Legend and Explanation

1 LOCATION (AIRPORT), APT OF ENTRY (IF APPLICABLE)

Airports are listed alphabetically by location name, with airport name in parentheses when different than location name. A cross index by airport name is provided.

2 ELEVATION, JEPPESEN NAVDATA (ICAO) IDENTIFIER, IATA IDENTIFIER (IF APPLICABLE), TIME ZONE (1) COORDINATES

(1)

Time Zone in numeric format, observed by the airport as stated in the source and indicating the standard difference of each zone from Universal Time Coordinated (UTC).

* indicated that the airport observes Daylight Savings or Summer Time.

3 TELEPHONE/TELEFAX NUMBERS

Telephone/Telefax numbers are provided for contact with the airport, where available.

4 RUNWAY DATA AND RUNWAY/APPROACH LIGHTS

All usable runways are listed indicating the following items:

a. Runway designators.

b. Total runway length, excluding stopways, overruns or clearways.

c. TORA and LDA if not identical with total runway length. TODA and ASDA when longer than take-off run (TORA) and provided by controlling authority. For explanation see below.

d. Type of runway surface.

e. Runway bearing strength.

Load classification number (LCN) supplemented (if known) by:

- r (rigid pavement) - radius of relative strength in inches

- f (flexible pavement) - thickness in inches

- Load Classification Group (LCG)

- Wheel and/or aircraft loads in thousands of pounds

SIWL

Single Isolated Wheel Load times number of main wheels = allowable aircraft weight.

ESWL

Equivalent Single Wheel Load, a calculated value for multiwheel legs. The resultant value is considered to be the same as SIWL for determining LCN as indicated below.

S or SW

(allowable aircraft weight) for single wheel per leg configuration.

T or DW

(allowable aircraft weight) for tandem or dual wheel per leg configuration.

TT or DDW

(allowable aircraft weight) for twin tandem or double dual wheel per leg configuration.

TDT

Runway weight bearing capacity for aircraft with twin delta tandem landing gear.

DDT

Runway weight bearing capacity for aircraft with double dual tandem type landing gear.

AUW

All Up Weight (without regard to wheel configuration).
5 HOURS & RESTRICTIONS

Airport hours of operation, restrictions for certain types of users or aircraft. All times are UTC unless otherwise indicated.

Abbreviations used for airport hours and restrictions have the following meaning:

**SR**
- Sunrise

**SS**
- Sunset

**H24**
- Continuous operation

**HX**
- Irregular times

**O/R**
- On Request

---

MTOW
Maximum Take-Off Weight
- Load allowed on each main landing gear leg for different wheel configurations in thousands of pounds

**S/L**
(load per leg) for single wheel per leg configuration.

**T/L**
(load per leg) for twin or tandem wheel per leg configuration.

**TT/L**
(load per leg) for bogie or twin tandem wheel per leg configuration.

- Type of aircraft (represents a maximum load factor).
- ACN/PCN system - see explanation below.

Information predicated on maximum pounds per square inch tire pressure is shown as "000 psi". Estimated information is prefaced with "E".

f. Runway edge and approach lights are indicated as the best available system from the following sequence.

**HIRL**
- high intensity runway lights

**MIRL**
- medium intensity runway lights

**RL**
- low intensity runway lights

**PORT-RL**
- portable electric runway lights

**FLARES**
- flare pots or goosenecks

**HIALS**
- high intensity approach lights

**MIALS**
- medium intensity approach lights

**ALS**
- low intensity approach lights

**LDIN**
- sequenced flashing lead-in lights

**RAIL**
- runway alignment indicator lights (sequenced flashing)
O/T
Other times

PNR
Prior Notice Required

PPO
Prior Permission Only

PPR
Prior Permission Required

PTO
Part Time Operation

ATND/SKD
Attended Schedule

Note:
Civil aircraft require prior permission for the use of military airports.

6 CUSTOMS
"Customs" without further explanation indicates that Customs are available during airport hours. Other Customs conditions are explained, as appropriate.

Note:
Availability at destination should be checked before departure.

7 FUEL
U
Fuel Services/Type unknown

7.1 JEPPESEN CODE AVGAS (GASOLINE) FUEL CATEGORY

F
Piston engine fuel (grade not specified)

F-1
73 octane

F-1
78 octane

F-2
80/87 octane (equal to MIL F-12)

F-7
91/96 octane, unleaded (no MIL spec)

F-7
91/115 octane

F-7
100 octane

F-3
100LL octane, low lead (equal to MIL F-18)

F-4
100/130 octane

F-5
115/145 octane (equal to MIL F-22)

F-6
7.2 JET (KEROSENE) FUEL CATEGORY

Jet
Jet turbine fuel (grade not specified)

Jet A
Kerosene without FS-II*, FP** minus 40°C

Jet A+
Kerosene with FS-II*, FP** minus 40°C

Jet A-1
Kerosene without FS-II*, FP** minus 47°C (equal to MIL F-35/JP-1***)

Jet A-1+
Kerosene with FS-II*, FP** minus 47°C (equal to MIL F-34/JP-8)

Jet B
Wide-cut turbine fuel without FS-II*, FP** minus 50°C (equal to JP-4 with the exception of certain additives)

Jet B+
Wide-cut turbine fuel with FS-II*, FP** minus 50°C

JP-4
Wide-cut turbine fuel for MIL aircraft, FP** minus 58°C (designation F-40 is also used)

JP-5
Kerosene with FS-II*, FP** minus 46°C used for aircraft operating from naval aircraft carriers (designation F-43/F-44 also used)

JP-8+100
Kerosene with FS-II*, FP** minus 47°C with fuel additive package that improves thermo stability characteristics

Note:
Fuel and servicing hours may not be identical with airport hours. At military fields fuel and/or oxygen may not be available for civil operators. Availability at destination should be checked before departure.

8 BEACON
The abbreviations “ABN” and “IBN” indicate the availability of an aerodrome light beacon or aerodrome identification beacon.

9 DECLARED RUNWAY DISTANCES AS SPECIFIED BY ICAO
Take-off Run Available (TORA), that is, the length of runway which is declared available and suitable for the ground run of an aeroplane taking off.

Accelerate Stop Distance Available (ASDA), that is, the length of the take-off run available plus the length of stopway available (if stopway is provided).

Take-off Distance Available (TODA), that is, the length of the take-off run available plus the length of clearway available (if clearway is provided).

Landing Distance Available (LDA), that is, the length of runway which is declared available and suitable for the ground run of an aeroplane landing. The landing distance available commences at the threshold and extends for the length of runway after the threshold. However, the threshold may be displaced from the extremity of the runway when it is considered necessary to make a corresponding displacement of the approach surface by reason of obstacles in the approach path to the runway.
10 RESCUE AND FIRE FIGHTING SYSTEM

Airport categories for rescue and fire fighting are based on the over-all length of the longest aeroplane normally using the airport and its maximum fuselage width as detailed in table 1.1.

Table 1.2. shows the minimum usable amounts of extinguishing agents related to the airport categories. They will be shown in the airport listings as "Fire" followed by the category number (e.g. Fire 5).

Where fire fighting equipment is available but the category is not defined, the letter U (Uncategorized) will be published (e.g. Fire U).

Where fire fighting equipment is not available, the letter N will be published.

If different category numbers are published for one airport, the lowest category number will be shown. The higher category number with the relevant note (e.g. Fire 7 PTO, Fire 7 PPR ... etc.) can be found within the airport information block.

Table 1.1. Airport category for rescue and fire fighting

<table>
<thead>
<tr>
<th>Airport cat.¹</th>
<th>ICAO</th>
<th>FAA</th>
<th>Aeroplane over-all length (ft/m)</th>
<th>Maximum fuselage width (ft/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>0 up to but not including 30/9</td>
<td>7/2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>30/9 up to but not including 39/12</td>
<td>7/2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>39/12 up to but not including 59/18</td>
<td>10/3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>59/18 up to but not including 79/24</td>
<td>13/4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>79/24 up to but not including 92/28</td>
<td>13/4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>B</td>
<td>92/28 up to but not including 128/39</td>
<td>16/5</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>C</td>
<td>128/39 up to but not including 161/49</td>
<td>16/5</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>D</td>
<td>161/49 up to but not including 200/61</td>
<td>23/7</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>E</td>
<td>200/61 up to but not including 249/76</td>
<td>23/7</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td></td>
<td>249/76 up to but not including 295/90</td>
<td>26/8</td>
</tr>
</tbody>
</table>

¹ The airport category shown in the Tabulation above should be considered as guideline only. To determine the exact rescue and fire airport category refer to ICAO DOC 9137 Chapter 2/(2.1.6) & FAA regulations §139.315, §139.317.

Table 1.2. Minimum Usable Amounts of Extinguishing Agents

<table>
<thead>
<tr>
<th>Airport category</th>
<th>Foam meeting performance level A</th>
<th>Foam meeting performance level B</th>
<th>Complementary Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICAO FAA²</td>
<td>Water Gal/L</td>
<td>Discharge Rate foam solution/minute Gal/L</td>
<td>Water Gal/L</td>
</tr>
<tr>
<td>1 A</td>
<td>90/350</td>
<td>90/350</td>
<td>60/230</td>
</tr>
</tbody>
</table>
### Airport category Foam meeting performance level A Foam meeting performance level B Complementary Agents

<table>
<thead>
<tr>
<th>ICAO</th>
<th>FAA²</th>
<th>Water Gal/L</th>
<th>Discharge Rate foam solution/minute Gal/L</th>
<th>Water Gal/L</th>
<th>Discharge Rate foam solution/minute Gal/L</th>
<th>Dry Chemical Powders Lbs/kg</th>
<th>Gallons or Lbs/kg</th>
<th>CO₂ or Lbs/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>220/1000</td>
<td>210/800</td>
<td>180/670</td>
<td>150/550</td>
<td>200/90</td>
<td>200/90</td>
<td>400/180</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>400/1800</td>
<td>340/1300</td>
<td>320/1200</td>
<td>240/900</td>
<td>330/135</td>
<td>330/135</td>
<td>600/270</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>790/3600</td>
<td>690/2600</td>
<td>630/2400</td>
<td>480/1800</td>
<td>330/135</td>
<td>330/135</td>
<td>600/270</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>1780/8100</td>
<td>1190/4500</td>
<td>1430/5400</td>
<td>790/3000</td>
<td>400/180</td>
<td>400/180</td>
<td>800/360</td>
</tr>
<tr>
<td>6 B</td>
<td></td>
<td>2600/11800</td>
<td>1590/6000</td>
<td>2090/7900</td>
<td>1060/4000</td>
<td>500/225</td>
<td>500/225</td>
<td>1000/450</td>
</tr>
<tr>
<td>7 C</td>
<td></td>
<td>4800/18200</td>
<td>2090/7900</td>
<td>3200/12100</td>
<td>1400/5300</td>
<td>500/225</td>
<td>500/225</td>
<td>1000/450</td>
</tr>
<tr>
<td>8 D</td>
<td></td>
<td>7210/27300</td>
<td>2850/10800</td>
<td>4810/18200</td>
<td>1900/7200</td>
<td>1000/450</td>
<td>1000/450</td>
<td>2000/900</td>
</tr>
<tr>
<td>9 E</td>
<td></td>
<td>9620/36400</td>
<td>3570/13500</td>
<td>6420/24300</td>
<td>2380/9000</td>
<td>1000/450</td>
<td>1000/450</td>
<td>2000/900</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>12730/48200</td>
<td>4390/16600</td>
<td>8530/32300</td>
<td>2960/11200</td>
<td>1000/450</td>
<td>1000/450</td>
<td>2000/900</td>
</tr>
</tbody>
</table>

² The FAA fire fighting categories requires equipment similar to the ICAO fire fighting equipment shown in the table above.

The principal extinguishing agent should be:

a. a foam meeting the minimum performance level A; or

b. a foam meeting the minimum performance level B; or

c. a combination of these agents.

### LOAD CLASSIFICATION OF RUNWAYS AND AIRCRAFT ALIGNMENT CHART

At some airports the bearing strength of runway pavement is defined by Load Classification Number (LCN) / Load Classification Group (LCG). The LCN / LCG has to be determined for a given aircraft and compared with the specific runway LCN / LCG. Normally the LCN / LCG of an aircraft should not be above that of the runway on which a landing is contemplated. Pre-arranged exceptions may be allowed by airport authorities.

The aircraft LCN / LCG can be determined as follows:

a. Obtain Single Isolated Wheel Load (SIWL / ESWL) for the aircraft from Aircraft Operations Manual and locate this figure in pounds or tons, on the left scale of the chart.

b. Locate tire pressure on the scale to the right.

c. Connect the points found in 1 and 2 with a straight line. Where this line crosses the center scale read your aircraft LCN / LCG.

d. This LCN / LCG should not be above the published runway LCN / LCG.

**Note:**

LCG reformulates LCN only; there is no correlation with other methods of expressing runway strength nor is any correlation possible.

**Example:**

Aircraft SIWL = 36,500 lbs or 16.5 tons
Tire pressure = 70 PSI or 4.9 kg/cm²
Aircraft LCN = 32, LCG = IV.
12 ACN/PCN SYSTEM

a. The ICAO introduced the ACN/PCN System as a method to classify pavement bearing strength for aircraft with an All-up Mass of more than 12500lbs (5700kg). For lighter aircraft see item e.

DEFINITIONS:

ACN (Aircraft Classification Number)

A number expressing the relative effect of an aircraft on a pavement for a specified standard subgrade category.

Note:
The aircraft classification number is calculated with respect to the center of gravity (CG) position which yields the critical loading on the critical gear. Normally the aftmost CG appropriate to the maximum gross apron (ramp) mass is used to calculate the ACN. In exceptional cases the forwardmost CG position may result in the nose gear loading being more critical.

CBR (California Bearing Ratio)

The bearing ratio of soil determined by comparing the penetration load of the soil to that of a standard material. The method covers evaluation of the relative quality of subgrade soils but is applicable to sub-base and some base course materials.

K
Westergaard’s modulus of subgrade reaction in MN/m³.

MN/m³ (Mega Newtons per cubic meter)

A measure of force in millions of Newtons per cubic meter.

MPa (Mega Pascals)

A measure of pressure or stress in millions of Pascals.

N (Newton)

The force which, when applied to a body having a mass of 1 kilogram gives it an acceleration of 1 meter per second squared.

Pa (Pascal)

The pressure of stress of 1 Newton per square meter.

PCN (Pavement Classification Number)

A number expressing the bearing strength of a pavement for unrestricted operations.

b. ACN for selected aircraft types currently in use have been provided by aircraft manufacturers or ICAO and the results are presented in tables shown on the following pages. Examples of ACN table usage are shown below. ICAO reference documents are Annex 14, Attachment B and Doc 9157-AN/901, Part 3.

c. PCN will be determined and reported by the appropriate authority. PCN will be qualified by type of pavement, subgrade strength, tire pressure and calculation method information, using the following codes:

1. The Pavement Classification Number:

   The reported PCN indicates that an aircraft with an ACN equal to or less than the reported PCN can operate on the pavement subject to any limitation on the tire pressure.

2. The type of pavement:
3. The subgrade strength category:
   A
   High
   B
   Medium
   C
   Low
   D
   Ultra-low

4. The tire pressure category:
   W
   High, no pressure limit
   X
   Medium, limited to 1.50MPa (218psi)
   Y
   Low, limited to 1.0MPa (145psi)
   Z
   Very low, limited to 0.50MPa (73psi)

5. Pavement calculation method:
   T
   Technical evaluation
   U
   Using aircraft experience

Example:
Coding - PCN 80/R/B/W/T
The bearing strength of a rigid pavement, resting on a medium strength subgrade, has been assessed by technical evaluation to be PCN 80 and there is no tire pressure limitation.

d. The appropriate authority may establish criteria to regulate the use of a pavement by aircraft with an ACN higher than the PCN reported for that pavement.

Note:
If the reported PCN is below the ACN for the Maximum Apron Mass, then an All-up Mass can be calculated which is suitable to the lower reported PCN. The ACN varies linearly between the Operating Mass Empty and the Maximum Apron Mass.

e. The bearing strength of a pavement for aircraft with an All-up Mass EQUAL TO OR LESS than 12500lbs (5700kg) shall be made available by reporting the following information in plain language:
   1. Maximum allowable aircraft mass, and
   2. Maximum allowable tire pressure.

Example:
4000kg (8800lbs)/0.50MPa (73psi)

f. Occasional minor overloading operations are acceptable for:
   1. Flexible pavements by aircraft with ACN not exceeding 10 per cent above the PCN;
   2. Rigid or composite pavements by aircraft with ACN not exceeding 5 per cent above the PCN;
   3. Unknown pavement structure, a 5 per cent limitation above the PCN should apply.

Where overload operations are conducted the Appropriate Authority should be consulted.
Example 1:

Find the ACN of a B777-200LR with a mass of 348359 kg on a rigid pavement resting on a medium strength subgrade (i.e., $K = 80 \text{MN/m}^3$). Tire pressure of the main wheels is 1.50 MPa.

Solution: $\text{ACN} = 82$

Example 2:

An AIP contains the following information related to a runway pavement:

PCN of the pavement = 80

Determine whether the pavement can accept the following aircraft at the indicated operating masses and tire pressures:

<table>
<thead>
<tr>
<th>Mass (kg)</th>
<th>Tire Pressure (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A380-800</td>
<td>571000</td>
</tr>
<tr>
<td>B747-400B</td>
<td>398345</td>
</tr>
<tr>
<td>IL-96</td>
<td>231000</td>
</tr>
<tr>
<td>EMB ERJ 145ER</td>
<td>20700</td>
</tr>
</tbody>
</table>

Solution: ACNs of these aircraft are 69, 62, 12.9 and 43 respectively. Since the pavement in question has a PCN of 80, it can accept all of the aircraft types cited.

Example:

Find the ACN of a B777-300 with a mass of 280400 kg on a flexible pavement resting on a medium strength subgrade (CBR-10%). The tire pressure of the main wheels is 1.48 MPa.

Solution:

\[
\text{ACN} = \frac{\text{Max. Take-off Mass} - \text{Actual Mass}}{\text{Max. Take-off Mass} - \text{Empty Mass}} \times (\text{ACN}_\text{max} - \text{ACN}_\text{empty})
\]

\[
= 59 - \frac{(300278 - 280400)}{(300278 - 157850)} \times (59 - 24)
\]

\[
= 59 - (0.14) \times (35)
\]

\[
\text{ACN} = 54
\]

Note:

The two All-up Masses required are shown in columns 2 or 3 of the following pages for each aircraft type listed.