Checklist MS FSX incl. Wilco Airbus Series
A320 Series / A330 / A340

IVAO:
Member-#: _____________________
Website-PW: _____________________
Network-PW: _____________________

Attention:
1) You need a saved Flight with the aircraft parked at parking position and parking break set!
   If you don’t have such a flight you won’t be able to load the aircraft in Dark & Cold mode. So
   create such a flight, set the parking break and save it.
   For every new flight, set D&C in the configurator, load the flight and then change the location
   the desired airport.
2) Auto-Functions in FMC are only available in Beginner and Intermediate mode (configurator).
3) Intermediate mode is recommended as IRS alignment otherwise takes 10 minutes.
4) Thrust levers (e.g. CH Throttle Quadrant) have to be calibrated in special way for the Wilco
   Airbus Series, because FLEX and TO/GA detents can’t be reached otherwise. When calibrating
   set the max forward position about 1cm behind the normal max forward position. With the
   configuration you can push the Airbus Series thrust levers over the 100% manual thrust
   position to reach FLEX and TO/GA detents. Alternate method: Use keyboard for t/o thrust
   setting and use throttles only for taxi and manual approach.

Parking Position / Preparation:
- Dark & Cold (at Configurator) Set
- Load & Fuel (at Configurator) Set
- FSX Start & load Airbus-Flight (with Parking Break set!)
- Parking Break Set
- All ENG Master switches Off
- Load & Fuel (at FSX) Check (or reset)
- IVAP-Connection Activate
- Flightplan at FSX Create
- Dep-Metar Check & note
- Arr-Metar Check & note
- Door(s) Open
- Gangway Enable (if available) (Ctrl + J)

⇒ Overhead-Panel:
- Battery On
- Engine GENerators On
- NAV-Light On
- Radio Mgmt. Panel (Pedestal) On
- External Power On (if available)
- Window Heat On
⇒ Overhead Panel End
- Autopilot-FD (Flight Director) Off ➔ On (Reset)
- FMC
  - DATA INDEX ➔ DATA Button
  - Import FS FPLN ➔ 6R
  - INSERT ➔ 6R
- MCDU Menu ➔ MCDU MENU Button
- FMGC ➔ 1L
- Enter Flight No. ➔ 3L
- Enter Flight-Level ➔ 6L
- Enter Alternate Airport ➔ 2R
- Enter Cost-Index ➔ 5L (50 average, 100 high speed cruise)
- Align IRS ➔ 3R
  ---- IRS Alignment has started----
- INIT Page B ➔ NEXT PAGE Button
- Enter Zero Fuel Weight (ZFW) ➔ 1R
  o (Auto-ZFW ➔ 2x 1R)
- Enter Block Fuel (BLOCK) ➔ 2R
  o (Auto-Block Fuel ➔ 2x 2R)
- F-Plan Page ➔ F-PLAN
  ➔ ---Make sure to be at the top of the F-PLAN page (↑-Button)---
- LAT REV Page (of Departure Airport) ➔ 1L
- DEPARTURE Page ➔ 1L
- Choose runway (up/down with ↑↓–Buttons) ➔ xL
  o x = line no. of desired runway
- Choose SID and Transition ➔ xL ➔ xR
  o x = line no. of desired SID / TRANS
  o You don’t have to choose a SID / TRANS (choose NONE).
- INSERT ➔ 6R
- Clear any discontinuities at departure route ➔ CLR Button ➔ xL
  o x = line no. of discontinuity
- Scroll page down to Arrival Airport ➔ 2x AIRPORT Button
- LAT REV Page (of Arrival Airport) ➔ xL (standard 6L)
  o x = line no. of Arrival Airport
- ARRIVAL Page ➔ 1R
- Choose runway ➔ xL
  o x = line no. of desired runway
  o You can change this in-flight if required.
- Choose STAR and Transition ➔ xL ➔ xR
  o x = line no. of desired STAR / TRANS
  o You can change this in-flight if required.
  o You don’t have to choose a STAR / TRANS (choose NONE / 1R).
- INSERT ➔ 6R
- Clear any discontinuities at arrival route ➔ CLR Button ➔ xL
  o x = line no. of discontinuity
  ➔ --- next steps are not necessary---
- Scroll page up to Dep. AP ➔ 2x AIRPORT Button
- VERT REV Page (of Dep. AP) ➔ 1R
- Enter estimated time of departure (UTC time) ➔ 2R
- RETURN ➔ 6L
  ➔ --- next steps are necessary again---
- PERF TO Page ➔ PERF Button
- Enter Flap configuration for T/O (1, 2 or 3) ➔ 3R
- Enter FLEX T/O TEMP ➔ 4R (average value: 50)
  o (Auto-Flex-Temp ➔ 2x 4R)
- Enter V1 ➔ 1L
- Enter VR ➔ 2L
- Enter V2 ➔ 3L
  o (Auto-V1, -VR, -V2 ➔ 2x L1 ➔ 2x L2 ➔ 2x L3)
- Enter Thrust-Reduction Alt. in ft. (>1500) (or leave suggested value) ➔ 5L
- Enter Transition Alt. ➔ 4L
- Next PHASE ➔ 6R
- Enter Climb Speed (KIAS) ➔ 4L
- Next PHASE ➔ 6R
- Enter Cruise-Speed (KIAS or .Mach) ➔ 4L
- Next PHASE ➔ 6R

⇒ ---FMC finished---

- I IVAP-flightplan
  Read from FMC & note/enter in IVAP FP
- Speed at flightplan
  Enter TAS (calculate: KIAS + FL/2) or MACH
- Departure Time
  Enter (UTC to CET ➔ CET -2 (winter -1))
- EFIS-Mode (MainPanel/MP)
  ARC
- EFIS-Range (MP)
  40nm (or as required)
- GND-Control
  Set frequency (active ATC or Unicom 122.8)
- IFR-clrc
  Request (when ATC active)
- IFR-clrc-data
  Note (Squawk, First-Altitude, QNH ➔ Readback)
- Squawk
  Set
- FP-correction
  Correct (if required / requested)
- FMC-correction
  Correct (if required / requested)
- Altimeter
  Set to actual atmospheric pressure (B)
- Autopilot
  Check (dash-ball-dash-ball-ball-dash)
  o CLB & NAV modes
    Armed (CLB / NAV written on FMA)
    ▪ If not...
      Reset FD (FD Off ➔ FD On)
  o First Altitude
    Set
  o Speed
    Managed
  o Heading
    Managed
  o Altitude
    Managed (Target Alt. must be higher than Accel. Alt.)
  ▪ Note: Managed = Left Mouse Button, Selected = Right MB

**Engine s/u & Pushback:**
- Gangway
  disable (strg + j)
- Doors
  closed
- Engine s/u & Pushback p/b clrc
  request
- APU Master
  On
- APU Start
  On
  --- wait till APU Start switch shows available (AVAIL) ---
- APU Bleed
  On
- External Power
  Off
- Fuel Pumps
  On (all puPmps of tanks containing fuel)
- Beacon Lights
  On
- Wing Lights
  On
- Nose Light
  Taxi
- Runway Turnoff Lights
  On
- No Smoking
  On (or Auto)
- Seat Belts
  Auto
- Flaps
  Select (as filled in FMC)
- Spoiler
  Armed
- Autobrake
  MAX (A340-600: RTO)
- Parking break
  Off
• Pushback Start
• ENG-Mode (Pedestal) IGN/Start
  --- FADEC should turn active (from amber displays)---

• A340 Engine Start:
  o ENG 1 & 4 Master On
     --- wait till started ---
  o ENG 2 & 3 Master On
     --- wait till started ---

• A320 / A330 Engine Start:
  o ENG 2 Master On
     --- wait till started ---
  o ENG 1 Master On
     --- wait till started ---

• ENG-Mode NORM
  --- wait till take-off memo shows up ---
• Engine GENerators Check On
• APU Bleed Off
• APU Master Off

• Engine & Wing anti-ice On (under 10°C TAT)
• T/O Config Check & push t/o-config button (Pedestal)
• Main Display Check for warnings
• Pushback Finish

Taxi:
• Taxi-Circ Request
• Taxiways Note (if needed)
• Ground-Guidance Request (if needed)

h/p:
• Hand-off GND to TWR Change frequency
• I/u & t/o clrc Request (rdy for dep h/p xx)
• Landing Lights On
• Nose Light TO
• Strobe Light On
• T/O Memo Check all green
• IVAP-Transponder On
• TCAS On (TA or TA/RA)
• TCAS Mode Above (or All)
• Postion & hold Taxi & stop on rwy
Ready to Takeoff:

- Parkingbreak Set
- Thrust:
  - Thrust Levers Forward to 60-70% N1
    - Flex–t/o Thrust Levers up to FLX detent (2 sounds)
    - Power–t/o Thrust Levers up to TO/GA detent (3 sounds)
- Parking Break Release
- Yoke Press forward till 80kts
- FMA Display-Check:
  - 1st column MAN FLEX flex-number (or TO/GA)
  - 2nd column CLB (blue) and SRS (green)
  - 3rd column NAV (blue) and RWY (green)
  - 4th column A/THR (blue)
- V1 Abort of start not possible anymore
- VR Lift nose up
- V2 Lift-off

Takeoff:

- Trim settings DO NOT adjust (Auto-Trim active)
- Gear Up (at positive climb rate >500ft)
- Autopilot 1 / AP1 On
- Flaps Raise (on schedule / at S speed)
- Airborne Publish airborne when on Unicom (no ATC)
- Start time Note (if needed)
- FMA Display:
  - Thrust Levers Back to CL detent (1 sound back from FLX)
  - Hand-off TWR to APP(DEP) Change frequency

Climb:

- Landing Lights Off
- Runway Turnoff Lights Off
- Nose Light Off
- Autobreak Off
- Auto-Thrust (A/TH) Reset if required (➔ A/TH Off ➔ A/TH On)
- FMA Display Check 2nd column: CLB mode active
  --- to final FL / next FL clrc ---
- AP altitude (& speed) Change (Selected Mode if needed)
- TCAS biasing mode All
- Hand-off APP to CTR Change frequency
- Engine & Wing anti-ice On (under 10°C TAT)
- Altimeter Readjust (above 18000ft) (STD setting)

Cruise:

- FMA Display Check 2nd column: ALT CRZ
- TCAS All
- Radio /ATC contact Maintain (on UniCom watch TCAS)
- Autopilot / FMC Check permanently
  - FMC Check FUEL PRED page for fuel consumption
**Descent & Approach:**
- Descent preparations
- Begin 30nm before T/D (Top of Descent)
- Airport-/Meta-Information
- Retrieve
- T/D reached:
  - Altitude
  - Select Altitude / press Alt. button (managed desc)
- Autobreaks
- Set (Low or Medium; Max/RTO is only for RTO)
- TCAS
- BLW (Pedestal)
- Deceleration (D) – Point:
  - Approach Phase
  - Target Speed
  - FMC AppPhase Page
  - Check FMC: AppPhase active, otherwise activate (6L)
  - Check Autopilot sets Vapp speed
  - Enter QNH \( \rightarrow \) 1L
- Speedbrakes
- Up (when needed/too fast)
- ILS
- On (push ILS button for ILS info on PFD)
- Altimeter
- Readjust (under 18000ft)
- Hand-off CTR to APP
- Change frequency
- FMC / Autopilot
  - ATC guidance
  - No ATC guidance
  - Select HDG and ALT (selected mode)
  - Follow flightplan (managed mode)
- Landing Lights
- On
- Nose Light
- TO
- Runway Turnoff Lights
- On

**Final approach & Landing (Autoland):**
- Flaps
  - Lower (as indicated) (e.g. 5000ft 1; VFE NEXT 2; …)
- FMC / Autopilot
  - ATC guidance
  - No ATC guidance
  - Select HDG and ALT (selected mode)
  - Follow flightplan (managed mode)
- Autopilot LOC
- On
- Around 2000ft. AGL:
  - Landing gear
  - Down
  - Flaps
  - Full / Check full
  - Spoiler
  - Armed
- ---stabilize von glideslope---
- ILS captured
- Announce (on Unicom state final app)
- Hand-off APP to TWR
- Change frequency
- Landing clrc
- Request (or state intention on Unicom)
- FMA Display
  - Check LOC or LOC*
  - Check LOC or LOC*
  - APPR On
  - 2nd AP On
- Landing Memo
- Check all green
- Autopilot
  - Check
  - LAND mode
  - On
  - FLARE mode
  - On
- “Retard” sound
  - Thrust Idle position
- ---Touchdown---
- Throttles
  - Idle
- Thrust reversers
  - Engage (if needed)
- Thrust reversers
  - Disengage (at 80kt) (Throttles idle)
- Brakes
  - Push (at 40-50kt) to disengage Autobreak
- Runway
  - Vacate (“rwy vacated”)
Final approach & Landing (w/o Autoland):

- Flaps: Lower (as indicated) (e.g. 5000ft 1; VFE NEXT 2; …)
- FMC / Autopilot
  - ATC guidance: Select HDG and ALT (selected mode)
  - No ATC guidance: Follow flightplan (managed mode)
- Autopilot LOC: On
- Around 2000ft. AGL:
  - Landing gear: Down
  - Flaps: Full / Check full
  - Spoiler: Armed
- ILS captured: Announce (on Unicom state final app)
- Hand-off APP to TWR: Change frequency
- Landing circ: Request (or state intention on Unicom)
- FMA Display: Check LOC or LOC*
  - Autopilot: APPR On
- Controls: Move, take control over airplane, (AP off)
- Landing Memo: Check all green
- “Retard” sound: Thrust Idle position
- Throttles: Idle
- Thrust reversers: Engage (if needed)
- Thrust reversers: Disengage (at 80kt) (Throttles idle)
- Brakes: Push (at 40-50kt) to disengage Autobreak
- Runway: Vacate („rwy vacated“)

Taxi:

- Transponder: Stdby
- Hand-off TWR to GND: Change frequency
- Taxiways: Note and follow (with active ATC)
- ( Ground-Guidance: Request if required)
- Flaps: Set 0
- Speedbrake: Disengage (if engaged)
- Autobrakes: Off
- Landing lights: Off
- Strobe: Off
- Landing time: Note (if needed)
- APU Master: On
- APU Start: On

Parking Position:

- Parking brake: Set
- ATC contact: End (state “on blocks, thx for service, bye”)
- All ENG Master switches: Off
- Fuel pumps: Off
- Seatbelts: Off
- Door s: Open (shift + e)
- Gangway: Enable (strg + j)
- Beacon lights: Off
- Wing Lights Off
  --- wait 1 minute ---
- External Power On
- APU Master Off
- Engine Anti Ice Off
- Wing Anti Ice Off
- Window Heat Off
- Flight Director Reset (Off ➔ On)
  ---if Dark & Cold is desired continue---
- TCAS Stdby
- Ground power Off
- External lights Off (all)
- Internal lights Off (all)
- Radio Mgmt. Panel (Pedestal) Off
- Engine GENerators Off
- Battery Off

--- Checklist for Wilco Airbus Series 1 & 2 with Microsoft Flight Simulator ---

Created by: Carsten Rau (June2008 / v5)
I used to create: My (PMDG) 747 checklist, Wilco Airbus Series Manual & Checklists
Only use with: Microsoft Flight Simulator / IVAO (Intl. Virtual Aviation Organization)
Visit: http://www.ivao.aero
http://www.carstenrau.de
http://www.leveldsim.com - Level-D 767
http://www.precisionmanuals.com - PMDG 747
http://www.wilcopub.com - Wilco 737 PIC / Airbus Series 1 & 2
A320 Series Attachments:
The following attachments are based on A320 data, but can be used for A318, A319, A320, A321.

**A320 Series Optimum & Maximum Flight Level Charts:**

![Flight Level Charts](image-url)
## A320 Series Fuel Planning Charts:

<table>
<thead>
<tr>
<th>Flightplan Fuel at CI = 50</th>
<th>MZFW 137800 lbs</th>
<th>Fuel Consumed (lbs)</th>
<th>Break Release to Landing</th>
<th>Climb: 250 / 300 kt M 0.78</th>
<th>Cruise: M 0.78</th>
<th>Descend: M 0.78 300 / 250 kt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data for A320</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A318 97%</td>
<td>A319 99%</td>
<td>A321 110%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance (nm)</td>
<td>Fuel (lbs) at FL 290</td>
<td>Fuel (lbs) at FL 310</td>
<td>Fuel (lbs) at FL 330</td>
<td>Fuel (lbs) at FL 350</td>
<td>Fuel (lbs) at FL 370</td>
<td>Fuel (lbs) at FL 390</td>
</tr>
<tr>
<td>100</td>
<td>3600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>5100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>6600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>8100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500</td>
<td>9700</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>11200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>700</td>
<td>12800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td>14300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>900</td>
<td>15900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>17600</td>
<td>97% of FL290</td>
<td>94% of FL290</td>
<td>93% of FL290</td>
<td>93% of FL290</td>
<td>93% of FL290</td>
</tr>
<tr>
<td>1100</td>
<td>19200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td>20800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1300</td>
<td>22400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1400</td>
<td>24100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1500</td>
<td>25800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1600</td>
<td>27500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1700</td>
<td>29200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1800</td>
<td>30900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1900</td>
<td>32700</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>34500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2100</td>
<td>36300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2200</td>
<td>38000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2300</td>
<td>39800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2400</td>
<td>42000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Fuel Planning Notes A318:

- **Basic Operating Weight (OEW)**: 086.650 LBS
- **Payload (passengers & cargo)**: XXX.XXX LBS
- **Zero Fuel Weight (ZFW)**: XXX.XXX LBS (max 120.100 LBS)
- **Minimum Landing Fuel**: 005.500 LBS
- **Alternate Fuel (200nm distance)**: 003.500 LBS
- **Contingency Fuel (holding, taxi, etc.)**: 005.500 LBS
- **Planned Landing Weight (PLW)**: XXX.XXX LBS (max 126.700 LBS)
- **Flight Plan Fuel (fuel for route)**: XXX.XXX LBS
- **Planned Takeoff Weight (PTOW)**: XXX.XXX LBS (max 149.900 LBS)

**Flight Plan Fuel + 14.500 LBS = Total Fuel**

- **Total fuel** = Enough fuel for route, 1h contingency (holding & taxi), problematic winds, alternate fuel for 200nm and a minimum landing fuel (1h). Modify alternate value as needed.
- **Load all wing tanks with same amount of fuel; outer tanks full ➔ inner tanks ➔ center tanks.**
### Fuel planning notes A319:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Operating Weight (OEW)</td>
<td>089.500</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Payload (passengers &amp; cargo)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>= Zero Fuel Weigh (ZFW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Minimum Landing Fuel</td>
<td>005.500</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Alternate Fuel (200nm distance)</td>
<td>003.500</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Contingency Fuel (holding, taxi, etc.)</td>
<td>005.500</td>
<td>LBS</td>
</tr>
<tr>
<td>= Planned Landing Weight (PLW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Flight Plan Fuel (fuel for route)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>= Planned Takeoff Weight (PTOW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
</tbody>
</table>

### Fuel planning notes A320:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Operating Weight (OEW)</td>
<td>093.500</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Payload (passengers &amp; cargo)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>= Zero Fuel Weigh (ZFW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Minimum Landing Fuel</td>
<td>005.500</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Alternate Fuel (200nm distance)</td>
<td>003.500</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Contingency Fuel (holding, taxi, etc.)</td>
<td>005.500</td>
<td>LBS</td>
</tr>
<tr>
<td>= Planned Landing Weight (PLW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Flight Plan Fuel (fuel for route)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>= Planned Takeoff Weight (PTOW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
</tbody>
</table>

### Fuel planning notes A321:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Operating Weight (OEW)</td>
<td>106.300</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Payload (passengers &amp; cargo)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>= Zero Fuel Weigh (ZFW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Minimum Landing Fuel</td>
<td>005.500</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Alternate Fuel (200nm distance)</td>
<td>003.500</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Contingency Fuel (holding, taxi, etc.)</td>
<td>005.500</td>
<td>LBS</td>
</tr>
<tr>
<td>= Planned Landing Weight (PLW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Flight Plan Fuel (fuel for route)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>= Planned Takeoff Weight (PTOW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
</tbody>
</table>

### Fuel planning notes ACJ (based on A319):

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Operating Weight (OEW)</td>
<td>095.900</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Payload (passengers &amp; cargo)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>= Zero Fuel Weigh (ZFW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Minimum Landing Fuel</td>
<td>005.500</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Alternate Fuel (200nm distance)</td>
<td>003.500</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Contingency Fuel (holding, taxi, etc.)</td>
<td>005.500</td>
<td>LBS</td>
</tr>
<tr>
<td>= Planned Landing Weight (PLW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>+ Flight Plan Fuel (fuel for route)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
<tr>
<td>= Planned Takeoff Weight (PTOW)</td>
<td>XXX.XXX</td>
<td>LBS</td>
</tr>
</tbody>
</table>

**Flight Plan Fuel + 14.500 LBS = Total Fuel**

- Total fuel = Enough fuel for route, 1h contingency (holding & taxi), problematic winds, alternate fuel for 200nm and a minimum landing fuel (1h). Modify alternate value as needed.
- Load all wing tanks with same amount of fuel; outer tanks full ➔ inner tanks ➔ center tanks.
A330-200 Attachments:

A330-200 Optimum & Maximum Flight Level Charts:
### A330-200 Fuel Planning Charts:

<table>
<thead>
<tr>
<th>Flightplan Fuel at CI = 50</th>
<th>MZFW 374800 lbs</th>
<th>Fuel Consumed (lbs)</th>
<th>Break Release to Landing</th>
<th>Climb: 250 / 300 kt M 0.78</th>
<th>Cruise: M 0.80</th>
<th>Descend: M 0.82 300 / 250 kt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance (nm)</td>
<td>Fuel (lbs) at FL 310</td>
<td>Fuel (lbs) at FL 330</td>
<td>Fuel (lbs) at FL 350</td>
<td>Fuel (lbs) at FL 370</td>
<td>Fuel (lbs) at FL 390</td>
<td>Fuel (lbs) at FL 410</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
<td>----------------</td>
<td>----------------</td>
<td>----------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>100</td>
<td>5000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>200</td>
<td>8200</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>300</td>
<td>11500</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>400</td>
<td>14800</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>500</td>
<td>18100</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1000</td>
<td>34600</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1500</td>
<td>51800</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2000</td>
<td>67500</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2500</td>
<td>84000</td>
<td>95%</td>
<td>92%</td>
<td>88%</td>
<td>86%</td>
<td>85%</td>
</tr>
<tr>
<td>3000</td>
<td>100500</td>
<td>of FL310</td>
<td>of FL310</td>
<td>of FL310</td>
<td>of FL310</td>
<td>of FL310</td>
</tr>
<tr>
<td>3500</td>
<td>116900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4000</td>
<td>133400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4500</td>
<td>149800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000</td>
<td>166300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5500</td>
<td>182800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6000</td>
<td>199300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6500</td>
<td>215700</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7000</td>
<td>232200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7500</td>
<td>248700</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8000</td>
<td>243900</td>
<td>-</td>
<td>-</td>
<td>233376</td>
<td>228072</td>
<td>225420</td>
</tr>
<tr>
<td>8500</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>247900</td>
<td>242262</td>
<td>239445</td>
</tr>
</tbody>
</table>

### Fuel planning notes A330-200:

- Basic Operating Weight (OEW) = 263.700 LBS
- + Payload (passengers & cargo) = XXX.XXX LBS
- Zero Fuel Weight (ZFW) = XXX.XXX LBS (max 374.800 LBS)
- + Minimum Landing Fuel = 013.000 LBS
- + Alternate Fuel (200nm distance) = 007.000 LBS
- + Contingency Fuel (holding, taxi, etc.) = 013.000 LBS
- Planned Landing Weight (PLW) = XXX.XXX LBS (max 401.200 LBS)
- + Flight Plan Fuel (fuel for route) = XXX.XXX LBS
- = Planned Takeoff Weight (PTOW) = XXX.XXX LBS (max 513.700 LBS)

**Flight Plan Fuel + 31.000 LBS = Total Fuel**

- Total fuel = Enough fuel for route, 1h contingency (holding & taxi), problematic winds, alternate fuel for 200nm and a minimum landing fuel (1h). Modify alternate value as needed.
- Load all wing tanks with same amount of fuel; inner tanks full ➔ outer tanks ➔ center tanks.
A330-300 Attachments:

A330-300 Optimum & Maximum Flight Level Charts:
A330-300 Fuel Planing Charts:

<table>
<thead>
<tr>
<th>Distance (nm)</th>
<th>Fuel (lbs) at FL 310</th>
<th>Fuel (lbs) at FL 330</th>
<th>Fuel (lbs) at FL 350</th>
<th>Fuel (lbs) at FL 370</th>
<th>Fuel (lbs) at FL 390</th>
<th>Fuel (lbs) at FL 410</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>4800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>7500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>10200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>12900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500</td>
<td>15600</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>29000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1500</td>
<td>42500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>56000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2500</td>
<td>69500</td>
<td>95% 90% 88% 87% 85%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3000</td>
<td>82900</td>
<td>Of Of Of Of Of Of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3500</td>
<td>96400</td>
<td>FL310 FL310 FL310 FL310 FL310 FL310</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4000</td>
<td>109800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4500</td>
<td>123300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000</td>
<td>136800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5500</td>
<td>150200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6000</td>
<td>163700</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6500</td>
<td>177100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7000</td>
<td>-</td>
<td>-</td>
<td>171540</td>
<td>167728</td>
<td>165822</td>
<td>162010</td>
</tr>
<tr>
<td>7500</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>173485</td>
</tr>
</tbody>
</table>

Fuel planning notes A330-300:

Basic Operating Weight (OEW) 274,500 LBS
+ Payload (passengers & cargo) XXX.XXX LBS
= Zero Fuel Weight (ZFW) XXX.XXX LBS (max 385.800 LBS)
+ Minimum Landing Fuel 013.000 LBS
+ Alternate Fuel (200nm distance) 005.000 LBS
+ Contingency Fuel (holding, taxi, etc.) 013.000 LBS
= Planned Landing Weight (PLW) XXX.XXX LBS (max 412.300 LBS)
+ Flight Plan Fuel (fuel for route) XXX.XXX LBS
= Planned Takeoff Weight (PTOW) XXX.XXX LBS (max 513.700 LBS)

👉Flight Plan Fuel + 28,000 LBS = Total Fuel

👉Total fuel = Enough fuel for route, 1h contingency (holding & taxi), problematic winds, alternate fuel for 200nm and a minimum landing fuel (1h). Modify alternate value as needed.
👉Load all wing tanks with same amount of fuel; inner tanks full 👉outer tanks 👉center tanks.
A340-300 Attachments:

A340-300 Optimum & Maximum Flight Level Charts:
### A340-300 Fuel Planning Charts:

<table>
<thead>
<tr>
<th>Flight plan fuel only</th>
<th>MZFW 399000 lbs</th>
<th>Fuel consumed (lbs)</th>
<th>Break release to landing</th>
<th>Climb: 250 / 300 kt M 0.78</th>
<th>Cruise: M 0.80</th>
<th>Descend: M 0.82 300 / 250 kt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance (nm)</td>
<td>Fuel (lbs) at FL 310</td>
<td>Fuel (lbs) at FL 330</td>
<td>Fuel (lbs) at FL 350</td>
<td>Fuel (lbs) at FL 370</td>
<td>Fuel (lbs) at FL 390</td>
<td>Fuel (lbs) at FL 410</td>
</tr>
<tr>
<td>100</td>
<td>5800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>8900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>12000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>15100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500</td>
<td>18200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>33800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1500</td>
<td>49300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>64800</td>
<td>95% of FL310</td>
<td>91% of FL310</td>
<td>88% of FL310</td>
<td>87% of FL310</td>
<td>86% of FL310</td>
</tr>
<tr>
<td>2500</td>
<td>80300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3000</td>
<td>95800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3500</td>
<td>111300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4000</td>
<td>126800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4500</td>
<td>142300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000</td>
<td>157800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5500</td>
<td>173300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6000</td>
<td>189900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6500</td>
<td>204400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7000</td>
<td>219900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7500</td>
<td>235400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8000</td>
<td>250700</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8500</td>
<td>-</td>
<td>242400</td>
<td>234400</td>
<td>231700</td>
<td>229100</td>
<td></td>
</tr>
<tr>
<td>9000</td>
<td>-</td>
<td>-</td>
<td>248000</td>
<td>245200</td>
<td>242400</td>
<td></td>
</tr>
</tbody>
</table>

### Fuel planning notes A340-300 (1kg = 2.205 lbs):

- **Basic Operating Weight (OEW)**: 287,000 LBS
- **Payload (passengers & cargo)**: XXX.XXX LBS
- **Zero Fuel Weight (ZFW)**: XXX.XXX LBS (max 399,000 LBS)
- **Minimum Landing Fuel**: 012,000 LBS
- **Alternate Fuel (200nm distance)**: 006,000 LBS
- **Contingency Fuel (holding, taxi, etc.)**: 012,000 LBS
- **Planned Landing Weight (PLW)**: XXX.XXX LBS (max 423,300 LBS)
- **Flight Plan Fuel (fuel for route)**: XXX.XXX LBS
- **Planned Takeoff Weight (PTOW)**: XXX.XXX LBS (max 609,600 LBS)

**Flight Plan Fuel + 30,000 LBS = Total Fuel**

- **Total fuel** = Enough fuel for route, 1h contingency (holding & taxi), problematic winds, alternate fuel for 200nm and a minimum landing fuel (1h). Modify alternate value as needed.
- **Load all wing tanks with same amount of fuel; inner tanks full ➔ outer tanks ➔ center tanks.**
A340-600 Attachments:

A340-600 Optimum & Maximum Flight Level Charts:
# A340-600 Fuel Planning Charts:

<table>
<thead>
<tr>
<th>Flightplan Fuel Only</th>
<th>MZFW 553400 lbs</th>
<th>Fuel Consumed (lbs)</th>
<th>Break Release to Landing</th>
<th>Climb: 250 / 300 kt M 0.78</th>
<th>Cruise: M 0.80</th>
<th>Descend: 300 / 250 kt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance (nm)</td>
<td>Fuel (lbs) at FL 310</td>
<td>Fuel (lbs) at FL 330</td>
<td>Fuel (lbs) at FL 350</td>
<td>Fuel (lbs) at FL 390</td>
<td>Fuel (lbs) at FL 410</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>4000</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>200</td>
<td>7600</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>300</td>
<td>11500</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>400</td>
<td>15300</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>500</td>
<td>19200</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>1000</td>
<td>38600</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>1500</td>
<td>58000</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>2000</td>
<td>77400</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>2500</td>
<td>96800</td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
<td>88%</td>
<td>87%</td>
</tr>
<tr>
<td>3000</td>
<td>116200</td>
<td>Of FL310</td>
<td>Of FL310</td>
<td>of FL310</td>
<td>of FL310</td>
<td>of FL310</td>
</tr>
<tr>
<td>3500</td>
<td>135600</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>4000</td>
<td>155000</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>4500</td>
<td>174500</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>5000</td>
<td>193800</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>5500</td>
<td>213200</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>6000</td>
<td>232600</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>6500</td>
<td>252000</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>7000</td>
<td>271500</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>7500</td>
<td>290900</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>8000</td>
<td>310200</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>8300</td>
<td>322000</td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>8500</td>
<td>-</td>
<td>313100</td>
<td>303200</td>
<td>293300</td>
<td>290000</td>
<td>286700</td>
</tr>
<tr>
<td>9000</td>
<td>-</td>
<td>-</td>
<td>321000</td>
<td>310600</td>
<td>307100</td>
<td>303600</td>
</tr>
<tr>
<td>9500</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>320500</td>
</tr>
</tbody>
</table>

## Fuel planning notes A340-600:

- Basic Operating Weight (OEW) = 400,900 LBS
- + Payload (passengers & cargo) = XXX.XXX LBS
- = Zero Fuel Weigh (ZFW) = XXX.XXX LBS (max 553,400 LBS)
- + Minimum Landing Fuel = 017,500 LBS
- + Alternate Fuel (200nm distance) = 008,000 LBS
- + Contingency Fuel (holding, taxi, etc.) = 017,500 LBS
- = Planned Landing Weight (PLW) = XXX.XXX LBS (max 584,200 LBS)
- + Flight Plan Fuel (fuel for route) = XXX.XXX LBS
- = Planned Takeoff Weight (PTOW) = XXX.XXX LBS (max 837,800 LBS)

Total fuel = Enough fuel for route, 1h contingency (holding & taxi), problematic winds, alternate fuel for 200nm and a minimum landing fuel (1h). Modify alternate value as needed.

Load all wing tanks with same amount of fuel; inner tanks full ➔ outer tanks ➔ center tanks.
## Reduced & Conventional Vertical Separation Minima - CVSM & RVSM

<table>
<thead>
<tr>
<th>CVSM</th>
<th>RVSM</th>
<th>RVSM (North-South)</th>
<th>RVSM (meter)</th>
<th>CVSM (meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>180°</td>
<td>000°</td>
<td>180° -359° -179°</td>
<td>000° -359° -179°</td>
<td>270° -89° -269°</td>
</tr>
<tr>
<td>FL 040</td>
<td>FL 050</td>
<td>FL 040</td>
<td>FL 050</td>
<td>FL 040</td>
</tr>
<tr>
<td>FL 060</td>
<td>FL 070</td>
<td>FL 060</td>
<td>FL 070</td>
<td>FL 060</td>
</tr>
<tr>
<td>FL 080</td>
<td>FL 090</td>
<td>FL 080</td>
<td>FL 090</td>
<td>FL 080</td>
</tr>
<tr>
<td>FL 100</td>
<td>FL 110</td>
<td>FL 100</td>
<td>FL 110</td>
<td>FL 100</td>
</tr>
<tr>
<td>FL 120</td>
<td>FL 130</td>
<td>FL 120</td>
<td>FL 130</td>
<td>FL 120</td>
</tr>
<tr>
<td>FL 140</td>
<td>FL 150</td>
<td>FL 140</td>
<td>FL 150</td>
<td>FL 140</td>
</tr>
<tr>
<td>FL 160</td>
<td>FL 170</td>
<td>FL 160</td>
<td>FL 170</td>
<td>FL 160</td>
</tr>
<tr>
<td>FL 180</td>
<td>FL 190</td>
<td>FL 180</td>
<td>FL 190</td>
<td>FL 180</td>
</tr>
<tr>
<td>FL 200</td>
<td>FL 210</td>
<td>FL 200</td>
<td>FL 210</td>
<td>FL 200</td>
</tr>
<tr>
<td>FL 220</td>
<td>FL 230</td>
<td>FL 220</td>
<td>FL 230</td>
<td>FL 220</td>
</tr>
<tr>
<td>FL 240</td>
<td>FL 250</td>
<td>FL 240</td>
<td>FL 250</td>
<td>FL 240</td>
</tr>
<tr>
<td>FL 260</td>
<td>FL 270</td>
<td>FL 260</td>
<td>FL 270</td>
<td>FL 260</td>
</tr>
<tr>
<td>FL 280</td>
<td>FL 290</td>
<td>FL 280</td>
<td>FL 290</td>
<td>FL 280</td>
</tr>
</tbody>
</table>

**CVSM**: All countries (including the Atlantic Ocean) with the following exceptions:
- France, Italy, Portugal, Spain & New Zealand.
- China, excluding Hong Kong, Macau and Taiwan.
- Russia, Mongolia, North Korea, Kyrgyzstan, Kazakhstan, and 6,000 m or below in Turkmenistan (where feet is used for FL210 and above).