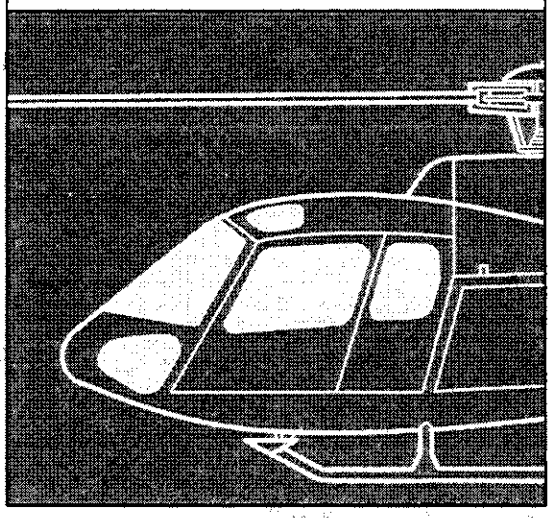
ECUREUIL
AS 350 B2

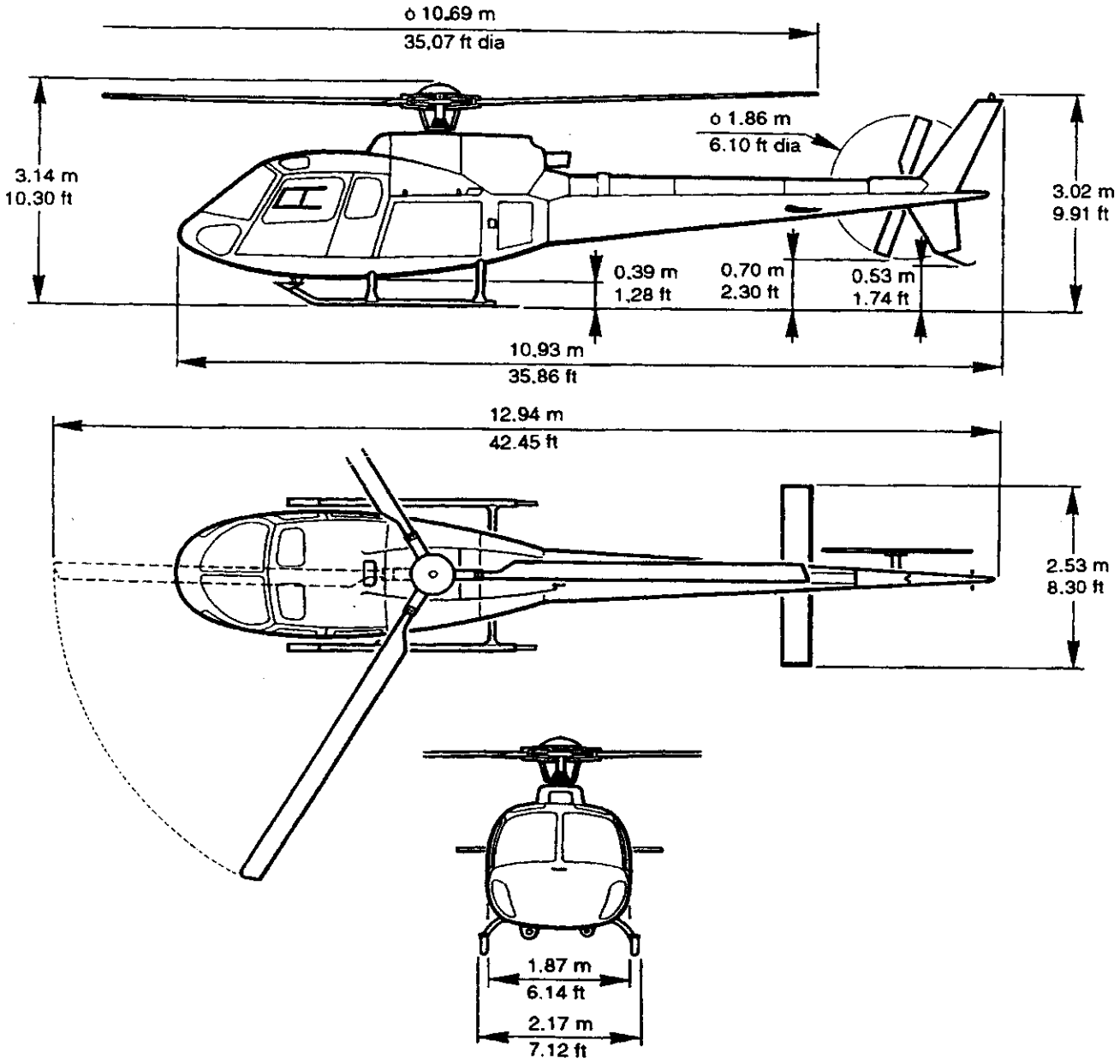
Technical Data



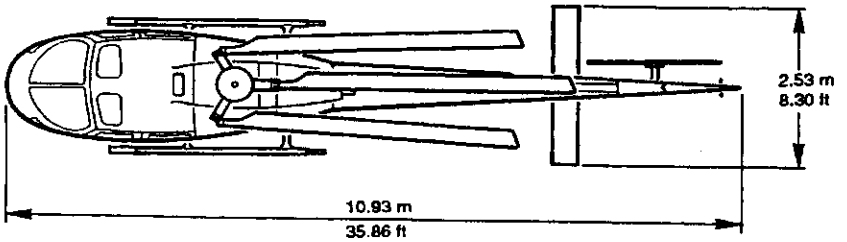
eurocopter

AS 350 B2 19.101.01 E

MAIN DIMENSIONS

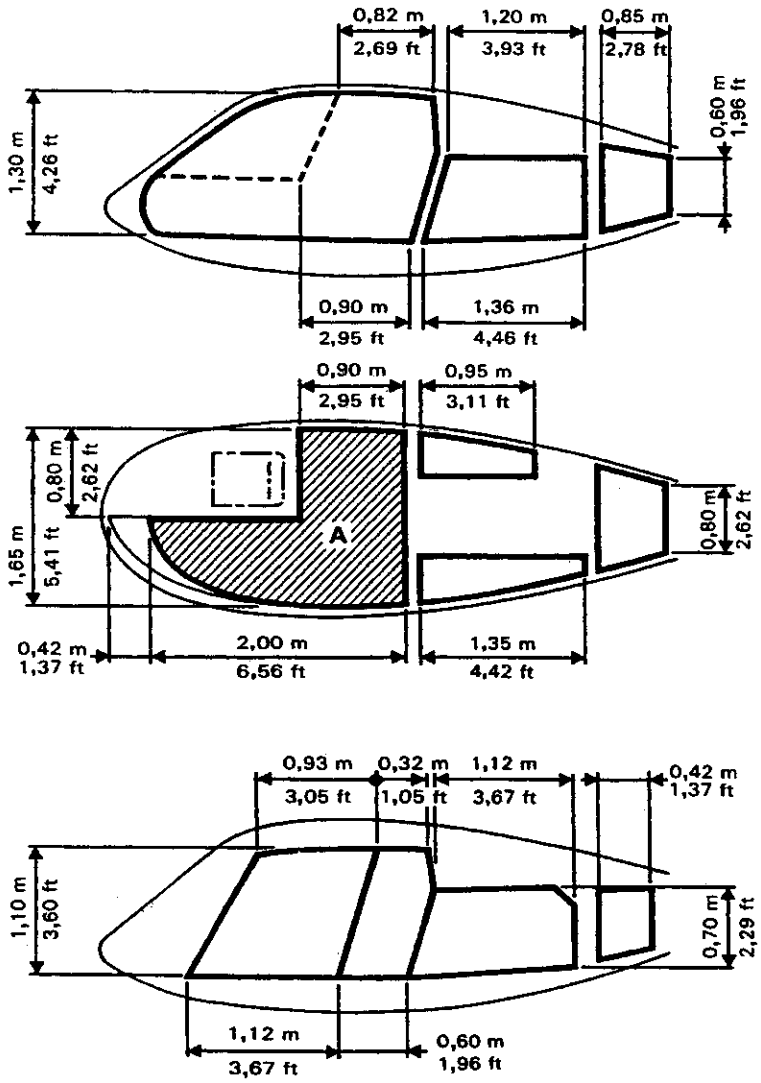


DIMENSIONS WITH BLADES FOLDED



DIMENSIONS OF COMPARTMENTS AND ACCESSES

■ CABIN MAIN DIMENSIONS



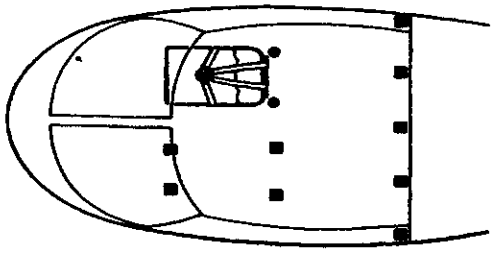
CABIN	
Surface A	2.60 m^2 27.98 sq.ft
Volume	3.000 m^3 105.943 cu.ft

LH HOLD	
Surface	0.43 m^2 4.62 sq.ft
Volume	0.235 m^3 8.290 cu.ft

RH HOLD	
Surface	0.35 m^2 3.76 sq.ft
Volume	0.200 m^3 7.060 cu.ft

REAR HOLD	
Surface	0.55 m^2 5.92 sq.ft
Volume	0.530 m^3 18.71 cu.ft

■ CABIN FLOOR



● Pilot's safety belt attachment and freight-tie-down rings

■ Passenger safety belt or freight tie-down rings

GENERAL CHARACTERISTICS

LAY-OUT

- Passenger-transport : 1 pilot + 5 passengers in standard version
  1 pilot + 4 or 5 passengers in "comfort" version
  1 pilot + 6 passengers in "high density" version
- Casualty-evacuation : 1 pilot + 1 or 2 stretcher patients + 2 doctors
- Cargo carrying : 1 pilot + 2.16 m³ (76.28 cu.ft) load in cabin

WEIGHTS

	kg	lb
Empty weight, standard aircraft (including engine oil and non usable fuel)	1,172	2,584
Useful load	1,078	2,376
Maximum take-off weight	2,250	4,960
Maximum cargo swing load	1,160	2,557
Maximum operational weight in external load configuration	2,500	5,512

Note : Empty weight is accurate to ± 2 %.

POWER PLANT : 1 TURBOMECA ARRIEL 1D1 turbine engine

ENGINE RATINGS

Power in ISA, at sea level :

	kW	ch	shp
Take-off power	546	742	732
Maximum continuous power	466	634	625

USABLE FUEL CAPACITIES

	Litres	US gal.	kg	lb
Standard tank	539	143	426	939
Ferrying tank (optional)	475	125	375	827

AS 350 B2 ECUREUIL STANDARD AIRCRAFT DEFINITION

GENERAL

Fuselage comprising the cabin and 3 luggage holds, with floor, tie-down nets and access doors
Tail boom with stabilizer, anti-torque rotor and fin
Skid landing gear capable of taking handling wheels.
Lifting points
Upper mooring fixtures
External paint : choice of standard paint schemes
Internal paint : grey.

CABIN

Cabin floor in light-alloy sheet-metal
2 pilot and copilot high-back seats, adjustable in reach, removable, complete with cushions, safety belts and dual-strap shoulder harnesses
2 2-place rear bench-seats, foldable separately, complete with cushions, safety belts and single-strap shoulder harnesses
2 pilot and copilot jettisonable doors each fitted with a sliding window
2 rear door-extensions for passengers and cargo
2 tinted upper panes
1 double-wall ceiling housing the ventilation and air conditioning ducts
Fixed parts for pilot and copilot windshield wipers
1 pilot map case
Demisting system for pilot and copilot front panes
1 fire-extinguisher
1 Flight Manual.

INSTRUMENTS

1 airspeed indicator
1 altimeter
1 rate-of-climb indicator
1 torquemeter
1 rotor and free turbine tachometer dual indicator
1 free turbine temperature indicator (T4)
1 engine oil temperature indicator
1 engine oil pressure indicator
1 gas generator tachometer with Ng limit variation indicator
1 fuel gauge
1 fuel pressure indicator
1 ammeter
1 voltmeter
1 clock
1 warning panel
1 OAT indicator on canopy
1 magnetic compass
1 heated pitot head.

POWER PLANT

1 TURBOMECA ARRIEL 1D1 546 kW (742 ch - 732 shp) turbine engine complete with starting, fuel supply and governing systems, and fitted with a magnetic plug and a chip detector
1 fuel system including 1 tank of 540 litres' (143 US gal.) total capacity
1 engine lubrication and oil cooling system
1 fire detection system
1 air-intake screen
1 torque-measurement pick-up.

TRANSMISSION SYSTEM

- 1 main gearbox, anti-vibration mounted, with oil sight gauge, chip detector , oil temperature and pressure switches, port for endoscope and self-sealing valve for oil sampling and draining
- 1 main gearbox oil cooling system
- 1 engine to main gearbox coupling shaft
- 1 rotor brake
- 1 main rotor r.p.m. sensor and high and low r.p.m warning device
- 1 tail drive carried by five anti-friction bearings
- 1 tail gearbox with oil sight gauge, chip detector and port for endoscopic inspection.

ROTORS AND FLYING CONTROLS

- 1 main rotor with 3 composite-material blades around a Starflex head fitted with spherical thrust bearings
- 1 anti-torque rotor with 2 composite-material blades
- 3 main rotor hydraulic servo units
- 1 tail rotor hydraulic servo unit and a load compensator.

ELECTRICAL INSTALLATION

- 1 4.5 kW, 28 V DC starter-generator
- 1 15 amp. hr cadmium-nickel battery
- 1 ground power receptacle
- 3 position lights
- 1 flashing anti-collision light
- 2 fixed landing light
- 2 cabin dome lights
- 1 instrument-panel lighting system
- 1 28 V DC cabin power outlet.

AIRBORNE KIT (*)

- 1 pitot head cover
- 2 static port stoppers
- 1 engine air-intake blanking cover
- 1 tail-pipe plug
- 2 ground handling bogies c/w hydraulic jacking system
- 1 lifting ring
- 2 upper mooring rings
- 3 main-blade socks
- 1 tail rotor locking device
- 1 document holder
- 1 airborne kit stowage bag.

(*) (weight not included in standard aircraft empty weight)

OPTIONAL EQUIPMENT

GENERAL ITEMS OF EQUIPMENT

		WEIGHT SUPPLEMENT			
		Complete installation		Including fixed parts	
		kg	lb	kg	lb
05-010	Dual controls	3.0	6.6	-	-
05-015	Cabin floor window (right side)	1.5	3.3	-	-
05-020	Improved side-visibility in standard front doors	2.2	4.9	-	-
05-025	Improved upward visibility in cabin roof	1.2	2.6	-	-
05-030	Tinted window for standard and optional configuration	-	-	-	-
05-035	Bulged window on front or rear doors	-	-	-	-
05-040	Hourmeter	0.3	0.7	-	-
05-050	Pilot's windshield wiper	2.2	4.9	-	-
05-060	Copilot's windshield wiper	2.2	4.9	-	-
05-070	Cabin heating installation	1.8	4.0	-	-
05-080	Kit for start-up in cold weather	19.2	42.3	-	-
05-100	Air conditioning system	61.2	134.9	-	-
05-112	Fuel anti-icing installation	4.3	9.5	-	-
05-122	Engine flushing device without removal of cowlings	0.8	1.8	-	-
05-141	Extras on the std a/c for CAA airworthiness certification	To be studied		-	-
05-151	Skid landing gear, raised type with two footsteps	10.6	23.4	-	-
05-167	Long footsteps on high or low skid landing gear ① ②	4.5	9.9	-	-
05-168	Short footsteps on high or low skid landing gear ①	2.7	6.0	-	-
05-171	Skid wearing plates	1.4	3.1	-	-
05-185	Adaptation for night-time missions with NVG	To be defined		-	-
05-190	Wire strike protection system ③	9.9	21.8	-	-
05-200	Fuel tank self-sealing protection	10.0	22.0	-	-
05-210	High visibility main rotor blades	0.1	0.2	-	-
05-254	Flight parameters recorder and maintenance management assistant	To be studied		-	-
05-300	Tail rotor arch	3.8	8.4	-	-
05-320	Closed circuit refuelling	0.6	1.3	-	-
05-350	JAA commercial transport kit	To be studied		-	-
05-400	Pilot / cabin separation net	Being studied		-	-
05-900	Customized external paint	4.0	8.8	-	-

INSTRUMENTS AND FLYING AIDS

06-025	3-axis autopilot without Failure Passivation Unit	Being studied		-	-
06-031	3-axis AP with Failure Passivation Unit	33.6	74.1	-	-

Note : value of the weight breakdown is given for information and shall not be considered as contractual.

① Footsteps incompatible with emergency floatation gear + low landing gear.
② Requires the fitment of the ground handling wheels modification kit.
③ This optional item has to be fitted on the production line.

INSTRUMENTS AND FLYING AIDS (continued)		WEIGHT SUPPLEMENT			
		Complete installation		Including fixed parts	
		kg	lb	kg	lb
06-050	Remaining fuel flowmeter	1.3	2.9	-	-
06-070	250 VA, 400 Hz AC, 1st generation	4.8	10.6	-	-
06-072	250 VA, 400 Hz AC, 2nd generation	4.2	9.3	-	-
06-075	200 Amp direct current generation	1.5	3.3	-	-
06-081	Gyro-instruments, type 2	8.2	18.1	-	-
06-083	Gyro-instruments, type 1	2.6	5.7	-	-
06-120	Turn and bank indicator	0.1	0.3	-	-
06-125	Stand-by gyro-horizon AIM 505-2B (*)	2.8	6.2		
06-170	GPS Moving Map : Euronav III	To be studied		-	-
SPECIFIC MISSION EQUIPMENT					
07-011	Emergency floatation gear ①	73.3	161.6	5.7	12.6
07-020	Life rafts installation	32.2	71.0	-	-
07-041	SURFAIR Skis	27.0	59.5	-	-
07-042	Lightweight skis : Bear-paws	7.0	15.4	-	-
07-052	Sand-prevention filter (sand and snow prevention) ②	7.3	16.1	0.4	0.9
07-060	Re-inforced sand-erosion protection strip on main rotor blades	0.2	0.4	-	-
07-0600	Re-inforced sand-erosion protection strip on tail rotor blades	0.1	0.2	-	-
07-070	Ferrying tank	27.4	60.4	1.1	2.4
07-085	Electrical release for hunged equipment ③	1.2	2.6	-	-
07-090	Cargo sling with dynamometer (750 kg - 1,654 lb)	5.3	11.7	2.2	4.9
07-101	Cargo swing with dynamometer (1,160 kg - 2,557lb)	19.0	41.9	6.0	13.2
07-110	External mirror ④	3.1	6.8	0.2	0.4
07-111	Electric and de-iced external mirror ④	3.0	6.6	0.7	1.5
07-115	Fire fighting installation : Bambi Bucket ⑤	On request		0.3	0.7
07-120	Lower casualty carrying installation	16.1	35.5	0.3	0.7
07-130	Upper casualty carrying installation	17.6	38.8	0.2	0.4
07-140	Upper + lower casualty carrying installations	33.7	74.3	0.5	1.1
07-143	EMS kit (AAT) ⑥	Refer to AAT			-

Note : value of the weight breakdown is given for information and shall not be considered as contractual.

① Compatible with standard and raised LG.
② The sand-prevention filter lifts the flight limitations in falling snow conditions.
③ Capabilities for Bambi Bucket and extended cargo sling.
④ Imply the fitting of : Skid landing gear, raised type.
⑤ The installation of a Bambi Bucket implies the fitting of the Cargo swing. The customer will contact directly SEI for the Removable parts.
⑥ Air Ambulance Technology (AAT) is responsible for the conformity, performances and certification of the ambulance installation on the helicopter.

(*) This instrument could be substituted with SEXTANT H321EHM or AIM 1100-28LS during 1999.

SPECIFIC MISSION EQUIPMENT (continued)

		WEIGHT SUPPLEMENT			
		Complete installation		Including fixed parts	
		kg	lb	kg	lb
07-150	Left rear sliding door ①	3.6	7.9	-	-
07-160	Right rear sliding door ①	3.6	7.9	-	-
07-165	Sliding window, on rear sliding doors	2.0	4.4	-	-
07-170	AIR EQUIPEMENT electrical hoist (136 kg – 300 lb) ②	40.1	88.4	2.6	5.7
07-180	Drip tub (sea rescue)	-10.0	-22.0	-	-
07-190	Locator search-light	11.1	24.5	1.0	2.2
07-195	Spectrolab SX 16 search-light	24.7	54.5	2.7	6.0
07-196	IR filter for SX 16 search light	Being studied		-	-
07-200	Landing light (Swivelling in elevation and azimuth)	3.4	7.5	-	-
07-231	4 Hailers	16.7	36.8	-	-
07-250	Fuel flow twist grip on the pilot and copilot sticks ③	5.2	11.5	-	-
07-260	Power take-off on MGB	4.0	8.8	-	-
07-270	Crop-spraying installation, SIMPLEX system ④	127.5	281.1	15.5	34.2
07-280	Fire-fighting installation, CONAIR system ⑤	206.0	454.1	2.0	4.4
07-281	Fire-fighting installation, ISOLAIR system (730 l) ⑤	138.2	304.7	4.0	8.8
07-360	Rappeling installation	4.0 (estimated weight)	8.8	-	-
07-400	Protective lower cowlings	48.0	105.8	-	-
07-600	Protection for floatation gear in case of hoisting operation	Being studied		-	-
07-700	Nose mounted Flir system - Fixed parts Removable parts- FSI, WESCAM, ...	On request		-	-
07-740	Flir system fitted on side mounted support beam - Fixed parts Removable parts- FSI, WESCAM, ...	On request		-	-
07-780	Cabin console for FLIR installation	On request		-	-
07-790	Transmission system for FLIR installation	On request		-	-

Note : value of the weight breakdown is given for information and shall not be considered as contractual.

① Improved side-visibility in the corresponding front door included in the optional equipment.
② Imply the fitting of left rear sliding door.
③ Imply the fitting of : dual controls.
④ Imply the fitting of : Skid landing gear, raised type (optional 05-151).
⑤ Imply the fitting of : Skid landing gear, raised type (optional 05-151) and the external mirror.

INTERIOR CABIN LAY-OUTS

		WEIGHT SUPPLEMENT			
		Complete installation		Including fixed parts	
		kg	lb	kg	lb
09-010	Arm-rests	5.3	11.7	-	-
09-015	7 places lay-out with pilot on left side	Being studied		-	-
09-020	7 places lay-out with pilot on right side	4.4	9.7	-	-
09-030	"Comfort" lay-out	33.7	74.3	-	-
09-040	"Comfort" lay-out with sound proofing	48.7	107.4	-	-
09-050	"EXECUTIVE" lay-out	64.0	141.1	-	-
09-081	Crashworthy front seats	8.0	17.6	-	-

GROUND HANDLING AND PICKETING

10-010	Folding of main rotor blades				
	Aircraft mounted equipment	1.0	2.2	-	-
	Ground tooling	32.2	71.0	-	-
10-020	Mooring kit (ground or ships) ①	2.1	4.6	1.3	2.9
10-030	Marine gripping sytem	1.2	2.6	-	-
10-050	Handling on soft terrain with hydraulic jack	43.4	95.7	-	-
10-060	Tail wheel under the skid ②	9.4	20.7	-	-

Note : value of the weight breakdown is given for information and shall not be considered as contractual.

① Recommended for transport by land, air and sea (when not in a container).
② Valid for standard low landing gear only.

RADIO COMMUNICATION AND RADIO NAVIGATION EQUIPMENT

1/ MINIMAL INSTALLATIONS FOR DAY VFR OPERATIONS
In sight of the surface, for general aviation (private use and aerial work) or for JAA commercial air transportation

	Solution B
GYRO- INSTRUMENTS TYPE 1	AIM 505-2B (*) GYRO-HORIZON + AIM 205-1 BL GYRO-DIRECTIONAL
VHF/AM No.1 (118-136.9 MHz)	KING KY 196 A
TRANSPONDER + ALTITUDE ENCODER	KING KT 76 A (mode A+C) ① + SHADIN 8800 T
EMERGENCY LOCATOR TRANSMITTER	JOLLIET JE 2 NG ② or NARCO ELT 910 ③
I.C.S.(1 control box)	TEAM TB 27 or NAT AMS 43 ④ ⑤
Weight supplement (kg)	**15.5**

Note : value of the weight breakdown is given for information and shall not be considered as contractual.

(*) This instrument could be substituted with SEXTANT H321EHM or AIM 1100-28LS during 1999.

① If mode S is necessary, use KING KT 73 instead of the KING KT 76 A.
② Acceptance by Local Airworthiness Authorities to be checked.
③ Compliant with TSO C 91A.
④ Includes the passenger interphone function.
⑤ Implies the fitting of DAVID CLARK H 10-26 headsets.

2/ MINIMAL INSTALLATIONS FOR DAY AND NIGHT VFR OPERATIONS
In sight of the surface, for general aviation (private use and aerial work)

	Solution C
GYRO- INSTRUMENTS TYPE 1	AIM 505-2B (*) GYRO-HORIZON + AIM 205-1 BL GYRO-DIRECTIONAL
STAND-BY GYRO HORIZON	AIM 505-2B (*)
VHF/AM No.1(118-136.9 MHz)	KING KY 196 A
VHF/AM/VOR/LOC/GLIDE (118-136.9 MHz)	KING KX 165 + KING KI 204 ①
GPS	KING KLN 89 B
TRANSPONDER + ALTITUDE ENCODER	KING KT 76 A (mode A+C) ② + SHADIN 8800 T
EMERGENCY LOCATOR TRANSMITTER	JOLLIET JE 2 NG ③ or NARCO ELT 910 ④
I.C.S.(1 control box)	TEAM TB 27 or NAT AMS 43 ⑤ ⑥
Weight supplement (kg)	**27.8**

Note : value of the weight breakdown is given for information and shall not be considered as contractual.

(*) This instrument could be substituted with SEXTANT H321EHM or AIM 1100-28LS during 1999.

① Replaced by KING KI 525 if type 2 gyro-instruments are installed.
② If mode S is necessary, use KING KT 73 instead of the KING KT 76 A.
③ Acceptance by Local Airworthiness Authorities to be checked.
④ Compliant with TSO C 91A.
⑤ Includes the passenger interphone function.
⑥ Implies the fitting of DAVID CLARK H 10-26 headsets.

3/ EQUIPMENT THAT CAN BE ADDED DEPENDING ON THE OPERATIONAL NEEDS OR THE REQUIREMENTS OF THE AUTHORITIES IN CERTAIN COUNTRIES
(if not included in the above minimum items of equipment)

	For solutions B and C	kg
GYRO- INSTRUMENTS TYPE 2 (instead of the Type 1)	SFENA H 140 GYRO-HORIZON + KING KCS 55 A GYRO-COMPASS with KI 525 A pictoral navigation indicator	8.2
STAND-BY GYRO HORIZON	AIM 505-2B (*)	3.8
R.M.I. with 2 crosses needles	KING KI 229 ① ②	1.6
VHF/AM No.2 (118-136.9 MHz)	KING KY 196 A	3.6
VHF/FM MARITIME	NAT NPX 138 ③ (138-173.9 MHz) or NAT NTX 138 (138-173.9 MHz)	2.5
UHF/FM (450-469.9 MHz)	NAT NT 450	5.7
HF/SSB (2-29.9 MHz)	KING KHF 950	14.4
VHF/AM/VOR/GLIDE/LOC No.2 (118-136.9 MHz)	KING KX 165 + KING KI 204 ④	5.4
VOR/LOC/GLIDE	KING KN 53 + KING KI 204 ④	2.8
A.D.F.	KING KR 87 + KING KI 227 ⑤	5.5
MARKER	KING KR 21	1.0
D.M.E.	KING KN 63	3.3
TRANSPONDER + ALTITUDE ENCODER	KING KT 76 A (mode A+C) ⑥ ⑦ + SHADIN 8800 T	2.6 + 1.0
RADIO ALTIMETER	THOMSON CNI AHV 16 or KING KRA 405 B	4.6 or TBD
GPS ⑧	TRIMBLE TNL 2101 Approach + or KING KLN 89 B	3.1 or 3.1

Note : value of the weight breakdown is given for information and shall not be considered as contractual.

(*) This instrument could be substituted with SEXTANT H321EHM or AIM 1100-28LS during 1999.

① Implies the fitting of Type 2 gyro-instruments.
② Implies the fitting of 10 VA AC generation system if KING KCS 55 A Gyro compass system or 250 VA AC generation are not installed.
③ If at least another NAT equipment is requested, propose the NAT NTX 138 with control head TH 250.
④ Replaced by KING KI 525 if type gyro-instruments are installed.
⑤ Replaced by KING KI 229 if installed.
⑥ If mode S is necessary, use KING KT 73 instead of the KING KT 76 A.
⑦ Mandatory for VFR use in France.
⑧ Coupling of GPS with the HSI if Type 2 gyro-instruments are installed.

3/ EQUIPMENT THAT CAN BE ADDED DEPENDING ON THE OPERATIONAL NEEDS OR THE REQUIREMENTS OF THE AUTHORITIES IN CERTAIN COUNTRIES (continued) (if not included in the above minimum items of equipment)

	For solutions B and C	kg
THREE -AXIS AUTOPILOT without failure passivation unit	SFIM 85 T 31 ①	TBD
THREE-AXIS AUTOPILOT with failure passivation unit	SFIM 85 T 31 ①	33.6
ELECTRICAL GENERATION	250 VA AC generation system (mandatory for Autopilot)	4.8
ELECTRICAL GENERATION	10 VA AC generation system	1.2
EMERGENCY LOCATOR TRANSMITTER	JOLLIET JE 2 NG ② or NARCO ELT 910 ③	1.5 1.5
EMERGENCY LOCATOR TRANSMITTER (121.5 / 243 / 406 MHz)	SOCATA ELT 96-406 ④	1.6
PASSENGER INTERPHONE	TEAM BA 1816	1.6
HEADSETS	SILEC 4449-1 or ELNO 247 SP 442 or DAVID CLARK H 10-26	0.5 0.6 0.6
Headset electrical extension	-	0.2
HELMETS	GUENEAU-SILEC 459	1.2

Note : value of the weight breakdown is given for information and shall not be considered as contractual.

① Implies the mandatory fitting of the 250 VA AC generation sytem.
② Acceptance by local Airworthiness Authorities to be checked.
③ Compliant with TSO C 91A.
④ Compliant with ED 62.

PERFORMANCE

Unless otherwise specified, the following performance figures and charts are values obtained with new production engine and are given for a clean standard aircraft, in zero wind at sea level, standard atmosphere conditions.

TAKE-OFF WEIGHT	kg lb	1,600 3,530	1,800 3,970	2,000 4,410	2,200 4,850	2,250 4,960
■ VNE	km/hr mph kts	287 178 155	287 178 155	287 178 155	287 178 155	287 178 155
■ Fast cruise speed	km/hr mph kts	261 162 141	258 160 139	253 157 137	248 154 134	246 153 133
■ Recommended cruise speed	km/hr mph kts	242 150 131	240 149 130	235 146 127	228 142 123	226 140 122
■ Fuel consumption at recommended cruise speed	kg/hr lb/hr	147 324	147 324	147 324	147 324	147 324
■ Rate-of-climb	m/sec ft/mn	11.1 2,185	10.6 2,085	9.9 1,950	8.9 1,750	8.5 1,675
■ Max. range (without fuel reserve at recommended cruise speed)	km st.m n.m	648 403 350	693 431 374	688 428 371	671 417 362	666 414 360
■ Endurance without reserve at 100 km/hr	time	4h24	5h18	4h54	4h36	4h30
■ Hover ceiling I.G.E. at max.take-off power						
• ISA	m ft	6,100 20,000	5,050 16,550	4,100 13,450	3,200 10,500	3,000 9,850
• ISA + 20°C	m ft	5,450 17,900	4,400 14,450	3,350 11,000	2,350 7,650	2,150 7,050
■ Hover ceiling O.G.E. at max.take-off power						
• ISA	m ft	5,400 17,700	4,400 14,450	3,450 11,300	2,550 8,350	2,300 7,550
• ISA + 20°C	m ft	4,750 15,600	3,700 12,150	2,650 8,700	1,600 5,250	1,300 4,250
■ Service ceiling (1 m/sec., 200 ft/min.)	m ft	6,100 20,000	6,100 20,000	5,700 18,700	4,800 15,750	4,600 15,100

OPERATING LIMITATIONS

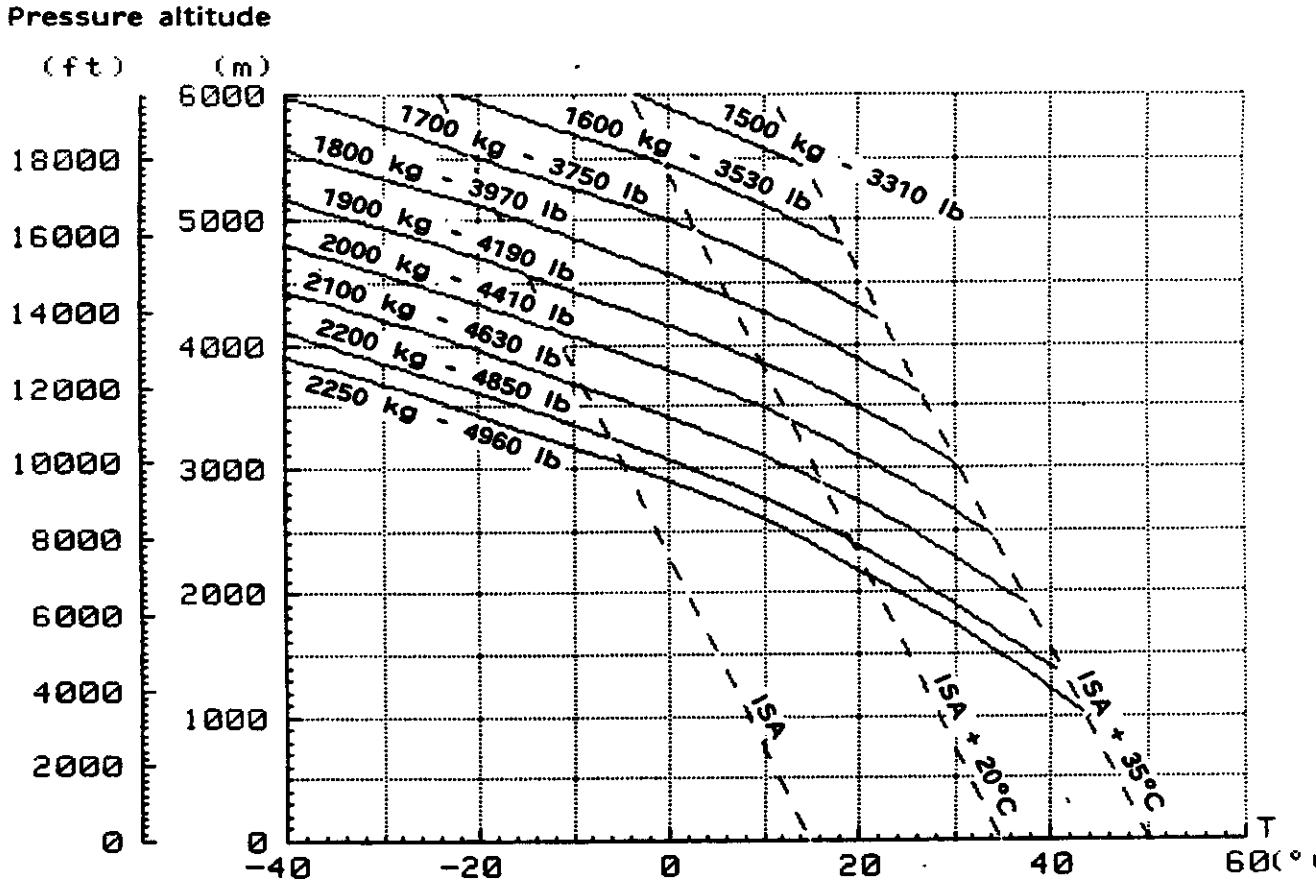
The aircraft can be operated normally within the following altitude and temperature limitations :

- Maximum pressure altitude : 6,100 m - 20,000 ft
- Maximum temperature : ISA + 35°C, limited to + 50°C
- Minimum temperature : - 40°C

HOVER CEILING I.G.E.

(Height 5 ft)

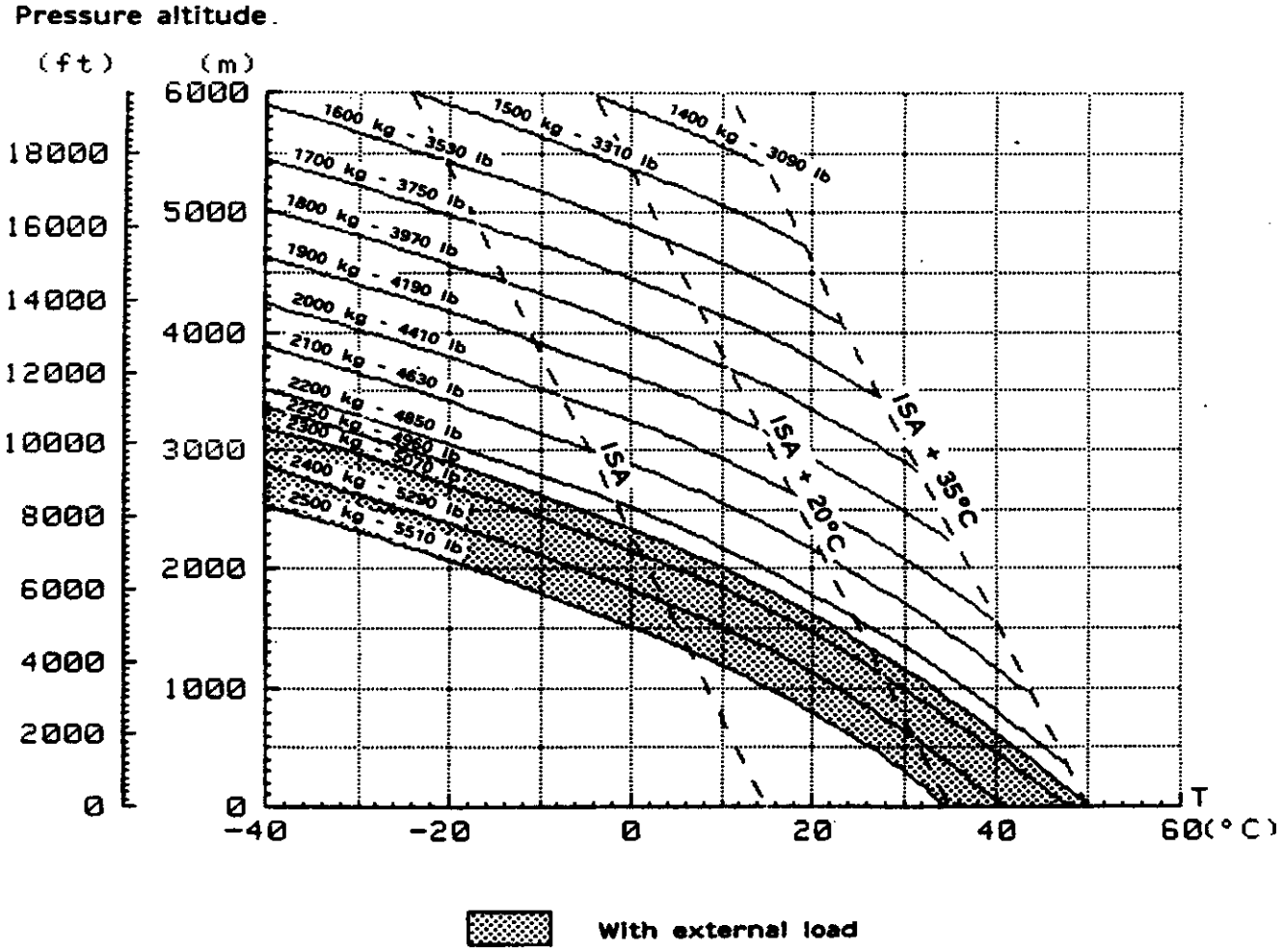
Maximum take-off power



Note : Guaranteed performances as long as the engine meets the power check criteria, as defined in the Flight Manual.

HOVER CEILING O.G.E.

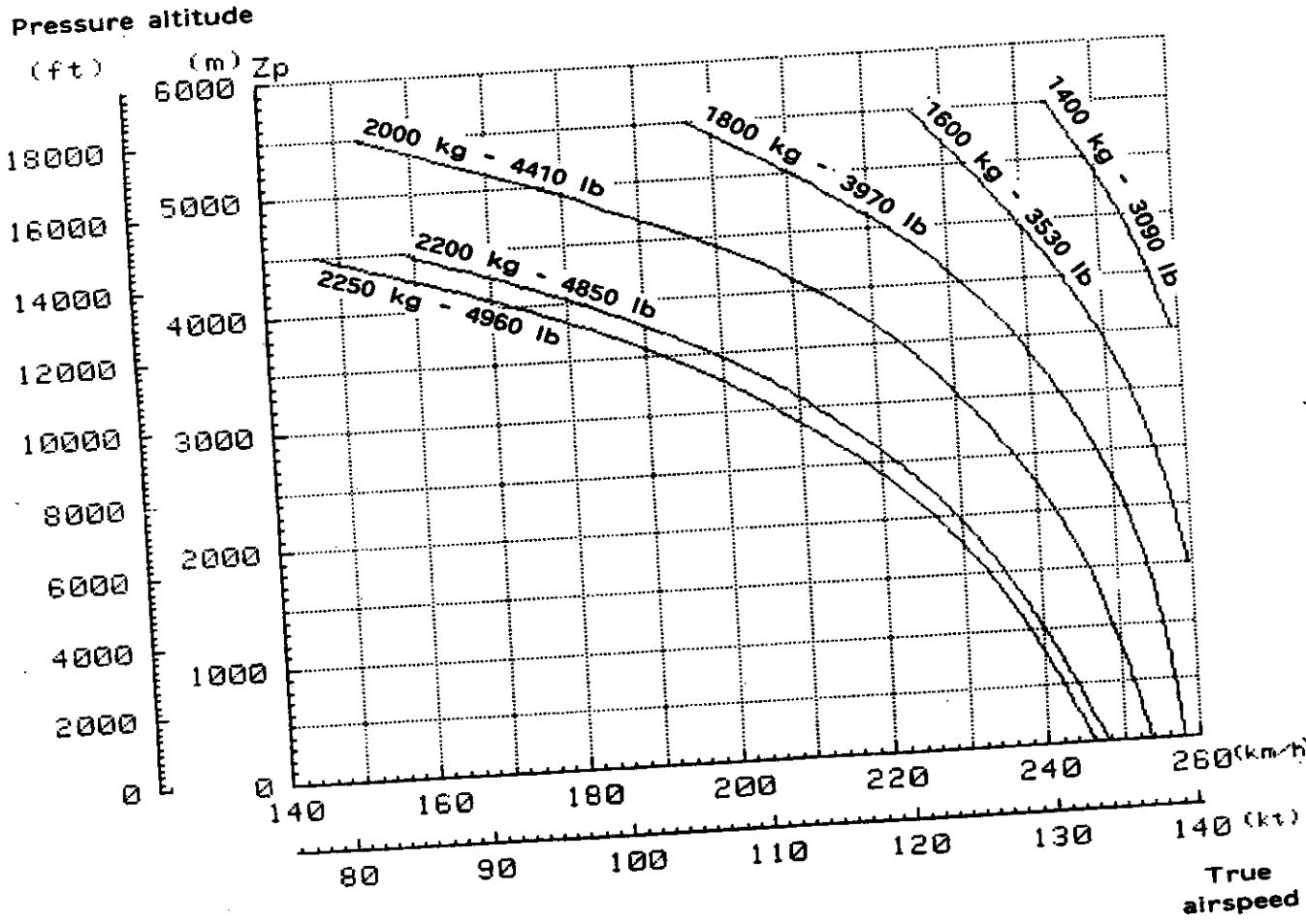
Maximum take-off power



Note : Guaranteed performances as long as the engine meets the power check criteria, as defined in the Flight Manual.

FAST CRUISE SPEED

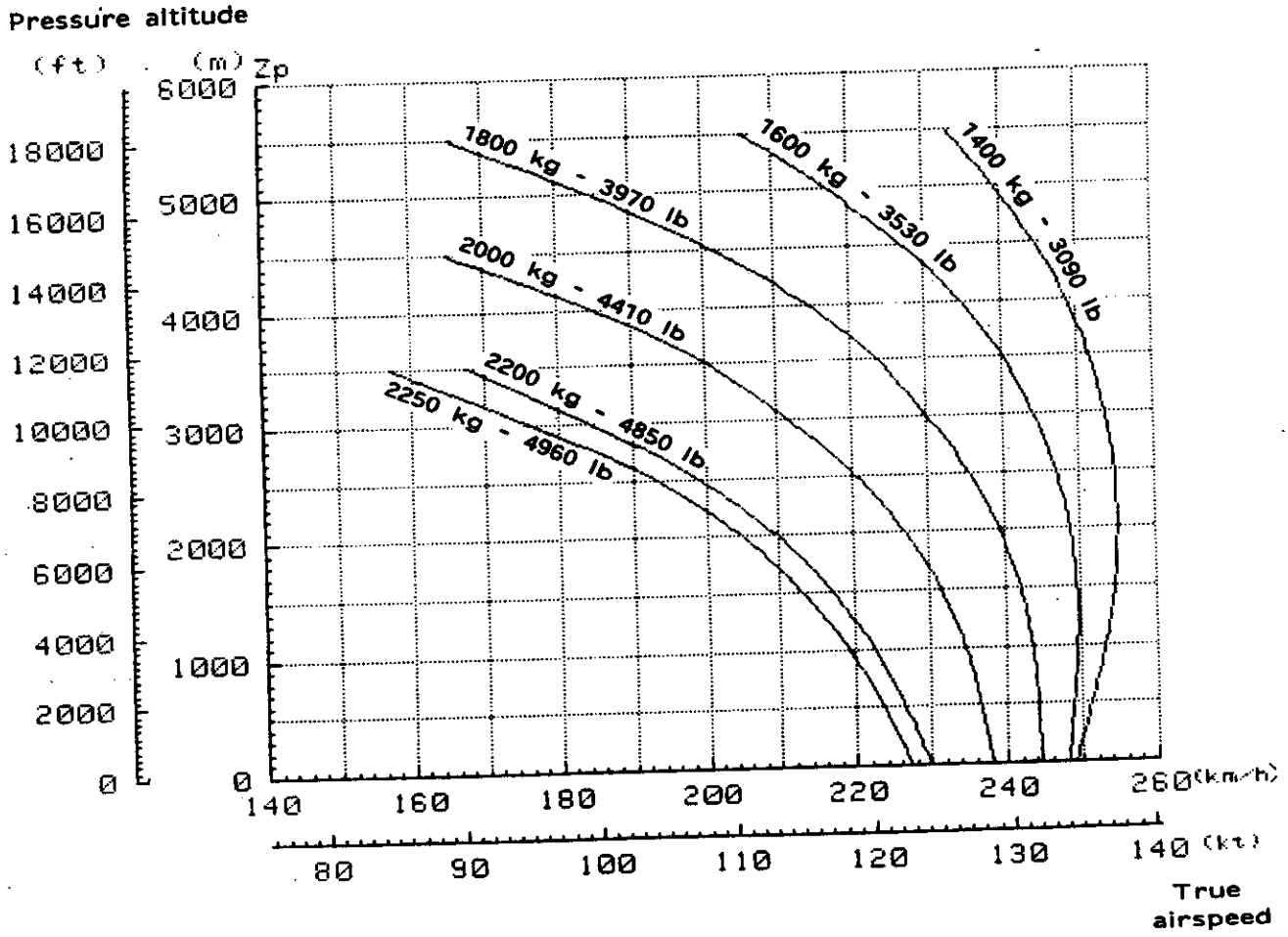
ISA



Note : Typical performance with clean standard aircraft.

FAST CRUISE SPEED

ISA + 20°C

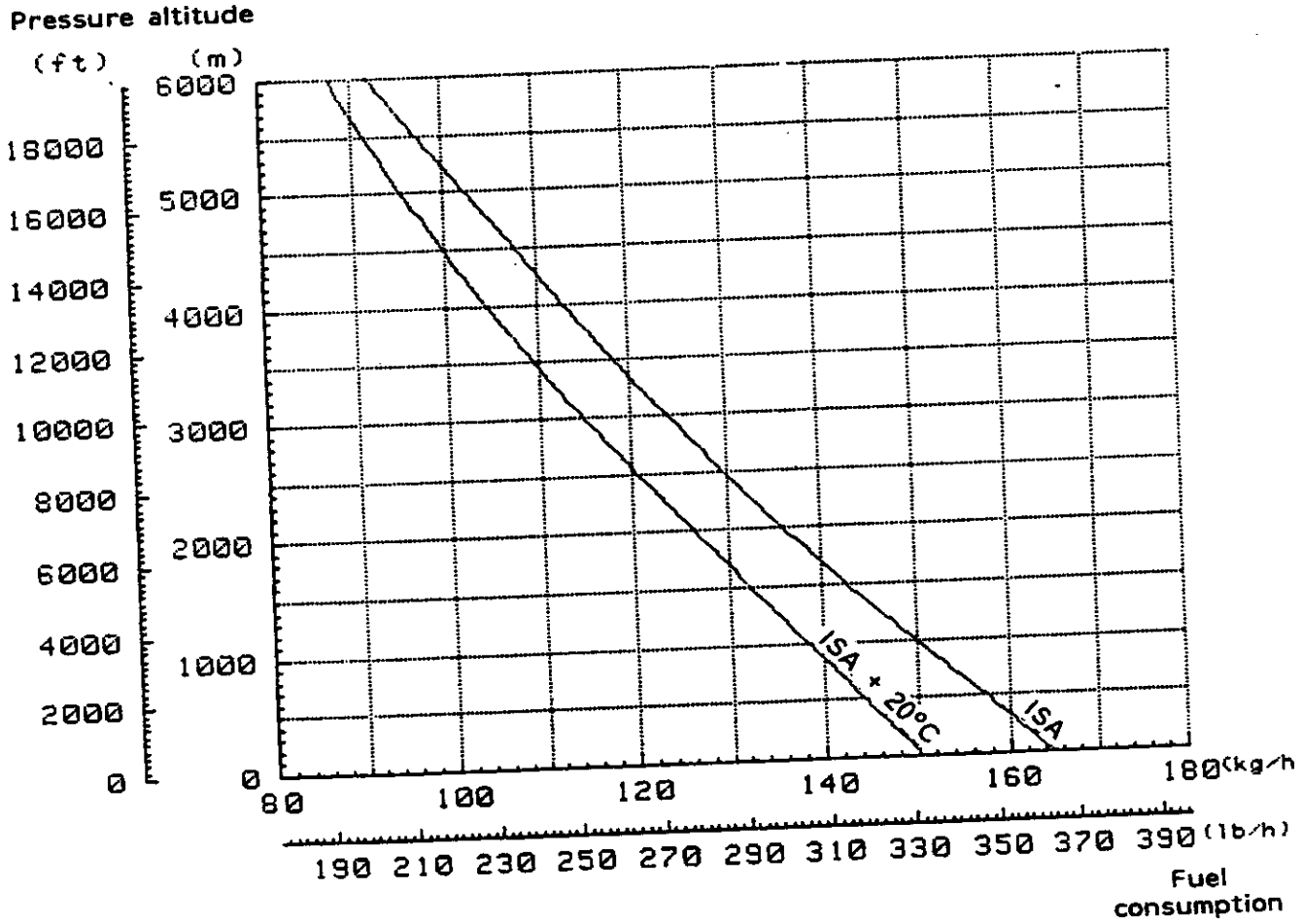


Note : Typical performance with clean standard aircraft.

HOURLY FUEL CONSUMPTION

AT FAST CRUISE SPEED

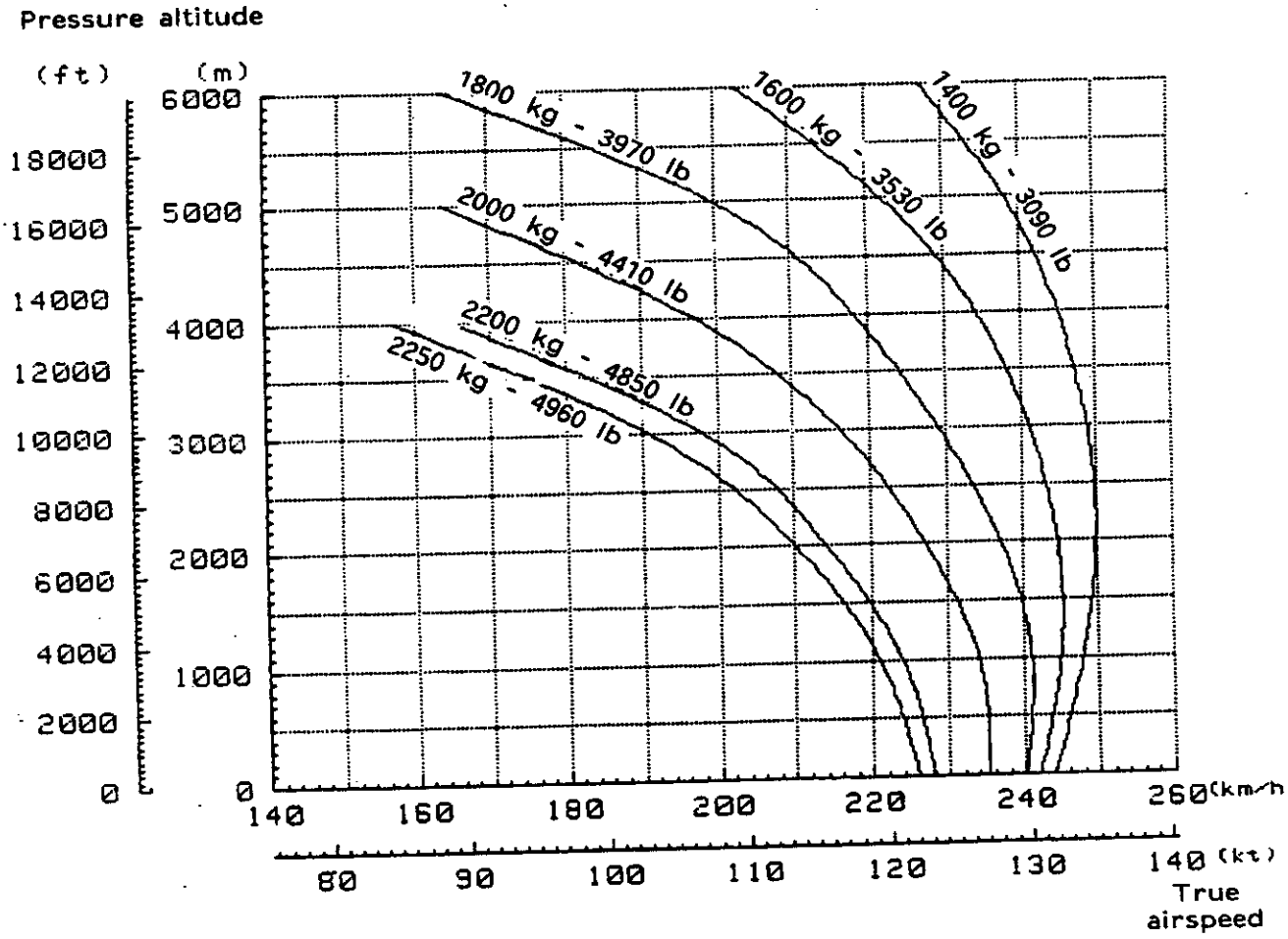
ISA, ISA + 20° C



Note : Typical consumption with clean standard aircraft and new engine.

RECOMMENDED CRUISE SPEED

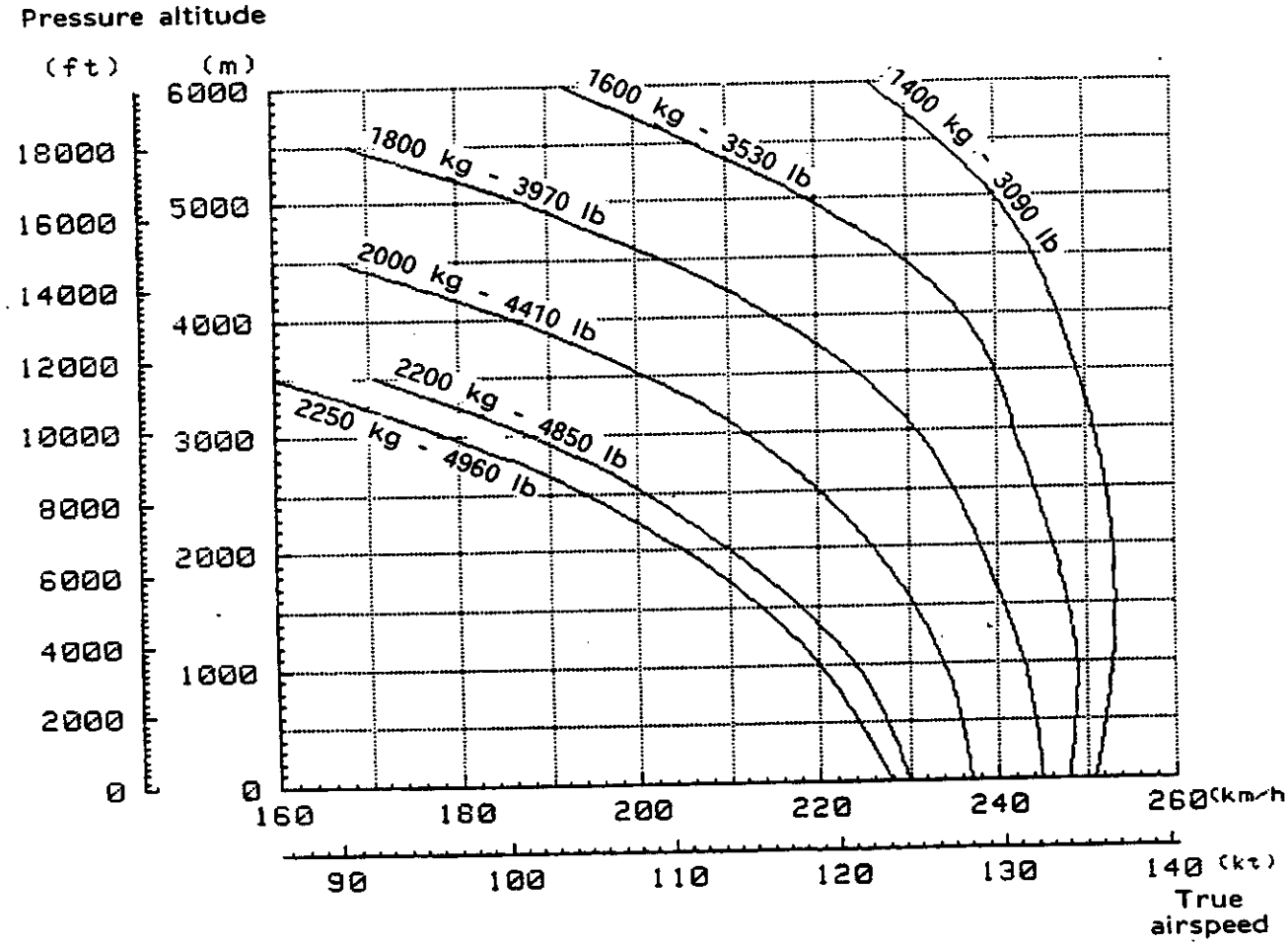
ISA



Note : Typical performance with clean standard aircraft.

RECOMMENDED CRUISE SPEED

ISA + 20° C

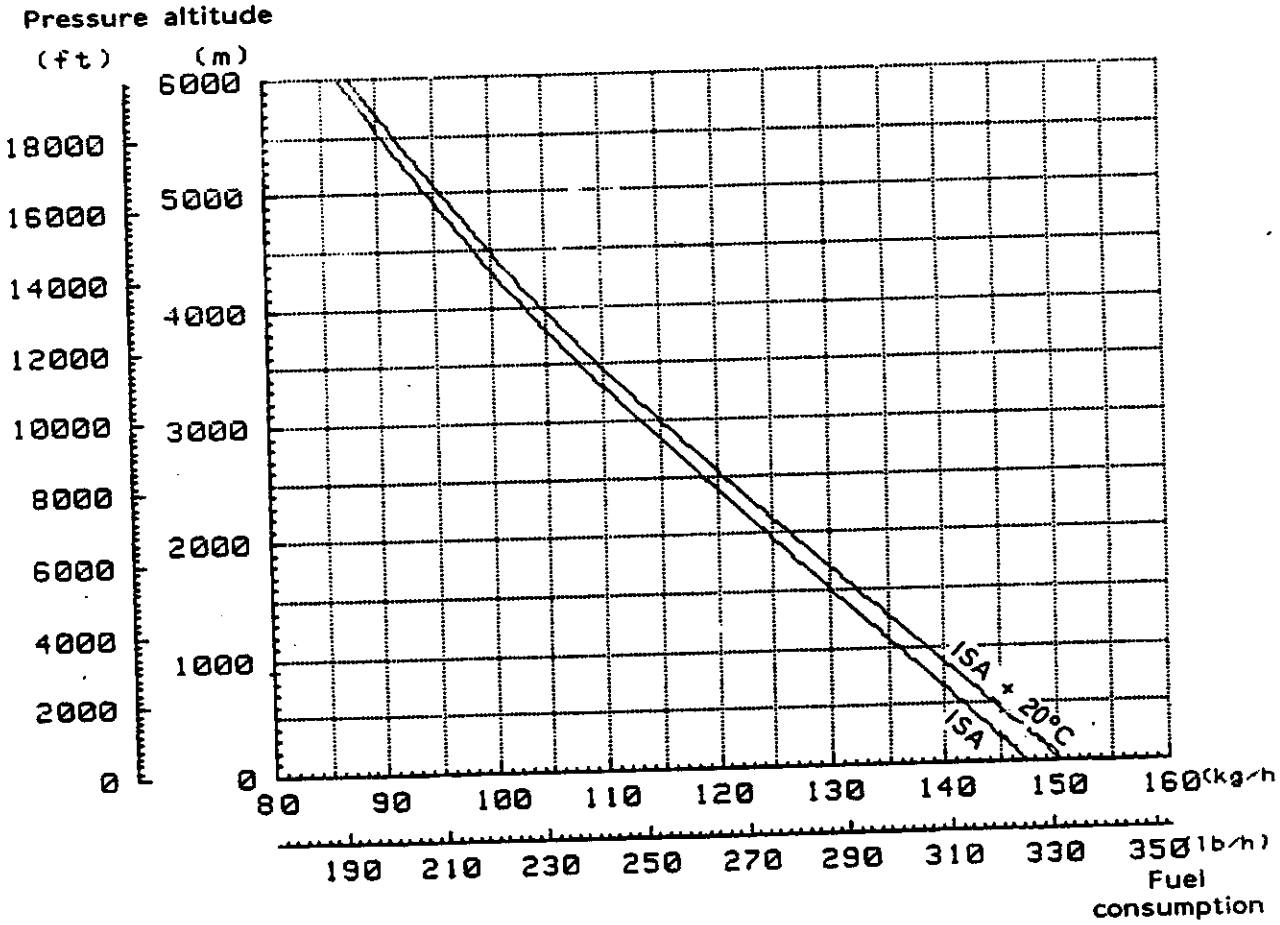


Note : Typical performance with clean standard aircraft.

HOURLY FUEL CONSUMPTION

AT RECOMMENDED CRUISE SPEED

ISA, ISA + 20° C

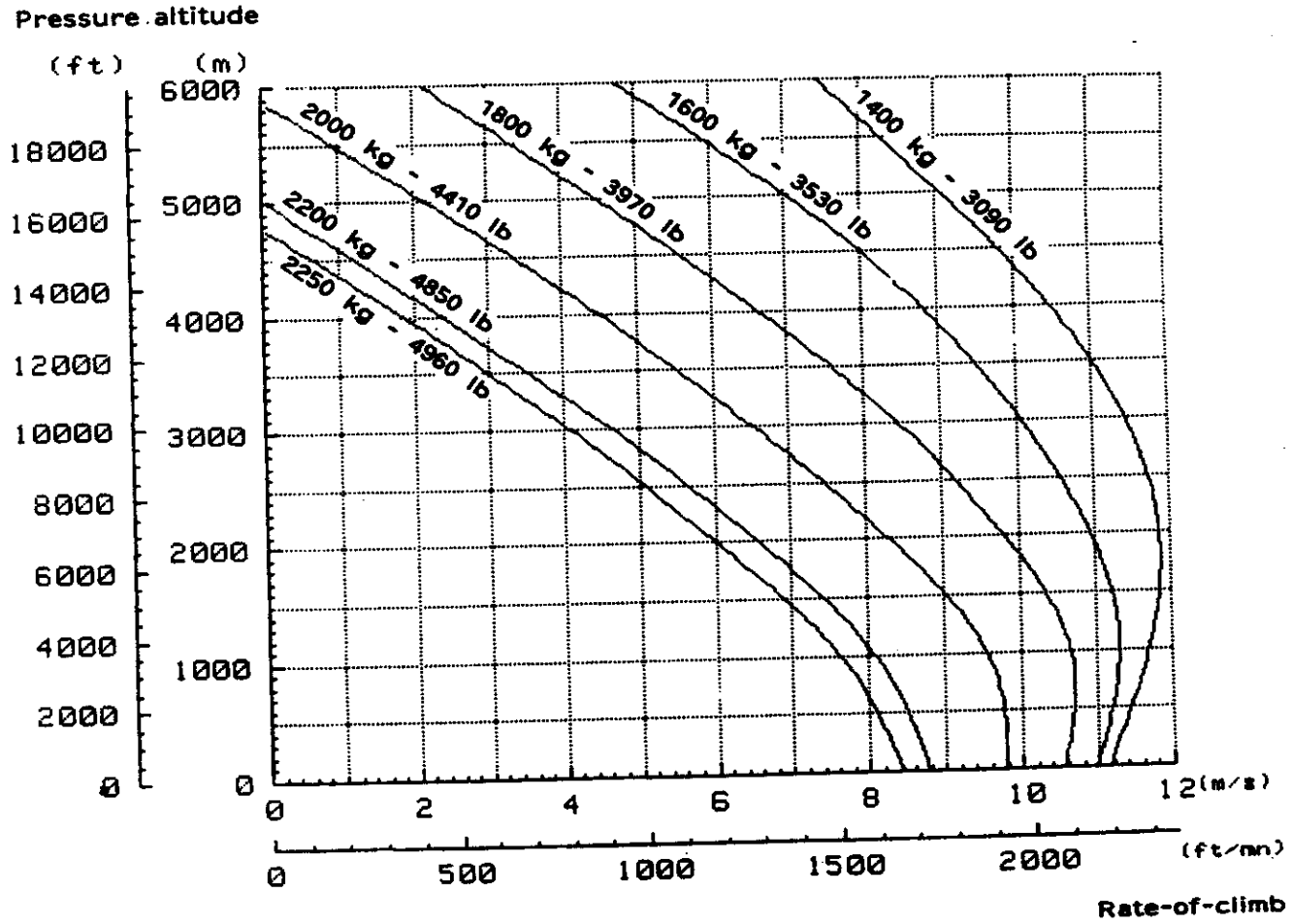


Note : Typical consumption with clean standard aircraft and new engine.

RATE OF CLIMB

IN OBLIQUE FLIGHT

ISA

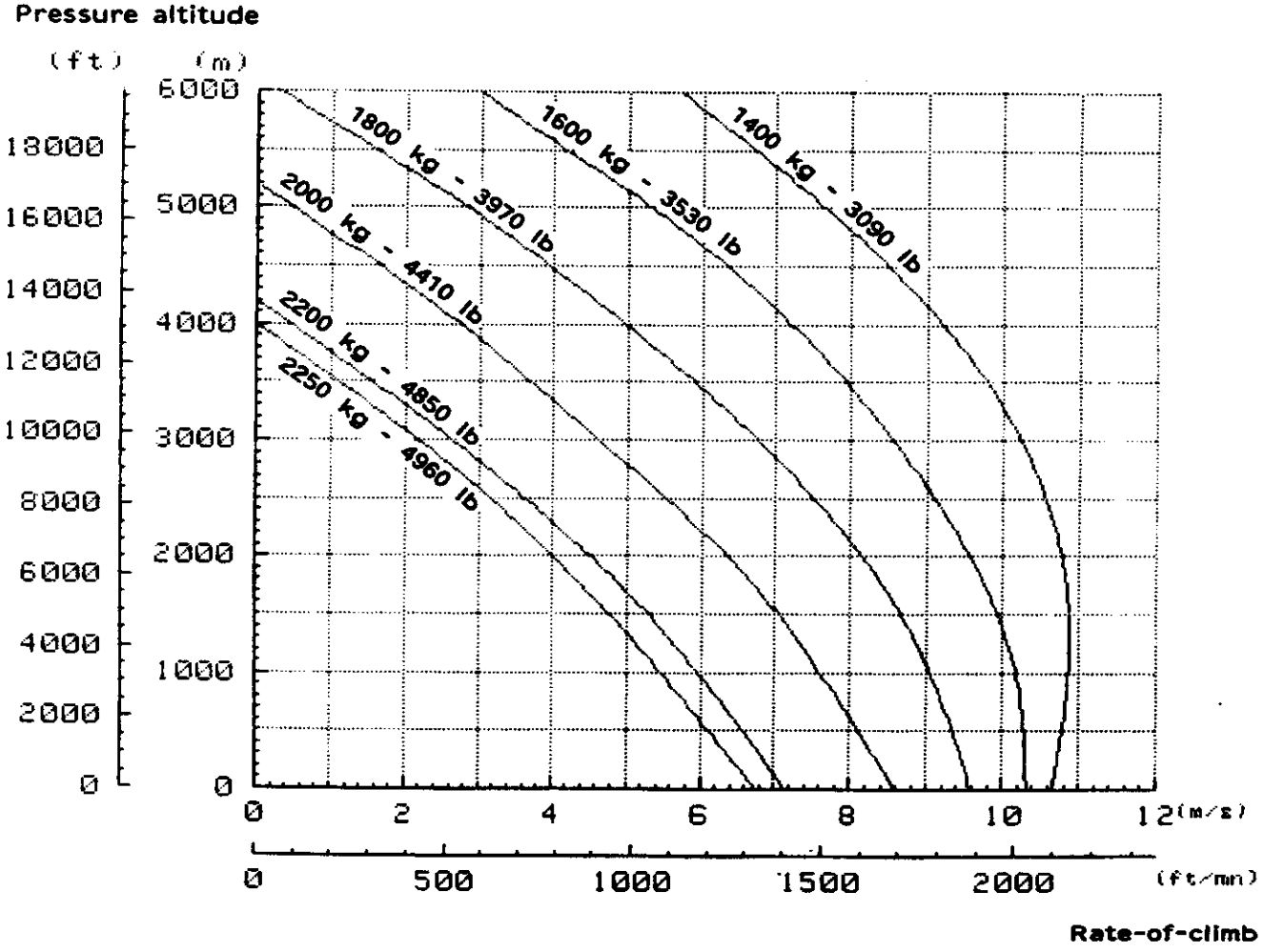


Note : Guaranteed performances as long as the engine meets the power check criteria, as defined in the Flight Manual.

RATE OF CLIMB

IN OBLIQUE FLIGHT

ISA + 20° C



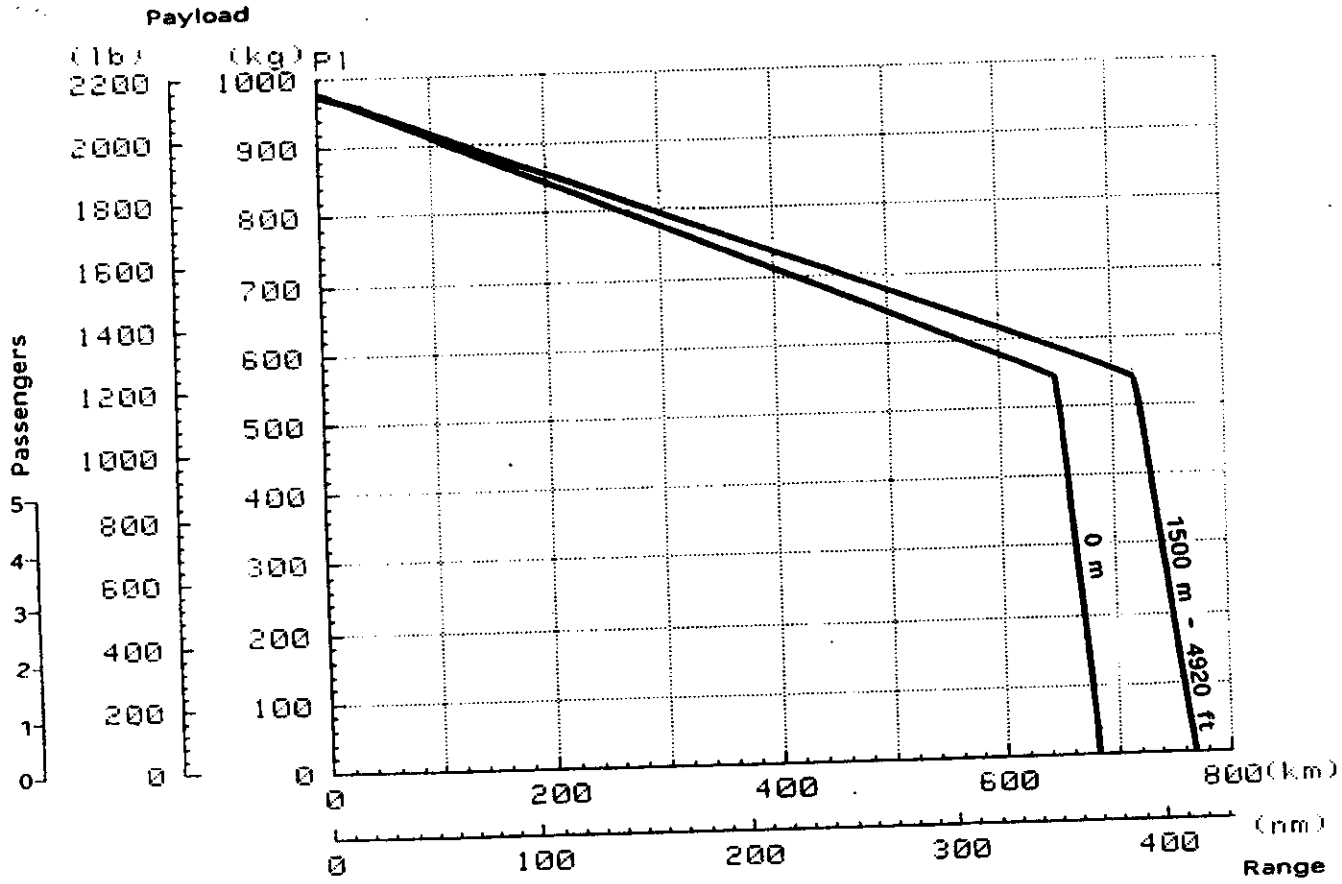
Note : Guaranteed performances as long as the engine meets the power check criteria, as defined in the Flight Manual.

PAYLOAD VERSUS RANGE

ISA

Recommended cruise speed

Empty weight equipped a/c + 1 pilot : 1,280 kg - 2,822 lb



Note : Typical mission without reserve, with clean standard aircraft and new engine.

MAINTENANCE MODES, ESTIMATED LABOUR COST AND REPLACEMENT TIMES

The word maintenance covers all scheduled, unscheduled and "on-conditions" maintenance operations as described hereafter.

SCHEDULED MAINTENANCE

■ **Daily inspections**	Before the first flight	Pilot task	
	Between flights	Pilot task	
	After the last flight	Pilot task	
■ **Complementary inspection**	Every 100 flight hours « S » inspection	2 hours	
		2 hrs for 100 flight hours	**0.02 MH / FH**
■ **Basic inspection**	Every 500 flight hours « T » inspection or every 24 months « A » inspection	95 hours per overhaul	
		95 hrs for 500 flight hours	**0.19 MH / FH**
■ **Major inspection**	Every 5000 flight hours « G » inspection or every 12 years « C » inspection	685 hours per overhaul	
		685 hrs for 5000 flight hours	**0.137 MH / FH**

UNSCHEDULED MAINTENANCE

■ **Repairs, removal, unusual inspections, on-condition maintenance, ...**	Between two major overhaul	Available data shows that 1,500 hrs are devoted to unscheduled maintenance	
		1,500 hrs for 5000 flight hours	**0.3 MH / FH**

AVERAGE MAN HOUR BETWEEN TWO MAJOR OVERHAULS

■ Assumptions :

- 2 hours 30 mn flying hours per day in 2 flights
- 0,300 hour of unscheduled maintenance per flying hour between two major inspection
- 2 engine cycles / hour operation.

■ Average maintenance man-hours per flying hour in above conditions :

- **0,647 hour** including major inspection
- **0,510 hour** without major inspection

TBO

TBO of Major assemblies	hrs
Main Gearbox	
Epicyclic reduction gear	3000
Bevel gear	3000
Oil pump	3000
Engine	
Complete engine	3000
Tail Gearbox	3000
Main servo-unit SAMM Type	3000
Tail servo-unit SAMM Type	3000

MAIN ASSEMBLY REPLACEMENT TIMES

The aircraft maintenance could be performed either in the workshop or in the field using a specially designed jib.

ASSEMBLIES	Replacement Times		
	In the Workshop	In the field	Men
Main blades (Qty : 3)	0 hr 18	0 hr 25 *	2
MRH	1 hr 35	1 hr 48 *	2
MRH + Mast	1 hr 50	2 hrs 07 *	2
Mast (bare)	3 hrs 30	3 hrs 55 *	2
MGB	3 hrs 30	4 hrs 00 *	2
Engine (equipped)	1 hr 18	1 hr 30 *	2
TGB	0 hr 30	0 hr 30	1
Tail rotor	0 hr 12	0 hr 12	1
Tail drive shaft	0 hr 18	0 hr 18	2
MGB-engine coupling shaft	1 hr 00	1 hr 10 *	1

* add jib installation/removal time = 0 hr 10

Note : The times given were obtained for replacements carried out during demonstrations with qualified personnel, and adequate tools and means on the repair site.

The operator is advised to mutiply these times by a coefficient of correction depending on : personnel qualification, work station preparation, available means.

DOCUMENTATION

Following technical documents are supplied with newly purchased helicopters :

- On paper
  - Flight Manual (PMV)
  - Master servicing recommendation (PRE)
  - Service Bulletins (SBT)

- On CD-ROM (Free unlimited update twice a year)
  - Operating
    - Master servicing recommendation (PRE)
  - Maintenance
    - Circuits and Schemas (MCS)
    - Description and operations (MDF)
    - Maintenance sheets (MET)
    - Fault isolation (MFI)
    - Storage (MST)
    - Repair (MRR)
    - Standard practices (MTC)
  - Identification
    - Spares parts (IPC)
    - Tools (ICO)
  - Specific
    - Service Bulletins (SBT)
    - Index of Modifications (SIM).

Whole documentation on paper is available as an optional, on request.

AS350 B2 AEC STANDARD AIRCRAFT DEFINITION

General

- Fuselage comprised of the cabin and 3 luggage holds, with floor, tie-down nets and access doors
- Tail boom with stabilizer, anti-torque rotor and fin
- Skid landing gear capable of taking handling wheels
- Lifting points
- Upper mooring fixtures
- External paint: 1 of 4 standard schemes in the 3 colors of customer's choice
- Interior: Standard; (covered cushions, interior panels and floor covering)

Cabin/Cargo

- Pilot and copilot high-back seats, adjustable fore and aft, removable, complete with safety belts, dual shoulder harnesses, and cushions
- 2-place rear bench-seats, foldable separately, complete with safety belts, shoulder harness and cushions (2)
- Pilot and copilot jettisonable doors each with a sliding window (2)
- Rear door-extensions for passengers and cargo (2)
- Fixed parts for pilot and copilot windshield wipers.
- Pilot map case (2)
- Cabin heating
- Demisting system for pilot and copilot windshield
- Fire-extinguisher
- Tail rotor pedal covers
- Tinted overhead windows (2)
- Flight manual

Instruments

- Airspeed indicator
- Altimeter
- Rate-of-climb indicator
- Clock
- Warning panel
- Magnetic compass (1)
- Heated pitot head (1)
- Torquemeter
- Hourmeter
- Ammeter
- Rotor and free turbine tachometer dual indicator
- Free turbine temperature indicator (T4)
- Engine oil temperature indicator
- Engine oil pressure indicator
- Gas generator tachometer with Ng limit variation indicator
- Fuel Gauge
- Fuel pressure indicator
- Voltmeter
- OAT indicator on canopy

Power Plant

- Turbomeca Arriel 1D1 turbine engine complete with:
  - starting, fuel supply and governing systems
  - fitted with a magnetic plug
  - chip detector with light on warning panel
- Fuel system including 1 tank of 143 US gal. (540 liters) total capacity
- Engine lubrication and oil cooling system
- Fire detection system
- Air-intake screen
- Torque-measurement pick-up
- Fixed parts for Sand Prevention Filter (excluding intake on engine cowling)

Transmission System

- Main gearbox, anti-vibration mounted, with oil sight gauge, chip detector with light on warning panel, oil temperature and pressure switches, port for endoscope and self-sealing valve for oil sampling and draining
- Main gearbox oil cooling system
- Engine to main gearbox coupling shaft
- Main rotor rpm sensor and high and low rpm warning device
- Tail drive carried by five anti-friction bearings
- Tail gearbox with oil sight gauge, chip detector with light and port for endoscopic inspection
- Rotor brake

Rotors and Flight Controls

- Main rotor with 3 composite-material blades around a Starflex head fitted with droop stops
- Anti-torque rotor with 2 composite-material blades
- Main rotor hydraulic servo units (3)
- Tail rotor hydraulic servo unit and a load compensator
- Single flight control system

Electrical System

- 4.5 KW, 28 V DC starter-generator
- 16 amp.-hr cadmium-nickel battery
- Ground power receptacle
- Position lights (3)
- Flashing anti-collision light
- Fixed landing light
- Cabin dome lights (2)
- Instrument-panel lighting system
- Fixed taxi light

Airborne Kit*

- Pitot head cover
- Static vent blanks (2)
- Engine air-intake cover
- Tail-pipe cover
- Ground handling wheels with hydraulic jacking system
- Lifting ring
- Upper mooring rings (2)
- Main-blade socks (3)
- Tail rotor locking device
- Technical documentation with case
- Airborne kit stowage bag

* Not included in the standard helicopter empty weight.