

# virtualCondor

## Operations Manual

### General - A

# *Airbus A320*



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***Airbus A320/A321***

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## 1. Economic Fuel Consumption

### 1.1 Cost Index

Der Cost Index ist ein Verhältnis von Crew zu Luftfahrzeugkosten und wird im Zweifel in Rücksprache mit dem Operations Control Center (OCC) erhöht, um Verspätungen aufzuholen.

Model	ICAO Designator	Cost Index
<i>Airbus A320</i>	A320	26
<i>Airbus A321</i>	A321	33

## 2. Aircraft Specification

### 2.1 Mass Configuration

#### Airbus A320

Empty Weight	OEW	<b>44.100</b> kg
Max. Zero Fuel Mass	MZFM	<b>61.000</b> kg
Max. Landing Weight	MLW	<b>64.500</b> kg
Max. Takeoff Mass	MTOM	<b>73.500</b> kg

Max. Fuel Capacity		<b>18.728</b> kg
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#### Airbus A321

Empty Weight	OEW	<b>49.800</b> kg
Max. Zero Fuel Mass	MZFM	<b>71.500</b> kg
Max. Landing Weight	MLW	<b>75.500</b> kg
Max. Takeoff Mass	MTOM	<b>93.500</b> kg

Max. Fuel Capacity		<b>18.604</b> kg
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### 2.2 Cabin Configuration

#### Airbus A320

Version	<b>DE320</b>
<i>Premium Economy</i>	32
<i>Economy</i>	132
Max. Passenger Capacity	164

#### Airbus A321

Version	<b>DE321</b>
<i>Premium Economy</i>	24
<i>Economy</i>	184
Max. Passenger Capacity	208

### 3. Operation Procedures

#### 3.1 Approach Minima (Approach Heights)

When approaching your destination, you are required to determine the approach category which is intended for your precision approach.

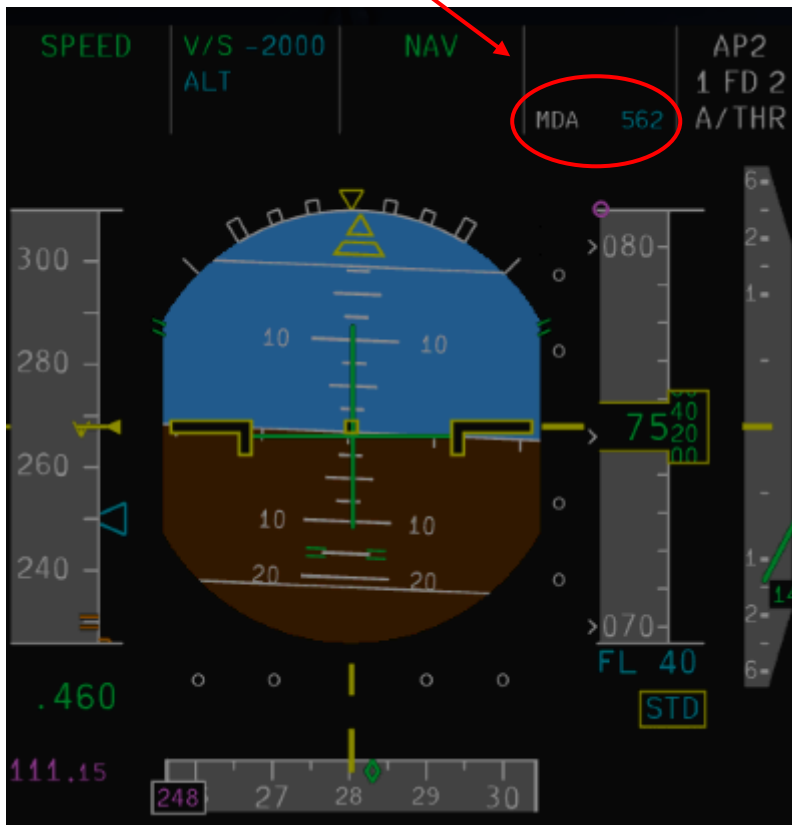
Category	Decision Height (DH) / Decision Altitude (DA)	Runway Visual Range (RVR)
CAT I	200' (Decision Altitude)	550m (Visibility)
CAT II	100'	300m
CAT IIIa	50'	200m
CAT IIIb	0'	75m
CAT IIIc	0'	0m

##### 3.1.1 Cockpit Setup

The Minimum Decision Altitude (MDA – 562') is set via the MCDU PERF Page.

Minimum Decision Altitude (MDA) is used for CAT I Approaches (BARO) and the Minimum Decision Height (MDH) is set via the ....

Minimum Decision Altitude (DA) at 562'



## **3.2 Minimum Fuel Policy**

### **3.2.1 Airbus A320/A321**

According to EU OPS 1, standard reserve fuel (*Alternate Fuel + Final Reserve*) is calculated as follows:

**ALTN Fuel** (Destination – Alternate)  
**Final Reserve Fuel** (**30 Minutes Holding @ 1500 feet** over ALTN)

Standard Final Reserve Fuel for 00:30h is **1800kg**

#### **Final Reserve Fuel Calculation**

Landing Weight (LW) = DOW + 279 PAX + 1500kg Payload  
Landing Weight (LW) = 44.100 kg + **xxxxx** kg + **1000** kg = **xxxxx kg**

According to the yellow marked fuel consumption table (1500') the fuel consumption for **200.000 kg** is expected to be **xxxxx kg/h** per engine.

Fuel Consumption per Engine \* 2 engines = **xxxx** kg/h \* 00:30h = **1800kg**

## **3.3 Speed Restrictions**

### **3.3.1 Below FL100**

General Speed Restriction below FL100 is **250kts** IAS.

Airbus A320 and Airbus A321 are allowed to proceed over 250kts IAS above Transition Altitude (**TA**):

- High Speed is approved by ATS

### **3.3.1 Taxi (Dry weather operations)**

All *Airbus A320/A321* aircraft are required to maintain a maximum speed, not exceeding **10kts**, during manoeuvring and sharp turns.

Long and straight taxiways without slopes may allowed to pass up to **30kts**.

### **3.3.2 Taxi (Wet and contaminated weather operations)**

All *Airbus A320/A321* aircraft are required to maintain a maximum speed , not exceeding **10kts**, during manoeuvring and sharp turns. Every other taxiway shall not be passed by exceeding **15kts** during wet and contaminated conditions.

## **3.4 Traffic Collision and Avoidance System (TCAS)**

The TCAS system is activated by switching the Transponder (XPDR) to "**TA/RA**" prior departure and is disabled by switching it onto "**TA**" while vacating the runway after landing on your destination.

### 3.5 Reduced Vertical Separation Minima (RVSM)

<b>AGL – FL290</b>	Vertical Separation	<b>VSM</b>	Opposite Direction Same Direction	1000 feet 2000 feet
<b>FL290 – FL410</b>	Non-Reduced Vertical Separation	<b>non-RVSM</b>	Opposite Direction Same Direction	2000 feet 4000 feet
	Reduced Vertical Separation	<b>RVSM</b>	Opposite Direction Same Direction	1000 feet 2000 feet

RVSM		NON-RVSM	
← FL430		← FL430	
	— FL410 →		— FL410 →
← FL400	— FL390 →	← FL390	
← FL380	— FL370 →		— FL370 →
← FL360	— FL350 →	← FL350	
← FL340	— FL330 →		— FL330 →
← FL320	— FL310 →	← FL310	
← FL300	— FL290 →		— FL290 →
← FL280	— FL270 →	← FL280	— FL270 →
← FL260	— FL250 →	← FL260	— FL250 →
← FL240	— FL230 →	← FL240	— FL230 →
← FL220	— FL210 →	← FL220	— FL210 →
← FL200	— FL190 →	← FL200	— FL190 →
← FL180		← FL180	
→ Tracks 000° - 179°		← Tracks 180° - 359°	

### 3.6 Autopilot (AP) and Auto Throttle (A/T)

virtualCondor allows each pilot to decide whether he is using the Autopilot (AP) and Auto Throttle (A/T) system for Cruise and Approach. It is highly recommended to use the Autopilot and Auto Throttle while **climbing trough FL100** or at least until **passing FL200** while descending.

#### Conditions for Manual Flight

A/C in **VMC** and **Runway in Sight – Clear of Clouds**

Autopilot (AP) and Auto Throttle (A/T) are used or/and disengaged **simultaneously**.

Using Auto Throttle (A/T) without the Autopilot (AP) or using (AP) without (A/T) is **not allowed**.

Keep in mind: *Fly manually or manage the automated flight.*

**CAT II** and **CAT IIIa/b** Landings are automated precision approaches and shall not be performed manually.

# Airbus A320/A321

### 3.7 Light Operation Overhead Lighting Panel



#### 3.8.1 Daylight Operations

NAV & LOGO

- Always (1/2)

BEACON

- Before Engine Start (On) | After Engine Shutdown (Off)

STROBE

- Before Takeoff (On) und After Landing (Off)

Nose (Taxi)

- Before Taxi (Taxi)

Nose (T.O.)

- Before Take-Off (On) | After Take-Off (Off)

- Gear-Down (On)

Runway Turnoff

- Before Taxi (On) | After Take-Off (Off)

Landing Lights

- Before Take-Off (On) | Passing FL100 (Off) | Descending FL100 (On)

#### 3.8.2 Night Operations

Wing

- Before Taxi (On), climbing and passing FL100 (Off)

- Descending FL100 (On), after Engine Shutdown (Off)

## 4. Take-Off Performance

### 4.1 General

Take-Off Performance depends on the Gross Weight (GW) of the aircraft, the ambient circumstances (pressure altitude e.g.) and the Take-Off Distance Available (TODA).

- Performance Calculator

### 4.2 Spain [Canaries]

- Airbus A321 Einschränkungen? (GCLA, GCRR)