	29.0	100.0	204.4	15.8	13.3

■ SOURCE: INDUSTRIAL ASSOCIATIONS (EC: DG III ANNUAL SURVEY - USA: A.I.A.A. - JAPAN: S.J.A.C. - CANADA: A.I.A.C.)

## AEROSPACE TURNOVER CONSOLIDATED AT NATIONAL LEVEL

## 3) MIO ECU - CONSTANT PRICES (1985)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	382	3,607	244	8,036	1,646	482	9,421	23,817	86,262	2,467	2,819
1981	494	4,223	319	8,982	2,182	546	9,583	26,329	88,604	2,452	3,218
1982	480	4,739	396	9,409	2,387	535	9,644	27,588	85,797	3,610	2,949
1983	383	4,548	412	10,070	2,515	624	9,796	28,348	89,284	3,543	2,620
1984	305	4,636	399	10,666	2,421	597	10,484	29,509	85,405	3,832	3,205
1985	360	5,319	418	10,782	2,611	533	10,661	30,683	103,325	4,652	3,914
1986	316	7,311	370	10,421	2,668	556	12,013	33,655	111,073	4,322	4,428
1987	304	7,327	337	10,267	2,735	420	13,122	34,513	116,619	4,735	5,041
1988	295	7,946	523	10,948	2,862	809	12,532	35,914	118,010	4,786	5,119
1989	311	8,416	600	11,867	2,965	1,088	12,318	37,565	118,442	5,378	5,620
1990	355	8,258	654	12,425	3,107	1,213	13,305	39,318	128,706	5,713	6,000
1991	338	8,383	528	12,333	2,585	1,403	11,085	36,656	123,946	6,073	6,579

## 4) GROWTH RATE OF TURNOVER (AS % - CONSTANT PRICES)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	44.8	0.3	33.6	14.2	15.7	4.7	27.8		10.9	-0.1	20.0
1981	29.4	17.1	30.7	11.8	32.6	13.3	1.7	10.5	2.7	-0.6	14.2
1982	-2.9	12.2	24.4	4.7	9.4	-2.1	0.6	4.8	-3.2	47.2	-8.4
1983	-20.2	-4.0	3.9	7.0	5.4	16.7	1.6	2.8	4.1	-1.9	-11.2
1984	-20.2	1.9	-3.1	5.9	-3.8	-4.2	7.0	4.1	-4.3	8.2	22.3
1985	17.9	14.7	4.7	1.1	7.8	-10.7	1.7	4.0	21.0	21.4	22.1
1986	-12.2	37.5	-11.5	-3.3	2.2	4.3	12.7	9.7	7.5	-7.1	13.1
1987	-3.7	0.2	-8.7	-1.5	2.5	-24.4	9.2	2.5	5.0	9.6	13.8
1988	-3.1	8.4	54.9	6.6	4.7	92.5	-4.5	4.1	1.2	1.1	1.5
1989	5.6	5.9	14.8	8.4	3.6	34.5	-1.7	4.6	0.4	12.4	9.8
1990	14.1	-1.9	9.0	4.7	4.8	11.6	8.0	4.7	8.7	6.2	6.8
1991	-4.8	1.5	-19.3	-0.7	-16.8	15.7	-16.7	-6.8	-3.7	6.3	9.7

1980-91	-1.1	8.0	7.3	4.0	4.2	10.2	1.5	4.0	3.3	8.5	8.0
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■ SOURCE: INDUSTRIAL ASSOCIATIONS (EC: DG III ANNUAL SURVEY - USA: A.I.A.A. - JAPAN: S.J.A.C. - CANADA: A.I.A.C.)



## AEROSPACE TURNOVER CONSOLIDATED AT EC LEVEL

## 1) MIO ECU - CURRENT PRICES

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	263	1,715	136	5,437	760	365	5,501	14,177	34,041	1,273	1,353
1981	349	1,837	189	6,540	1,307	373	6,129	16,723	49,118	1,685	2,078
1982	338	2,157	281	7,303	1,623	408	6,283	18,393	59,945	2,540	2,292
1983	271	2,175	247	7,950	1,698	518	6,409	19,269	72,021	2,914	2,353
1984	205	2,343	288	9,082	1,744	528	7,330	21,519	84,171	3,642	3,187
1985	260	3,135	326	10,278	1,830	533	8,409	24,772	103,325	4,652	3,914
1986	227	5,538	307	10,264	1,977	584	8,625	27,522	86,465	4,815	3,456
1987	224	6,084	304	10,212	2,093	432	9,911	29,259	77,089	5,225	3,680
1988	246	6,344	503	10,740	2,260	858	10,570	31,521	77,449	5,831	4,114
1989	223	7,164	639	12,895	2,558	1,157	11,643	36,279	88,029	6,653	5,280
1990	244	6,973	773	13,903	2,867	1,336	12,510	38,606	86,076	5,959	5,097
1991	271	7,542	665	13,540	2,704	1,602	11,212	37,537	92,278	7,120	6,002

## 2) COMPARISON OF TURNOVER BY GEOGRAPHICAL AREA (EC = 100)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	1.9	12.1	1.0	38.4	5.4	2.6	38.8	100.0	240.1	9.0	9.5
1981	2.1	11.0	1.1	39.1	7.8	2.2	36.6	100.0	293.7	10.1	12.4
1982	1.8	11.7	1.5	39.7	8.8	2.2	34.2	100.0	325.9	13.8	12.5
1983	1.4	11.3	1.3	41.3	8.8	2.7	33.3	100.0	373.8	15.1	12.2
1984	1.0	10.9	1.3	42.2	8.1	2.5	34.1	100.0	391.2	16.9	14.8
1985	1.1	12.7	1.3	41.5	7.4	2.2	33.9	100.0	417.1	18.8	15.8
1986	0.8	20.1	1.1	37.3	7.2	2.1	31.3	100.0	314.2	17.5	12.6
1987	0.8	20.8	1.0	34.9	7.2	1.5	33.9	100.0	263.5	17.9	12.6
1988	0.8	20.1	1.6	34.1	7.2	2.7	33.5	100.0	245.7	18.5	13.1
1989	0.6	19.7	1.8	35.5	7.1	3.2	32.1	100.0	242.6	18.3	14.6
1990	0.6	18.1	2.0	36.0	7.4	3.5	32.4	100.0	223.0	15.4	13.2
1991	0.7	20.1	1.8	36.1	7.2	4.3	29.9	100.0	245.8	19.0	16.0

■ SOURCE: INDUSTRIAL ASSOCIATIONS (EC: DGIII ANNUAL SURVEY - USA: A.I.A.A. - JAPAN: S.J.A.C. - CANADA: A.I.A.C.)

## AEROSPACE TURNOVER CONSOLIDATED AT EC LEVEL

## 3) MIO ECU - CONSTANT PRICES (1985)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	314	2,282	180	7,292	1,216	475	7,796	19,555	86,262	2,467	2,819
1981	406	2,338	230	8,108	1,869	462	7,203	20,615	88,604	2,452	3,218
1982	397	2,486	315	8,607	2,075	449	6,960	21,289	85,797	3,610	2,949
1983	306	2,316	293	8,992	1,923	543	7,058	21,432	89,284	3,543	2,620
1984	220	2,405	307	9,719	1,811	540	7,770	22,771	85,405	3,832	3,205
1985	260	3,135	326	10,278	1,830	533	8,409	24,772	103,325	4,652	3,914
1986	214	5,125	294	9,754	1,850	556	9,501	27,293	111,073	4,322	4,428
1987	202	5,376	284	9,597	1,890	401	10,907	28,659	116,619	4,735	5,041
1988	221	5,529	431	9,921	1,968	788	10,297	29,157	118,010	4,786	5,119
1989	192	6,072	486	11,491	2,064	1,049	10,751	32,105	118,442	5,378	5,620
1990	199	5,663	543	11,838	2,169	1,170	11,469	33,052	128,706	5,713	6,000
1991	214	5,878	434	11,316	1,920	1,363	9,478	30,603	123,946	6,073	6,579

## 4) GROWTH RATE OF TURNOVER (AS % - CONSTANT PRICES)

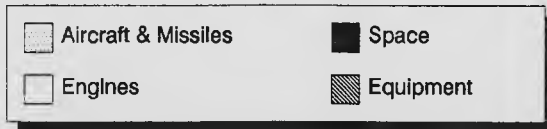
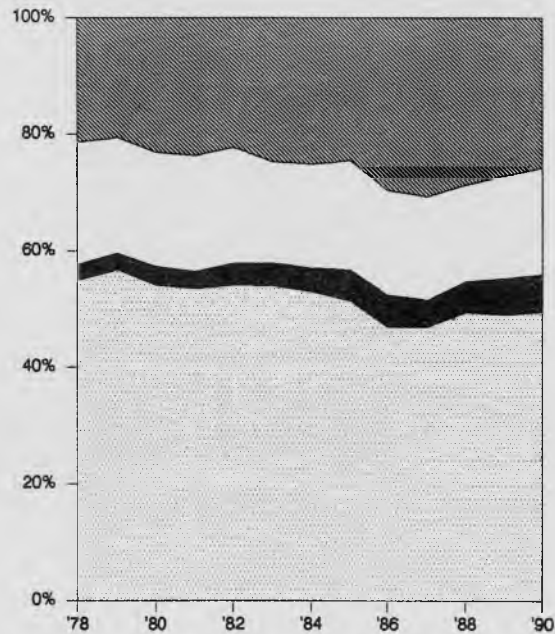
	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1980	61.4	-16.5	31.4	14.9	-3.1	6.2	34.2		10.9	-0.1	20.0
1981	29.3	2.5	27.5	11.2	53.7	-2.7	-7.6	5.4	2.7	-0.6	14.2
1982	-2.2	6.3	37.1	6.2	11.0	-2.9	-3.4	3.3	-3.2	47.2	-8.4
1983	-22.8	-6.9	-6.9	4.5	-7.3	21.1	1.4	0.7	4.1	-1.9	-11.2
1984	-28.0	3.9	4.5	8.1	-5.9	-0.6	10.1	6.2	-4.3	8.2	22.3
1985	18.1	30.3	6.5	5.8	1.1	-1.2	8.2	8.8	21.0	21.4	22.1
1986	-17.9	63.5	-10.0	-5.1	1.1	4.2	13.0	10.2	7.5	-7.1	13.1
1987	-5.2	4.9	-3.2	-1.6	2.2	-27.7	14.8	5.0	5.0	9.6	13.8
1988	9.4	2.9	51.7	3.4	4.1	96.4	-5.6	1.7	1.2	1.1	1.5
1989	-13.5	9.8	12.6	15.8	4.8	33.1	4.4	10.1	0.4	12.4	9.8
1990	3.9	-6.7	11.7	3.0	5.1	11.5	6.7	2.9	8.7	6.2	6.8
1991	7.8	3.8	-20.1	-4.4	-11.5	16.4	-17.4	-7.4	-3.7	6.3	9.7

1980-91	-3.4	9.0	8.3	4.1	4.2	10.1	1.8	4.2	3.3	8.5	8.0
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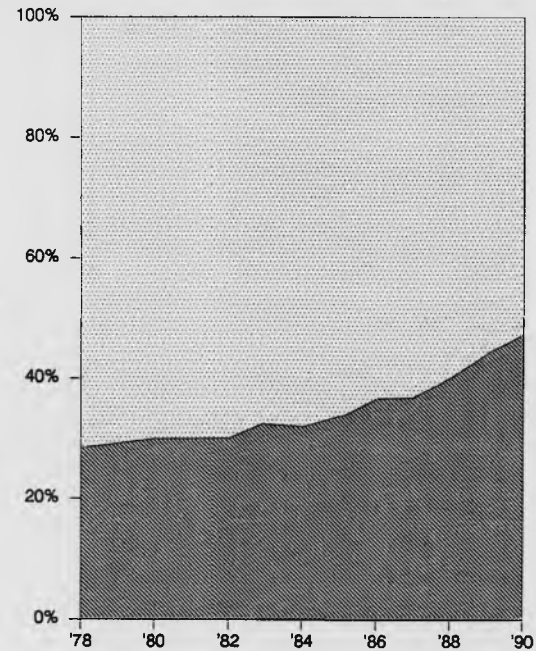
■ SOURCE: INDUSTRIAL ASSOCIATIONS (EC: DGIII ANNUAL SURVEY - USA: A.I.A.A. - JAPAN: S.J.A.C. - CANADA: A.I.A.C.)

# EC AEROSPACE TURNOVER

Breakdown by Sector



Breakdown by Activity





## BREAKDOWN OF OVERALL AEROSPACE TURNOVER

## BY SUBSECTOR (AS % OF TOTAL)

## 1) EC

	SUBSECTORS				DESTINATION	
	AIRCRAFT AND MISSILES	SPACE	ENGINES	EQUIPMENT	CIVIL	MILITARY
1980	54.1	3.2	19.6	23.1	30.0	70.0
1981	53.5	3.0	19.8	23.7	29.8	70.2
1982	54.1	3.7	19.9	22.3	30.1	69.9
1983	54.0	3.8	17.4	24.9	32.5	67.5
1984	53.0	4.0	17.9	25.1	31.9	68.1
1985	51.4	5.4	18.7	24.5	33.5	66.5
1986	46.9	5.5	18.0	29.6	36.8	63.2
1987	46.9	4.6	17.8	30.6	36.9	63.1
1988	49.4	5.3	16.6	28.7	40.0	60.0
1989	49.0	6.3	17.5	27.3	44.2	55.8
1990	49.5	6.4	18.3	25.8	47.4	52.6
1991	-	-	-	-	-	-

## 2) USA

	SUBSECTORS				DESTINATION	
	AIRCRAFT AND MISSILES	SPACE	ENGINES	EQUIPMENT	CIVIL	MILITARY
1980	56.1	7.3	16.5	20.0	45.5	54.5
1981	54.2	7.0	17.7	21.0	40.8	59.2
1982	49.2	8.1	17.4	25.3	29.4	70.6
1983	52.0	7.7	16.2	24.2	29.1	70.9
1984	51.7	7.9	17.1	23.3	25.9	74.1
1985	53.6	8.0	15.4	23.0	26.6	73.4
1986	54.3	7.4	15.0	23.3	27.4	72.6
1987	52.5	9.0	16.9	21.6	25.0	75.0
1988	49.3	9.4	20.1	21.1	28.5	71.5
1989	49.2	10.1	19.6	21.2	33.6	66.4
1990	53.9	8.8	17.8	19.5	38.9	61.1
1991	-	-	-	-	43.9	56.1

■ SOURCE: INDUSTRIAL ASSOCIATIONS (EC: DG III ANNUAL SURVEY - USA: A.I.A.A. - JAPAN: S.J.A.C.)

## BREAKDOWN OF OVERALL AEROSPACE TURNOVER

BY SUBSECTOR (AS % OF TOTAL)

## 3) JAPAN

	SUBSECTORS				DESTINATION	
	AIRCRAFT AND MISSILES	SPACE	ENGINES	EQUIPMENT	CIVIL	MILITARY
1980	40.1	31.5	14.8	13.6	43.5	56.5
1981	42.9	29.4	15.0	12.7	44.7	55.3
1982	45.6	27.3	14.1	13.1	43.9	56.1
1983	44.2	27.7	13.5	14.7	43.4	56.6
1984	47.8	21.7	15.0	15.5	35.4	64.6
1985	48.1	23.5	14.3	14.1	35.5	64.5
1986	45.0	21.6	15.2	18.2	34.5	65.5
1987	44.7	23.1	14.0	18.1	38.0	62.0
1988	43.0	25.1	13.8	18.0	40.8	59.2
1989	40.3	27.7	13.6	18.4	44.8	55.2
1990	40.4	26.8	14.1	18.8	45.1	54.9
1991	37.4	28.2	14.4	15.8	46.1	53.9

■ SOURCE: INDUSTRIAL ASSOCIATIONS (EC: DG III ANNUAL SURVEY - USA: A.I.A.A. - JAPAN: S.J.A.C.)

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

TOTAL (MIO ECUS AT CURRENT PRICES)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	6,576	6,776	7,285	8,188	9,315	10,636	11,945	13,139	13,431	14,236	14,838
.. R-D CONTRACTS	2,038	2,061	2,153	2,492	2,877	3,118	3,564	3,907	3,445	4,256	4,793
.. MAINTENANCE	1,055	1,151	1,251	1,236	1,601	1,683	1,961	2,144	2,313	2,570	2,913
.. PROCUREMENT	3,483	3,565	3,880	4,460	4,836	5,835	6,420	7,089	7,673	7,410	7,132
AEROSPACE MANUFACTURERS	7,466	10,411	11,872	12,765	13,307	13,719	16,358	16,102	18,472	17,212	20,768
.. NATIONAL	3,142	4,039	4,504	4,607	4,652	4,828	6,019	6,375	7,108	7,341	7,505
.. IN OTHER EC STATES	3,076	4,647	5,522	6,303	6,428	5,911	6,407	6,058	7,415	6,333	7,526
.. IN THIRD COUNTRIES	1,248	1,725	1,846	1,855	2,227	2,980	3,932	3,669	3,949	3,537	5,737
FINAL USERS	6,353	8,222	9,262	9,226	9,977	11,156	11,644	12,450	14,140	18,505	18,031
.. NATIONAL	847	878	911	850	1,123	1,420	1,561	1,543	1,886	2,579	3,031
.. IN OTHER EC STATES	1,073	1,008	1,161	928	953	1,119	1,038	1,341	1,789	2,117	2,360
.. IN THIRD COUNTRIES	4,432	6,337	7,190	7,449	7,901	8,617	9,045	9,566	10,465	13,809	12,640
TOTAL	20,394	25,409	28,419	30,179	32,599	35,512	39,948	41,691	46,044	49,953	53,637
EC PUBLIC MARKET.....(1)	7,197	7,331	7,983	8,673	9,702	11,022	12,410	13,699	14,059	15,345	15,464
EC COMMERCIAL MARKET..(2)	7,517	10,015	11,399	12,202	12,769	12,893	14,560	14,757	17,571	17,261	19,796
EXPORTS.....(3)	5,681	8,062	9,036	9,304	10,128	11,597	12,978	13,235	14,414	17,347	18,376

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

TOTAL (AS % OF GRAND TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	32.2	26.7	25.6	27.1	28.6	30.0	29.9	31.5	29.2	28.5	27.7
.. R-D CONTRACTS	10.0	8.1	7.6	8.3	8.8	8.8	8.9	9.4	7.5	8.5	8.9
.. MAINTENANCE	5.2	4.5	4.4	4.1	4.9	4.7	4.9	5.1	5.0	5.1	5.4
.. PROCUREMENT	17.1	14.0	13.7	14.8	14.8	16.4	16.1	17.0	16.7	14.8	13.3
AEROSPACE MANUFACTURERS	36.6	41.0	41.8	42.3	40.8	38.6	40.9	38.6	40.1	34.5	38.7
.. NATIONAL	15.4	15.9	15.8	15.3	14.3	13.6	15.1	15.3	15.4	14.7	14.0
.. IN OTHER EC STATES	15.1	18.3	19.4	20.9	19.7	16.6	16.0	14.5	16.1	12.7	14.0
.. IN THIRD COUNTRIES	6.1	6.8	6.5	6.1	6.8	8.4	9.8	8.8	8.6	7.1	10.7
FINAL USERS	31.1	32.4	32.6	30.6	30.6	31.4	29.1	29.9	30.7	37.0	33.6
.. NATIONAL	4.2	3.5	3.2	2.8	3.4	4.0	3.9	3.7	4.1	5.2	5.7
.. IN OTHER EC STATES	5.3	4.0	4.1	3.1	2.9	3.2	2.6	3.2	3.9	4.2	4.4
.. IN THIRD COUNTRIES	21.7	24.9	25.3	24.7	24.2	24.3	22.6	22.9	22.7	27.6	23.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EC PUBLIC MARKET.....(1)	35.3	28.9	28.1	28.7	29.8	31.0	31.1	32.9	30.5	30.7	28.8
EC COMMERCIAL MARKET..(2)	36.9	39.4	40.1	40.4	39.2	36.3	36.4	35.4	38.2	34.6	36.9
EXPORTS.....(3)	27.9	31.7	31.8	30.8	31.1	32.7	32.5	31.7	31.3	34.7	34.3

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS



## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## CIVIL SECTOR (MIO ECUS AT CURRENT PRICES)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	579	572	677	896	750	942	1,441	2,041	1,807	2,631	3,191
.. R-D CONTRACTS	334	276	347	334	360	553	718	1,000	631	1,083	1,404
.. MAINTENANCE	66	68	58	64	58	74	56	154	178	303	331
.. PROCUREMENT	180	228	273	498	333	315	668	887	999	1,244	1,456
AEROSPACE MANUFACTURERS	2,770	3,667	4,564	4,995	5,180	5,948	6,894	7,621	9,136	8,725	11,929
.. NATIONAL	1,389	1,495	1,644	1,888	1,786	2,045	2,356	2,559	2,959	2,801	3,383
.. IN OTHER EC STATES	694	1,177	1,872	2,036	1,973	2,224	2,310	2,478	3,527	3,360	4,517
.. IN THIRD COUNTRIES	687	995	1,048	1,071	1,421	1,679	2,228	2,585	2,650	2,563	4,030
FINAL USERS	2,768	3,336	3,306	3,917	4,464	5,006	6,372	5,721	7,469	10,716	10,321
.. NATIONAL	847	878	911	850	1,123	1,420	1,561	1,543	1,886	2,579	3,031
.. IN OTHER EC STATES	452	452	462	442	565	733	573	781	1,161	1,008	1,734
.. IN THIRD COUNTRIES	1,468	2,006	1,933	2,625	2,775	2,852	4,238	3,397	4,422	7,129	5,555
TOTAL	6,118	7,575	8,548	9,808	10,395	11,896	14,707	15,384	18,412	22,071	25,441
EC PUBLIC MARKET.....(1)	579	572	677	896	750	942	1,441	2,041	1,807	2,631	3,191
EC COMMERCIAL MARKET..(2)	3,383	4,002	4,889	5,216	5,449	6,423	6,800	7,360	9,533	9,748	12,665
EXPORTS.....(3)	2,155	3,001	2,981	3,695	4,196	4,531	6,466	5,982	7,072	9,692	9,585

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## CIVIL SECTOR (AS % OF GRAND TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	2.8	2.3	2.4	3.0	2.3	2.7	3.6	4.9	3.9	5.3	5.9
.. R-D CONTRACTS	1.6	1.1	1.2	1.1	1.1	1.6	1.8	2.4	1.4	2.2	2.6
.. MAINTENANCE	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.4	0.4	0.6	0.6
.. PROCUREMENT	0.9	0.9	1.0	1.6	1.0	0.9	1.7	2.1	2.2	2.5	2.7
AEROSPACE MANUFACTURERS	13.6	14.4	16.1	16.6	15.9	16.8	17.3	18.3	19.8	17.5	22.2
.. NATIONAL	6.8	5.9	5.8	6.3	5.5	5.8	5.9	6.1	6.4	5.6	6.3
.. IN OTHER EC STATES	3.4	4.6	6.6	6.7	6.1	6.3	5.8	5.9	7.7	6.7	8.4
.. IN THIRD COUNTRIES	3.4	3.9	3.7	3.5	4.4	4.7	5.6	6.2	5.8	5.1	7.5
FINAL USERS	13.6	13.1	11.6	13.0	13.7	14.1	16.0	13.7	16.2	21.5	19.2
.. NATIONAL	4.2	3.5	3.2	2.8	3.4	4.0	3.9	3.7	4.1	5.2	5.7
.. IN OTHER EC STATES	2.2	1.8	1.6	1.5	1.7	2.1	1.4	1.9	2.5	2.0	3.2
.. IN THIRD COUNTRIES	7.2	7.9	6.8	8.7	8.5	8.0	10.6	8.1	9.6	14.3	10.4
TOTAL	30.0	29.8	30.1	32.5	31.9	33.5	36.8	36.9	40.0	44.2	47.4
EC PUBLIC MARKET.....(1)	2.8	2.3	2.4	3.0	2.3	2.7	3.6	4.9	3.9	5.3	5.9
EC COMMERCIAL MARKET..(2)	16.6	15.7	17.2	17.3	16.7	18.1	17.0	17.7	20.7	19.5	23.6
EXPORTS.....(3)	10.6	11.8	10.5	12.2	12.9	12.8	16.2	14.3	15.4	19.4	17.9

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## MILITARY SECTOR (MIO ECUS AT CURRENT PRICES)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	5,996	6,204	6,607	7,291	8,564	9,694	10,504	11,098	11,624	11,605	11,647
.. R-D CONTRACTS	1,704	1,785	1,807	2,157	2,518	2,565	2,847	2,907	2,814	3,173	3,389
.. MAINTENANCE	989	1,083	1,192	1,172	1,544	1,609	1,905	1,989	2,135	2,266	2,581
.. PROCUREMENT	3,304	3,336	3,608	3,962	4,503	5,520	5,752	6,201	6,675	6,166	5,676
AEROSPACE MANUFACTURERS	4,696	6,744	7,307	7,770	8,127	7,771	9,465	8,480	9,336	8,487	8,838
.. NATIONAL	1,752	2,544	2,860	2,719	2,866	2,783	3,662	3,816	4,150	4,540	4,123
.. IN OTHER EC STATES	2,382	3,470	3,650	4,267	4,455	3,687	4,098	3,580	3,888	2,973	3,009
.. IN THIRD COUNTRIES	562	730	797	784	806	1,301	1,704	1,084	1,299	974	1,707
FINAL USERS	3,584	4,886	5,956	5,309	5,513	6,151	5,273	6,729	6,671	7,789	7,711
.. NATIONAL	-	-	-	-	-	-	-	-	-	-	-
.. IN OTHER EC STATES	621	556	699	486	387	386	465	560	628	1,109	626
.. IN THIRD COUNTRIES	2,964	4,331	5,257	4,824	5,126	5,765	4,808	6,169	6,043	6,680	7,085
TOTAL	14,277	17,834	19,871	20,371	22,204	23,615	25,241	26,307	27,631	27,881	28,196
EC PUBLIC MARKET.....(1)	6,617	6,759	7,306	7,777	8,952	10,080	10,969	11,658	12,252	12,714	12,273
EC COMMERCIAL MARKET..(2)	4,134	6,014	6,510	6,986	7,321	6,470	7,760	7,396	8,037	7,513	7,132
EXPORTS.....(3)	3,525	5,061	6,055	5,608	5,932	7,066	6,512	7,253	7,342	7,655	8,791

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## MILITARY SECTOR (AS % OF GRAND TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	29.4	24.4	23.2	24.2	26.3	27.3	26.3	26.6	25.2	23.2	21.7
.. R-D CONTRACTS	8.4	7.0	6.4	7.1	7.7	7.2	7.1	7.0	6.1	6.4	6.3
.. MAINTENANCE	4.8	4.3	4.2	3.9	4.7	4.5	4.8	4.8	4.6	4.5	4.8
.. PROCUREMENT	16.2	13.1	12.7	13.1	13.8	15.5	14.4	14.9	14.5	12.3	10.6
AEROSPACE MANUFACTURERS	23.0	26.5	25.7	25.7	24.9	21.9	23.7	20.3	20.3	17.0	16.5
.. NATIONAL	8.6	10.0	10.1	9.0	8.8	7.8	9.2	9.2	9.0	9.1	7.7
.. IN OTHER EC STATES	11.7	13.7	12.8	14.1	13.7	10.4	10.3	8.6	8.4	6.0	5.6
.. IN THIRD COUNTRIES	2.8	2.9	2.8	2.6	2.5	3.7	4.3	2.6	2.8	2.0	3.2
FINAL USERS	17.6	19.2	21.0	17.6	16.9	17.3	13.2	16.1	14.5	15.6	14.4
.. NATIONAL	-	-	-	-	-	-	-	-	-	-	-
.. IN OTHER EC STATES	3.0	2.2	2.5	1.6	1.2	1.1	1.2	1.3	1.4	2.2	1.2
.. IN THIRD COUNTRIES	14.5	17.0	18.5	16.0	15.7	16.2	12.0	14.8	13.1	13.4	13.2
TOTAL	70.0	70.2	69.9	67.5	68.1	66.5	63.2	63.1	60.0	55.8	52.6
EC PUBLIC MARKET.....(1)	32.4	26.6	25.7	25.8	27.5	28.4	27.5	28.0	26.6	25.5	22.9
EC COMMERCIAL MARKET..(2)	20.3	23.7	22.9	23.1	22.5	18.2	19.4	17.7	17.5	15.0	13.3
EXPORTS.....(3)	17.3	19.9	21.3	18.6	18.2	19.9	16.3	17.4	15.9	15.3	16.4

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## AIRFRAME AND MISSILES SECTOR (MIO ECUS AT CURRENT PRICES)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	3,699	3,697	3,815	4,248	4,522	5,600	5,822	6,360	6,233	7,049	7,380
.. R-D CONTRACTS	1,093	1,133	1,137	1,312	1,589	1,653	1,956	2,031	1,694	2,418	2,345
.. MAINTENANCE	554	600	657	626	817	836	965	1,080	1,147	1,329	1,630
.. PROCUREMENT	2,052	1,963	2,021	2,310	2,116	3,111	2,901	3,249	3,392	3,302	3,406
AEROSPACE MANUFACTURERS	3,002	4,017	4,786	5,456	5,420	5,168	5,929	5,390	7,392	6,337	8,356
.. NATIONAL	938	1,212	1,356	1,441	1,343	1,315	1,407	1,494	2,172	1,965	1,803
.. IN OTHER EC STATES	1,704	2,432	2,924	3,626	3,664	3,100	3,037	3,097	3,997	3,459	4,090
.. IN THIRD COUNTRIES	361	374	506	389	413	754	1,484	799	1,223	913	2,464
FINAL USERS	4,343	5,875	6,785	6,590	7,331	7,472	6,976	7,799	9,124	11,090	10,789
.. NATIONAL	349	410	473	335	500	568	368	367	425	855	1,323
.. IN OTHER EC STATES	633	514	714	548	497	628	304	443	906	1,259	1,448
.. IN THIRD COUNTRIES	3,361	4,951	5,599	5,708	6,334	6,276	6,304	6,989	7,792	8,976	8,018
TOTAL	11,043	13,589	15,386	16,295	17,273	18,239	18,727	19,549	22,749	24,476	26,526
EC PUBLIC MARKET.....(1)	4,122	4,051	4,323	4,551	4,778	5,866	5,923	6,472	6,446	7,708	7,684
EC COMMERCIAL MARKET..(2)	3,200	4,214	4,958	5,646	5,748	5,344	5,016	5,290	7,287	6,879	8,360
EXPORTS.....(3)	3,721	5,325	6,104	6,097	6,747	7,029	7,788	7,788	9,016	9,889	10,482

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## AIRFRAME AND MISSILES SECTOR (AS % OF GRAND TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	18.1	14.5	13.4	14.1	13.9	15.8	14.6	15.3	13.5	14.1	13.8
.. R-D CONTRACTS	5.4	4.5	4.0	4.3	4.9	4.7	4.9	4.9	3.7	4.8	4.4
.. MAINTENANCE	2.7	2.4	2.3	2.1	2.5	2.4	2.4	2.6	2.5	2.7	3.0
.. PROCUREMENT	10.1	7.7	7.1	7.7	6.5	8.8	7.3	7.8	7.4	6.6	6.4
AEROSPACE MANUFACTURERS	14.7	15.8	16.8	18.1	16.6	14.6	14.8	12.9	16.1	12.7	15.6
.. NATIONAL	4.6	4.8	4.8	4.8	4.1	3.7	3.5	3.6	4.7	3.9	3.4
.. IN OTHER EC STATES	8.4	9.6	10.3	12.0	11.2	8.7	7.6	7.4	8.7	6.9	7.6
.. IN THIRD COUNTRIES	1.8	1.5	1.8	1.3	1.3	2.1	3.7	1.9	2.7	1.8	4.6
FINAL USERS	21.3	23.1	23.9	21.8	22.5	21.0	17.5	18.7	19.8	22.2	20.1
.. NATIONAL	1.7	1.6	1.7	1.1	1.5	1.6	0.9	0.9	0.9	1.7	2.5
.. IN OTHER EC STATES	3.1	2.0	2.5	1.8	1.5	1.8	0.8	1.1	2.0	2.5	2.7
.. IN THIRD COUNTRIES	16.5	19.5	19.7	18.9	19.4	17.7	15.8	16.8	16.9	18.0	14.9
TOTAL	54.1	53.5	54.1	54.0	53.0	51.4	46.9	46.9	49.4	49.0	49.5
EC PUBLIC MARKET.....(1)	20.2	15.9	15.2	15.1	14.7	16.5	14.8	15.5	14.0	15.4	14.3
EC COMMERCIAL MARKET..(2)	15.7	16.6	17.4	18.7	17.6	15.0	12.6	12.7	15.8	13.8	15.6
EXPORTS.....(3)	18.2	21.0	21.5	20.2	20.7	19.8	19.5	18.7	19.6	19.8	19.5

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## SPACE SECTOR (MIO ECUS AT CURRENT PRICES)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	229	242	351	450	474	741	483	554	799	1,063	1,083
.. R-D CONTRACTS	210	152	214	259	283	479	235	289	398	605	532
.. MAINTENANCE	5	1	3	5	6	18	15	30	26	17	10
.. PROCUREMENT	15	90	134	185	185	243	233	235	374	441	541
AEROSPACE MANUFACTURERS	196	277	534	509	505	659	833	894	843	1,109	1,843
.. NATIONAL	56	102	147	95	108	214	255	434	308	435	463
.. IN OTHER EC STATES	120	159	362	353	338	414	519	391	503	556	1,192
.. IN THIRD COUNTRIES	20	16	24	61	59	31	58	68	32	117	188
FINAL USERS	218	256	161	174	331	525	877	481	799	954	506
.. NATIONAL	10	14	13	17	95	219	341	234	334	294	331
.. IN OTHER EC STATES	145	180	81	91	185	221	170	169	311	187	100
.. IN THIRD COUNTRIES	62	62	67	66	52	85	365	77	154	473	75
TOTAL	643	775	1,046	1,132	1,310	1,924	2,193	1,928	2,441	3,125	3,432
EC PUBLIC MARKET.....(1)	230	242	351	450	475	741	484	554	862	1,168	1,087
EC COMMERCIAL MARKET..(2)	332	455	603	555	725	1,067	1,285	1,229	1,393	1,368	2,082
EXPORTS.....(3)	82	77	91	127	111	116	423	146	186	590	263

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## SPACE SECTOR (AS % OF GRAND TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	1.1	1.0	1.2	1.5	1.5	2.1	1.2	1.3	1.7	2.1	2.0
.. R-D CONTRACTS	1.0	0.6	0.8	0.9	0.9	1.3	0.6	0.7	0.9	1.2	1.0
.. MAINTENANCE	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0
.. PROCUREMENT	0.1	0.4	0.5	0.6	0.6	0.7	0.6	0.6	0.8	0.9	1.0
AEROSPACE MANUFACTURERS	1.0	1.1	1.9	1.7	1.5	1.9	2.1	2.1	1.8	2.2	3.4
.. NATIONAL	0.3	0.4	0.5	0.3	0.3	0.6	0.6	1.0	0.7	0.9	0.9
.. IN OTHER EC STATES	0.6	0.6	1.3	1.2	1.0	1.2	1.3	0.9	1.1	1.1	2.2
.. IN THIRD COUNTRIES	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.4
FINAL USERS	1.1	1.0	0.6	0.6	1.0	1.5	2.2	1.2	1.7	1.9	0.9
.. NATIONAL	0.1	0.1	0.0	0.1	0.3	0.6	0.9	0.6	0.7	0.6	0.6
.. IN OTHER EC STATES	0.7	0.7	0.3	0.3	0.6	0.6	0.4	0.4	0.7	0.4	0.2
.. IN THIRD COUNTRIES	0.3	0.2	0.2	0.2	0.2	0.2	0.9	0.2	0.3	0.9	0.1
TOTAL	3.2	3.0	3.7	3.8	4.0	5.4	5.5	4.6	5.3	6.3	6.4
EC PUBLIC MARKET.....(1)	1.1	1.0	1.2	1.5	1.5	2.1	1.2	1.3	1.9	2.3	2.0
EC COMMERCIAL MARKET..(2)	1.6	1.8	2.1	1.8	2.2	3.0	3.2	2.9	3.0	2.7	3.9
EXPORTS.....(3)	0.4	0.3	0.3	0.4	0.3	0.3	1.1	0.3	0.4	1.2	0.5

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS



## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## ENGINE SECTOR (MIO ECUS AT CURRENT PRICES)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	1,213	1,175	1,281	1,255	1,372	1,359	1,539	1,751	1,723	1,852	1,982
.. R-D CONTRACTS	290	324	346	375	290	324	253	390	338	385	784
.. MAINTENANCE	286	297	325	326	388	374	353	367	431	443	358
.. PROCUREMENT	637	553	610	555	694	661	933	995	953	1,024	840
AEROSPACE MANUFACTURERS	1,722	2,704	2,966	2,828	3,251	3,477	3,787	3,927	4,144	3,715	4,392
.. NATIONAL	627	877	975	738	775	951	885	842	833	1,119	1,268
.. IN OTHER EC STATES	573	1,041	1,156	1,205	1,398	1,263	1,365	1,235	1,453	900	1,016
.. IN THIRD COUNTRIES	522	786	836	886	1,078	1,263	1,537	1,850	1,858	1,697	2,108
FINAL USERS	1,063	1,149	1,394	1,165	1,212	1,821	1,860	1,764	1,777	3,164	3,463
.. NATIONAL	286	234	214	294	237	293	440	402	459	500	623
.. IN OTHER EC STATES	164	146	213	143	124	108	119	271	257	168	173
.. IN THIRD COUNTRIES	612	769	967	728	851	1,421	1,301	1,090	1,061	2,496	2,666
TOTAL	3,998	5,028	5,642	5,249	5,835	6,658	7,185	7,442	7,643	8,731	9,836
EC PUBLIC MARKET.....(1)	1,337	1,287	1,358	1,334	1,440	1,388	1,612	1,995	1,892	1,951	2,057
EC COMMERCIAL MARKET..(2)	1,528	2,186	2,481	2,301	2,466	2,586	2,736	2,507	2,832	2,588	3,005
EXPORTS.....(3)	1,134	1,555	1,803	1,613	1,929	2,684	2,838	2,940	2,919	4,193	4,774

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## ENGINE SECTOR (AS % OF GRAND TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	5.9	4.6	4.5	4.2	4.2	3.8	3.9	4.2	3.7	3.7	3.7
.. R-D CONTRACTS	1.4	1.3	1.2	1.2	0.9	0.9	0.6	0.9	0.7	0.8	1.5
.. MAINTENANCE	1.4	1.2	1.1	1.1	1.2	1.1	0.9	0.9	0.9	0.9	0.7
.. PROCUREMENT	3.1	2.2	2.1	1.8	2.1	1.9	2.3	2.4	2.1	2.1	1.6
AEROSPACE MANUFACTURERS	8.4	10.6	10.4	9.4	10.0	9.8	9.5	9.4	9.0	7.4	8.2
.. NATIONAL	3.1	3.5	3.4	2.4	2.4	2.7	2.2	2.0	1.8	2.2	2.4
.. IN OTHER EC STATES	2.8	4.1	4.1	4.0	4.3	3.6	3.4	3.0	3.2	1.8	1.9
.. IN THIRD COUNTRIES	2.6	3.1	2.9	2.9	3.3	3.6	3.8	4.4	4.0	3.4	3.9
FINAL USERS	5.2	4.5	4.9	3.9	3.7	5.1	4.7	4.2	3.9	6.3	6.5
.. NATIONAL	1.4	0.9	0.8	1.0	0.7	0.8	1.1	1.0	1.0	1.0	1.2
.. IN OTHER EC STATES	0.8	0.6	0.7	0.5	0.4	0.3	0.3	0.7	0.6	0.3	0.3
.. IN THIRD COUNTRIES	3.0	3.0	3.4	2.4	2.6	4.0	3.3	2.6	2.3	5.0	5.0
TOTAL	19.6	19.8	19.9	17.4	17.9	18.7	18.0	17.8	16.6	17.5	18.3
EC PUBLIC MARKET.....(1)	6.6	5.1	4.8	4.4	4.4	3.9	4.0	4.8	4.1	3.9	3.8
EC COMMERCIAL MARKET..(2)	7.5	8.6	8.7	7.6	7.6	7.3	6.8	6.0	6.2	5.2	5.6
EXPORTS.....(3)	5.6	6.1	6.3	5.3	5.9	7.6	7.1	7.1	6.3	8.4	8.9

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## EQUIPMENT SECTOR (MIO ECUS AT CURRENT PRICES)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	1,434	1,663	1,837	2,234	2,946	2,936	4,100	4,474	4,677	4,273	4,392
.. R-D CONTRACTS	444	451	456	546	716	662	1,121	1,197	1,015	849	1,133
.. MAINTENANCE	210	253	266	278	390	455	628	667	708	781	915
.. PROCUREMENT	779	958	1,115	1,410	1,841	1,819	2,352	2,610	2,954	2,643	2,345
AEROSPACE MANUFACTURERS	2,546	3,412	3,586	3,973	4,132	4,415	5,810	5,892	6,094	6,051	6,176
.. NATIONAL	1,521	1,847	2,026	2,334	2,427	2,349	3,471	3,605	3,796	3,823	3,972
.. IN OTHER EC STATES	679	1,015	1,080	1,120	1,028	1,135	1,486	1,335	1,462	1,418	1,228
.. IN THIRD COUNTRIES	346	549	480	519	677	932	853	952	836	811	976
FINAL USERS	730	942	923	1,297	1,103	1,338	1,932	2,406	2,441	3,297	3,273
.. NATIONAL	201	219	211	204	291	340	412	539	668	929	753
.. IN OTHER EC STATES	131	167	153	145	148	162	445	457	315	503	639
.. IN THIRD COUNTRIES	397	556	558	947	665	836	1,076	1,410	1,458	1,865	1,881
TOTAL	4,710	6,017	6,345	7,504	8,181	8,690	11,843	12,772	13,211	13,620	13,842
EC PUBLIC MARKET.....(1)	1,508	1,752	1,951	2,338	3,010	3,027	4,392	4,679	4,859	4,518	4,635
EC COMMERCIAL MARKET..(2)	2,458	3,160	3,357	3,699	3,829	3,896	5,522	5,731	6,059	6,427	6,349
EXPORTS.....(3)	744	1,105	1,037	1,466	1,342	1,768	1,929	2,362	2,293	2,675	2,858

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

## EQUIPMENT SECTOR (AS % OF GRAND TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NATIONAL STATE	7.0	6.5	6.5	7.4	9.0	8.3	10.3	10.7	10.2	8.6	8.2
.. R-D CONTRACTS	2.2	1.8	1.6	1.8	2.2	1.9	2.8	2.9	2.2	1.7	2.1
.. MAINTENANCE	1.0	1.0	0.9	0.9	1.2	1.3	1.6	1.6	1.5	1.6	1.7
.. PROCUREMENT	3.8	3.8	3.9	4.7	5.6	5.1	5.9	6.3	6.4	5.3	4.4
AEROSPACE MANUFACTURERS	12.5	13.4	12.6	13.2	12.7	12.4	14.5	14.1	13.2	12.1	11.5
.. NATIONAL	7.5	7.3	7.1	7.7	7.4	6.6	8.7	8.6	8.2	7.7	7.4
.. IN OTHER EC STATES	3.3	4.0	3.8	3.7	3.2	3.2	3.7	3.2	3.2	2.8	2.3
.. IN THIRD COUNTRIES	1.7	2.2	1.7	1.7	2.1	2.6	2.1	2.3	1.8	1.6	1.8
FINAL USERS	3.6	3.7	3.2	4.3	3.4	3.8	4.8	5.8	5.3	6.6	6.1
.. NATIONAL	1.0	0.9	0.7	0.7	0.9	1.0	1.0	1.3	1.5	1.9	1.4
.. IN OTHER EC STATES	0.6	0.7	0.5	0.5	0.5	0.5	1.1	1.1	0.7	1.0	1.2
.. IN THIRD COUNTRIES	1.9	2.2	2.0	3.1	2.0	2.4	2.7	3.4	3.2	3.7	3.5
TOTAL	23.1	23.7	22.3	24.9	25.1	24.5	29.6	30.6	28.7	27.3	25.8
EC PUBLIC MARKET.....(1)	7.4	6.9	6.9	7.7	9.2	8.5	11.0	11.2	10.6	9.0	8.6
EC COMMERCIAL MARKET..(2)	12.1	12.4	11.8	12.3	11.7	11.0	13.8	13.7	13.2	12.9	11.8
EXPORTS.....(3)	3.6	4.3	3.7	4.9	4.1	5.0	4.8	5.7	5.0	5.4	5.3

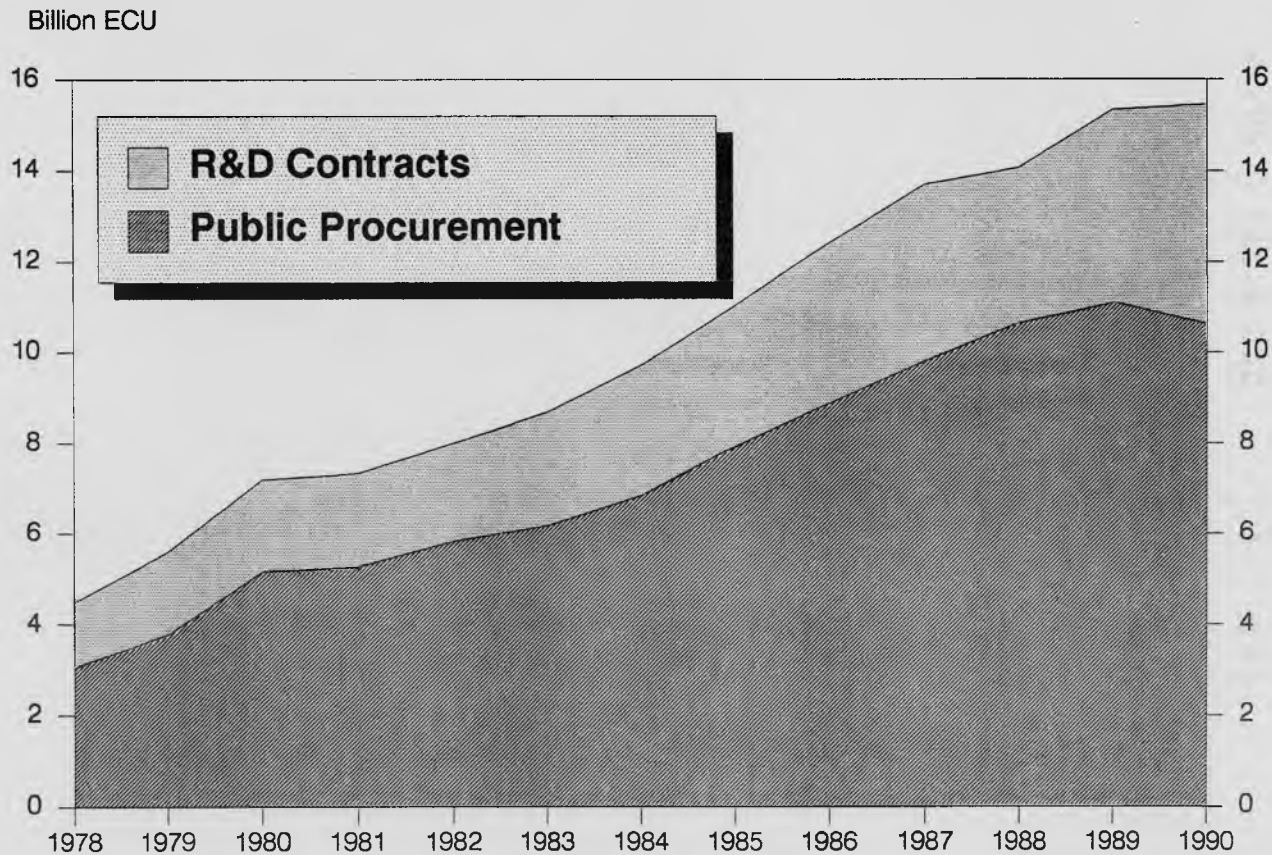
(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## PUBLIC SUPPORT TO EC AEROSPACE INDUSTRY



■ SOURCE: INDUSTRIAL ASSOCIATIONS



## PUBLIC SUPPORT TO AEROSPACE INDUSTRY

## BREAKDOWN BY CONTRACT TYPE (MIO ECU AT CURRENT PRICES)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>EC</b>											
R-D CONTRACTS	2,038	2,061	2,153	2,492	2,877	3,118	3,564	3,907	3,445	4,256	4,793
AS % OF PUBLIC SUPPORT	28%	28%	27%	29%	30%	28%	29%	29%	25%	28%	31%
PUBLIC PROCUREMENT	5,159	5,271	5,830	6,181	6,824	7,904	8,846	9,792	10,614	11,089	10,671
AS % OF PUBLIC SUPPORT	72%	72%	73%	71%	70%	72%	71%	71%	75%	72%	69%
<b>TOTAL</b>	<b>7,197</b>	<b>7,331</b>	<b>7,983</b>	<b>8,673</b>	<b>9,702</b>	<b>11,022</b>	<b>12,410</b>	<b>13,699</b>	<b>14,059</b>	<b>15,345</b>	<b>15,464</b>
<b>AS % OF FINAL TURNOVER</b>	<b>42%</b>	<b>34%</b>	<b>33%</b>	<b>34%</b>	<b>35%</b>	<b>36%</b>	<b>37%</b>	<b>39%</b>	<b>36%</b>	<b>36%</b>	<b>34%</b>
<b>USA</b>											
R-D CONTRACTS	4,760	7,639	10,478	12,802	17,863	21,730	15,225	16,042	16,809	17,822	17,512
AS % OF PUBLIC SUPPORT	24%	26%	25%	25%	28%	28%	24%	28%	30%	29%	32%
PUBLIC PROCUREMENT	15,200	21,923	30,908	38,495	45,087	54,587	48,679	41,670	39,351	43,362	37,668
AS % OF PUBLIC SUPPORT	76%	74%	75%	75%	72%	72%	76%	72%	70%	71%	68%
<b>TOTAL</b>	<b>19,961</b>	<b>29,562</b>	<b>41,386</b>	<b>51,296</b>	<b>62,951</b>	<b>76,316</b>	<b>63,904</b>	<b>57,712</b>	<b>56,161</b>	<b>61,184</b>	<b>55,181</b>
<b>AS % OF TURNOVER</b>	<b>59%</b>	<b>60%</b>	<b>69%</b>	<b>71%</b>	<b>75%</b>	<b>74%</b>	<b>74%</b>	<b>75%</b>	<b>73%</b>	<b>70%</b>	<b>64%</b>

■ SOURCE: INDUSTRIAL ASSOCIATIONS (EC: DG III ANNUAL SURVEY - USA: A.I.A.A.)

## PUBLIC FINANCING OF AEROSPACE R-D

## MIO ECUS

AIRCRAFT	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1981	4	-	168	0	112	0	0	6	0	0	219	508
1982	4	-	172	0	-	0	0	29	0	0	154	-
1983	4	-	166	0	-	0	0	15	0	0	189	-
1984	-	-	184	-	-	0	0	39	0	0	194	-
1985	-	-	343	-	-	0	0	40	0	0	203	-
1986	-	-	288	-	-	0	0	48	0	0	197	-
1987	-	-	356	-	-	0	0	41	0	0	146	-
1988	-	-	346	-	-	0	0	78	0	0	154	-
1989	-	-	379	-	-	0	0	87	0	0	178	-
1990	-	-	432	-	-	0	0	86	0	0	118	-
1991	-	-	-	0	-	-	-	-	0	0	15	-

SPACE	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1981	28	8	292	0	278	0	1	121	40	0	123	890
1982	28	9	340	0	318	0	1	92	42	0	131	961
1983	30	11	338	0	395	0	1	123	41	0	127	1,066
1984	37	12	341	0	509	1	1	216	39	0	134	1,288
1985	43	14	369	30	560	1	2	260	42	0	143	1,463
1986	50	14	453	17	713	0	2	288	53	0	173	1,765
1987	66	15	532	57	725	0	3	438	50	0	185	2,072
1988	71	17	592	85	772	0	3	515	61	0	224	2,341
1989	83	18	645	112	919	0	3	505	54	0	221	2,561
1990	101	20	717	116	1,039	0	4	556	57	0	218	2,828
1991	106	22	-	162	1,149	-	-	492	62	1	235	-

TOTAL	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1981	32	-	459	0	389	0	1	127	40	0	341	1,398
1982	32	-	511	0	-	0	1	121	42	0	284	-
1983	34	-	504	0	-	0	1	137	41	0	317	-
1984	-	-	524	-	-	1	1	255	39	0	328	-
1985	-	-	712	-	-	1	2	299	42	0	346	-
1986	-	-	741	-	-	0	2	336	53	0	371	-
1987	-	-	888	-	-	0	3	479	50	0	331	-
1988	-	-	938	-	-	0	3	593	61	0	379	-
1989	-	-	1,025	-	-	1	3	592	54	0	399	-
1990	-	-	1,148	-	-	0	4	642	57	0	336	-
1991	-	-	-	162	-	-	-	-	62	1	250	-

■ SOURCE: EUROSTAT



## PUBLIC FINANCING OF AEROSPACE R-D

## AS % OF PUBLIC FINANCING OF TOTAL R-D

AIRCRAFT	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1981	0.9	-	2.4	0.0	1.7	0.0	0.0	0.3	0.0	0.0	3.6	2.3
1982	0.8	-	2.1	0.0	-	0.0	0.0	1.3	0.0	0.0	2.3	-
1983	0.7	-	2.0	0.0	-	0.0	0.0	0.5	0.0	0.0	2.8	-
1984	-	-	2.1	-	-	0.0	0.0	1.2	0.0	0.0	2.7	-
1985	-	-	3.6	-	-	0.0	0.0	1.1	0.0	0.0	2.6	-
1986	-	-	2.9	-	-	0.1	0.0	1.1	0.0	0.0	2.9	-
1987	-	-	3.3	-	-	0.0	0.0	0.8	0.0	0.0	2.1	-
1988	-	-	3.2	-	-	0.1	0.0	1.4	0.0	0.0	2.1	-
1989	-	-	3.3	-	-	0.1	0.0	1.5	0.0	0.0	2.5	-
1990	-	-	3.5	-	-	0.0	0.0	1.4	0.0	0.0	1.6	-
1991	-	-	-	0.0	-	-	-	-	0.0	0.0	0.2	-
SPACE	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1981	5.5	3.2	4.1	0.0	4.1	0.4	1.7	5.8	3.1	0.0	2.0	4.0
1982	5.4	3.4	4.2	0.0	4.3	0.3	1.5	4.1	3.0	0.0	2.0	3.9
1983	5.4	3.4	4.0	0.0	4.8	0.0	1.3	4.4	2.8	0.0	1.9	4.0
1984	6.2	3.3	3.9	0.0	5.6	0.5	1.6	6.4	2.6	0.0	1.8	4.4
1985	6.6	3.2	3.9	3.7	5.6	0.6	1.6	7.1	2.7	0.0	1.8	4.6
1986	7.7	2.7	4.5	2.1	7.0	0.3	1.9	6.5	3.1	0.0	2.6	5.5
1987	9.9	2.6	5.0	5.7	6.8	0.3	2.7	8.8	2.8	0.0	2.7	6.1
1988	10.6	2.3	5.5	6.8	6.7	0.3	3.0	9.0	3.3	0.1	3.1	6.5
1989	10.4	2.3	5.7	6.3	7.6	0.3	2.8	8.7	2.8	0.1	3.1	6.9
1990	12.3	2.5	5.9	5.4	8.0	0.3	2.7	8.7	2.8	0.1	3.0	7.1
1991	12.3	2.7	-	7.0	8.6	-	-	7.0	3.1	0.3	3.3	-
TOTAL	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1981	6.4	-	6.5	0.0	5.8	0.4	1.7	6.1	3.1	0.0	5.7	6.2
1982	6.2	-	6.3	0.0	-	0.3	1.5	5.3	3.0	0.0	4.3	-
1983	6.1	-	6.0	0.0	-	0.0	1.3	4.9	2.8	0.0	4.6	-
1984	-	-	6.0	-	-	0.5	1.6	7.6	2.6	0.0	4.5	-
1985	-	-	7.5	-	-	0.6	1.6	8.2	2.7	0.0	4.4	-
1986	-	-	7.4	-	-	0.4	1.9	7.6	3.1	0.0	5.5	-
1987	-	-	8.3	-	-	0.3	2.7	9.7	2.8	0.0	4.8	-
1988	-	-	8.7	-	-	0.4	3.0	10.4	3.3	0.1	5.2	-
1989	-	-	9.0	-	-	0.4	2.8	10.2	2.8	0.1	5.5	-
1990	-	-	9.4	-	-	0.3	2.7	10.1	2.8	0.1	4.7	-
1991	-	-	-	7.0	-	-	-	-	3.1	0.3	3.5	-

■ SOURCE: EUROSTAT

## PUBLIC SUPPORT FOR THE EC AEROSPACE INDUSTRY

## BREAKDOWN BY CONTRACT AND SUBSECTOR (MIO ECU AT CURRENT PRICES)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>AIRFRAMES AND MISSILES</b>											
R-D CONTRACTS	1,093	1,133	1,137	1,312	1,589	1,653	1,956	2,031	1,694	2,418	2,345
PUBLIC ..... - CIVIL	106	95	129	285	129	93	157	168	162	227	572
PROCUREMENT . - MILITARY	2,500	2,468	2,548	2,651	2,804	3,854	3,709	4,162	4,377	4,404	4,464
INTRA-EC MILITARY SALES	423	354	508	303	256	267	101	111	213	659	304
TOTAL	4,122	4,051	4,323	4,551	4,778	5,866	5,923	6,472	6,446	7,708	7,684
<b>SPACE</b>											
R-D CONTRACTS	210	152	214	259	283	479	235	289	398	605	532
PUBLIC ..... - CIVIL	6	85	108	177	185	185	159	174	292	371	484
PROCUREMENT . - MILITARY	14	6	29	14	6	76	89	91	108	87	67
INTRA-EC MILITARY SALES	0	0	0	0	0	1	1	0	63	105	4
TOTAL	230	242	351	450	475	741	484	554	862	1,168	1,087
<b>ENGINES</b>											
R-D CONTRACTS	290	324	346	375	290	324	253	390	338	385	784
PUBLIC ..... - CIVIL	72	56	45	28	31	24	111	240	270	372	36
PROCUREMENT . - MILITARY	851	794	890	852	1,051	1,012	1,176	1,121	1,114	1,095	1,162
INTRA-EC MILITARY SALES	123	112	76	78	68	29	72	243	169	99	75
TOTAL	1,337	1,287	1,358	1,334	1,440	1,388	1,612	1,995	1,892	1,951	2,057
<b>EQUIPMENT</b>											
R-D CONTRACTS	444	451	456	546	716	662	1,121	1,197	1,015	849	1,133
PUBLIC ..... - CIVIL	63	60	48	72	45	87	297	459	452	576	696
PROCUREMENT . - MILITARY	927	1,152	1,333	1,617	2,186	2,187	2,683	2,817	3,210	2,847	2,564
INTRA-EC MILITARY SALES	74	89	114	104	64	90	291	205	182	246	243
TOTAL	1,508	1,752	1,951	2,338	3,010	3,027	4,392	4,679	4,855	4,518	4,635

■ INDUSTRIAL ASSOCIATIONS

## PUBLIC SUPPORT FOR THE EC AEROSPACE INDUSTRY

## BREAKDOWN BY CONTRACT AND SUBSECTOR (AS % OF SUBSECTOR)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>AIRFRAMES AND MISSILES</b>											
R-D CONTRACTS	26.5	28.0	26.3	28.8	33.3	28.2	33.0	31.4	26.3	31.4	30.5
PUBLIC ..... - CIVIL	2.6	2.3	3.0	6.3	2.7	1.6	2.6	2.6	2.5	2.9	7.4
PROCUREMENT . - MILITARY	60.6	60.9	58.9	58.2	58.7	65.7	62.6	64.3	67.9	57.1	58.1
INTRA-EC MILITARY SALES	10.3	8.7	11.8	6.7	5.4	4.5	1.7	1.7	3.3	8.6	4.0
AS % OF GRAND TOTAL	57.3	55.2	54.1	52.5	49.2	53.2	47.7	47.2	45.9	50.2	49.7
<b>SPACE</b>											
R-D CONTRACTS	91.4	62.6	61.0	57.6	59.6	64.6	48.5	52.2	46.2	51.8	48.9
PUBLIC ..... - CIVIL	2.4	35.1	30.9	39.3	39.1	25.0	32.9	31.4	33.9	31.8	44.5
PROCUREMENT . - MILITARY	6.1	2.3	8.1	3.2	1.3	10.3	18.5	16.4	12.6	7.4	6.2
INTRA-EC MILITARY SALES	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.0	7.3	9.0	0.4
AS % OF GRAND TOTAL	18.6	17.5	17.0	15.4	14.8	12.6	13.0	14.6	13.5	12.7	13.3
<b>ENGINES</b>											
R-D CONTRACTS	21.7	25.2	25.5	28.1	20.2	23.3	15.7	19.5	17.9	19.7	38.1
PUBLIC ..... - CIVIL	5.4	4.4	3.3	2.1	2.2	1.7	6.9	12.1	14.3	19.1	1.7
PROCUREMENT . - MILITARY	63.7	61.7	65.6	63.9	73.0	72.9	73.0	56.2	58.9	56.1	56.5
INTRA-EC MILITARY SALES	9.2	8.7	5.6	5.9	4.7	2.1	4.5	12.2	9.0	5.1	3.7
AS % OF GRAND TOTAL	21.0	23.9	24.4	27.0	31.0	27.5	35.4	34.2	34.6	29.4	30.0
<b>EQUIPMENT</b>											
R-D CONTRACTS	29.5	25.8	23.3	23.3	23.8	21.9	25.5	25.6	20.9	18.8	24.4
PUBLIC ..... - CIVIL	4.1	3.4	2.5	3.1	1.5	2.9	6.8	9.8	9.3	12.8	15.0
PROCUREMENT . - MILITARY	61.5	65.7	68.3	69.1	72.6	72.3	61.1	60.2	66.1	63.0	55.3
INTRA-EC MILITARY SALES	4.9	5.1	5.9	4.5	2.1	3.0	6.6	4.4	3.8	5.4	5.2
AS % OF GRAND TOTAL	3.2	3.3	4.4	5.2	4.9	6.7	3.9	4.0	6.1	7.6	7.0

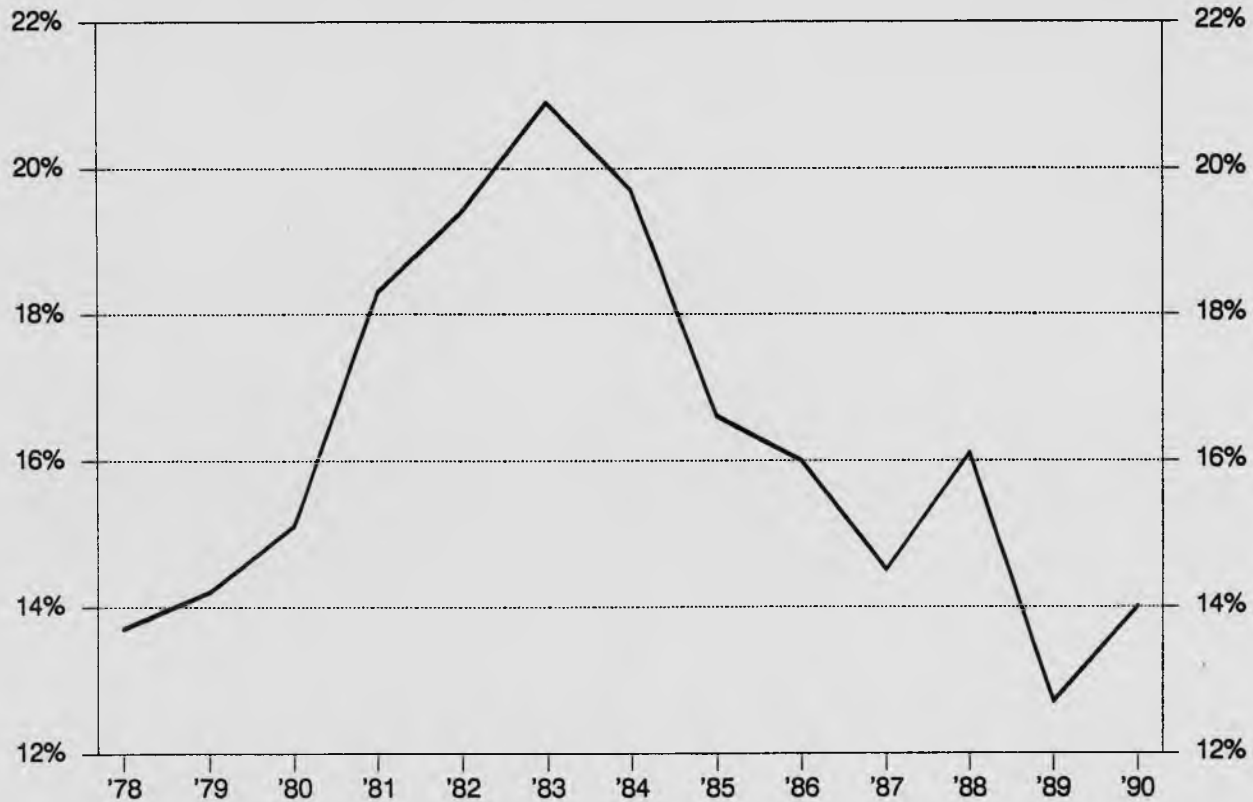
■ INDUSTRIAL ASSOCIATIONS



# LEVEL OF INTRA-EUROPEAN COOPERATION

Exports to other EC Aerospace Manufacturers

As % of Turnover



■ SOURCE: INDUSTRIAL ASSOCIATIONS

### LEVEL OF INTRA-EUROPEAN COOPERATION IN AEROSPACE SECTOR

#### PROPORTION OF TURNOVER EXPORTED TO AEROSPACE COMPANIES IN OTHER EC MEMBER STATES

##### AS % OF OVERALL TURNOVER

	BE	DE	ES	FR	IT	NL	UK	EC
1980	17.1	29.6	26.0	7.6	21.8	1.5	15.0	15.1
1981	17.8	36.0	27.9	8.0	12.5	15.2	21.1	18.3
1982	17.1	38.4	20.4	6.9	11.2	15.9	24.0	19.4
1983	19.8	39.0	28.7	8.8	19.6	12.7	24.8	20.9
1984	27.6	38.6	22.6	7.5	21.2	9.5	22.8	19.7
1985	27.6	33.5	21.1	4.0	25.4	0.0	18.7	16.6
1986	32.3	24.2	19.6	5.3	25.5	0.1	18.6	16.0
1987	33.3	21.9	13.2	5.4	25.6	4.5	14.8	14.5
1988	24.8	24.8	16.4	7.8	25.9	2.5	15.5	16.1
1989	38.5	23.2	18.6	2.7	25.3	3.5	11.0	12.7
1990	44.0	25.8	16.4	4.0	25.1	3.5	12.2	14.0
1991	-	-	-	7.0	18.4	2.9	12.8	-

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## FINANCE: EC (\*)

## MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989	1990
TURNOVER	-	-	-	30790	31508	36771	43520	-
VALUE ADDED	-	-	-	13003	12633	14521	16270	-
WAGE COSTS	-	-	-	10356	10630	11398	12420	-
TRADING INCOME	-	-	-	2647	2003	3124	3850	-
NET INCOME	-	-	-	716	339	1009	1229	-
EQUITY	-	-	-	7981	8567	12060	13418	-
LONG AND MEDIUM TERM DEBT	-	-	-	9152	8795	10052	11429	-
TOTAL PERMANENT LIABILITIES	-	-	-	17133	17362	22112	24847	-
PERMANENT ASSETS	-	-	-	8634	9641	13141	15644	-
R-D ..... TOTAL	-	-	-	-	-	-	-	-
..... INDUSTRY FUNDED	-	-	-	-	-	-	-	-
OPERATING INVESTMENTS	-	-	-	-	1717	2136	2870	-
EMPLOYMENT	-	-	-	386584	381309	420335	418827	-

## RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989	1990
LABOR PRODUCTIVITY								
- VALUE ADDED ON WAGE COST	-	-	-	125.6	118.8	127.4	131.0	-
- VAL.ADD./WORKER (000 ECUS)	-	-	-	33.6	33.1	34.5	38.8	-
R-D ON TURNOVER ..... TOTAL	-	-	-	-	-	-	-	-
..... INDUSTRY FUNDED	-	-	-	-	-	-	-	-
OPER. INVESTMENT ON VAL.ADD.	-	-	-	-	13.6	14.7	17.6	-
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	-	-	-	53.4	50.7	45.5	46.0	-
TRADING INCOME ON VALUE ADDED	-	-	-	20.4	15.9	21.5	23.7	-
NET INCOME ON VALUE ADDED	-	-	-	5.5	2.7	7.0	7.6	-
..... ON EQUITY	-	-	-	9.0	4.0	8.4	9.2	-
..... ON ASSETS	-	-	-	8.3	3.5	7.7	7.9	-

(\*) EC = FRANCE + FRG + ITALY + NETHERLANDS + SPAIN + UK

■ SOURCE: EUROSTAF/AEROSPATIALE

## FINANCE: USA

## MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989	1990
TURNOVER	91486	112456	138714	113371	96147	95430	107377	104930
VALUE ADDED	31497	40321	45674	39184	35557	35791	39610	36358
WAGE COSTS	24313	30139	35058	30028	26947	27548	31010	27765
TRADING INCOME	7185	10181	10616	9156	8610	8243	8599	8593
NET INCOME	3178	4612	4290	3143	3969	4129	3509	3524
EQUITY	27399	33736	38915	33422	27453	28642	33508	31330
LONG AND MEDIUM TERM DEBT	10518	11559	18168	16883	14433	15889	21124	22554
TOTAL PERMANENT LIABILITIES	37917	45295	57083	50305	41887	44531	54632	53884
PERMANENT ASSETS	26998	32963	45361	40491	33696	34524	43169	42689
R-D ..... TOTAL	17306	23901	29132	21388	21187	21903	23286	22617
..... INDUSTRY FUNDED	4505	6038	7403	6163	5145	5093	5464	5104
OPERATING INVESTMENTS	3314	4601	4600	3922	3119	2951	3785	3157
EMPLOYMENT	765000	817000	898000	948000	968000	977000	992000	946000

## RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989	1990
LABOR PRODUCTIVITY								
- VALUE ADDED ON WAGE COST	129.6	133.8	130.3	130.5	131.9	129.9	127.7	130.9
- VAL.ADD./WORKER (000 ECUS)	41.2	49.4	50.9	41.3	36.7	36.6	39.9	38.4
R-D ON TURNOVER ..... TOTAL	18.9	21.3	21.0	18.9	22.0	23.0	21.7	21.6
..... INDUSTRY FUNDED	4.9	5.4	5.3	5.4	5.4	5.3	5.1	4.9
OPER. INVESTMENT ON VAL.ADD.	10.5	11.4	10.1	10.0	8.8	8.2	9.6	8.7
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	27.7	25.5	31.8	33.6	34.5	35.7	38.7	41.9
TRADING INCOME ON VALUE ADDED	22.8	25.3	23.2	23.4	24.2	23.0	21.7	23.6
NET INCOME ON VALUE ADDED	10.1	11.4	9.4	8.0	11.2	11.5	8.9	9.7
..... ON EQUITY	11.6	13.7	11.0	9.4	14.5	14.4	10.5	11.2
..... ON ASSETS	11.8	14.0	9.5	7.8	11.8	12.0	8.1	8.3

■ SOURCE : AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA



## FINANCE: FRG

## MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989	1990
TURNOVER	3594	3737	4205	4239	4351	5065	4959	-
VALUE ADDED	1690	1783	1949	2058	2025	2322	2079	-
WAGE COSTS	1359	1426	1539	1744	1926	2046	1927	-
TRADING INCOME	331	357	410	315	99	276	152	-
NET INCOME	52	60	79	-18	16	51	-16	-
EQUITY	1104	1287	1395	1469	1397	1503	1950	-
LONG AND MEDIUM TERM DEBT	699	631	695	799	850	936	925	-
TOTAL PERMANENT LIABILITIES	1803	1918	2091	2268	2247	2439	2875	-
PERMANENT ASSETS	885	978	1003	1119	1241	1402	1925	-
R-D ..... TOTAL	-	-	1258	1177	1327	1394	1730	-
..... INDUSTRY FUNDED	-	-	205	238	259	239	265	-
OPERATING INVESTMENTS	180	156	200	287	309	332	353	-
EMPLOYMENT	52117	51163	52558	54283	55595	57411	48498	-

## RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989	1990
LABOR PRODUCTIVITY								
- VALUE ADDED ON WAGE COST	124.4	125.0	126.6	118.0	105.2	113.5	107.9	-
- VAL.ADD./WORKER (000 ECUS)	32.4	34.8	37.1	37.9	36.4	40.4	42.9	-
R-D ON TURNOVER ..... TOTAL	-	-	29.9	27.8	30.5	27.5	34.9	-
..... INDUSTRY FUNDED	-	-	4.9	5.6	5.9	4.7	5.3	-
OPER. INVESTMENT ON VAL.ADD.	10.6	8.7	10.3	14.0	15.3	14.3	17.0	-
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	38.8	32.9	33.2	35.2	37.8	38.4	32.2	-
TRADING INCOME ON VALUE ADDED	19.6	20.0	21.0	15.3	4.9	11.9	7.3	-
NET INCOME ON VALUE ADDED	3.1	3.3	4.0	-0.9	0.8	2.2	-0.8	-
..... ON EQUITY	4.7	4.6	5.7	-1.2	1.1	3.4	-0.8	-
..... ON ASSETS	5.9	6.1	7.9	-1.6	1.3	3.6	-0.8	-

■ SOURCE : EUROSTAF/AEROSPATIALE

## FINANCE: SPAIN

## MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989	1990
TURNOVER	-	-	355	305	313	532	601	-
VALUE ADDED	-	-	247	220	205	310	394	-
WAGE COSTS	-	-	184	207	214	261	306	-
TRADING INCOME	-	-	62	13	-9	49	88	-
NET INCOME	-	-2	13	-63	-97	-46	-36	-
EQUITY	-	69	89	30	-68	-29	-8	-
LONG AND MEDIUM TERM DEBT	-	165	206	312	285	537	616	-
TOTAL PERMANENT LIABILITIES	-	234	295	342	216	508	608	-
PERMANENT ASSETS	-	109	135	174	195	256	352	-
R-D ..... TOTAL	-	-	-	-	-	-	-	-
..... INDUSTRY FUNDED	-	14	15	15	15	18	20	-
OPERATING INVESTMENTS	-	36	46	47	50	62	74	-
EMPLOYMENT	-	10037	10238	10591	10777	10652	10138	-

## RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989	1990
LABOR PRODUCTIVITY								
- VALUE ADDED ON WAGE COST	-	-	133.8	106.5	95.7	118.9	128.9	-
- VAL.ADD./WORKER (000 ECUS)	-	-	24.1	20.8	19.0	29.1	38.9	-
R-D ON TURNOVER ..... TOTAL	-	-	-	-	-	-	-	-
..... INDUSTRY FUNDED	-	-	4.2	4.8	4.7	3.4	3.4	-
OPER. INVESTMENT ON VAL.ADD.	-	-	18.5	21.6	24.3	19.9	18.7	-
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	-	70.6	69.8	91.3	131.5	105.8	101.3	-
TRADING INCOME ON VALUE ADDED	-	-	25.2	6.1	-4.5	15.9	22.4	-
NET INCOME ON VALUE ADDED	-	-	5.1	-28.8	-47.4	-14.7	-9.0	-
..... ON EQUITY	-	-3.1	14.2	-212.2	142.4	154.4	465.1	-
..... ON ASSETS	-	-2.0	9.4	-36.5	-49.9	-17.8	-10.1	-

■ SOURCE : EUROSTAF/AEROSPATIALE

## FINANCE: FRANCE

## MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989	1990
TURNOVER	-	-	15124	15713	15078	16158	15650	-
VALUE ADDED	-	-	6690	6303	6128	5912	6154	-
WAGE COSTS	-	-	4818	5115	4888	4695	4536	-
TRADING INCOME	-	-	1872	1187	1240	1217	1618	-
NET INCOME	-	177	318	414	356	452	525	-
EQUITY	-	1424	1713	2854	3447	4531	4680	-
LONG AND MEDIUM TERM DEBT	-	5848	6246	4991	4154	3822	4014	-
TOTAL PERMANENT LIABILITIES	-	7271	7959	7845	7601	8353	8694	-
PERMANENT ASSETS	-	3638	3906	4624	4589	4993	5764	-
R-D ..... TOTAL	-	-	-	-	-	-	-	-
..... INDUSTRY FUNDED	-	-	-	-	-	-	-	-
OPERATING INVESTMENTS	-	-	911	872	779	701	885	-
EMPLOYMENT	-	-	153220	153082	133867	126210	123408	-

## RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989	1990
LABOR PRODUCTIVITY								
- VALUE ADDED ON WAGE COST	-	-	138.8	123.2	125.4	125.9	135.7	-
- VAL.ADD./WORKER (000 ECUS)	-	-	43.7	41.2	45.8	46.8	49.9	-
R-D ON TURNOVER ..... TOTAL	-	-	-	-	-	-	-	-
..... INDUSTRY FUNDED	-	-	-	-	-	-	-	-
OPER. INVESTMENT ON VAL.ADD.	-	-	13.6	13.8	12.7	11.9	14.4	-
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	-	80.4	78.5	63.6	54.6	45.8	46.2	-
TRADING INCOME ON VALUE ADDED	-	-	28.0	18.8	20.2	20.6	26.3	-
NET INCOME ON VALUE ADDED	-	-	4.8	6.6	5.8	7.6	8.5	-
..... ON EQUITY	-	12.5	18.6	14.5	10.3	10.0	11.2	-
..... ON ASSETS	-	4.9	8.2	9.0	7.8	9.1	9.1	-

■ SOURCE : EUROSTAF/AEROSPATIALE

## FINANCE: ITALY

## MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989	1990
TURNOVER	-	-	-	2082	2067	2140	2578	-
VALUE ADDED	-	-	-	971	1001	1075	1310	-
WAGE COSTS	-	-	-	569	653	707	824	-
TRADING INCOME	-	-	-	402	347	368	486	-
NET INCOME	-	-	-	39	56	70	65	-
EQUITY	-	-	-	802	891	896	1017	-
LONG AND MEDIUM TERM DEBT	-	-	-	1653	1573	1704	1839	-
TOTAL PERMANENT LIABILITIES	-	-	-	2455	2465	2601	2856	-
PERMANENT ASSETS	-	-	-	911	944	1250	1380	-
R-D ..... TOTAL	-	-	-	605	654	623	648	-
..... INDUSTRY FUNDED	-	-	-	-	-	-	-	-
OPERATING INVESTMENTS	-	-	-	-	131	151	166	-
EMPLOYMENT	-	-	-	29610	30223	30712	31384	-

## RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989	1990
LABOR PRODUCTIVITY	-	-	-	-	-	-	-	-
- VALUE ADDED ON WAGE COST	-	-	-	170.6	153.2	152.1	158.9	-
- VAL.ADD./WORKER (000 ECUS)	-	-	-	32.8	33.1	35.0	41.7	-
R-D ON TURNOVER ..... TOTAL	-	-	-	29.1	31.6	29.1	25.1	-
..... INDUSTRY FUNDED	-	-	-	-	-	-	-	-
OPER. INVESTMENT ON VAL.ADD.	-	-	-	-	13.1	14.0	12.7	-
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	-	-	-	67.3	63.8	65.5	64.4	-
TRADING INCOME ON VALUE ADDED	-	-	-	41.4	34.7	34.3	37.1	-
NET INCOME ON VALUE ADDED	-	-	-	4.1	5.6	6.5	5.0	-
..... ON EQUITY	-	-	-	4.9	6.3	7.8	6.4	-
..... ON ASSETS	-	-	-	4.3	6.0	5.6	4.7	-

■ SOURCE: EUROSTAF/AEROSPATIALE

## FINANCE: NETHERLANDS

## MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989	1990
TURNOVER	604	619	533	584	452	880	1199	-
VALUE ADDED	222	209	81	300	-113	368	396	-
WAGE COSTS	183	186	228	277	291	299	319	-
TRADING INCOME	39	23	-147	22	-404	69	77	-
NET INCOME	7	9	13	8	-46	6	18	-
EQUITY	54	68	104	117	121	365	376	-
LONG AND MEDIUM TERM DEBT	196	229	230	245	676	637	771	-
TOTAL PERMANENT LIABILITIES	251	297	334	361	796	1002	1147	-
PERMANENT ASSETS	106	115	147	168	584	589	607	-
R-D ..... TOTAL	36	100	159	153	98	39	23	-
..... INDUSTRY FUNDED	15	15	30	40	75	12	10	-
OPERATING INVESTMENTS	10	19	36	27	39	24	42	-
EMPLOYMENT	8398	9055	10053	10860	11709	11690	12925	-

## RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989	1990
LABOR PRODUCTIVITY								
- VALUE ADDED ON WAGE COST	121.4	112.4	35.6	108.0	-38.8	123.1	124.0	-
- VAL.ADD./WORKER (000 ECUS)	26.4	23.1	8.1	27.6	-9.6	31.5	30.6	-
R-D ON TURNOVER ..... TOTAL	6.0	16.2	29.9	26.2	21.7	4.4	1.9	-
..... INDUSTRY FUNDED	2.5	2.5	5.6	6.9	16.7	1.4	0.8	-
OPER. INVESTMENT ON VAL.ADD.	4.5	8.9	44.8	9.1	-34.8	6.6	10.7	-
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	78.3	77.0	68.8	67.6	84.8	63.6	67.2	-
TRADING INCOME ON VALUE ADDED	17.6	11.0	-180.9	7.4	357.7	18.8	19.4	-
NET INCOME ON VALUE ADDED	3.2	4.5	16.2	2.6	40.6	1.5	4.6	-
..... ON EQUITY	13.2	13.7	12.6	6.8	-37.9	1.6	4.8	-
..... ON ASSETS	6.7	8.1	9.0	4.7	-7.9	1.0	3.0	-

■ SOURCE : EUROSTAF/AEROSPATIALE

## FINANCE: UNITED KINGDOM

## MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989	1990
TURNOVER	6741	7066	7737	7868	9248	11995	18534	-
VALUE ADDED	2609	2990	3307	3152	3387	4534	5938	-
WAGE COSTS	2393	2466	2655	2444	2658	3390	4507	-
TRADING INCOME	216	525	651	708	730	1144	1430	-
NET INCOME	-153	215	186	336	54	476	673	-
EQUITY	2007	2308	2729	2709	2779	4794	5403	-
LONG AND MEDIUM TERM DEBT	1384	1463	1213	1152	1258	2415	3264	-
TOTAL PERMANENT LIABILITIES	3391	3771	3942	3861	4037	7209	8667	-
PERMANENT ASSETS	1342	1685	1764	1637	2089	4651	5616	-
R-D ..... TOTAL	-	-	-	1151	1149	1418	1650	-
..... INDUSTRY FUNDED	394	367	377	369	439	385	523	-
OPERATING INVESTMENTS	192	219	300	291	408	866	1350	-
EMPLOYMENT	136264	129690	128658	128158	139138	183660	192474	-

## RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989	1990
LABOR PRODUCTIVITY								
- VALUE ADDED ON WAGE COST	109.0	121.3	124.5	129.0	127.5	133.8	131.7	-
- VAL.ADD./WORKER (000 ECUS)	19.1	23.1	25.7	24.6	24.3	24.7	30.8	-
R-D ON TURNOVER ..... TOTAL	-	-	-	14.6	12.4	11.8	8.9	-
..... INDUSTRY FUNDED	5.8	5.2	4.9	4.7	4.8	3.2	2.8	-
OPER. INVESTMENT ON VAL.ADD.	7.4	7.3	9.1	9.2	12.1	19.1	22.7	-
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	40.8	38.8	30.8	29.8	31.1	33.5	37.7	-
TRADING INCOME ON VALUE ADDED	8.3	17.5	19.7	22.5	21.5	25.2	24.1	-
NET INCOME ON VALUE ADDED	-5.9	7.2	5.6	10.7	1.6	10.5	11.3	-
..... ON EQUITY	-7.6	9.3	6.8	12.4	1.9	9.9	12.5	-
..... ON ASSETS	-11.4	12.7	10.5	20.5	2.6	10.2	12.0	-

■ SOURCE: EUROSTAF/AEROSPATIALE

# EMPLOYMENT



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## EMPLOYMENT

The **annual survey**, conducted by DG III together with the industrial associations of 7 EC Member States - A.I.A. (It), A.T.E.C.M.A. (Es), B.D.L.I. (De), G.E.B.E.C.O.M.A. (Be), G.I.F.A.S. (Fr), N.A.I. (Nl) and S.B.A.C. (UK) -, enables the *employment* in the European aerospace industry to be broken down by *professional* and *activity* categories. Participants to this survey are the aerospace companies whose turnover concerns (partly or entirely) one or more of the 3 groups of aerospace products listed in Chapter 6 (complete aircraft / space systems, propulsion devices, equipment).

Data for Spain relating to the years 1984-86 have been estimated by linear regression to the employment of the major Spanish aerospace company, Casa.

The *professional categories* are the following:

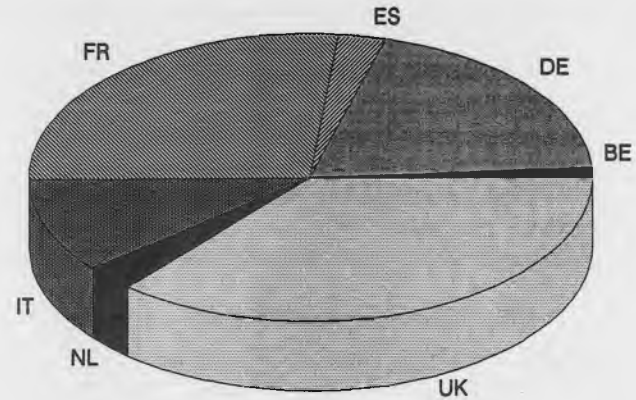
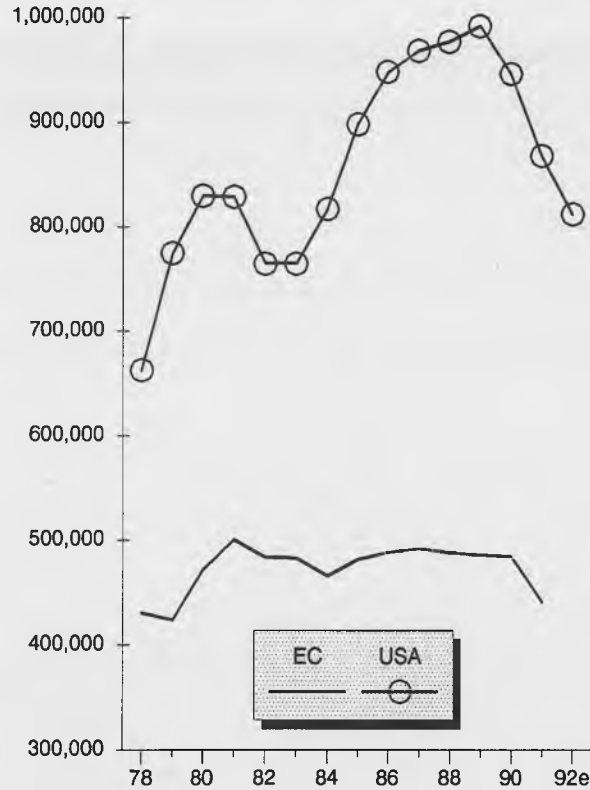
- *engineers and managers*,
- *technical employees* comprise technicians, draughtsmen, craftsmen, supervisors, foremen, etc.
- *administrative employees* comprise clerical and office staff, etc.
- *production workers* (skilled and unskilled)

The professional categories indicated correspond to the actual functions carried out, and do not necessarily correspond to the formal qualifications possessed.

The *activities* considered concern:

- *R&D*,
- *production*, including maintenance, repairs and post-delivery modifications,
- *marketing and management*, including all the activities involved in running the company (general management, general accounting, financial management, personnel management, etc.) besides marketing activities and after-sales services.

### Aerospace Employment



Breakdown by Country - 1991

## TOTAL AEROSPACE EMPLOYMENT

## AT YEAR-END

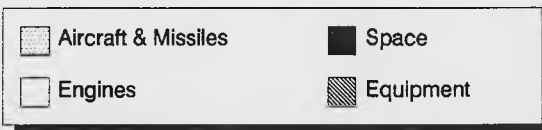
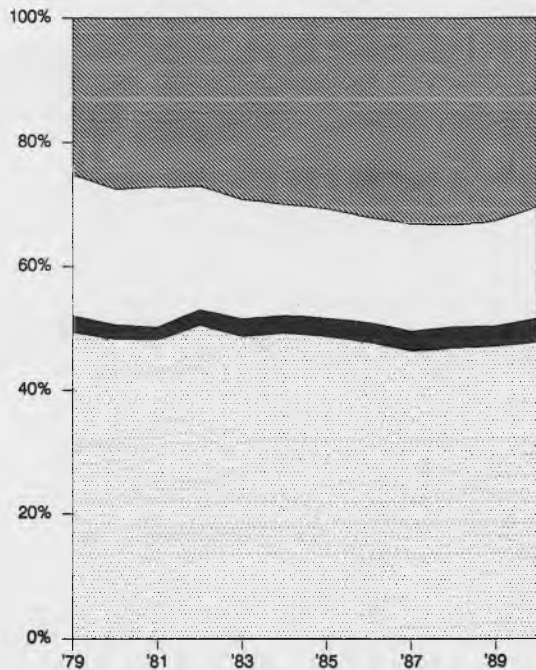
	1978	1979	1980	1981	1982	1983	1984	1985	1986
BELGIUM	5,068	6,272	7,032	6,886	6,705	6,127	5,757	5,470	5,743
FRG	56,348	60,866	66,086	68,650	66,883	65,677	65,366	77,256	85,021
FRANCE	103,424	106,297	110,783	113,690	115,982	127,269	127,815	127,072	126,056
ITALY	36,136	38,370	40,934	41,920	42,907	42,546	42,885	43,284	44,780
NETHERLANDS	7,382	7,935	8,862	9,706	9,527	8,398	9,055	10,053	10,860
UNITED KINGDOM	214,918	196,566	229,821	249,863	230,961	221,998	203,202	206,677	203,489
EC 10	423,276	416,306	463,518	490,715	472,965	472,015	454,080	469,812	475,949
SPAIN	6,642	7,331	8,177	9,516	10,216	10,538	11,282	11,744	12,096
EC 12	429,918	423,637	471,695	500,231	483,181	482,553	465,362	481,556	488,045
USA	663,000	775,000	830,000	829,000	765,000	765,000	817,000	898,000	948,000
CANADA	33,800	37,700	46,800	44,800	39,800	37,100	42,300	47,627	53,678
JAPAN	30,097	31,666	32,991	33,772	35,033	32,879	34,216	34,313	35,286

	1987	1988	1989	1990	1991	1992 E	1993 F	1994 F	1995 F
BELGIUM	5,510	4,829	5,239	5,234	4,843	-	-	-	-
FRG	86,573	93,561	94,456	95,042	86,299	87,750	86,850	87,840	87,300
FRANCE	122,317	119,484	120,334	120,720	118,300	103,000	87,600	77,700	-
ITALY	47,000	49,500	50,501	50,698	47,000	44,000	43,124	-	-
NETHERLANDS	11,529	11,584	12,718	13,314	12,606	12,700	13,000	13,100	13,800
UNITED KINGDOM	207,161	196,682	189,911	186,337	160,000	-	-	-	-
EC 10	480,090	475,640	473,159	471,345	429,048	-	-	-	-
SPAIN	11,304	11,770	12,581	12,627	11,812	11,436	-	-	-
EC 12	491,394	487,410	485,740	483,972	440,860	-	-	-	-
USA	968,000	977,000	992,000	946,000	868,000	812,000	-	-	-
CANADA	57,804	63,650	63,632	63,962	62,407	61,203	62,411	64,000	64,953
JAPAN	36,560	37,488	38,329	38,710	39,660	-	-	-	-

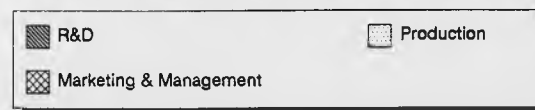
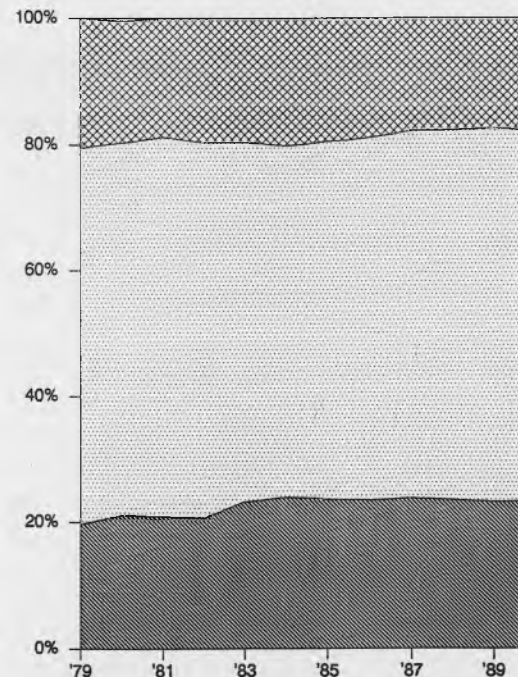
■ SOURCE: INDUSTRIAL ASSOCIATIONS (EC: DG III ANNUAL SURVEY - USA: A.I.A.A. - CANADA: A.I.A.C. - JAPAN: S.J.A.C.)

# EC AEROSPACE EMPLOYMENT

Breakdown by Sector



Breakdown by Activity



■ SOURCE: INDUSTRIAL ASSOCIATIONS

## EC 12 : BREAKDOWN OF WORKFORCE (AT YEAR-END)

## BY SECTOR AND BY MEMBER STATE

## AIRFRAMES AND MISSILES

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
BELGIUM	3,423	3,755	3,461	3,329	2,919	2,757	2,577	2,714	2,680	2,611	2,847	2,806
FRG	37,935	40,901	42,472	40,501	38,722	39,411	41,694	44,934	40,698	43,824	45,237	48,598
FRANCE	57,018	58,745	59,902	60,798	59,615	60,525	59,954	58,530	55,553	54,317	54,466	53,160
ITALY	24,788	26,534	26,930	28,183	28,255	27,850	26,280	27,087	27,965	27,918	29,543	29,152
NETHERLANDS	5,705	6,375	6,982	6,852	6,039	6,511	7,229	7,809	8,439	8,789	9,717	10,243
UNITED KINGDOM	73,875	83,907	92,310	94,953	90,015	81,844	86,799	81,463	82,249	81,170	76,088	76,318
EC 10	202,744	220,217	232,057	234,616	225,565	218,898	224,533	222,537	217,584	218,629	217,898	220,277
SPAIN	6,413	7,290	8,553	9,233	9,535	9,940	10,220	10,397	9,808	9,601	10,469	10,654
EC 12	209,157	227,507	240,610	243,849	235,100	228,838	234,753	232,934	227,392	228,230	228,367	230,931

## SPACE

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
BELGIUM	290	245	299	364	410	380	434	571	555	344	549	590
FRG	2,841	2,766	2,681	3,727	4,432	5,067	5,447	5,553	5,896	6,304	6,474	7,006
FRANCE	2,699	2,845	2,961	3,106	3,058	2,984	3,200	3,492	3,121	3,013	3,404	3,870
ITALY	482	870	811	914	1,283	1,420	2,280	2,964	3,243	3,614	3,535	3,650
NETHERLANDS	189	209	229	226	201	217	241	260	240	269	322	350
UNITED KINGDOM	4,539	4,417	3,168	3,437	4,107	2,967	2,600	2,500	2,358	2,747	1,978	2,309
EC 10	11,040	11,352	10,149	11,774	13,491	13,035	14,202	15,340	15,413	16,291	16,262	17,775
SPAIN	150	146	156	140	156	226	266	304	358	371	351	532
EC 12	11,190	11,498	10,305	11,914	13,647	13,261	14,468	15,644	15,771	16,662	16,613	18,307

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## EC 12 : BREAKDOWN OF WORKFORCE (AT YEAR-END)

## BY SECTOR AND BY MEMBER STATE

## ENGINES

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
BELGIUM	1,807	2,262	2,398	2,357	2,238	2,107	2,053	2,053	1,878	1,611	1,555	1,590
FRG	8,431	8,701	8,955	8,697	7,717	8,434	8,096	8,790	9,481	9,824	9,802	10,926
FRANCE	21,871	23,116	24,061	25,038	25,367	26,156	26,800	27,064	26,771	26,848	26,947	27,750
ITALY	5,783	6,037	6,292	5,984	5,803	5,645	6,475	6,086	6,392	6,830	6,868	6,945
NETHERLANDS	0	0	0	0	0	0	0	0	0	0	0	0
UNITED KINGDOM	58,524	62,986	70,942	53,671	51,264	40,630	40,701	38,591	39,924	34,765	36,004	39,523
EC 10	96,416	103,102	112,648	95,747	92,389	82,972	84,125	82,584	84,446	79,878	81,176	86,734
SPAIN	214	226	240	259	261	390	462	533	528	663	720	395
EC 12	96,630	103,328	112,888	96,006	92,650	83,362	84,587	83,117	84,974	80,541	81,896	87,129

## EQUIPMENT

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
BELGIUM	752	770	728	655	560	513	406	405	397	263	288	248
FRG	11,659	13,718	14,542	13,958	14,806	12,454	22,019	25,744	30,498	33,609	32,943	28,512
FRANCE	24,709	26,077	26,766	27,040	39,229	38,150	37,118	36,970	36,872	35,306	35,517	35,940
ITALY	7,317	7,493	7,887	7,826	7,205	7,970	8,249	8,643	9,400	11,138	10,555	10,951
NETHERLANDS	2,041	2,278	2,495	2,449	2,158	2,327	2,583	2,791	2,850	2,526	2,679	2,721
UNITED KINGDOM	59,628	78,511	83,443	78,900	76,612	77,761	76,577	80,935	82,630	78,000	75,841	68,187
EC 10	106,106	128,847	135,861	130,828	140,570	139,175	146,952	155,488	162,647	160,842	157,823	146,559
SPAIN	554	515	567	584	586	725	796	861	610	1,135	1,041	1,046
EC 12	106,660	129,362	136,428	131,412	141,156	139,900	147,748	156,349	163,257	161,977	158,864	147,605

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## EC 12 : BREAKDOWN OF WORKFORCE (AT YEAR-END)

## BY SECTOR AND BY PROFESSIONAL CATEGORY/ACTIVITY

## AIRFRAMES AND MISSILES

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ENGINEERS AND MANAGERS	34,860	36,458	38,676	39,295	39,844	40,518	40,347	39,567	37,980	41,302
TECHNICAL STAFF	56,313	60,901	60,255	59,487	57,796	62,445	59,079	62,693	64,391	63,314
ADMINISTRATIVE STAFF	40,366	37,216	34,837	34,731	37,042	34,857	34,651	34,986	35,441	35,316
PRODUCTION WORKERS	109,070	109,275	101,331	95,325	100,072	95,113	93,314	90,986	90,555	90,999
R-D	46,361	47,832	51,761	51,953	48,616	49,942	52,229	51,061	49,842	50,340
PRODUCTION	147,457	148,446	136,657	130,202	140,255	137,380	134,618	136,859	139,309	139,581
MARKETING AND MANAGEMENT	46,792	47,571	46,681	46,683	45,883	45,612	40,544	40,310	39,216	41,010
TOTAL	240,610	243,849	235,100	228,838	234,753	232,934	227,392	228,230	228,367	230,931

## SPACE

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ENGINEERS AND MANAGERS	2,682	3,613	4,103	3,790	4,595	4,401	4,523	5,666	5,772	6,722
TECHNICAL STAFF	3,122	3,401	4,627	4,169	5,572	6,598	6,624	6,691	5,587	5,740
ADMINISTRATIVE STAFF	1,680	1,905	2,044	2,030	2,138	1,742	2,083	2,051	1,928	2,005
PRODUCTION WORKERS	2,822	2,994	2,874	3,272	2,162	2,904	2,542	2,254	3,326	3,840
R-D	5,093	6,017	7,306	6,285	8,012	8,026	7,813	9,446	9,134	9,708
PRODUCTION	3,593	3,977	4,000	4,891	3,001	4,810	4,705	3,654	4,927	5,498
MARKETING AND MANAGEMENT	1,619	1,920	2,342	2,086	3,454	2,808	3,254	3,562	2,552	3,101
TOTAL	10,305	11,914	13,647	13,261	14,468	15,644	15,771	16,662	16,613	18,307

■ SOURCE: INDUSTRIAL ASSOCIATIONS

## EC 12 : BREAKDOWN OF WORKFORCE (AT YEAR-END)

## BY SECTOR AND BY PROFESSIONAL CATEGORY/ACTIVITY

## ENGINES

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ENGINEERS AND MANAGERS	14,285	15,603	15,344	14,143	14,427	14,101	13,326	12,590	13,089	12,613
TECHNICAL STAFF	23,112	19,498	21,674	19,732	19,192	19,237	25,131	23,589	25,099	25,170
ADMINISTRATIVE STAFF	15,948	11,471	11,097	9,905	11,315	9,959	11,032	10,618	9,736	9,017
PRODUCTION WORKERS	59,543	49,434	44,535	39,582	39,652	39,820	35,485	33,744	33,972	40,329
R-D	17,967	16,511	17,580	16,382	17,102	16,146	17,066	16,515	16,978	18,695
PRODUCTION	73,625	58,671	54,783	49,290	49,513	50,279	52,323	49,127	49,650	53,336
MARKETING AND MANAGEMENT	21,296	20,824	20,287	17,690	17,972	16,693	15,585	14,899	15,268	15,098
TOTAL	112,888	96,006	92,650	83,362	84,587	83,117	84,974	80,541	81,896	87,129

## EQUIPMENT

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ENGINEERS AND MANAGERS	24,983	23,684	27,098	28,295	31,101	36,280	35,248	30,677	31,405	29,828
TECHNICAL STAFF	29,067	28,652	34,210	33,335	35,969	35,533	38,055	39,296	39,507	36,680
ADMINISTRATIVE STAFF	21,264	20,737	22,597	23,667	24,040	23,960	27,375	26,711	25,755	21,513
PRODUCTION WORKERS	61,114	58,339	57,251	54,603	56,637	60,576	62,579	65,293	62,197	59,583
R-D	34,411	29,018	35,294	37,717	39,559	40,632	40,109	37,282	36,515	34,383
PRODUCTION	76,963	77,474	80,075	74,819	81,696	88,541	94,802	96,719	94,714	85,264
MARKETING AND MANAGEMENT	25,054	24,920	25,787	27,365	26,493	27,177	28,346	27,976	27,635	27,958
TOTAL	136,428	131,412	141,156	139,900	147,748	156,349	163,257	161,977	158,864	147,605

■ SOURCE: INDUSTRIAL ASSOCIATIONS



**EC 12 : BREAKDOWN OF WORKFORCE (AT YEAR-END)****BY SECTOR AND BY PROFESSIONAL CATEGORY/ACTIVITY****TOTAL**

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ENGINEERS AND MANAGERS	76,810	79,358	85,221	85,523	89,968	95,300	93,444	88,500	88,246	90,465
TECHNICAL STAFF	111,614	112,452	120,766	116,723	118,529	123,813	128,889	132,270	134,584	130,904
ADMINISTRATIVE STAFF	79,258	71,329	70,575	70,333	74,535	70,519	75,141	74,365	72,860	67,851
PRODUCTION WORKERS	232,549	220,042	205,991	192,782	198,523	198,413	193,920	192,276	190,050	194,751
R-D	103,832	99,378	111,941	112,336	113,289	114,746	117,217	114,304	112,469	113,126
PRODUCTION	301,638	288,568	275,515	259,202	274,464	281,010	286,448	286,359	288,600	283,680
MARKETING AND MANAGEMENT	94,761	95,235	95,097	93,824	93,802	92,290	87,729	86,747	84,671	87,167
<b>TOTAL</b>	<b>500,231</b>	<b>483,181</b>	<b>482,553</b>	<b>465,362</b>	<b>481,556</b>	<b>488,045</b>	<b>491,394</b>	<b>487,410</b>	<b>485,740</b>	<b>483,972</b>

■ SOURCE: INDUSTRIAL ASSOCIATIONS



# AEROSPACE MANUFACTURERS

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## MAJOR AEROSPACE MANUFACTURERS

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Data for the *turnover* and *employment* of the major world *aerospace manufacturers* are basically the result of an annual survey, carried out by DG III with the companies, completed if necessary with elements published in their annual reports and press information.

Unless stated otherwise, the data relating to diversified groups should cover their **aerospace activities only**.

The turnover/employment ratio is not the best way of measuring productivity, since it overestimates the position of manufacturers that undertake little R&D activity and/or carry out more work under license or under sub-contracts.

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## TURNOVER OF MAJOR AEROSPACE MANUFACTURERS (MIO ECU AT CURRENT VALUES)

	1984	1985	1986	1987	1988	1989	1990	1991	1992 E	1993 F
(US) BOEING (GROUP)	13,428	18,253	17,017	13,698	14,664	18,719	22,022	23,868	-	-
(US) MC DONNELL DOUGLAS	11,674	14,285	12,305	11,010	11,915	12,919	12,489	14,874	-	-
(US) GENERAL ELECTRIC	-	10,218	10,460	10,425	9,999	11,024	10,344	10,672	-	-
(US) UNITED TECHNOLOGIES	10,219	10,626	8,521	7,784	8,332	9,837	8,898	8,993	-	-
(DE) DEUTSCHE AEROSPACE	3,696	4,060	4,010	4,312	5,175	7,869	8,201	8,508	8,904	-
(UK) BRITISH AEROSPACE	4,179	4,496	4,671	5,784	6,135	7,631	8,653	8,464	7,452	6,799
(US) LOCKHEED (GROUP)	9,913	12,204	10,242	9,722	8,956	8,978	7,820	7,916	7,711	-
(FR) AEROSPATIALE	3,658	3,620	3,737	3,592	3,977	4,509	4,741	6,969	7,419	-
(US) HUGHES AIRCRAFT	-	-	7,068	6,066	6,267	6,750	6,141	6,223	-	-
(US) MARTIN MARIETTA	4,148	4,989	4,198	3,896	4,156	4,779	4,575	4,643	-	-
(US) NORTHROP (GROUP)	4,674	6,627	5,698	5,243	4,902	4,764	4,311	4,595	-	-
(US) ALLIED-SIGNAL AEROSPACE	-	4,708	4,556	4,113	4,014	4,610	4,208	4,252	-	-
(US) GENERAL DYNAMICS	5,186	5,862	5,080	4,915	4,991	5,472	4,361	3,605	-	-
(US) GRUMMAN	3,300	4,061	3,558	2,924	3,086	3,230	3,173	3,259	-	-
(IT) ALENIA	1,622	1,804	2,028	2,117	2,272	2,822	2,743	3,139	3,209	3,325
(UK) ROLLS-ROYCE (GROUP)	2,032	2,228	2,229	2,516	2,531	3,051	3,278	2,900	-	-
(US) ROCKWELL	5,490	6,957	5,634	4,394	3,358	3,548	2,969	2,853	-	-
(US) TEXTRON	-	3,591	3,614	3,358	3,051	3,069	2,857	2,763	-	-
(US) TRW	3,681	4,383	3,453	2,691	2,690	2,891	2,600	2,510	-	-
(JA) MITSUBISHI HEAVY IND.	1,446	1,738	1,648	1,878	1,924	2,039	1,878	2,493	-	-
(FR) SNECMA	1,192	1,384	1,508	1,350	1,458	1,915	2,044	2,076	2,001	-
(FR) DASSAULT AVIATION	2,284	2,419	2,294	2,243	2,510	2,471	2,476	2,058	2,191	-
(US) LITTON INDUSTRIES	2,166	2,467	2,128	1,948	1,995	2,251	1,894	1,825	1,660	1,514
(NL) FOKKER AIRCRAFT B.V.	619	533	584	452	880	1,199	1,385	1,650	1,889	-
(FR) MATRA	802	840	830	929	965	1,014	1,485	1,534	-	-
(JA) KAWASAKI HEAVY INDUSTRIES	651	731	800	765	1,160	1,439	1,239	1,385	1,444	-
(IS) I.A.I.	1,142	1,322	1,099	753	898	1,161	1,114	1,297	1,195	1,074
(US) ROHR (GROUP)	768	778	636	577	767	948	847	1,118	-	-
(US) TELEDYNE	-	1,793	1,467	1,247	1,309	1,331	1,155	1,081	-	-
(UK) LUCAS INDUSTRIES	-	550	491	613	800	894	946	1,071	-	-
(CA) BOMBARDIER AEROSPACE	1,160	1,177	982	855	907	884	931	1,070	-	-
(US) SUNDSTRAND AEROSPACE	824	1,057	982	863	864	970	835	826	771	767
(US) VUGHT AIRCRAFT	667	1,302	1,101	875	717	593	613	802	-	-
(FR) SEXTANT AVIONIQUE	-	-	-	-	-	857	975	798	-	-
(JA) ISHIKAWAJIMA-HARIMA H.I.	554	590	640	590	713	803	695	781	-	-
(CA) CAE INDUSTRIES	183	274	245	218	576	859	739	737	-	-
(US) GULFSTREAM AEROSPACE	425	392	301	286	249	272	767	716	-	-
(IT) FIAT AVIAZIONE	261	310	415	413	457	593	631	713	689	765
(ES) CASA	323	361	337	356	561	630	764	681	690	754
(UK) WESTLAND (GROUP)	502	524	513	542	531	641	576	667	572	-
(SW) SAAB AIRCRAFT	296	502	468	608	563	572	572	660	-	-

■ SOURCE: COMPANIES (DGIII SURVEY - ANNUAL REPORTS - PRESS)

TURNOVER (continued)	1984	1985	1986	1987	1988	1989	1990	1991	1992 E	1993 F
(FR) S.E.P.	263	333	384	493	518	614	648	668	666	644
(US) CESSNA AIRCRAFT (TEXTRON)	878	941	548	454	406	589	585	659	655	-
(US) KAMAN	683	729	598	613	649	728	649	630	-	-
(US) HERCULES	948	1,106	921	872	890	875	782	604	-	-
(IT) AGUSTA	493	570	580	613	667	734	722	588	692	690
(SW) VOLVO FLYGMOTOR	207	247	267	299	345	371	376	548	556	-
(US) BEECHCRAFT (RAYTHEON)	415	357	297	273	432	420	452	450	328	-
(FR) DASSAULT ELECTRONIQUE	262	277	329	387	391	427	459	412	-	-
(UK) DOWTY	312	261	264	297	390	429	443	407	-	-
(IN) HINDUSTAN AERONAUTICS	522	661	496	454	419	487	416	363	323	-
(FR) TURBOMECA	266	266	253	267	290	308	335	356	386	-
(CA) SPAR AEROSPACE	186	214	140	154	185	179	226	328	-	-
(UK) REDIFFUSION SIMULATION	58	100	121	141	181	247	297	327	196	-
(BR) EMBRAER	203	287	384	411	442	636	457	324	-	-
(JA) FUJI HEAVY INDUSTRIES	194	212	234	233	314	325	280	312	-	-
(IT) AERMACCHI	138	163	159	188	170	222	263	245	245	238
(SW) ERICSSON RADAR (ERE)	-	-	-	-	278	325	239	232	252	258
(AU) HAWKER DE HAVILLAND	80	122	119	118	138	201	173	180	153	148
(BE) TECHSPACE AERO	140	215	171	149	147	148	182	163	149	-
(SW) FFV AEROTECH	150	167	178	193	223	256	239	152	149	150
(BE) SABCA	56	71	70	82	92	107	129	151	154	134
(PO) O.G.M.A.	22	24	33	30	48	65	68	82	69	-
(AU) ASTA	43	50	-	-	-	68	71	75	96	105
(KO) DAEWOO HEAVY INDUSTRIES	-	-	2	4	6	13	19	39	51	81

### WORKFORCE OF MAJOR AEROSPACE MANUFACTURERS

	1984	1985	1986	1987	1988	1989	1990	1991	1992 E	1993 F
(US) BOEING (GROUP)	86,600	98,700	118,500	136,100	147,300	159,200	161,700	159,100	-	-
(US) MC DONNELL DOUGLAS	88,391	97,067	105,696	112,400	121,421	127,926	121,190	109,123	-	-
(UK) BRITISH AEROSPACE	75,998	75,645	75,480	86,760	87,623	83,260	81,869	79,022	75,000	70,000
(DE) DEUTSCHE AEROSPACE	50,700	52,482	54,258	55,516	58,990	82,259	80,000	78,455	70,000	-
(US) GENERAL DYNAMICS	99,000	103,300	105,400	105,300	102,800	102,200	98,100	75,300	69,700	-
(US) LOCKHEED (GROUP)	81,300	87,800	94,200	97,200	85,600	82,500	73,000	72,300	-	-
(US) GENERAL ELECTRIC	-	-	92,000	89,000	84,400	80,600	76,900	65,800	-	-
(US) HUGHES AIRCRAFT	-	-	79,216	76,339	75,146	66,625	67,174	63,204	57,000	50,000
(US) PRATT-WHITNEY GROUP (UTC)	42,129	43,891	46,728	46,536	46,000	45,900	45,700	44,400	42,000	37,000
(IN) HINDUSTAN AERONAUTICS	42,389	42,993	44,123	44,043	43,663	42,678	41,530	40,694	39,746	-
(US) NORTHROP (GROUP)	41,500	46,900	46,800	48,200	44,600	41,000	38,200	36,200	-	-
(US) MARTIN MARIETTA	33,093	37,116	36,845	36,597	33,990	33,267	32,900	32,000	-	-
(IT) ALENIA	26,943	27,779	27,956	28,606	29,738	31,648	30,179	30,200	29,000	24,000

■ SOURCE: COMPANIES (DGIII SURVEY - ANNUAL REPORTS - PRESS)

WORKFORCE (continued)	1984	1985	1986	1987	1988	1989	1990	1991	1992 E	1993 F
(UK) ROLLS-ROYCE (GROUP)	40,900	41,700	42,000	41,600	40,400	41,100	34,900	29,800	27,000	-
(FR) AEROSPATIALE	35,456	34,889	34,246	32,827	32,626	32,958	33,506	26,500	25,900	24,800
(US) ROCKWELL	43,300	45,700	41,100	34,408	32,574	31,517	25,142	25,227	-	-
(US) GRUMMAN	30,900	32,000	33,400	33,700	32,000	28,900	26,100	23,600	21,900	21,400
(US) TRW	43,700	38,400	28,100	30,800	28,300	27,500	25,400	23,000	-	-
(CA) BOMBARDIER AEROSPACE	14,168	13,999	15,201	15,327	15,134	16,788	17,363	18,778	-	-
(US) LITTON INDUSTRIES	23,567	25,106	25,541	24,689	24,398	22,732	20,682	18,305	16,763	15,722
(IS) I.A.I.	21,650	22,070	21,483	20,270	17,291	16,612	16,904	17,213	17,500	16,000
(FR) SNECMA	13,442	13,862	13,918	13,434	13,482	13,955	14,192	13,816	13,800	12,650
(NL) FOKKER AIRCRAFT B.V.	9,055	10,053	10,860	11,529	11,584	12,718	13,314	12,606	12,500	11,550
(FR) DASSAULT AVIATION	16,196	16,123	15,783	14,676	13,818	13,385	12,390	11,900	11,400	10,000
(US) ROHR (GROUP)	6,900	7,600	8,000	10,000	11,000	12,000	12,000	11,500	9,100	8,000
(US) BEECHCRAFT (RAYTHEON)	8,707	7,935	7,790	8,413	8,461	9,398	10,757	10,956	10,100	-
(US) VUGHT AIRCRAFT	7,364	9,293	9,678	9,662	10,000	10,800	10,500	9,700	8,700	-
(CA) CAE INDUSTRIES	4,065	4,840	5,125	4,000	12,400	11,760	10,000	9,600	-	-
(ES) CASA	10,037	10,238	10,591	10,548	10,370	10,138	9,544	9,338	9,100	8,500
(UK) WESTLAND (GROUP)	11,892	11,613	10,595	9,231	9,216	9,499	9,601	9,240	-	-
(US) SUNDSTRAND AEROSPACE	8,549	9,919	10,118	10,052	9,796	9,073	8,994	8,603	8,500	7,500
(FR) SEXTANT AVIONIQUE	-	-	-	-	-	-	9,150	8,440	8,093	7,008
(IT) AGUSTA	10,064	9,793	9,703	9,711	9,888	9,826	9,300	8,343	7,000	6,500
(BR) EMBRAER	7,645	7,736	8,592	10,157	12,069	12,607	9,007	8,200	5,700	-
(FR) MATRA	4,810	4,846	4,933	5,017	4,747	5,086	8,000	8,100	-	-
(SW) SAAB AIRCRAFT	6,115	6,443	6,500	6,000	6,489	6,475	7,166	6,909	-	-
(JA) MITSUBISHI HEAVY IND.	6,130	6,270	6,200	6,480	6,470	6,500	6,650	6,480	-	-
(US) KAMAN	5,006	5,326	6,333	6,473	6,391	6,424	6,085	5,544	-	-
(US) CESSNA AIRCRAFT (TEXTRON)	8,900	8,900	7,800	4,100	3,600	4,100	4,900	5,200	5,500	-
(US) GULFSTREAM AEROSPACE	2,949	3,234	3,411	3,725	3,702	3,644	3,500	4,800	-	-
(JA) KAWASAKI HEAVY INDUSTRIES	3,700	3,700	3,900	3,900	4,000	5,300	4,900	4,800	4,700	-
(IT) FIAT AVIAZIONE	3,466	3,604	4,528	4,656	4,749	4,651	4,666	4,719	4,762	4,777
(UK) DOWTY	6,998	7,480	6,376	5,641	5,854	6,056	5,686	4,400	-	-
(SW) VOLVO FLYGMOTOR	3,326	3,463	3,587	3,729	3,760	3,804	3,847	4,250	4,185	-
(FR) S.E.P.	3,571	3,708	3,886	3,969	4,144	3,999	3,901	3,918	3,900	3,650
(JA) ISHIKAWAJIMA-HARIMA H.I.	3,500	3,500	3,200	3,500	3,550	3,600	3,600	3,650	-	-
(FR) TURBOMECA	3,868	3,828	3,669	3,655	3,558	3,544	3,552	3,612	3,560	-
(IT) AERMACCHI	2,454	2,435	2,474	2,550	2,698	2,715	3,297	3,000	2,850	2,450
(CA) SPAR AEROSPACE	2,172	2,221	2,089	2,122	2,107	2,114	2,550	2,903	-	-
(FR) DASSAULT ELECTRONIQUE	2,725	2,799	2,915	3,023	-	-	3,030	2,810	2,700	2,300
(PO) O.G.M.A.	2,468	2,431	2,486	2,495	2,666	2,761	2,706	2,576	2,550	-
(AU) HAWKER DE HAVILLAND	1,499	3,200	2,800	2,700	2,900	2,800	2,700	2,545	2,326	1,810
(UK) REDIFFUSION SIMULATION	1,293	1,410	1,706	1,946	2,132	2,400	2,783	2,509	2,155	1,560
(SW) ERICSSON RADAR (ERE)	-	-	-	-	4,230	3,682	2,562	2,380	2,344	2,360
(AU) ASTA	2,335	2,337	-	-	-	1,800	1,950	1,900	2,200	2,050
(BE) SABCA	1,669	1,458	1,598	1,621	1,614	1,677	1,776	1,882	1,711	1,561
(SW) FFV AEROTECH	3,022	2,856	2,920	3,047	3,085	3,168	2,930	1,826	1,717	1,704
(BE) TECHSPACE AERO	2,302	2,308	2,214	1,999	1,648	1,603	1,675	1,409	1,150	-
(KO) DAEWOO HEAVY INDUSTRIES	-	209	310	469	563	722	740	741	768	-

■ SOURCE: COMPANIES (DGIII SURVEY - ANNUAL REPORTS - PRESS)



# ANNEXES

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## EXCHANGE RATES

1 ECU =

	BFR	DM	PTA	FF	LIT	HFL	UK £	US \$	CA \$	YEN	SEK
1970	51.112	3.7414	71.36	5.6777	638.9	3.7005	0.42593	1.0222	-	368.00	-
1971	50.866	3.6457	72.57	5.7721	647.4	3.6575	0.42858	1.0478	-	363.83	-
1972	49.361	3.5768	72.00	5.6572	654.3	3.5999	0.44894	1.1218	-	339.72	-
1973	47.801	3.2764	71.81	5.4678	716.5	3.4285	0.50232	1.2317	-	333.17	-
1974	45.912	3.0867	68.84	5.6745	791.7	3.1714	0.51350	1.2021	1.1704	339.68	5.2404
1975	45.569	3.0494	70.27	5.3192	809.5	3.1349	0.56003	1.2408	1.2355	360.73	5.1413
1976	43.166	2.8155	74.74	5.3449	930.2	2.9552	0.62158	1.1180	1.1023	331.21	4.8666
1977	40.883	2.6483	86.82	5.6061	1,006.8	2.8001	0.65370	1.1411	1.2140	305.81	5.1193
1978	40.061	2.5561	97.42	5.7398	1,080.2	2.7541	0.66391	1.2741	1.4537	267.08	5.7494
1979	40.165	2.5110	91.97	5.8298	1,138.4	2.7488	0.64630	1.3705	1.6056	300.46	5.8717
1980	40.598	2.5242	99.70	5.8690	1,189.2	2.7603	0.59849	1.3923	1.6261	315.04	5.8810
1981	41.295	2.5139	102.68	6.0399	1,263.2	2.7751	0.55311	1.1164	1.3379	245.38	5.6347
1982	44.712	2.3760	107.56	6.4312	1,323.8	2.6139	0.56046	0.9797	1.2082	243.55	6.1434
1983	45.438	2.2705	127.50	6.7708	1,349.9	2.5372	0.58701	0.8902	1.0967	211.35	6.8212
1984	45.442	2.2381	126.57	6.8717	1,381.4	2.5234	0.59063	0.7890	1.0207	187.09	6.5110
1985	44.914	2.2263	129.13	6.7950	1,448.0	2.5110	0.58898	0.7631	1.0420	180.56	6.5213
1986	43.798	2.1282	137.46	6.7998	1,461.9	2.4009	0.67154	0.9842	1.3673	165.00	6.9957
1987	43.041	2.0715	142.16	6.9291	1,494.9	2.3342	0.70457	1.1544	1.5302	166.60	7.3100
1988	43.429	2.0744	137.60	7.0364	1,537.3	2.3348	0.66443	1.1825	1.4559	151.46	7.2419
1989	43.381	2.0702	130.41	7.0239	1,510.5	2.3353	0.67330	1.1017	1.3043	151.94	7.0994
1990	42.426	2.0521	129.41	6.9141	1,522.0	2.3121	0.71385	1.2734	1.4854	183.66	7.5205
1991	42.223	2.0508	128.47	6.9733	1,533.2	2.3110	0.70101	1.2392	1.4198	166.49	7.4793
1992 E	41.618	2.0216	132.53	6.8475	1,589.3	2.2763	0.73805	1.2968	1.5661	164.16	7.4604
1993 F	41.659	2.0237	132.62	6.8336	1,594.2	2.2793	0.73535	1.3036	1.5689	161.74	7.4563

■ SOURCE: COMMISSION SERVICES

## GROSS DOMESTIC PRODUCT AT MARKET PRICES

## BILLION ECU AT CURRENT PRICES

	BE	DE	ES	FR	IT	NL	UK	EC 12	USA	CDN	JAPAN
1970	24.7	180.5	37.2	139.8	105.1	33.5	121.2	678.1	986.7	-	199.3
1971	27.2	205.7	41.3	153.2	112.7	38.2	134.4	752.2	1,045.0	-	221.8
1972	31.3	230.1	48.8	174.6	122.0	43.9	143.6	838.8	1,072.5	-	272.0
1973	36.7	280.0	59.0	206.6	135.0	52.6	147.5	970.1	1,091.3	-	337.7
1974	44.8	318.8	75.4	229.6	154.3	64.5	163.0	1,112.3	1,210.5	129.0	395.2
1975	49.8	336.7	86.7	276.0	171.3	71.9	188.6	1,248.6	1,275.3	137.7	411.2
1976	59.7	398.0	98.1	318.2	188.0	87.3	201.1	1,431.5	1,577.3	178.1	502.9
1977	68.1	451.3	107.1	342.1	212.9	100.6	222.9	1,594.3	1,722.9	178.0	607.0
1978	74.6	502.2	116.8	380.3	234.7	110.5	253.2	1,768.4	1,740.2	164.8	765.3
1979	79.4	552.9	144.7	425.6	272.2	117.7	306.1	2,004.5	1,796.9	170.7	737.4
1980	85.0	583.2	154.3	478.5	326.0	124.9	386.4	2,250.0	1,929.3	189.2	762.4
1981	86.6	610.6	167.3	524.0	367.3	130.2	459.6	2,472.2	2,693.7	264.2	1,051.3
1982	87.0	668.4	184.0	563.8	411.8	144.5	496.2	2,698.7	3,183.2	307.7	1,111.1
1983	90.7	734.9	176.3	591.7	469.2	153.8	516.8	2,883.8	3,762.5	366.8	1,333.2
1984	97.5	782.3	200.6	634.8	525.4	162.5	548.7	3,115.3	4,712.0	432.4	1,606.4
1985	105.5	818.9	218.4	691.7	559.8	170.6	602.6	3,344.3	5,192.2	455.2	1,774.6
1986	113.8	904.7	235.2	745.5	615.6	182.8	568.4	3,551.0	4,243.1	366.7	2,027.9
1987	120.9	960.9	254.2	770.2	658.1	188.7	596.1	3,741.2	3,857.3	357.3	2,091.4
1988	127.6	1,010.4	291.9	813.4	710.2	195.9	702.1	4,057.6	4,066.9	412.1	2,452.3
1989	138.7	1,074.5	345.3	873.6	789.6	207.5	757.5	4,410.3	4,658.3	493.3	2,605.3
1990	151.5	1,178.2	386.9	937.8	858.6	223.3	769.3	4,746.8	4,234.5	447.9	2,320.1
1991	159.4	1,364.7	426.4	967.0	927.5	235.2	816.1	5,155.8	4,463.8	474.0	2,722.7
1992 E	169.0	1,486.8	446.8	1,033.5	953.3	250.0	805.3	5,425.7	4,448.3	447.9	2,847.6
1993 F	178.1	1,591.7	482.6	1,090.0	1,016.9	263.4	853.1	5,776.9	4,674.2	476.6	3,018.8

■ SOURCE: COMMISSION SERVICES

## GROSS DOMESTIC PRODUCT AT MARKET PRICES

BN ECU AT 1985 PRICES AND EXCHANGE RATES

	BE	DE	ES	FR	IT	NL	UK	EC 12	USA	CDN	JAPAN
1970	73.8	593.6	144.7	467.1	359.6	121.7	451.7	2,330.2	3,442.0	252.7	951.3
1971	76.5	611.2	151.6	489.2	365.3	127.1	461.1	2,403.2	3,551.5	267.0	991.0
1972	80.6	637.4	163.9	508.3	377.5	131.4	477.9	2,503.9	3,736.0	281.9	1,072.8
1973	85.3	668.9	176.4	536.4	402.5	137.3	511.2	2,650.5	3,914.2	304.1	1,153.8
1974	88.7	670.6	186.0	551.0	424.0	142.7	503.9	2,699.8	3,883.8	317.0	1,147.4
1975	87.5	660.6	187.2	548.3	414.5	142.6	499.4	2,673.7	3,847.2	325.2	1,180.3
1976	92.3	696.1	193.1	572.7	440.8	150.0	512.8	2,801.4	4,032.9	345.6	1,230.0
1977	92.8	715.9	198.9	592.9	455.6	153.4	525.4	2,883.0	4,209.7	357.6	1,288.3
1978	95.3	737.3	201.6	613.0	473.2	157.3	543.7	2,972.1	4,422.4	373.9	1,350.9
1979	97.4	768.0	201.6	632.8	501.1	160.9	559.8	3,079.1	4,513.6	388.5	1,425.1
1980	101.5	776.0	203.9	641.8	521.9	162.4	547.6	3,116.3	4,507.2	394.3	1,478.0
1981	100.6	777.3	203.4	649.6	525.3	161.3	540.2	3,117.5	4,609.1	409.2	1,529.6
1982	102.1	770.3	205.9	664.5	526.5	159.0	549.7	3,141.7	4,490.9	396.0	1,579.2
1983	102.4	782.3	209.8	669.3	531.5	161.2	569.2	3,190.0	4,669.4	408.5	1,620.5
1984	104.7	803.3	213.5	679.3	545.4	166.3	581.6	3,265.5	5,002.0	434.8	1,689.9
1985	105.5	818.9	218.4	691.7	559.8	170.6	602.6	3,344.3	5,192.2	455.2	1,774.6
1986	107.1	837.2	225.3	708.5	576.0	174.0	626.2	3,437.6	5,360.0	469.9	1,820.4
1987	109.3	849.1	238.2	723.9	594.4	175.3	656.0	3,529.4	5,546.8	489.5	1,895.6
1988	114.8	880.7	250.4	751.4	618.6	180.0	683.9	3,668.7	5,797.7	512.7	2,012.8
1989	119.0	910.8	262.4	778.5	637.0	188.3	699.5	3,792.2	5,962.1	525.1	2,106.0
1990	123.4	956.8	271.7	798.5	649.8	195.6	705.3	3,900.4	6,013.8	527.2	2,224.2
1991	125.9	1,063.6	278.3	808.1	658.7	200.1	689.9	4,028.0	5,946.4	519.6	2,322.4
1992 E	127.5	1,090.5	281.5	823.3	666.5	202.6	683.2	4,085.6	6,047.4	531.4	2,362.2
1993 F	129.6	1,121.6	288.7	841.9	678.1	206.5	687.6	4,165.0	6,132.8	553.3	2,418.7

■ SOURCE: COMMISSION SERVICES

## GDP DEFLATOR AT MARKET PRICES

1985 = 100 - IN NATIONAL CURRENCY

	BE	DE	ES	FR	IT	NL	UK	EC 12	USA	CDN	JAPAN
1970	38.1	51.1	14.2	25.0	12.9	40.6	19.4	29.1	38.4	33.6	42.7
1971	40.2	55.1	15.3	26.6	13.8	43.8	21.2	31.3	40.4	34.7	45.1
1972	42.7	58.0	16.6	28.6	14.6	47.9	22.9	33.5	42.2	36.7	47.7
1973	45.8	61.6	18.6	31.0	16.6	52.3	24.6	36.6	45.0	39.9	54.0
1974	51.6	65.9	21.6	34.8	19.9	57.1	28.2	41.2	49.1	45.7	64.8
1975	57.8	69.8	25.2	39.4	23.1	62.9	35.9	46.7	53.9	50.2	69.6
1976	62.2	72.3	29.4	43.7	27.4	68.5	41.4	51.1	57.3	54.5	75.0
1977	66.8	75.0	36.2	47.6	32.5	73.1	47.1	55.3	61.2	58.0	79.8
1978	69.8	78.2	43.7	52.4	37.0	77.0	52.5	59.5	65.7	61.5	83.8
1979	72.9	81.2	51.1	57.7	42.7	80.1	60.0	65.1	71.5	67.7	86.1
1980	75.7	85.2	58.4	64.4	51.3	84.6	71.7	72.2	78.1	74.9	90.0
1981	79.2	88.7	65.4	71.7	61.0	89.2	79.9	79.3	85.5	82.9	93.4
1982	84.8	92.6	74.4	80.3	71.5	94.6	85.9	85.9	91.0	90.1	94.9
1983	89.6	95.8	83.0	88.1	82.3	96.4	90.5	90.4	94.0	94.5	96.3
1984	94.2	97.9	92.1	94.5	91.9	98.2	94.6	95.4	97.4	97.4	98.5
1985	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1986	103.7	103.3	111.1	105.3	107.9	100.5	103.5	103.3	102.1	102.4	101.8
1987	106.0	105.3	117.5	108.5	114.3	100.1	108.7	106.0	105.2	107.2	101.8
1988	107.5	106.9	124.2	112.1	121.9	101.2	115.8	110.6	108.7	112.3	102.2
1989	112.6	109.7	132.9	116.0	129.3	102.5	123.8	116.3	112.8	117.6	104.1
1990	116.0	113.5	142.7	119.5	138.9	105.1	132.2	121.7	117.5	121.1	106.1
1991	119.0	118.2	152.4	122.8	149.1	108.2	140.8	128.0	121.9	124.3	108.1
1992 E	122.8	123.8	162.9	126.5	157.0	111.9	147.7	132.8	125.0	126.7	109.6
1993 F	127.5	129.0	171.7	130.2	165.1	115.8	154.9	138.7	130.2	129.7	111.8

■ SOURCE: COMMISSION SERVICES

## Index of Abbreviations and Signs Used

*EC 10* 10 Member States: BE, DK, DE, HE, FR, IR, IT, LX, NL, UK

*EC 12* EC 10 + Es + Po  
*EUR* Western Europe

*intra-EC* with EC Member States only

*extra-EC* with countries not Member of the EC

*EC* European Community

*BE* Belgium

*DK* Denmark

*DE* Federal Republic of Germany

*ES* Spain

*FR* France

*HE* Greece

*IR* Ireland

*IT* Italy

*LX* Luxembourg

*NL* Netherlands

*UK* United Kingdom

*AUS* Australia

*CDN* Canada

*JPN* Japan

*SWE* Sweden

*USA* USA

*ECU* European Currency Unit

*BFR* Belgian Franc

*CDK* Danish Crown

*DM* German Mark

*PTA* Peseta

*FF* French Franc

*DRA* Drachma

*IR £* Irish Punt

*LIT* Italian Lira

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*HFL* Dutch Guilder

*UK £* Pound Sterling

*AUS \$* Australian Dollar

*CA \$* Canadian Dollar

*YEN* Japanese Yen

*SEK* Swedish Crown

*US \$* US Dollar

*GDP* Gross Domestic Product

*R&D* Research and Development

*ICAO* International Organization for Civil Aviation

*AEA* Association of European Airlines

*O.E.C.D.* Organization for Economic Cooperation and Development

*Mio* Million

*- or NA* Data not available

*e or E* estimate

*f or F* forecast

