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Manufacturers notice

Attention !

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1 - Foreword



The FENNEC AS 550 C3 is derived from the civilian ECUREUIL AS 350 B3 version. It has the recognized advantages of this light helicopter : state of the art technology, low operating costs, easy maintenance, performance and comfort. The FENNEC AS 550 C3 is fitted with the powerful Turbomeca Arriel 2B1 engine, electronically regulated by a dual channel FADEC (Full Authority Digital Engine Control), backed up by a third independant control system. The pilot benefits from the VEMD (Vehicle and Engine Multifunction Display) on the instrument panel : a new generation of integrated instrumentation which allows him to see at one glance the main vehicle and engine parameters on a dual LCD synthetic display. It offers also to fly with night vision goggles. The AS 550 C3 is the single engine, multi purpose version of the FENNEC family. It is the best compromise between transport capacity and operating range in its category. Its low operating cost makes it a remarkable training tool. This helicopter is particularly suited for hot climates and high altitudes where its high performance level is highlighted. In addition to its high maneuverability and outstanding agility, the FENNEC AS 550 C3 proves to be a stable firing platform and can be equipped with unguided weapons (pod-mounted cannon, rocket launchers, machine gun) or with missiles.

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2- General Characteristics

Lay-Out

- **Passenger-transport**
 - 1 pilot + 5 passengers in standard version
- **Casualty-evacuation**
 - 1 pilot + 1 stretcher patient + 2 doctors
- **Cargo carrying**
 - 1 pilot + 3 m³ (105.9 ft³) load in cabin

Weights

Note : Empty weight accuracy : within $\pm 2\%$

	kg	lb
■ Empty weight, standard aircraft (including engine oil and unusable fuel)	1,240	2,734
■ Useful load	1,010	2,226
■ Maximum all-up weight	2,250	4,960
■ Maximum cargo-sling load	1,400	3,086
■ Maximum all-up weight in external load configuration	2,800	6,172
■ Maximum operational weight with jettisonable external weapons	2,450	5,401

Power plant

1 TURBOMECA ARRIEL 2B1 turbine engine

Engine ratings

Thermodynamic Power, in standard atmosphere, at sea level :

	kW	ch	shp
■ Take-off power	632	860	847
■ Maximum continuous power	543	739	728

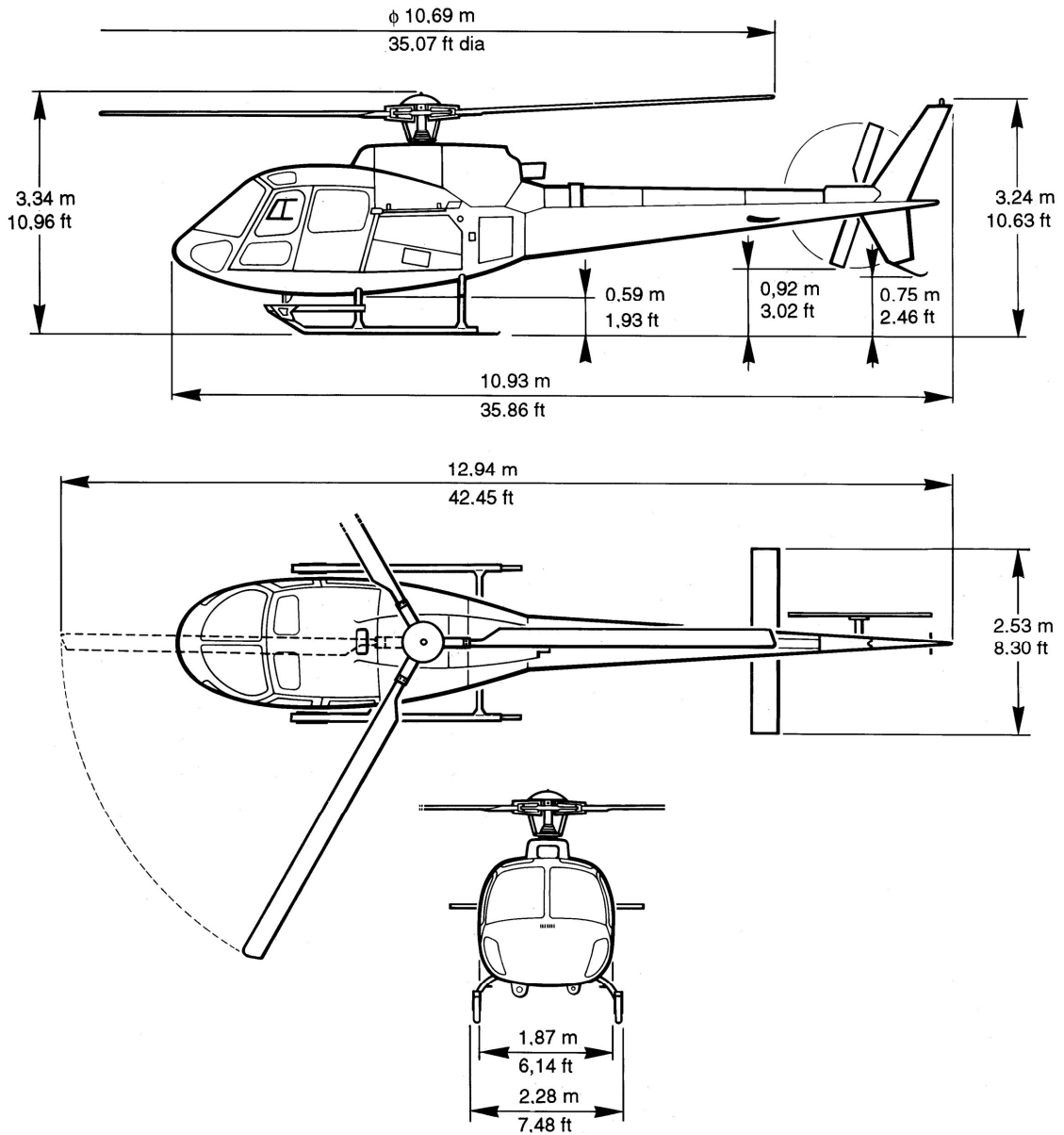
Usable Fuel capacities

	litres	US gal.	kg	lb
■ Standard fuel tank	540	143	426	939
■ Auxiliary fuel tank (option)	475	125	375	827

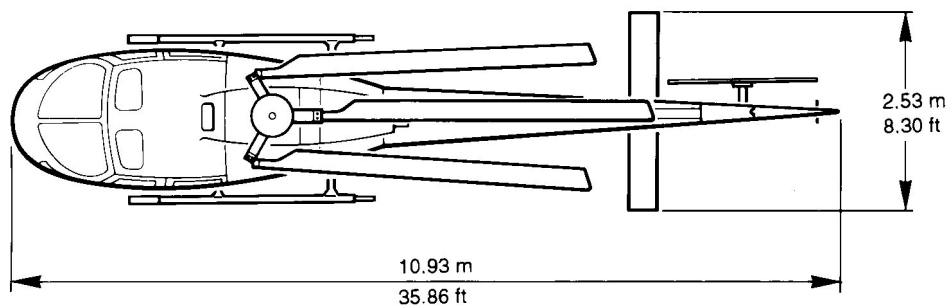
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Main dimensions



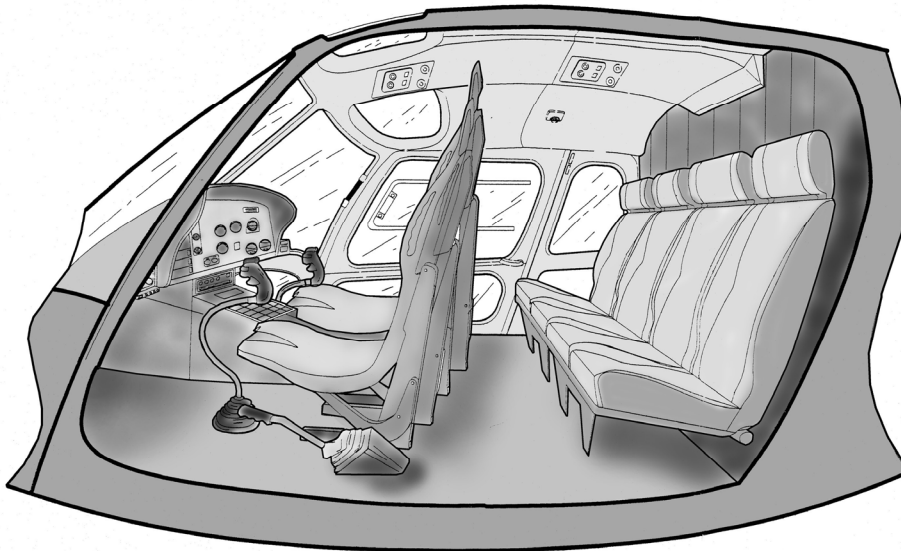
Dimensions with blades folded



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Configurations



Standard lay-out

**Internal cargo
load transport
lay-out**

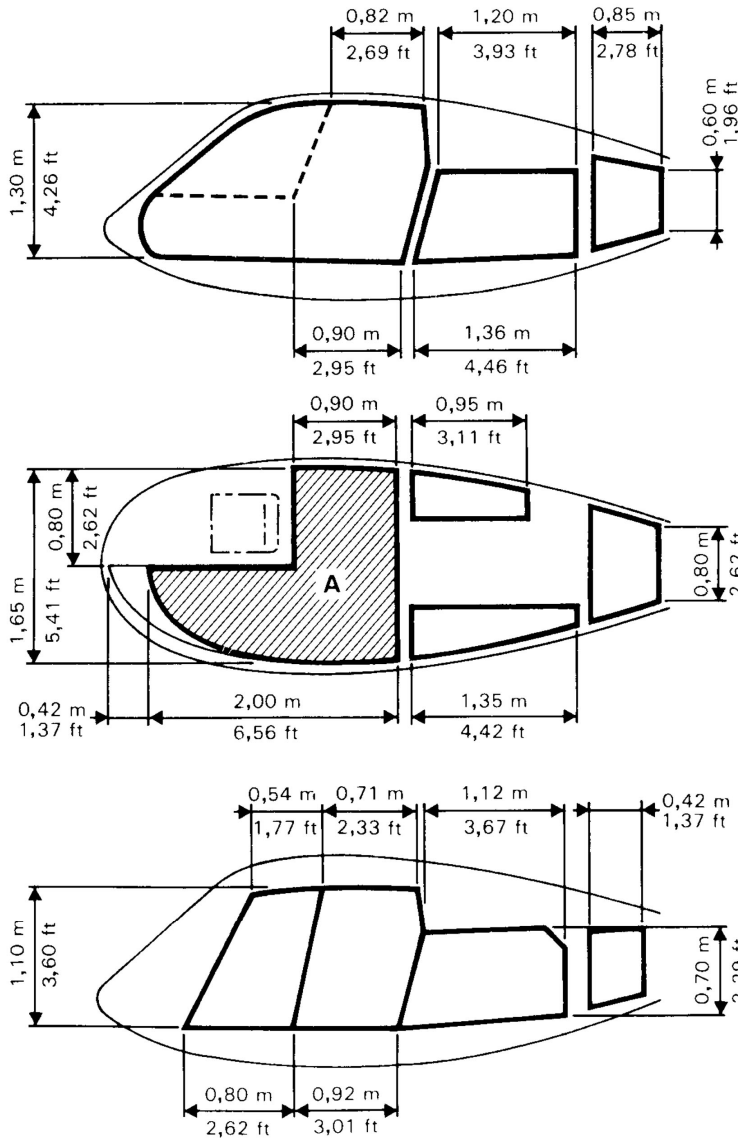


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Dimensions of compartments and accesses

Cabin main dimensions



CABIN

Surface	2.60 m ² 27.98 ft ²
Volume	3.000 m ³ 105.94 ft ³

LH HOLD

Surface	0.43 m ² 4.62 ft ²
Volume	0.235 m ³ 8.29 ft ³

RH HOLD

Surface	0.35 m ² 3.76 ft ²
Volume	0.200 m ³ 7.06 ft ³

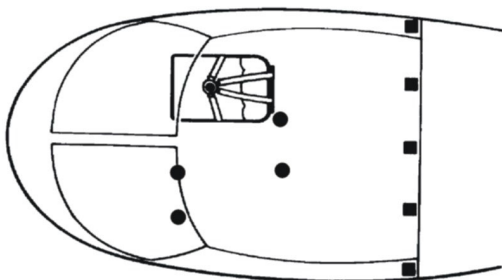
REAR HOLD

Surface	0.55 m ² 5.92 ft ²
Volume	0.565 m ³ 19.95 ft ³

TOTAL HOLDS

Surface	1.33 m ² 14.3 ft ²
Volume	1.000 m ³ 35.30 ft ³

Cabin floor



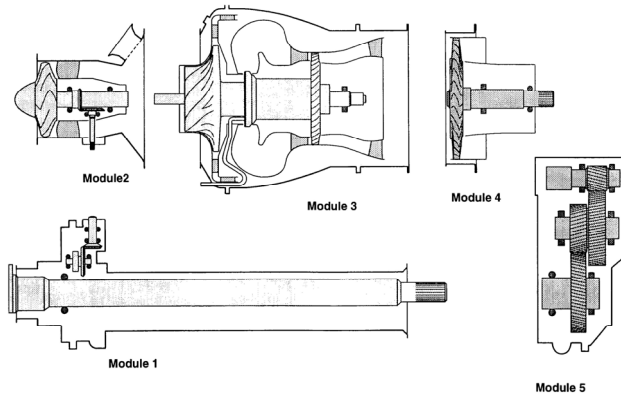
- Pilot's safety belt attachment and freight-tie-down rings
- Passenger safety belt or freight tie-down rings

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Other characteristics

TURBOMECA ARRIEL 2B1 turbine engine



- 847 shp (632 kW) take-off power
- Triple engine control : one dual channel FADEC (Full Authority Digital Engine Control) unit plus a third independent and automatic back up channel
- Optimized engine ratings according to outside operations conditions thanks to electronic governing system (FADEC)
- Optimized engine monitoring through the VEMD
- Automatic starting sequence
- Modular conception

VEMD

- Full color LCD display
- Fully duplex equipment
- Self monitoring at one glance
- First Limitation Indication (FLI) with aural warning
- Mission parameters calculation
- Engine cycle counting
- Engine health monitoring

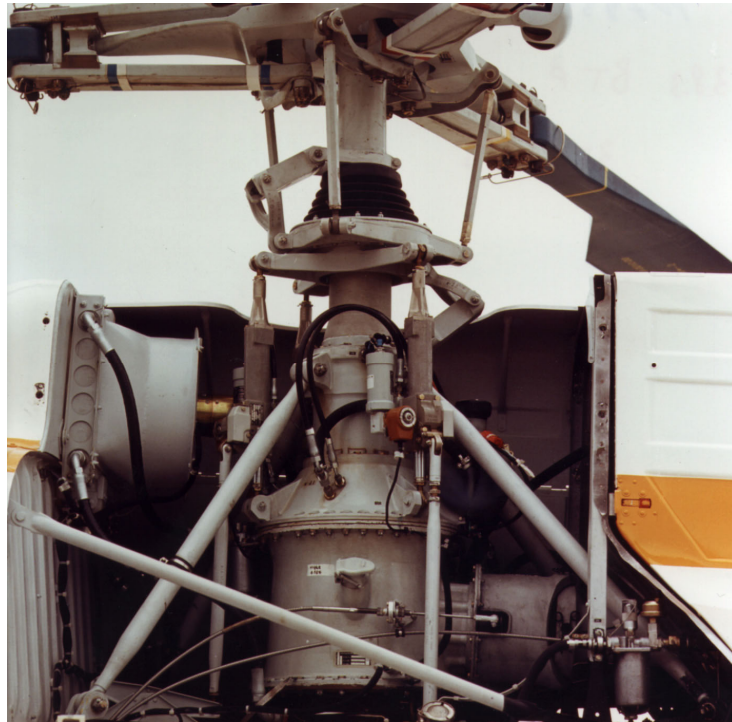


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Decreased vulnerability

- Self-sealing fuel tank (on option)
- Main Gearbox with 45 minutes dry-run capability



- Impact-resistant main rotor blades and hub



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3- AS 550 C3 - Standard Aircraft Definition

GENERAL

- Fuselage comprising the cabin, a rear storage compartment with floor, tie-down net, electromagnetic interference protection (EMI), access door, and two side compartments each with a hinged door and a fairing letting the weapon beams through when fitted
- Reinforced tail boom with stabilizer, anti-torque rotor and fin
- Raised skid landing gear capable of taking handling wheels with short footstep
- Lifting points
- Upper mooring fixtures
- External paint : per customer paint scheme
- Internal paint : Black
- Structural reinforcements (in the side compartments) for missile weapon installations or axial armement installation
- Wire strike protection system

CABIN

- Cabin floor in light-alloy sheet-metal with tie-down rings, including fixed parts of lower casualty carrying installation as well as side firing machine gun reinforcement
- 1 twist grip on pilot stick (for engine reduction in case of tail rotor failure and autorotation training)
- 2 pilot and copilot energy-absorbing seats adjustable in reach, removable, complete with cushions, safety belts, and dual-strap shoulder harnesses
- 2 two-place rear bench-seats, foldable separately, complete with safety belts and cushions
- 2 pilot and copilot jettisonable doors each fitted with a sliding window
- 1 rear LH sliding door
- 1 rear RH sliding door
- 1 instrument panel, 1 console and 1 ceiling panel equipped for night vision goggle use
- Main frame reinforcement for clear sight
- Over control quadrant
- 2 tinted upper panes
- 1 double-wall ceiling housing the ventilation and air conditioning ducts
- Capabilities for pilot and copilot windshield wipers
- 1 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 LCD dual RPM tachometer (rotor tachometer and Nf tachometer)
- 1 clock
- 1 warning panel
- 1 magnetic compass
- 1 heated pitot head
- 1 I.C.S. connection to aural warning issued from VEMD
- Capabilities for VEMD data download (including maintenance plug)
- 1 LCD Dual screen Vehicle and Engine Multifunction Display (VEMD) providing the following information:
 - First limitation indicator (FLI)
 - ◆ torquemeter
 - ◆ exhaust gas temperature (T4)
 - ◆ gas generator tachometer (Ng, delta Ng)
 - Engine oil temperature/pressure
 - Fuel quantity and fuelflow and estimated remaining time to fly
 - Ammeter and voltmeter
 - Outside Air Temperature (OAT)
 - Enhanced usage monitoring functions
 - ◆ IGE/OGE performance calculations
 - ◆ engine cycles counting
 - ◆ engine power check
 - ◆ overlimits display
 - VEMD and peripheral maintenance information

POWER PLANT

- 1 TURBOMECA ARRIEL 2B1 632 kW (860 ch – 847 shp) turbine engine complete with starting, fuel supply and dual channel digital engine control system (FADEC), 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 back-up control box that automatically controls the engine in case of total failure of the 2 digital channels of the FADEC
- 1 engine lubrication and oil cooling system
- 1 fire detection system
- 1 air-intake screen
- 1 torque-measurement pick-up
- 1 sand filter, dynamic type (sand and snow prevention).

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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
- Flying controls with provisions for the autopilot.
- 1 hydraulic ground power receptacle

ELECTRICAL INSTALLATION

- 1 200 A, 28 V DC starter-generator
- 1 15 amp. hr cadmium-nickel battery
- 1 ground power receptacle
- 3 position lights
- 1 flashing anti-collision light
- 1 RH fixed landing light
- 1 LH landing light adjustable in elevation and bearing
- 3 formation lights
- Cabin and instrument panel lighting system compatible with night vision goggle use
- 1 control panel with fuses panel
- 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)

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4- Optional equipment

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

General equipment

Document reference	Commercial reference	Name	kg	lb
05-23004-A	05-23004-00-CI	Engine flushing device without removal of cowlings	0.8	1.8
05-24004-A	05-24004-00-CI	Tail rotor arch	1.5	3.3
05-25006-A	05-25006-00-CI	Re-inforced sand-erosion protection strip on main rotor blades	0.2	0.4
05-25007-A	05-25007-00-CI	Re-inforced sand-erosion protection strip on tail rotor blades	0.1	0.2
05-28001-A	05-28001-00-CI	Protective lower cowlings	On request	
05-31007-A	05-31007-00-CI	Large cabin floor window (right side) 1	3.2	7.1
05-32001-A	05-32001-00-CI	Pilot's windshield wiper	2.6	5.7
05-32003-A	05-32003-00-CI	Copilot's windshield wiper	2.6	5.7
05-37010-B	05-37010-01-CI	Dual controls	3.5	7.7
05-41002-A	05-41002-00-CI	Cabin heating installation	1.8	4.0
05-42003-A	05-42003-00-CI	Air conditioning system 2	61.2	134.9
05-61007-A	05-61007-00-CI	2 nd battery kit 3	17.5	38.6
05-62001-A	05-62001-00-CI	250 VA AC generation system 4	4.3	9.5
05-70002-A	05-70002-00-CI	Dual hydraulic circuit	25.0	55.1
05-82016-A	05-82016-00-CI	Fuel tank self-sealing protection	15.6	34.4
05-84001-A	05-84001-00-FP	Ferrying tank - Fixed Parts	0.3	0.7
	05-84001-00-RP	Ferrying tank - Removable Parts	27.6	60.8
05-92001-A	05-92001-00-FP	Folding of main rotor blades - Fixed Parts 5	1.8	4.0
	05-92001-00-RP	Folding of main rotor blades - Removable Parts 6	Not applicable	
05-93001-A	05-93001-00-CI	Mooring kit (ground or ships) 7	0.8	1.8
05-93002-A	05-93002-00-CI	Marine gripping system	1.0	2.2

1 Removes the standard pilot map case.

2 Available : cycle + 2 months.

3 Recommended for start-up in cold weather.

4 Mandatory for autopilot.

5 For rough weather conditions.

6 The removable parts are delivered as Ground Support Equipment. Tool weight = 32.2 kg – 71 lb.

7 Recommended for transport by land, air and sea (when not in a container).

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Specific mission equipment

Document reference	Commercial reference	Name	kg	lb
06-11009-A	06-11009-00-CI	SURFAIR Skis 1	27.0	59.5
06-11012-A	06-11012-00-CI	Settling protectors	4.1	9.0
06-11017-A	06-11017-00-CI	Skid wearing plates	1.3	2.9
06-12015-A	06-12015-02-CI	High skid landing gear with 2 long footsteps	0.9	2.0
06-21003-A	06-21003-00-FP	AIR EQUIPEMENT electrical hoist (136 kg - 300 lb, 40 m - 131 ft cable) - Fixed Parts	2.6	5.7
	06-21003-00-RP	AIR EQUIPEMENT electrical hoist (136 kg - 300 lb, 40 m - 131 ft cable) - Removable Parts	37.5	82.7
06-21008-A	06-21008-00-FP	BREEZE electrical hoist (204 kg - 450 lb, 50 m - 164 ft cable) - Fixed Parts	2.6	5.7
	06-21008-00-RP	BREEZE electrical hoist (204 kg - 450 lb, 50 m - 164 ft cable) - Removable Parts	51.8	114.2
06-21018-A	06-21018-00-CI	Support for BREEZE electrical hoist 2	5.4	11.9
06-24001-A	06-24001-00-CI	Rappelling installation (without rope)	3.2	7.1
06-25002-A	06-25002-00-CI	Drip tub (sea rescue) 3	-0.8	-1.8
06-26003-A	06-26003-00-CI	RH side external mirror 4	2.9	6.4
06-26004-A	06-26004-00-CI	RH side electric and de-iced external mirror 4	3.0	6.6
06-27004-A	06-27004-00-FP	Cargo sling with dynamometer (750 kg - 1,654 lb) - Fixed Parts	3.1	6.8
	06-27004-00-RP	Cargo sling with dynamometer (750 kg - 1,654 lb) - Removable Parts	3.2	7.1
06-27008-A	06-27008-00-FP	Cargo swing (1400 kg - 3,080 lb) - Fixed Parts	5.1	11.2
	06-27008-00-RP	Cargo swing (1400 kg - 3,080 lb) - Removable Parts	14.5	32.0
06-27009-A	06-27009-00-CI	Capabilities for extended cargo sling	1.2	2.6
06-31005-A	06-31005-00-CI	Integrated hailers 5- 6	11.0	24.3
06-47002-A	06-47002-01-FP	Spectrolab SX 16 search-light - Fixed Parts	On request	
	06-47002-01-RP	Spectrolab SX 16 search-light - Removable Parts	On request	
06-47003-A	06-47003-00-CI	Infra-red filter for SPECTROLAB SX-16 search-light 7	2.0	4.4
06-61003-A	06-61003-00-FP	Emergency floatation gear - Fixed Parts	5.7	12.6
	06-61003-00-RP	Emergency floatation gear - Removable Parts	67.6	149.0

- 1** Incompatible with the optional item "High skid landing gear with 2 long footsteps".
- 2** Requires the selection of the optional item 06-21008-00-FP "BREEZE electrical hoist – Fixed Parts".
- 3** The weight figure includes the removal of the cushions of the two standard two-place rear bench-seats and seats belts (bench-seats folded).
- 4** Recommended for sling/swing work.
- 5** Availability : cycle + 3 months.
- 6** Incompatible with the optional item 06-61003-00-FP "Emergency floatation gear – Fixed Parts".
- 7** The filter is not remotely controlled retractable.

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Interior cabin layout

Document reference	Commercial reference	Name	kg	lb
07-15010-A	07-15010-01-CI	Lenghtened rails for energy-absorbing front seats	2.0	4.4
07-15012-A	07-15012-00-CI	Energy-absorbing front seats, adjustable in height in replacement of standard energy-absorbing seats 1	10.0	22.0
07-25001-A	07-25001-00-CI	3 places instead of 4 places transformation kit 2	4.4	9.7
07-50006-A	07-50006-00-CI	Sliding window, on rear LH sliding door	1.1	2.4
07-50007-A	07-50007-00-CI	Sliding window, on rear RH sliding door	1.1	2.4
07-71002-A	07-71002-00-FP	Lower casualty-carrying installation - Lower installation with stretcher - Fixed Parts	Included in standard	
	07-71002-00-RP	Lower casualty-carrying installation - Lower installation with stretcher - Removable Parts 3	-4.5	-9.9

Operational protection

Document reference	Commercial reference	Name	kg	lb
10-20002-A	10-20002-00-CI	Cabin floor armour plating (against 7.62 mm bullets)	On request	
10-41004-A	10-41004-00-CI	Radar warning receiver EWR 99 - Fruit	On request	
10-51002-A	10-51002-00-CI	Alkan Elips self protection decoying system	On request	

Military installation

Document reference	Commercial reference	Name	kg	lb
11-00002-A	11-00002-00-CI	Mixed installation : pod-mounted cannon (RH side) / rocket-launcher (LH side) M 621 20 mm pod-mounted cannon + 68 mm rockets (12 rockets) M 621 20 mm pod-mounted cannon + 2.75" rockets (7 rockets)	On request	
11-10001-A	11-10001-00-CI	7.62 mm Side-firing machine gun in the cabin on the LH side	On request	
11-25001-A	11-25001-00-CI	12.7 mm pod mounted Heavy Machine Gun	On request	
11-25002-A	11-25002-00-CI	20 mm gun pod-mounted cannon (RH side)	On request	
11-40001-A	11-40001-00-CI	Rocket-launcher installation : 2x12 rockets 68 mm 2x7 rockets 2.75"	On request	
11-90001-B	11-90001-01-FP	Clear aiming sight - Fixed Parts	On request	
	11-90001-01-RP	Clear aiming sight - Removable Parts 1	On request	
11-90003-A	11-90003-00-CI	Roof-Mounted Sight Provisions	On request	

- 1** Use of clear aiming sight requires front seats adjustable in height in replacement of standard seats.
- 2** Including mainly 4 arm-rests and a fifth harness.
- 3** The weight figure includes the complete removal of one two-place rear bench-seat and copilot seat.

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Avionics

Recommended equipments

Document reference	Commercial reference	Name	kg	lb
08-51007-A	08-51007-00-CI	Thales H 140 - Gyro-horizon	2.5	5.5
08-52011-A	08-52011-00-CI	Honeywell KCS 55 A - Gyro Compass with Honeywell KI 525 A - Horizontal Situation Indicator	5.7	12.6
08-51015-A	08-51015-00-CI	Thales H 321 EHM - Stand-by gyro-horizon	3.8	8.4
08-61003-A	08-61003-00-CI	Collins RMI36 - Radio Magnetic Indicator	1.5	3.3
08-19007-A	08-19007-00-CI	Collins ETC40XXF - Radio Management System	11.5	25.3
08-14001-A	08-14001-00-CI	Collins ARC 210 - V/UHF AM/FM tactical and FM maritime 1	12.2	26.9
08-12034-A	08-12034-00-CI	Collins VHF 422 B - VHF/AM 1	4.1	9.0
08-26004-A	08-26004-00-CI	Collins VIR 32 - VOR/ILS/MKR 1	6.0	13.2
08-25006-A	08-25006-00-CI	Collins DME 42 - DME 1 - 2	4.5	9.9
08-43009-A	08-43009-00-CI	FreeFlight 2101 I/O Approach+ - GPS 3 - 4	3.1	6.8
08-23002-A	08-23002-00-CI	Raytheon APX 100 - IFF 1 - 5	7.0	15.4
08-57002-A	08-57002-00-CI	Shadin 8800 T - Altitude Encoder	1.0	2.2
08-21008-A	08-21008-00-CI	Thales AHV 16 - Radio altimeter	5.0	11.0
06-67016-A	06-67016-00-CI	Kannad 121 AF-H - Emergency Locator Transmitter 6	1.5	3.3
08-16010-A	08-16010-00-CI	Team TB 31 (2 control boxes) - ICS 7	5.6	12.3
08-17014-A	08-17014-00-CI	Team BA1920 - Passenger Interphone	1.9	4.1

- 1** Equipment Controlled by the ETC 40XXF option.
- 2** The DME indicator must be switched off during night-time missions with NVG.
- 3** Delivered with EUROPE map. Subscription to be made by the customer.
- 4** Interfaced with HSI and RMI. Mandatory for VEMD data download.
- 5** This equipment can be submitted to export licence. Time of equipment availability to be checked.
- 6** 2 frequencies : 121.5 MHz, 243 MHz. Compliant with ED 62 and TSO C91A.
- 7** I.C.S. compatible with any type of headsets.

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Additional equipment that can be added depending on operational needs

Document reference	Commercial reference	Name	kg	lb
06-67011-A	06-67011-00-CI	Kannad 406 AF-H - Emergency Locator Transmitter 1 - 2	1.5	3.3
08-10006-A	08-10006-00-CI	Collins HF 9X00 - HF/SSB 3	15.7	34.6
08-13005-A	08-13005-00-CI	Chelton 805-1 - UHF/AM	7.2	15.9
08-16016-A	08-16016-00-CI	Team TB 31 (3 rd control box in cabin) - ICS 4	1.1	2.4
08-18013-A	08-18013-00-CI	Silec 4449-1 - Headset 5	0.5	1.1
08-18025-A	08-18025-00-CI	Eino FPH600 - Helmet	1.0	2.2
08-23020-A	08-23020-00-CI	Thales TSC 2050 - IFF 3 - 6	7.5	16.5
08-24001-A	08-24001-00-CI	Collins ADF 60 - ADF 3	5.9	13.0
08-25506-A	08-25506-00-CI	Collins ARN 153 - TACAN 3	20.8	45.9
08-27014-A	08-27014-00-CI	Chelton System 7 - HOMER UHF wide band	2.9	6.4
08-27016-A	08-27016-00-CI	Chelton System 7 - HOMER SAR	4.5	9.9
08-70004-A	08-70004-00-CI	SFIM 85 T 31 - 3-Axis AP with failure passivation unit 7	29.5	65.0
08-83017-A	08-83017-00-CI	VEMD data download kit 8	Not applicable	
08-91004-A	08-91004-00-CI	Hourmeter	0.3	0.7

The radio/com/nav. equipment weight figures included in this chapter are average values. As the installation of those equipment may vary from one a/c to another, the weight of a complete configuration with multiple items may not be the simple sum of all individual weights.

- [1](#) 3 frequencies : 121.5 MHz, 243 MHz, 406 MHz. Compliant with ED 62 and TSO C91A.
- [2](#) The Programming Data Sheet must be filled and communicated by the customer two months at the latest before the helicopter's delivery.
- [3](#) Equipment Controlled by the ETC 40XXF option.
- [4](#) The third TB31 control box is installed instead of the BA1920 passenger interphone.
- [5](#) Low level / High impedance headset.
- [6](#) This reference of this equipment varies depending on customer's country and his approval to have access to mode 4.
- [7](#) Implies the mandatory fitting of the 250 VA AC generation system, Thales H140 gyro-horizon, Gyro-compass + Horizontal Situation Indicator.
- [8](#) Delivered in addition to the airborne kit, the kit includes two softwares and a connection wire.

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5- Incompatibilities between some items of optional equipment

- Impossibility of simultaneous fitment of the fixed parts of 2 items of equipment
- ▲ Total or partial incompatibility of simultaneous fitment of the removal parts of two items of equipment
- Possibility of simultaneous fitment on the same aircraft, but impossible to use simultaneously

Note: This table indicates the compatibility restrictions existing between the installations. The consultation of EUROCOPTER is necessary for the definitive Equipment Compatibility clearance of a configuration.

Reference Optional	Installation	Nature of the incompatibility		
		■	▲	●
General equipment				
05-24004-00-CI	Tail rotor arch	08-10006-00-CI		
05-32003-00-CI	Copilot's windshield wiper	05-42003-00-CI		
05-37010-01-CI	Dual controls with fuel flow twist grip		07-71002-00-RP	
05-42003-00-CI	Air conditioning system	05-32003-00-CI	07-71002-00-RP	
05-84001-00-RP	Ferrying tank		06-25002-00-CI 07-25001-00-CI 07-71002-00-RP 11-10001-00-CI	06-21003-00-RP 06-21008-00-RP 06-27004-00-RP 06-27008-00-RP 06-27009-00-CI
Specific mission equipment				
06-11009-00-CI	SURFAIR skis	06-12015-02-CI	06-61003-00-RP	
06-12015-02-CI	High skid landing gear with 2 long footsteps	06-11009-00-CI		
06-21003-00-FP	AIR EQUIPEMENT electrical hoist (136 kg - 300 lb, 40 m - 131 ft cable) - Fixed parts	06-21008-00-FP ¹		
06-21003-00-RP	AIR EQUIPEMENT electrical hoist (136 kg - 300 lb, 40 m - 131 ft cable) - Removable parts			05-84001-00-RP 06-24001-00-CI 06-27004-00-RP 06-27008-00-RP 06-27009-00-CI 06-61003-00-RP ² 07-25001-00-CI 07-71002-00-RP 11-10001-00-CI

- ¹ Only the structural supplies for the "BREEZE electrical hoist" (06-21008-00-FP) are compatible with the "AIR EQUIPEMENT electrical hoist" installation (06-21003-00-FP).
- ² Hoisting remains possible when the floats are folded.

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Reference Optional	Installation	Nature of the incompatibility		
		■	▲	●
Specific mission equipment (continued)				
06-21008-00-FP	BREEZE electrical hoist (204 kg - 450 lb, 50 m - 164 ft cable) - Fixed parts	06-21003-00-FP ¹		
06-21008-00-RP	BREEZE electrical hoist (204 kg - 450 lb, 50 m - 164 ft cable) - Removable parts			05-84001-00-RP 06-24001-00-CI 06-27004-00-RP 06-27008-00-RP 06-27009-00-CI 06-61003-00-RP ² 07-25001-00-CI 07-71002-00-RP 11-10001-00-CI
06-24001-00-CI	Rappelling installation (without rope)			06-21003-00-RP 06-21008-00-RP 06-27004-00-RP 06-27008-00-RP 06-27009-00-CI 06-61003-00-RP
06-25002-00-CI	Drip tub (sea rescue)		05-84001-00-RP 07-25001-00-CI 07-71002-00-RP 11-10001-00-CI	
06-27004-00-RP	Cargo sling with dynamometer (750 kg - 1,654 lb) - Removable parts		06-27008-00-RP 06-27009-00-CI	05-84001-00-RP 06-21003-00-RP 06-21008-00-RP 06-24001-00-CI 07-71002-00-RP
06-27008-00-RP	Cargo swing (1 400 kg - 3,080 lb)		06-27004-00-RP 06-47002-00-RP	05-84001-00-RP 06-21003-00-RP 06-21008-00-RP 06-24001-00-CI 07-71002-00-RP 11-10001-00-CI
06-27009-00-CI	Capabilities for extended cargo sling		06-27004-00-RP 06-47002-00-RP	05-84001-00-RP 06-21003-00-RP 06-21008-00-RP 06-24001-00-CI 07-71002-00-RP 11-10001-00-CI

- ¹ Only the structural supplies for the "BREEZE electrical hoist" (06-21008-00-FP) are compatible with the "AIR EQUIPEMENT electrical hoist" installation (06-21003-00-FP).
- ² Hoisting remains possible when the floats are folded.

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Reference Optional	Installation	Nature of the incompatibility		
		■	▲	●
Specific mission equipment (continued)				
06-31005-00-CI	Integrated hailers	06-61003-00-FP		
06-47002-00-RP	SPECTROLAB SX-16 search-light - Removable parts		06-27008-00-RP 06-27009-00-CI	
06-61003-00-FP	Emergency floatation gear - Fixed parts	06-31005-00-CI		
06-61003-00-RP	Emergency floatation gear - Removable parts		06-11009-00-CI	06-21003-00-RP 1 06-21008-00-RP 1 06-24001-00-CI
Interior layout				
07-25001-00-CI	3 places instead of 4 places transformation kit		05-84001-00-RP 06-25002-00-CI 07-71002-00-RP 11-10001-00-CI	06-21003-00-RP 06-21008-00-RP
07-71002-00-RP	Lower casualty-carrying installation with stretcher - Removable parts		05-37010-00-CI 05-42003-00-CI 05-84001-00-RP 06-25002-00-CI 07-25001-00-CI 11-10001-00-CI	06-21003-00-RP 06-21008-00-RP 06-27004-00-RP 06-27008-00-RP 06-27009-00-CI
Operational protection				
10-20002-00-CI	Cabin floor armour plating (against 7,62 mm bullets)	Being studied	Being studied	Being studied
10-41004-00-CI	Radar warning receiver EWR 99 FRUIT	Being studied	Being studied	Being studied
10-51002-00-CI	ALKAN ELIPS self-protection decoying system	Being studied	Being studied	Being studied

1 Hoisting remains possible when the floats are folded.

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Reference Optional	Installation	Nature of the incompatibility		
		■	▲	●
Military installations				
11-00002-00-CI	Mixed installation : pod-mounted cannon (RH side) / rocket-launcher (LH side)			11-10001-00-CI
11-10001-00-CI	7,62 mm side-firing machine gun in the cabin, on the left side		05-84001-00-RP 06-25002-00-CI 07-25001-00-CI 07-71002-00-RP	06-21003-00-RP 06-21008-00-RP 06-27008-00-RP 06-27009-00-CI 11-00002-00-CI 11-25001-00-CI 11-25002-00-CI 11-40001-00-CI
11-25001-00-CI	12,7 mm pod-mounted Heavy Machine Gun			11-10001-00-CI
11-25002-00-CI	20 mm pod-mounted cannon (RH side)			11-10001-00-CI
11-40001-00-CI	Rocket-launcher installation			11-10001-00-CI
11-90003-00-CI	Roof mounted sight provision	Being studied	Being studied	Being studied

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6- Main performance

The following performance values and figures refer to an **AS 550 C3**, equipped with a **new engine**. Unless otherwise specified, the values and figures refer to a **clean helicopter with sand filter not operating at Sea Level (SL)**, in **International Standard Atmosphere (ISA)** and **zero wind** condition.

Performance

Gross Weight	kg	1,600	1,800	2,000	2,200	2,250
	lb	3,530	3,968	4,409	4,850	4,960
■ Maximum speed, VNE	km/hr	287	287	287	287	287
	kts	155	155	155	155	155
■ Fast cruise speed (at MCP)	km/hr	261	260	256	250	248
	kts	141	140	138	135	134
■ Recommended cruise speed	km/hr	224	223	217	210	208
	kts	121	120	117	113	112
■ Fuel consumption at recommended cruise speed	kg/hr	145	145	145	145	145
	lb/h	320	320	320	320	320
■ Rate-of-climb	m/sec	12.2	11.8	11	10.1	9.8
	ft/min	2,410	2,320	2,180	1,985	1,935
■ Hover ceiling I.G.E. at Take-off power	m	6,950	5,925	4,975	4,085	3,875
● ISA + 20°C	m	6,215	5,160	4,185	3,275	3,055
■ Hover ceiling OGE at Take-off power	m	6,355	5,310	4,340	3,435	3,220
● ISA + 20°C	m	5,665	4,525	3,530	2,590	2,365
■ Service ceiling (1 m/sec., 200 ft/min.)	m	>7,000	6,755	5,830	4,960	4,750
■ Range (without reserve at recommended cruise speed)	km	563	661	654	641	636
■ Endurance (without reserve at 100 km/hr – 54 kts)	hr : min	3h56	4h35	4h19	4h08	4h05

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Effect of sand filter operating on AS 550 C3 performance

When the sand filter is operating, the given performances are modified as follows.

	Outside Air Temperature	
	lower than ISA + 15 °C	higher than ISA + 15 °C
In engine limit		
■ Fast cruise speed (at MCP)	- 1.1 kts - 2.0 km/hr	- 2.7 kts - 5.0 km/hr
■ Recommended cruise speed	0 kts 0 km/hr	- 2.7 kts - 5.0 km/hr
■ Fuel consumption at fast cruise speed	0 %	- 1 %
■ Fuel consumption at recommended cruise speed	+ 1 %	- 1 %
■ Rate-of-climb	- 0.41 m/sec - 80 ft/min	
■ Hover ceiling I.G.E. at Take-off power	- 40 kg	
■ Hover ceiling OGE at Take-off power	- 40 kg	
■ Range at recommended cruise speed	- 1 %	- 3 %
In torque limit		
■ Fuel consumption at fast cruise speed	+ 1 %	

Effect of armaments on AS 550 C3 performance

The figures hereunder are obtained with a 2,250 kg take-off weight.

Unless otherwise specified, they are given for an armed aircraft, in zero wind at sea level, standard atmosphere conditions.

Armaments		Cannon	Cannon / 1 rocket launcher	2 rocket launchers
Fast cruise speed variation	Km/h kts	- 8.0 - 4.0	- 16.0 - 9.0	- 18.0 - 10.0
Rate-of-climb variation	m/sec ft/min	- 0.55 - 110.0	- 0.75 - 150.0	- 0.75 - 150.0
Recommended cruise speed variation	km/h kts	- 7.0 - 4.0	- 14.0 - 8.0	- 15.0 - 8.0
Hourly fuel consumption variation at recommended cruise speed	kg/hr lb/h	0	0	0

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Operating limitations

The helicopter is cleared to be operated within the following altitude and temperature limitations (according to Flight Manual). For complementary information, refer to Flight Manual.

- Maximum altitude : 7,010 m - 23,000 ft (PA)
- Maximum temperature : ISA + 35°C limited to + 50° C
- Minimum temperature : - 40° C

Abbreviations

IGE :	In Ground Effect	SL :	Sea Level
ISA :	International Standard Atmosphere	TAS :	True Air Speed
MCP :	Maximum Continuous Power	TOP :	Take-Off Power
OGE :	Out of Ground Effect	VNE :	Never Exceed Speed
PA :	Pressure Altitude	Vz :	Rate-of-climb

Units

nm :	nautical miles	hr:min :	hours:minutes
kts:	knots	kg :	kilogramms
ft/min :	feet per minute	lb :	pounds
m/sec :	meters per second	km :	kilometers
° C :	degrees Celsius		

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Performance charts

The performance charts presented hereafter apply to an aircraft as per the standard definition.

■ Take-off weight in hover IGE, (height 6 ft, Maximum TOP, no wind)	Page 26
■ Take-off weight in hover OGE, (Maximum TOP, no wind)	Page 27
■ Fast cruise speed (ISA)	Page 28
■ Fast cruise speed (ISA+ 20°C)	Page 29
■ Fast cruise speed (ISA+ 35°C)	Page 30
■ Recommended cruise speed (ISA)	Page 31
■ Recommended cruise speed (ISA + 20°C)	Page 32
■ Recommended cruise speed (ISA + 35°C)	Page 33
■ Rate of climb in oblique flight (ISA)	Page 34
■ Rate of climb in oblique flight (ISA + 20°C)	Page 35
■ Rate of climb in oblique flight (ISA + 35°C)	Page 36
■ Hourly fuel consumption at fast cruise speed (ISA, ISA + 20°C, ISA + 35°C)	Page 37
■ Hourly fuel consumption at recommended cruise speed (ISA, ISA + 20°C, ISA + 35°C)	Page 38
■ Internal Payload Versus Range (ISA, recommended cruise speed, without reserve)	Page 39
■ Internal Payload Versus Range (ISA + 35°C, recommended cruise speed, without reserve)	Page 40

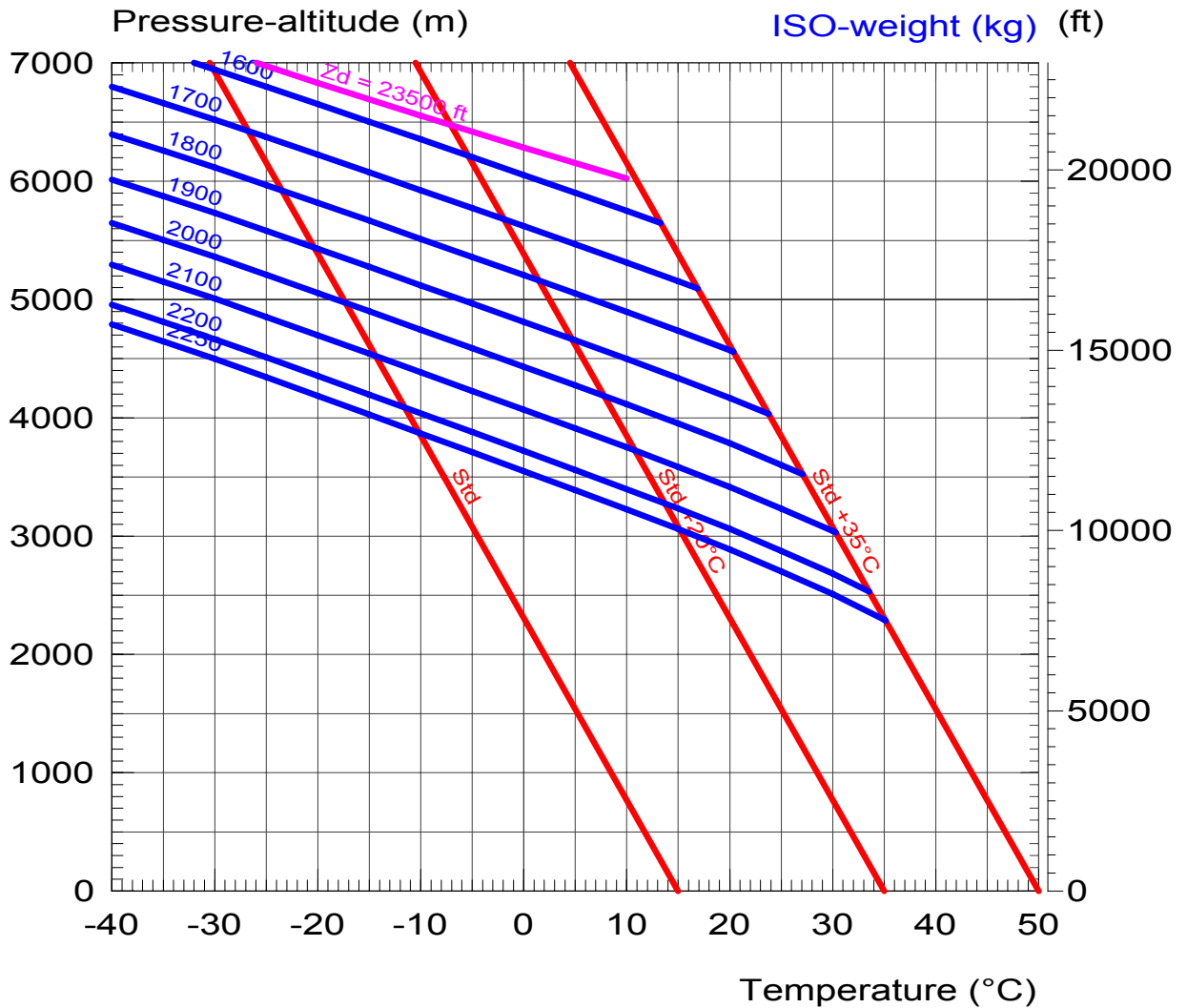
The data set forth in this document are general in nature and for information purposes only.

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HOVER CEILING I.G.E.

at maximum TOP

(Height 6 ft)



Note : Approved performance (as long as the engine meets the power check criteria), as defined in the Flight Manual.

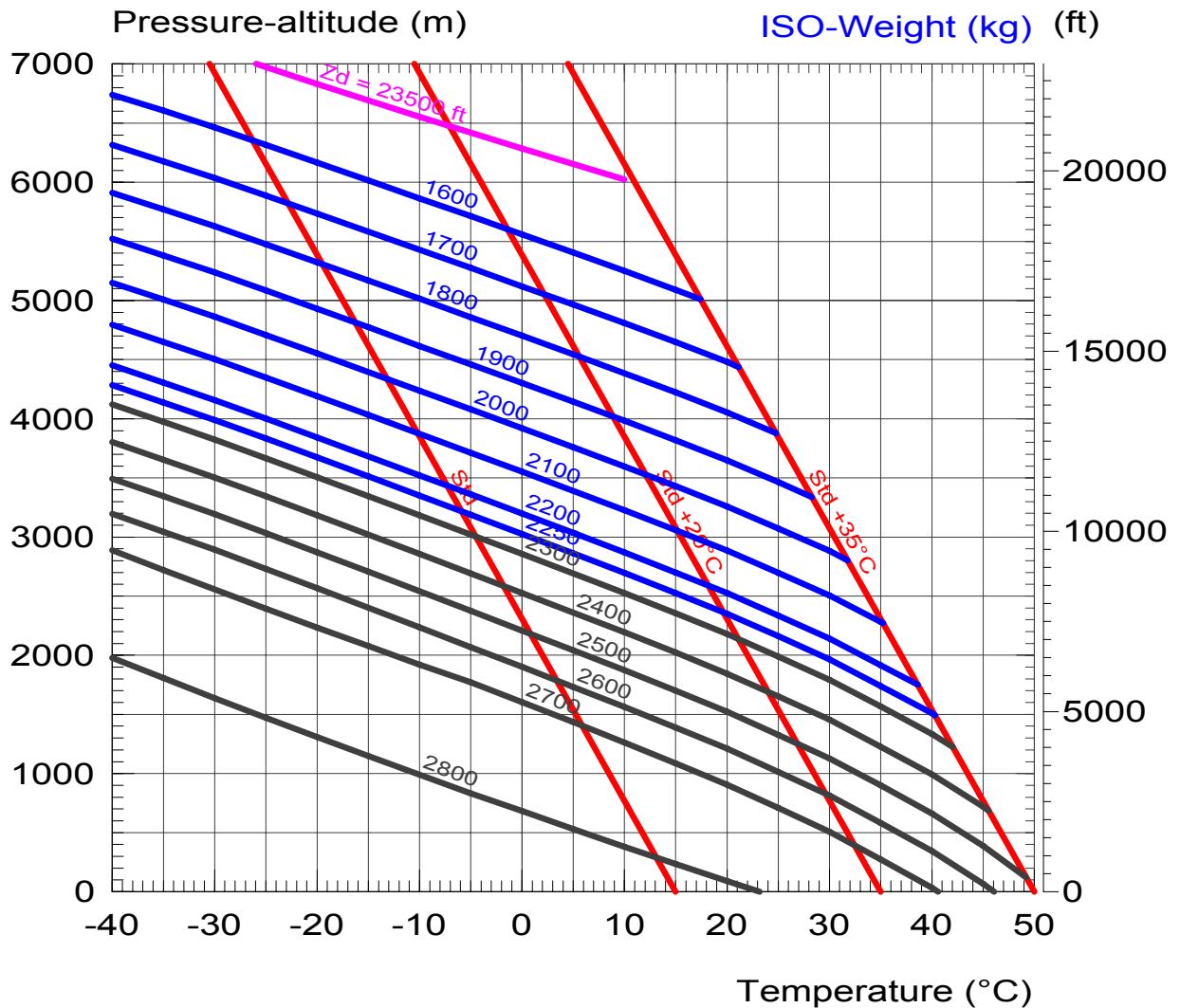
Note : With the sand filter operating, the performance is modified. Refer to table page 23.

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HOVER CEILING O.G.E.

at maximum TOP



Note : ISO weight curves from 2,300 to 2,800 kg are curves with external load.

Note : Approved performance (as long as the engine meets the power check criteria), as defined in the Flight Manual.

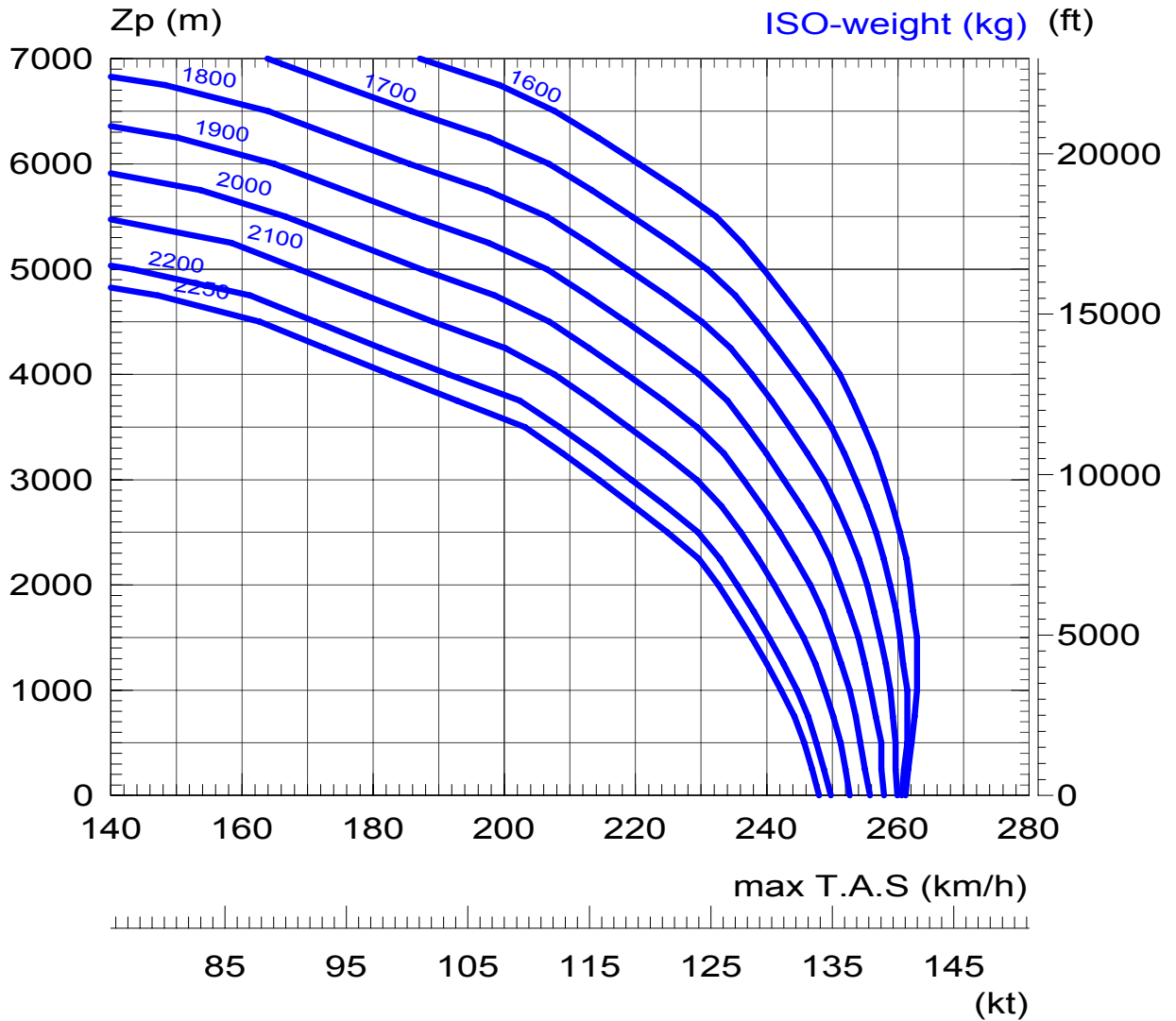
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FAST CRUISE SPEED

ISA



Note : Typical performance with clean standard aircraft.

In case of extremely light and rear centered CG aircraft, speed is restricted at 246 km/hr - 133 kts.

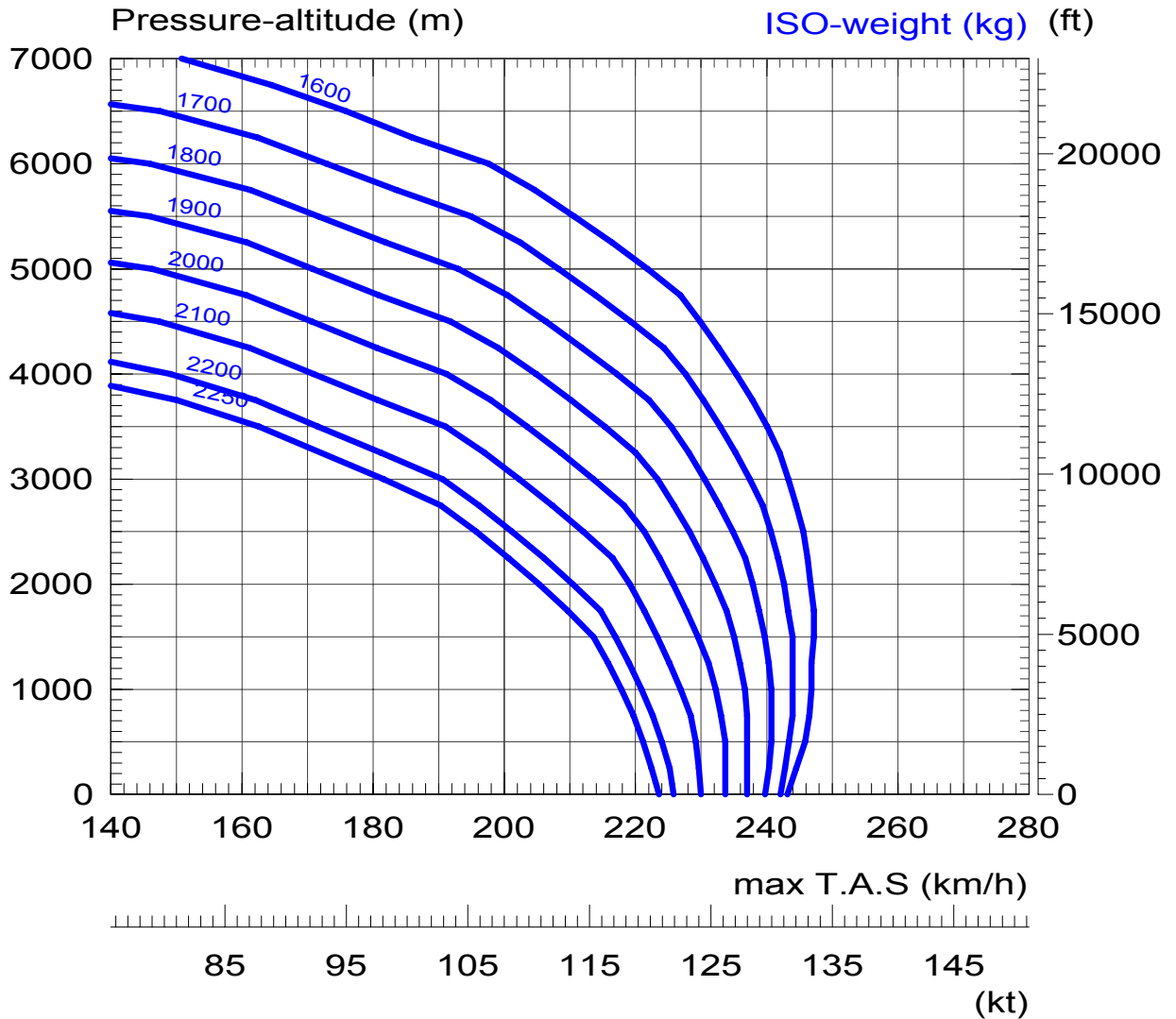
Note : With the sand filter operating, the performance is modified. Refer to table page 23.

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FAST CRUISE SPEED

ISA + 20°C



Note : Typical performance with clean standard aircraft.

In case of extremely light and rear centered CG aircraft, speed is restricted at 246 km/hr - 133 kts.

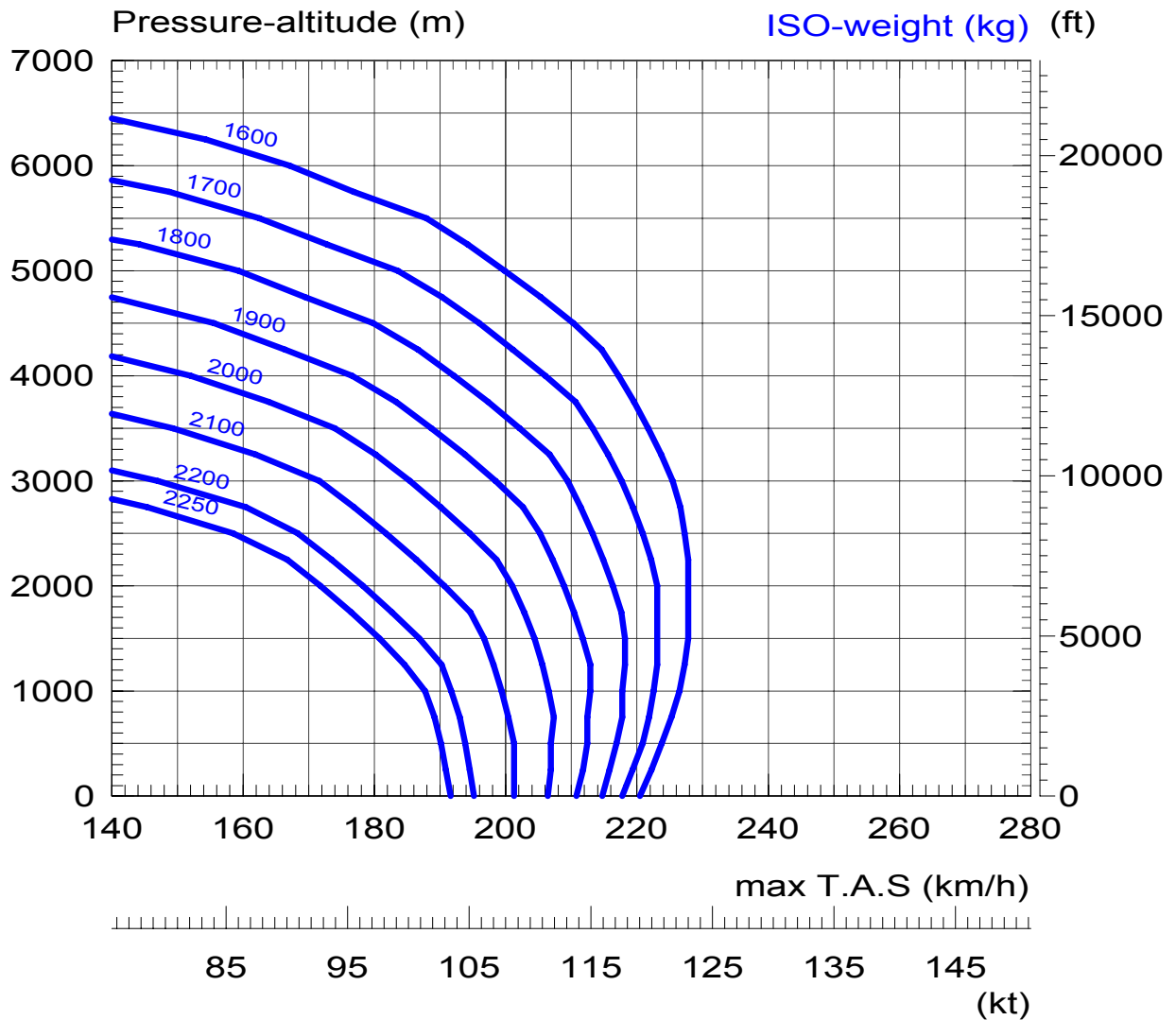
Note : With the sand filter operating, the performance is modified. Refer to table page 23.

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FAST CRUISE SPEED

ISA + 35°C



Note : Typical performance with clean standard aircraft.

In case of extremely light and rear centered CG aircraft, speed is restricted at 246 km/hr - 133 kts.

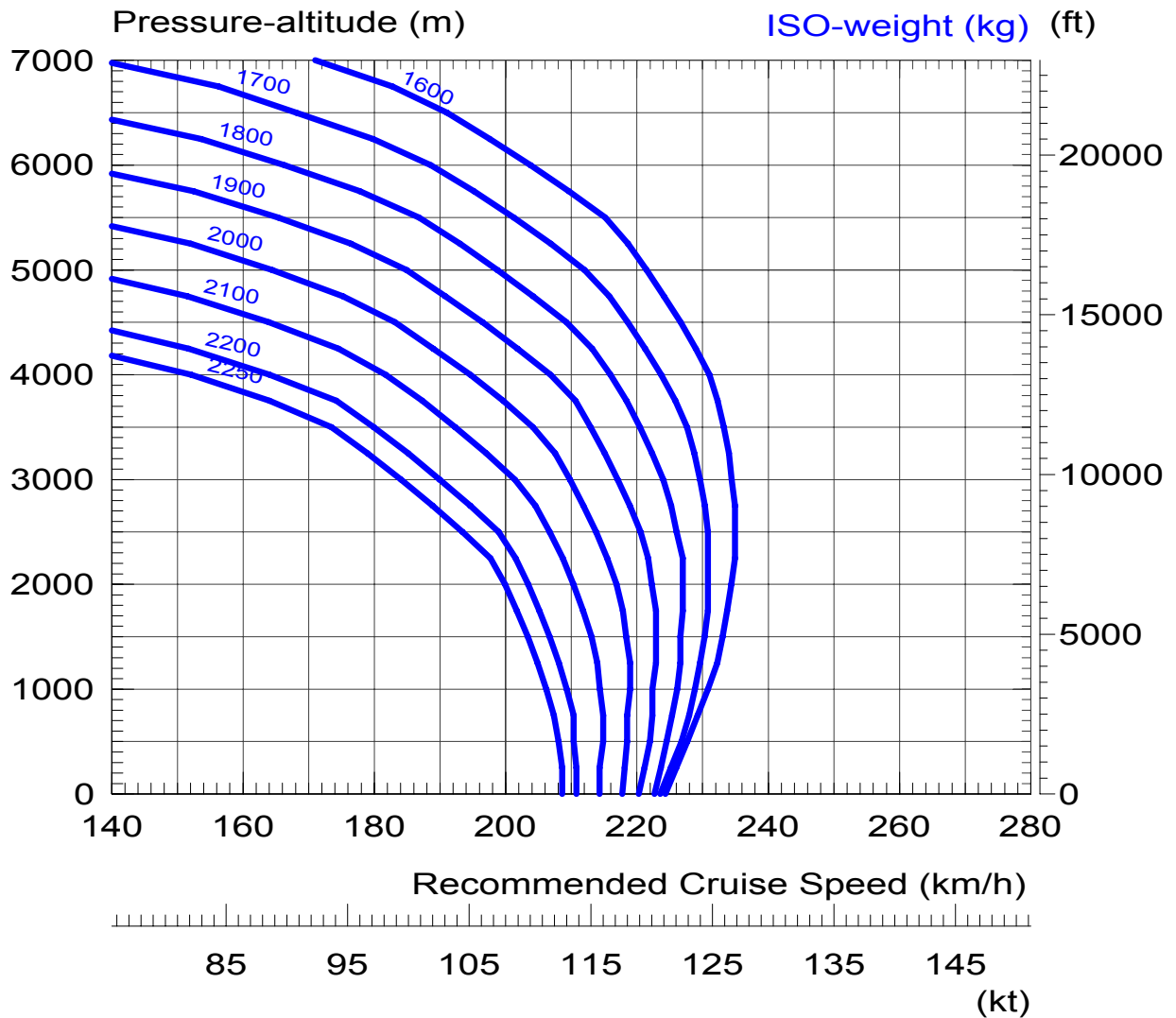
Note : With the sand filter operating, the performance is modified. Refer to table page 23.

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RECOMMENDED CRUISE SPEED

ISA



Note : Typical performance with clean standard aircraft.

In case of extremely light and rear centered CG aircraft, speed is restricted at 246 km/hr - 133 kts.

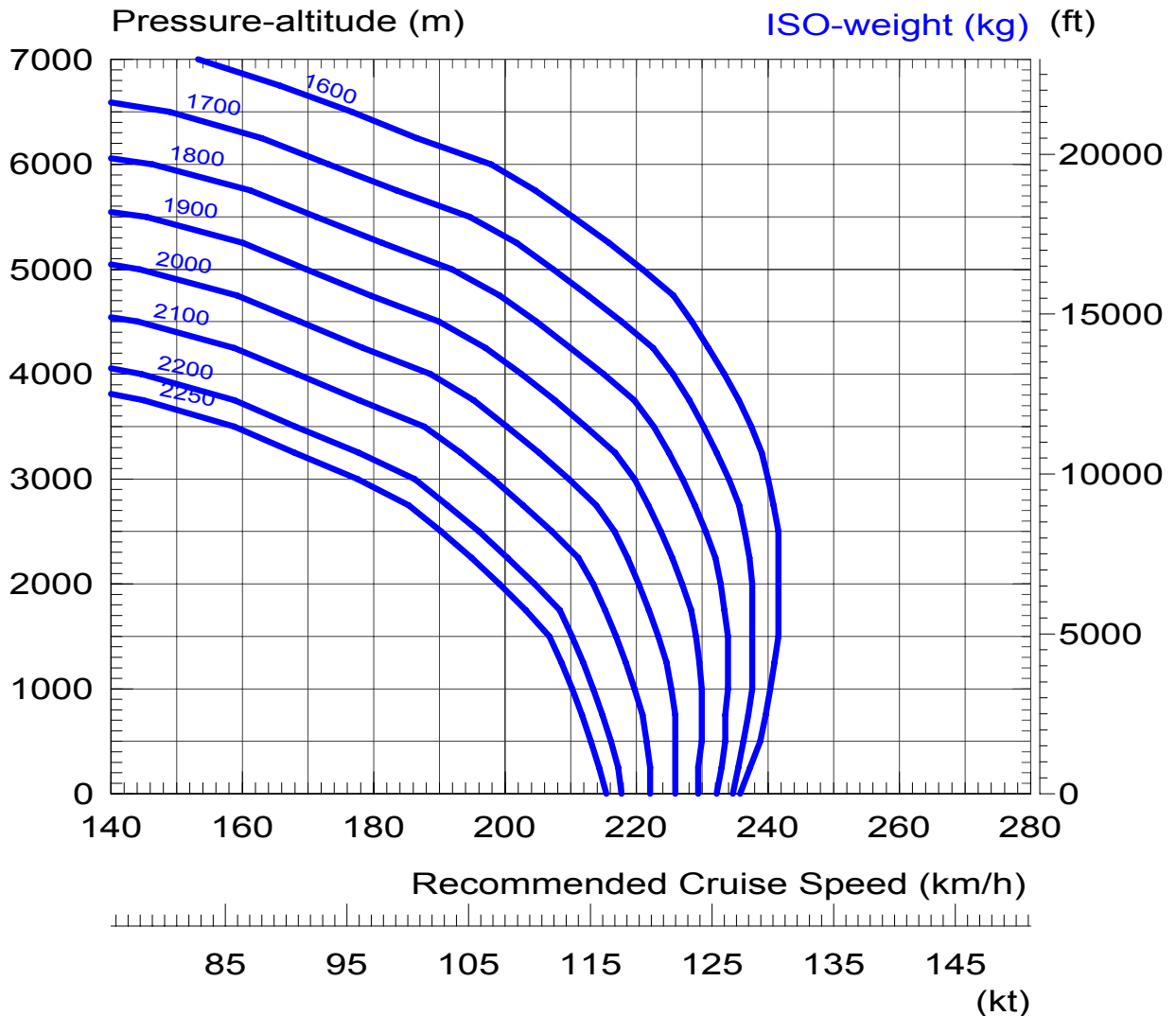
Note : With the sand filter operating, the performance is modified. Refer to table page 23.

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RECOMMENDED CRUISE SPEED

ISA + 20° C



Note : Typical performance with clean standard aircraft.

In case of extremely light and rear centered CG aircraft, speed is restricted at 246 km/hr - 133 kts.

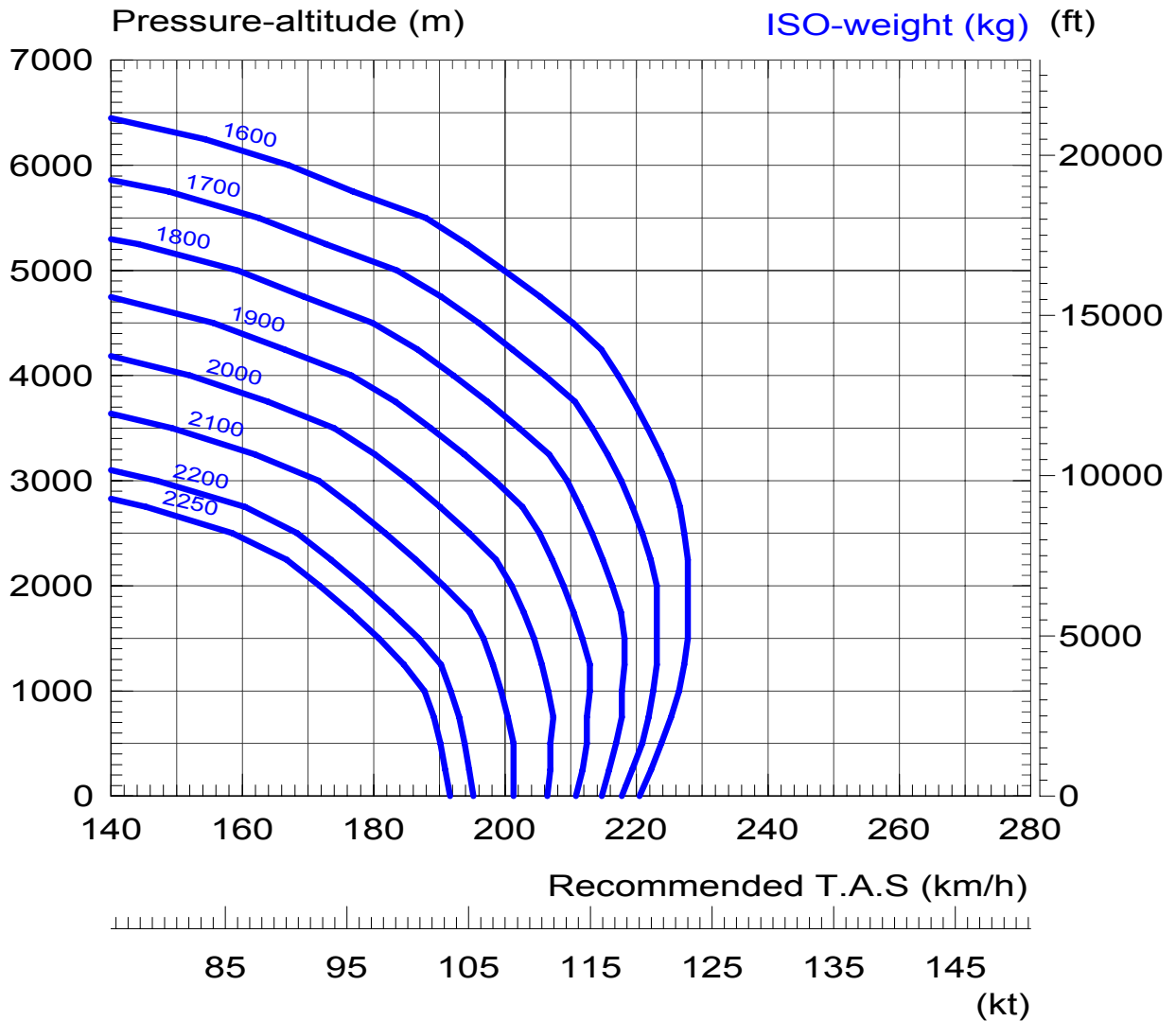
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RECOMMENDED CRUISE SPEED

ISA + 35° C



Note : Typical performance with clean standard aircraft.

In case of extremely light and rear centered CG aircraft, speed is restricted at 246 km/hr - 133 kts.

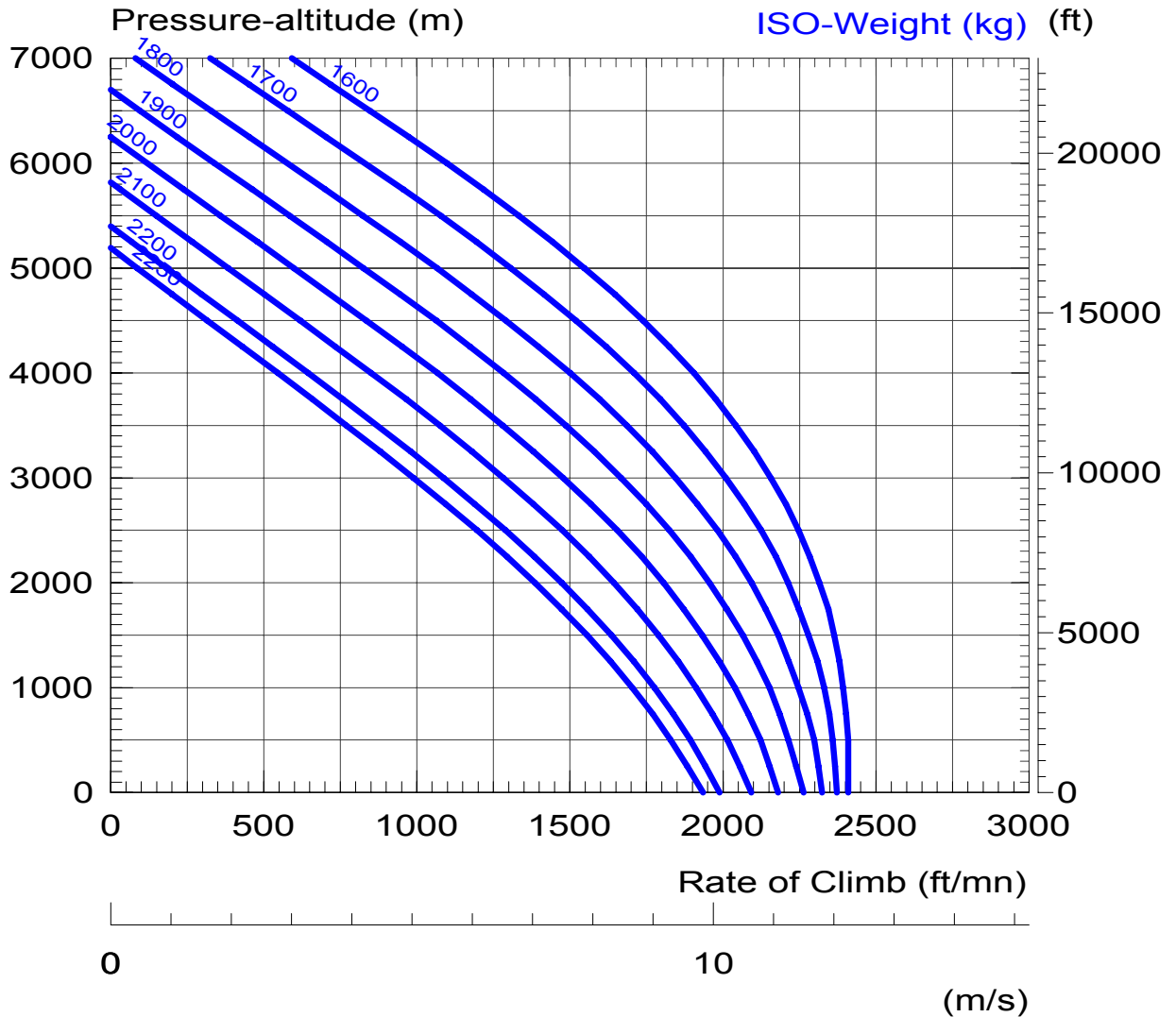
Note : With the sand filter operating, the performance is modified. Refer to table page 23.

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RATE OF CLIMB IN OBLIQUE FLIGHT

ISA



Note : Approved performance (as long as the engine meets the power check criteria), as defined in the Flight Manual.

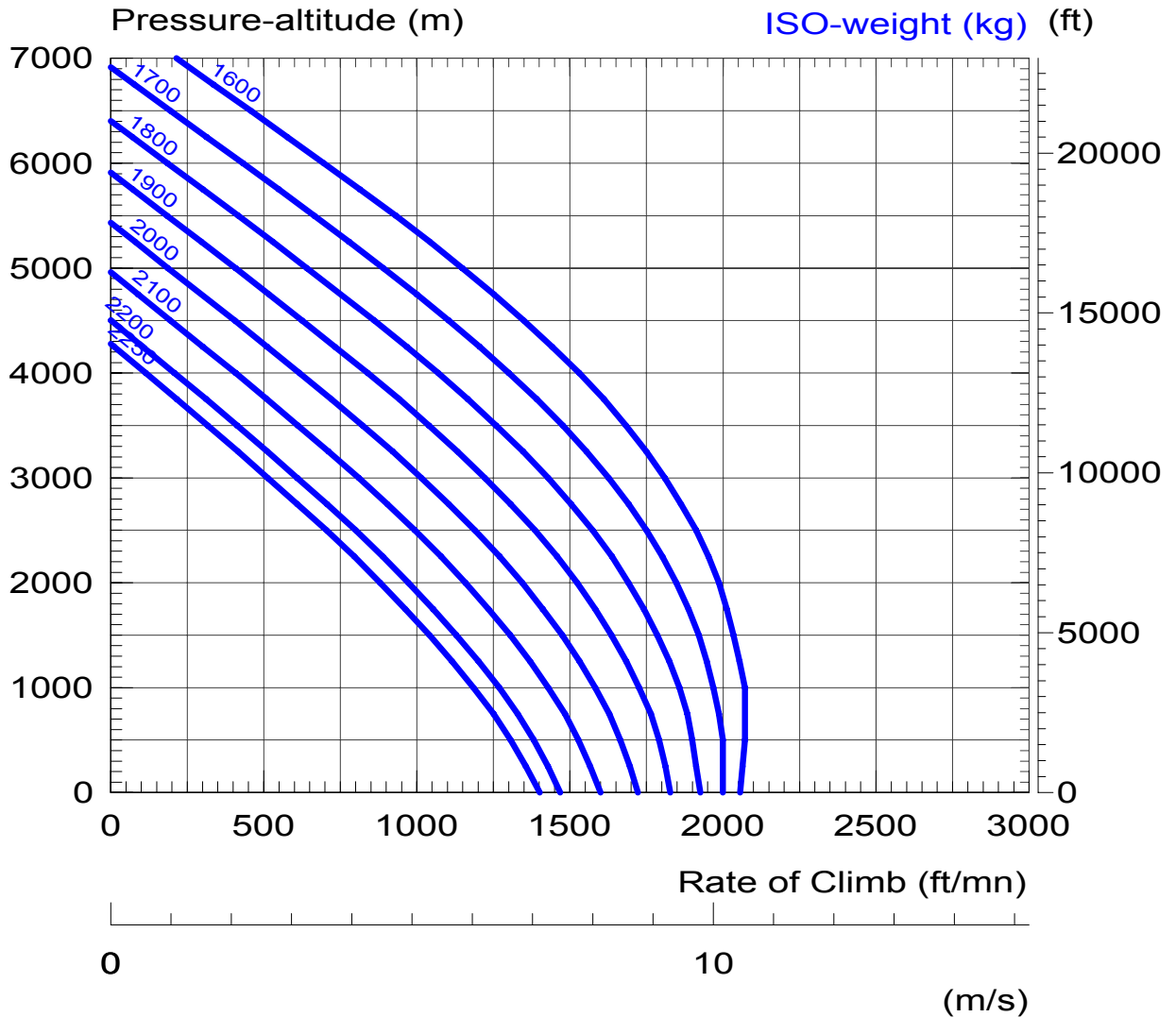
Note : With the sand filter operating, the performance is modified. Refer to table page 23.

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RATE OF CLIMB IN OBLIQUE FLIGHT

ISA + 20° C



Note : Approved performance (as long as the engine meets the power check criteria), as defined in the Flight Manual.

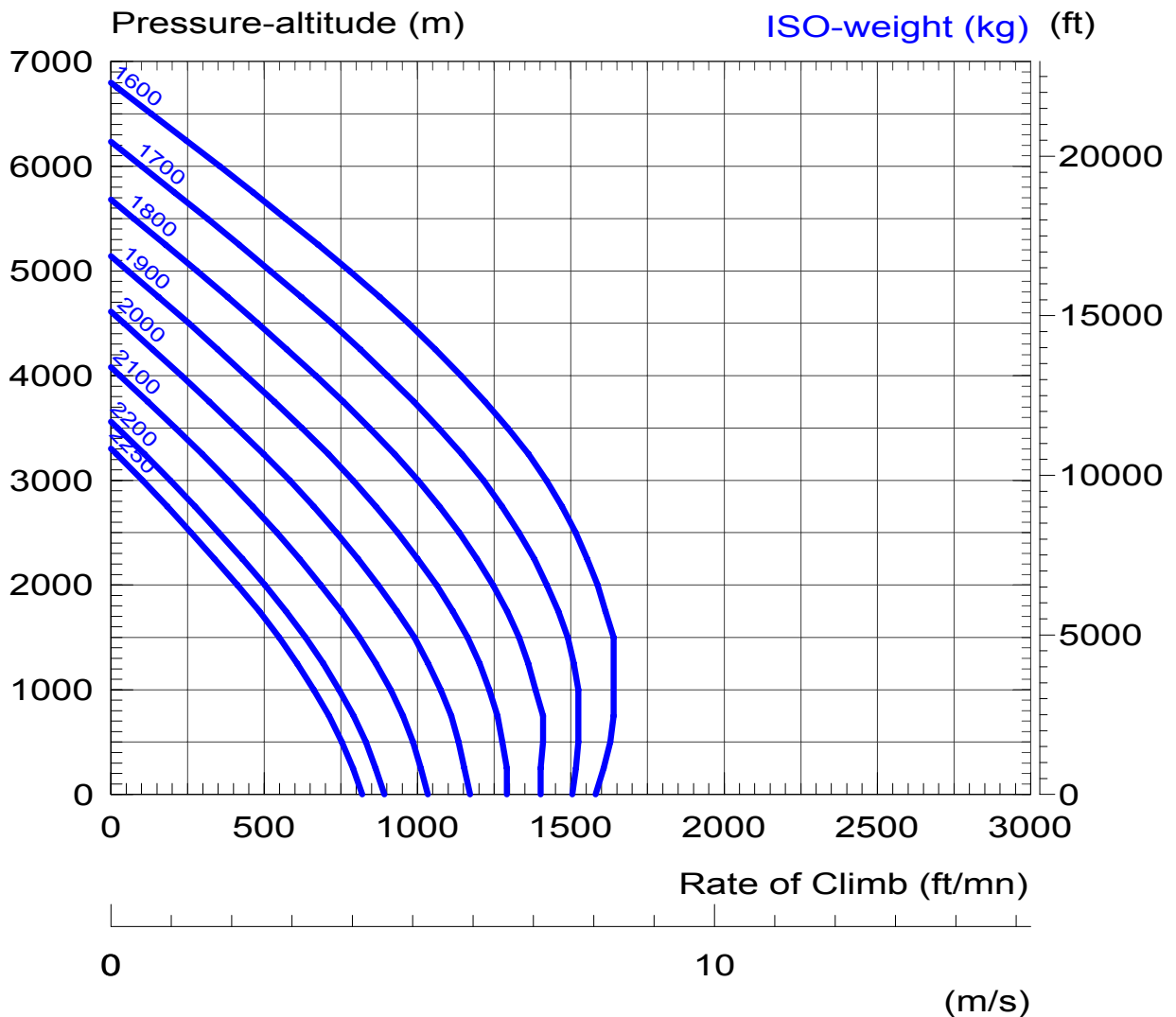
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RATE OF CLIMB IN OBLIQUE FLIGHT

ISA + 35° C



Note : Approved performance (as long as the engine meets the power check criteria), as defined in the Flight Manual.

Note : With the sand filter operating, the performance is modified. Refer to table page 23.

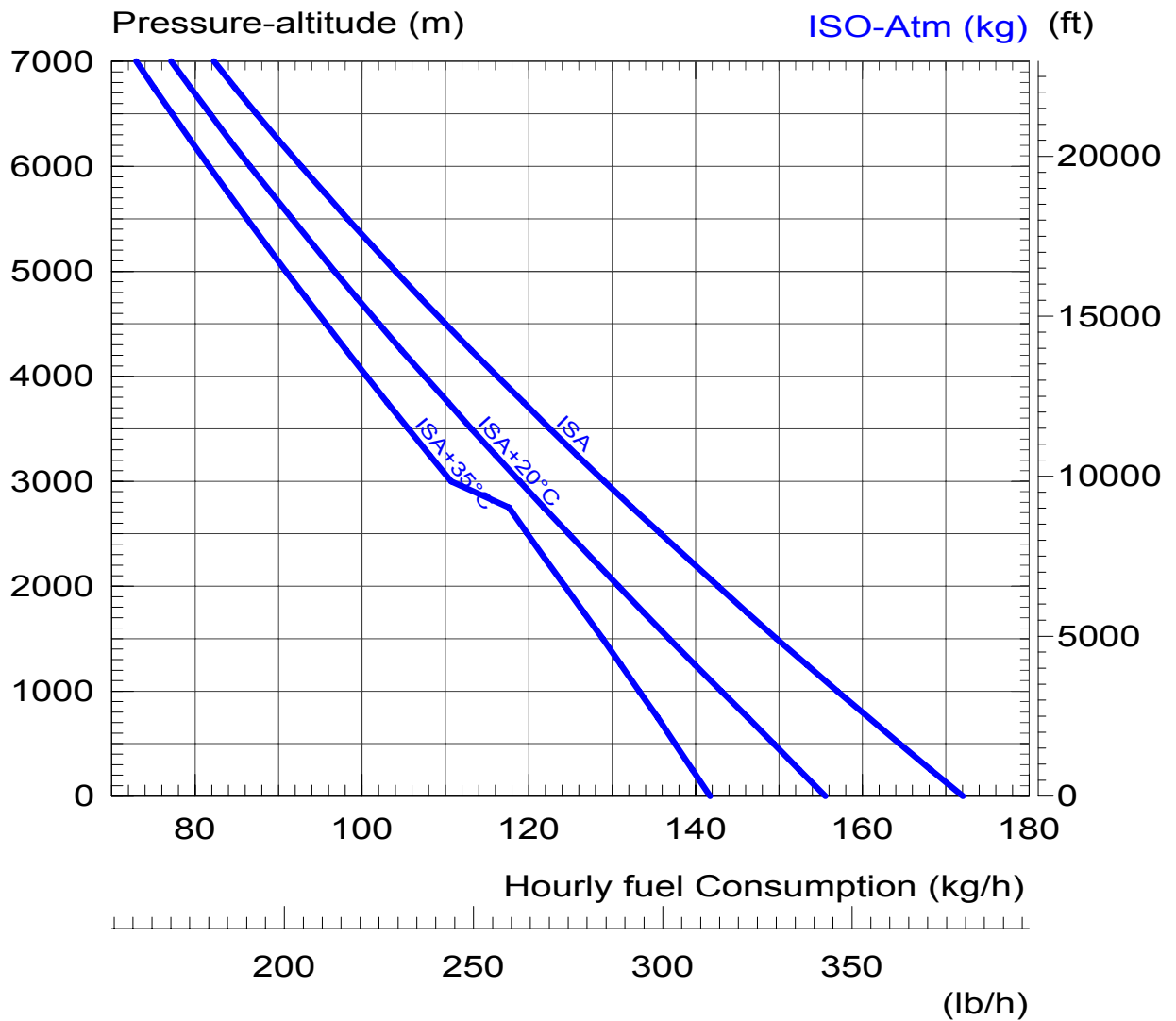
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HOURLY FUEL CONSUMPTION

at fast cruise speed

ISA, ISA + 20°C, ISA + 35°C



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

Note : With the sand filter operating, the performance is modified. Refer to table page 23.

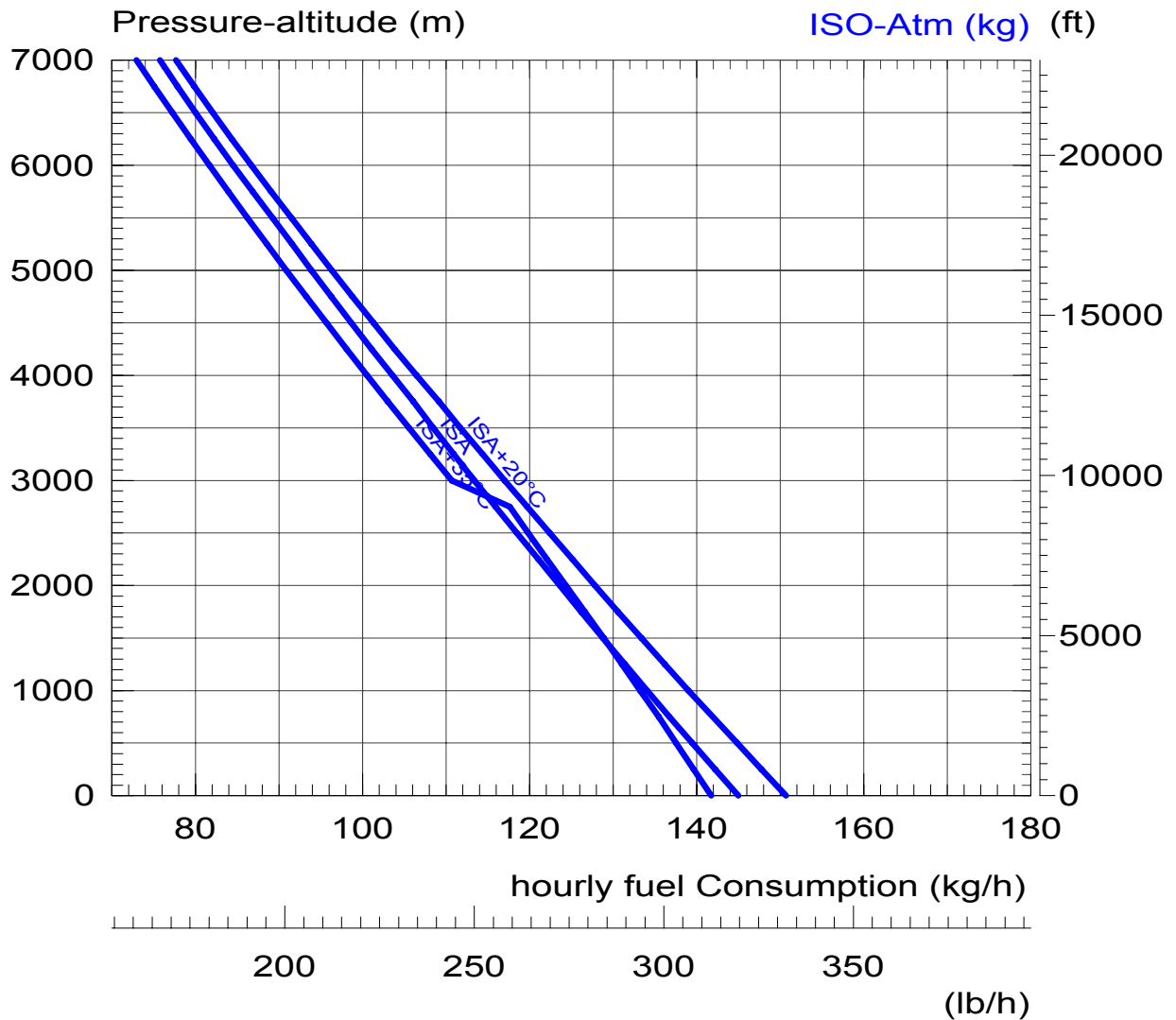
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HOURLY FUEL CONSUMPTION

at recommended cruise speed

ISA, ISA + 20°C, ISA + 35 °C



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

Note : With the sand filter operating, the performance is modified. Refer to table page 23.

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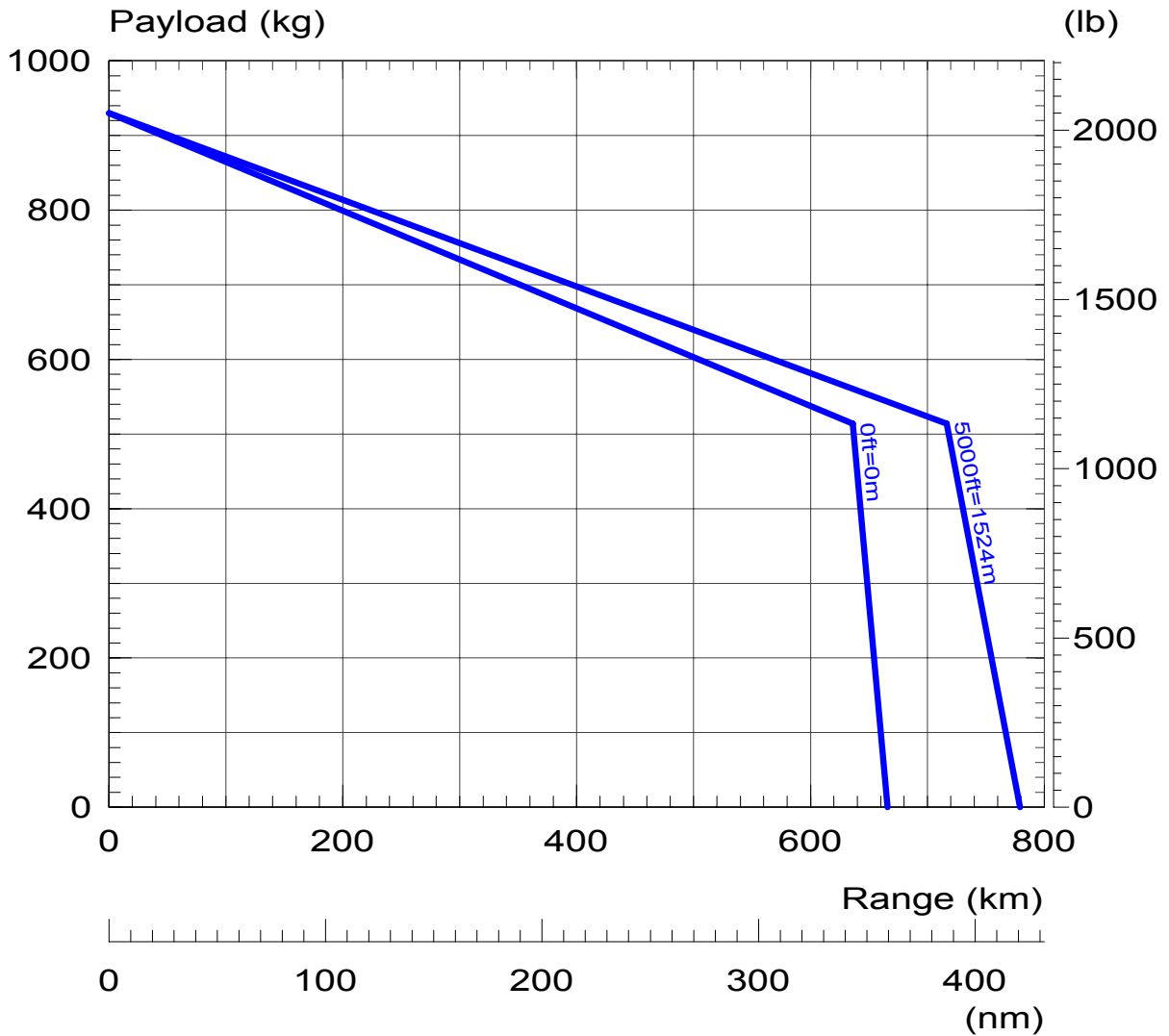
For performance data and operating limitations, reference must be made to the approved flight manual and all appropriate documents..

PAYLOAD / RANGE

ISA

Recommended cruise speed

Empty weight equipped a/c + 1 pilot : 1320 kg - 2910 lb



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

Note : With the sand filter operating, the performance is modified. Refer to table page 23.

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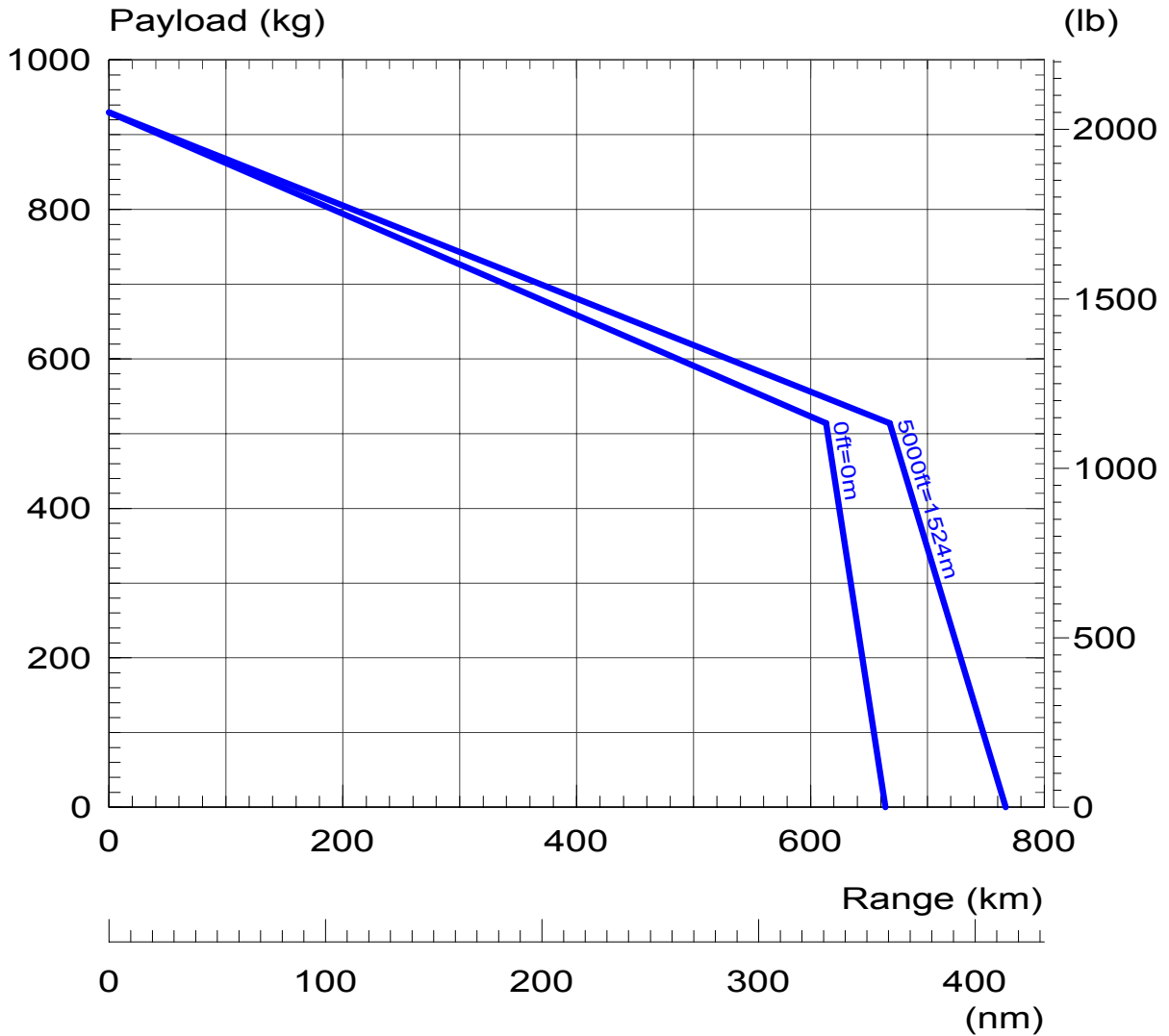
For performance data and operating limitations, reference must be made to the approved flight manual and all appropriate documents..

PAYLOAD / RANGE

ISA + 35°C

Recommended cruise speed

Empty weight equipped a/c + 1 pilot : 1320 kg - 2910 lb



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

Note : With the sand filter operating, the performance is modified. Refer to table page 23.

The data set forth in this document are general in nature and for information purposes only.

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