## 01.00 CONTENTS

## GENERAL

This section includes the limitations required by the regulations and contained in the Flight Manual.

R All references to airspeed, Mach and altitude relate to indicated airspeed, indicated Mach and pressure altitude, unless otherwise noted.

## KIND OF OPERATIONS

This airplane is certified in the public transport category (passengers and freight) for day and night operations, in the following conditions when the appropriate equipment and instruments required by the airworthiness and operating regulations are approved, installed and in an operable condition :

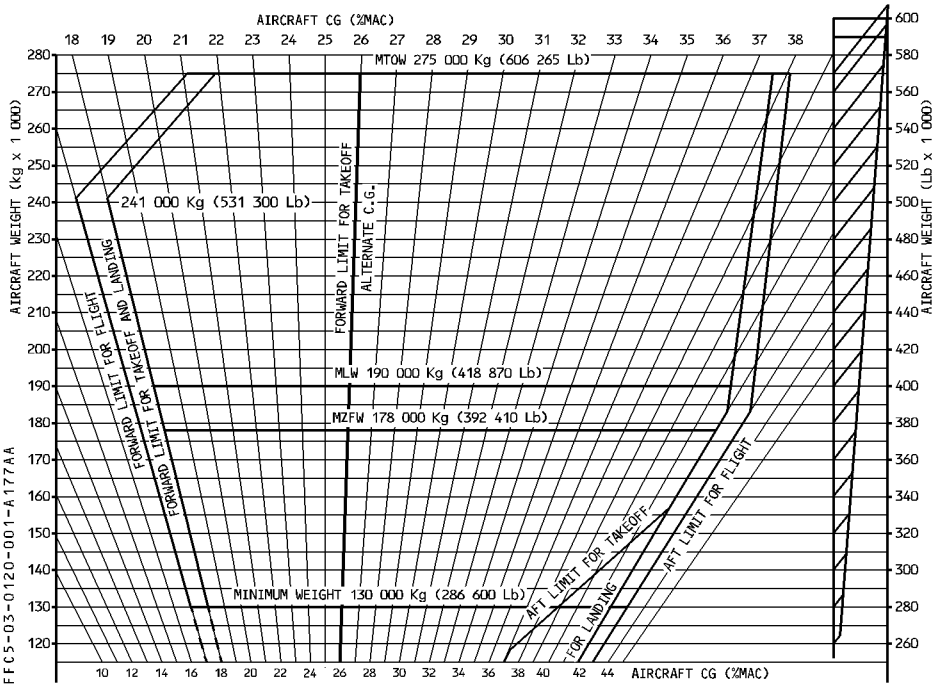
- VFR and IFR
- Extended overwater flight
- Flight in icing conditions
- Maximum number of passenger seats : 375

## MINIMUM FLIGHT CREW

The minimum flight crew consists of 2 pilots.

## CENTER OF GRAVITY LIMITS

R




- CG limits are given in percentage of the reference chord length aft of the leading edge.
- The reference chord length is 7.27 m (23.85 feet). It is 28.15 m (92.36 feet) aft of the aircraft nose.
- The CG must always be within these limits, regardless of fuel load.

## WEIGHT LIMITATIONS

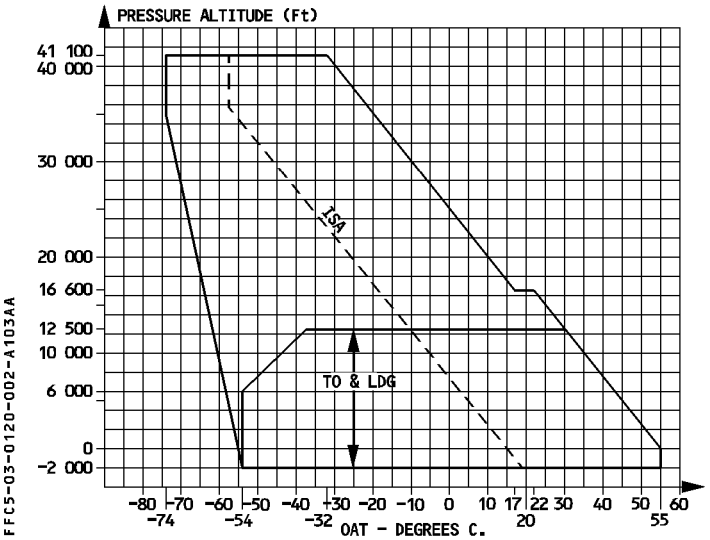
Maximum taxi weight . . . . . 275 900 kg (608 250 lb)
Maximum takeoff weight (brake release) . . . . . 275 000 kg* (606 265 lb)
Maximum landing weight . . . . . 190 000 kg* (418 870 lb)
Maximum zero fuel weight . . . . . 178 000 kg* (392 410 lb)
Minimum weight . . . . . 130 000 kg (286 600 lb)

R * Weight varies with CG (refer to graph p 1).
R In exceptional conditions (in flight turn back or diversion), an immediate landing at weight
R above maximum landing weight is permitted provided that the pilot follows the overweight
R landing procedure.

## FLIGHT MANEUVERING LOAD ACCELERATION LIMITS

Clean configuration . . . . . – 1 g to + 2.5 g
Other configurations . . . . . 0 g to + 2 g

## ENVIRONMENTAL ENVELOPE



## AIRPORT OPERATIONS

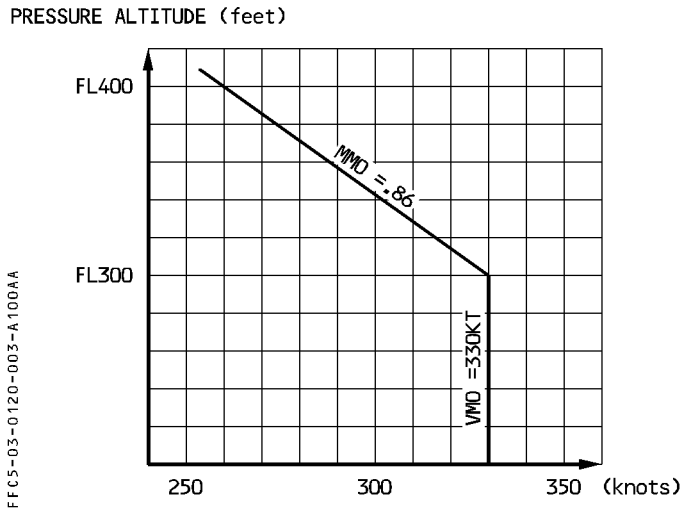
· Runway slope (mean) . . . . . ± 2 %
· Runway altitude . . . . . 12 500 feet
· Wind for takeoff and landing :
  – Maximum crosswind demonstrated . . . . . 27 knots with gusts up to 33 knots
  – Maximum tailwind . . . . . 15 knots
    · Maximum crosswind values have been demonstrated with flight controls in normal law, as well as in direct law, with and without yaw damper.

R *Note : Maximum tailwind for automatic landing and rollout is 10 knots.*

Wind for passenger/cargo door operation :
– Maximum wind for passenger door operation is 40 knots (or 50 knots, if the aircraft nose is oriented into the wind).
– Maximum wind for cargo door operation is 40 knots (or 60 knots, if the aircraft nose is oriented into the wind, or the door is on the leeward side).
– The passenger/cargo door must be closed before the wind speed exceeds 60 knots.

## SPEED LIMITATIONS

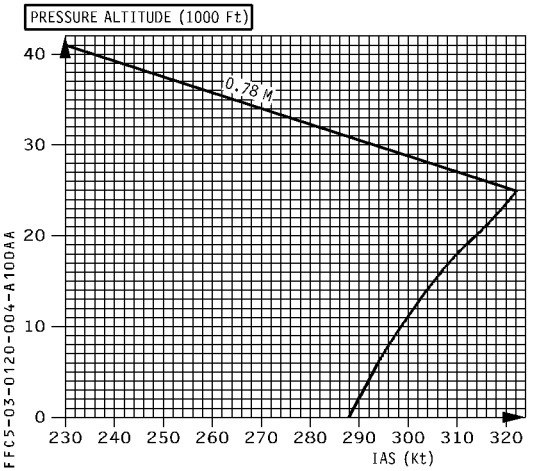
### MAXIMUM OPERATING SPEED VMO/MMO




The maximum operating limit speed VMO/MMO may not be deliberately exceeded in any regime of flight.

## MAXIMUM DESIGN MANEUVERING SPEED VA

(Applies in alternate or direct flight control laws only).

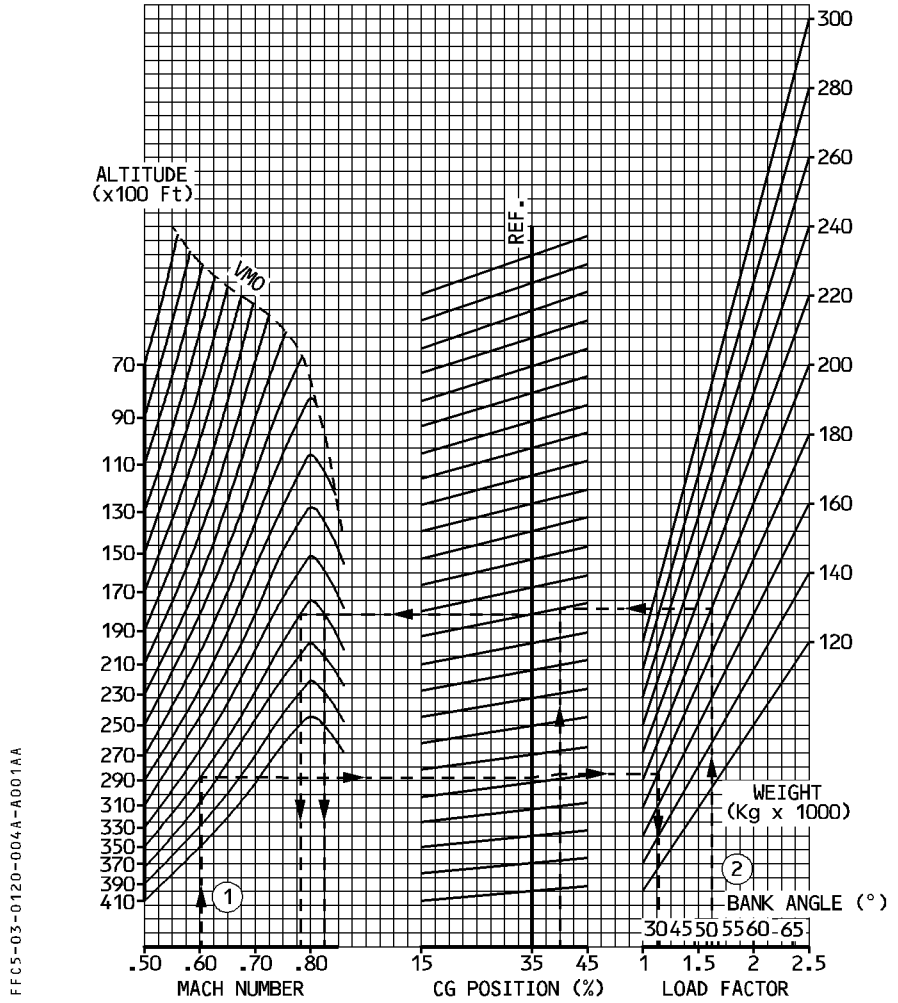



If alternate or direct law is active, full ailerons and rudder should only be applied at speeds below VA.
If alternate or direct law is active, maneuvres involving an angle-of-attack near stall should only be performed at speeds below VA.

CAUTION

Rapid and large alternating control inputs, especially in combination with large changes in pitch, roll, or yaw (e.g. large sideslip angles) may result in structural failures at any speed, even below VA.

## BUFFET ONSET




Examples :

1. Determine Maximum Bank Angle limited by buffet :
   DATA : M = 0.6, FL = 350, CG = 40 %, WEIGHT = 180000 kg
   RESULT : load factor = 1.15 g or 30° bank
2. Determine low and high speed limited by buffet :
   DATA : 52° bank or 1.63 g, WEIGHT = 200000 kg, CG = 40%, FL = 350
   RESULT : M = 0.775 (low speed buffet) and M = 0.825 (high speed buffet).

## MAXIMUM FLAPS/SLATS SPEEDS

| Lever Position | SLATS | FLAPS | AILERONS | Ind. on ECAM | MAX SPD | FLIGHT PHASE |
|---|---|---|---|---|---|---|
| 1 | 20 | 0 | 0 | 1 | 255 | HOLDING |
| | | 17 | 10 | 1 + F | 215 | TAKEOFF |
| 2 | 24 | 17 | 10 | 2(a) | 205 | APPROACH |
| | 24 | 22 | 10 | 2 | 196 | TAKEOFF/APPROACH |
| 3 | 24 | 26 | 10 | 3 | 186 | TAKEOFF/APPR/LDG |
| FULL | 24 | 32 | 10 | FULL | 180 | LANDING |
| (a) This slats/flaps position corresponds to CONF 1* | | | | | | |

· Maximum altitude with flaps/slats extended : 20000 feet.

## GEAR DOWN SPEEDS

· Maximum speed with landing gear extended (VLE) . . . . . 240 knots/.55
· Maximum speed at which the landing gear may be operated (extension and retraction) (VLO) . . . . . 240 knots/.55
· Maximum speed for gravity extension (VLE/VLO) . . . . . 200 knots
· Maximum altitude at which the landing gear may be extended . . . . . 21000 feet

## MAXIMUM TIRE SPEED

R · Ground speed . . . . . 204 knots

## WINDSHIELD WIPERS IN USE

· Maximum speed . . . . . 230 knots

## COCKPIT WINDOW OPEN

· Maximum speed . . . . . 230 knots

*Note : It is not possible to open the cockpit windows, with the packs ON.*

## SPEEDBRAKES

· No limitation.

R **MINIMUM CONTROL SPEEDS**

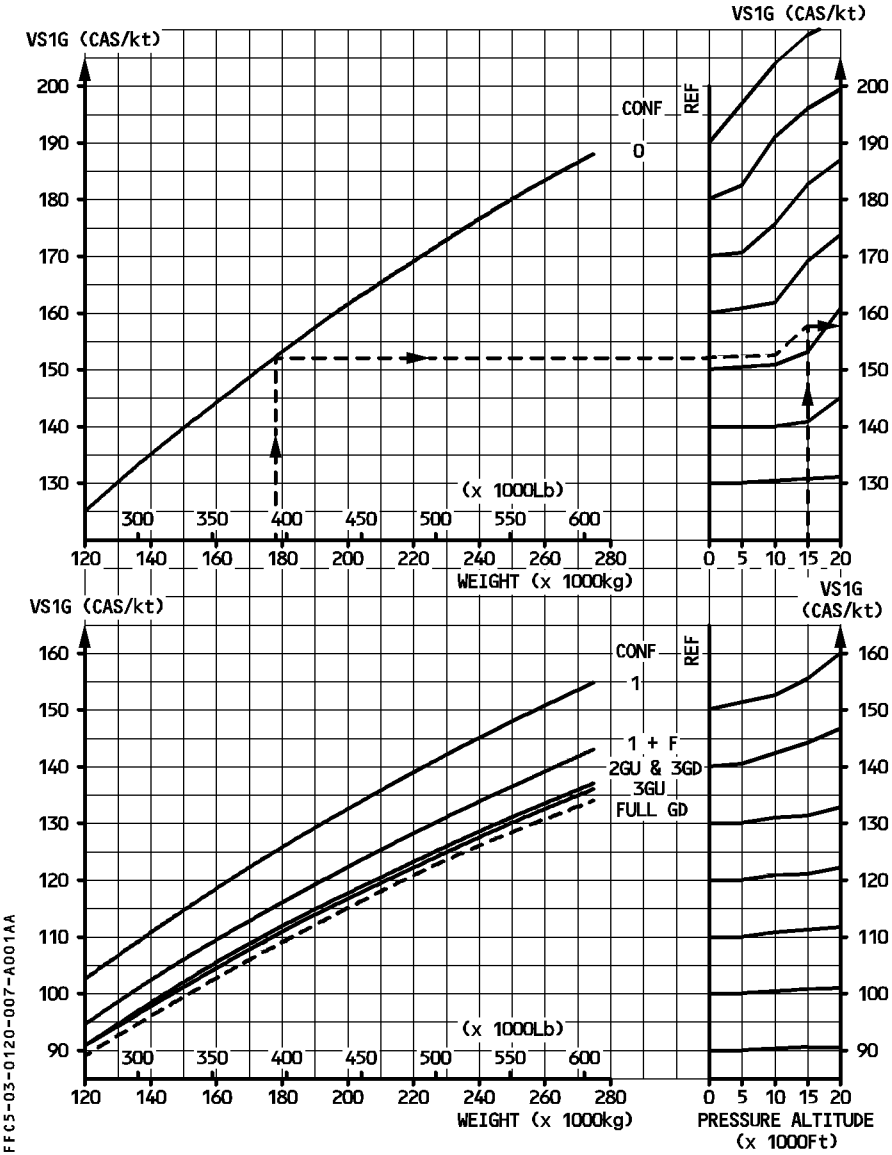
VMCL = 125 kt ; VMCL-2 = 157 kt.

R

| Altitude (ft) | VMCA (KT CAS) | VMCG (KT IAS) | | |
|---|---|---|---|---|
| | | CONF 1 + F | CONF 2 | CONF 3 |
| 0 | 124 | 126.5 | 126.5 | 127 |
| 2000 | 121 | 123.5 | 123.5 | 124 |
| 4000 | 118 | 120 | 120 | 121 |
| 6000 | 115 | 117 | 117 | 118 |
| 8000 | 111.5 | 114 | 114 | 114.5 |

## STALLING SPEEDS

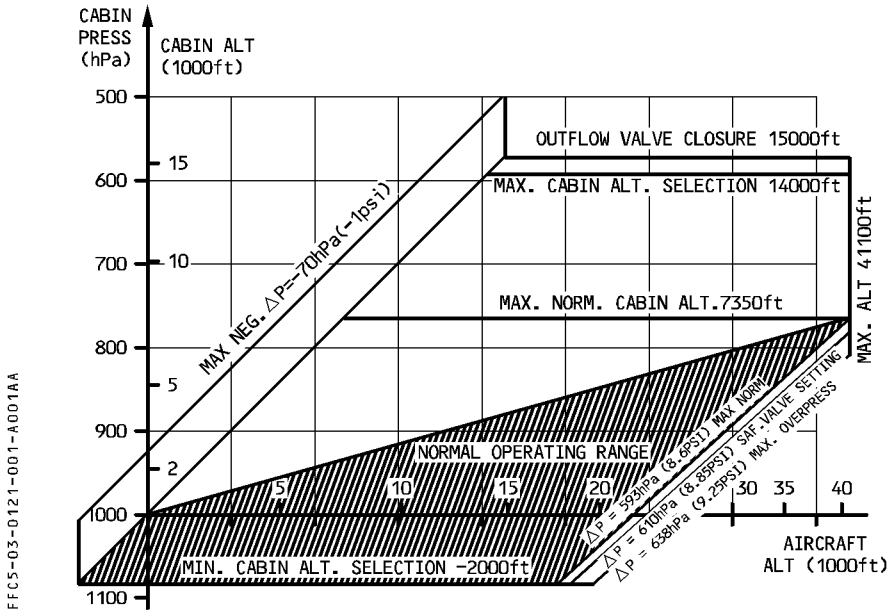
R




R EXAMPLE : DATA : 178 000 kg (392419 lb), PRESSURE ALTITUDE 15000 ft, CLEAN
R CONFIGURATION
RESULT : VS1G CAS = 158 kt

## CABIN PRESSURE

- Maximum positive differential pressure . . . . . 9.25 psi
- Maximum negative differential pressure . . . . . – 1 psi
- Safety relief valve setting . . . . . 8.85 psi/– 1 psi




*Note : Maximum differential pressure and safety valve setting tolerance = ± 7 hPa (0.1 psi).*

## RAM AIR INLET

Opens only if differential pressure is lower than 1 psi.

## AIR CONDITIONING WITH LP GROUND UNIT

- Do not use conditioned air simultaneously from packs and low pressure ground units (to avoid chattering of the non return valves).
- Air flow supplied by two ground carts should not exceed 2 × 1.6 kg/sec (2 × 3.53 lb/sec).

R **AIR CONDITIONING WITH HP GROUND UNIT**

R – Do not use HP ground unit when APU supplies bleed air to avoid bleed system damage.

## GENERAL

### AUTO PILOT FUNCTION

Minimum height for use of autopilot on takeoff with SRS mode . . . . . 100 ft AGL
(An internal FMGS logic prevents the autopilot from engaging during the 5 seconds after liftoff).
Minimum height for use of the autopilot in :
Straight-in non precision approach . . . . . applicable MDA (MDH)
Circling approach . . . . . applicable MDA - 100 ft (or MDH - 100 ft)
ILS approach with CAT 1 displayed on FMA . . . . . 160 ft AGL
Go-around (AP or FD engagement) . . . . . 100 ft AGL
All other phases . . . . . 500 ft AGL
Use of the AP or FD in OPEN DES or DES mode is not permitted in approach, unless the FCU altitude is set to, or above, MDA (MDH) or 500 feet, whichever is the highest.

### AUTOTHRUST FUNCTION

R Use of the autothrust is approved with, or without, AP/FD in selected or managed mode.

## FLIGHT MANAGEMENT FUNCTION

FMGS lateral and vertical navigation has been certified for after takeoff, en route, and terminal area operations, for instrument approach procedures (except ILS, LOC, LOC-BC, LDA, SDF and MLS), and for missed approach procedures.
RNP accuracy with GPS PRIMARY, has been demonstrated to be :

R

| | With AP ON in NAV | With AP OFF and FD ON in NAV | With AP OFF and FD OFF |
|---|---|---|---|
| En route | 1 NM | 1 NM | 1.1 NM |
| In terminal area | 0.5 NM | 0.5 NM | 0.51 NM |
| In approach | 0.3 NM | 0.3 NM | Not authorized |

Without GPS PRIMARY (or GPS deselected or inoperative), the accuracy has been demonstrated, provided the appropriate RNP value is checked or entered on the MCDU, and HIGH accuracy is displayed.
Without GPS PRIMARY (or GPS deselected or inoperative), the navigation accuracy is a function of ground radio navaid infrastructure, or elapsed time since the last radio update.
The FMGS is also certified for navigation within BRNAV, PRNAV, and RNP 10 airspace.
RNP10 oceanic/remote area operations are approved with GPS PRIMARY or, without GPS PRIMARY (or GPS deselected or inoperative), provided time limitations in IRS only navigation (acceptable to operational authorities), are established.
FMGS approval is based on the assumption that the navigation database has been
R validated for intended use. The Precision RNAV Airworthiness approval does not account
R for database accuracy or compatibility.
Obstacle clearance and adherence to airspace constraints remains the flight crew's responsibility.
Fuel, time predictions/performance information is provided for advisory purposes only.
NAV mode may be used after takeoff, provided FMGS runway updating has been checked.

## TAKEOFF IN GPS PRIMARY

For certain airports, where the difference between the local coordinate system and WGS 84 (geodesic standard used by GPS, FMS) is not negligible, an incorrect NAV guidance may occur after takeoff.
When departing from these airports, GPS must be deselected for takeoff from these airports, until a safe altitude is reached.

## USE OF NAV AND FINAL APP MODES FOR NON PRECISION APPROACH

NAV, or NAV and FINAL APP mode may be used for VOR, VOR/DME, NDB, NDB/DME or RNAV (including GPS) approach, but not for ILS, LOC, LOC-BC, LDA, SDF, or MLS final approach.

For instrument approach procedures not coded in WGS 84 (or equivalent) coordinate system, the GPS must be deselected.

FINAL APP mode guidance capability with GPS PRIMARY has been demonstrated down to MDH/DH (barometric) 250 feet.

VOR, VOR/DME, NDB or NDB/DME approach procedures may be performed, in NAV, or NAV and FINAL APP mode, provided AP or FD is used, and :

- GPS PRIMARY is available. In this case, the reference navaid may be unserviceable, or the airborne radio equipment may be inoperative, or not installed, provided operational approval is obtained.
- Without GPS PRIMARY :
  - The reference navaid and the corresponding airborne equipment is serviceable, tuned, and monitored during the approach, or
  - The radio navaid coverage supports the RNP value, specified for the approach procedure, and an operational approval is obtained.

For GPS approach, GPS PRIMARY must be available.

RNAV approach without GPS PRIMARY may be performed only if the radio navaid coverage supports the RNP value and HIGH accuracy is displayed on the MCDU with the specified RNP, and operational approval is obtained.

NAV mode may be used in the terminal area, provided :

- GPS PRIMARY is available, or
- HIGH accuracy is displayed, and the appropriate RNP is checked or entered on the MCDU, or

R - Navaid raw data is monitored.

## AUTOMATIC APPROACH, LANDING AND ROLL OUT

### CATEGORY II

Minimum decision height : . . . . . 100 feet AGL
At least one autopilot must be engaged in APPR mode and CAT 2, CAT 3 SINGLE or CAT 3 DUAL must be displayed on the FMA.
If the crew performs an automatic approach without autoland, the autopilot must be disengaged no later than at 80 feet.

### CATEGORY III FAIL PASSIVE

Minimum decision height : . . . . . 50 feet
At least one autopilot must be engaged in APPR mode and CAT 3 SINGLE or CAT 3 DUAL must be displayed on the FMA.

### CATEGORY III FAIL OPERATIONAL

A/THR must be used in selected or managed speed.
Alert height : . . . . . 200 feet
– CAT III With DH :
2 autopilots must be engaged in APPR mode and CAT 3 DUAL must be displayed on the FMA.
– CAT III Without DH :
2 autopilots must be engaged in APPR mode and CAT 3 DUAL must be displayed on the FMA.
Minimum Runway Visual Range : . . . . . 75 meters

R **ENGINE OUT**

R CAT II and CAT III autoland are only approved in configuration 3 if engine-out procedures
R are completed before reaching 1000 feet in approach. CAT III fail passive autoland is
R approved in single inner engine out, CAT III fail operational autoland in single outer engine
R out.

## MAXIMUM WIND CONDITIONS FOR CAT II/CAT III AUTOMATIC APPROACH, OR AUTOMATIC LANDING AND AUTOMATIC ROLL OUT

Headwind : 35 kt
Tailwind : 10 kt
Crosswind : 20 kt

*Note : Wind limitation is based on the surface wind reported by the tower. If the wind displayed on the ND exceeds the above-noted autoland limitations, but the tower reports surface wind within the limitations, then the autopilot can remain engaged. If the tower reports surface wind beyond the limitations, only a CAT I automatic approach without autoland can be performed.*

## AUTOMATIC LANDING

CAT II and CAT III autoland is approved in CONF3 and CONF FULL.
Automatic landing has been demonstrated :
- On CAT II and CAT III ILS beam,
- With ILS slope angle inside a range of (– 2.5°, – 3.15°),
- For airfield elevation lower than 9200 feet.
- For weights below maximum landing weight.
- R – at approach speed (VAPP) = VLS + wind correction
- R minimum wind correction = 5 kt
- R maximum wind correction = 15 kt

Automatic roll out performance has been approved on dry and wet runways, but performance on snow covered or icy runway has not been demonstrated.
Automatic landing system performance has been demonstrated on CAT II and CAT III ILS beams. However, automatic landing in CAT I, or better, weather conditions is possible on CAT I ground installation or when ILS-sensitive areas are not protected, if the following precautions are taken :
- The airline has checked that the ILS beam quality and the effect of the terrain profile before the runway have no adverse effect on autopilot guidance. In particular the effect of terrain discontinuities within 300m before the runway threshold must be evaluated.
- The crew is aware that LOC or GS beam fluctuations, independent of the aircraft system, may occur and the PF is prepared to immediately disconnect the autopilot and to take the appropriate action should unsatisfactory guidance occur.
- At least CAT 2 capability is displayed on the FMA and CAT II/III procedures are used.
- Visual references are obtained, at a DH appropriate for the CAT I approach being flown, or a go-around is performed.
- When the crew does not intend to perform an autoland, they should disconnect the AP at or above 80 feet. This altitude is considered as a minimum to take over and feel comfortable.
  Nevertheless, for safety purposes, the AP can be disconnected at anytime.

## GENERAL

### FUEL AND ADDITIVE SPECIFICATIONS

- See CFM specifications
- The fuel system has been certified for JET A, JET A1, JP 8, JET B, JP4 and JP 5.

### MAXIMUM ALLOWED WING FUEL IMBALANCE

Maximum allowed wing fuel imbalance in either the inner or outer tanks at takeoff, landing and in flight.

| INNER TANKS | | OUTER TANKS | |
|---|---|---|---|
| Tank content (heavier tank) | Maximum allowed imbalance | Tank content (heavier tank) | Maximum allowed imbalance |
| FULL 34 500 kg (76 100 lb) | 2 300 kg (5 100 lb) | FULL 3 000 kg (6 600 lb) | 1 300 kg (2 850 lb) |
| HALF 17 000 kg (37 500 lb) | 3 700 kg (8 200 lb) | 1 400 kg (3 100 lb) | 1 400 kg (3 100 lb) |
| 6 100 kg (13 400 lb) | 6 100 kg (13 400 lb) | – | – |

The variation is linear between these values. (No limitation below 6100 kg (13400 lb) for the inner tanks and 1400 kg (3100 lb) for the outer tanks).

*Note : Inner and outer authorized asymmetries should not be added.*

### FUEL TEMPERATURE

Maximum fuel temperature : JET A, JET A1, JP 8 and JP 5 : + 60°C
JP 4, JET B : + 49°C
Minimum fuel temperature : Freezing point + 5°C in the inner tank.
Freezing point in the outer or trim tank.
If the actual fuel freezing point of the fuel being used for the flight is not known, the following fuel specification freezing point must be used :

| JET A1 | JET A | JET B | JP 4 | JP 8 | JP 5 |
|---|---|---|---|---|---|
| – 47° C | – 40° C | – 50° C | – 58° C | – 47° C | – 46° C |

### FUEL MANAGEMENT

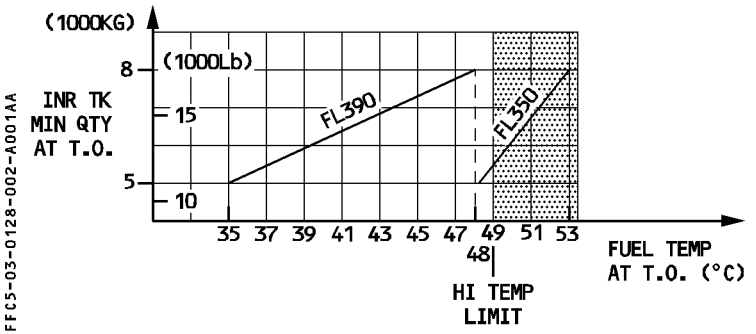
- Tanks must be emptied in the following order : center tank, then wing tanks.
- Do not select the trim tank forward when pitch attitude is above 3 degrees, to avoid inadvertent fuel aft transfer.
- Transfer from center to inner, when using JP4, is possible up to 20 000 feet.

R **MINIMUM FUEL QUANTITY FOR TAKEOFF : 5 400 kg (11 460 lb)**

WING TK LO LVL warning must not be displayed on ECAM for takeoff.

**TEMPERATURE LIMIT USING JP 4 TO ENSURE ADEQUATE JET PUMP PERFORMANCE**

If JP 4 fuel is used, the inner tank minimum quantity at takeoff (depending on the first CRUISE flight level) is as follows :



## HYDRAULIC

Normal operating pressure is 3000 psi ± 200.

## GENERAL

### BRAKES

Maximum brake temperature for takeoff (brake fans (◁) off) . . . . . 300° C

### AUTOBRAKE

Use of the autobrake does not relieve the pilot of his responsibility to safely stop within the available runway length by taking over brake control with the brake pedals, if necessary. The pilot may disengage the automatic braking system, either by pressing the armed mode pushbutton, or by applying firm action on the brake pedals.

### PARKING BRAKE

CAUTION

Do not set N1 above 70 % on all engines with the parking brake ON.

### LANDING GEAR

The center gear may be inhibited by ground maintenance action.
For weight limitations, see the MEL.

### NOSEWHEEL STEERING

The nosewheel steering angle is limited to 72°.

R No braked pivot turn is allowed (ie. differential braking cannot be used to fully stop one
R main gear).

R Asymmetric thrust should be used during the turn, to maintain a continuous speed
R (between 5 and 10 knots). Some anticipation is required to ensure that asymmetric thrust
R is available at the beginning of the turn.

For towing and pushback, the nosewheel steering angle is limited to 65°. The ground crew should make use of the 65° markings on the nose landing gear door, to ensure that this limitation is not exceeded.

## TAXI WITH DEFLATED TIRES

R If tire damage is suspected after landing, or after a rejected takeoff, inspection of the tires is required before taxi. If the tire is deflated but not damaged, the aircraft can be taxied at low speed with the following limitations :

1. If one tire is deflated on one or more gears (ie. a maximum of four tires), the speed should be limited to 7 knots when turning.

R 2. If two tires are deflated on the same main gear (the other main gear tires not being
R deflated), or on the center gear, the speed should be limited to 3 knots, and the nosewheel steering angle should be limited to 30 degrees.

R **INERTIAL REFERENCE SYSTEM**

R Refer to the Polar Navigation section in the FCOM 4.04.40.

**ISIS**

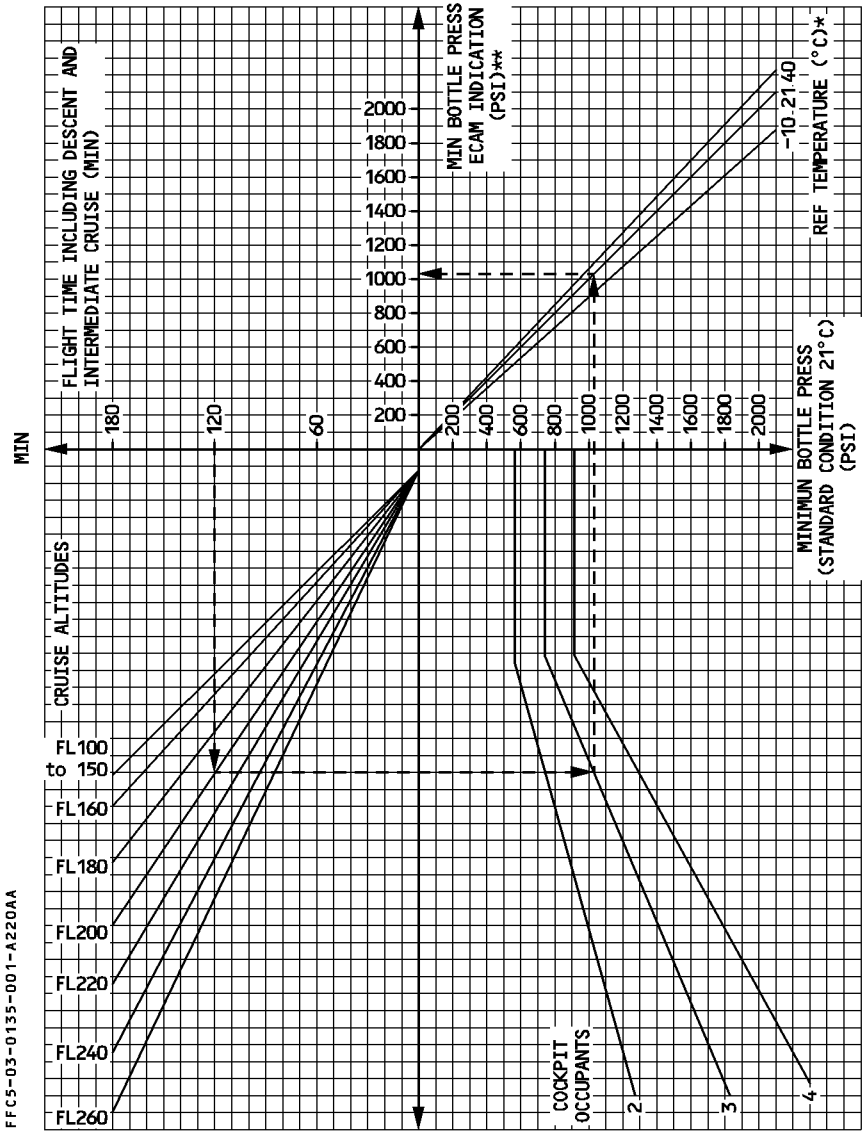
NOT APPLICABLE

**ENHANCED GROUND PROXIMITY WARNING SYSTEM (EGPWS)**

- Aircraft navigation is not to be predicated on the use of the terrain display.
  The terrain display is only intended as a situational awareness tool, and may not provide the accuracy on which to solely base terrain avoidance maneuvers.
  The EGPWS database, display, and alerting algorithms, do not currently take into account man-made obstructions.
- The EGPWS enhanced function should be inhibited (TERR pushbutton to OFF, on the GPWS panel) when the aircraft position is less than 15 NM from the airfield :
  - For operations to/from runways not incorporated in the EGPWS database.
  - For specific approach procedures, which have previously been identified as potentially producing false terrain alerts.

## COCKPIT FIXED OXYGEN SYSTEM

### MINIMUM FLIGHT CREW OXYGEN PRESSURE



* REF TEMPERATURE :
. on ground : (OAT + CAB TEMP) / 2
. in flight : CAB TEMP (°C) – 10°C
or
CAB TEMP (°F) – 18° F
** MINIMUM BOTTLE PRESSURE TO COVER :
– Preflight checks
– Usage of oxygen when only one pilot is in the cockpit
R – Unusable quantity (to ensure regulator functioning with minimum pressure)
– Normal system leakage
– and :
R · Protection after loss of cabin pressure with mask regulator on NORMAL (diluted oxygen):
– taking into account following flight profile :
R · 1 minute at FL 400
· descent at 5500 feet/minute from FL 400 to cruise altitude
· flight time at the cruise altitude read on the chart (at least 105 minutes at FL 100 for 2 crew members)
· descent at 2700 feet/minute from cruise altitude to FL 100
or
· Protection against smoke with 100 % oxygen for all cockpit members during 15
R minutes at 8000 feet cabin altitude.

R *Note : The above times which are based on the use of a sealed mask, may be shorter*
R *for bearded crew (in terms of performance, pressure or duration).*

## GENERAL

### OIL QUANTITY

R Minimum before start . . . . . LOW OIL LEVEL ECAM advisory not displayed
R *Refer to 3.02.80.*

### APU STARTER

After three consecutive start attempts without cooling down, a 60–minute cooling interval must be observed before the next start.

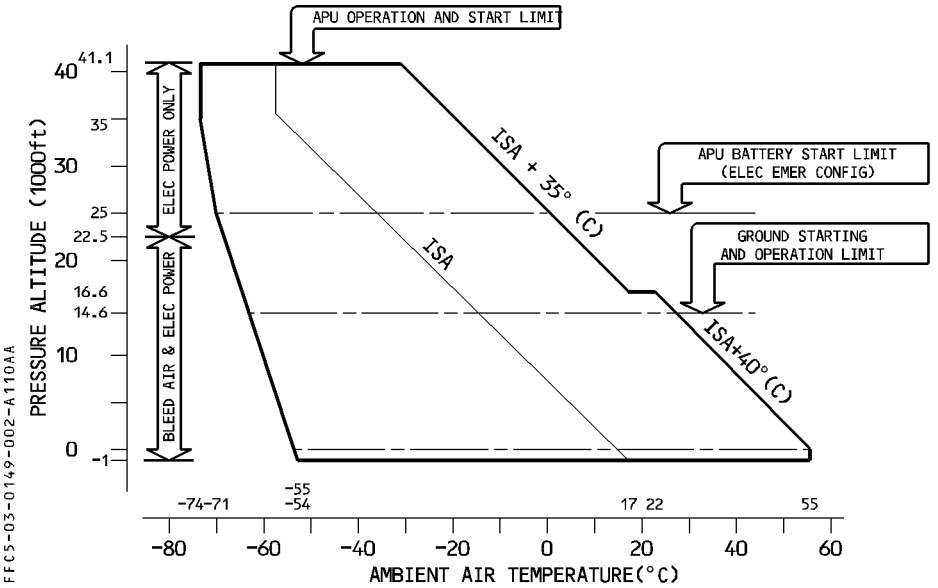
### ROTOR SPEED

· Maximum N . . . . . 107 %

### EGT

· Maximum EGT . . . . . 650 degrees C
· Maximum for start . . . . . 1250 degrees C

## ENVELOPE




R *Note : In the APU start envelope, APU start is guaranteed within 3 consecutive start*
R *attempts.*
*When JET B or JP4 is used APU operation is limited to 25000 feet.*

· ELEC power extraction only in flight or on ground : 115 KVA (100 %).
· Air bleed extraction with generator load in flight :

| BLEED AIR AND GEN LOAD IN FLIGHT | | | | |
|---|---|---|---|---|
| TEMP ▶<br>MAX ALT (feet) ▼ | | ISA | ISA + 20 | ISA + 35 |
| 22500 feet | ONE PACK | 100 % (115 KVA) | 63 % (72 KVA) | 35 % (40 KVA) |
| 20000 feet | ENG START | 100 % (115 KVA) | 83 % (95 KVA) | 55 % (63 KVA) |
| 17500 feet | TWO PACKS | 100 % (115 KVA) | 100 % (115 KVA) | 74 % (85 KVA) |

· APU air bleed extraction for wing anti-ice is not permitted.

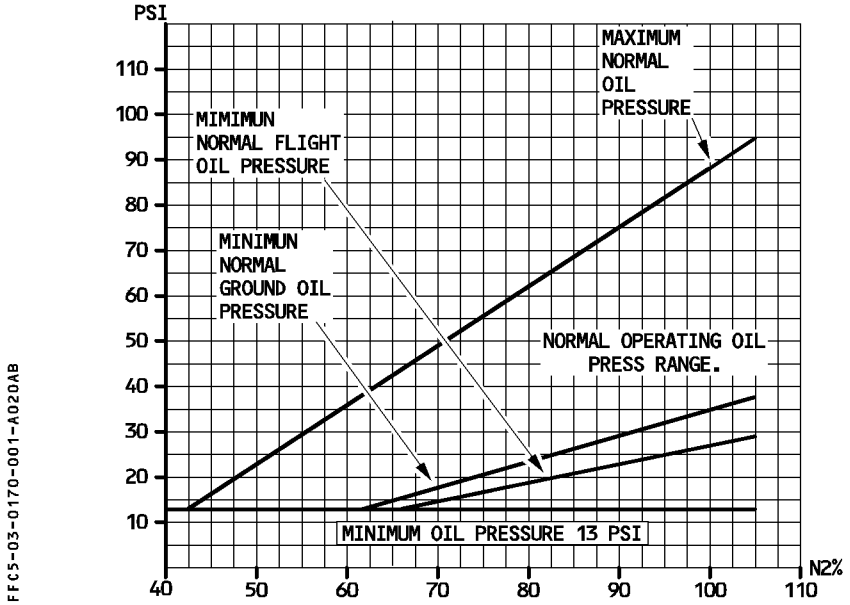
## THRUST SETTING / EGT LIMITS

| OPERATING CONDITION | TIME LIMIT | EGT LIMIT | NOTE |
|---|---|---|---|
| TAKEOFF AND GO AROUND | 5 min | 950° C | |
| | 10 min | | Only in case of engine failure |
| MCT | Unlimited | 915° C | |
| CL | Unlimited | 915° C | |
| STARTING | | 725° C | |

## OIL

Maximum continuous temperature . . . . . 140°C
Maximum transient temperature (15 minutes) . . . . . 155°C
Minimum starting temperature :
CLASS A (TYPE 1) . . . . . - 54°C
CLASS B (TYPE 2) . . . . . - 40°C
R Minimum prior to takeoff . . . . . - 10°C
Minimum oil quantity . . . . . (Refer to 3.03.04)

### MIN/MAX OIL PRESSURE (ECAM indication)



## RPM

N1 max . . . . . 104.2 %

*Note : The N1 limit depends upon ambient conditions and engine airbleed configuration. These may limit the N1 to a value lower than that given above (see 3.05.06).*

N2 max . . . . . 105 %

## STARTER

- 4 consecutive cycles, each of 2 minutes duration, maximum
- 20 seconds between cycles to allow for starter relubrication
- After 4 cycles,15 minutes to allow starter to cool before attempting a new start or motoring.
- No running engagement of the starter when the N2 is above 20 %.

*Note : High tailwinds (> 25 kt) may have an adverse effect on start. It may be necessary to reposition the airplane into the wind.*

## REVERSE THRUST

- Selection of reverse thrust in flight is prohibited
- Backing the aircraft with reverse thrust is not permitted.
- Maximum reverse should not be used below 60 knots (or when indication starts to fluctuate). Idle reverse is allowed down to aircraft stop.

## REDUCED THRUST TAKEOFF

- Takeoff at reduced thrust is permissible only if the airplane meets all applicable performance requirements at the planned takeoff weight with the operating engines at the thrust available for the assumed temperature.
- Thrust reduction must not exceed 25 % of the full rated takeoff thrust. To meet this requirement, the flexible temperature must not be higher than ISA + 40°C (T MAX FLEX).
- The assumed temperature must not be lower than the flat rating temperature or the actual OAT.
- Takeoff reduced thrust is not permitted on contaminated runways.
- R Takeoff at reduced thrust is allowed with any inoperative item affecting the performance
- R only if the associated performance shortfall has been applied to meet all performance
- R requirements at the takeoff weight, with the operating engines at the thrust available for
- R the flex temperature.