Type Specification

dauphin sa360c

Division Hélicoptères
2 à 20 av. M. Cachin
La Courneuve 93126
France

Réf. **360 C 78 3 A 1**

CONTENTS

PERFORMANCE

OPTIONAL EQUIPMENT

LIST OF REVISIONS

PAGE	REFERENCE
1	360 C 78 3 A 1
2	360 C 78 3 A 1
3	360 C 78 3 A 1
4	360 C 78 3 A 1
5	360 C 78 3 A 1
6	360 C 78 3 A 1
7	360 C 78 3 A 1
8	360 C 78 3 A 1
9	360 C 78 3 A 1
10	360 C 78 3 A 1
11	360 C 78 3 A 1
12	360 C 78 3 A 1
13	360 C 78 3 A 1
14	360 C 78 3 A 1
15	360 C 78 3 A 1
16	360 C 78 3 A 1
17	360 C 78 3 A 1
18	360 C 78 3 A 1
19	360 C 78 3 A 1
20	360 C 78 3 A 1
21	360 C 78 3 A 1
22	360 C 78 3 A 1
23	360 C 78 3 A 1
24	360 C 78 3 A 1
25	360 C 78 3 A 1
26	360 C 78 3 A 1
27	360 C 78 3 A 1
28	360 C 78 3 A 1
29	360 C 78 3 A 1
30	360 C 78 3 A 1
31	360 C 78 3 A 1
32	360 C 78 3 A 1
33	360 C 78 3 A 1
34	360 C 78 3 A 1
35	360 C 78 3 A 1
36	360 C 78 3 A 1
37	360 C 78 3 A 1
38	360 C 78 3 A 1
39	360 C 78 3 A 1
40	360 C 78 3 A 1
41	360 C 78 3 A 1
42	360 C 78 3 A 1
43	360 C 78 3 A 1
44	360 C 78 3 A 1
45	360 C 78 3 A 1
46	360 C 78 3 A 1

PAGE	REFERENCE
47	360 C 78 3 A 1
48	360 C 78 3 A 1
49	360 C 78 3 A 1
50	360 C 78 3 A 1
51	360 C 78 3 A 1
52	360 C 78 3 A 1
53	360 C 78 3 A 1
54	360 C 78 3 A 1
55	360 C 78 3 A 1
56	360 C 78 3 A 1
57	360 C 78 3 A 1
58	360 C 78 3 A 1
59	360 C 78 3 A 1
60	360 C 78 3 A 1
61	360 C 78 3 A 1
62	360 C 78 3 A 1
63	360 C 78 3 A 1
64	360 C 78 3 A 1
65	360 C 78 3 A 1
66	360 C 78 3 A 1
67	360 C 78 3 A 1
68	360 C 78 3 A 1
69	360 C 78 3 A 1
70	left blanck
71	360 C 78 3 A 1
72	left blanck
73	360 C 78 3 A 1
74	left blanck
75	360 C 78 3 A 1
76	360 C 78 3 A 1
77	360 C 78 3 A 1
78	360 C 78 3 A 1
79	360 C 78 3 A 1
80	360 C 78 3 A 1
81	360 C 78 3 A 1
82	360 C 78 3 A 1
83	360 C 78 3 A 1
84	left blanck
85	360 C 78 3 A 1
86	360 C 78 3 A 1
87	360 C 78 3 A 1
88	360 C 78 3 A 1
89	360 C 78 3 A 1
90	360 C 78 3 A 1
91	360 C 78 3 A 1
92	360 C 78 3 A 1

Issue 2

FOREWORD

The SA 360 C single-engined helicopter as defined in this Type Specification meets the requirements of the French regulations and the American FAR 29, cat B for day and night VFR flight.

The SA 360 C is manufactured in series by the Aerospatiale Helicopter Division.

The design of the SA 360 C was undertaken along the following criteria :

- vast cabin (10/14 seats) of easy access, affording many lay-out possibilities
- high cruise-speed (270 km/hr = 146 kts)
- substantial useful load (1,360 kg = 2,998 lb)
- spearhead technology inspired from Gazelle's, benefitting from the experience gained on this helicopter
- ease of flying
- manœuvrability
- mechanical components whose liberal sizing makes for high T.B.O'S
- infinite life main and tail blades
- simplified maintenance which ought quickly to permit « on condition » servicing, ie. no systematic removal of the elements

All these guide-lines resulted in an aircraft with the following advantages :

- low maintenance costs with high T.B.O's
- outstanding performance
- operational flexibility
- safety

The SA 360 C holds three world speed records in its class :

- 312 km/hr over 3 km base
- 303 km/hr over 15 km base
- 299 km/hr, on closed circuit, over 100 km

The various lay-out possibilities, the useful volume of 5 m^3 (177 cu.ft.) in the cabin and 1 m^3 (35 cu.ft.) in the hold, all combined with flat floor, 4 wide doors and a door extension provide the Dauphin with true versability.

With the suitable optional equipment, the Dauphin can fulfil the following missions :

- personnel-carrying (up to 14 passengers including the pilot)
- oil-rig provisioning
- V.I.P. carrying
- internal load carrying
- cargo-slung load carrying
- rescue
- casualty evacuation (up to 4 stretcher patients + 1 medical attendent)
- surveillance
- aerial photography
- fire fighting

GENERAL

The SA 360 C Dauphin is a 3,000 kg (6,615 lb) gross weight, fast, 10/14 seat helicopter designed for personnel-carrying and aerial work.

A helicopter of the new generation which stands out by its :

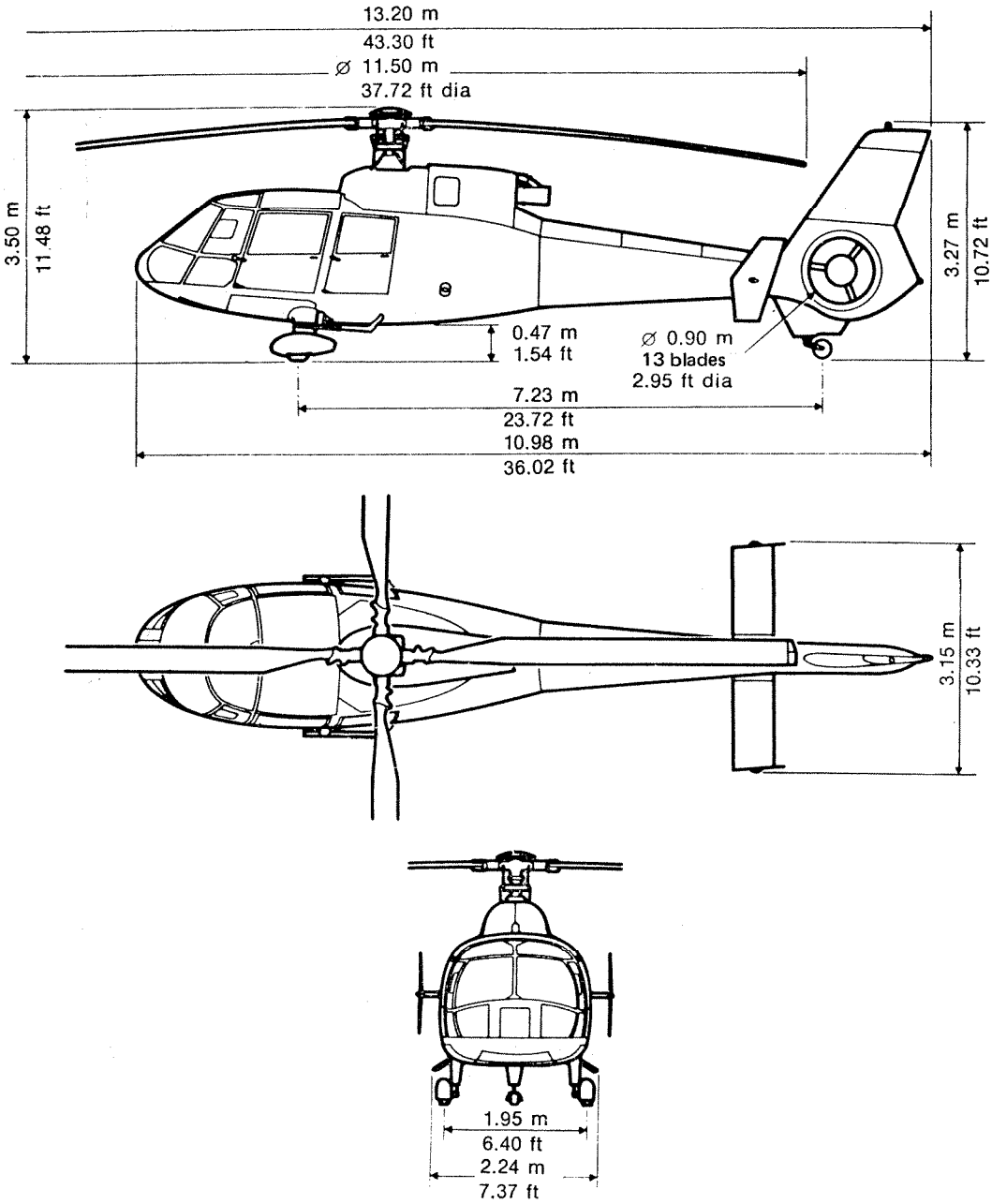
- moulded blades formed of a glass-fibre roving spar, a carbon fabric skin and plastic honeycomb filler. The carbon fiber, a good conductor of electricity, protects the spar against any risk of lightning strike,
- semi-rigid rotor head doing away with the conventional drag-damper, a source of maintenance-work,
- ducted tail rotor which, in relation to the traditional type, increases safety during low altitude manœuvring and landing, and as regards ground personnel. It also makes it possible to reach high cruising speed,
- TURBOMECA Astazou XVIII turbine-engine of 770 kW (1,047 ch, 1032 HP) maximum power at ISA, SL,
- low vibration-level,
- equipment required to ensure, in operation, efficient monitoring of the operation of the mechanical units and engine,
- lay-out of the mechanical units and engine making for easier inspection and removal.

DIMENSIONS

Aircraft overall dimensions		
■ Length, rotor rotating	13.20 m	43.30 ft
■ Main rotor diameter	11.50 m	37.72 ft
■ Height at top of fin	3.27 m	10.72 ft
■ Length with blades folded*	13.20 m	43.30 ft
■ Width with blades folded*	3.15 m	10.33 ft
■ Height at rotor head	3.50 m	11.48 ft
■ Ground clearance under cabin	0.47 m	1,54 ft
■ Width of fuselage	1.95 m	6.40 ft
■ Length of fuselage	10.98 m	36.02 ft
Cabin dimensions		
■ Maximum length	2.30 m	7.54 ft
■ Maximum width	1.92 m	6.29 ft
■ Maximum height	1.40 m	4.59 ft
■ Area available	4.20 m^2	45.20 sq.ft
■ Volume available	5.00 m^3	176.57 cu.ft
Cabin door dimensions		
■ Front doors		
Width	1.14 m	3.74 ft
Kξωκ]	1.16 m	3.80 ft
Area	1.32 m^2	14.20 sq.ft
■ Rear doors		
Width	0.87 m	2.85 ft
Height	1.16 m	3.80 ft
Area	1.00 m^2	10.76 sq.ft
Luggage hold dimensions		
■ Length	1.57 m	5.15 ft
■ Width at front	1.50 m	4.92 ft
■ Width at rear	0.70 m	2.29 ft
■ Height at front	1.00 m	3.28 ft
■ Height at rear	0.70 m	2.29 ft
■ Area available	1.15 m^2	12.37 sq.ft
■ Volume available	1.00 m^3	35.31 cu.ft
Luggage hold door dimensions		
■ Height	0.57 m	1.87 ft
■ Length	0.77 m	2.53 ft

* 2 blades forwards, 2 blades rearwards.

MAIN DIMENSIONS



WEIGHT BREAKDOWN OF STANDARD AIRCRAFT

	kg		lb	
Airframe	**786**		**1,733**	
■ Main rotor blades		159		351
■ Fuselage		417		919
■ Tail unit and rotor		31		68
■ Flight controls		57		126
■ Landing gear		84		185
■ Cowlings		38		84
Power unit and transmission	**589**		**1,299**	
■ Power unit installation		212		467
■ Mechanical units		345		761
■ Fuel systems		31		69
■ Undrainable fuel		1		2
Equipment and furnishing	**262**		**578**	
■ Hydraulic systems		25		55
■ Electrical systems		75		165
■ Accommodation		140		309
■ Flight handling and navigation aids		22		49
■ Communications		0		0
Empty, weight	**1,637**		**3,610**	
Engine oil	**8**		**18**	
Useful load	**1,355**		**2,987**	
■ Pilot		80		176
■ Payload and fuel		1,275		2,811
• Usable fuel in normal tanks : 510 kg (1,125 lb)				
Maximum operating gross weight	**3,000**		**6,615**	

N B : The empty weight of the standard aircraft as defined in this Type Specification includes the lubricants, the non-consumable fuel and the Flight Manual, but not the engine oil.

The empty is correct to ± 2 %.