C909

(ARJ21-700)

Aircraft Characteristics for Airport Planning

ACAP

Number: TP-E700051

(**PMC:** ARJ21-SVV19-50009-00)

Commercial Aircraft Corporation of China, Ltd.

Original:2014.10.31

R9：2025.03.19

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Transmittal Letter

2025.03.19

To: All holders of this technical publication.

This revision applies to Aircraft Characteristics for Airport Planning.

REVISION DESCRIPTION

This revision supersedes all content in the previous version.Data modules which are revised will be identified in the List of Effective Data Modules.

In case of lost or missing items, please contact COMAC.

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Revision Highlights

Data Module	Description of Change	Applicable to
ARJ21-A-00-40-23-00A-021A-A	Revised	

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List of Effective Data Modules

Code N, C, D or RR indicates data modules which are New, Changed, Deleted or Reinstated revised respectively.

Data module code	Revision Status	Issue Date
ARJ21-A-00-40-23-00A-001A-A	C	2025.03.19
ARJ21-A-00-40-23-00A-021A-A	C	2025.03.19
ARJ21-A-00-40-23-00A-023B-A	C	2025.03.19
ARJ21-A-00-40-23-00A-00UA-A	C	2025.03.19
ARJ21-A-00-40-23-00A-00SA-A	C	2025.03.19
ARJ21-A-00-40-23-00A-00TA-A	C	2025.03.19
ARJ21-A-00-40-23-01A-01BA-A		2023.03.10
ARJ21-A-00-40-23-00A-01BA-A		2021.09.20
ARJ21-A-19-20-01-01A-01BA-A		2023.03.10
ARJ21-A-19-20-01-02A-01BA-A		2023.03.10
ARJ21-A-19-20-01-03A-01BA-A		2023.03.10
ARJ21-A-19-20-02-01A-04AA-A		2023.03.10
ARJ21-A-19-20-02-02A-04AA-A		2023.03.10
ARJ21-A-19-20-02-03A-04AA-A		2021.09.20
ARJ21-A-19-20-02-04A-04AA-A		2023.03.10
ARJ21-A-19-20-02-05A-04AA-A		2023.03.10
ARJ21-A-19-20-02-06A-04AA-A		2023.03.10
ARJ21-A-19-20-02-07A-04AA-A		2023.03.10
ARJ21-A-19-20-02-08A-04AA-A		2021.09.20
ARJ21-A-19-20-02-09A-04AA-A		2023.03.10
ARJ21-A-19-20-03-01A-03CA-A		2021.09.20
ARJ21-A-19-20-03-02A-03CA-A		2023.03.10
ARJ21-A-19-20-03-03A-03CA-A		2023.03.10
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ARJ21-A-19-20-03-05A-03CA-A		2023.03.10
ARJ21-A-19-20-04-01A-04AA-A		2021.09.20
ARJ21-A-19-20-04-02A-04AA-A		2021.09.20
ARJ21-A-19-20-04-03A-04AA-A		2023.03.10
ARJ21-A-19-20-04-04A-04AA-A		2023.03.10
ARJ21-A-19-20-04-05A-04AA-A		2021.09.20
ARJ21-A-19-20-04-06A-04AA-A		2021.09.20

Data module code	Revision Status	Issue Date
ARJ21-A-19-20-05-01A-04AA-A		2023.03.10
ARJ21-A-19-20-05-02A-04AA-A		2023.03.10
ARJ21-A-19-20-05-03A-04AA-A		2023.03.10
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ARJ21-A-19-20-05-06A-04AA-A		2021.09.20
ARJ21-A-19-20-06-01A-04AA-A		2021.09.20
ARJ21-A-19-20-06-02A-04AA-A		2021.09.20
ARJ21-A-19-20-06-03A-04AA-A		2023.03.10
ARJ21-A-19-20-07-01A-04AA-A		2023.03.10
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ARJ21-A-19-20-07-06A-04AA-A		2021.09.20
ARJ21-A-19-20-07-07A-04AA-A		2023.03.10
ARJ21-A-19-20-07-08A-04AA-A		2023.03.10
ARJ21-A-19-20-07-09A-04AA-A		2023.03.10
ARJ21-A-19-20-07-10A-04AA-A		2023.03.10

Revision Records

Make sure that previous revisions to this manual have been filed.
Enter the date filed and the name of the person filing.

Issue No	Issue Date	Filed date	Filed by

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Preamble

1. General

C909(ARJ21-700) Aircraft Characteristics for Airport Planning (ACAP) is issued to provide essential characteristics of C909 (ARJ21-700) Aircraft and necessary data which are needed for airport operators and airlines for accomplishment of aircraft facilities planning.

ACAP is helpful for aircraft operators to accomplish airport facilities planning in a short time according to aircraft basic data, performance, ground maneuvering and servicing arrangement provided in this manual.

This manual comprises 7 chapters:

A. Chapter 1: Overview

B. Chapter 2: Aircraft Description

C. Chapter 3: Aircraft Performance

D. Chapter 4: Ground Maneuvering

E. Chapter 5: Terminal Servicing

F. Chapter 6: Operating Conditions

G. Chapter 7: Pavement Data

2. Revision Marks

The revised contents are identified by a black vertical bar on the left-hand page margins of the manual. Detailed reasons for revisions can be found in the Revision Highlights.

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Symbols and Abbreviations

1. Abbreviations

Table 1 Abbreviations

ACN	Aircraft Classification Number	MG	Main Landing Gear
APR	Auto Power Reserve	MAX	Maximum
APU	Auxiliary Power Unit	MIN	Minimum
BLG	Body Landing Gear	MLW	Maximum Design Landing Weight
CAAC	Civil Aviation Authority of China	MPL	Maximum Payload
CAS	Calibrated Air Speed	MRW	Maximum Ramp Weight
CBR	California Bearing Ratio	MTOW	Maximum Design Takeoff Weight
CG	Center of Gravity	MTW	Maximum Design Taxi Weight
C/L	Centerline	MZFW	Maximum Design Zero Fuel Weight
E-E	Electronic/Electrical Equipment	NLG	Nose Landing Gear
E	Young's modulus	NTO	Takeoff thrust
FR	Frame	OAT	Outside Air Temperature
FWD	Forward	OEW	Operating Empty Weight
GPU	Ground Power Unit	PAX	Passenger
H	Horizontal/Altitude	PCA	Portland Cement Association
GSE	Ground Support Equipment	PCN	Pavement Classification Number
ICAO	International Civil Aviation Organization	R	Right/Radius
IDG	Integrated Drive Generator	RAT	Ram Air Turbine
ISA	International Standard Atmosphere	SLS	Sea Level Static
k	Subgrade Strength	V	Vertical
L	Left	V_{REF}	Landing Reference Speed

LCD	Liquid Crystal Display	W	Weight
LCN	Load Classification Number	MAC	Mean Aerodynamic Chord

2. Symbols

Table 2 Symbols

°	Degree (unit of angle)	lb	Pound
%	Percentage	lbf	Pounds Force
℃	Degree Centigrade	L/min	Litre/Minute
℉	Degree Fahrenheit	m	Meter
bar	Bar (unit of barometric pressure)	m/s	Meter per Second
cm	Centimeter	m^2	Square Meter
deg	Degree (unit of angle)	m^3	Cubic Meter
ft	Foot	min	Minimum
ft/s	Foot per Second	mm	Millimeter
ft/s^2	Foot per Square Second	MN/m^3	Mega Newton per Cubic Meter
ft^2	Square Foot	MPa	Mega Pascal
ft^3	Cubic Foot	MPH	Meter per Hour
in	Inch	nm	Nautical mile
K	Kelvin	pci	Pound per Cubic Inch
kg	Kilogram	psi	Pound per Square Inch
kg/l	Kilogram per Liter	t	Ton
km/h	Kilometer per Hour	US gal	United States Gallon
kt	Knot	qt	Quart
kVA	Kilovolt Ampere	l	Liter

Chapter 1
Overview

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Scope

ARJ21-700 Aircraft Characteristics for Airport Planning(ACAP) is applicable to ARJ21-700STD, ARJ21-700ER and ARJ21-700CCF. and is issued to provide the necessary data for airport operators and airlines for accomplishment of aircraft facilities planning. Since operational practices vary among scheduled flights, specific data should be coordinated with the using airlines prior to application. Commercial Aircraft Corporation of China, Ltd. (COMAC) should be contacted for any additional information required.

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Introduction

This manual comprises 7 chapters with a Table of Contents (TOC) at the beginning of the manual.

1. Chapter 1 Overview

2. Chapter 2 Aircraft Description

This chapter contains general dimensional and other basic (family) aircraft data of ARJ21 aircraft.

It covers:

- General Characteristics, General Dimensions and Ground Clearances.
- Passenger and Cargo Compartments Arrangement, and Landing Gear Door Arrangement and Dimensions.

3. Chapter 3 Aircraft Performance

This chapter provides the aircraft performance parameters.

It covers:

- Payload/Range.
- Takeoff Field Length and Landing Field Length Requirements.
- Reference Landing Speed.

4. Chapter 4 Ground Maneuvering

This chapter provides the aircraft turning capability and maneuvering characteristics on the ground.

It covers:

- Aircraft Steering Radius and Cockpit Field of View.
- Runway and Taxiway Turn Paths, and Runway Holding Bay.

5. Chapter 5 Terminal Servicing

This chapter provides information for ground handling and servicing setting and arrangement during ground servicing.

It covers:

- Locations and Connections of Ground Servicing Equipment.
- Pneumatic, Ground Air-Conditioning and Preconditioned Airflow Requirements for Engine Starting.

6. Chapter 6 Operating Conditions

This chapter provides information on engine data and engine influence on ambience.

It covers:

- Engine Exhaust Velocities and Exhaust Temperatures.
- APU Exhaust Velocities and Exhaust Temperatures.
- Danger Areas of the Engines.

7. Chapter 7 Pavement Data

This chapter provides the pavement data and additional pavement diagrams helpful for airport planning.

It covers:

- Landing Gear Footprint.
- Maximum Pavement Load and Landing Gear Loading on Pavement.
- Flexible and Rigid Pavement Requirements, and Flexible and Rigid Pavement LCN Conversion.
- ACN/PCN Reporting System —- Flexible and Rigid Pavements.

ARJ21-700 Aircraft Description

The ARJ21-700 (Advanced Regional Jet for the 21st Century) is a 70~90 seat advanced regional aircraft of medium or short range, powered by turbofan engines. The aircraft has the layout of five seats for each row, a fuselage in the shape of two circular plane sections, low wings, two Short Duct Separation Flow power plants mounted at the tail of the fuselage, i. e. advanced turbofan engines CF34-10A, a high horizontal tail and tricycle retractable landing gear. The cockpit is designed for a two-member crew. The avionics system features bus technology and LCD panel with integrated display capability. The flight control system is an electrical system controlled through electrical signals and actuated by hydraulic pressure or electromechanics, with international advanced technology. Supercritical wings with larger sweepback angle and integrated winglets are used to obtain higher cruise lift-drag ratio, so as to reduce cruise drag and improve operation economy. ARJ21-700 is the basic aircraft of ARJ21 family, and its passenger basic layout has three types: mixed class with 78 seats, full economy class with 90 seats and premium economy class with 68 seats. To meet the requirements of different regions and different route structures for requirement egional aircraft, the basic aircraft has Standard Range Version (STD) and Extended Range Version (ER).

ARJ21-700CCF is a cargo aircraft of medium or short range developed on the basic ARJ21-700, which is specialized in air cargo transport. It is mainly used for cargo, mail and express transport on domestic routes and short and international routes of some neighboring countries. It is an important derivative model of ARJ21-700 aircraft series development. Cargo aircraft include passenger aircraft converted cargo aircraft and new cargo aircraft two types. The cargo aircraft in this manual aims at converting passenger aircraft into cargo aircraft, that is, converting passenger aircraft into cargo aircraft based on airline routes.

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Chapter 2
Aircraft Description

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General Characteristics

Maximum Design Taxi Weight (MTW): Maximum weight for ground maneuver as limited by aircraft strength and airworthiness requirements, including fuel consumed during start and taxiing.

Maximum Design Landing Weight (MLW):Maximum weight for landing as limited by aircraft strength and airworthiness requirements.

Maximum Design Takeoff Weight (MTOW):Maximum weight for takeoff as limited by aircraft strength and airworthiness requirements.

Operating Empty Weight (OEW):Manufacturer's empty weight plus weight of operational items (including standard items)

Maximum Design Zero Fuel Weight (MZFW): Maximum weight allowed before usable fuel and other specified usable agents are loaded as limited by aircraft strength and airworthiness requirements.

Maximum Payload (MPL):Maximum design zero fuel weight minus operating empty weight.

Standard Seating Capacity:The number of passengers in full economy type cabin.

Avionics Compartment Volume:Theoretical volume of the space region surrounded by the boundary of E-E bay.

Cockpit Volume:Theoretical volume of the space region surrounded by the boundary of Cockpit.

Maximum Cargo Volume:The maximum space available for cargo.

Usable Fuel: Fuel available for engines with unusable fuel deducted.

		Aircraft Type				
		ARJ21-700 STD		ARJ21-700 ER		ARJ21-700 CCF
		Full Economy/ Mixed	Premium Economy	Full Economy/ Mixed	Premium Economy	Cargo Aircraft
MTW	lb	89464	84613	96077	89905	96077
	kg	40580	38380	43580	40780	43580
MLW	lb	83036	81571	89187	81571	89187
	kg	37665	37000	40455	37000	40455
MTOW	lb	89286	84437	95900	89728	95900
	kg	40500	38300	43500	40700	43500
OEW	lb	55016	54895	55016	54895	53270
	kg	24955	24900	24955	24900	24666
MZFW	lb	74713	72532	74713	72532	74713
	kg	33890	32900	33890	32900	34163
MPL	lb	19698	17637	19698	17637	22046
	kg	8935	8000	8935	8000	9467

		Aircraft Type				
		ARJ21-700 STD		ARJ21-700 ER		ARJ21-700 CCF
		Full Economy/ Mixed	Premium Economy	Full Economy/ Mixed	Premium Economy	Cargo Aircraft
Maximum Passenger Capacity	Passenger	90/78	60	90/78	60	/
Avionics Compartment Volume	ft^3	273.7	273.7	273.7	273.7	273.7
	m^3	7.8	7.8	7.8	7.8	7.8
Cockpit Volume	ft^3	310.8	310.8	310.8	310.8	310.8
	m^3	8.8	8.8	8.8	8.8	8.8
Cabin	ft^3	3918.7	3918.7	3918.7	3918.7	/
	m^3	111	111	111	111	/
Main Cargo Volume	ft^3	/	/	/	/	3368.3
	m^3	/	/	/	/	95.38
Maximum cargo Volume	ft^3	711.4	711.4	711.4	711.4	711.4
	m^3	20.1	20.1	20.1	20.1	20.1
Usable Fuel Capacity	ft^3	453.5	453.5	453.5	453.5	453.5
	m^3	12.8	12.8	12.8	12.8	12.8
	US GAL	3392.5	3392.5	3392.5	3392.5	3392.5
	L	12842	12842	12842	12842	12842

General Dimensions

Aircraft Dimensions	Wing Span (including winglets)	27.29 m(1074.33 in)
	Height	8.44 m(332.34 in)
	Length	33.46 m(1317.44 in)
Wing	Reference Area	79.86 m^2(859.60 ft^2)
	Aspect Ratio	8.86
Fuselage	Overall Length	30.43 m(1197.99 in)
	Length of FWD Non-barrel Cross Section	5.64 m(222.00 in)
	Length of AFT Non-barrel Cross Section	11.00 m(433.00 in)
	Length of Barrel Cross Section	13.79 m(543.00 in)
	Upper Diameter	3.34 m(131.62 in)
	Lower Diameter	3.122 m(122.91 in)
Horizontal Tail	Reference Area	23.22 m^2(249.89 ft^2)
	Span	10.51 m(413.78 in)
	Aspect Ratio	4.76
Vertical Tail	Reference Area	14.96 m^2(161.03 ft^2)
	Span	3.505 m(137.99 in)
	Aspect Ratio	0.82

Applicable to：ALL

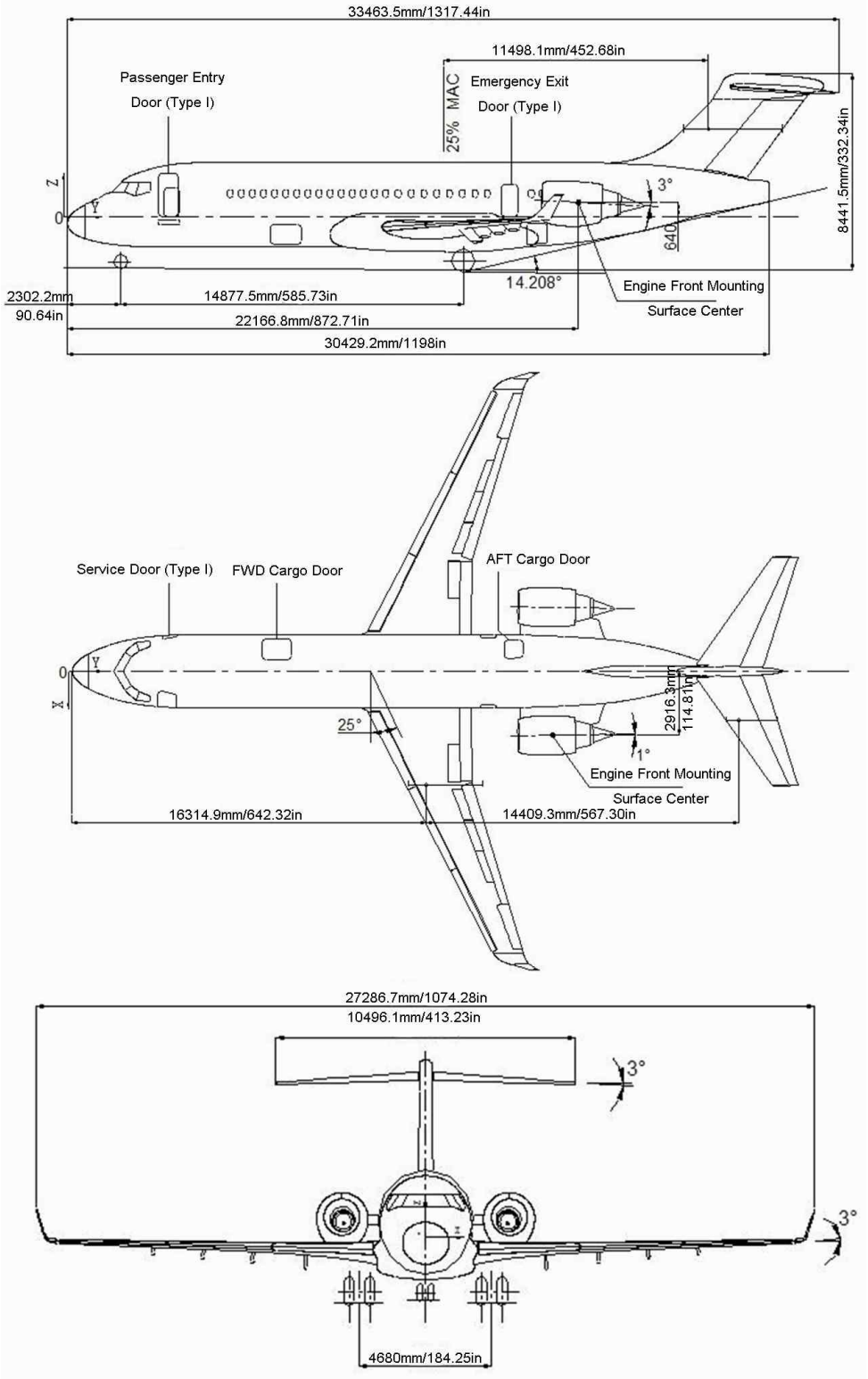

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Figure 1 Three-View Drawing of Aircraft (Sheet 1 of 1)

Applicable to：ALL

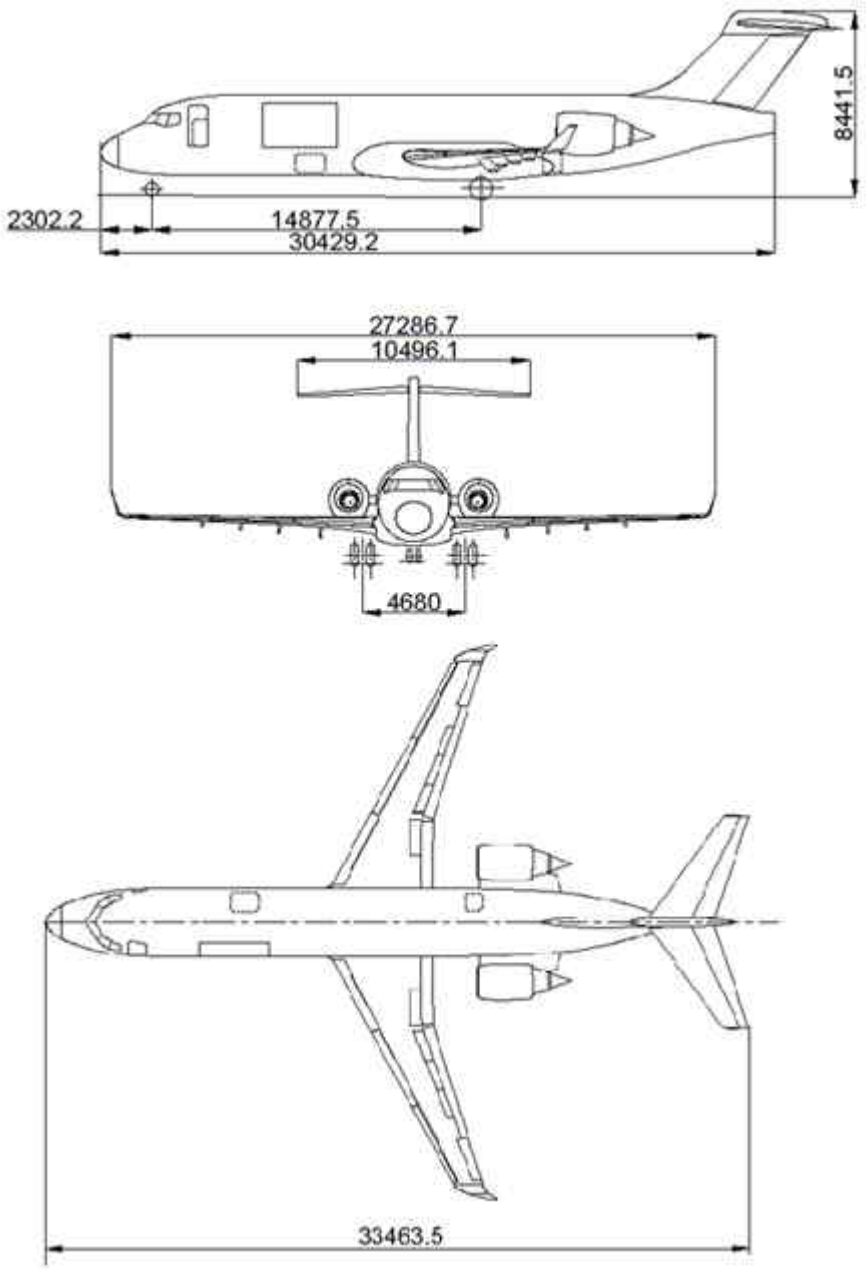

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Figure 2 Three-View Drawing of Aircraft (mm) (Sheet 1 of 1)

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Ground Clearances

Applicable to : ALL

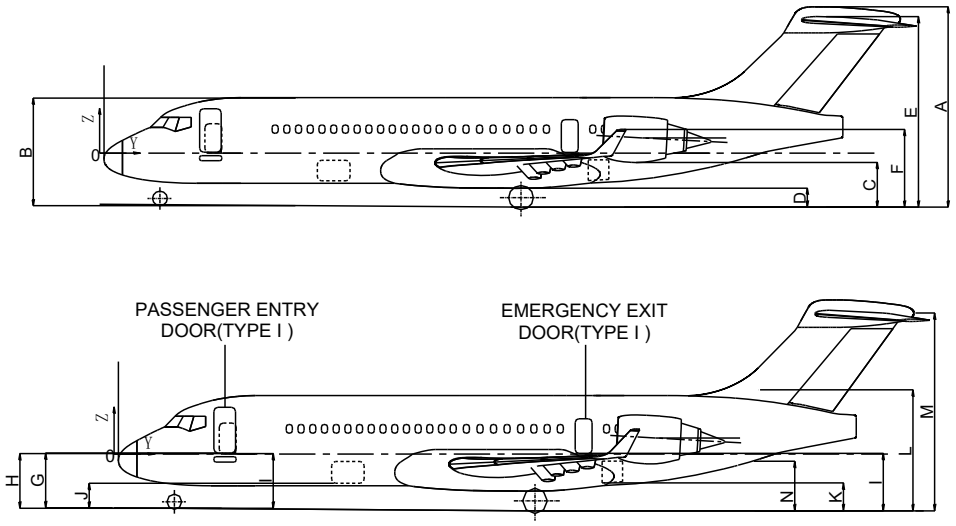

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Figure 1 Ground Clearances (Sheet 1 of 1)

Table 1 Ground Clearances

Dimension No.	Dimension Name	Dimension No.	Dimension Name
A	Ground Clearances of Vertical Tail Highest Point	H	Ground Clearances of Service Door
B	Fuselage Highest Point Ground Clearances	I	Emergency Exit Door Ground Clearances
C	Engine Lowest Point Ground Clearances	J	FWD Cargo Door Ground Clearances
D	Fuselage Lowest Point Ground Clearances	K	AFT Cargo Door Ground Clearances Ground Clearances
E	Horizontal Tail Highest Point Ground Clearances	L	Vertical Tail Root Ground Clearances
F	Wingtip Ground Clearances	M	Horizontal Tail Rear Part Ground Clearances
G	Passenger Entry Door Ground Clearances	N	MID-AFT Fuselage Jacking Point Ground Clearances
Elastic distortion of wing structure is not taken into consideration in F (ground clearance of wing highest point).			

Table 2 Ground Clearances of OEW

	OAT 15°		OAT 0°		OAT -10°	
No.	mm	in	mm	in	mm	in
A	8,606	338.8	8,590	338.2	8,579	337.8

B	4,747	186.9	4,727	186.1	4,713	185.6
C	1,909	75.2	1,891	74.4	1,879	74.0
D	888	35.0	869	34.2	857	33.7
E	8,085	318.3	8,069	317.7	8,058	317.2
F	3,352	132.0	3,334	131.3	3,322	130.8
G	2,461	96.9	2,440	96.1	2,426	95.5
H	2,440	96.1	2,419	95.2	2,405	94.7
I	2,391	94.1	2,372	93.4	2,360	92.9
J	1,213	47.8	1,193	47.0	1,180	46.5
K	1,198	47.2	1,180	46.5	1,168	46.0
L	4,636	182.5	4,619	181.9	4,608	181.4
M	7,955	313.2	7,939	312.6	7,928	312.1
N	1,444	56.9	1,426	56.1	1,415	55.7
	OAT -20°		OAT -30°		OAT -40°	
No.	mm	in	mm	in	mm	in
A	8,568	337.3	8,558	336.9	8,548	336.5
B	4,699	185.0	4,686	184.5	4,672	183.9
C	1,868	73.5	1,856	73.1	1,845	72.6
D	844	33.2	832	32.8	820	32.3
E	8,047	316.8	8,037	316.4	8,027	316.0
F	3,310	130.3	3,299	129.9	3,288	129.4
G	2,412	95.0	2,398	94.4	2,385	93.9
H	2,391	94.1	2,378	93.6	2,364	93.1
I	2,348	92.4	2,337	92.0	2,325	91.5
J	1,167	45.9	1,153	45.4	1,140	44.9
K	1,156	45.5	1,145	45.1	1,133	44.6
L	4,597	181.0	4,586	180.6	4,575	180.1
M	7,918	311.7	7,908	311.3	7,898	310.9
N	1,403	55.2	1,392	54.8	1,381	54.4

Table 3 Ground Clearances at Status of MTW (STD)

	OAT 15°				OAT 0°			
No.	mm	in	mm	in	mm	in	mm	in
	C.G. FWD Limit		C.G. AFT Limit		C.G. FWD Limit		C.G. AFT Limit	
A	8,600	338.6	8,508	335.0	8,583	337.9	8,494	334.4

B	4,643	182.8	4,667	183.7	4,627	182.2	4,650	183.1
C	1,859	73.2	1,817	71.5	1,842	72.5	1,802	70.9
D	810	31.9	799	31.5	794	31.3	783	30.8
E	8,079	318.1	7,987	314.4	8,062	317.4	7,973	313.9
F	3,299	129.9	3,260	128.3	3,282	129.2	3,245	127.8
G	2,311	91.0	2,382	93.8	2,296	90.4	2,365	93.1
H	2,290	90.2	2,361	93.0	2,276	89.6	2,344	92.3
I	2,325	91.5	2,300	90.6	2,309	90.9	2,285	90.0
J	1,092	43.0	1,130	44.5	1,077	42.4	1,114	43.9
K	1,140	44.9	1,107	43.6	1,123	44.2	1,092	43.0
L	4,611	181.5	4,540	178.7	4,595	180.9	4,526	178.2
M	7,967	313.7	7,854	309.2	7,949	313.0	7,840	308.7
N	1,403	55.2	1,350	53.1	1,386	54.6	1,336	52.6
	OAT -10°				OAT -20°			
No.	mm	in	mm	in	mm	in	mm	in
	C.G. FWD Limit		C.G. AFT Limit		C.G. FWD Limit		C.G. AFT Limit	
A	8,572	337.5	8,485	334.1	8,561	337.0	8,476	333.7
B	4,616	181.7	4,639	182.6	4,605	181.3	4,628	182.2
C	1,832	72.1	1,792	70.6	1,821	71.7	1,783	70.2
D	784	30.9	773	30.4	774	30.5	763	30.0
E	8,050	316.9	7,964	313.5	8,039	316.5	7,955	313.2
F	3,272	128.8	3,235	127.4	3,261	128.4	3,226	127.0
G	2,287	90.0	2,353	92.6	2,277	89.6	2,342	92.2
H	2,267	89.3	2,332	91.8	2,257	88.9	2,321	91.4
I	2,299	90.5	2,275	89.6	2,288	90.1	2,265	89.2
J	1,067	42.0	1,103	43.4	1,057	41.6	1,092	43.0
K	1,113	43.8	1,082	42.6	1,102	43.4	1,072	42.2
L	4,584	180.5	4,517	177.8	4,573	180.0	4,507	177.4
M	7,938	312.5	7,832	308.3	7,927	312.1	7,823	308.0
N	1,376	54.2	1,326	52.2	1,365	53.7	1,317	51.9
	OAT -30°				OAT -40°			
No.	mm	in	mm	in	mm	in	mm	in
	C.G. FWD Limit		C.G. AFT Limit		C.G. FWD Limit		C.G. AFT Limit	
A	8,550	336.6	8,468	333.4	8,539	336.2	8,459	333.0
B	4,595	180.9	4,552	179.2	4,584	180.5	4,605	181.3

C	1,811	71.3	1,773	69.8	1,800	70.9	1,764	69.4
D	763	30.0	753	29.6	753	29.6	743	29.3
E	8,029	316.1	7,947	312.9	8,018	315.7	7,938	312.5
F	3,251	128.0	3,216	126.6	3,241	127.6	3,207	126.3
G	2,268	89.3	2,330	91.7	2,258	88.9	2,319	91.3
H	2,247	88.5	2,309	90.9	2,238	88.1	2,298	90.5
I	2,278	89.7	2,256	88.8	2,268	89.3	2,246	88.4
J	1,047	41.2	1,081	42.6	1,037	40.8	1,070	42.1
K	1,092	43.0	1,063	41.9	1,082	42.6	1,053	41.5
L	4,562	179.6	4,499	177.1	4,552	179.2	4,490	176.8
M	7,916	311.7	7,815	307.7	7,905	311.2	7,807	307.4
N	1,354	53.3	1,307	51.5	1,344	52.9	1,298	51.1

Table 4 Ground Clearances at Status of MTW (ER)

	OAT 15°				OAT 0°			
No.	mm	in	mm	in	mm	in	mm	in
	C.G. FWD Limit		C.G. AFT Limit		C.G. FWD Limit		C.G. AFT Limit	
A	8,578	337.7	8,516	335.3	8,562	337.1	8,502	334.7
B	4,626	182.1	4,646	182.9	4,610	181.5	4,630	182.3
C	1,842	72.5	1,810	71.3	1,826	71.9	1,796	70.7
D	797	31.4	792	31.2	782	30.8	777	30.6
E	8,057	317.2	7,995	314.8	8,041	316.6	7,980	314.2
F	3,283	129.3	3,235	127.4	3,267	128.6	3,220	126.8
G	2,306	90.8	2,356	92.8	2,292	90.2	2,340	92.1
H	2,286	90.0	2,341	92.2	2,272	89.4	2,325	91.5
I	2,311	91.0	2,296	90.4	2,295	90.4	2,281	89.8
J	1,084	42.7	1,114	43.9	1,069	42.1	1,098	43.2
K	1,124	44.3	1,104	43.5	1,109	43.7	1,089	42.9
L	4,592	180.8	4,544	178.9	4,576	180.2	4,530	178.3
M	7,943	312.7	7,866	309.7	7,926	312.0	7,852	309.1
N	1,386	54.6	1,351	53.2	1,370	53.9	1,336	52.6
	OAT -10°				OAT -20°			
No.	mm	in	mm	in	mm	in	mm	in
	C.G. FWD Limit		C.G. AFT Limit		C.G. FWD Limit		C.G. AFT Limit	
A	8,551	336.7	8,493	334.4	8,541	336.3	8,484	334.0
B	4,600	181.1	4,619	181.9	4,589	180.7	4,609	181.5

C	1,816	71.5	1,786	70.3	1,806	71.1	1,776	69.9
D	771	30.4	767	30.2	761	30.0	757	29.8
E	8,030	316.1	7,971	313.8	8,020	315.7	7,962	313.5
F	3,257	128.2	3,210	126.4	3,246	127.8	3,201	126.0
G	2,283	89.9	2,330	91.7	2,273	89.5	2,319	91.3
H	2,262	89.1	2,314	91.1	2,252	88.7	2,303	90.7
I	2,285	90.0	2,271	89.4	2,275	89.6	2,261	89.0
J	1,059	41.7	1,087	42.8	1,050	41.3	1,077	42.4
K	1,098	43.2	1,079	42.5	1,088	42.8	1,070	42.1
L	4,565	179.7	4,521	178.0	4,555	179.3	4,511	177.6
M	7,916	311.7	7,843	308.8	7,905	311.2	7,834	308.4
N	1,359	53.5	1,327	52.2	1,349	53.1	1,317	51.9
	OAT -30°				OAT -40°			
No.	mm	in	mm	in	mm	in	mm	in
	C.G. FWD Limit		C.G. AFT Limit		C.G. FWD Limit		C.G. AFT Limit	
A	8,530	335.8	8,475	333.7	8,520	335.4	8,466	333.3
B	4,579	180.3	4,598	181.0	4,569	179.9	4,587	180.6
C	1,796	70.7	1,767	69.6	1,786	70.3	1,758	69.2
D	751	29.6	747	29.4	742	29.2	737	29.0
E	8,009	315.3	7,954	313.1	7,999	314.9	7,945	312.8
F	3,236	127.4	3,191	125.6	3,227	127.0	3,182	125.3
G	2,263	89.1	2,308	90.9	2,254	88.7	2,297	90.4
H	2,243	88.3	2,292	90.2	2,233	87.9	2,282	89.8
I	2,265	89.2	2,252	88.7	2,255	88.8	2,242	88.3
J	1,040	40.9	1,067	42.0	1,030	40.6	1,056	41.6
K	1,078	42.4	1,060	41.7	1,068	42.0	1,051	41.4
L	4,545	178.9	4,502	177.2	4,535	178.5	4,493	176.9
M	7,895	310.8	7,826	308.1	7,884	310.4	7,818	307.8
N	1,339	52.7	1,308	51.5	1,329	52.3	1,299	51.1

Table 5 Ground Clearances at Jacked Status

Dimension No.	Metric mm	Imperial in
A	9,022	355.2
B	5,052	198.9
C	2,266	89.2

Dimension No.	Metric mm	Imperial in
D	1,209	47.6
E	8,506	334.9
F	3,706	145.9
G	2,686	105.8
H	2,666	105.0
I	2,728	107.4
J	1,477	58.1
K	1,544	60.8
L	5,027	197.9
M	8,395	330.5
N	1,813	71.4

NOTE: Landing Gear Fully-Extended Status on The Jacks.

Applicable to : ALL

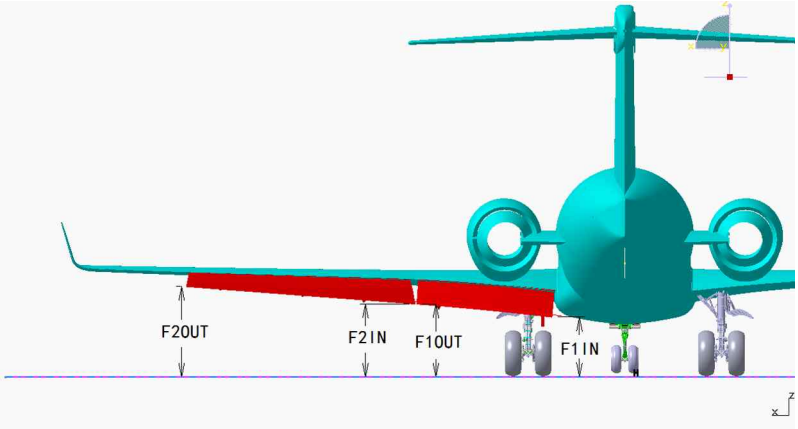

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Figure 2 Ground Clearances at Flap Fully Extended Status of Each Flap (Sheet 1 of 1)

Table 6 Ground Clearances at Flap Fully Extended Status of Each Flap

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
15℃	Flap 1 Inboard (F1IN)	1,048	41.3	965	38.0	950	37.4	979	38.5	958	37.7
	Flap 1 Outboard (F1OUT)	1,366	53.8	1,283	50.5	1,262	49.7	1,297	51.1	1,276	50.2
	Flap 2 Inboard (F2IN)	1,367	53.8	1,284	50.6	1,263	49.7	1,298	51.1	1,277	50.3
	Flap 2 Outboard (F2OUT)	1,786	70.3	1,711	67.4	1,673	65.9	1,726	68.0	1,695	66.7
0℃	Flap 1 Inboard (F1IN)	1,030	40.6	950	37.4	935	36.8	963	37.9	943	37.1
	Flap 1 Outboard (F1OUT)	1,348	53.1	1,267	49.9	1,247	49.1	1,281	50.4	1,261	49.6
	Flap 2 Inboard (F2IN)	1,348	53.1	1,268	49.9	1,248	49.1	1,282	50.5	1,262	49.7

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	Flap 2 Outboard (F2OUT)	1,768	69.6	1,695	66.7	1,658	65.3	1,710	67.3	1,680	66.1
-10℃	Flap 1 Inboard (F1IN)	1,018	40.1	940	37.0	925	36.4	953	37.5	933	36.7
	Flap 1 Outboard (F1OUT)	1,335	52.6	1,257	49.5	1,237	48.7	1,271	50.0	1,251	49.3
	Flap 2 Inboard (F2IN)	1,336	52.6	1,258	49.5	1,238	48.7	1,272	50.1	1,252	49.3
	Flap 2 Outboard (F2OUT)	1,756	69.1	1,685	66.3	1,649	64.9	1,699	66.9	1,670	65.7
-20℃	Flap 1 Inboard (F1IN)	1,006	39.6	929	36.6	915	36.0	943	37.1	923	36.3
	Flap 1 Outboard (F1OUT)	1,323	52.1	1,247	49.1	1,228	48.3	1,260	49.6	1,241	48.9
	Flap 2 Inboard (F2IN)	1,324	52.1	1,248	49.1	1,228	48.3	1,261	49.6	1,242	48.9
	Flap 2 Outboard (F2OUT)	1,744	68.7	1,675	65.9	1,639	64.5	1,689	66.5	1,660	65.4
-30℃	Flap 1 Inboard (F1IN)	994	39.1	919	36.2	906	35.7	932	36.7	913	35.9
	Flap 1 Outboard (F1OUT)	1,311	51.6	1,237	48.7	1,218	48.0	1,250	49.2	1,231	48.5
	Flap 2 Inboard (F2IN)	1,312	51.7	1,238	48.7	1,219	48.0	1,251	49.3	1,232	48.5
	Flap 2 Outboard (F2OUT)	1,732	68.2	1,665	65.6	1,630	64.2	1,679	66.1	1,650	65.0
-40℃	Flap 1 Inboard (F1IN)	982	38.7	910	35.8	896	35.3	922	36.3	904	35.6

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	Flap 1 Outboard (F1OUT)	1,300	51.2	1,227	48.3	1,208	47.6	1,240	48.8	1,221	48.1
	Flap 2 Inboard (F2IN)	1,301	51.2	1,228	48.3	1,209	47.6	1,241	48.9	1,222	48.1
	Flap 2 Outboard (F2OUT)	1,721	67.8	1,655	65.2	1,620	63.8	1,668	65.7	1,641	64.6

Applicable to：ALL

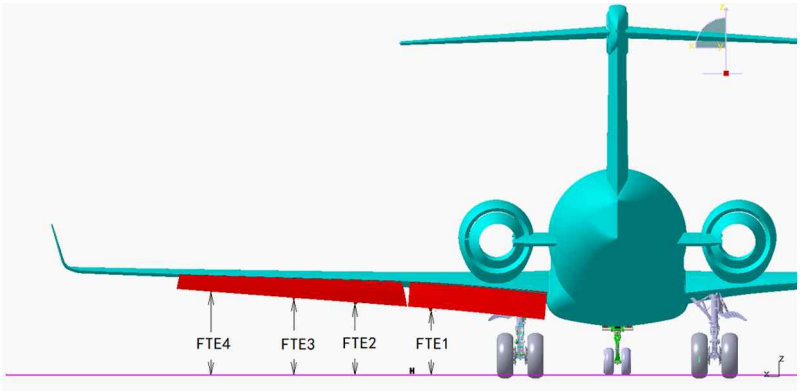

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Figure 3 Ground Clearances at Flap Fully Extended Status of Flap Track Fairing (Sheet 1 of 1)

Table 7 Ground Clearances at Flap Fully Extended Status of Flap Track Fairing

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
15℃	Flap Track 1 (FTE1)	1,250	49.2	1,164	45.8	1,147	45.2	1,177	46.3	1,161	45.7
	Flap Track 2 (FTE2)	1,418	55.8	1,333	52.5	1,312	51.7	1,347	53.0	1,328	52.3
	Flap Track 3 (FTE3)	1,545	60.8	1,463	57.6	1,437	56.6	1,477	58.1	1,455	57.3
	Flap Track 4 (FTE4)	1,699	66.9	1,620	63.8	1,587	62.5	1,635	64.4	1,608	63.3
0℃	Flap Track 1 (FTE1)	1,232	48.5	1,148	45.2	1,132	44.6	1,162	45.7	1,146	45.1
	Flap Track 2 (FTE2)	1,400	55.1	1,318	51.9	1,297	51.1	1,331	52.4	1,313	51.7
	Flap Track 3 (FTE3)	1,527	60.1	1,447	57.0	1,422	56.0	1,461	57.5	1,440	56.7
	Flap Track 4 (FTE4)	1,681	66.2	1,605	63.2	1,573	61.9	1,619	63.7	1,593	62.7
-10℃	Flap Track 1 (FTE1)	1,220	48.0	1,138	44.8	1,122	44.2	1,151	45.3	1,136	44.7
	Flap Track 2 (FTE2)	1,387	54.6	1,308	51.5	1,287	50.7	1,321	52.0	1,303	51.3

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	Flap Track 3 (FTE3)	1,514	59.6	1,437	56.6	1,412	55.6	1,451	57.1	1,430	56.3
	Flap Track 4 (FTE4)	1,669	65.7	1,594	62.8	1,563	61.5	1,608	63.3	1,583	62.3
-20℃	Flap Track 1 (FTE1)	1,208	47.6	1,128	44.4	1,113	43.8	1,141	44.9	1,126	44.3
	Flap Track 2 (FTE2)	1,375	54.1	1,297	51.1	1,277	50.3	1,310	51.6	1,293	50.9
	Flap Track 3 (FTE3)	1,502	59.1	1,427	56.2	1,402	55.2	1,440	56.7	1,420	55.9
	Flap Track 4 (FTE4)	1,657	65.2	1,584	62.4	1,553	61.1	1,598	62.9	1,573	61.9
-30℃	Flap Track 1 (FTE1)	1,196	47.1	1,118	44.0	1,103	43.4	1,131	44.5	1,116	43.9
	Flap Track 2 (FTE2)	1,363	53.7	1,287	50.7	1,268	49.9	1,300	51.2	1,283	50.5
	Flap Track 3 (FTE3)	1,491	58.7	1,417	55.8	1,392	54.8	1,430	56.3	1,410	55.5
	Flap Track 4 (FTE4)	1,645	64.8	1,574	62.0	1,543	60.7	1,588	62.5	1,564	61.6
-40℃	Flap Track 1 (FTE1)	1,184	46.6	1,108	43.6	1,093	43.0	1,120	44.1	1,106	43.5
	Flap Track 2 (FTE2)	1,352	53.2	1,278	50.3	1,258	49.5	1,290	50.8	1,274	50.2
	Flap Track 3 (FTE3)	1,479	58.2	1,407	55.4	1,383	54.4	1,420	55.9	1,400	55.1
	Flap Track 4 (FTE4)	1,633	64.3	1,564	61.6	1,534	60.4	1,577	62.1	1,554	61.2

Applicable to：ALL

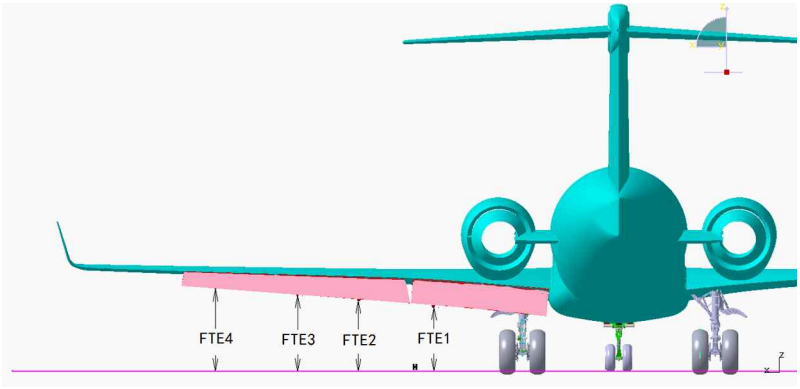

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Figure 4 Ground Clearances at Flap Detent 2 Status of Flap Track Fairing (Sheet 1 of 1)

Table 8 Ground Clearances at Flap Detent 2 Status of Flap Track Fairing

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
15℃	Flap Track 1 (FTF1)	1,285	50.6	1,197	47.1	1,182	46.5	1,211	47.7	1,196	47.1
	Flap Track 2 (FTF2)	1,441	56.7	1,356	53.4	1,335	52.6	1,370	53.9	1,352	53.2
	Flap Track 3 (FTF3)	1,559	61.4	1,476	58.1	1,450	57.1	1,490	58.7	1,469	57.8
	Flap Track 4 (FTF4)	1,708	67.2	1,629	64.1	1,597	62.9	1,644	64.7	1,618	63.7
0℃	Flap Track 1 (FTF1)	1,266	49.8	1,182	46.5	1,167	45.9	1,195	47.0	1,180	46.5
	Flap Track 2 (FTF2)	1,423	56.0	1,340	52.8	1,320	52.0	1,354	53.3	1,337	52.6
	Flap Track 3 (FTF3)	1,540	60.6	1,460	57.5	1,435	56.5	1,474	58.0	1,453	57.2
	Flap Track 4 (FTF4)	1,690	66.5	1,613	63.5	1,582	62.3	1,628	64.1	1,603	63.1
-10℃	Flap Track 1 (FTF1)	1,254	49.4	1,172	46.1	1,157	45.6	1,185	46.7	1,170	46.1
	Flap Track 2 (FTF2)	1,411	55.6	1,330	52.4	1,310	51.6	1,343	52.9	1,327	52.2

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	Flap Track 3 (FTF3)	1,528	60.2	1,450	57.1	1,425	56.1	1,463	57.6	1,443	56.8
	Flap Track 4 (FTF4)	1,678	66.1	1,603	63.1	1,572	61.9	1,617	63.7	1,593	62.7
-20℃	Flap Track 1 (FTF1)	1,242	48.9	1,162	45.7	1,147	45.2	1,174	46.2	1,160	45.7
	Flap Track 2 (FTF2)	1,399	55.1	1,320	52.0	1,301	51.2	1,333	52.5	1,317	51.9
	Flap Track 3 (FTF3)	1,516	59.7	1,440	56.7	1,416	55.7	1,453	57.2	1,433	56.4
	Flap Track 4 (FTF4)	1,666	65.6	1,593	62.7	1,562	61.5	1,607	63.3	1,583	62.3
-30℃	Flap Track 1 (FTF1)	1,230	48.4	1,152	45.4	1,137	44.8	1,164	45.8	1,150	45.3
	Flap Track 2 (FTF2)	1,387	54.6	1,310	51.6	1,291	50.8	1,323	52.1	1,307	51.5
	Flap Track 3 (FTF3)	1,504	59.2	1,430	56.3	1,406	55.4	1,443	56.8	1,424	56.1
	Flap Track 4 (FTF4)	1,654	65.1	1,583	62.3	1,553	61.1	1,596	62.8	1,573	61.9
-40℃	Flap Track 1 (FTF1)	1,218	48.0	1,142	45.0	1,127	44.4	1,154	45.4	1,140	44.9
	Flap Track 2 (FTF2)	1,375	54.1	1,300	51.2	1,281	50.4	1,312	51.7	1,297	51.1
	Flap Track 3 (FTF3)	1,492	58.7	1,420	55.9	1,396	55.0	1,433	56.4	1,414	55.7
	Flap Track 4 (FTF4)	1,642	64.6	1,573	61.9	1,543	60.7	1,586	62.4	1,563	61.5

Applicable to：ALL

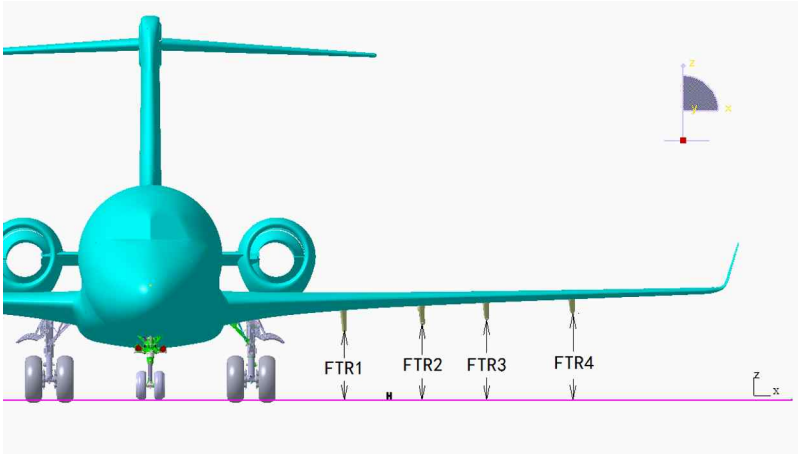

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Figure 5 Ground Clearances at Flap Smooth Status of Flap Track Fairing (Sheet 1 of 1)

Table 9 Ground Clearances at Flap Smooth Status of Flap Track Fairing

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
15℃	Flap Track 1 (FTR1)	1,285	50.6	1,197	47.1	1,182	46.5	1,211	47.7	1,196	47.1
	Flap Track 2 (FTR2)	1,441	56.7	1,356	53.4	1,335	52.6	1,370	53.9	1,352	53.2
	Flap Track 3 (FTR3)	1,559	61.4	1,476	58.1	1,450	57.1	1,490	58.7	1,469	57.8
	Flap Track 4 (FTR4)	1,708	67.2	1,629	64.1	1,597	62.9	1,644	64.7	1,618	63.7
0℃	Flap Track 1 (FTR1)	1,266	49.8	1,182	46.5	1,167	45.9	1,195	47.0	1,180	46.5
	Flap Track 2 (FTR2)	1,423	56.0	1,340	52.8	1,320	52.0	1,354	53.3	1,337	52.6
	Flap Track 3 (FTR3)	1,540	60.6	1,460	57.5	1,435	56.5	1,474	58.0	1,453	57.2
	Flap Track 4 (FTR4)	1,690	66.5	1,613	63.5	1,582	62.3	1,628	64.1	1,603	63.1
-10℃	Flap Track 1 (FTR1)	1,254	49.4	1,172	46.1	1,157	45.6	1,185	46.7	1,170	46.1

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	Flap Track 2 (FTR2)	1,411	55.6	1,330	52.4	1,310	51.6	1,343	52.9	1,327	52.2
	Flap Track 3 (FTR3)	1,528	60.2	1,450	57.1	1,425	56.1	1,463	57.6	1,443	56.8
	Flap Track 4 (FTR4)	1,678	66.1	1,603	63.1	1,572	61.9	1,617	63.7	1,593	62.7
-20℃	Flap Track 1 (FTR1)	1,242	48.9	1,162	45.7	1,147	45.2	1,174	46.2	1,160	45.7
	Flap Track 2 (FTR2)	1,399	55.1	1,320	52.0	1,301	51.2	1,333	52.5	1,317	51.9
	Flap Track 3 (FTR3)	1,516	59.7	1,440	56.7	1,416	55.7	1,453	57.2	1,433	56.4
	Flap Track 4 (FTR4)	1,666	65.6	1,593	62.7	1,562	61.5	1,607	63.3	1,583	62.3
-30℃	Flap Track 1 (FTR1)	1,230	48.4	1,152	45.4	1,137	44.8	1,164	45.8	1,150	45.3
	Flap Track 2 (FTR2)	1,387	54.6	1,310	51.6	1,291	50.8	1,323	52.1	1,307	51.5
	Flap Track 3 (FTR3)	1,504	59.2	1,430	56.3	1,406	55.4	1,443	56.8	1,424	56.1
	Flap Track 4 (FTR4)	1,654	65.1	1,583	62.3	1,553	61.1	1,596	62.8	1,573	61.9
-40℃	Flap Track 1 (FTR1)	1,218	48.0	1,142	45.0	1,127	44.4	1,154	45.4	1,140	44.9
	Flap Track 2 (FTR2)	1,375	54.1	1,300	51.2	1,281	50.4	1,312	51.7	1,297	51.1
	Flap Track 3 (FTR3)	1,492	58.7	1,420	55.9	1,396	55.0	1,433	56.4	1,414	55.7
	Flap Track 4 (FTR4)	1,642	64.6	1,573	61.9	1,543	60.7	1,586	62.4	1,563	61.5

Applicable to：ALL

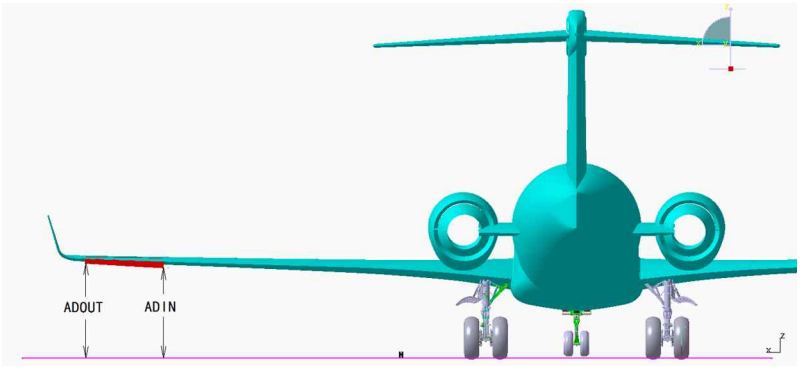

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Figure 6 Ground Clearances at Aileron Down Status (Sheet 1 of 1)

Table 10 Ground Clearances at Aileron Down Status

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
15℃	Aileron Inboard (ADIN)	1,976	77.8	1,901	74.8	1,864	73.4	1,916	75.4	1,886	74.3
	Aileron Outboard (ADOUT)	2,095	82.5	2,022	79.6	1,979	77.9	2,038	80.2	2,003	78.9
0℃	Aileron Inboard (ADIN)	1,958	77.1	1,885	74.2	1,849	72.8	1,900	74.8	1,870	73.6
	Aileron Outboard (ADOUT)	2,077	81.8	2,006	79.0	1,964	77.3	2,022	79.6	1,988	78.3
-10℃	Aileron Inboard (ADIN)	1,946	76.6	1,875	73.8	1,839	72.4	1,889	74.4	1,861	73.3
	Aileron Outboard (ADOUT)	2,065	81.3	1,996	78.6	1,954	76.9	2,011	79.2	1,978	77.9
-20℃	Aileron Inboard (ADIN)	1,935	76.2	1,865	73.4	1,830	72.0	1,879	74.0	1,851	72.9
	Aileron Outboard (ADOUT)	2,053	80.8	1,986	78.2	1,945	76.6	2,000	78.7	1,969	77.5

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
-30℃	Aileron Inboard (ADIN)	1,923	75.7	1,855	73.0	1,820	71.7	1,868	73.5	1,841	72.5
	Aileron Outboard (ADOUT)	2,041	80.4	1,976	77.8	1,935	76.2	1,990	78.3	1,959	77.1
-40℃	Aileron Inboard (ADIN)	1,911	75.2	1,811	71.3	1,845	72.6	1,858	73.1	1,832	72.1
	Aileron Outboard (ADOUT)	2,030	79.9	1,926	75.8	1,966	77.4	1,980	78.0	1,950	76.8

Applicable to：ALL

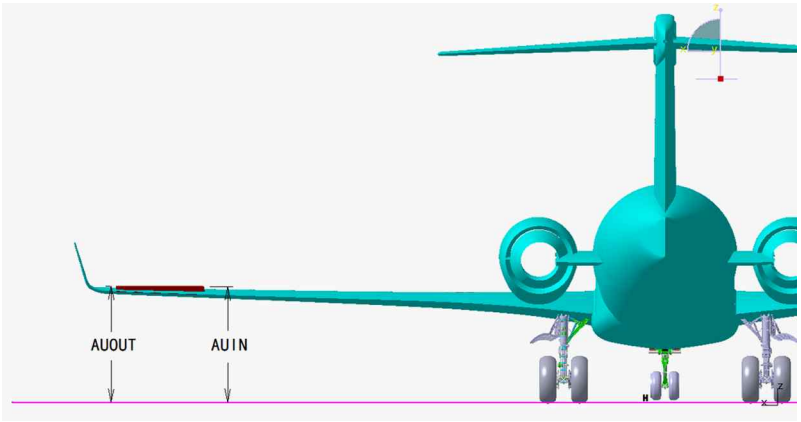

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Figure 7 Ground Clearances at Aileron Raise Status (Sheet 1 of 1)

Table 11 Ground Clearances at Aileron Raise Status

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
15℃	Aileron Inboard (AUIN)	2,324	91.5	2,249	88.5	2,212	87.1	2,264	89.1	2,233	87.9
	Aileron Outboard (AUOUT)	2,339	92.1	2,267	89.3	2,223	87.5	2,282	89.8	2,248	88.5
0℃	Aileron Inboard (AUIN)	2,306	90.8	2,233	87.9	2,197	86.5	2,248	88.5	2,218	87.3
	Aileron Outboard (AUOUT)	2,321	91.4	2,251	88.6	2,208	86.9	2,266	89.2	2,233	87.9
-10℃	Aileron Inboard (AUIN)	2,294	90.3	2,223	87.5	2,187	86.1	2,237	88.1	2,208	86.9
	Aileron Outboard (AUOUT)	2,309	90.9	2,241	88.2	2,199	86.6	2,256	88.8	2,223	87.5
-20℃	Aileron Inboard (AUIN)	2,282	89.8	2,213	87.1	2,177	85.7	2,227	87.7	2,198	86.5
	Aileron Outboard (AUOUT)	2,297	90.4	2,231	87.8	2,189	86.2	2,245	88.4	2,213	87.1

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
-30℃	Aileron Inboard (AUIN)	2,271	89.4	2,203	86.7	2,168	85.4	2,216	87.2	2,189	86.2
	Aileron Outboard (AUOUT)	2,286	90.0	2,220	87.4	2,180	85.8	2,235	88.0	2,203	86.7
-40℃	Aileron Inboard (AUIN)	2,259	88.9	2,158	85.0	2,193	86.3	2,206	86.9	2,179	85.8
	Aileron Outboard (AUOUT)	2,274	89.5	2,170	85.4	2,211	87.0	2,224	87.6	2,194	86.4

Applicable to：ALL

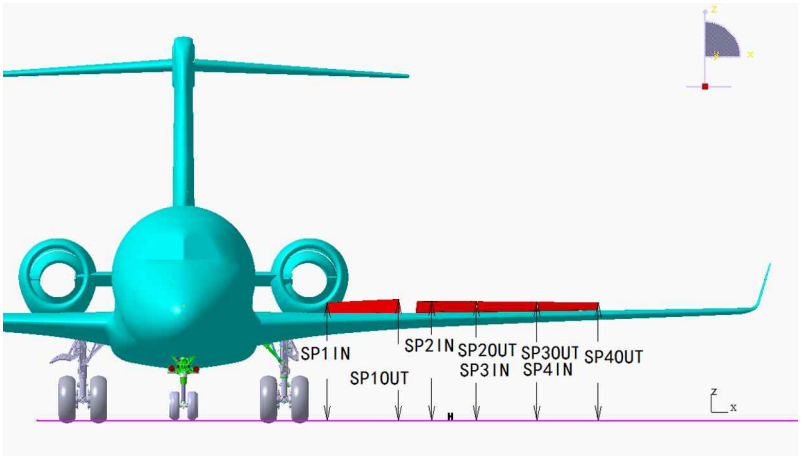

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Figure 8 Ground Clearances at Spoiler Raise Status (Sheet 1 of 1)

Table 12 Ground Clearances at Spoiler Raise Status

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
15℃	No.1 Spoiler Inboard (SP1IN)	2,440	96.1	2,353	92.6	2,339	92.1	2,366	93.1	2,351	92.6
	No.1 Spoiler Outboard (SP1OUT)	2,523	99.3	2,435	95.9	2,419	95.2	2,449	96.4	2,433	95.8
	No.2 Spoiler Inboard (SP2IN)	2,477	97.5	2,390	94.1	2,372	93.4	2,404	94.6	2,388	94.0
	No.2 Spoiler Outboard (SP2OUT)	2,470	97.2	2,386	93.9	2,363	93.0	2,400	94.5	2,380	93.7
	No.3 Spoiler Inboard (SP3IN)	2,470	97.2	2,385	93.9	2,363	93.0	2,399	94.4	2,380	93.7
	No.3 Spoiler Outboard (SP3OUT)	2,454	96.6	2,373	93.4	2,345	92.3	2,387	94.0	2,364	93.1

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	No.4 Spoiler Inboard (SP4IN)	2,454	96.6	2,372	93.4	2,345	92.3	2,387	94.0	2,364	93.1
	No.4 Spoiler Outboard (SP4OUT)	2,442	96.1	2,363	93.0	2,331	91.8	2,377	93.6	2,351	92.6
0℃	No.1 Spoiler Inboard (SP1IN)	2,421	95.3	2,337	92.0	2,324	91.5	2,350	92.5	2,335	91.9
	No.1 Spoiler Outboard (SP1OUT)	2,504	98.6	2,420	95.3	2,404	94.6	2,433	95.8	2,418	95.2
	No.2 Spoiler Inboard (SP2IN)	2,458	96.8	2,375	93.5	2,357	92.8	2,388	94.0	2,372	93.4
	No.2 Spoiler Outboard (SP2OUT)	2,451	96.5	2,370	93.3	2,348	92.4	2,384	93.9	2,365	93.1
	No.3 Spoiler Inboard (SP3IN)	2,451	96.5	2,370	93.3	2,348	92.4	2,384	93.9	2,365	93.1
	No.3 Spoiler Outboard (SP3OUT)	2,436	95.9	2,357	92.8	2,330	91.7	2,371	93.3	2,349	92.5
	No.4 Spoiler Inboard (SP4IN)	2,436	95.9	2,357	92.8	2,330	91.7	2,371	93.3	2,349	92.5
	No.4 Spoiler Outboard (SP4OUT)	2,423	95.4	2,347	92.4	2,316	91.2	2,361	93.0	2,336	92.0
-10℃	No.1 Spoiler Inboard (SP1IN)	2,409	94.8	2,327	91.6	2,314	91.1	2,340	92.1	2,325	91.5
	No.1 Spoiler Outboard (SP1OUT)	2,492	98.1	2,410	94.9	2,394	94.3	2,423	95.4	2,408	94.8

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	No.2 Spoiler Inboard (SP2IN)	2,446	96.3	2,365	93.1	2,347	92.4	2,378	93.6	2,362	93.0
	No.2 Spoiler Outboard (SP2OUT)	2,439	96.0	2,360	92.9	2,338	92.0	2,373	93.4	2,355	92.7
	No.3 Spoiler Inboard (SP3IN)	2,439	96.0	2,360	92.9	2,338	92.0	2,373	93.4	2,355	92.7
	No.3 Spoiler Outboard (SP3OUT)	2,424	95.4	2,347	92.4	2,320	91.3	2,360	92.9	2,339	92.1
	No.4 Spoiler Inboard (SP4IN)	2,424	95.4	2,347	92.4	2,320	91.3	2,360	92.9	2,339	92.1
	No.4 Spoiler Outboard (SP4OUT)	2,411	94.9	2,337	92.0	2,306	90.8	2,351	92.6	2,326	91.6
-20℃	No.1 Spoiler Inboard (SP1IN)	2,397	94.4	2,317	91.2	2,304	90.7	2,330	91.7	2,315	91.1
	No.1 Spoiler Outboard (SP1OUT)	2,480	97.6	2,400	94.5	2,384	93.9	2,412	95.0	2,398	94.4
	No.2 Spoiler Inboard (SP2IN)	2,434	95.8	2,355	92.7	2,337	92.0	2,367	93.2	2,352	92.6
	No.2 Spoiler Outboard (SP2OUT)	2,427	95.6	2,350	92.5	2,328	91.7	2,363	93.0	2,345	92.3
	No.3 Spoiler Inboard (SP3IN)	2,427	95.6	2,350	92.5	2,328	91.7	2,363	93.0	2,345	92.3
	No.3 Spoiler Outboard (SP3OUT)	2,412	95.0	2,337	92.0	2,311	91.0	2,350	92.5	2,329	91.7

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	No.4 Spoiler Inboard (SP4IN)	2,412	95.0	2,337	92.0	2,310	90.9	2,350	92.5	2,329	91.7
	No.4 Spoiler Outboard (SP4OUT)	2,399	94.4	2,327	91.6	2,296	90.4	2,340	92.1	2,316	91.2
-30℃	No.1 Spoiler Inboard (SP1IN)	2,385	93.9	2,307	90.8	2,294	90.3	2,319	91.3	2,305	90.7
	No.1 Spoiler Outboard (SP1OUT)	2,468	97.2	2,390	94.1	2,374	93.5	2,402	94.6	2,388	94.0
	No.2 Spoiler Inboard (SP2IN)	2,422	95.4	2,345	92.3	2,328	91.7	2,357	92.8	2,342	92.2
	No.2 Spoiler Outboard (SP2OUT)	2,415	95.1	2,340	92.1	2,319	91.3	2,352	92.6	2,335	91.9
	No.3 Spoiler Inboard (SP3IN)	2,415	95.1	2,340	92.1	2,318	91.3	2,352	92.6	2,335	91.9
	No.3 Spoiler Outboard (SP3OUT)	2,400	94.5	2,327	91.6	2,301	90.6	2,340	92.1	2,319	91.3
	No.4 Spoiler Inboard (SP4IN)	2,400	94.5	2,327	91.6	2,301	90.6	2,340	92.1	2,319	91.3
	No.4 Spoiler Outboard (SP4OUT)	2,388	94.0	2,317	91.2	2,286	90.0	2,330	91.7	2,307	90.8
-40℃	No.1 Spoiler Inboard (SP1IN)	2,373	93.4	2,297	90.4	2,284	89.9	2,309	90.9	2,295	90.4
	No.1 Spoiler Outboard (SP1OUT)	2,456	96.7	2,380	93.7	2,364	93.1	2,392	94.2	2,378	93.6

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	No.2 Spoiler Inboard (SP2IN)	2,410	94.9	2,335	91.9	2,318	91.3	2,347	92.4	2,332	91.8
	No.2 Spoiler Outboard (SP2OUT)	2,403	94.6	2,330	91.7	2,309	90.9	2,342	92.2	2,325	91.5
	No.3 Spoiler Inboard (SP3IN)	2,403	94.6	2,330	91.7	2,309	90.9	2,342	92.2	2,325	91.5
	No.3 Spoiler Outboard (SP3OUT)	2,388	94.0	2,317	91.2	2,291	90.2	2,329	91.7	2,310	90.9
	No.4 Spoiler Inboard (SP4IN)	2,388	94.0	2,317	91.2	2,291	90.2	2,329	91.7	2,309	90.9
	No.4 Spoiler Outboard (SP4OUT)	2,376	93.5	2,307	90.8	2,277	89.6	2,320	91.3	2,297	90.4

Applicable to : ALL

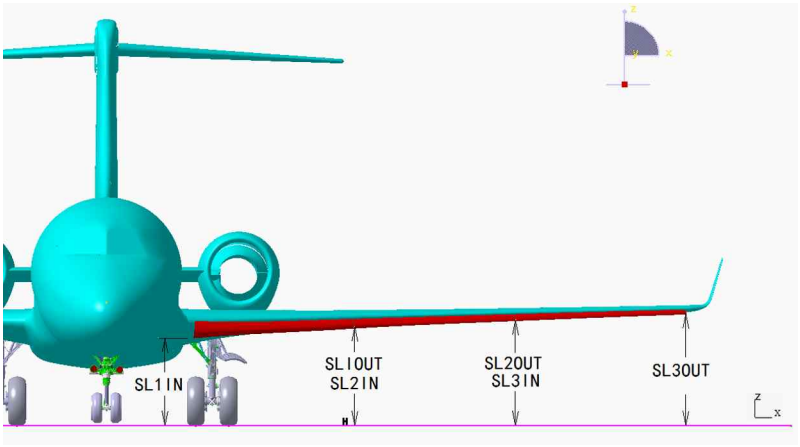

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Figure 9 Ground Clearances at Leading Edge Slat Extended Status (Sheet 1 of 1)

Table 13 Ground Clearances at Leading Edge Slat Extended Status

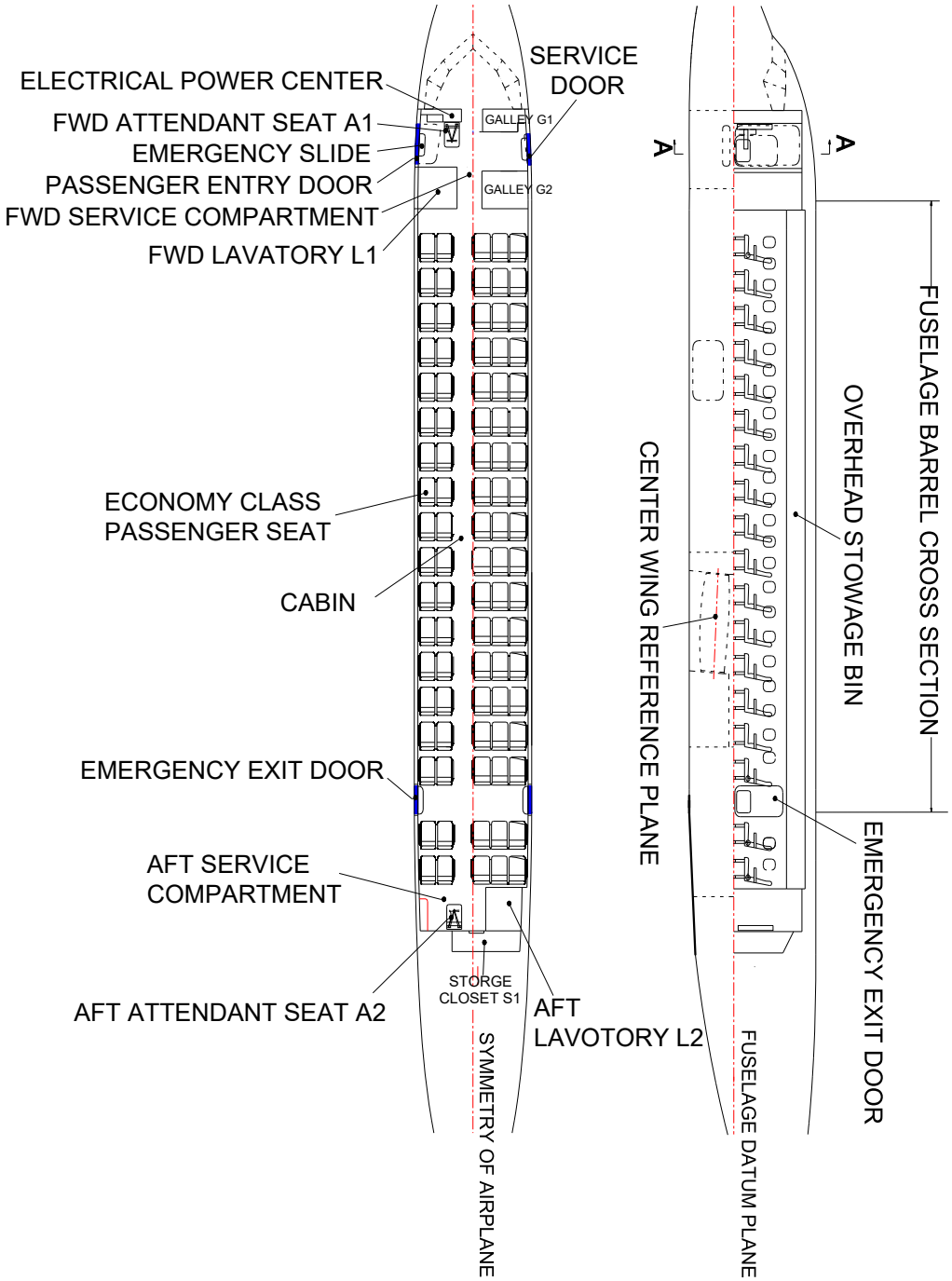
OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
15℃	Slat 1 Inboard (SL1IN)	1,598	62.9	1,490	58.7	1,497	58.9	1,501	59.1	1,512	59.5
	Slat 1 Outboard (SL1OUT)	1,801	70.9	1,702	67.0	1,695	66.7	1,714	67.5	1,713	67.4
	Slat 2 Inboard (SL2IN)	1,801	70.9	1,703	67.0	1,696	66.8	1,715	67.5	1,714	67.5
	Slat 2 Outboard (SL2OUT)	1,967	77.4	1,877	73.9	1,856	73.1	1,891	74.4	1,878	73.9
	Slat 3 Inboard (SL3IN)	1,967	77.4	1,878	73.9	1,856	73.1	1,891	74.4	1,878	73.9
	Slat 3 Outboard (SL3OUT)	2,106	82.9	2,027	79.8	1,989	78.3	2,041	80.4	2,015	79.3
0℃	Slat 1 Inboard (SL1IN)	1,579	62.2	1,475	58.1	1,482	58.3	1,486	58.5	1,496	58.9
	Slat 1 Outboard (SL1OUT)	1,782	70.2	1,687	66.4	1,680	66.1	1,699	66.9	1,698	66.9
	Slat 2 Inboard (SL2IN)	1,782	70.2	1,688	66.5	1,680	66.1	1,699	66.9	1,698	66.9

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	Slat 2 Outboard (SL2OUT)	1,948	76.7	1,862	73.3	1,841	72.5	1,875	73.8	1,862	73.3
	Slat 3 Inboard (SL3IN)	1,948	76.7	1,862	73.3	1,841	72.5	1,875	73.8	1,863	73.3
	Slat 3 Outboard (SL3OUT)	2,088	82.2	2,011	79.2	1,974	77.7	2,025	79.7	2,000	78.7
-10℃	Slat 1 Inboard (SL1IN)	1,566	61.7	1,465	57.7	1,472	58.0	1,475	58.1	1,485	58.5
	Slat 1 Outboard (SL1OUT)	1,769	69.6	1,677	66.0	1,670	65.7	1,689	66.5	1,687	66.4
	Slat 2 Inboard (SL2IN)	1,770	69.7	1,678	66.1	1,670	65.7	1,689	66.5	1,688	66.5
	Slat 2 Outboard (SL2OUT)	1,936	76.2	1,852	72.9	1,831	72.1	1,864	73.4	1,852	72.9
	Slat 3 Inboard (SL3IN)	1,936	76.2	1,852	72.9	1,831	72.1	1,865	73.4	1,853	73.0
	Slat 3 Outboard (SL3OUT)	2,076	81.7	2,001	78.8	1,964	77.3	2,015	79.3	1,990	78.3
-20℃	Slat 1 Inboard (SL1IN)	1,553	61.1	1,455	57.3	1,461	57.5	1,465	57.7	1,475	58.1
	Slat 1 Outboard (SL1OUT)	1,757	69.2	1,667	65.6	1,660	65.4	1,678	66.1	1,677	66.0
	Slat 2 Inboard (SL2IN)	1,757	69.2	1,668	65.7	1,660	65.4	1,679	66.1	1,678	66.1
	Slat 2 Outboard (SL2OUT)	1,924	75.7	1,842	72.5	1,821	71.7	1,854	73.0	1,842	72.5
	Slat 3 Inboard (SL3IN)	1,924	75.7	1,842	72.5	1,821	71.7	1,854	73.0	1,843	72.6
	Slat 3 Outboard (SL3OUT)	2,064	81.3	1,991	78.4	1,955	77.0	2,004	78.9	1,980	78.0
-30℃	Slat 1 Inboard (SL1IN)	1,541	60.7	1,445	56.9	1,451	57.1	1,455	57.3	1,464	57.6
	Slat 1 Outboard (SL1OUT)	1,745	68.7	1,657	65.2	1,650	65.0	1,668	65.7	1,667	65.6

OAT	Description	Operating Empty Weight		Maximum Taxi Weight - ER				Maximum Taxi Weight - STD			
				FWD CG		AFT CG		FWD CG		AFT CG	
		mm	in	mm	in	mm	in	mm	in	mm	in
	Slat 2 Inboard (SL2IN)	1,745	68.7	1,658	65.3	1,650	65.0	1,669	65.7	1,667	65.6
	Slat 2 Outboard (SL2OUT)	1,912	75.3	1,832	72.1	1,811	71.3	1,844	72.6	1,832	72.1
	Slat 3 Inboard (SL3IN)	1,912	75.3	1,832	72.1	1,811	71.3	1,844	72.6	1,833	72.2
	Slat 3 Outboard (SL3OUT)	2,052	80.8	1,981	78.0	1,945	76.6	1,994	78.5	1,971	77.6
-40℃	Slat 1 Inboard (SL1IN)	1,528	60.2	1,436	56.5	1,441	56.7	1,445	56.9	1,454	57.2
	Slat 1 Outboard (SL1OUT)	1,732	68.2	1,647	64.8	1,640	64.6	1,658	65.3	1,657	65.2
	Slat 2 Inboard (SL2IN)	1,733	68.2	1,648	64.9	1,641	64.6	1,659	65.3	1,657	65.2
	Slat 2 Outboard (SL2OUT)	1,900	74.8	1,822	71.7	1,801	70.9	1,834	72.2	1,822	71.7
	Slat 3 Inboard (SL3IN)	1,900	74.8	1,822	71.7	1,802	70.9	1,834	72.2	1,823	71.8
	Slat 3 Outboard (SL3OUT)	2,040	80.3	1,971	77.6	1,936	76.2	1,984	78.1	1,961	77.2

Internal layout

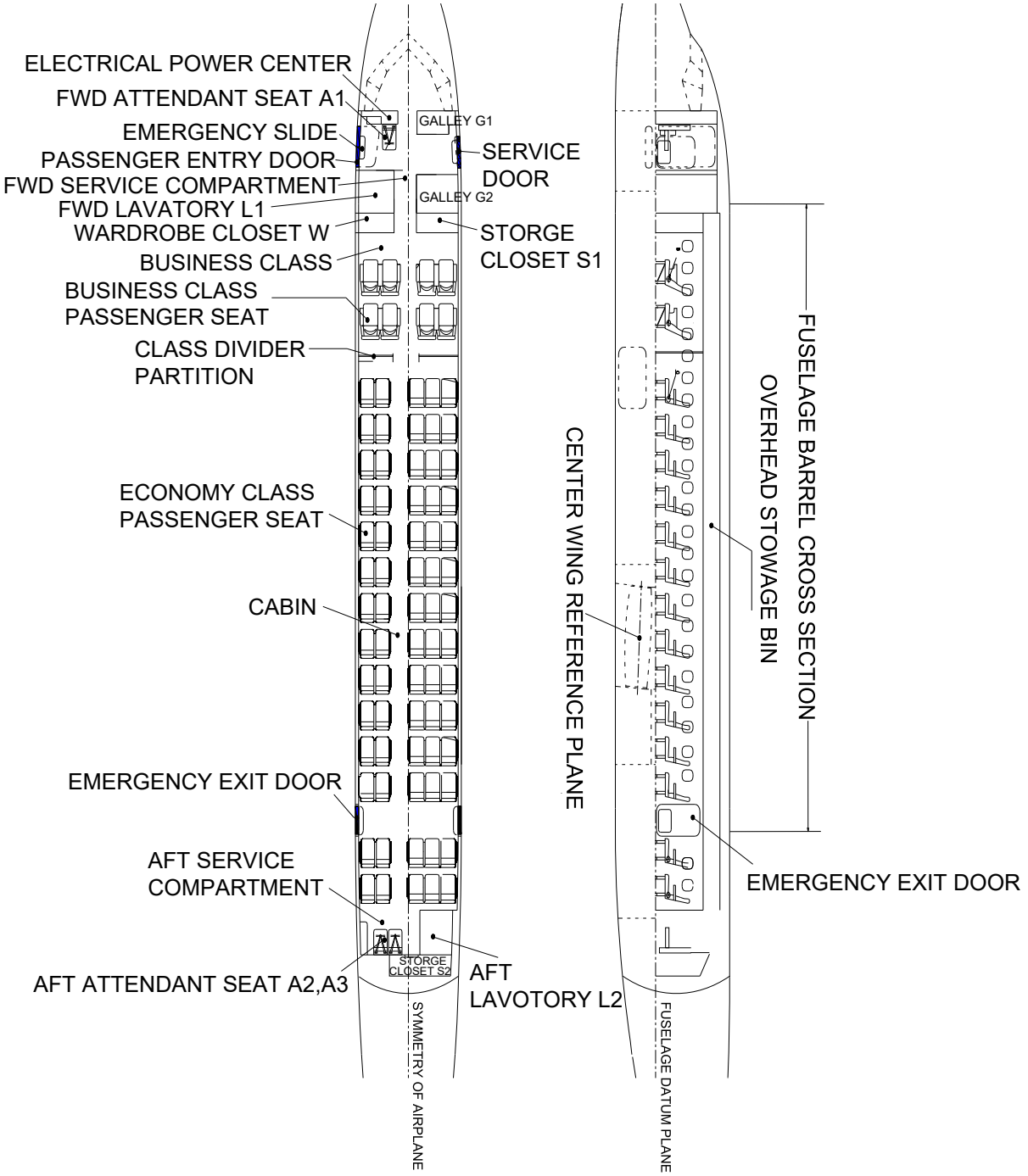
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10704-A-003-01

Figure 1 ARJ21-700 90-Seat Full-economy Interior Arrangement (Sheet 1 of 1)

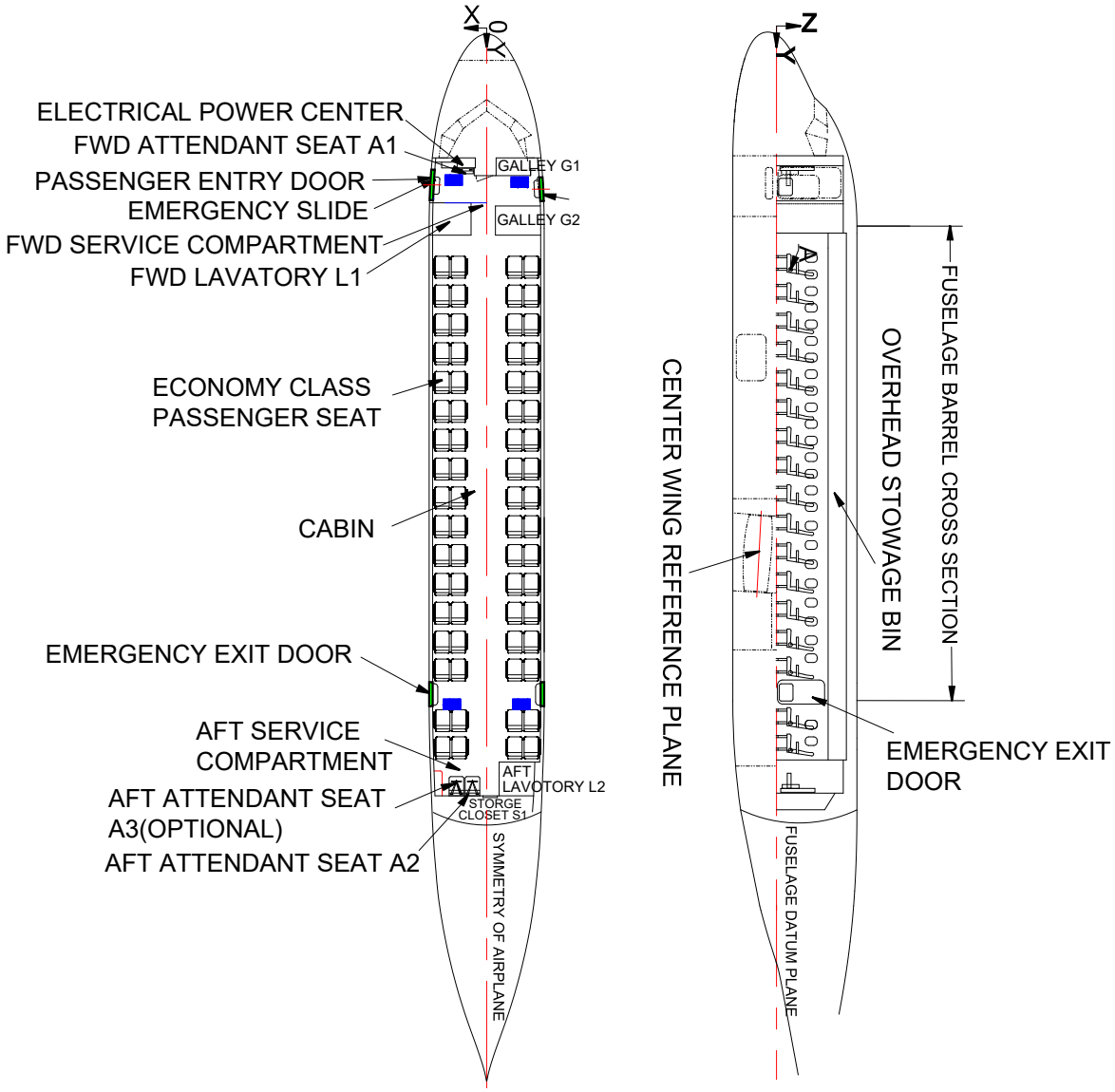
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10705-A-003-01

Figure 2 ARJ21-700 78-Seat Mixed Class Interior Arrangement (Sheet 1 of 1)

Applicable to：ALL

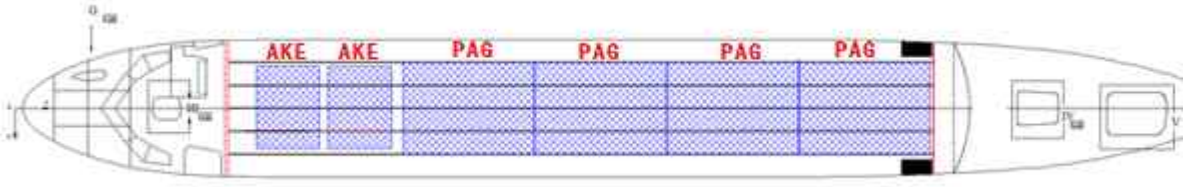


68 SEATS FULL-ECONOMY ARRANGEMENT

ICN-ARJ21-A-192002-A-SVV19-10706-A-005-01

Figure 3 ARJ21-700 68-Seat Full-economy Interior Arrangement (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-63256-A-002-01

Figure 4 Interior Arrangement of ARJ21 CCF (2 AKE and 4 PAG/AAY) (Sheet 1 of 1)

Applicable to：ALL

ICN-ARJ21-A-192002-A-SVV19-63257-A-002-01

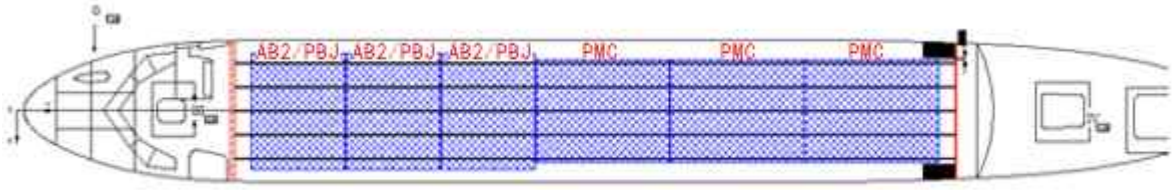
Figure 5 Interior Arrangement of ARJ21 CCF (2 AKE and 4 PMC) (Sheet 1 of 1)

Applicable to：ALL

ICN-ARJ21-A-192002-A-SVV19-63258-A-002-01

Figure 6 Interior Arrangement of ARJ21 CCF (7 PBJ) (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-63259-A-002-01

Figure 7 Interior Arrangement of ARJ21 CCF (3 AB2/PBJ and 3 PMC) (Sheet 1 of 1)

Applicable to：ALL

ICN-ARJ21-A-192002-A-SVV19-63260-A-002-01

Figure 8 Interior Arrangement of ARJ21 CCF (3 AB2/PBJ and 3 PAG/AAY) (Sheet 1 of 1)

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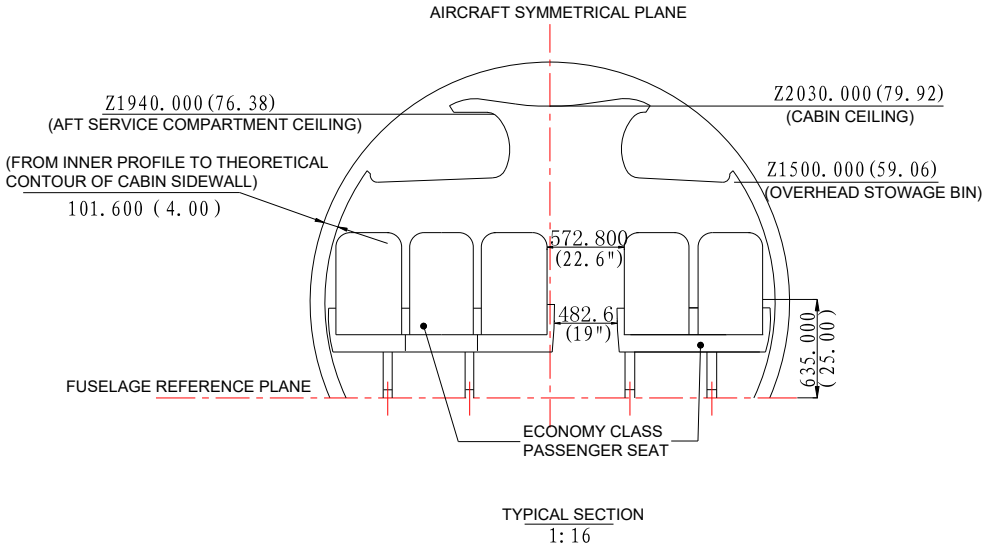
Cabin Cross-Sections

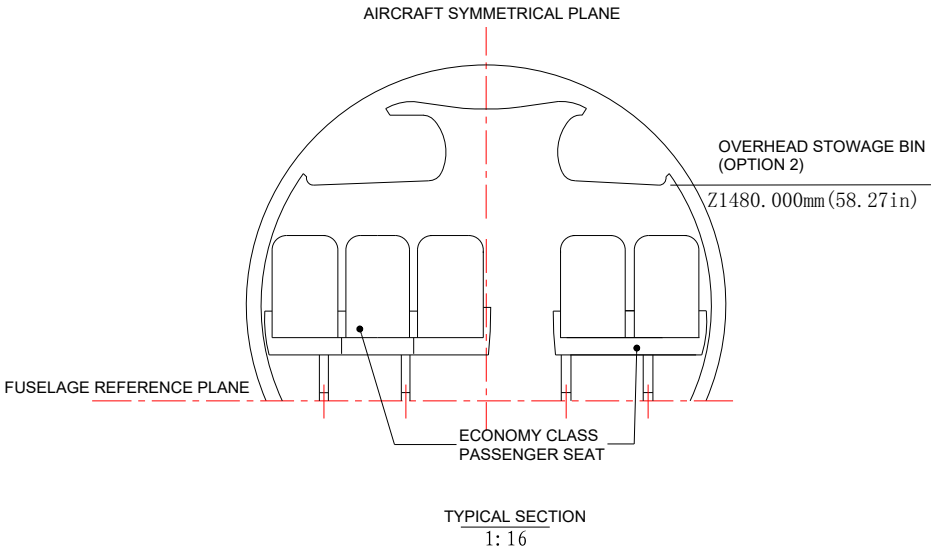
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10707-A-001-01

Figure 1 ARJ21-700 Cabin Cross-Section of 90-Seat Full Economy Class (Sheet 1 of 3)

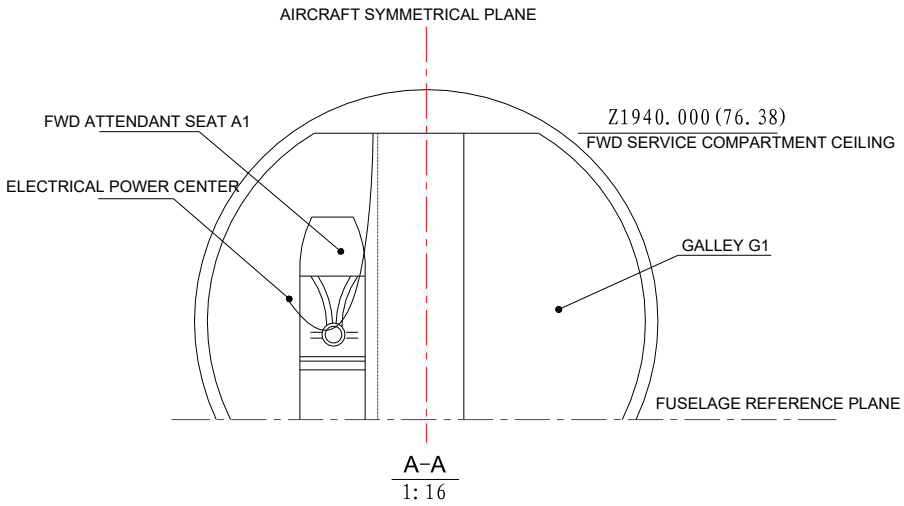
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10708-A-001-01

Figure 1 ARJ21-700 Cabin Cross-Section of 90-Seat Full Economy Class (Sheet 2 of 3)

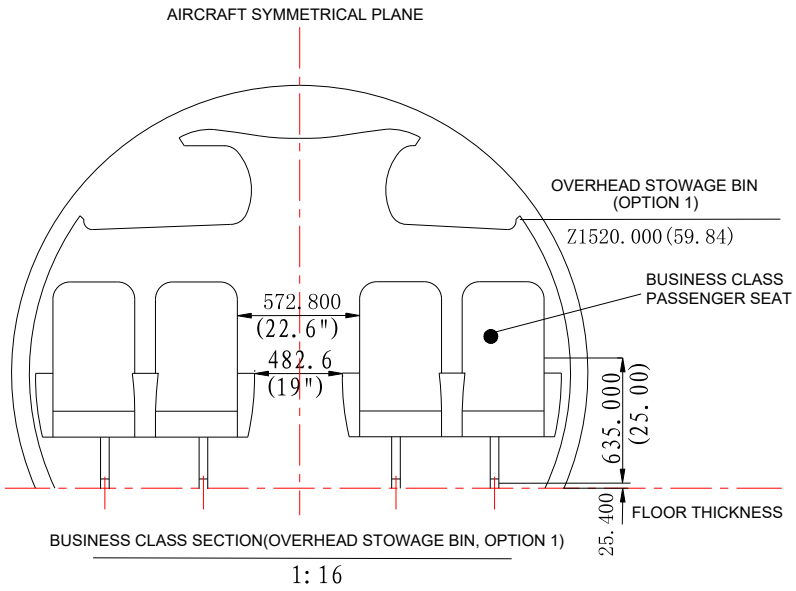
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10709-A-001-01

Figure 1 ARJ21-700 Cabin Cross-Section of 90-Seat Full Economy Class (Sheet 3 of 3)

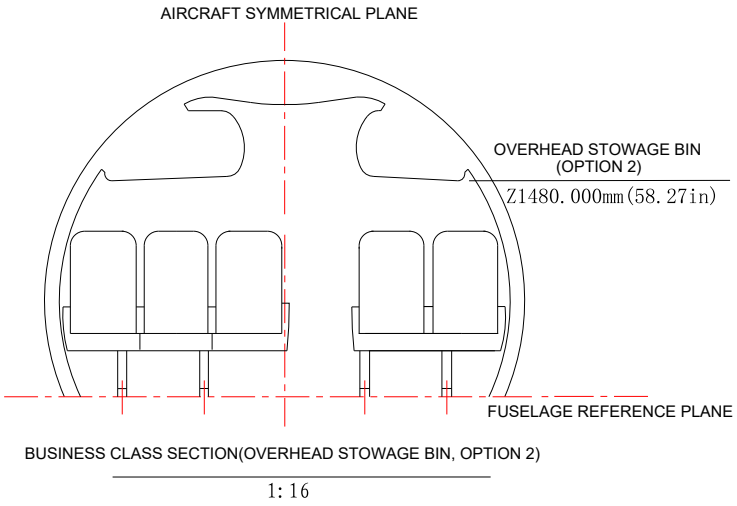
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10710-A-001-01

Figure 2 ARJ21-700 Cabin Cross-Section of 78-Seat Mixed Class (Sheet 1 of 3)

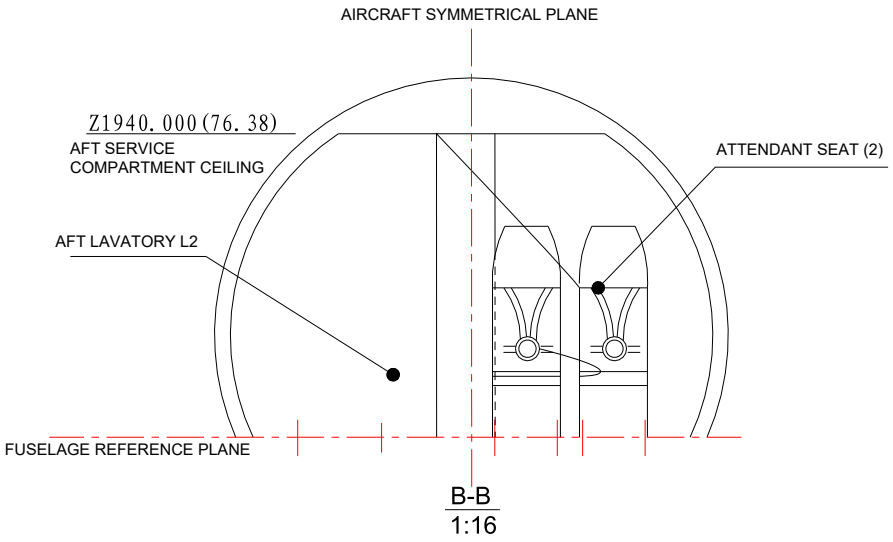
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10711-A-001-01

Figure 2 ARJ21-700 Cabin Cross-Section of 78-Seat Mixed Class (Sheet 2 of 3)

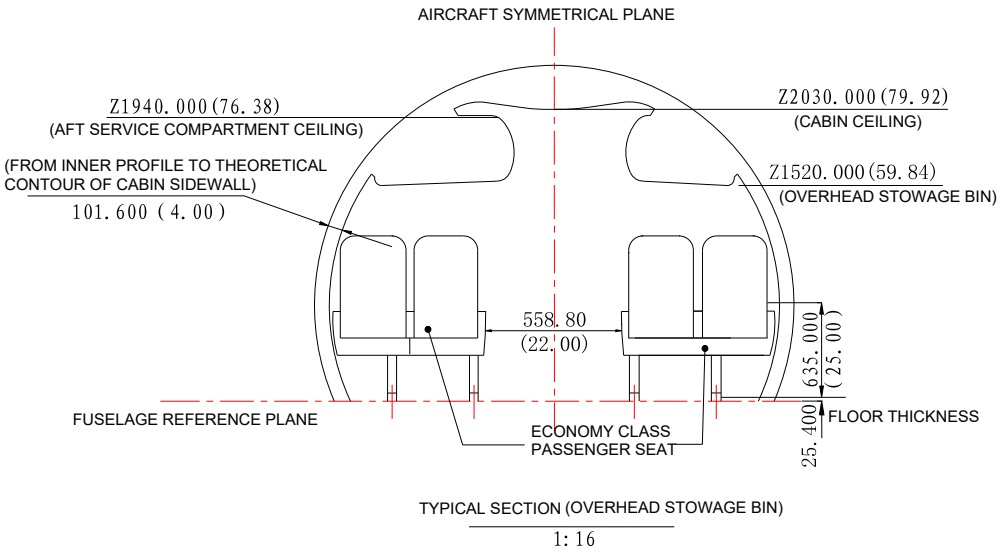
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10712-A-001-01

Figure 2 ARJ21-700 Cabin Cross-Section of 78-Seat Mixed Class (Sheet 3 of 3)

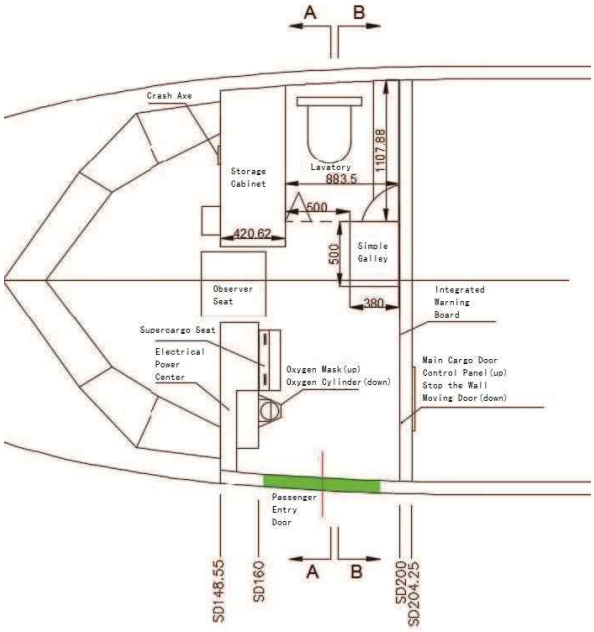
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10713-A-001-01

Figure 3 ARJ21-700 Cabin Cross Sections of Premium Economy Class with 68 Seats (Sheet 1 of 1)

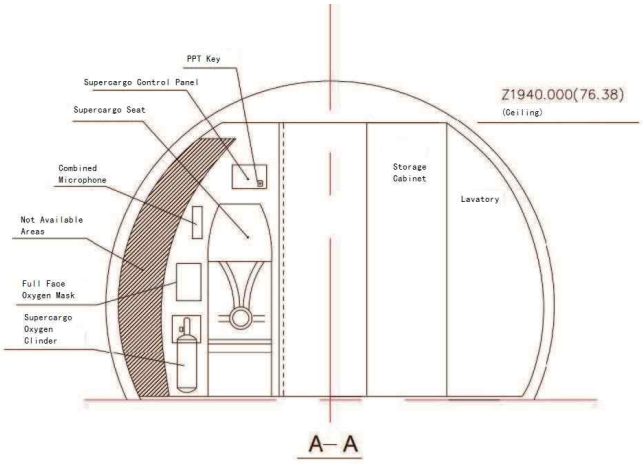
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-97161-A-001-01

Figure 4 Top View of ARJ21-700 CCF Escort Cabin (Sheet 1 of 1)

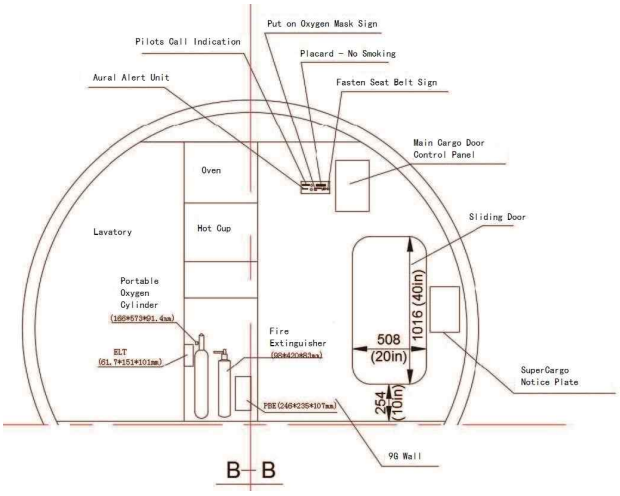
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-97162-A-001-01

Figure 5 Front View and AFT View of ARJ21-700 CCF Escort Cabin (Sheet 1 of 2)

Applicable to：ALL

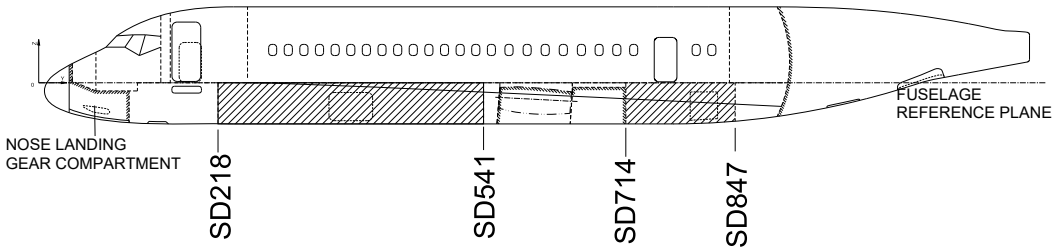


ICN-ARJ21-A-192002-A-SVV19-97163-A-001-01

Figure 5 Front View and AFT View of ARJ21-700 CCF Escort Cabin (Sheet 2 of 2)

Cargo Compartment Data

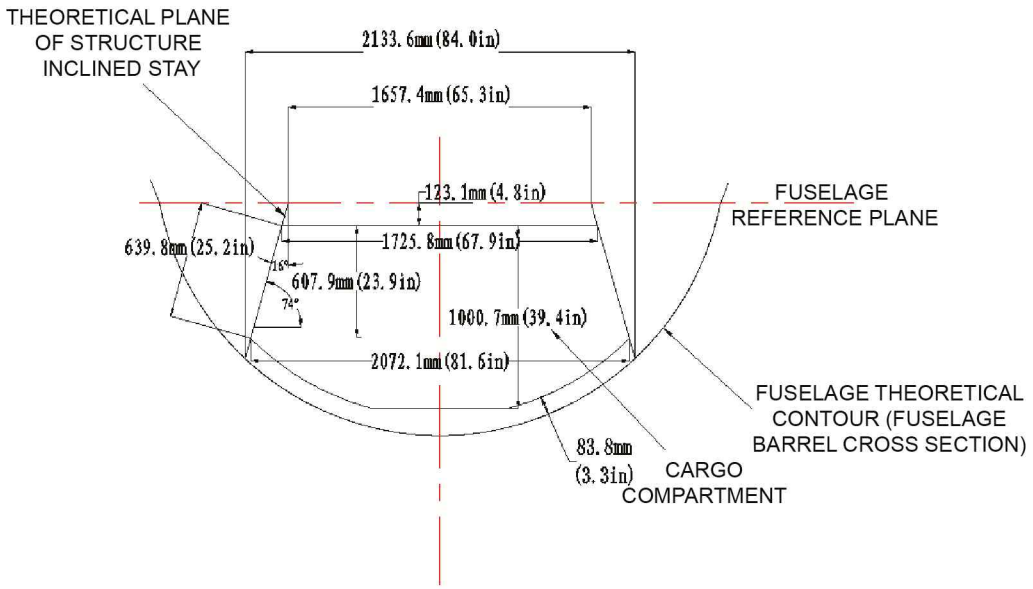
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-90806-A-001-01

Figure 1 Locations of ARJ21-700 Cargo Compartment and Cargo Door (Sheet 1 of 1)

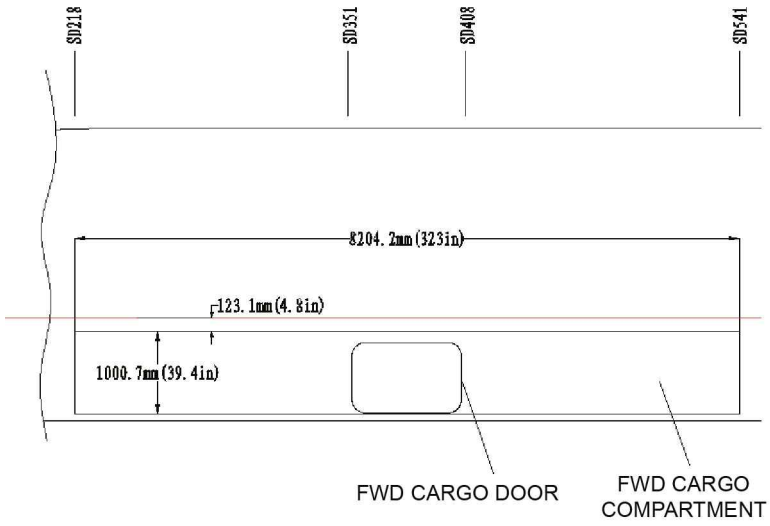
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10714-A-001-01

Figure 2 ARJ21-700 Cargo Compartment Cross-Section (Fuselage Barrel Cross Section) (Sheet 1 of 1)

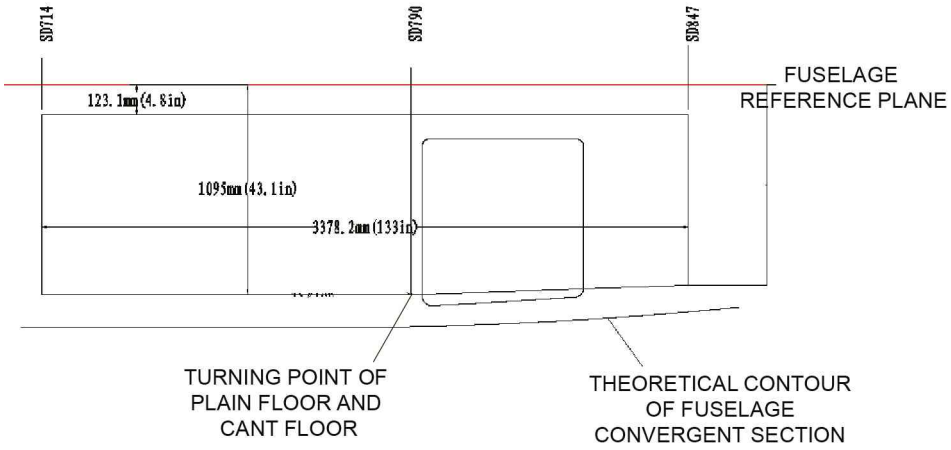
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-90805-A-001-01

Figure 3 Profile of ARJ21-700 FWD Cargo Compartment Side View (Sheet 1 of 1)

Applicable to：ALL



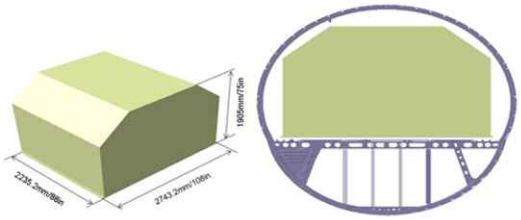
ICN-ARJ21-A-192002-A-SVV19-10715-A-001-01

Figure 4 Profile of ARJ21-700 AFT Cargo Compartment Side View (Sheet 1 of 1)

Table 1 ARJ21-700 Cargo Compartment Data

	FWD Cargo Compartment	AFT Cargo Compartment
Capacity	14.643m^3/517.12ft^3	5.502m^3/194.307ft^3

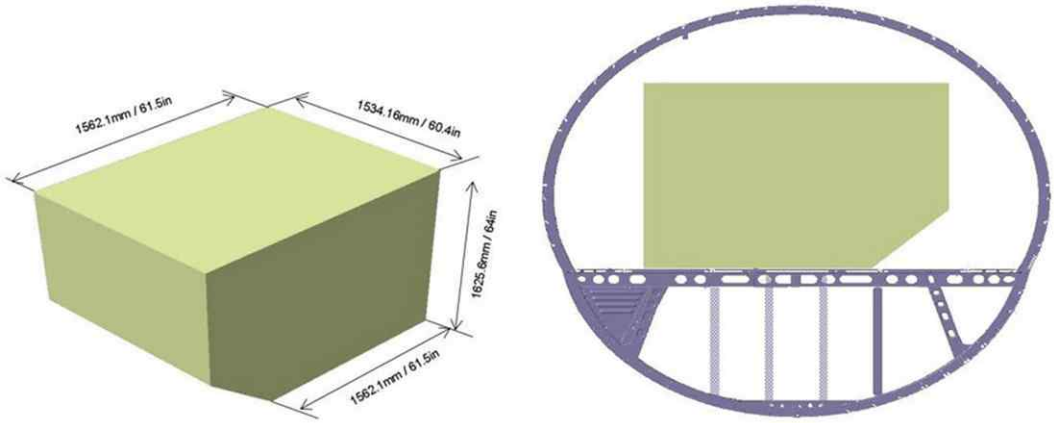
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-63261-A-001-01

Figure 5 Profile Arrangement of AB2 Container/PBJ Pallet in Main Cargo Compartment (Sheet 1 of 1)

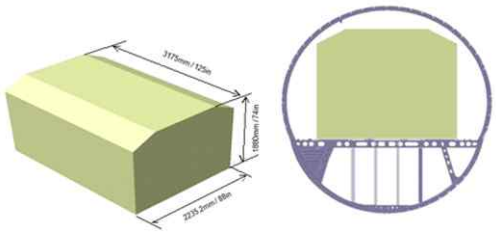
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-63262-A-001-01

Figure 6 Profile Arrangement of AKE Container/RKN Pallet in Main Cargo Compartment (Sheet 1 of 1)

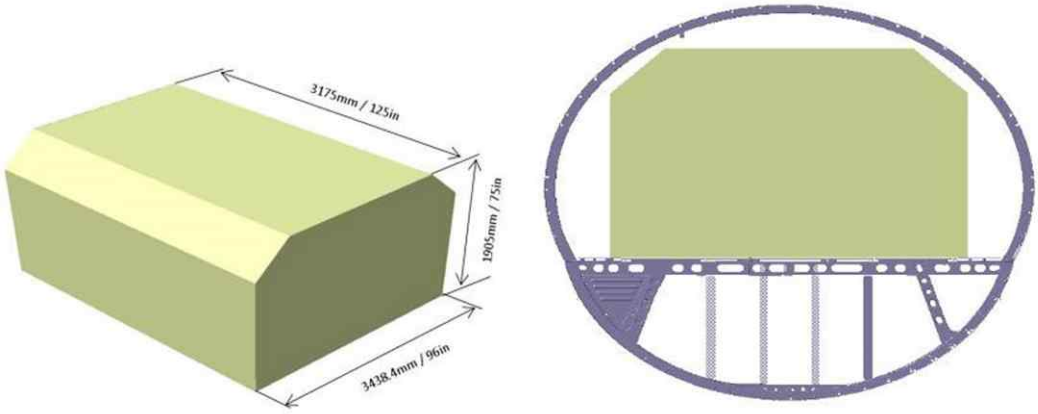
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-63263-A-001-01

Figure 7 Profile Arrangement of AAY Container/PAG Pallet in Main Cargo Compartment (Sheet 1 of 1)

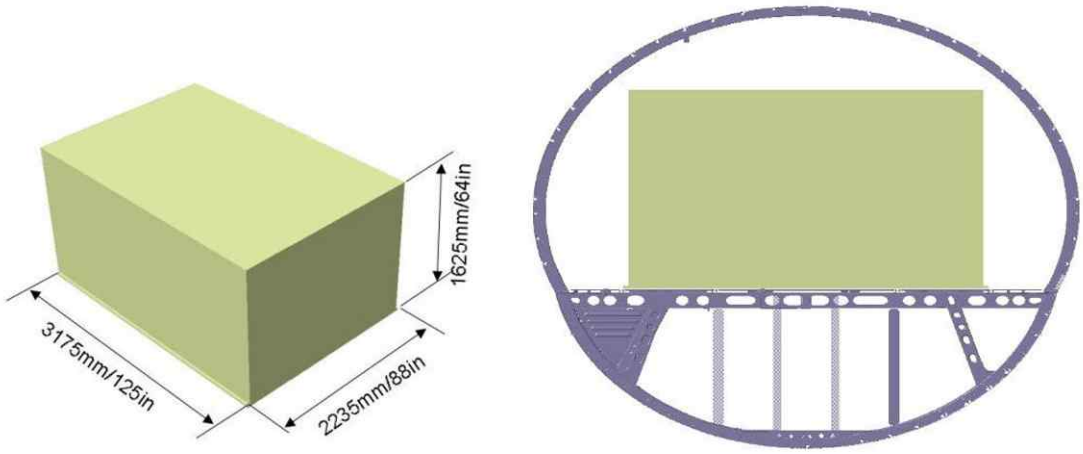
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-63264-A-001-01

Figure 8 Profile Arrangement of PMC Pallet in Main Cargo Compartment (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-63265-A-001-01

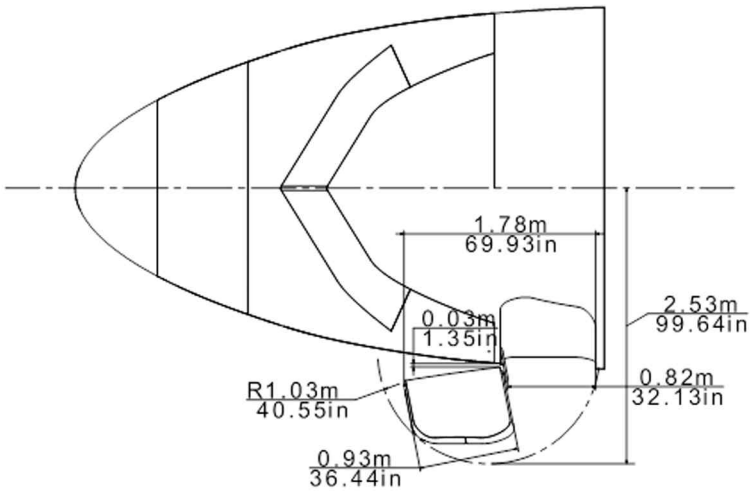
Figure 9 Profile Arrangement of RAP Container in Main Cargo Compartment (Sheet 1 of 1)

Table 2 Applicable ULDS

ULD Type	Dimensions (in)	Theoretical Volume (ft^3)	Loading Weight Limit (kg)	Collector Weight Limit (kg)
AB2	88× 108× 75	359.32	4536	166
PBJ	88×108	359.32	4536	91
AAY	88× 125× 74	409.11	6033	192
PAG	88×125	430.64	6800	105
RAP	88× 125× 64	224.2	4933	1100
PMC	96×125	463.15	6800	118
AKE	60.4× 61.5× 64	153.96	1588	70
RKN	60.4× 61.5× 64	81.9	953	635

Door Clearances

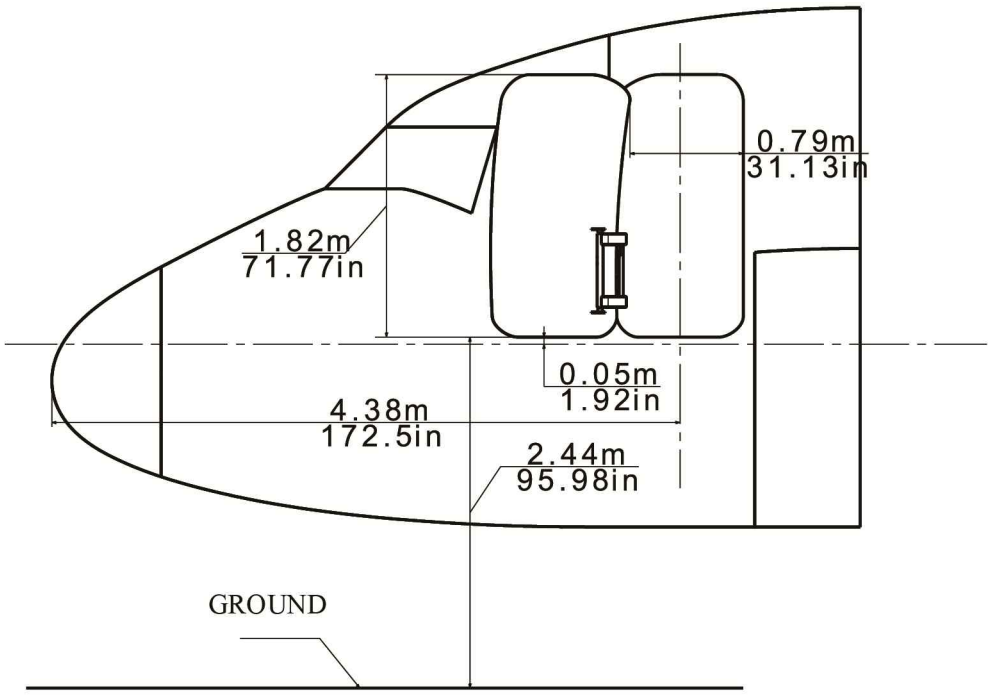
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10716-A-001-01

Figure 1 ARJ21-700 Passenger Entry Door Clearances (Sheet 1 of 3)

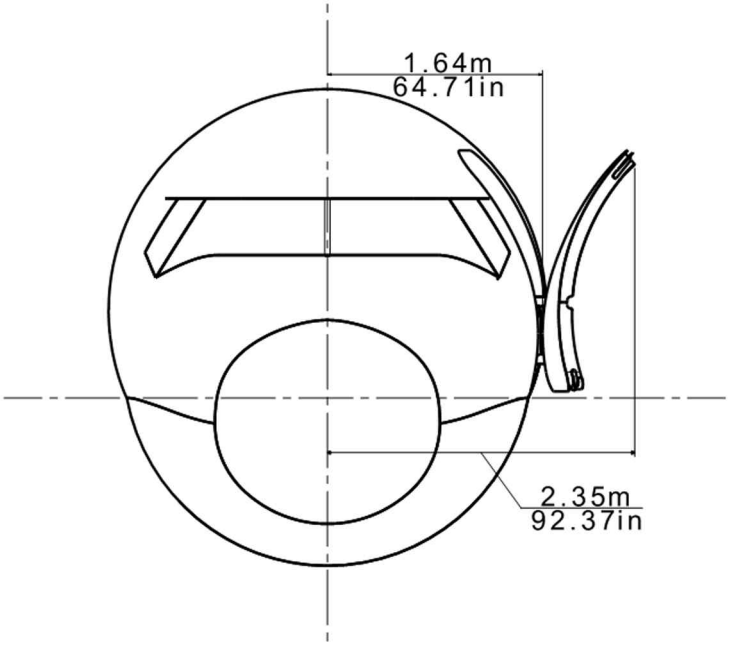
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10717-A-001-01

Figure 1 ARJ21-700 Passenger Entry Door Clearances (Sheet 2 of 3)

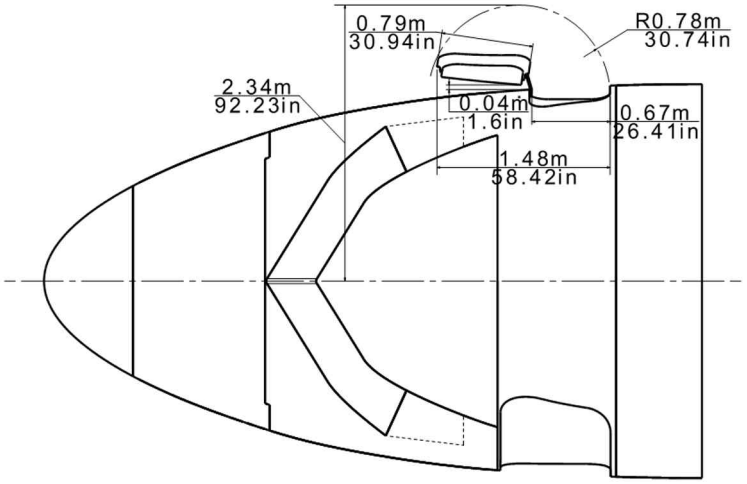
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10718-A-001-01

Figure 1 ARJ21-700 Passenger Entry Door Clearances (Sheet 3 of 3)

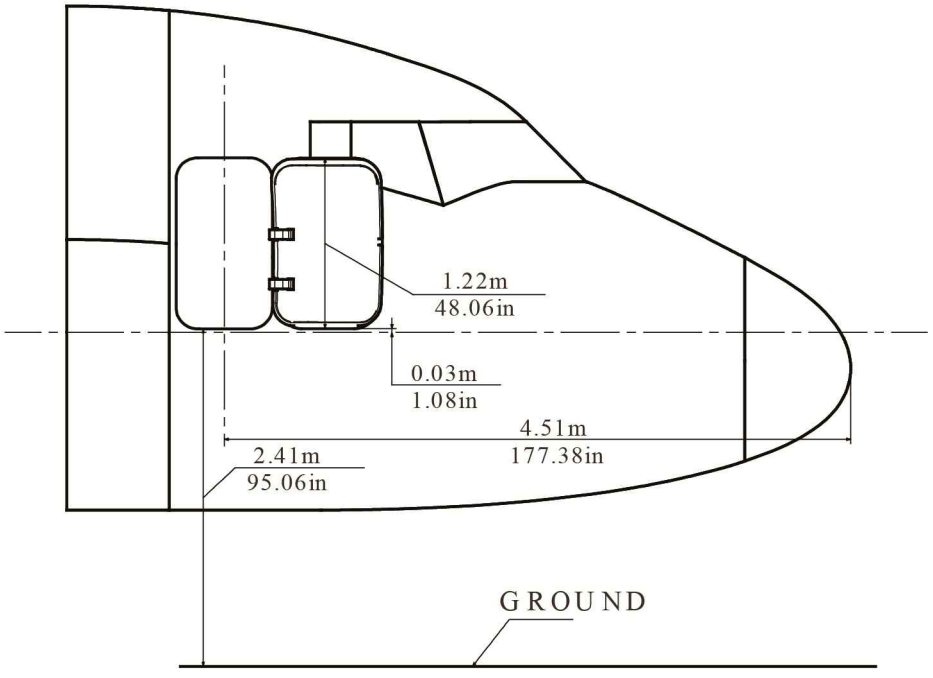
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10721-A-001-01

Figure 2 ARJ21-700 Service Door Clearances (Sheet 1 of 3)

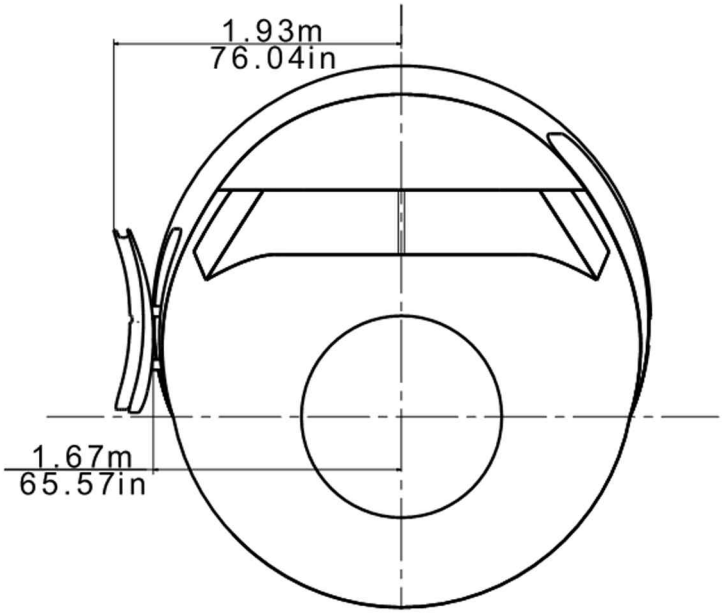
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10722-A-001-01

Figure 2 ARJ21-700 Service Door Clearances (Sheet 2 of 3)

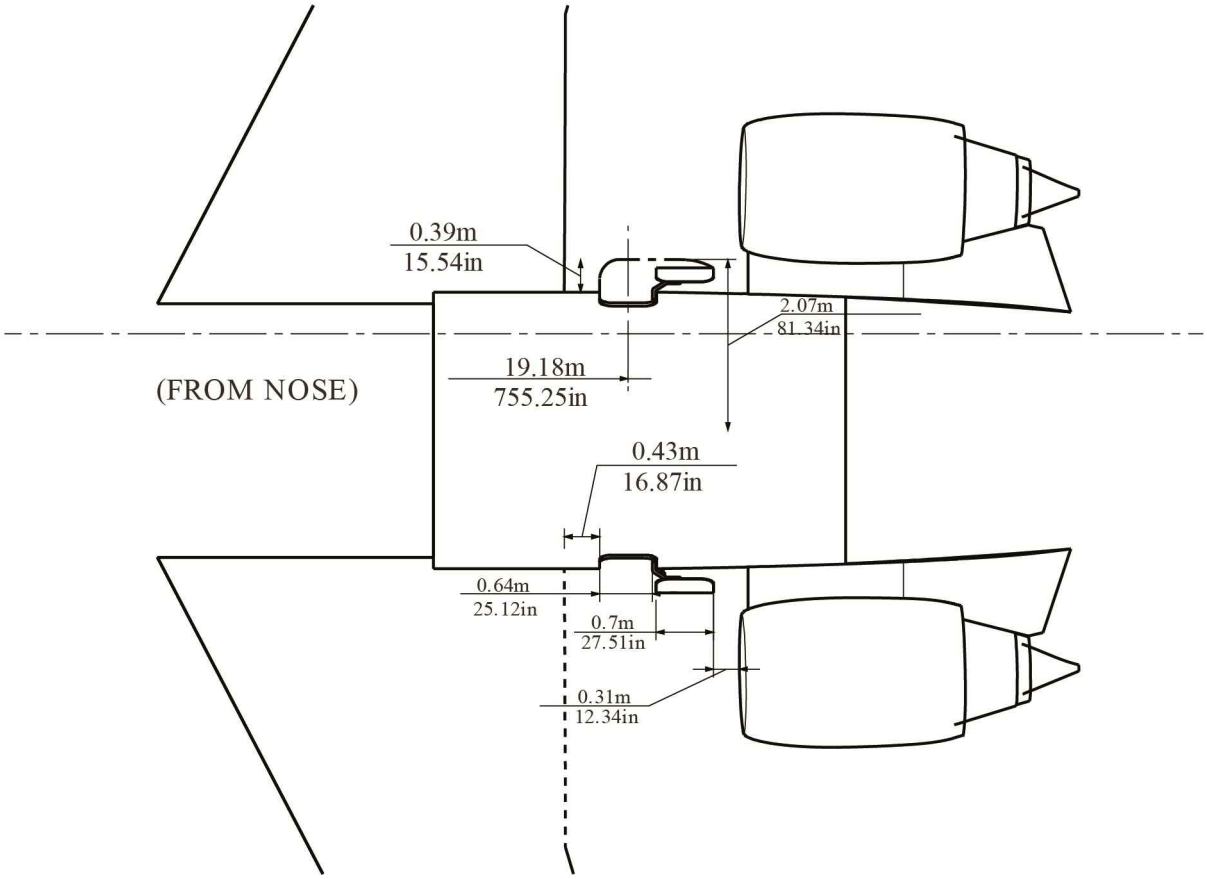
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10723-A-001-01

Figure 2 ARJ21-700 Service Door Clearances (Sheet 3 of 3)

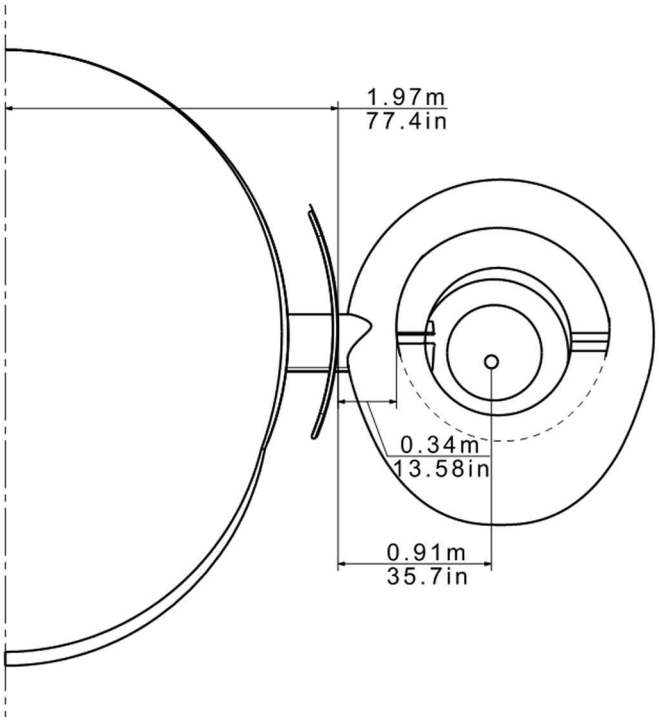
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10724-A-001-01

Figure 3 ARJ21-700 Emergency Exit Door Clearances (Sheet 1 of 3)

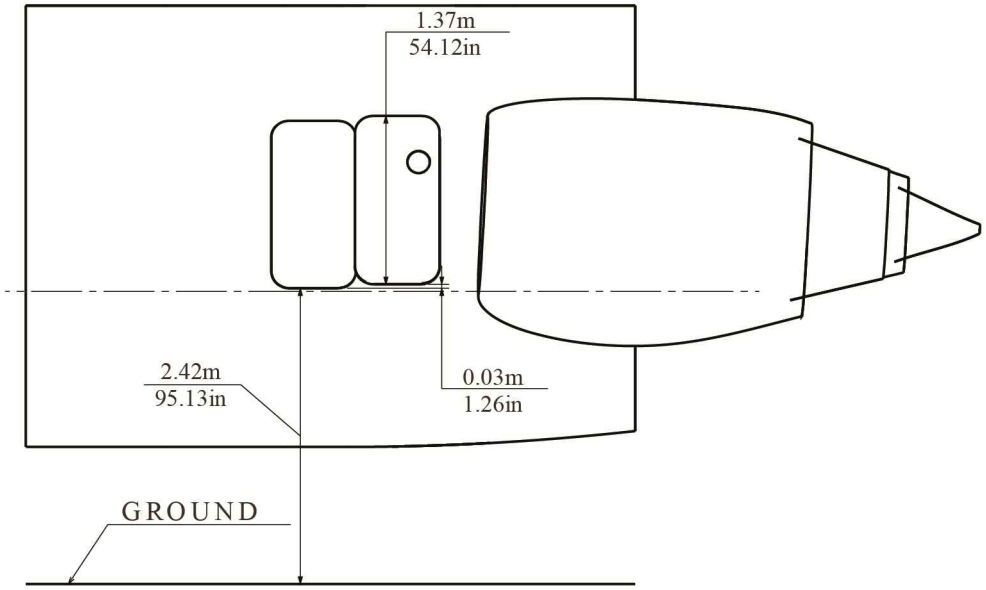
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10725-A-001-01

Figure 3 ARJ21-700 Emergency Exit Door Clearances (Sheet 2 of 3)

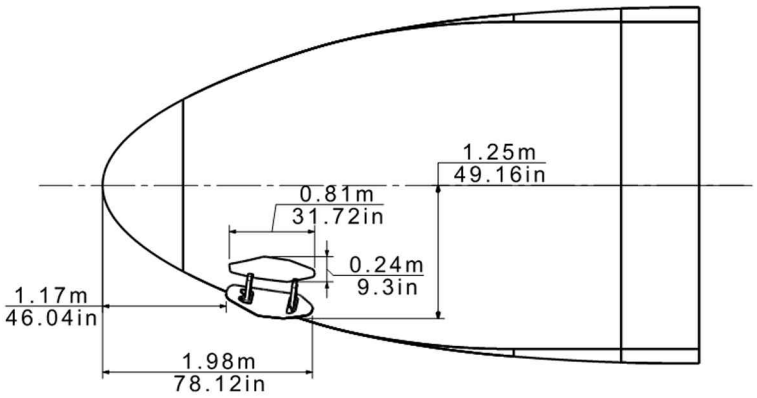
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10726-A-001-01

Figure 3 ARJ21-700 Emergency Exit Door Clearances (Sheet 3 of 3)

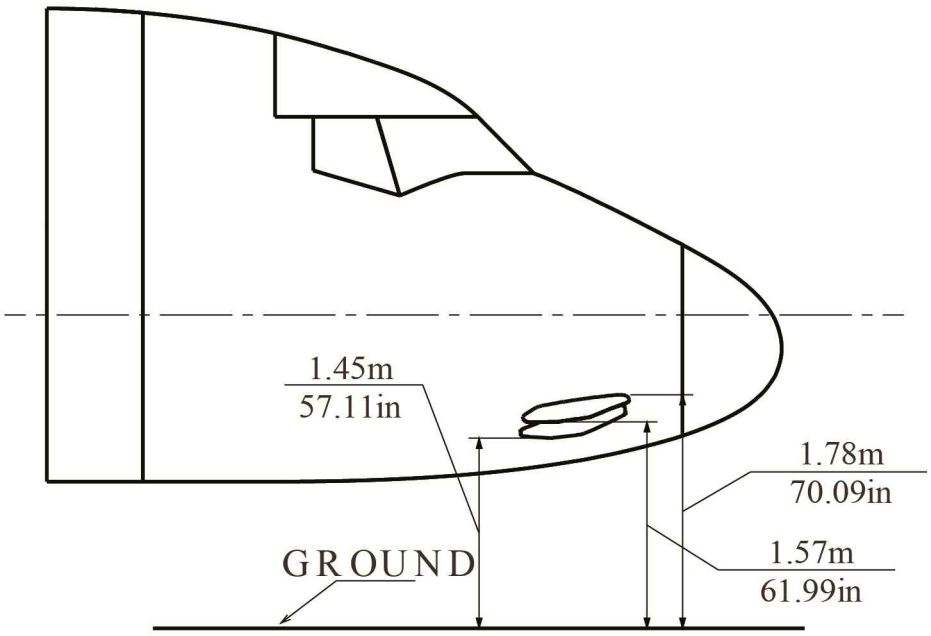
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10729-A-001-01

Figure 4 ARJ21-700 Rat Compartment Door Clearances (Sheet 1 of 3)

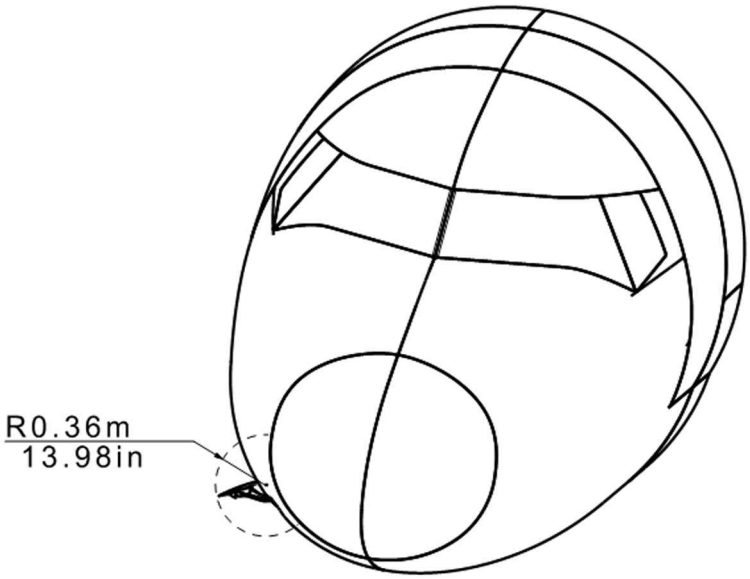
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10730-A-001-01

Figure 4 ARJ21-700 Rat Compartment Door Clearances (Sheet 2 of 3)

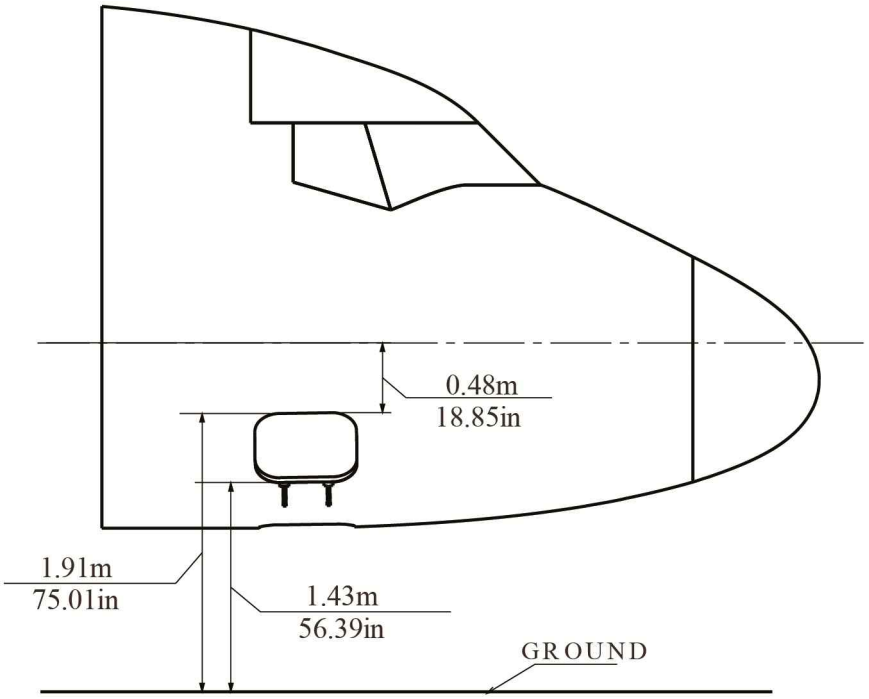
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10731-A-001-01

Figure 4 ARJ21-700 Rat Compartment Door Clearances (Sheet 3 of 3)

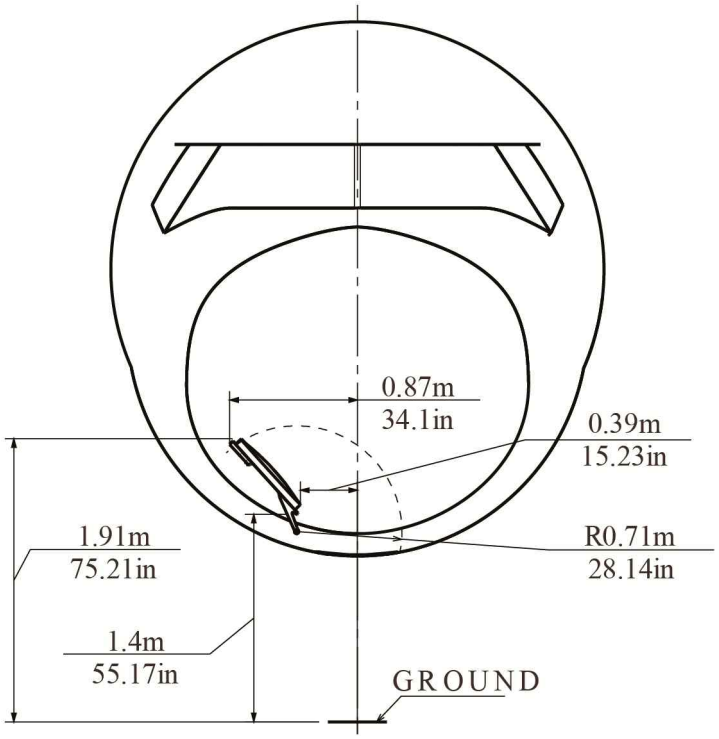
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10732-A-001-01

Figure 5 ARJ21-700 E/E Bay Door Clearances (Sheet 1 of 3)

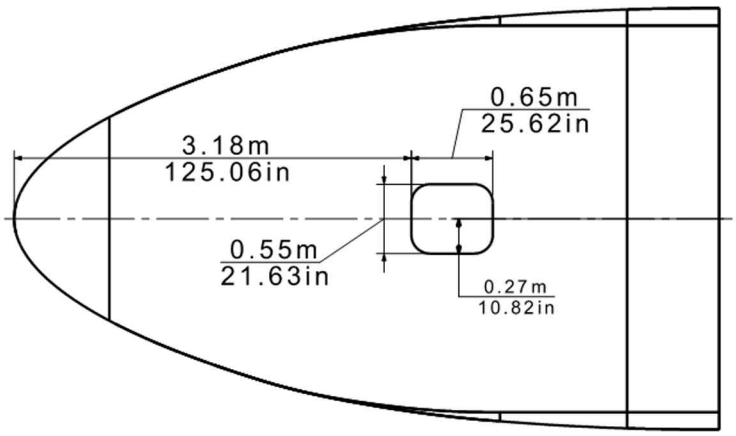
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10733-A-001-01

Figure 5 ARJ21-700 E/E Bay Door Clearances (Sheet 2 of 3)

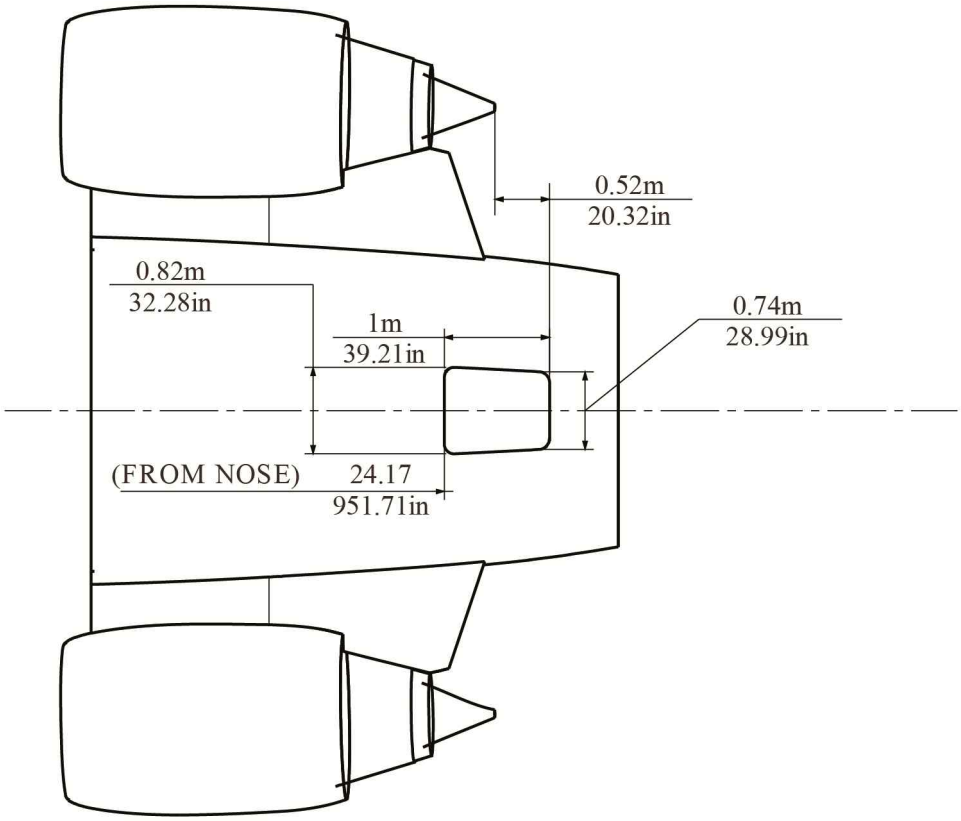
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10734-A-001-01

Figure 5 ARJ21-700 E/E Bay Door Clearances (Sheet 3 of 3)

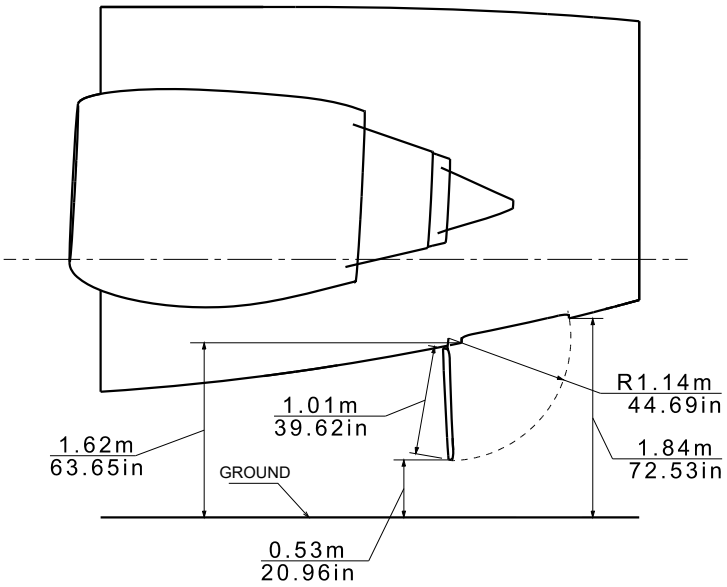
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10735-A-001-01

Figure 6 ARJ21-700 Aft Accessory Compartment Door Clearances (Sheet 1 of 2)

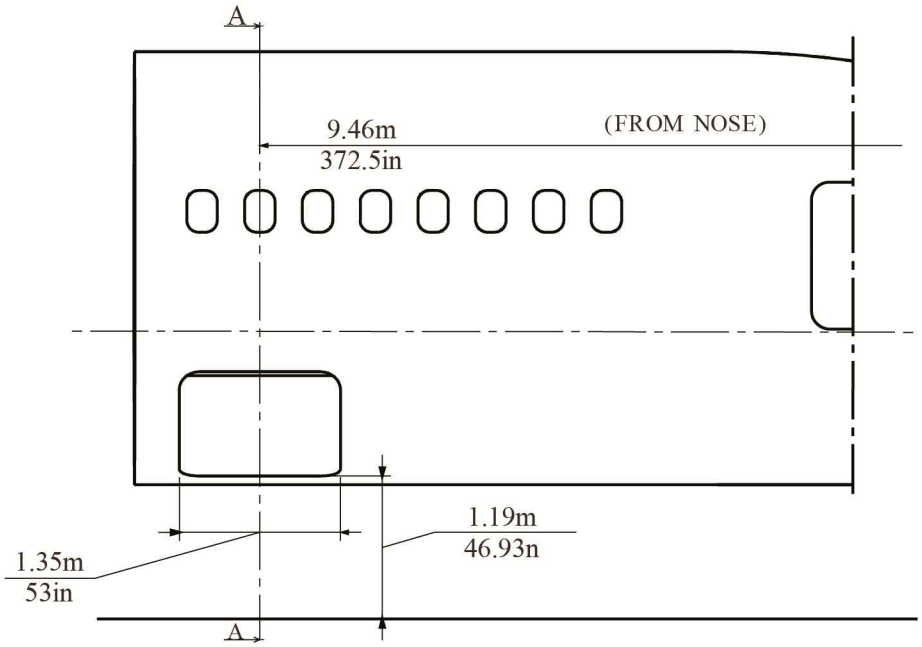
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10736-A-001-01

Figure 6 ARJ21-700 Aft Accessory Compartment Door Clearances (Sheet 2 of 2)

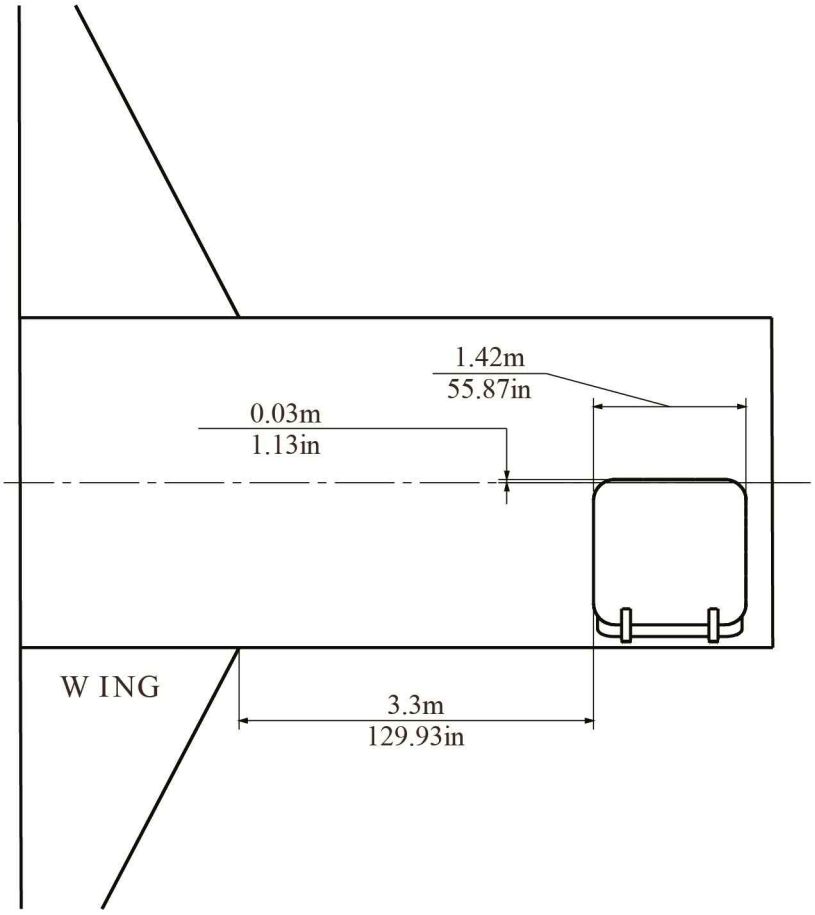
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10737-A-001-01

Figure 7 ARJ21-700 FWD Cargo Door Clearances (Sheet 1 of 3)

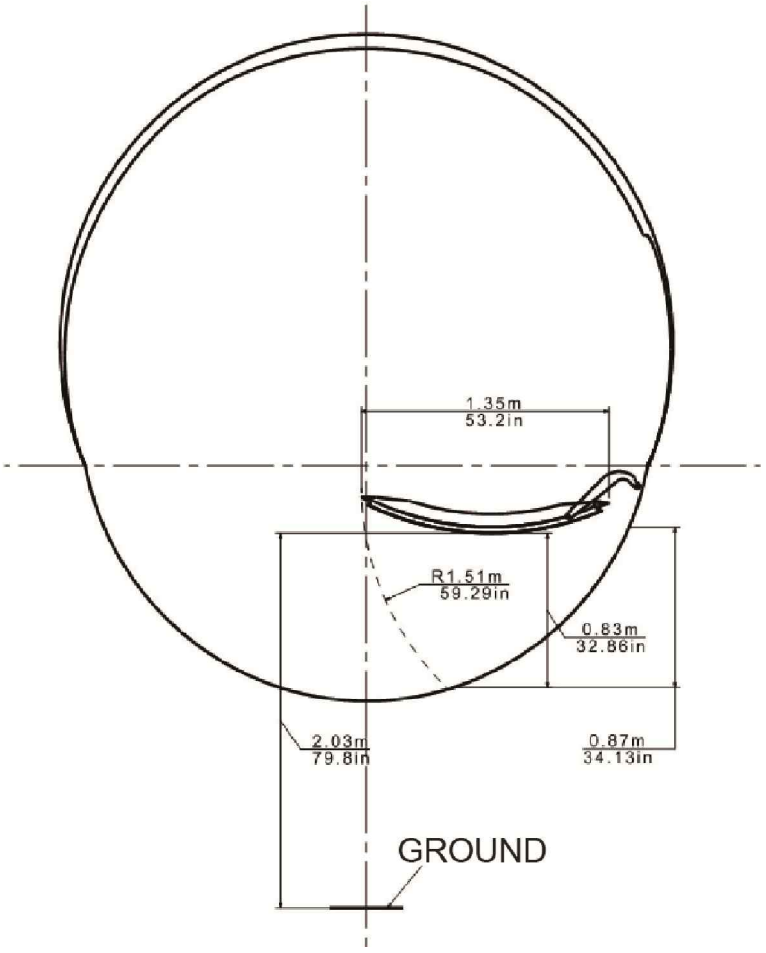
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10738-A-001-01

Figure 7 ARJ21-700 FWD Cargo Door Clearances (Sheet 2 of 3)

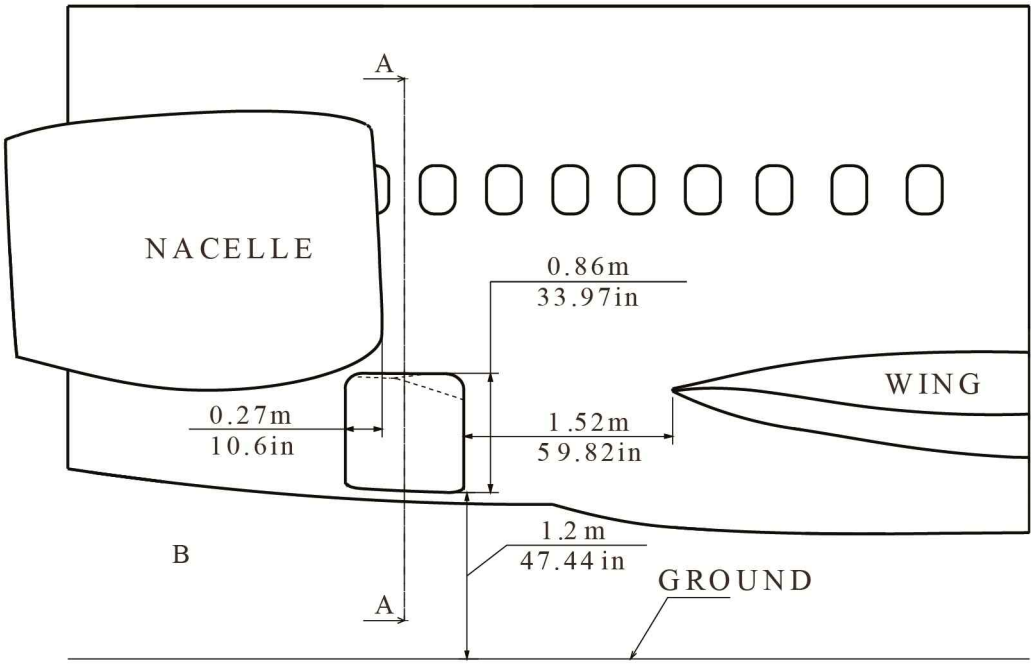
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10739-A-001-01

Figure 7 ARJ21-700 FWD Cargo Door Clearances (Sheet 3 of 3)

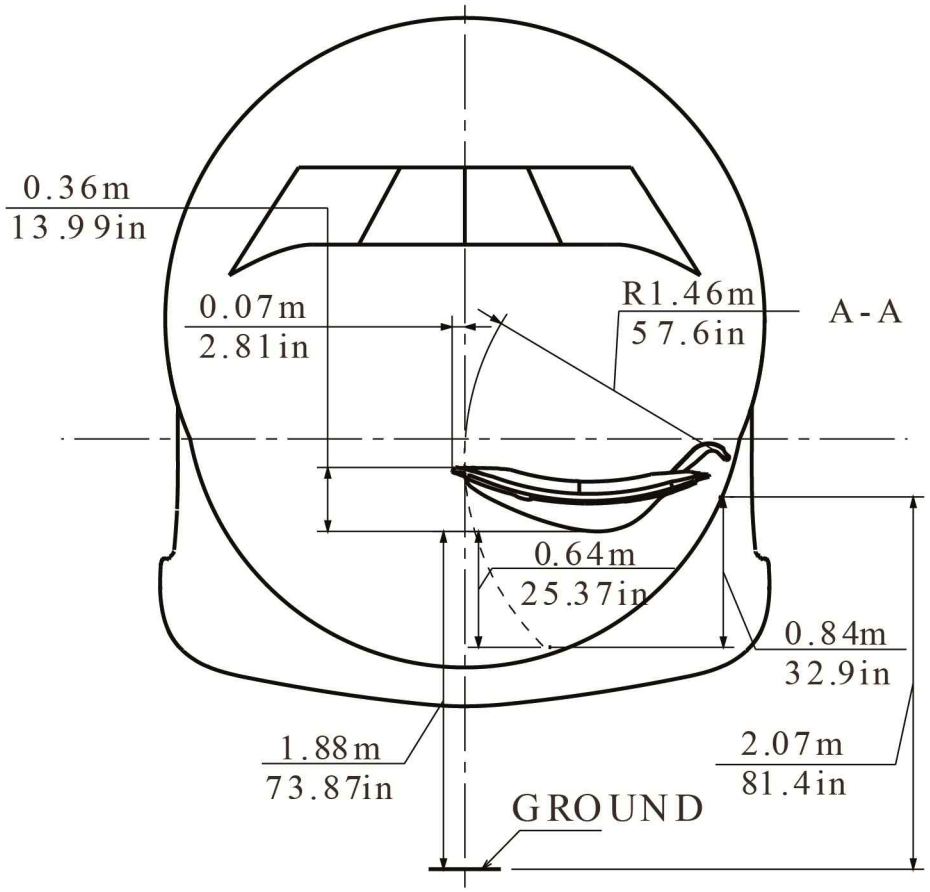
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10740-A-001-01

Figure 8 ARJ21-700 AFT Cargo Door Clearances (Sheet 1 of 3)

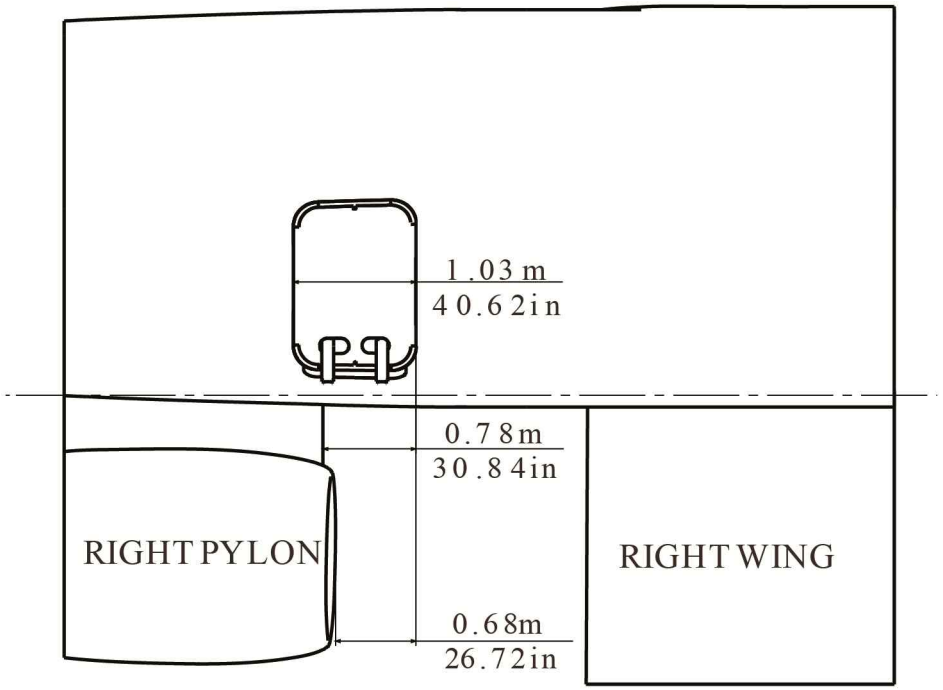
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10741-A-001-01

Figure 8 ARJ21-700 AFT Cargo Door Clearances (Sheet 2 of 3)

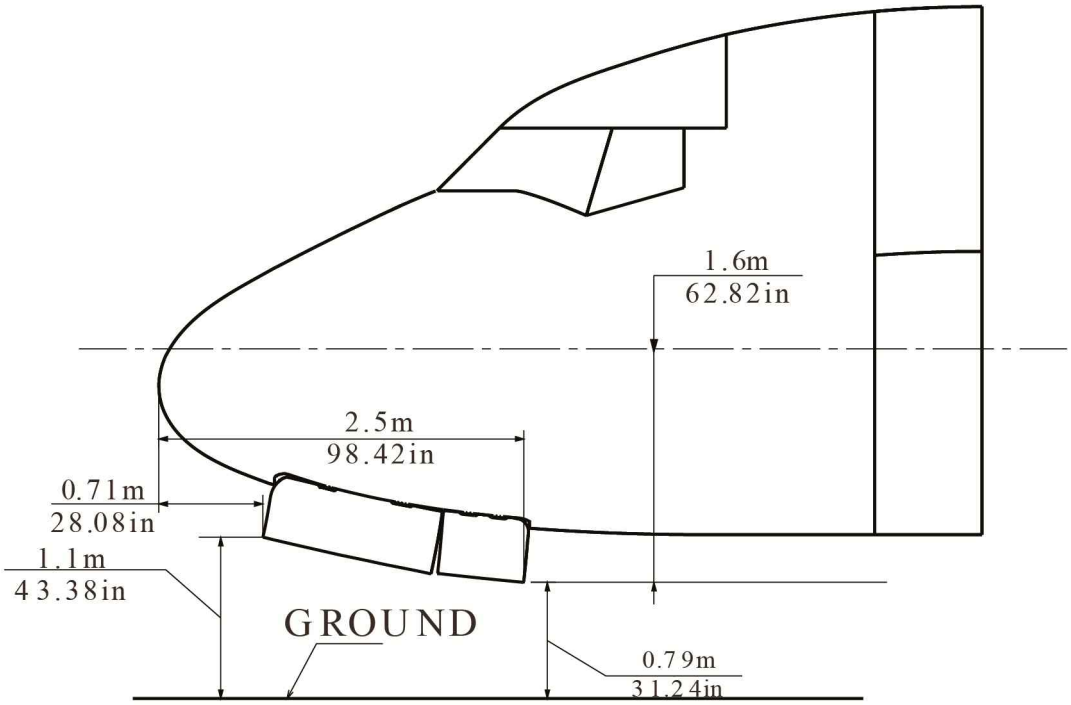
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10742-A-001-01

Figure 8 ARJ21-700 AFT Cargo Door Clearances (Sheet 3 of 3)

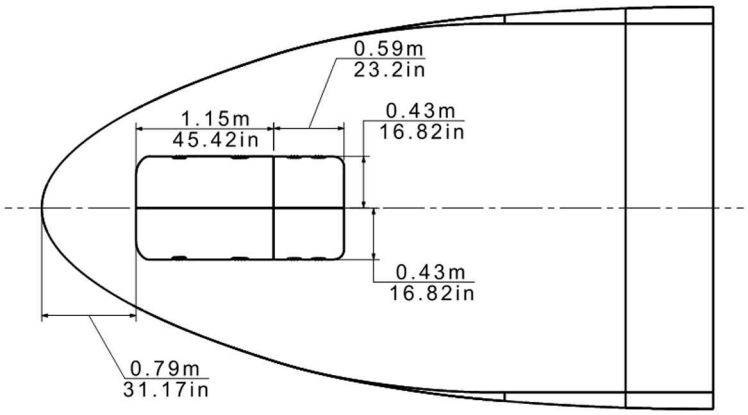
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10743-A-001-01

Figure 9 ARJ21-700 Nose Landing Gear Door Clearances (Sheet 1 of 3)

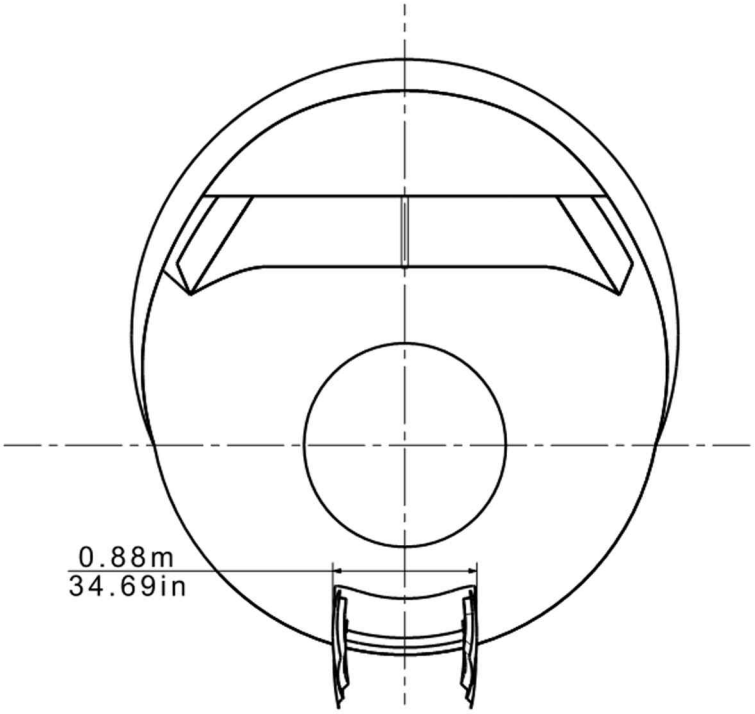
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10744-A-001-01

Figure 9 ARJ21-700 Nose Landing Gear Door Clearances (Sheet 2 of 3)

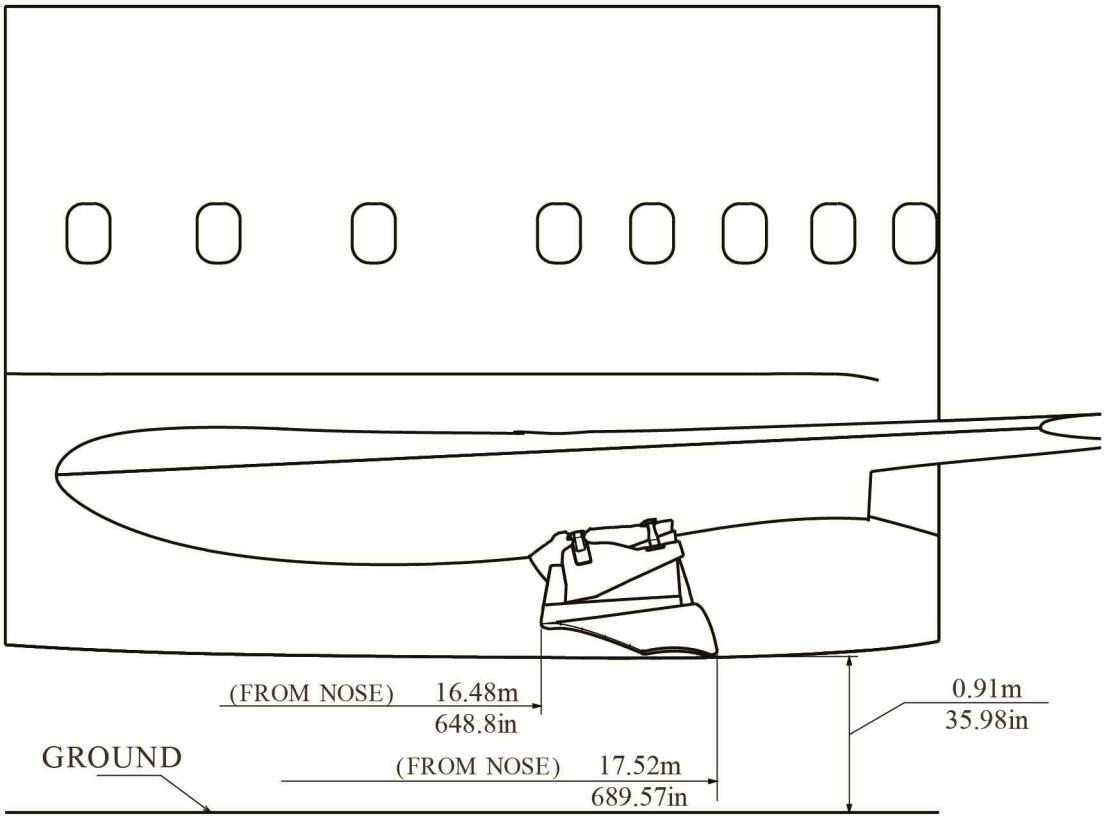
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10745-A-001-01

Figure 9 ARJ21-700 Nose Landing Gear Door Clearances (Sheet 3 of 3)

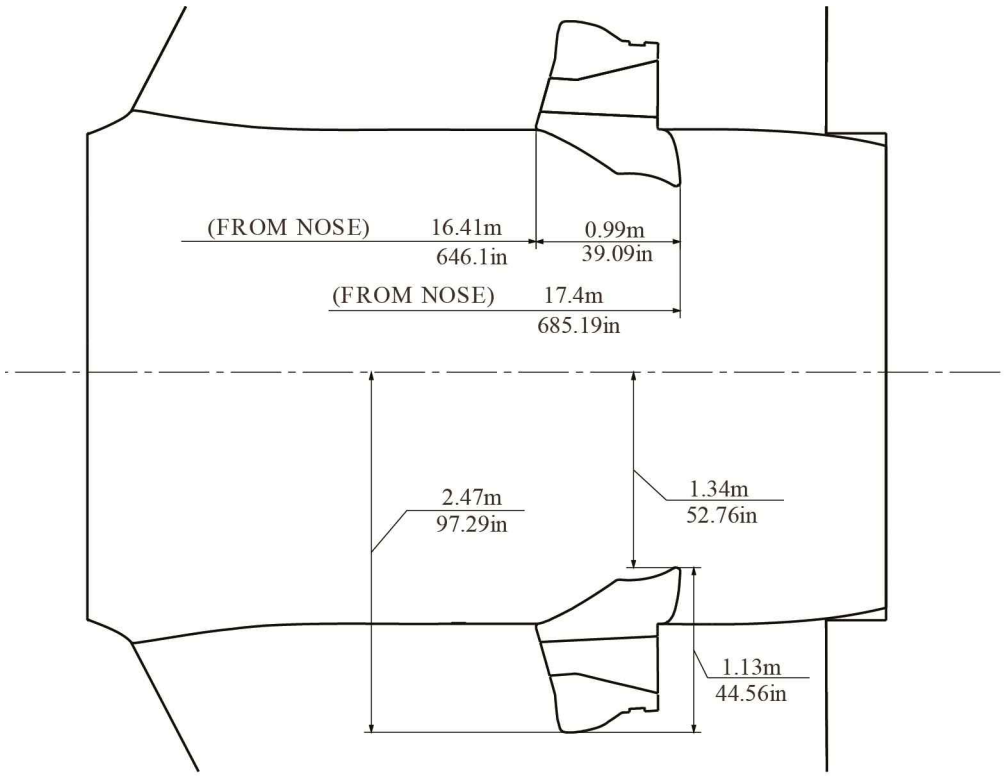
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10746-A-001-01

Figure 10 ARJ21-700 Main Landing Gear Door Clearance (Sheet 1 of 3)

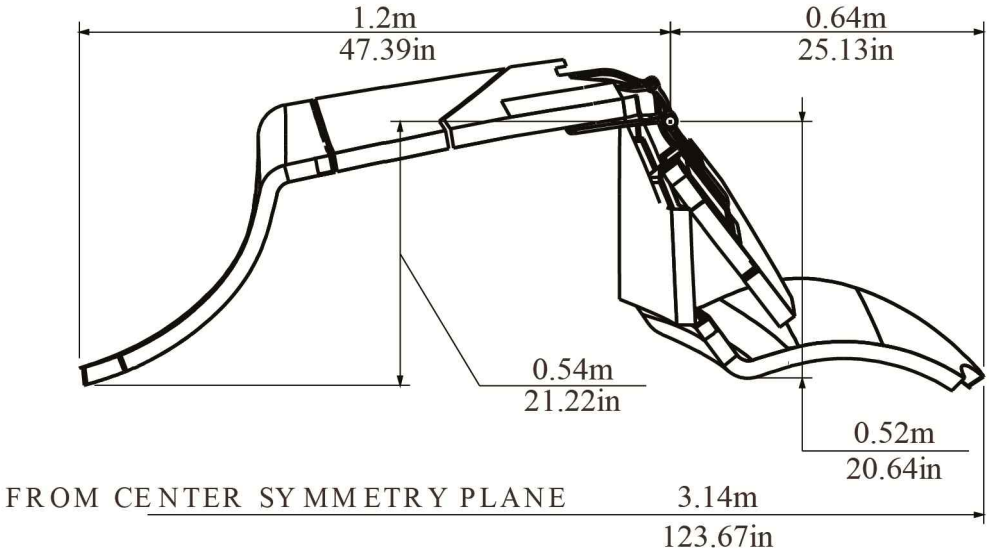
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10747-A-001-01

Figure 10 ARJ21-700 Main Landing Gear Door Clearance (Sheet 2 of 3)

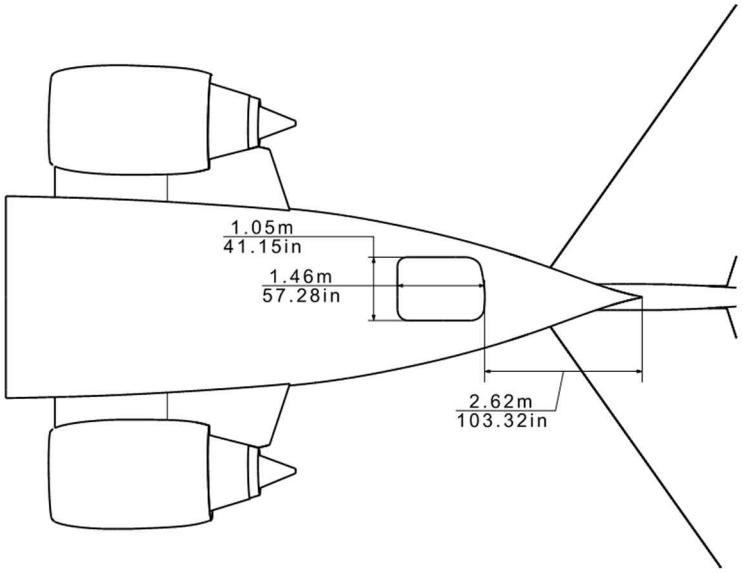
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10748-A-001-01

Figure 10 ARJ21-700 Main Landing Gear Door Clearance (Sheet 3 of 3)

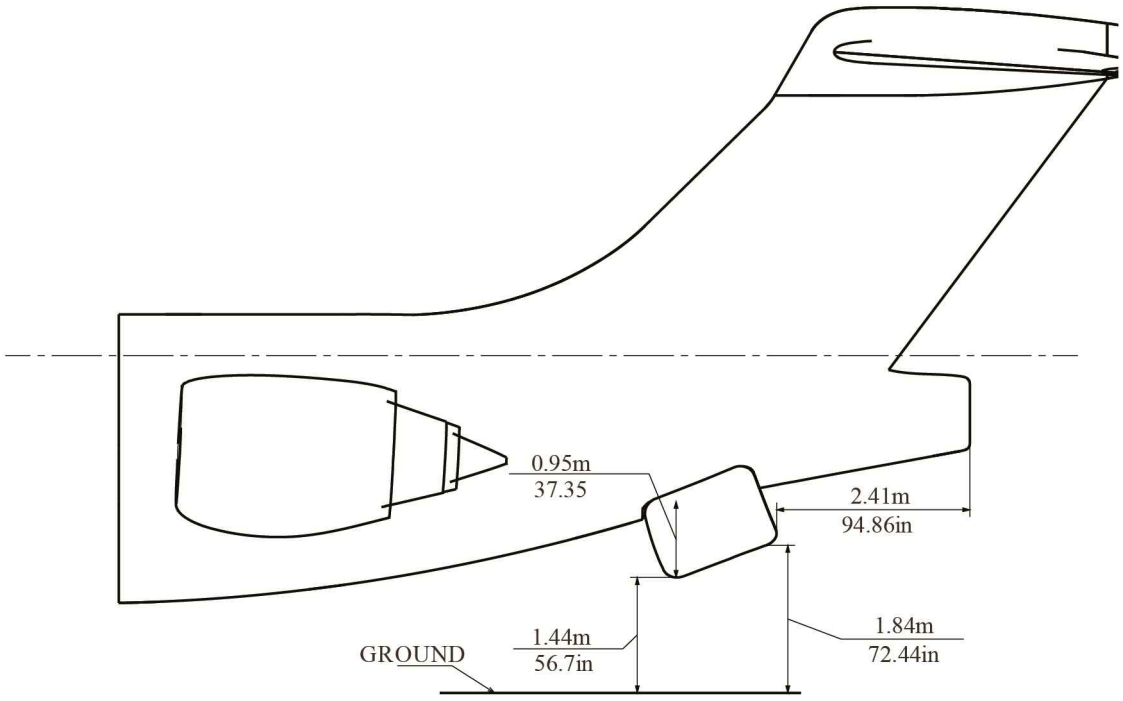
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10749-A-001-01

Figure 11 ARJ21-700 APU Door Clearance (Sheet 1 of 2)

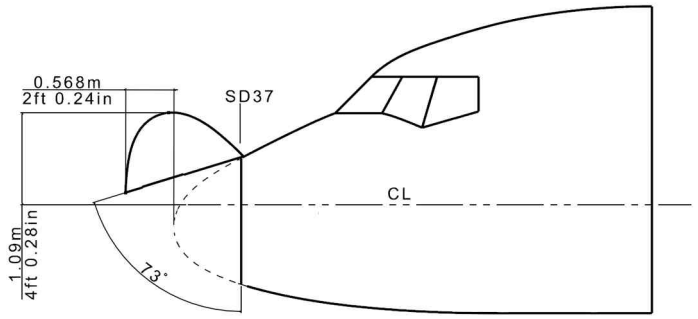
Applicable to : ALL



ICN-ARJ21-A-192002-A-SVV19-10752-A-001-01

Figure 11 ARJ21-700 APU Door Clearance (Sheet 2 of 2)

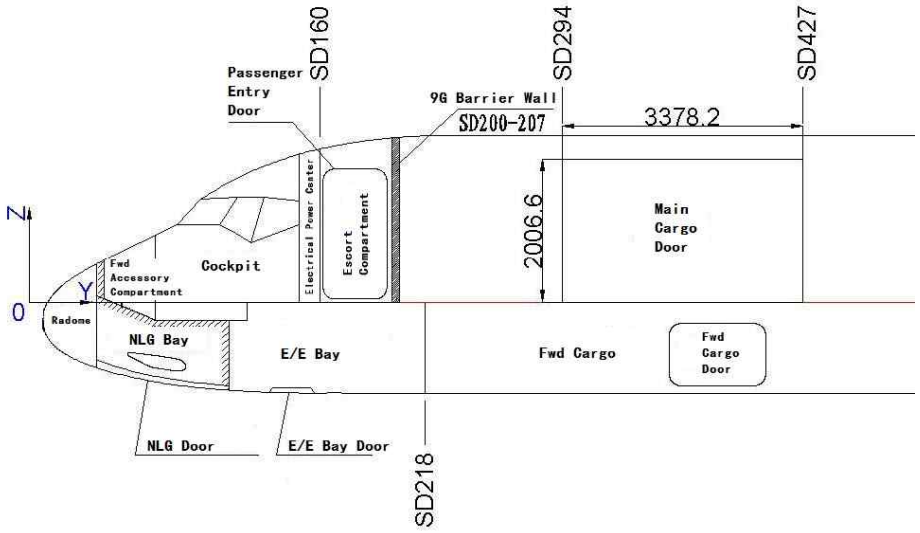
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-10753-A-001-01

Figure 12 ARJ21-700 Radome Clearances (Sheet 1 of 1)

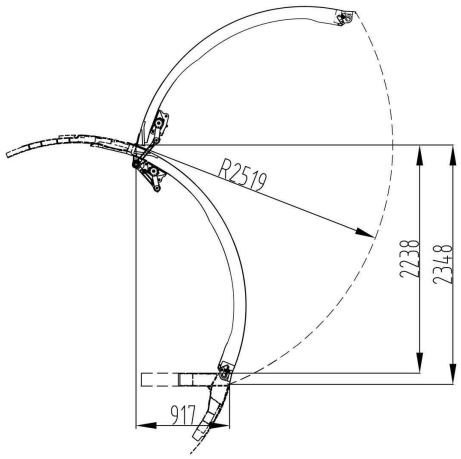
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-97164-A-001-01

Figure 13 ARJ21-700CCF Main Cargo Door Open Areas (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-97165-A-002-01

Figure 14 ARJ21-700CCF Main Cargo Door Dimensions (Sheet 1 of 1)

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Jacking

1. Jacking for Maintenance

A. General

The aircraft maximum weight for jacking is **33000 kg**(**72753 lb**).

Do not jack the aircraft when the wind speed is above **10 m/s**.

The airplane has three main jacking points and one auxiliary jacking point. The main jacking points are the wing jacking points and the mid-aft body jacking point. The auxiliary jack point is the fwd fuselage jacking point, and is used to make the aircraft stable.

If you will do the complete aircraft jacking, make sure there is a minimum of **50 mm**(**1.97 in**) of tire clearance between the tire and ground surface. If you will retract or extend the landing gear, make sure there is a minimum of **100 mm**(**3.94 in**) of tire clearance between the tire and ground surface.

B. Aircraft Jacking Points

(1) Primary Jacking Points

The aircraft is provided with three primary jacking points:

- One located under the AFT fuselage.
- Two located under the wings (one under each wing).

The jack pad of primary jacking points is the spherical jack top in accordance with ISO43-1976 standard, with a radius of **19.1 mm**(**0.75 in**), the top head of the jack adopts the nest structure.

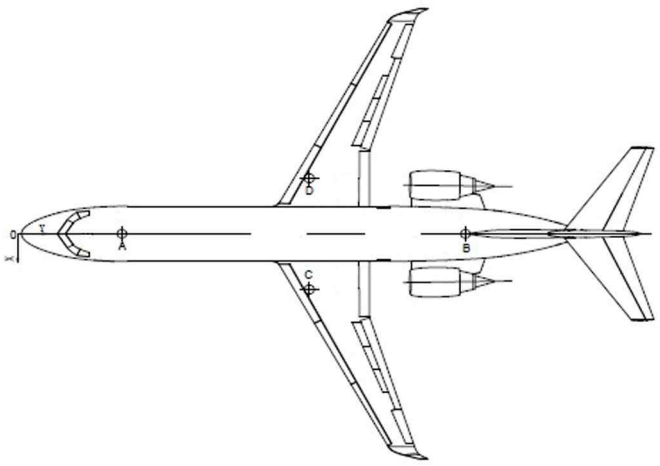
(2) Auxiliary Jacking Points

One located under the FWD fuselage.

Use the three primary jack the aircraft, during jacking, the auxiliary jack under the FWD fuselage without being forced with the aircraft lifting , and play the role of auxiliary support and insurance.

The jack pad of auxiliary jacking points is the spherical jack top in accordance with ISO43-1976 standard, with a radius of **19.1 mm**(**0.75 in**), the top head of the jack adopts the nest structure.

Applicable to : ALL



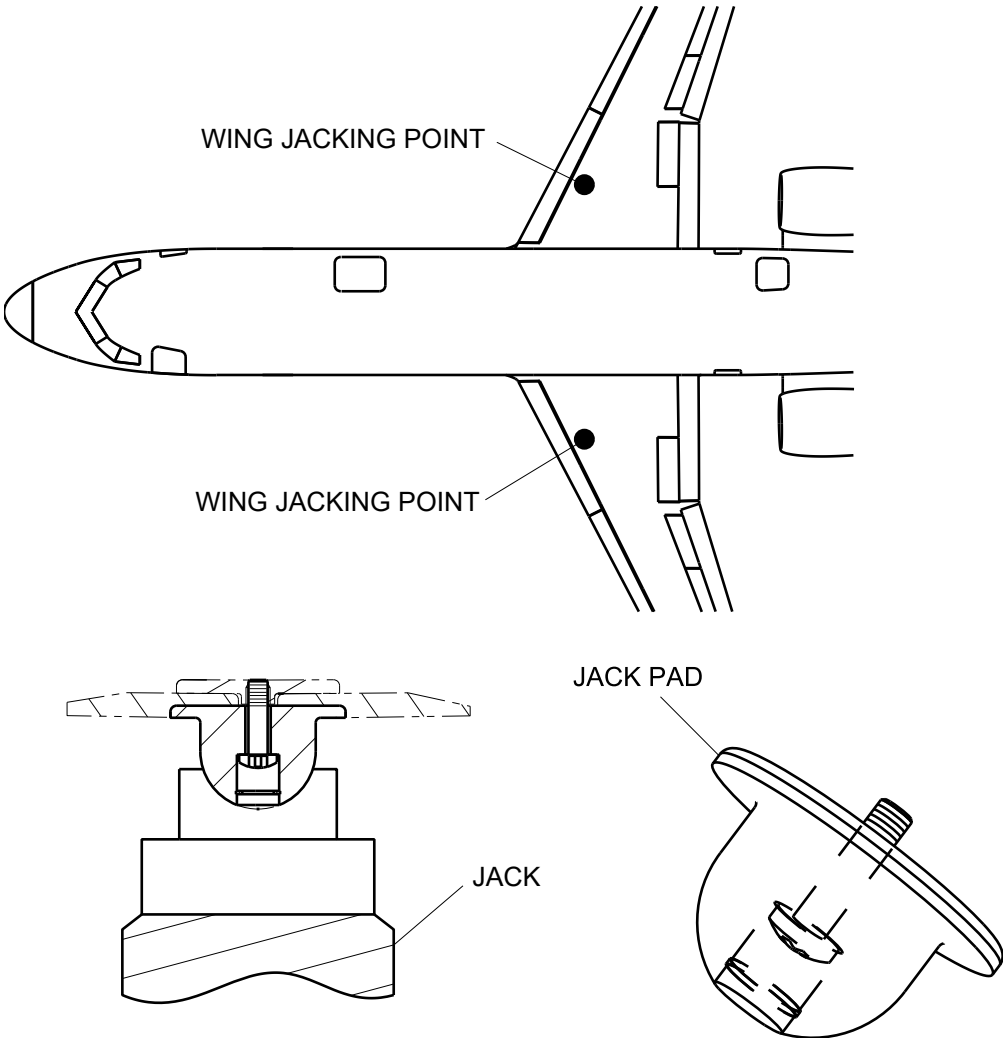
ICN-ARJ21-A-192002-A-SVV19-92265-A-001-01

Figure 1 Location of Jacking Points (Sheet 1 of 1)

Jacking Points		Maximum Permitted Loads (kg/lb)	Jacking Location		
			X(mm/in)	Y(mm/in)	Z(mm/in)
FWD fuselage	A	5969/13159.26	0/0	5507/216.81	-1265/-49.8
AFT fuselage	B	7980/17592.71	0/0	23670931.89	-901/-35.47
Left Wing	C	20333/44826.13	3395/133.67	15134/595.83	-621/-24.45
Right Wing	D	20333/44826.13	-3395/-133.67	15134/595.83	-621/-24.45

NOTE: Safety stay is not used for jacking.

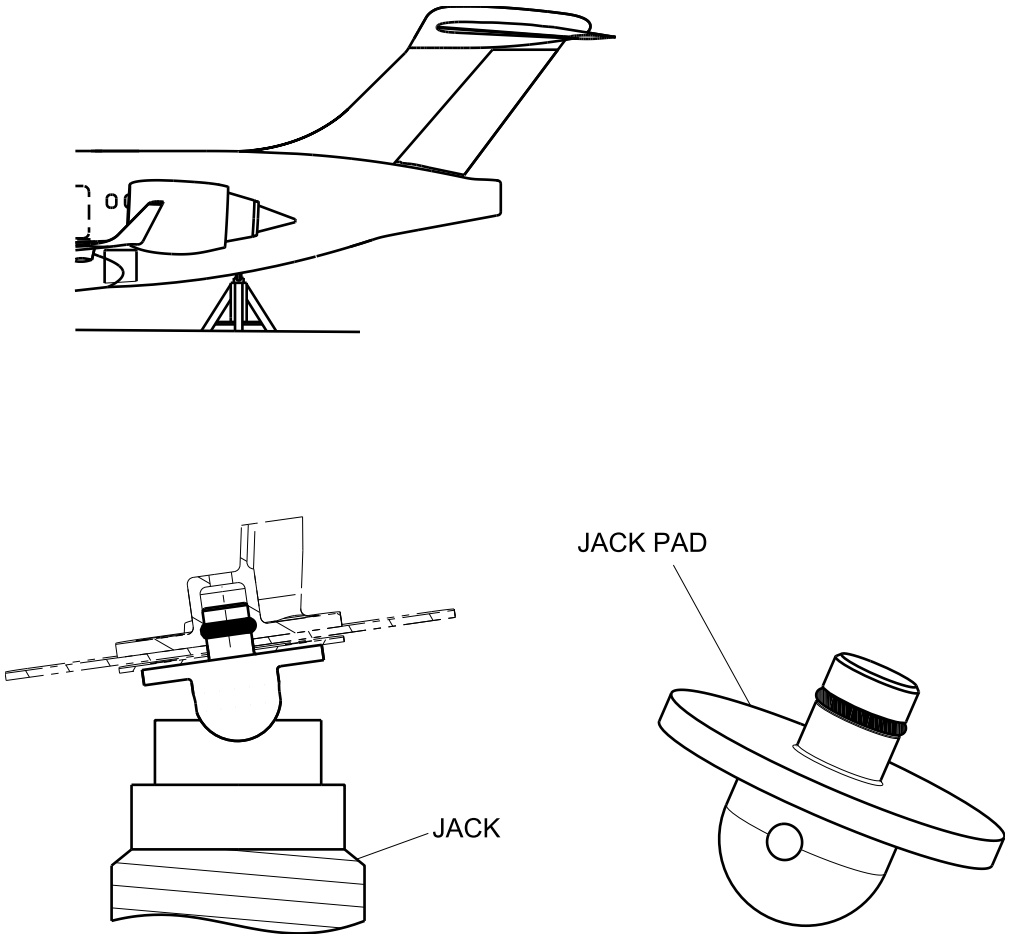
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-92266-A-001-01

Figure 2 Wing Jack Point (Sheet 1 of 1)

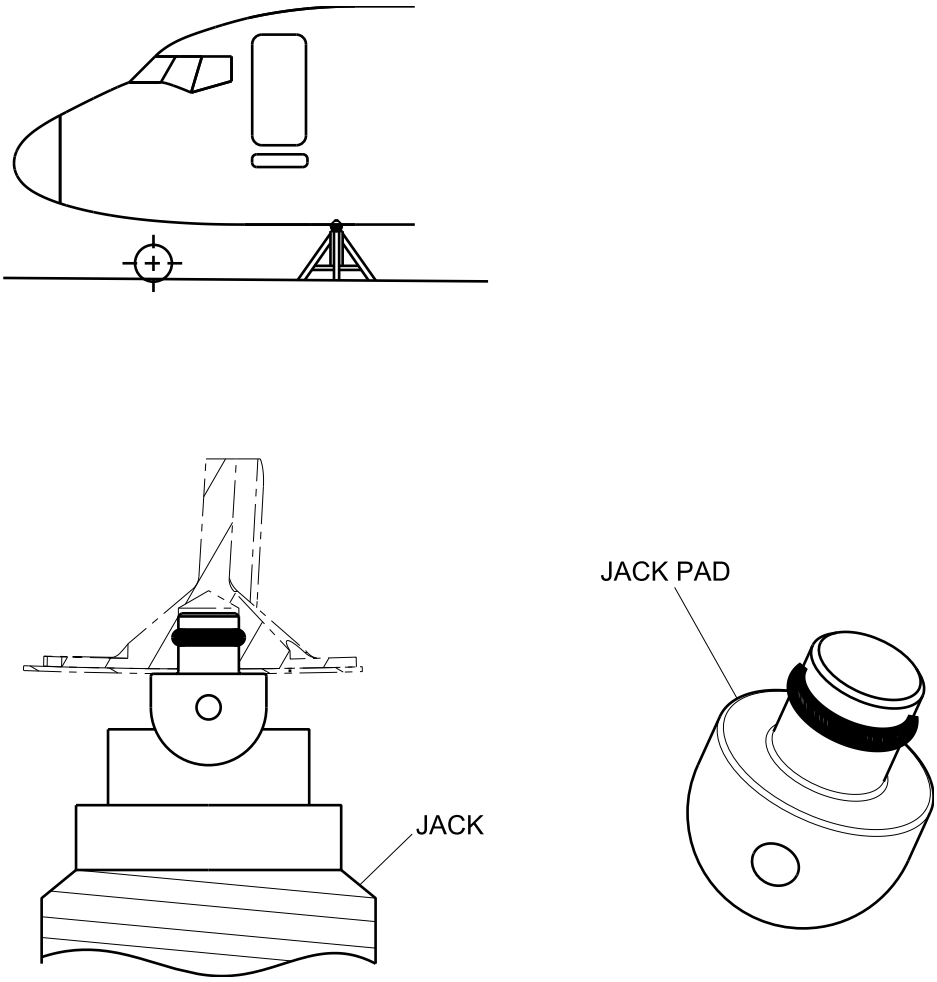
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-92267-A-001-01

Figure 3 AFT Fuselage Jack Point (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-92268-A-001-01

Figure 4 FWD Fuselage Jack Point (Sheet 1 of 1)

2. Jacking of the Landing Gear

The aircraft maximum weight for jacking is **43580 kg**(**96077 lb**), the FWD CG limit is **3%** MAC, the AFT CG limit is **31%** MAC.

Jacking refer to AMM 07 Lifting and Shoring.

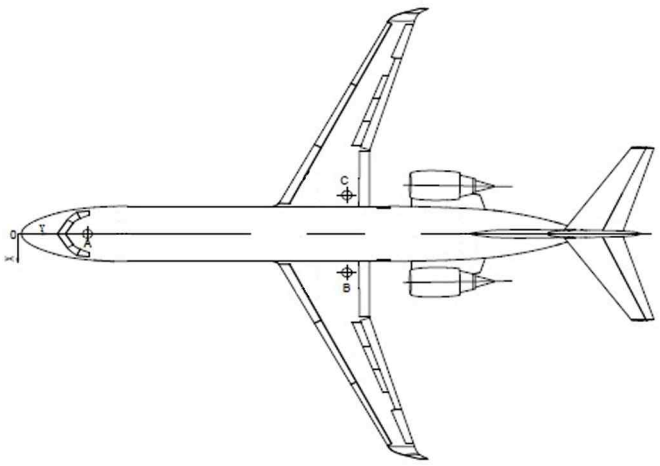
When you jack the main landing gear for the maintenance of the wheel and tire or brake assembly, make sure that there is a minimum of **25 mm**(**0.98 in**) of clearance between the main landing gear and the ground.

Follow these safety instructions when you jack the aircraft on the axle jacks:

(1) Jack only one landing gear axle at a time.

(2) Make sure that the aircraft is turned into the wind if it is possible, when it is out of the hangar.

Applicable to：ALL



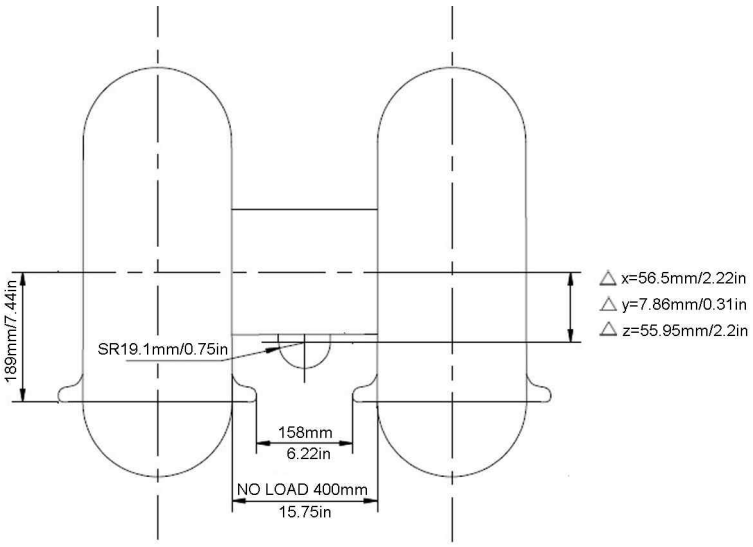
ICN-ARJ21-A-192002-A-SVV19-92273-A-001-01

Figure 5 Location of Jacking Points (Sheet 1 of 1)

Jacking Points		Maximum Permitted Loads (kg/lb)	Jacking Location		
			X(mm/in)	Y(mm/in)	Z(mm/in)
Nose Landing Gear	A	6044/13324.6	0	–	–
Left Main Landing Gear	B	27331/60253.92	2340/92.13	–	–
Right Main Landing Gear	C	27331/60253.92	-2340/-92.13	–	–

The jack pad of each landing gear is the spherical jack top in accordance with ISO43-1976 standard, with a radius of **19.1 mm**(**0.75 in**), the top head of the jack adopts the nest structure.

Applicable to：ALL

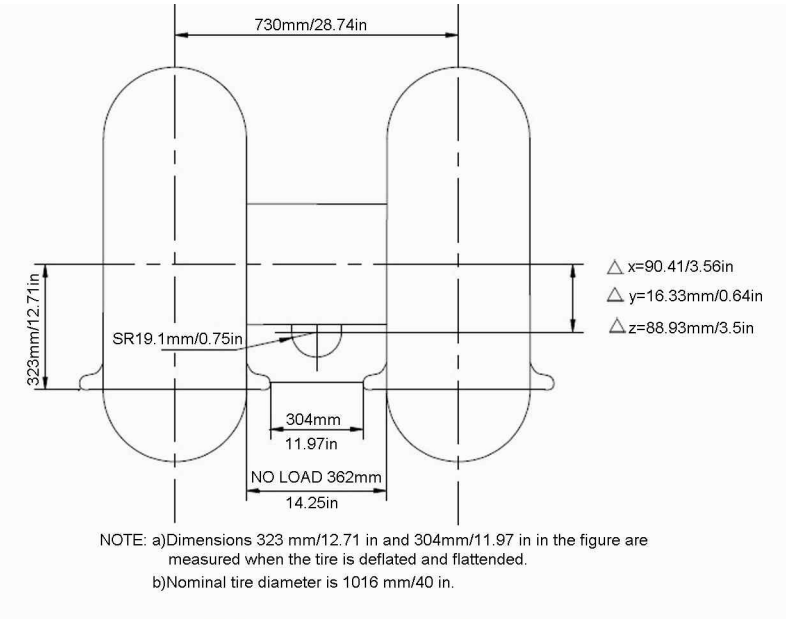


Note: a) Dismensions 189 mm/7.44 in and 158 mm/6.22 in in the figure are mas ured when the tire is deflated and flatttened.
b) Nominal tire diameter is 609.6 mm/ 24 in.

ICN-ARJ21-A-192002-A-SVV19-92269-A-002-01

Figure 6 Nose Landing Gear Jacking (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-92270-A-002-01

Figure 7 Main Landing Gear Jacking (Sheet 1 of 1)

Parking and Mooring

1. Parking and Mooring

When the aircraft is parked, necessary precautions should be taken to ensure the safety of the aircraft and personnel, and these precautions may vary, depending on weather conditions aircraft parking/mooring duration. order to protect the aircraft to the maximum extent in severe weather/high wind conditions, the aircraft should be parked in hangar. If there is no hangar for parking the aircraft, the aircraft should be parked windward.

The maximum weight for aircraft parking and mooring is the maximum design taxi weight, the maximum weight for aircraft mooring is the operational empty weight, and the aircraft's CG position shall meet the requirements of the aircraft's CG envelope.

Equipment required for parking the aircraft is as follows:

- Nose Landing Gear Downlock Pin
- Main Landing Gear Ground Lock Pin
- Wheel Chock
- Ground Wire
- Cover, Blanking Cap and Plug

Additional equipment required for mooring the aircraft is as follows:

- Nose Landing Gear Mooring Set
- Main Landing Gear Mooring Set
- Wing Mooring Set
- Mid-Aft Fuselage Mooring Set

Aircraft mooring procedure refer to AMM 10 Parking and Mooring.

2. Mooring Point Locations

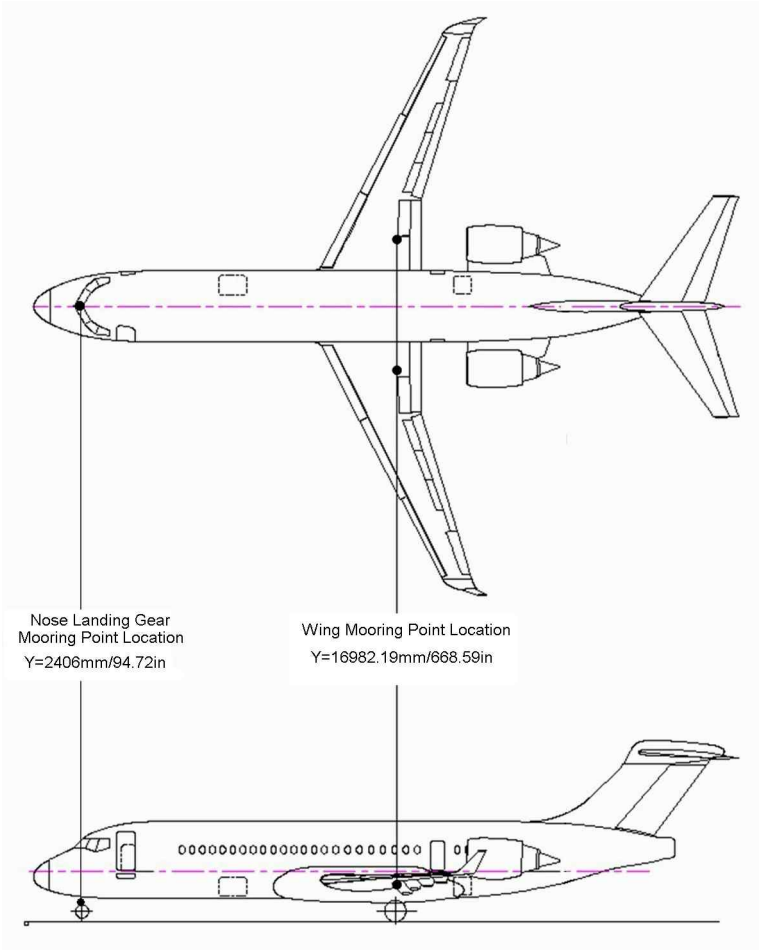
Aircraft left and right wing lower surface each set one mooring point, AFT fuselage set one mooring point, wing and AFT fuselage mooring points set installation holes of mooring fitting.

Aircraft left and right main landing gear mooring points and nose landing gear mooring point each set one mooring point, special mooring lug vertical are set in left and right main landing gear and nose landing gear shock strut.

Table 1 Aircraft Mooring Point Locations

Mooring Point	Mooring Point Locations		
	X(mm/in)	Y(mm/in)	Z(mm/in)
Left Wing Mooring Points	+3291/+129.57	16982/668.59	-632/-24.88
Right Wing Mooring Points	-3291/-129.57	16982/668.59	-632/-24.88
Nose Landing Gear Mooring Points	0	2406/94.72	1380/54.33

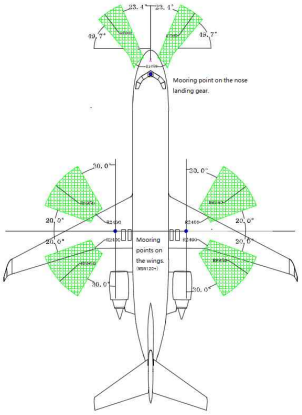
Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-92276-A-002-01

Figure 1 Aircraft Mooring Point Station (Unit: mm) (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-92309-A-003-01

Figure 2 Available Mooring Ground Anchor Area Diagram (Unit: mm) (Sheet 1 of 1)

Chapter 3
Aircraft Performacne

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General

The following table shows Metric and Imperial System conversion of altitudes and temperatures in ISA:

Table 1 Metric and Imperial System Conversion of Altitudes and Temperatures in ISA

Metric and Imperial System Conversion of Altitudes and Temperatures in ISA			
Altitudes Conversion		**Temperature Conversion**	
ft	m	°F	°C
0	0	59.0	15.0
2,000	610	51.9	11.0
4,000	1,219	44.7	7.1
6,000	1,829	37.6	3.1
8,000	2,438	30.5	-0.8
10,000	3,048	23.3	-4.8
12,000	3,658	16.2	-8.8
13,500	4,115	10.9	-11.7

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Payload/Range

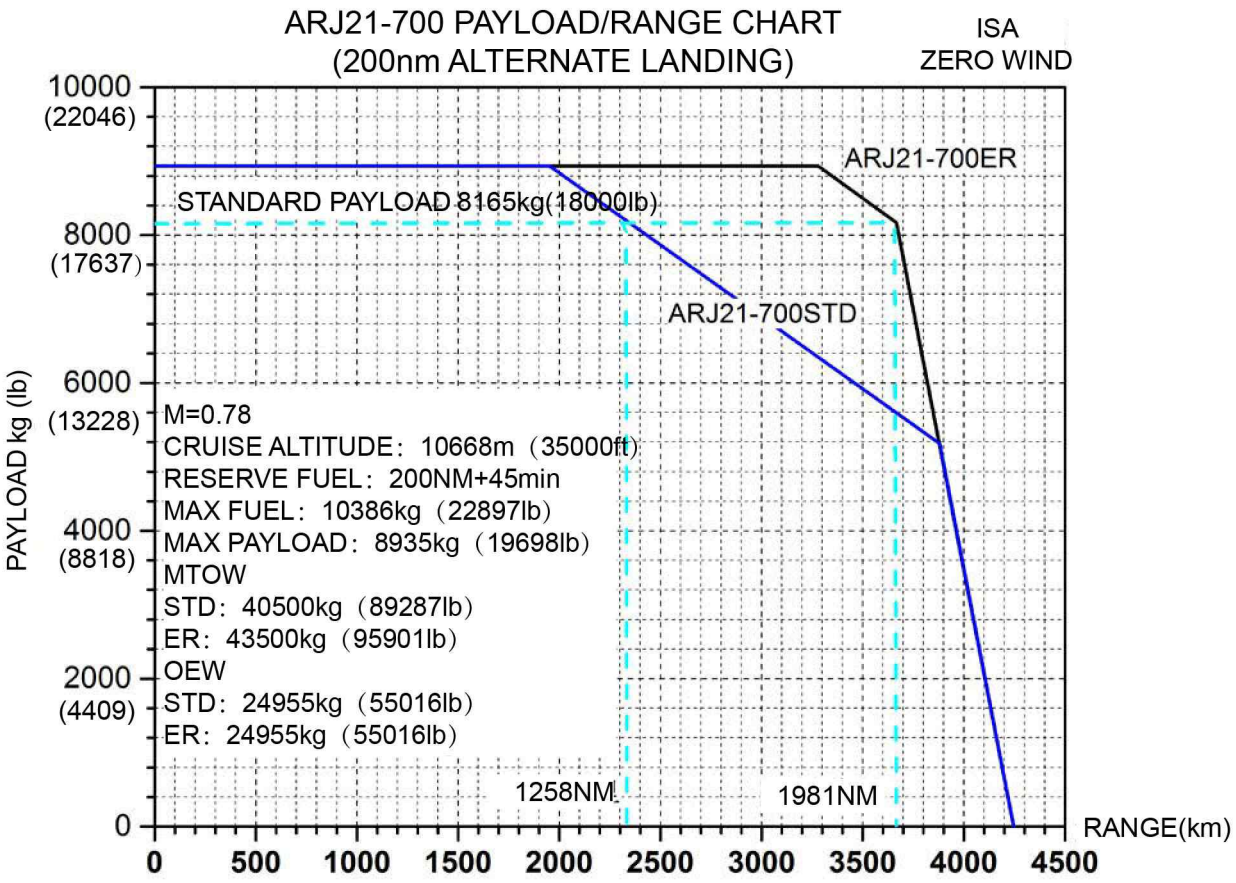
This section provides the Payload/Range Chart in ISA conditions.

The payload/range capability of ARJ21-700STD and ARJ21-700ER in the regular condition with reserve fuel for 200NM and waiting reserve fuel for 45 minutes are given, and the details are shown in figure 1 and 2.

The range capability of ARJ21-700CCF in the regular condition with reserve fuel for 200NM and waiting reserve fuel for 45 minutes are given, and the details are shown in figure 3.

NOTE: The fuel reference density is 0.803g/cm^3.

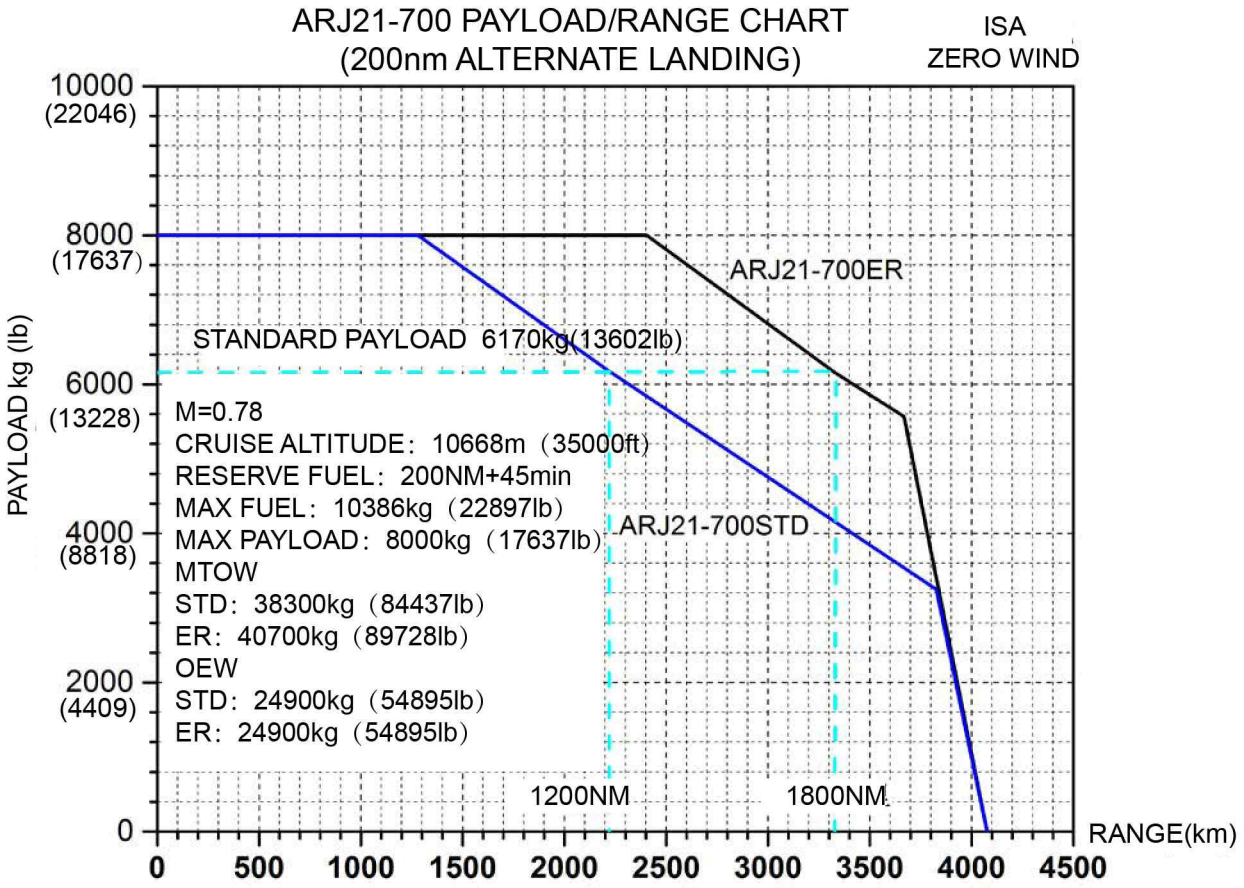
Applicable to：ALL



ICN-ARJ21-A-192003-A-SVV19-10756-A-002-01

Figure 1 ARJ21-700 Payload Range (Full Economy/Mixed Class) (Sheet 1 of 1)

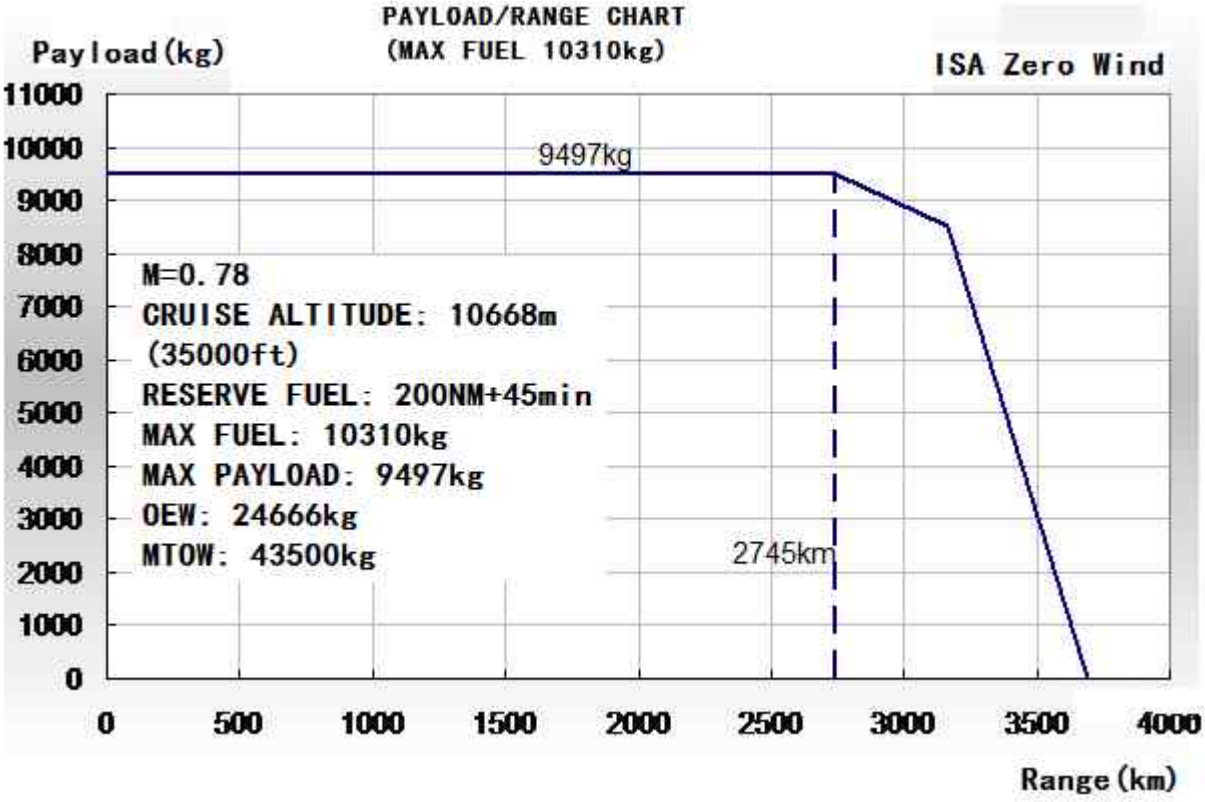
Applicable to：ALL



ICN-ARJ21-A-192003-A-SVV19-10757-A-002-01

Figure 2 AR21-700 Payload Range (Premium Economy Class) (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-63266-A-003-01

Figure 3 AR21-700CCF Payload Range (Sheet 1 of 1)

Take-Off Field Length

Accelerate-abort distance is determined in accordance with the conditions specified by CCAR25.109, and takeoff distance and takeoff roll distance are determined in accordance with CCAR25.113. The takeoff field length is the longest one among the three data. Refer to Table 1 and 2.

1. Calculation Contents and Conditions

The table of takeoff performance covers takeoff field length calculation results at different weights, different airport altitudes and different air temperatures.

A. Calculation Conditions:

(1) Takeoff Flap: Detent 2

(2) Dry Smooth Runway, Zero Wind and No Slope

B. Engine Bleed Air Status:

(1) Double Engine NTO: Air conditioning ON, wing anti-ice and nacelle anti-ice OFF.

(2) Single Engine APR: Air conditioning, wing anti-ice and nacelle anti-ice OFF.

2. Takeoff Field Length Calculation Results

Takeoff performance is calculated in accordance with the chart in Aircraft Flight Manual. For facilitate data query, the table of takeoff field length data is also provided.

Table 1 ARJ21-700 Takeoff Field Length——m(ft)

Weight kg (lb)	ΔT(℃)									
	ISA	ISA+10	ISA+20	ISA+30	ISA+40	ISA	ISA+10	ISA+20	ISA+30	ISA+40
	H=0 m(0 ft)					H=1000 m(3281 ft)				
30500 (67241)	1223 (4012)	1256 (4121)	1279 (4196)	1356 (4449)	1512 (4961)	1319 (4327)	1359 (4459)	1371 (4498)	1525 (5003)	1709 (5607)
31500 (69446)	1232 (4042)	1266 (4154)	1291 (4236)	1438 (4718)	1605 (5266)	1332 (4370)	1372 (4501)	1449 (4754)	1619 (5312)	1816 (5958)
32500 (71650)	1242 (4075)	1276 (4186)	1356 (4449)	1523 (4997)	1701 (5581)	1384 (4541)	1428 (4685)	1534 (5033)	1716 (5630)	1928 (6325)
33500 (73855)	1273 (4177)	1313 (4308)	1433 (4701)	1611 (5285)	1802 (5912)	1463 (4800)	1510 (4954)	1623 (5325)	1817 (5961)	2045 (6709)
34500 (76059)	1341 (4400)	1383 (4537)	1512 (4961)	1702 (5584)	1906 (6253)	1544 (5066)	1594 (5230)	1714 (5623)	1921 (6302)	2166 (7106)
35500 (78264)	1410 (4626)	1456 (4777)	1594 (5230)	1796 (5892)	2015 (6611)	1628 (5341)	1680 (5512)	1809 (5935)	2029 (6657)	2292 (7520)
36500 (80469)	1482 (4862)	1530 (5020)	1678 (5505)	1894 (6214)	2127 (6978)	1714 (5623)	1770 (5807)	1906 (6253)	2142 (7028)	2424 (7953)
37500 (82673)	1556 (5105)	1607 (5272)	1765 (5791)	1995 (6545)	2244 (7362)	1803 (5915)	1862 (6109)	2007 (6585)	2258 (7408)	2561 (8402)

Weight kg (lb)	ΔT(℃)									
	ISA	ISA+10	ISA+20	ISA+30	ISA+40	ISA	ISA+10	ISA+20	ISA+30	ISA+40
	H=0 m(0 ft)					H=1000 m(3281 ft)				
38500 (84878)	1633 (5358)	1686 (5531)	1854 (6083)	2100 (6890)	2366 (7762)	1895 (6217)	1958 (6424)	2112 (6929)	2379 (7805)	2703 (8868)
39500 (87083)	1711 (5614)	1767 (5797)	1947 (6388)	2208 (7244)	2493 (8179)	1990 (6529)	2056 (6745)	2220 (7283)	2505 (8219)	2851 (9354)
40500 (89287)	1792 (5879)	1851 (6073)	2043 (6703)	2321 (7615)	2624 (8609)	2088 (6850)	2158 (7080)	2332 (7651)	2635 (8645)	3006 (9862)
41500 (91492)	1875 (6152)	1937 (6355)	2142 (7028)	2438 (7999)	2761 (9058)	2189 (7182)	2263 (7425)	2447 (8028)	2770 (9088)	3167 (10390)
42500 (93696)	1960 (6430)	2026 (6647)	2244 (7362)	2558 (8392)	2903 (9524)	2293 (7523)	2371 (7779)	2567 (8422)	2910 (9547)	3335 (10942)
43500 (95901)	2049 (6722)	2118 (6949)	2349 (7707)	2684 (8806)	3051 (10010)	2401 (7877)	2484 (8150)	2691 (8829)	3056 (10026)	3520 (11549)
	H=2000 m(6562 ft)					H=2438 m(8000 ft)				
30500 (67241)	1418 (4652)	1462 (4797)	1566 (5138)	1756 (5761)	1967 (6453)	1534 (5033)	1583 (5194)	1695 (5561)	1904 (6247)	2138 (7014)
31500 (69446)	1503 (4931)	1551 (5089)	1662 (5453)	1866 (6122)	2094 (6870)	1627 (5338)	1679 (5509)	1800 (5906)	2025 (6644)	2278 (7474)
32500 (71650)	1592 (5223)	1643 (5390)	1762 (5781)	1981 (6499)	2226 (7303)	1724 (5656)	1779 (5837)	1909 (6263)	2151 (7057)	2424 (7953)
33500 (73855)	1683 (5522)	1737 (5699)	1865 (6119)	2100 (6890)	2363 (7753)	1824 (5984)	1883 (6178)	2022 (6634)	2282 (7487)	2577 (8455)
34500 (76059)	1778 (5833)	1836 (6024)	1972 (6470)	2223 (7293)	2507 (8225)	1927 (6322)	1991 (6532)	2139 (7018)	2419 (7936)	2736 (8976)
35500 (78264)	1875 (6152)	1937 (6355)	2082 (6831)	2352 (7717)	2657 (8717)	2034 (6673)	2102 (6896)	2261 (7418)	2562 (8406)	2903 (9524)
36500 (80469)	1976 (6483)	2042 (6699)	2197 (7208)	2486 (8156)	2814 (9232)	2146 (7041)	2217 (7274)	2388 (7835)	2710 (8891)	3077 (10095)
37500 (82673)	2081 (6827)	2151 (7057)	2316 (7598)	2625 (8612)	2977 (9767)	2261 (7418)	2337 (7667)	2519 (8264)	2865 (9400)	3259 (10692)
38500 (84878)	2189 (7182)	2263 (7425)	2439 (8002)	2770 (9088)	3147 (10325)	2380 (7808)	2461 (8074)	2655 (8711)	3026 (9928)	3450 (11319)
39500 (87083)	2301 (7549)	2379 (7805)	2567 (8422)	2920 (9580)	3325 (10909)	2503 (8212)	2589 (8494)	2797 (9177)	3194 (10479)	3649 (11972)
40500 (89287)	2417 (7930)	2499 (8199)	2699 (8855)	3077 (10095)	3511 (11519)	2631 (8632)	2722 (8930)	2944 (9659)	3368 (11050)	3871 (12700)

Weight kg (lb)	ΔT(℃)									
	ISA	ISA+10	ISA+20	ISA+30	ISA+40	ISA	ISA+10	ISA+20	ISA+30	ISA+40
	H=0 m(0 ft)					H=1000 m(3281 ft)				
41500 (91492)	2537 (8323)	2624 (8609)	2837 (9308)	3239 (10627)	3708 (12165)	2764 (9068)	2859 (9380)	3096 (10157)	3551 (11650)	4101 (13455)
42500 (93696)	2661 (8730)	2753 (9032)	2979 (9774)	3409 (11184)	3923 (12871)	2901 (9518)	3002 (9849)	3254 (10676)	3741 (12274)	4342 (14245)
43500 (95901)	2789 (9150)	2886 (9469)	3126 (10256)	3585 (11762)	4146 (13602)	3043 (9984)	3150 (10335)	3419 (11217)	3942 (12933)	4594 (15072)
	H=3000 m (9843 ft)					H=4114 m(13500 ft)				
30500 (67241)	1691 (5548)	1746 (5728)	1867 (6125)	2098 (6883)	2369 (7772)	2063 (6768)	2134 (7001)	2282 (7487)	2556 (8386)	2918 (9573)
31500 (69446)	1796 (5892)	1855 (6086)	1984 (6509)	2233 (7326)	2527 (8291)	2193 (7195)	2270 (7448)	2429 (7969)	2727 (8947)	3122 (10243)
32500 (71650)	1904 (6247)	1967 (6453)	2106 (6909)	2375 (7792)	2693 (8835)	2330 (7644)	2412 (7913)	2584 (8478)	2907 (9537)	3336 (10945)
33500 (73855)	2016 (6614)	2083 (6834)	2233 (7326)	2523 (8278)	2866 (9403)	2471 (8107)	2559 (8396)	2744 (9003)	3094 (10151)	3562 (11686)
34500 (76059)	2132 (6995)	2204 (7231)	2365 (7759)	2677 (8783)	3048 (10000)	2619 (8593)	2713 (8901)	2912 (9554)	3291 (10797)	3800 (12467)
35500 (78264)	2253 (7392)	2330 (7644)	2502 (8209)	2837 (9308)	3239 (10627)	2773 (9098)	2873 (9426)	3087 (10128)	3497 (11473)	4062 (13327)
36500 (80469)	2378 (7802)	2460 (8071)	2645 (8678)	3005 (9859)	3438 (11280)	2933 (9623)	3039 (9970)	3270 (10728)	3713 (12182)	4340 (14239)
37500 (82673)	2508 (8228)	2595 (8514)	2793 (9163)	3180 (10433)	3647 (11965)	3100 (10171)	3213 (10541)	3460 (11352)	3940 (12927)	4632 (15197)
38500 (84878)	2643 (8671)	2736 (8976)	2947 (9669)	3363 (11033)	3878 (12723)	3274 (10741)	3394 (11135)	3660 (12008)	4177 (13704)	4939 (16204)
39500 (87083)	2783 (9131)	2881 (9452)	3107 (10194)	3554 (11660)	4122 (13524)	3456 (11339)	3583 (11755)	3867 (12687)	4427 (14524)	-
40500 (89287)	2929 (9610)	3032 (9948)	3274 (10741)	3753 (12313)	4376 (14357)	3645 (11959)	3779 (12398)	4084 (13399)	4701 (15423)	-
41500 (91492)	3080 (10105)	3189 (10463)	3448 (11312)	3961 (12995)	4642 (15230)	3841 (12602)	3984 (13071)	4311 (14144)	4988 (16365)	-
42500 (93696)	3237 (10620)	3353 (11001)	3628 (11903)	4187 (13737)	4921 (16145)	4047 (13278)	4198 (13773)	4548 (14921)	-	-
43500 (95901)	3399 (11152)	3522 (11555)	3816 (12520)	4426 (14521)	-	4261 (13980)	4420 (14501)	4795 (15732)	-	-

Table 2 ARJ21-700CCF Takeoff Field Length——m

Weight kg	ΔT(℃)									
	ISA	ISA+10	ISA+20	ISA+30	ISA+40	ISA	ISA+10	ISA+20	ISA+30	ISA+40
	H=0m					H=1000m				
30500	986	1019	1165	1356	1512	1181	1218	1363	1525	1709
31500	1081	1117	1276	1438	1605	1293	1334	1449	1619	1816
32500	1182	1221	1356	1523	1701	1384	1428	1534	1716	1928
33500	1273	1313	1433	1611	1802	1463	1510	1623	1817	2045
34500	1341	1383	1512	1702	1906	1544	1594	1714	1921	2166
35500	1410	1455	1594	1796	2015	1628	1680	1809	2029	2292
36500	1482	1530	1678	1894	2127	1714	1770	1906	2142	2424
37500	1556	1607	1765	1995	2244	1803	1862	2007	2258	2561
38500	1632	1686	1854	2100	2366	1895	1958	2112	2379	2703
39500	1711	1767	1947	2208	2493	1990	2056	2220	2505	2851
40500	1792	1851	2043	2321	2624	2088	2158	2332	2635	3006
41500	1875	1937	2142	2438	2761	2189	2263	2447	2770	3167
42500	1960	2026	2244	2558	2903	2293	2371	2567	2910	3335
43500	2049	2118	2349	2684	3051	2401	2484	2691	3056	3520
	H=2000m					H=2438.4 m(8000 ft)				
30500	1418	1462	1566	1756	1967	1534	1583	1695	1904	2138
31500	1503	1551	1662	1866	2094	1627	1679	1800	2025	2278
32500	1592	1643	1762	1981	2226	1724	1780	1909	2151	2424
33500	1683	1737	1865	2100	2363	1824	1883	2022	2283	2577
34500	1778	1836	1972	2223	2507	1927	1991	2140	2419	2736
35500	1875	1937	2082	2352	2657	2034	2102	2261	2562	2903
36500	1976	2042	2197	2486	2814	2146	2217	2388	2710	3077
37500	2081	2151	2316	2625	2977	2261	2337	2519	2865	3259
38500	2189	2263	2439	2770	3147	2380	2461	2655	3026	3450
39500	2301	2379	2567	2920	3325	2503	2589	2797	3194	3649
40500	2417	2499	2699	3077	3511	2631	2722	2944	3369	3871
41500	2537	2624	2837	3239	3708	2764	2860	3096	3551	4102
42500	2661	2753	2979	3409	3923	2901	3002	3255	3741	4342
43500	2789	2886	3126	3585	4146	3044	3150	3419	3942	4594
	H=3000m					H=4114.8 m(13500 ft)				
30500	1691	1746	1867	2098	2369	2063	2134	2282	2557	2919
31500	1796	1855	1984	2233	2527	2194	2270	2430	2728	3123
32500	1904	1967	2106	2375	2693	2330	2412	2584	2907	3337

Weight kg	ΔT(℃)									
	ISA	ISA+10	ISA+20	ISA+30	ISA+40	ISA	ISA+10	ISA+20	ISA+30	ISA+40
33500	2016	2083	2233	2523	2866	2472	2559	2745	3095	3563
34500	2132	2204	2365	2677	3048	2620	2713	2912	3292	3800
35500	2253	2330	2502	2837	3239	2774	2873	3088	3498	4063
36500	2378	2460	2645	3005	3438	2934	3040	3270	3714	4341
37500	2508	2595	2793	3180	3647	3101	3214	3461	3940	4633
38500	2643	2736	2947	3363	3878	3275	3395	3660	4178	4940
39500	2783	2881	3107	3554	4122	3456	3583	3868	4428	-
40500	2929	3032	3274	3753	4376	3645	3780	4085	4702	-
41500	3080	3189	3448	3961	4642	3842	3985	4312	4988	-
42500	3237	3353	3628	4187	4921	4047	4198	4549	-	-
43500	3399	3522	3816	4426	-	4261	4421	4796	-	-

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Landing Field Length

Landing performance covers landing field length for ARJ21-700 at different weights and different airport altitudes. Refer to Table 1 and 2.

Landing performance covers landing field length for ARJ21-700CCF at different weights and different airport altitudes. Refer to Table 3 and 4.

1. Calculation Methods and Conditions

According to CCAR25.125, landing distance is the horizontal distance required for aircraft landing from a 15m (50 ft) height above landing surface to a full stop. To ensure safe landing within available runway length, the required landing field length is the actual landing distance divided by 0.6 in accordance with CCAR121.195. The landing field length given by the calculation meets this requirement. Thrust reverser is not considered in the landing process during calculation.

Landing performance covers landing field length at different weights and different airport altitudes.

Calculation Conditions:

A. Landing Flaps: Detent 3 and 4.

B. Dry Smooth Runway, Zero Wind and No Slope

C. Air Temperature: ISA

D. Deceleration Measure: Use speedbrake and manual brake instead of thrust reverser.

NOTE: Since the effect of different air temperature on landing field length is small, only ISA is considered.

2. Landing Field Length Calculation Results

Table 1 ARJ21-700 Landing Field Length with Flap at Detent 3——m (ft)

Weight kg (lb)	Airport Pressure Altitude						
	0 m (0 ft)	1000 m (3281 ft)	2000 m (6562 ft)	2438 m (8000 ft)	3000 m (9843 ft)	4000 m (13123 ft)	4114 m (13500 ft)
30000 (66139)	1512 (4961)	1629 (5344)	1759 (5771)	1821 (5974)	1906 (6253)	2071 (6795)	2091 (6860)
31000 (68343)	1552 (5092)	1672 (5486)	1807 (5928)	1871 (6138)	1958 (6424)	2128 (6982)	2149 (7051)
32000 (70548)	1591 (5220)	1715 (5627)	1854 (6083)	1920 (6299)	2011 (6598)	2187 (7175)	2208 (7244)
33000 (72753)	1631 (5351)	1758 (5768)	1902 (6240)	1970 (6463)	2063 (6768)	2245 (7365)	2267 (7438)
34000 (74957)	1671 (5482)	1802 (5912)	1950 (6398)	2021 (6631)	2116 (6942)	2304 (7559)	2327 (7635)
35000 (77162)	1711 (5614)	1846 (6056)	1998 (6555)	2071 (6795)	2170 (7119)	2364 (7756)	2388 (7835)

Weight kg (lb)	Airport Pressure Altitude						
	0 m (0 ft)	1000 m (3281 ft)	2000 m (6562 ft)	2438 m (8000 ft)	3000 m (9843 ft)	4000 m (13123 ft)	4114 m (13500 ft)
36000 (79366)	1751 (5745)	1890 (6201)	2047 (6716)	2122 (6962)	2224 (7297)	2424 (7953)	2449 (8035)
37000 (81571)	1791 (5876)	1934 (6345)	2096 (6877)	2173 (7129)	2278 (7474)	2485 (8153)	2510 (8235)
37665 (83037)	1818 (5965)	1964 (6444)	2129 (6985)	2207 (7241)	2315 (7595)	2525 (8284)	2551 (8369)
38000 (83776)	1831 (6007)	1979 (6493)	2145 (7037)	2225 (7300)	2333 (7654)	2546 (8353)	2572 (8438)
39000 (85980)	1872 (6142)	2023 (6637)	2195 (7201)	2277 (7470)	2388 (7835)	2608 (8556)	2635 (8645)
40000 (88185)	1913 (6276)	2068 (6785)	2245 (7365)	2329 (7641)	2444 (8018)	2671 (8763)	2698 (8852)
40455 (89188)	1931 (6335)	2089 (6854)	2268 (7441)	2353 (7720)	2470 (8104)	2699 (8855)	2728 (8950)

Table 2 ARJ21-700 Landing Field Length with Flap at Detent 4——m (ft)

Weight kg (lb)	Airport Pressure Altitude						
	0 m (0 ft)	1000 m (3281 ft)	2000 m (6562 ft)	2438 m (8000 ft)	3000 m (9843 ft)	4000 m (13123 ft)	4114 m (13500 ft)
30000 (66139)	1395 (4577)	1503 (4931)	1625 (5331)	1683 (5522)	1762 (5781)	1916 (6286)	1935 (6348)
31000 (68343)	1431 (4695)	1542 (5059)	1668 (5472)	1728 (5669)	1809 (5935)	1969 (6460)	1989 (6526)
32000 (70548)	1467 (4813)	1582 (5190)	1712 (5617)	1774 (5820)	1858 (6096)	2023 (6637)	2044 (6706)
33000 (72753)	1504 (4934)	1622 (5322)	1756 (5761)	1820 (5971)	1907 (6257)	2078 (6818)	2099 (6886)
34000 (74957)	1540 (5052)	1662 (5453)	1800 (5906)	1866 (6122)	1956 (6417)	2133 (6998)	2154 (7067)
35000 (77162)	1577 (5174)	1703 (5587)	1845 (6053)	1913 (6276)	2006 (6581)	2188 (7178)	2210 (7251)
36000 (79366)	1614 (5295)	1743 (5719)	1890 (6201)	1960 (6430)	2055 (6742)	2244 (7362)	2267 (7438)
37000 (81571)	1651 (5417)	1784 (5853)	1935 (6348)	2007 (6585)	2106 (6909)	2300 (7546)	2324 (7625)

Weight kg (lb)	Airport Pressure Altitude						
	0 m (0 ft)	1000 m (3281 ft)	2000 m (6562 ft)	2438 m (8000 ft)	3000 m (9843 ft)	4000 m (13123 ft)	4114 m (13500 ft)
37665 (83037)	1675 (5495)	1811 (5942)	1965 (6447)	2039 (6690)	2139 (7018)	2338 (7671)	2362 (7749)
38000 (83776)	1688 (5538)	1825 (5988)	1980 (6496)	2055 (6742)	2156 (7073)	2357 (7733)	2382 (7815)
39000 (85980)	1725 (5659)	1866 (6122)	2026 (6647)	2103 (6900)	2207 (7241)	2414 (7920)	2440 (8005)
40000 (88185)	1762 (5781)	1907 (6257)	2072 (6798)	2151 (7057)	2259 (7411)	2472 (8110)	2499 (8199)
40455 (89188)	1779 (5837)	1926 (6319)	2093 (6867)	2173 (7129)	2283 (7490)	2499 (8199)	2526 (8287)

Table 3 ARJ21-700CCF Landing Field Length with Flap at Detent 3——m

Weight kg	Airport Pressure Altitude (m)						
	0 m	1000 m	2000 m	2438.4 m	3000 m	4000 m	4114.8 m
30000	1546	1665	1799	1863	1949	2118	2139
31000	1586	1709	1848	1913	2003	2177	2199
32000	1627	1753	1896	1964	2056	2237	2259
33000	1667	1798	1945	2015	2110	2297	2320
34000	1708	1842	1994	2066	2165	2357	2381
35000	1748	1887	2043	2118	2219	2418	2442
36000	1789	1932	2093	2170	2274	2479	2504
37000	1830	1977	2143	2222	2330	2541	2567
38000	1872	2023	2193	2274	2385	2603	2630
39000	1913	2068	2244	2327	2442	2666	2694
40000	1955	2114	2295	2381	2498	2730	2758
40455	1974	2135	2318	2405	2524	2759	2788

Table 4 ARJ21-700CCF Landing Field Length with Flap at Detent 4——m

Weight kg	Airport Pressure Altitude (m)						
	0 m	1000 m	2000 m	2438.4 m	3000 m	4000 m	4114.8 m
30000	1395	1503	1625	1683	1762	1916	1935
31000	1431	1542	1668	1728	1809	1969	1989
32000	1467	1582	1712	1774	1858	2023	2044
33000	1504	1622	1756	1820	1907	2078	2099
34000	1540	1662	1800	1866	1956	2133	2154

Weight kg	Airport Pressure Altitude (m)						
	0 m	1000 m	2000 m	2438.4 m	3000 m	4000 m	4114.8 m
35000	1577	1703	1845	1913	2006	2188	2211
36000	1614	1743	1890	1960	2055	2244	2267
37000	1651	1784	1935	2007	2106	2300	2324
38000	1688	1825	1980	2055	2156	2357	2382
39000	1725	1866	2026	2103	2207	2414	2440
40000	1762	1907	2072	2151	2259	2472	2499
40455	1779	1926	2093	2173	2283	2499	2526

Landing Reference Speed

Refer to Table 1 and 2 for ARJ21-700 and CCF landing reference speed at sea level in ISA. The speeds are calibrated air speeds.

Table 1 ARJ21-700 and CCF Landing Reference Speed with Flap Detent 3

W (kg/lb)	30000/66139	31000/68343	32000/70548	33000/72753	34000/74957	35000/77162
VREF (kt)	132	134.2	136.3	138.4	140.5	142.6
W (kg/lb)	36000/79366	37000/81571	38000/83776	39000/85980	40000/88185	40455/89188
VREF (kt)	144.6	146.6	148.6	150.6	152.4	153.3

Table 2 ARJ21-700 and CCF Landing Reference Speed with Flap Detent 4

W (kg/lb)	30000/66139	31000/68343	32000/70548	33000/72753	34000/74957	35000/77162
VREF (kt)	124.5	126.6	128.5	130.6	132.6	134.4
W (kg/lb)	36000/79366	37000/81571	38000/83776	39000/85980	40000/88185	40455/89188
VREF (kt)	136.4	138.3	140.1	141.9	143.8	144.5

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Chapter 4
Ground Maneuvering

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General

This chapter provides aircraft turning capability and maneuvering characteristics on the ground. For ease of presentation, these data have been determined from the theoretical limits imposed by the geometry of the aircraft. As such, they reflect the turning capability in favorable operating circumstances. These data should be used only as guidelines for the method of determination of such parameters and for the maneuvering characteristics of this aircraft.

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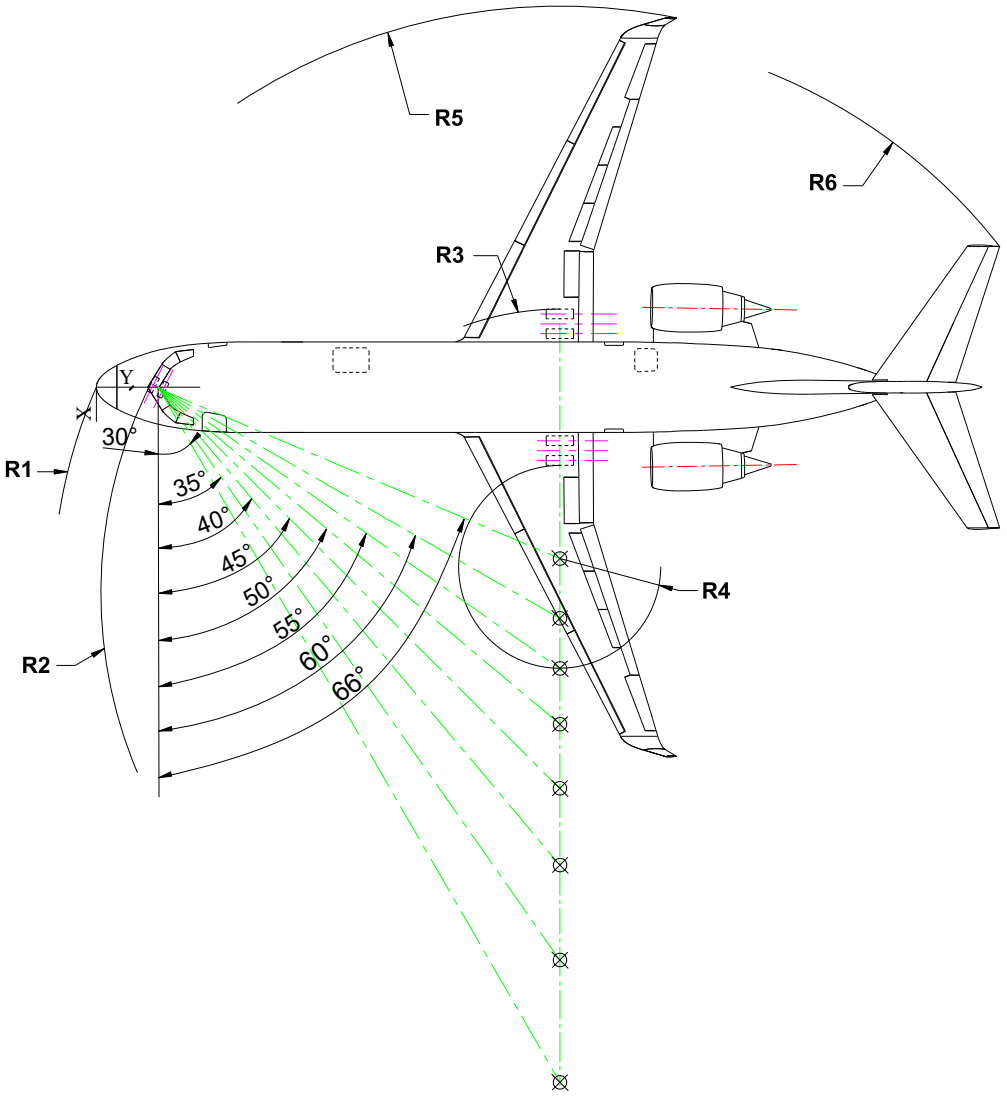
Steering Radius - No Slip Angle

Applicable to : ALL



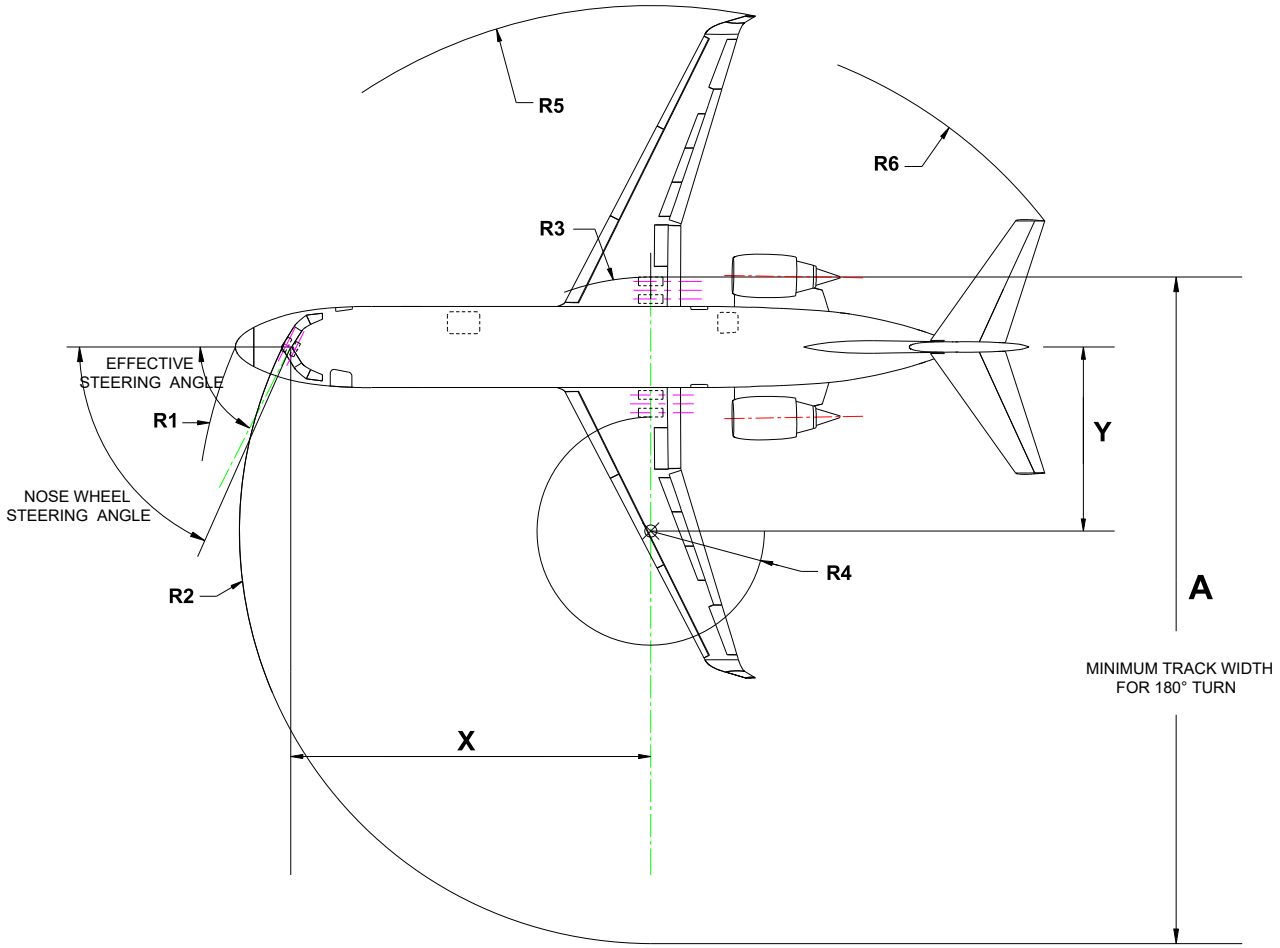
STEERING ANGLE (°)	R1		R2		R3		R4		R5		R6	
	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft
30	30.96	101.6	30.08	98.7	28.65	94.0	22.89	75.1	39.63	130.0	34.98	114.8
35	27.31	89.6	26.24	86.1	24.13	79.2	18.36	60.2	35.14	115.3	31.05	101.9
40	24.68	81.0	23.48	77.0	20.61	67.6	14.85	48.7	31.65	103.8	28.11	92.2
45	22.71	74.5	21.34	70.0	17.76	58.3	11.99	39.3	28.83	94.6	25.84	84.8
50	21.22	69.6	19.72	64.7	15.37	50.4	9.60	31.5	26.47	86.8	24.03	78.8
55	20.08	65.9	18.46	60.6	13.30	43.6	7.53	24.7	24.43	80.1	22.56	74.0
60	19.19	63.0	17.48	57.3	11.47	37.6	5.71	18.7	22.63	74.2	21.33	70.0
66	18.40	60.4	16.58	54.4	9.51	31.2	3.74	12.3	20.71	67.9	20.12	66.0

ICN-ARJ21-A-192004-A-SVV19-10767-A-001-01

Figure 1 Steering Radius - No Slip Angle (Sheet 1 of 1)

Minimum Turning Radius

Applicable to : ALL



EFFECTIVE STEERING ANGLE		X	Y	A	R1	R2	R3	R4	R5	R6
63°	m	14.88	7.58	27.46	18.94	17.00	10.46	4.70	21.62	20.70
	ft	48.8	24.9	90.1	61.5	55.8	34.3	15.4	71.0	67.9

ICN-ARJ21-A-192004-A-SVV19-10768-A-002-01

Figure 1 Ground Minimum Turning Radius (Sheet 1 of 1)

Visibility from Cockpit in Static Position

Applicable to : ALL

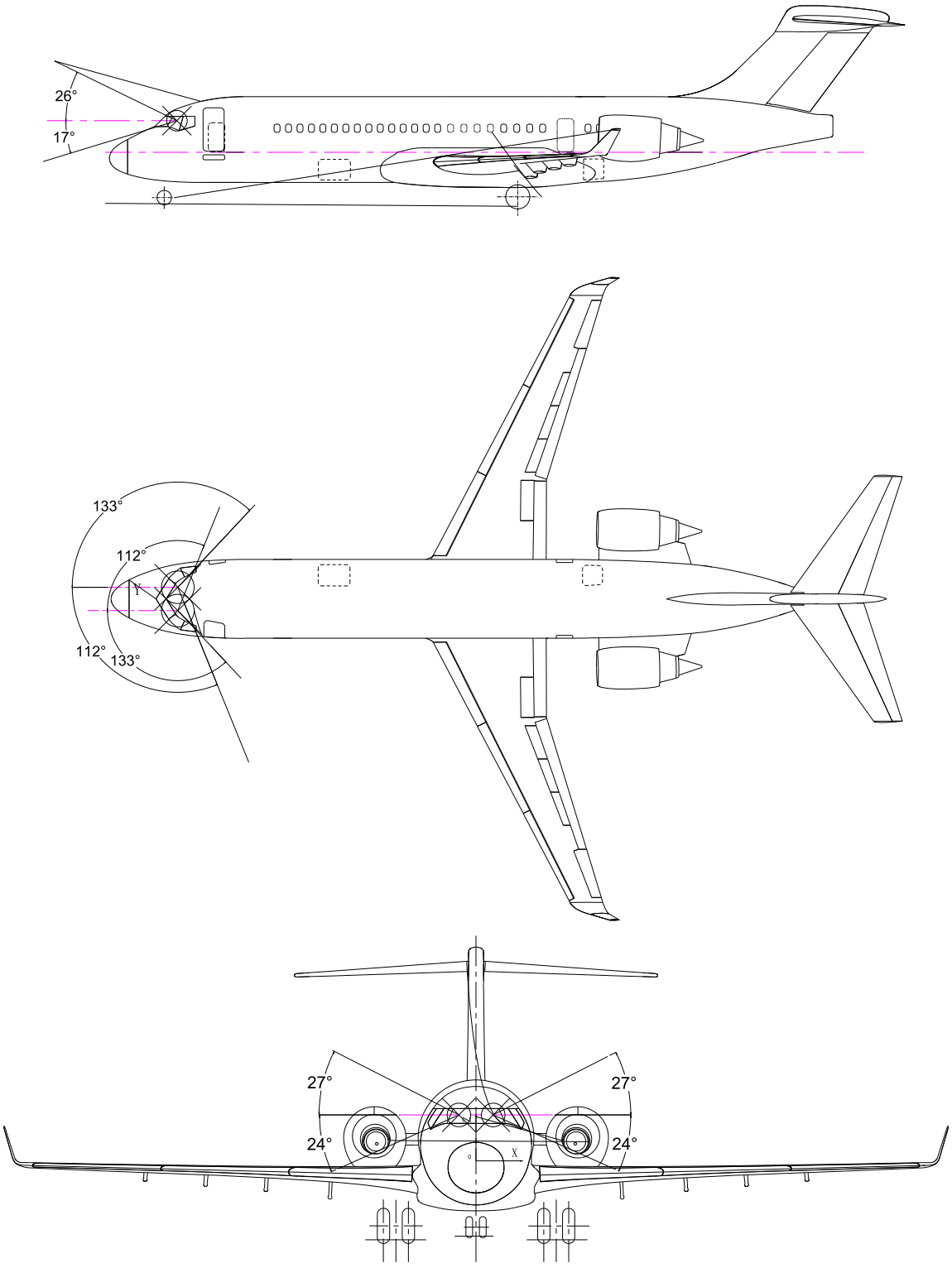


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Figure 1 Visibility from Cockpit in Static Position (Sheet 1 of 1)

Runway and Taxiway Turn Paths

Applicable to : ALL

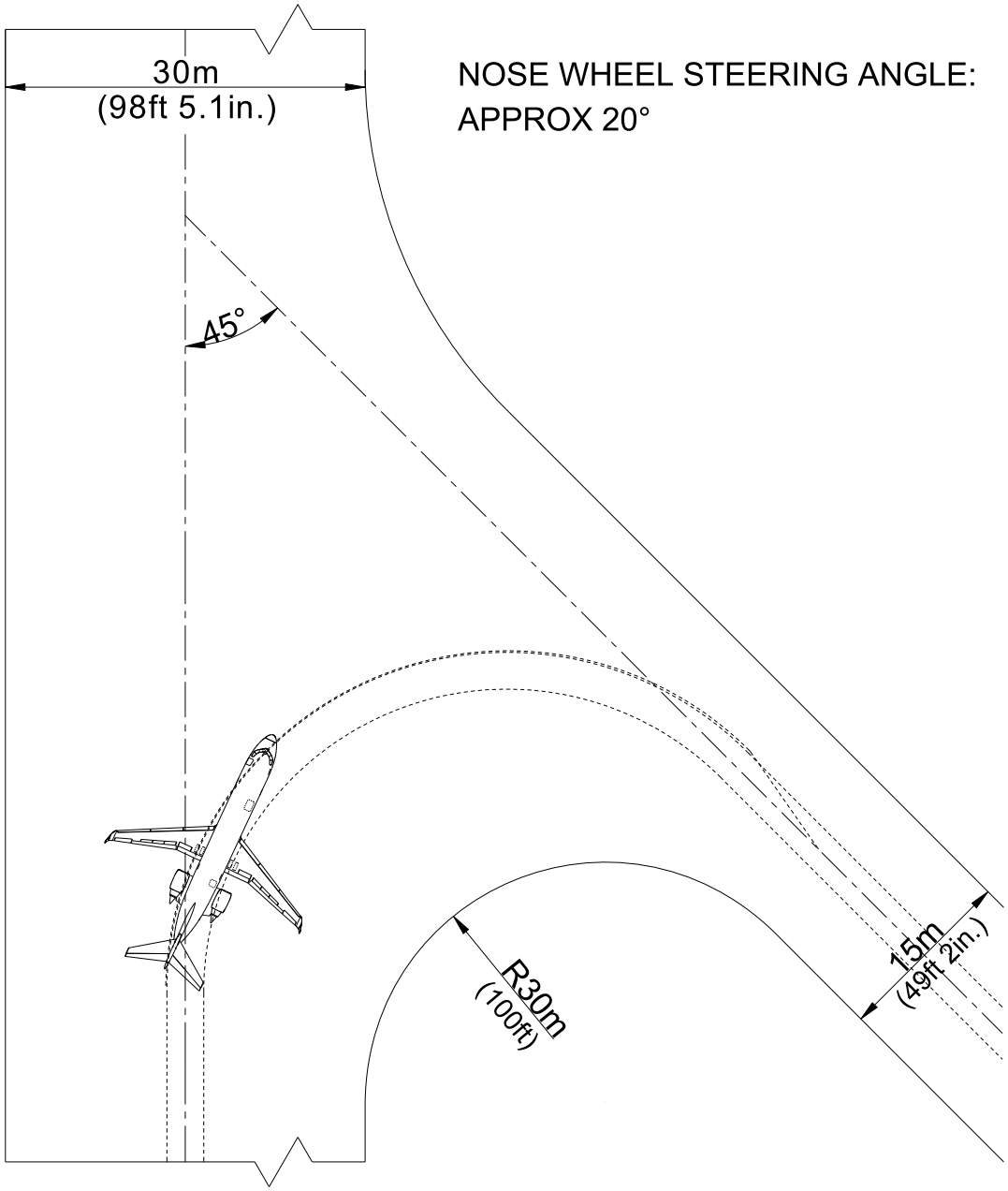

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Figure 1 Runway-To-Taxiway, Less Than 90-Degree Turn (Sheet 1 of 1)

Applicable to：ALL

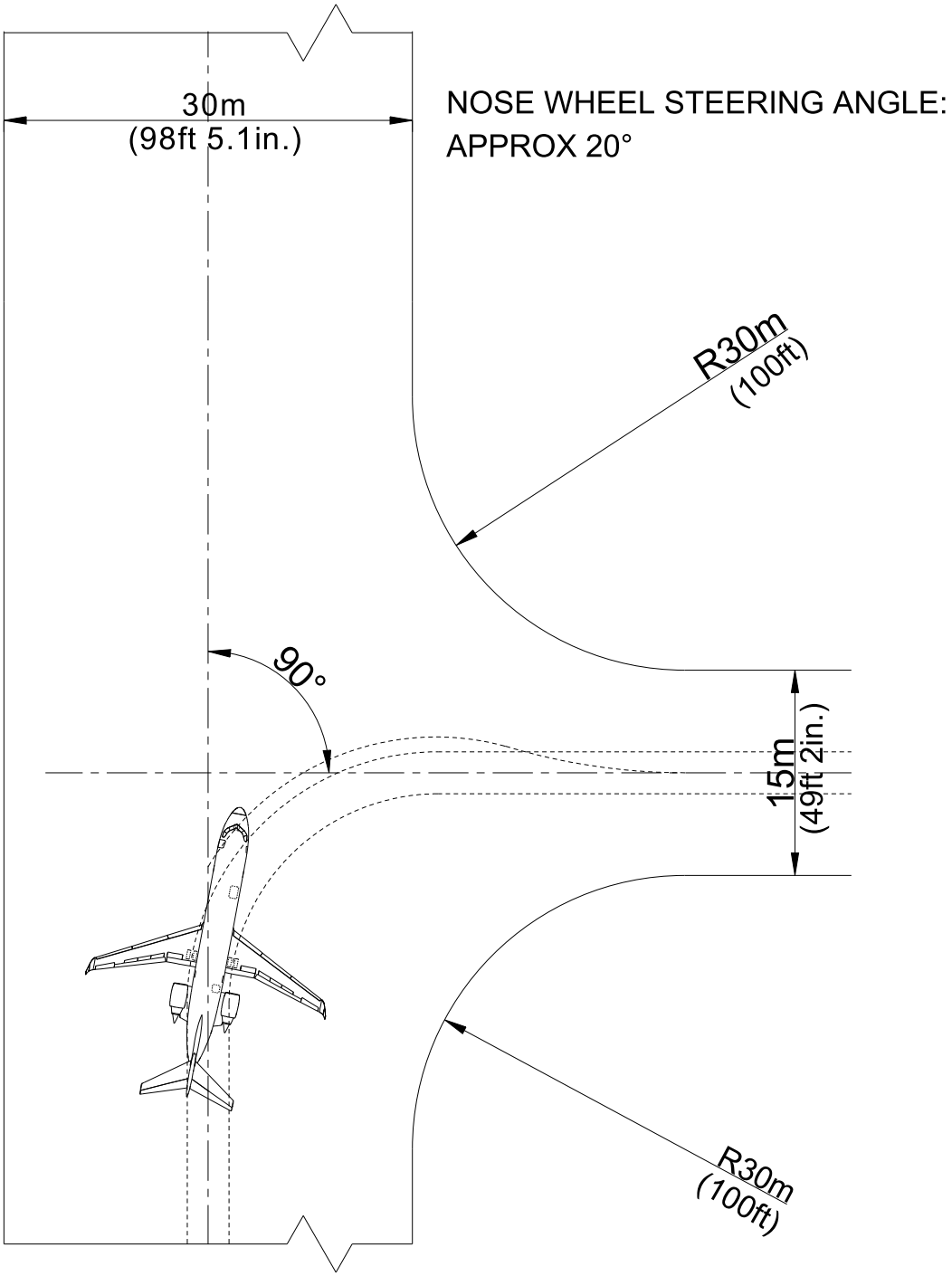

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Figure 2 Runway-To-Taxiway, 90-Degree Turn (Sheet 1 of 1)

Applicable to : ALL

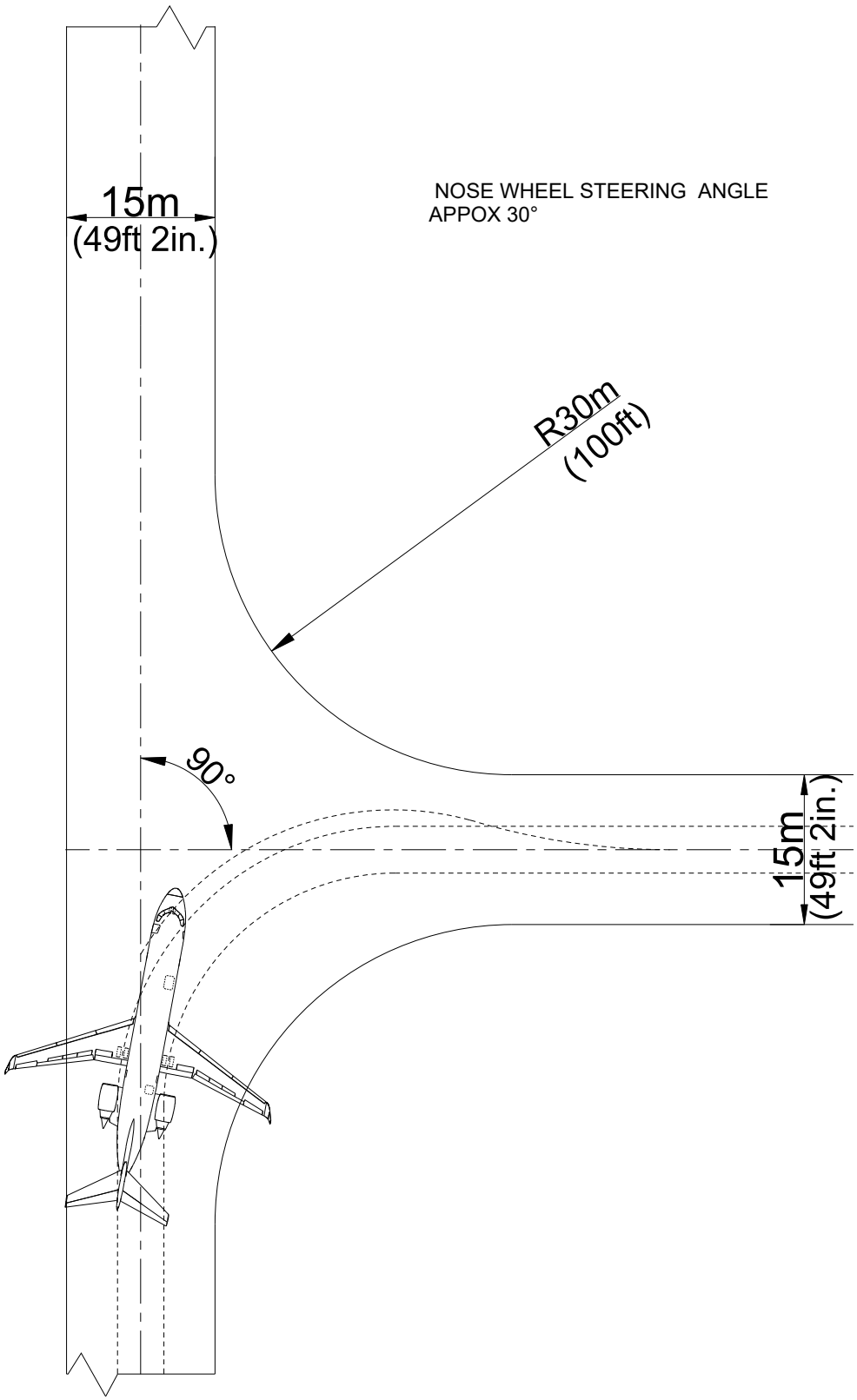

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Figure 3 Taxiway-To-Taxiway, 90-Degree Turn (Sheet 1 of 1)

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Runway Holding Bay

Applicable to : ALL

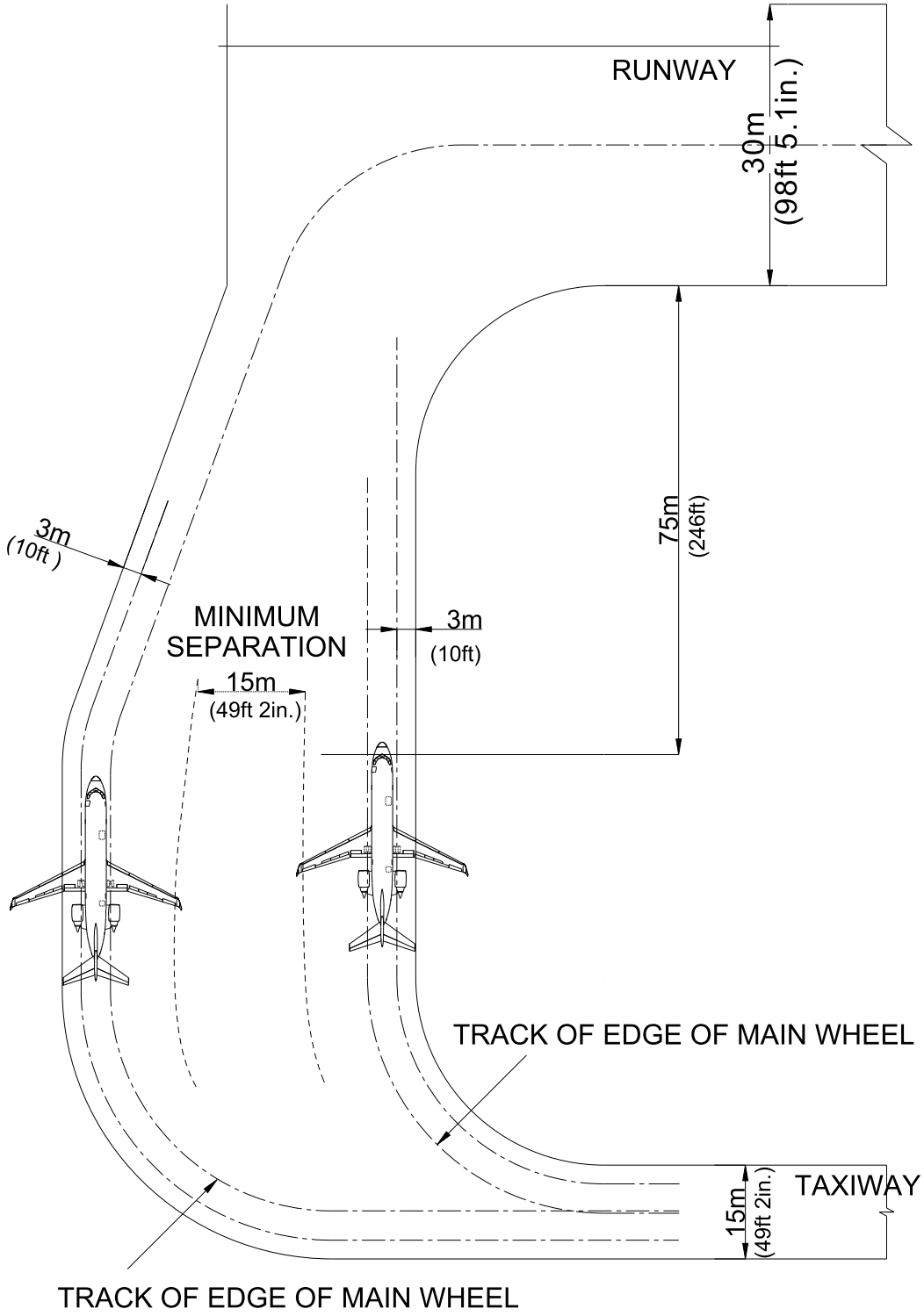

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Figure 1 Runway Holding Bay (Sheet 1 of 1)

Chapter 5
Terminal Servicing

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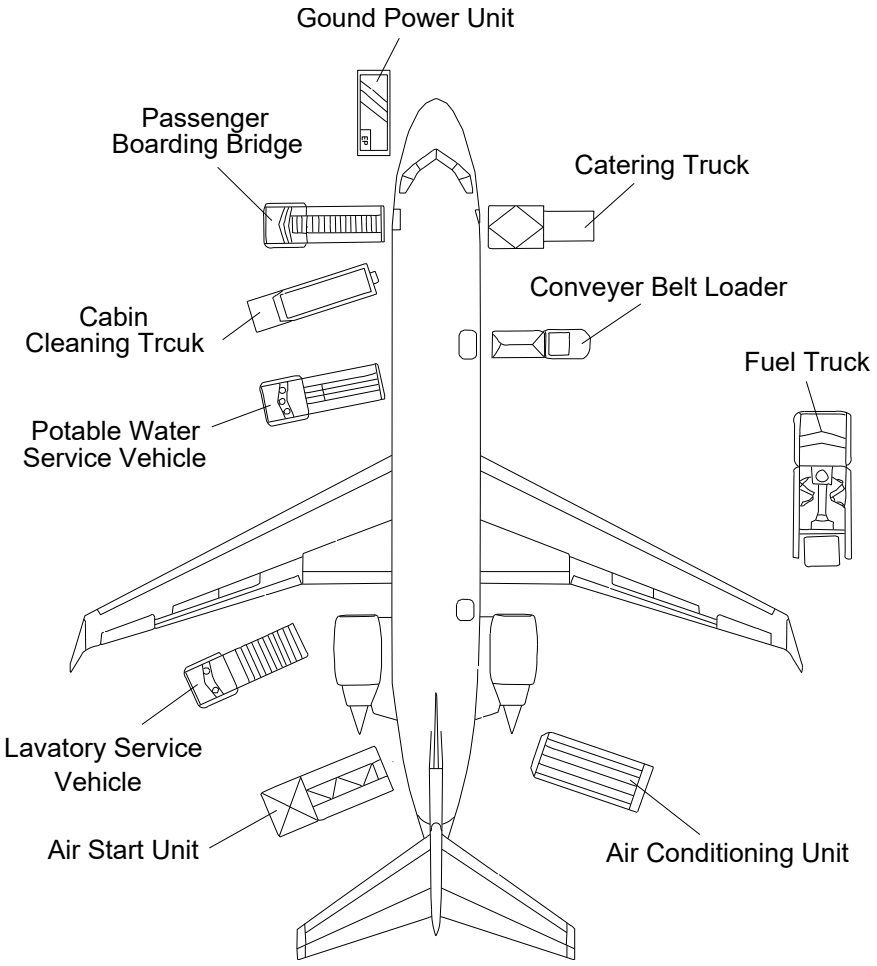
Aircraft Servicing Arrangement

Applicable to : ALL

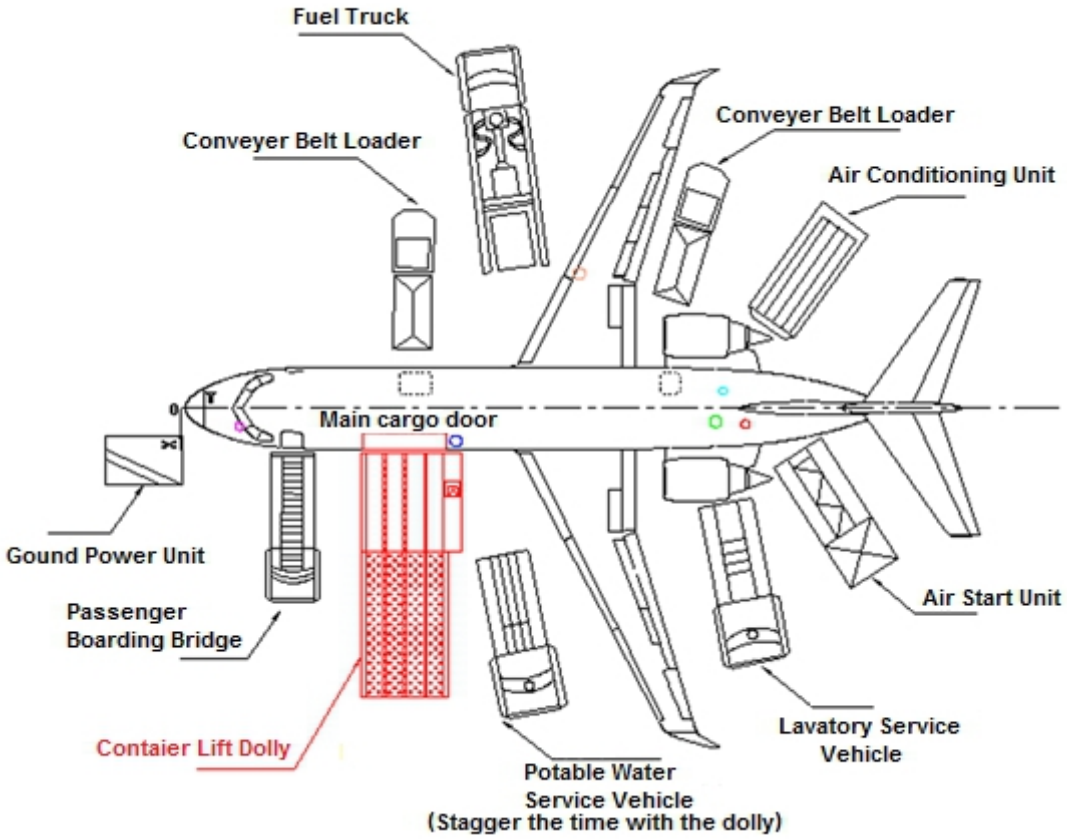


ICN-ARJ21-A-192005-A-SVV19-91670-A-002-01

Figure 1 Aircraft Servicing Arrangement (Sheet 1 of 1)

NOTE: When turnaround the station, the right front side of the aircraft is relatively cramped. In case of conflict between catering truck and fuel truck, the operator can consider that the catering truck and fuel truck should work step by step under the condition that the turnaround station time is guaranteed. The operation sequence can be referred to Turnaround Station - , ACAP ARJ21-A-19-20-05-02A-04AA-ATurnaround Station (Navigation-eclipse conflict).

Applicable to：ALL



ICN-ARJ21-A-192002-A-SVV19-63267-A-003-01

Figure 2 Aircraft Servicing Arrangement (ARJ21-700CCF) (Sheet 1 of 1)

NOTE: When the dolly is near the main cargo door for cargo loading and unloading, the potable water service vehicle cannot be used at the same time.

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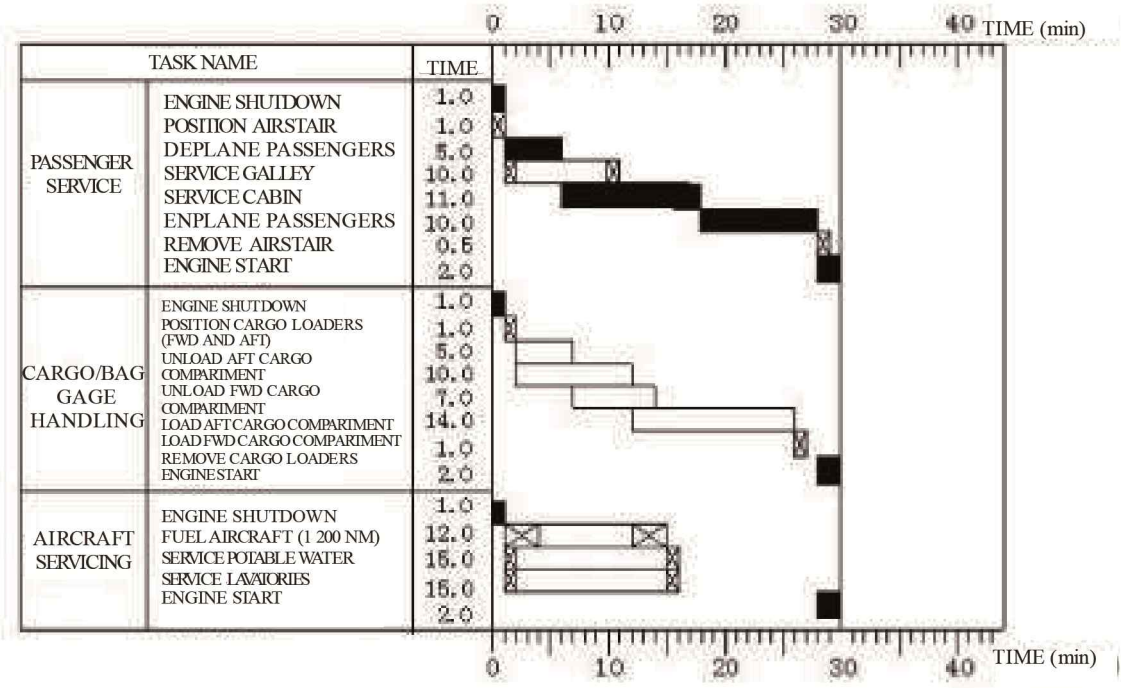
Turnaround Station

Applicable to : ALL



Note: 1.For basis 90-seat aircraft.

2. ⊠ indicates positioning/removing vehicle.

3. ■ indicates critical servicing processes.

4. 100% loading factor.

5. 3 000 lb cargo.

6. 1.2 pieces of baggage for each passenger.

7. Time for enplaning passengers is the time required for the first passenger to pass through the entry door to the last passenger seated.

ICN-ARJ21-A-192005-A-SVV19-10775-A-002-01

Figure 1 Turnaround Station (Sheet 1 of 1)

Applicable to：ALL

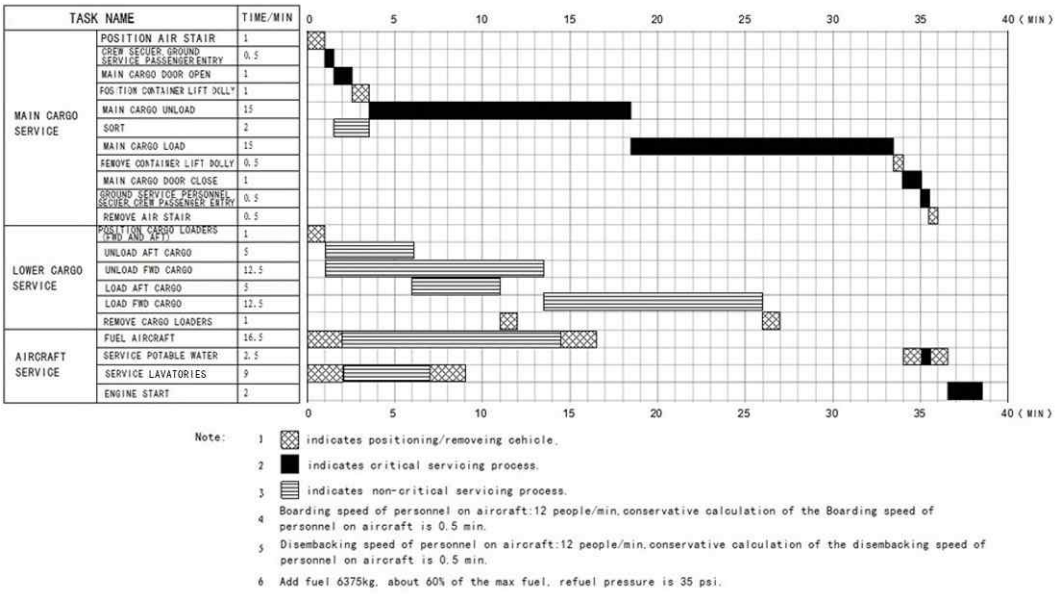


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Figure 2 CCF Turnaround Station (Sheet 1 of 1)

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Ground Servicing Connections

1. Positions of Ground Service Points

Applicable to : ALL

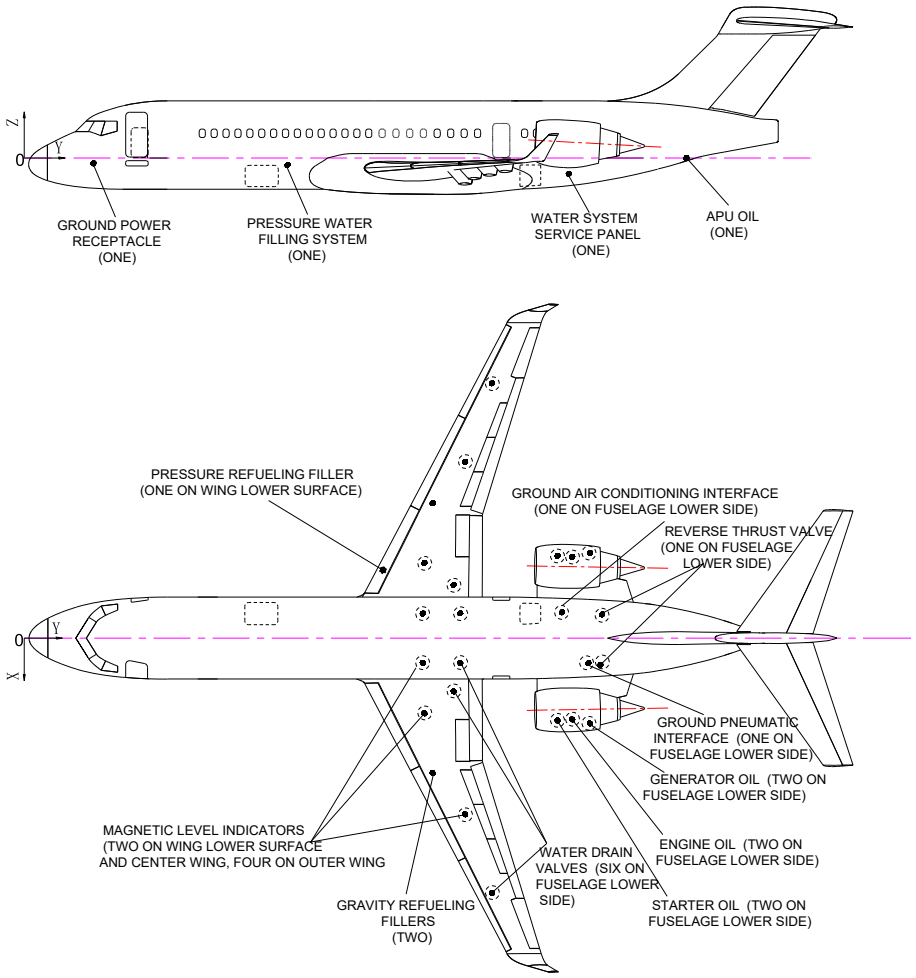

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Figure 1 Positions of Ground Service Points (Sheet 1 of 1)

2. Grounding Points

Distance(mm/in)				
	From Nose	From Aircraft Centerline		From Ground
		L Side	R Side	
On left Main Landing Gear leg	17180/676	2340/92	-	1000/39
On right Main Landing Gear leg	17180/676	-	2340/92	1000/39

Static grounding is necessary when performing maintenance tasks using these devices:

(1) Power tools.

(2) Electrical power sources.

(3) Lights.

(4) Tools driven by external power.

(5) Flammable conditions.

For details, see AMM 20 Static grounding.

Applicable to：ALL

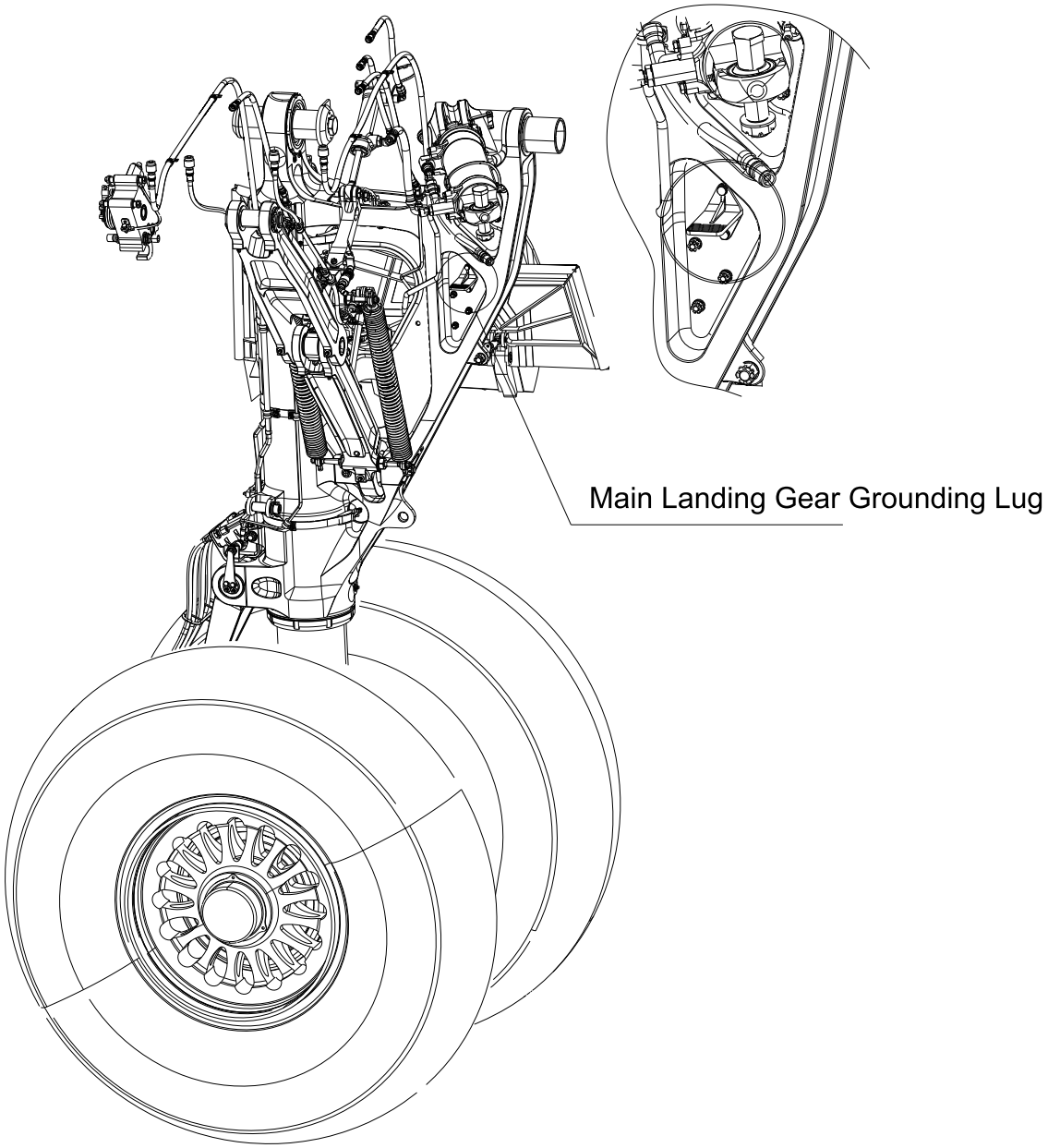

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Figure 2 Main Landing Gear Grounding Lug (Sheet 1 of 1)

Applicable to：ALL

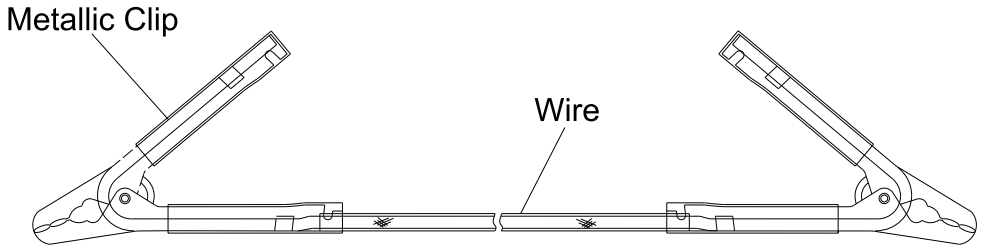

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Figure 3 Main Landing Gear Grounding Metallic Clip (Sheet 1 of 1)

3. Hydraulic System

Distance(mm/in)				
	From Nose	From Aircraft Centerline		From Ground
		L Side	R Side	
Maintenance Panel No.1	24720/973	383/15		1880/74
Maintenance Panel No.2	24627/970		427/17	1871/74
Maintenance Panel No.3	18633/734	1474/58		1887/74

NOTE: Zero-load status

A. Maintenance Panel No.1, 2 and 3

Pressure Quick Disconnect (including protective cap), size: **28.58 mm** (**1.125 in**).

Return Fluid Quick Disconnect (including protective cap), size: **41.28 mm** (**1.625 in**) ;

Return Fluid Quick Disconnect (including protective cap), size: **23.81 mm** (**0.9375 in**).

Accumulator Charging Valve, size: M6164-5.

B. Oil Tank

(1) No.1 Reservior

Fluid Temperature ℃	-40 ~18	-17 ~4	5 ~27	27 ~49	49 ~71	72 ~93
Capacity Limit %	42 ~50	48 ~56	53 ~62	59 ~68	65 ~73	71 ~79

NOTE: Fluid capacity variation does not exceed 10% after pressurization.

(2) No.2 Reservior

Fluid Temperature ℃	-40 ~18	-17 ~4	5 ~27	27 ~49	49 ~71	72 ~93
Capacity Limit %	43 ~53	50 ~60	57 ~67	64 ~74	71 ~81	78 ~88

NOTE: Fluid capacity variation does not exceed 9% after pressurization.

(3) No.3 Reservior

Fluid Temperature ℃	-40 ~18	-17 ~4	5 ~27	27 ~49	49 ~71	72 ~93
Capacity Limit %	49 ~54	53 ~58	56 ~62	60 ~66	64 ~69	68 ~73

NOTE: Fluid capacity variation does not exceed 20% after pressurization.

Applicable to：ALL

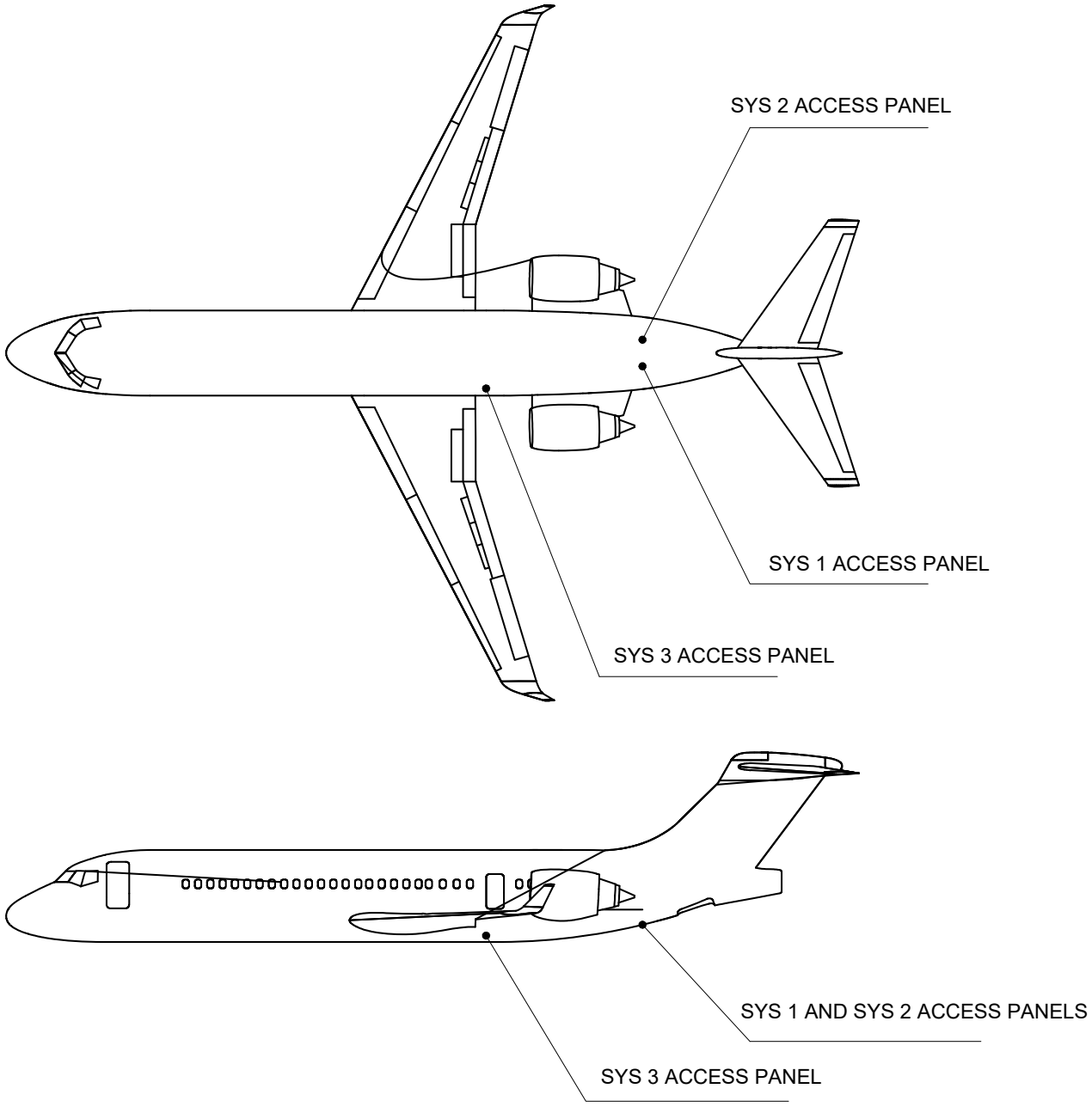

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Figure 4 Hydraulic System Ground Maintenance Panels (Sheet 1 of 1)

4. Electrical Power System

Distance(mm/in)				
	From Nose	From Aircraft Centerline		From Ground
		L Side	R Side	
External Power Receptacle	2531/100	1012/40		1709/67

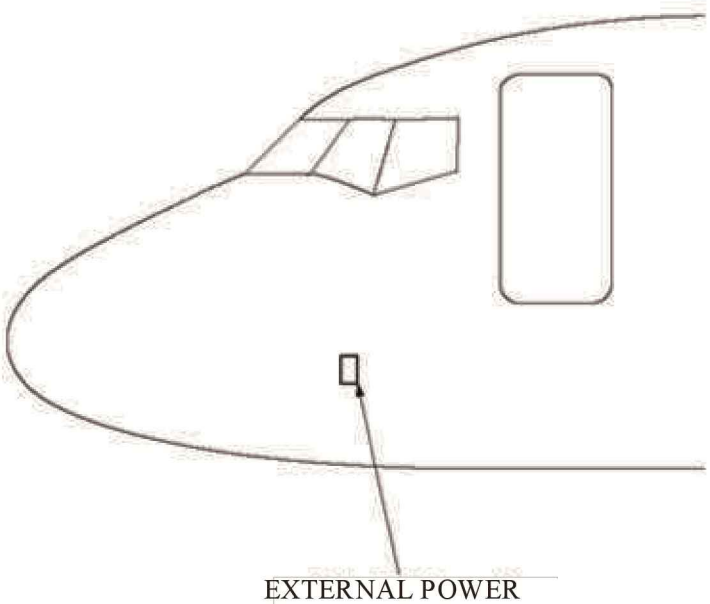
NOTE: Zero-load status

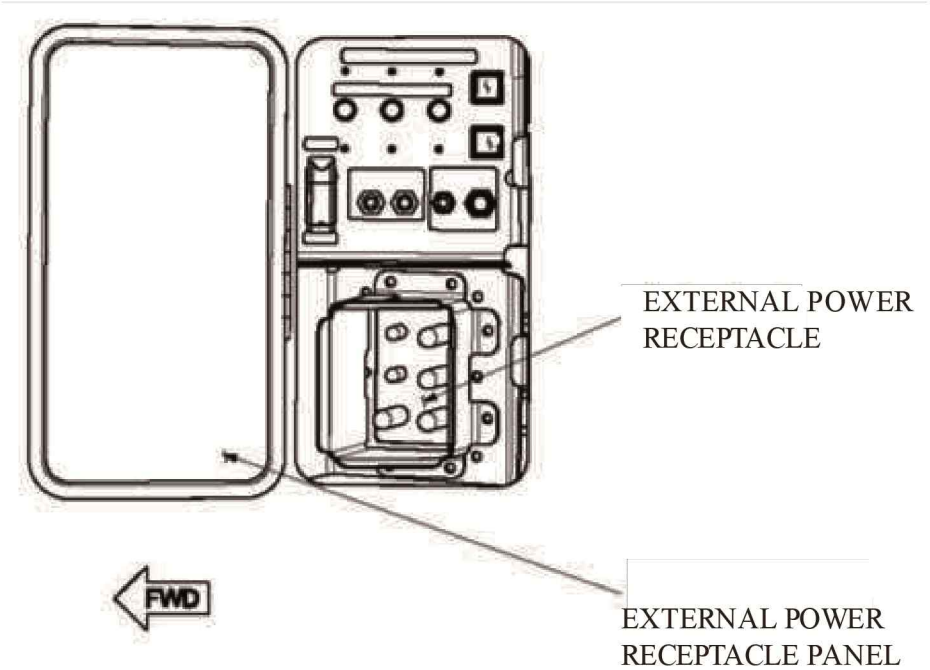
A. The receptacle conforms to the Standard ISO R461, and rated input power 40kVA.

B. Three-phase **115 V /200 V** , **400 Hz** .

C. When aircraft is powered by external power, the output cable must be connected to the external power receptacle conforming to standard ISO R461.

Applicable to：ALL





EXTERNAL POWER
RECEPTACLE Ⓐ

Figure 5 Electrical System Ground Service Panel (Sheet 1 of 1)

5. Air Conditioning System

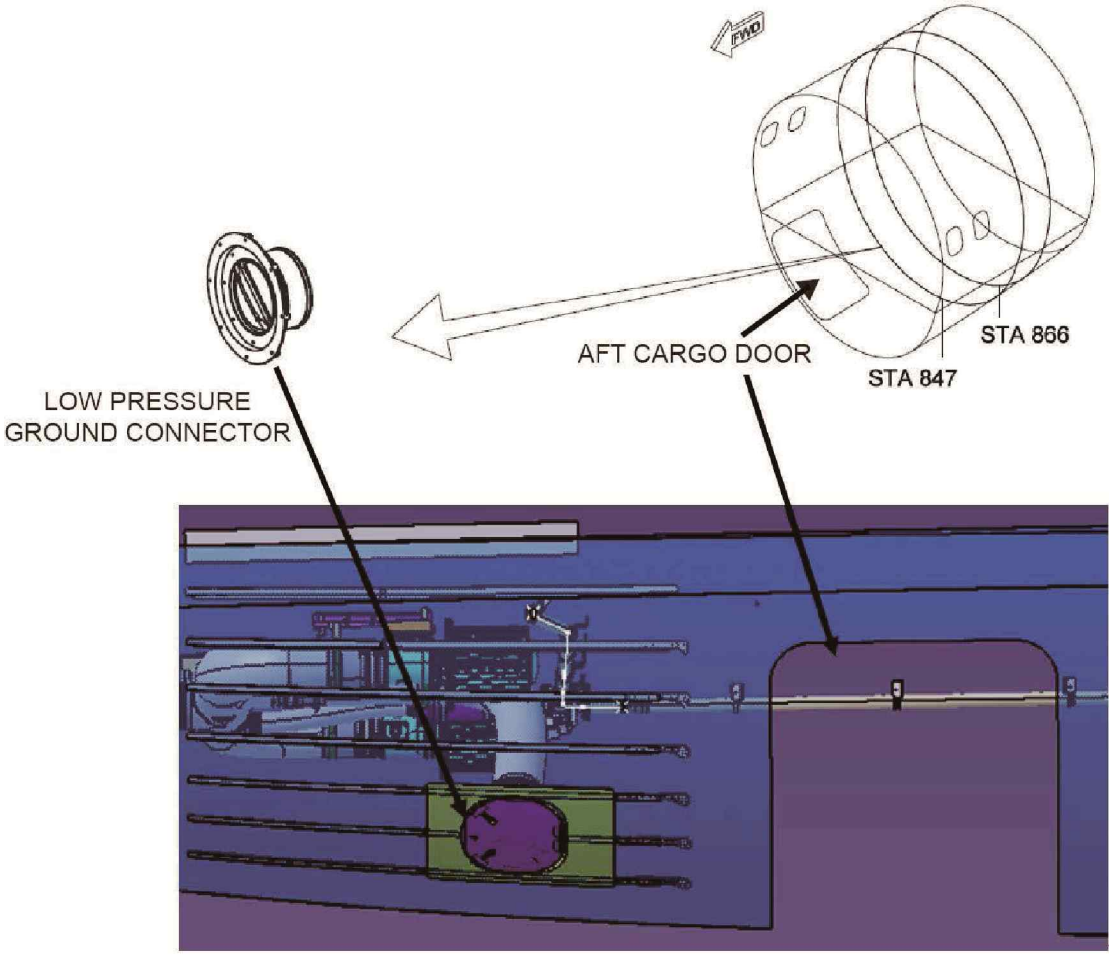
Distance(mm/in)				
	From Nose	From Aircraft Centerline		From Ground
		L Side	R Side	
Low Pressure Ground Connection	21576/849		937/37	1643/65

NOTE: Zero-load status

A. Comply with ISO 1034.

B. Diameter **203.2 mm** (**8 in**)

Applicable to：ALL



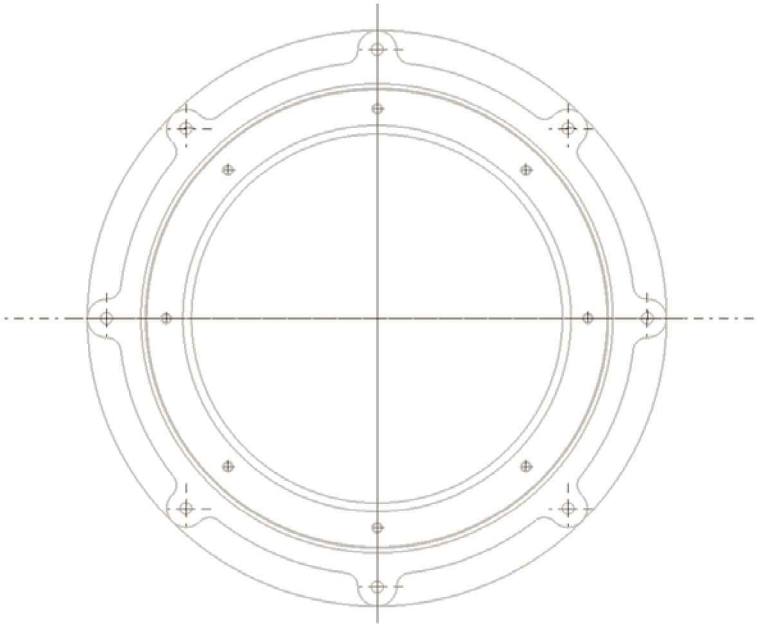


Figure 6 Air Conditioning System Port (Sheet 1 of 1)

6. Oxygen System

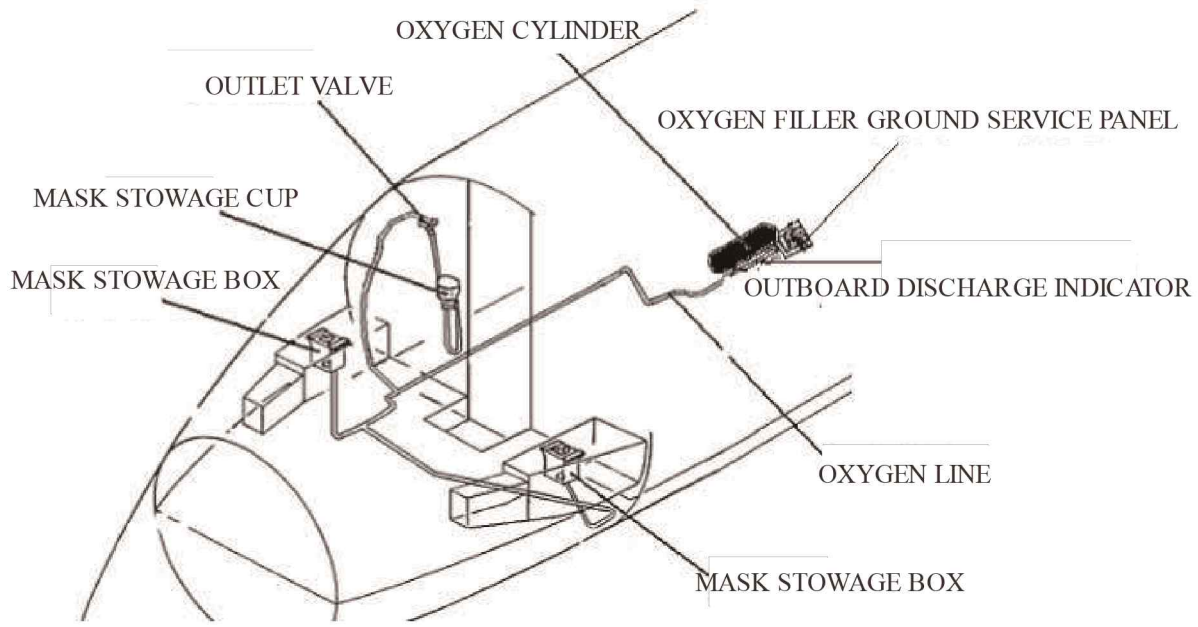
Distance(mm/in)				
	From Nose	From Aircraft Centerline		From Ground
		L Side	R Side	
Oxygen Filler Valve	6840/269	1290/51		1890/74

NOTE: Zero-load status

A. On oxygen filler ground service panel of fwd fuselage (Door No. 136ARW, size: 200 × 120).

B. Diameter of oxygen filling valve is **6.35 mm** (**0.25 in**)

Applicable to：ALL



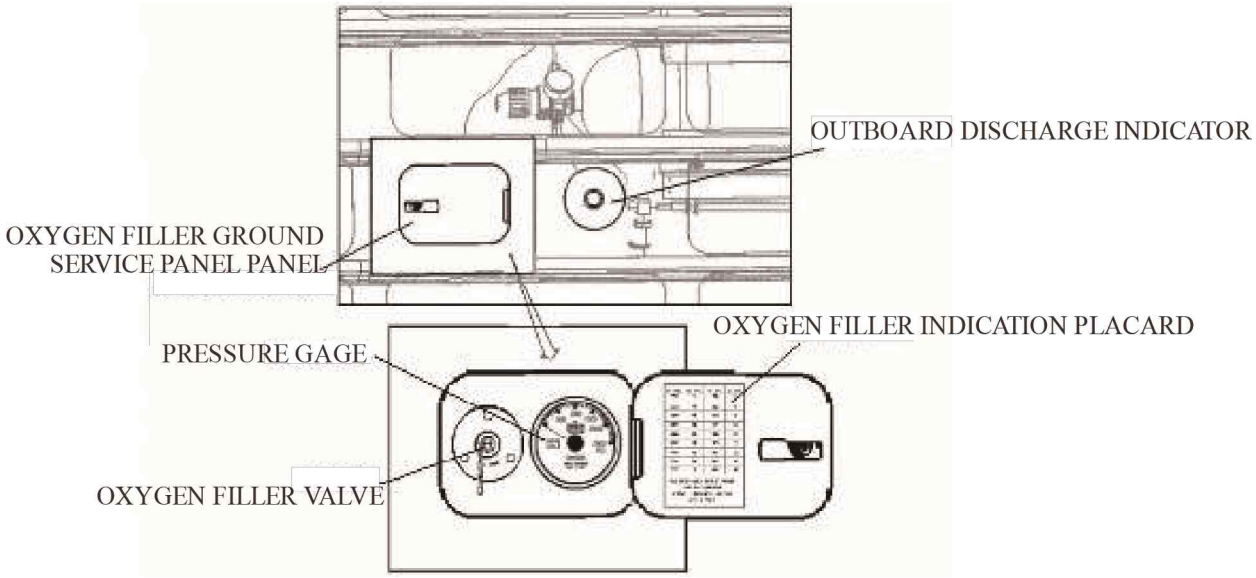


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Figure 7 Oxygen System Ground Service Panel (Sheet 1 of 1)

7. Waste System

Distance(mm/in)				
	From Nose	Distance to Symmetrical Plane		From Ground
		R Side	L Side	
Access panel: 161ALW	22140/872		930/37	1600/63

NOTE: Zero-load status

A. Nipple

(1) Rinse water nipple: **25.4 mm** (**1 in**) Comply with ISO 17775.

(2) Draining nipple: **101.6 mm** (**4 in**) Comply with ISO 17775.

B. Waste tank capacity: **68 L**

C. Flushing water pressure of waste tank: **3.45 bar** (**50 psi**)

D. Flow rate: **16 L/min**(**~ 28 L/min**)

Applicable to：ALL

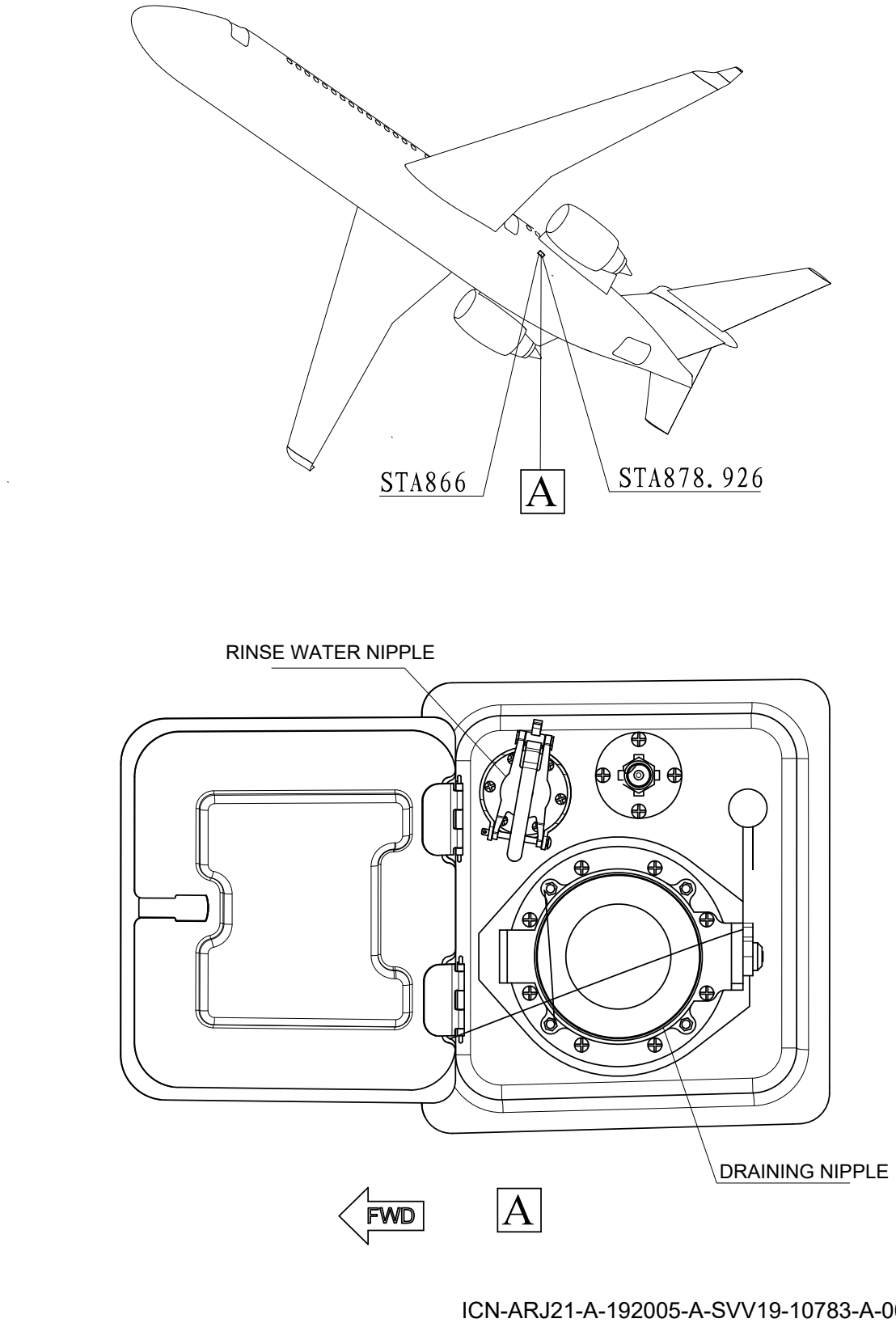

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Figure 8 Drainage System Ground Service Panel (Sheet 1 of 1)

8. Potable Water System

	Distance(mm/in)			
	From Nose	From Aircraft Centerline		From Ground
		R Side	L Side	
Access panel: 135ALW	10600/417		1330/52	1930/76

NOTE: Zero-load status

A. Water filling nipple: **19.05 mm** (**0.75 in**) Comply with ISO 17775.

B. Water tank capacity: **83 L**

C. Maximum filling pressure of water tank: **3.45 bar** (**50 psi**)

Applicable to：ALL

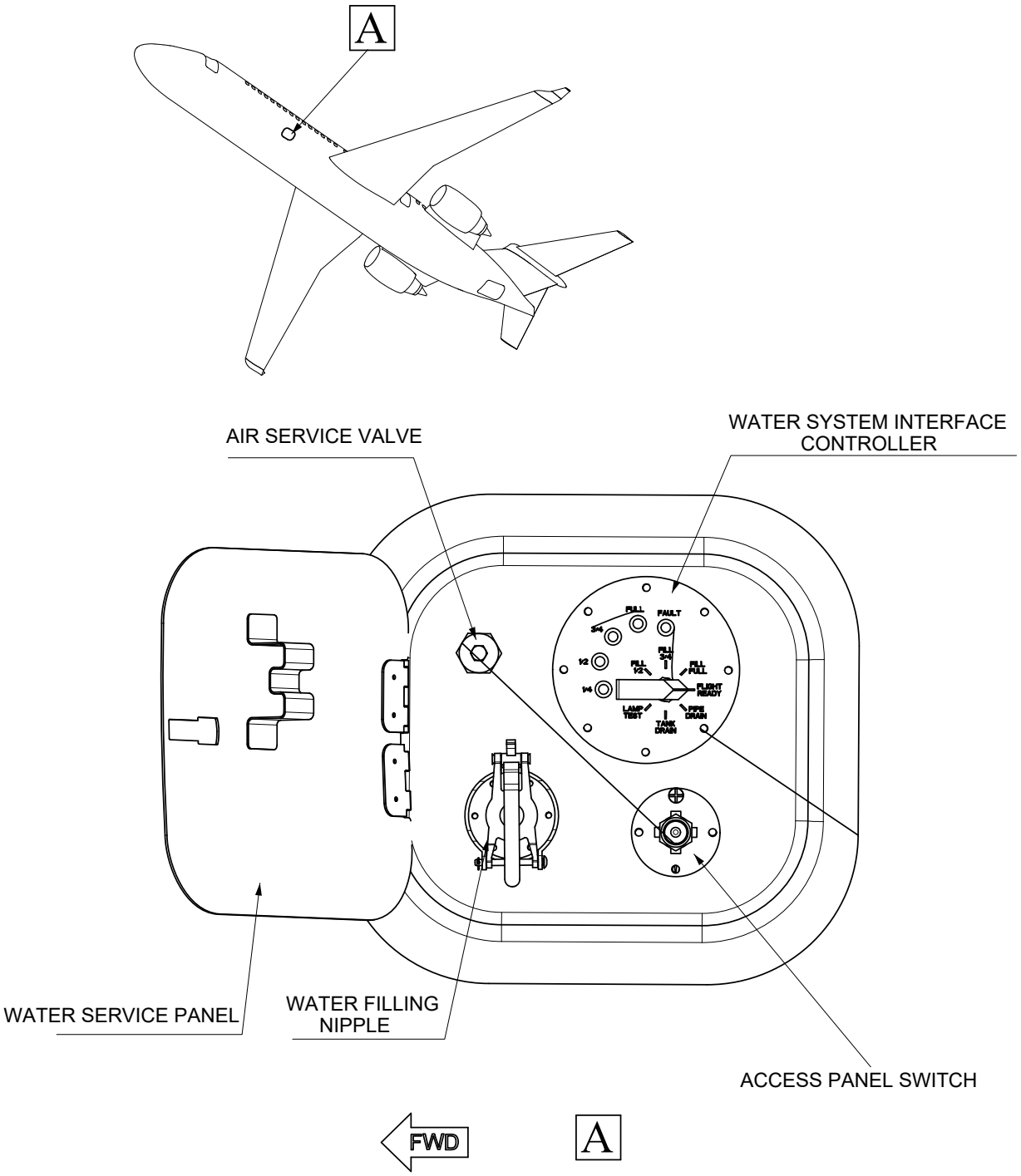

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Figure 9 Potable Water System Ground Service Panel (Sheet 1 of 1)

9. Oil System

	Distance(mm/in)			
	From Nose	From Aircraft Centerline		From Ground
		R Side	L Side	
Manual Gravity Oil Filler	21705/855	3619/142		1757/69
Manual Gravity Oil Filler	21705/855		2246/88	1757/69
Pressure Refueling Receptacle	21654/853	3606/142		1737/68
Pressure Refueling Receptacle	21654/853		2230/87	1730/68

NOTE: Zero-load status

A. Oil Tank Volume 16 qt

B. Oil Overfill Volume 13.3 qt

Applicable to：ALL

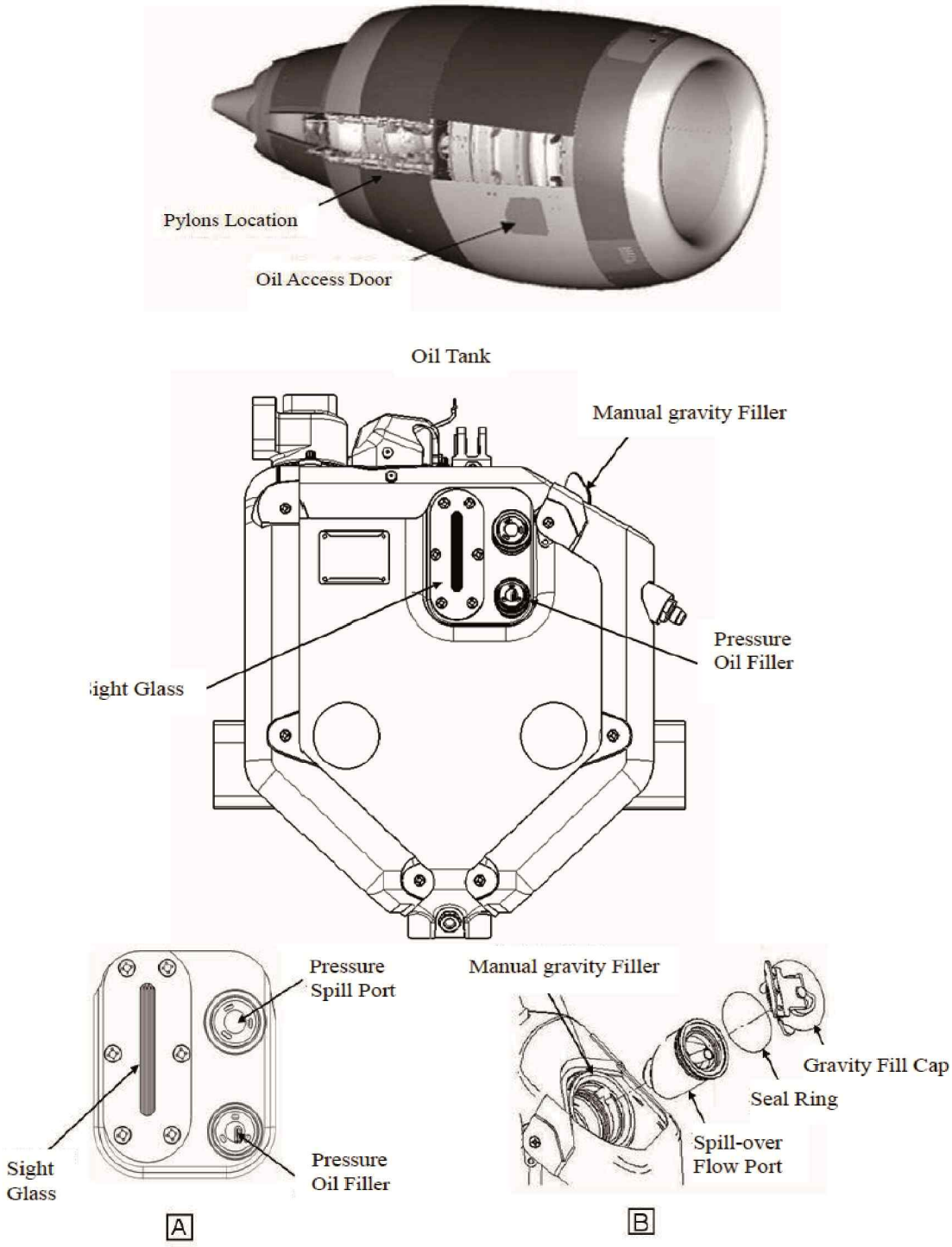

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Figure 10 Engine Oil Tank Refueling Filler (Sheet 1 of 1)

A. Starter Oil System

	Distance(mm/in)			
	From Nose	From Aircraft Centerline		From Ground
		R Side	L Side	
Manual Gravity Oil Filler	21802/858	2728/107		1345/53
Manual Gravity Oil Filler	21802/858		3117/123	1345/53
Pressure Refueling Receptacle	21778/857	2801/110		1193/47
Pressure Refueling Receptacle	21778/857		3040/120	1193/47

NOTE: Zero-load status

Applicable to：ALL

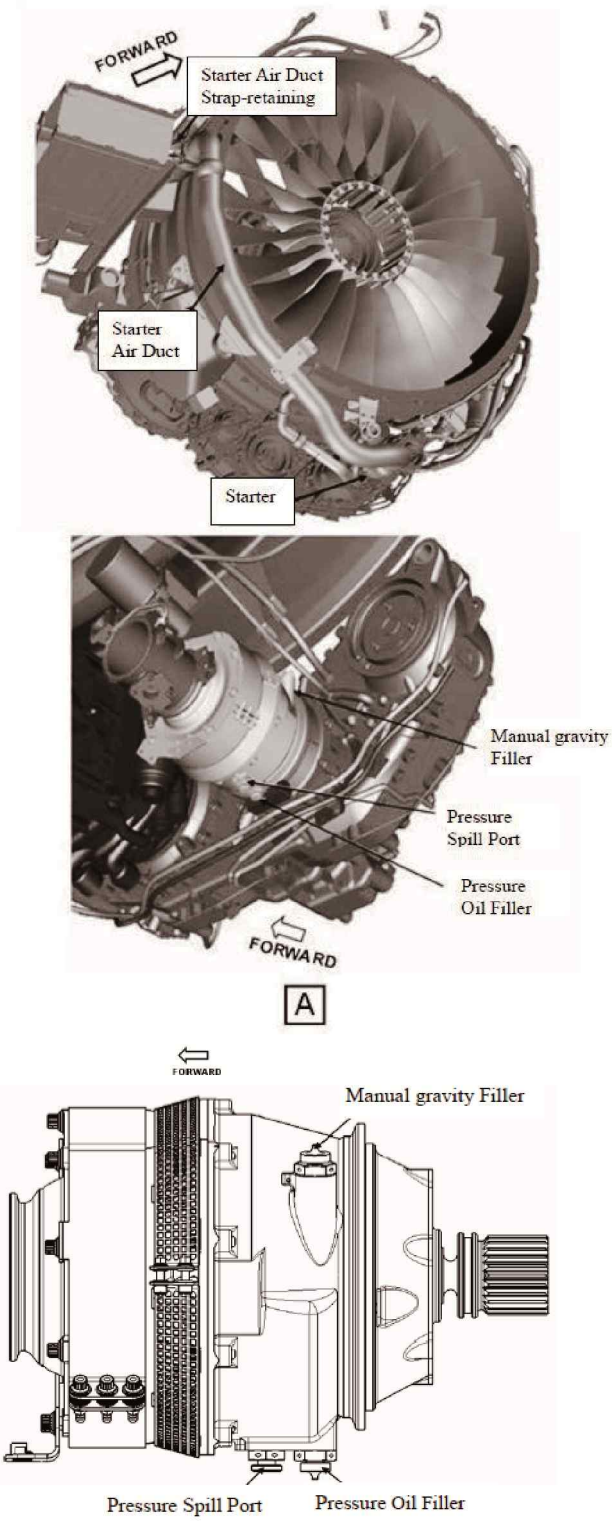

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Figure 11 Starter Oil Filler (Sheet 1 of 1)

B. Integrated Drive Generator (IDG) Oil System

Name	Distance(mm/in)			
	From Nose	Distance to Symmetrical Plane of Aircraft		From Ground
		R Side	L Side	
L IDG Oil Port	21700/854		2710/107	2080/82
R IDG Oil Port	21700/854	2710/107		2080/82

NOTE: Zero-load status

Applicable to：ALL

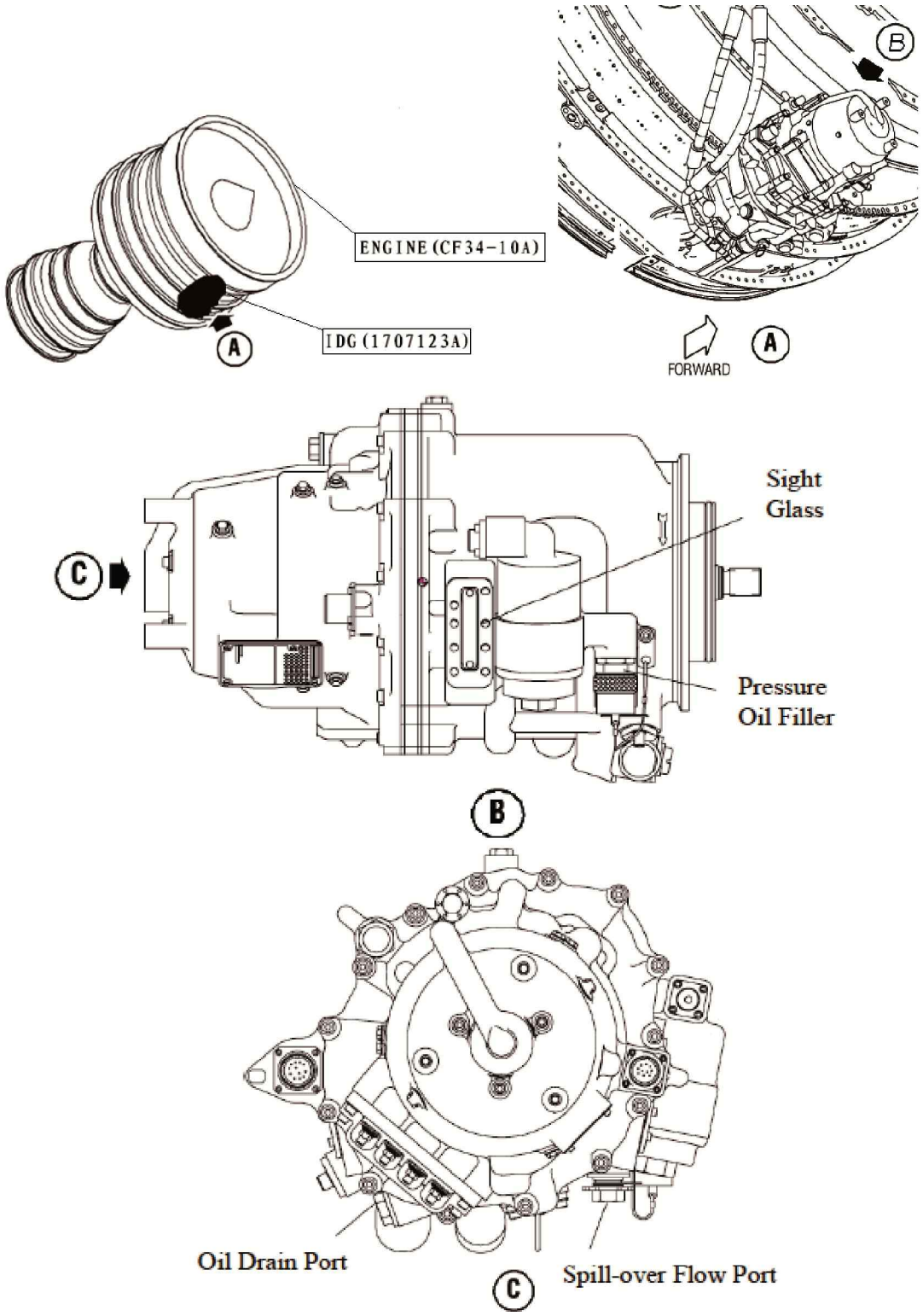

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Figure 12 IDG Oil Port (Sheet 1 of 1)

10. Pneumatic System

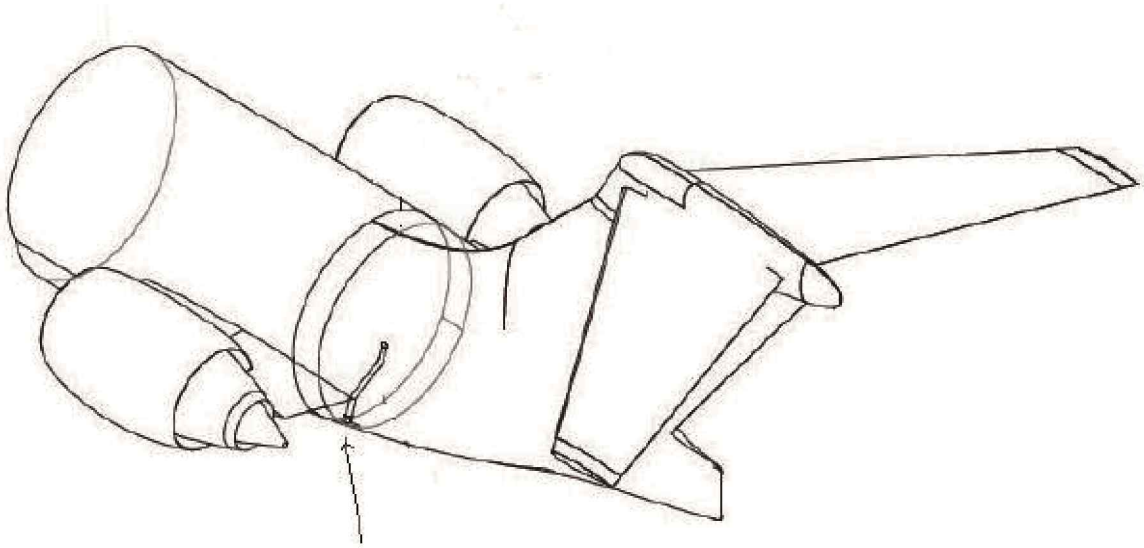
Distance(mm/in)				
	From Nose	From Aircraft Centerline		From Ground
		L Side	R Side	
High Pressure Ground Connector	23715/934	708/28		1592/63

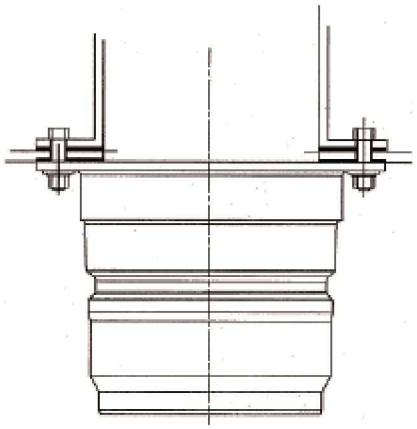
NOTE: Zero-load status

A. Standard Connector comply with ISO 2026.

B. Diameter **76.2 mm** (**3 in**)

Applicable to：ALL





ICN-ARJ21-A-192005-A-SVV19-10788-A-001-01

Figure 13 Pneumatic System Connector (Sheet 1 of 1)

11. Fuel System

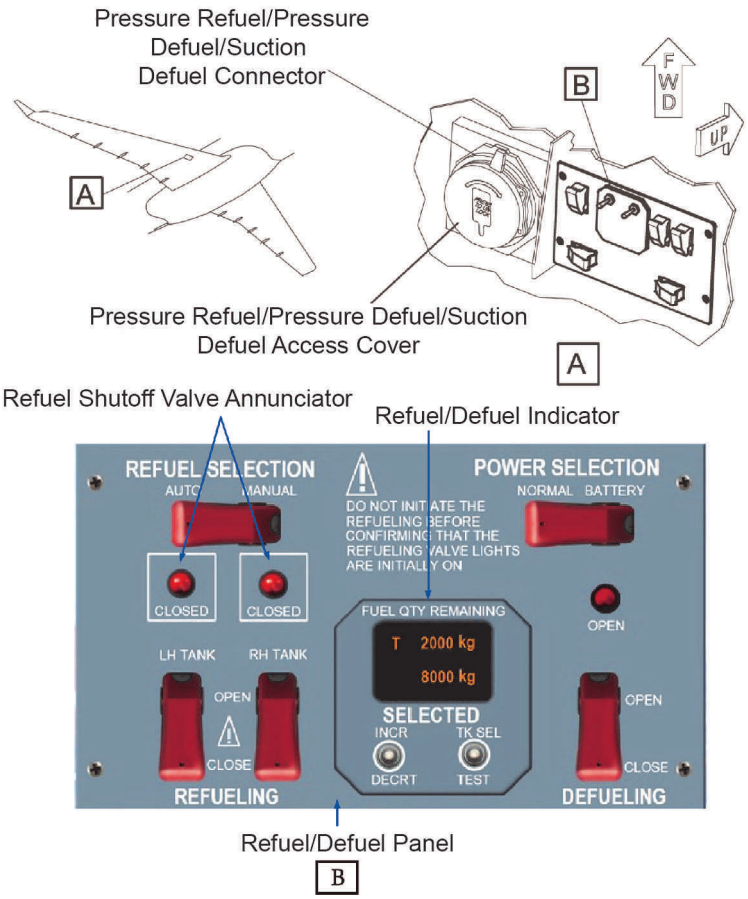
	Distance(mm/in)			
	From Nose	From Aircraft Centerline		From Ground
		R Side	L Side	
Refuel/Defuel Adapter	14680/578	3130/123		1900/75

NOTE: Zero-load status

A. Refuel/Defuel Adapter: **63.5 mm** (**2.5 in**) standard connector comply with ISO 45, install one between No.3 rib and No.4 rib in the right wing only.

B. Refuel Pressure: **2.42 bar ~ 3.45 bar** (**35 psi ~ 50 psi**)

Applicable to：ALL



ICN-ARJ21-A-192005-A-SVV19-10789-A-001-01

Figure 14 Fuel System Connector (Sheet 1 of 1)

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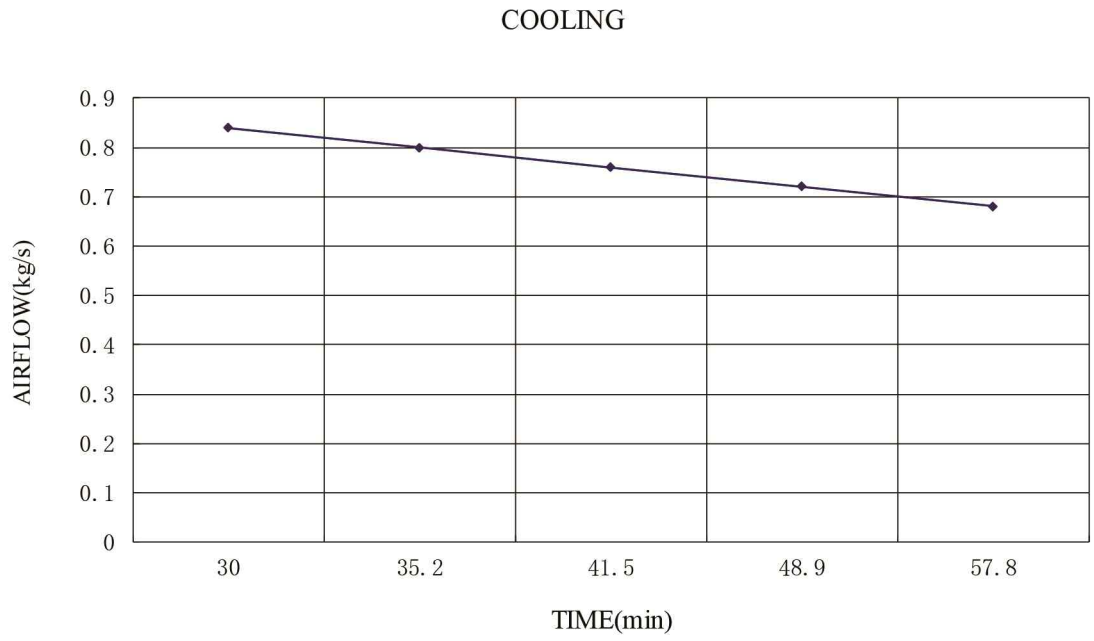
Ground Air-Conditioning Requirements

Applicable to : ALL



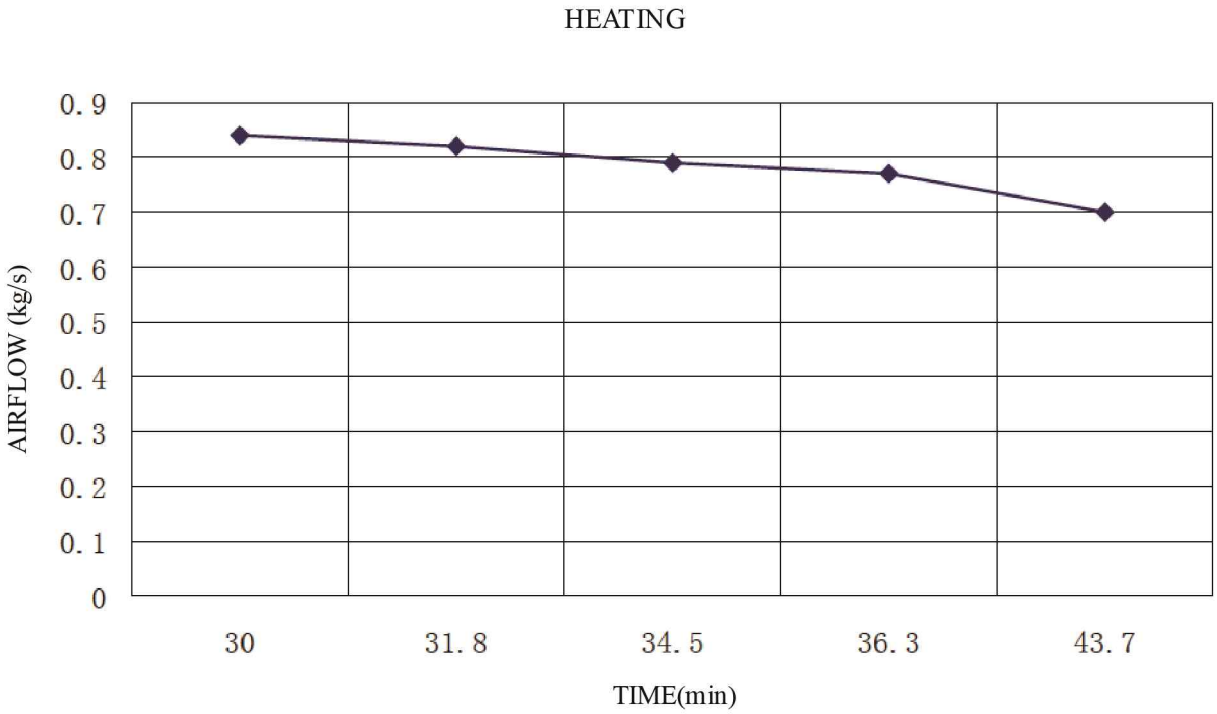
ICN-ARJ21-A-192005-A-SVV19-10790-A-001-01

Figure 1 Cooling (Sheet 1 of 1)

Initial Cabin Temperature: 46℃, cooling cabin to 27℃. Low Pressure Ground Connection Temperature: 1.5℃.

Aircraft State: No passengers, recirculation fan on, windows and doors are closed, no other internal thermal loads.

Applicable to：ALL



ICN-ARJ21-A-192005-A-SVV19-10791-A-001-01

Figure 2 Heating (Sheet 1 of 1)

Initial Cabin Temperature: -30℃, heating cabin to 24℃. Low Pressure Ground Connection Temperature: 70℃.

Aircraft State: No passengers, recirculation fan on, windows and doors are closed, no other internal thermal loads.

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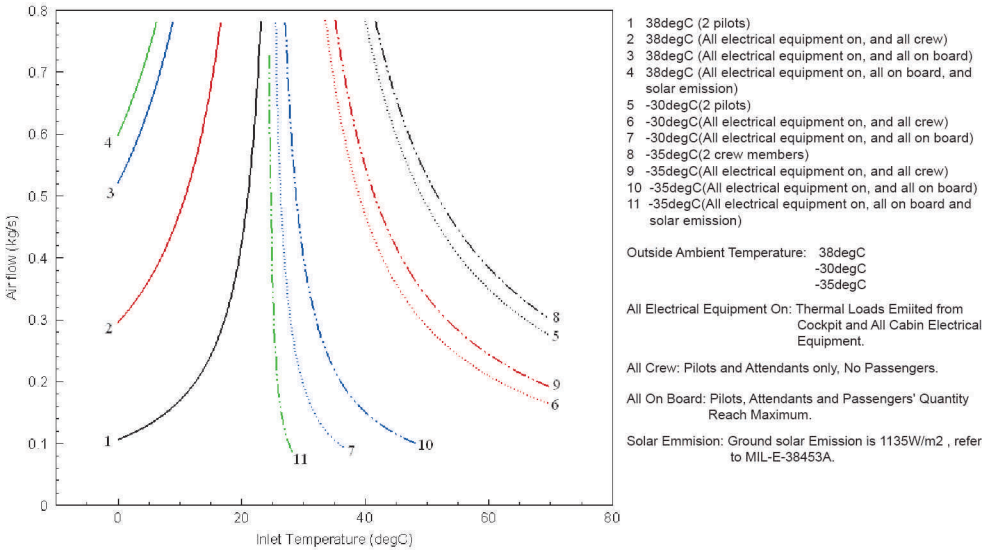
Preconditioned Airflow Requirements

Applicable to : ALL



ICN-ARJ21-A-192005-A-SVV19-10792-A-001-01

Figure 1 Cabin Airflow and Connection Temperature Curve (Sheet 1 of 1)

Ground Towing Requirements

1. Ground Towing Requirements

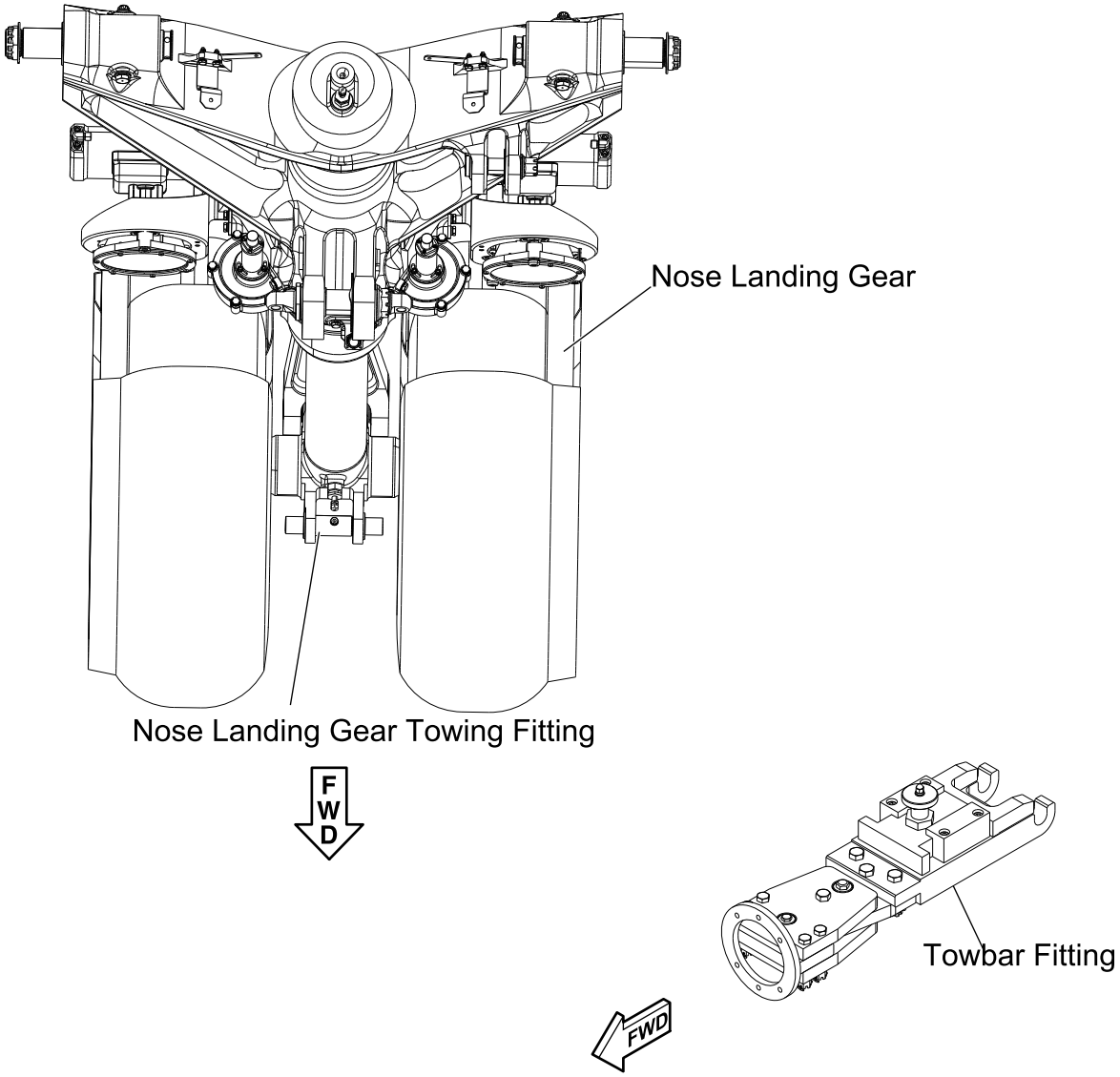
Use towing equipment for aircraft towing when carrying out parking, mooring or maintenance work. Aircraft towing contains normal towing and emergency towing. Normal towing is generally through towing the aircraft from nose landing gear. Emergency towing is generally through towing the aircraft from main landing gear.

For details, see AMM 09 Towing and Taxiing.

Two safety bolts are arranged on the towing fitting of the towbar. The failure shear force of the first is **45674 N**（ **10267 lbf** ）, The failure shear force of the second is **61986 N**（ **13934 lbf** ）.

Maximum allowable moment at towing trunnion of the towbar is **2022.6 N.m**（ **1491.7 lbf.ft** ）.

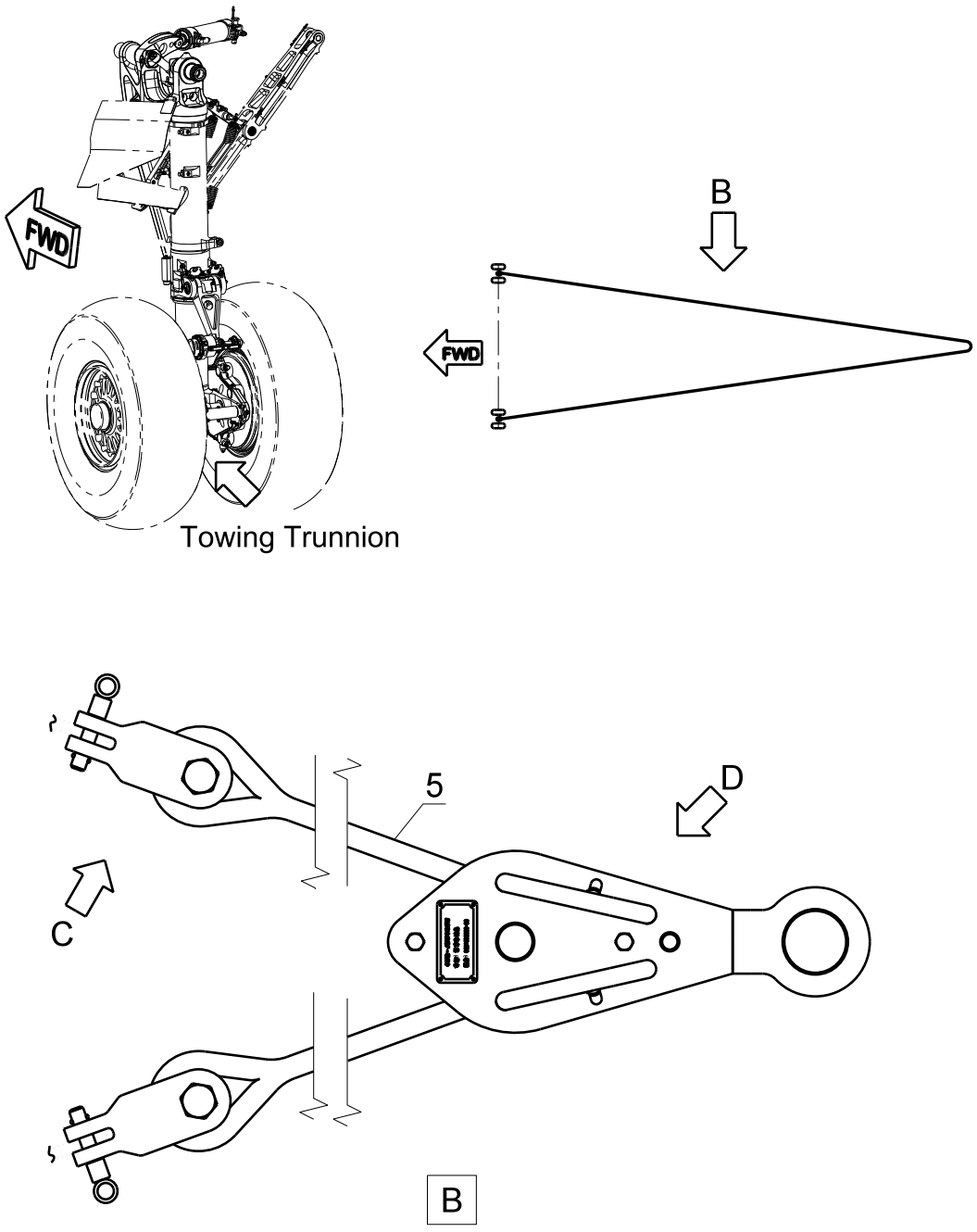
Applicable to : ALL



ICN-ARJ21-A-192005-A-SVV19-92240-A-001-01

Figure 1 Normal Towing (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192005-A-SVV19-92241-A-001-01

Figure 2 Emergency Towing (Sheet 1 of 1)

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Chapter 6
Operating Conditions

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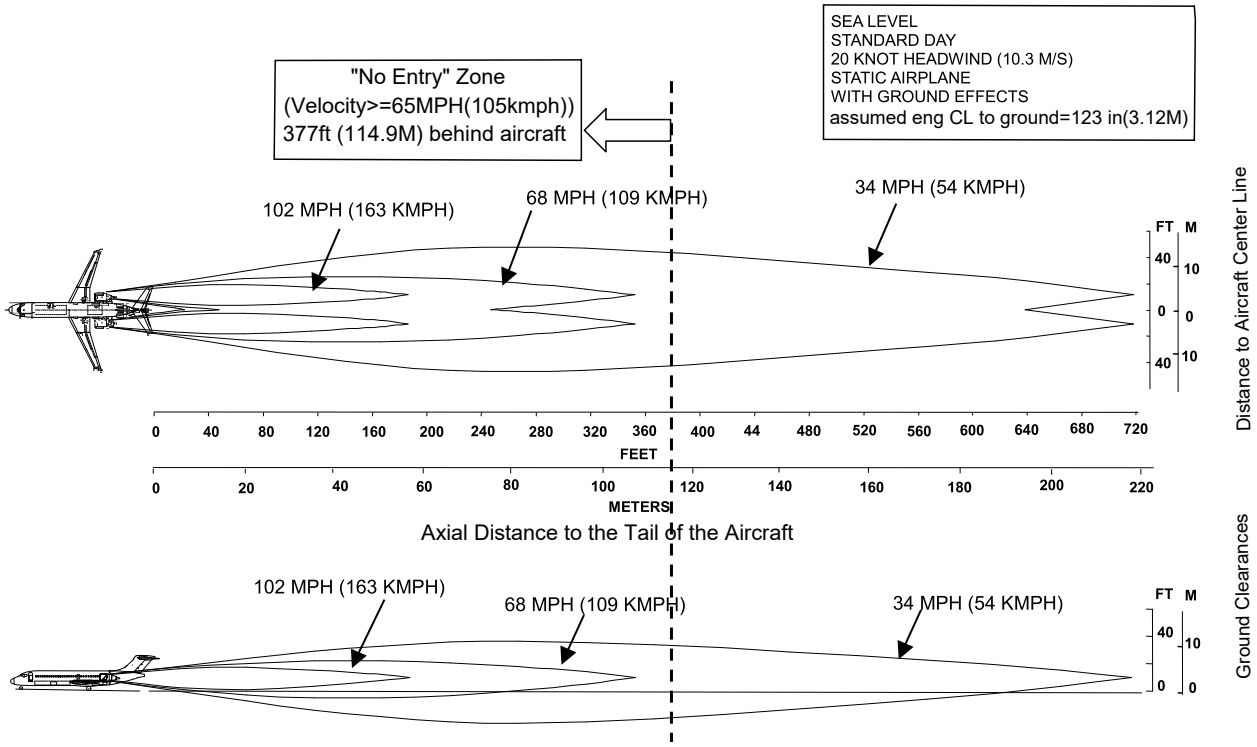
Engine Exhaust Velocities and Temperatures

1. Engine Exhaust Velocity - Takeoff Thrust

Applicable to : ALL

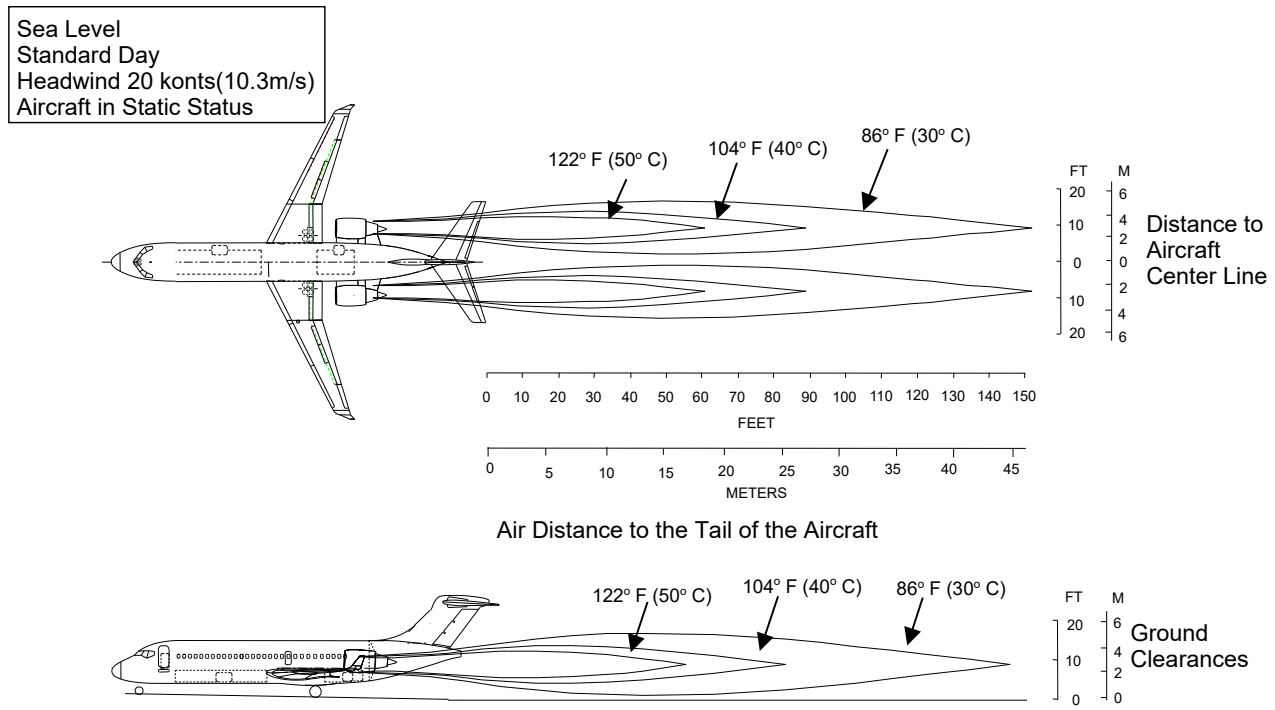


ICN-ARJ21-A-192006-A-SVV19-10793-A-001-01

Figure 1 CF34-10A Engine Exhaust Velocity Contour (Sea Level, Takeoff Thrust 17514 lbf) (- Sheet 1 of 1)

2. Engine Exhaust Temperature - Takeoff Thrust

Applicable to：ALL

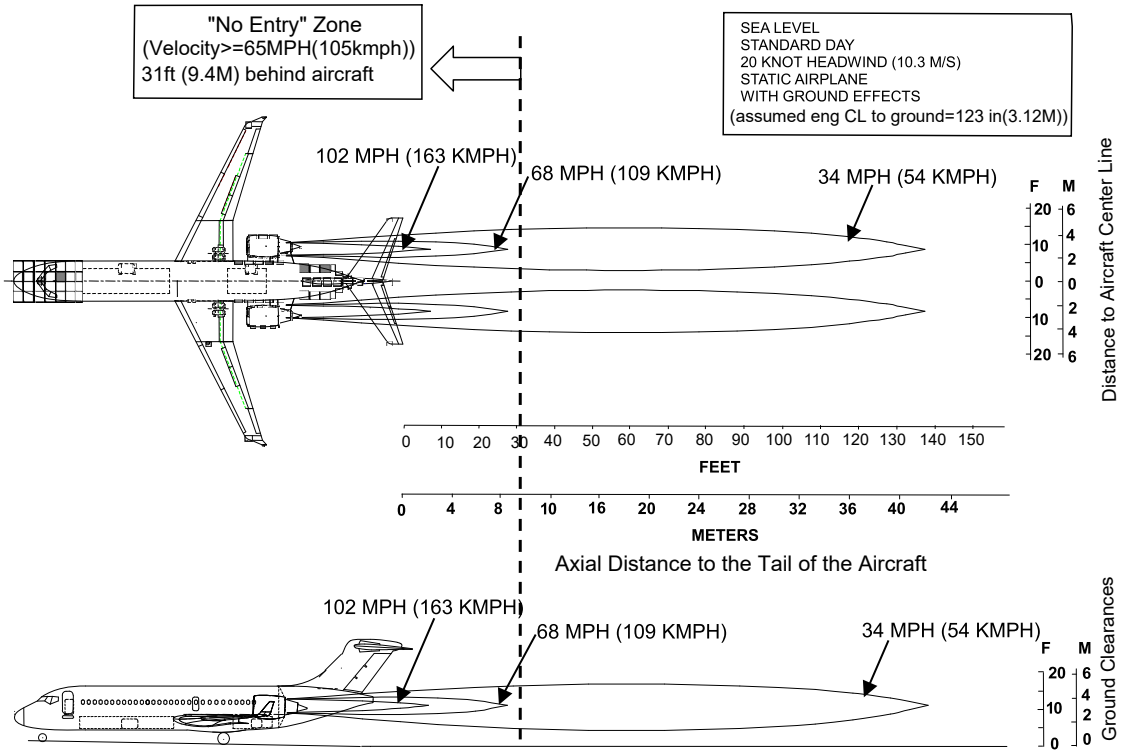


ICN-ARJ21-A-192006-A-SVV19-10794-A-001-01

Figure 2 CF34-10A Engine Exhaust Temperature Contour (Sea Level, Takeoff Thrust 17514 lbf) (Sheet 1 of 1)

3. Engine Exhaust Velocity - Ground Idle Thrust

Applicable to：ALL

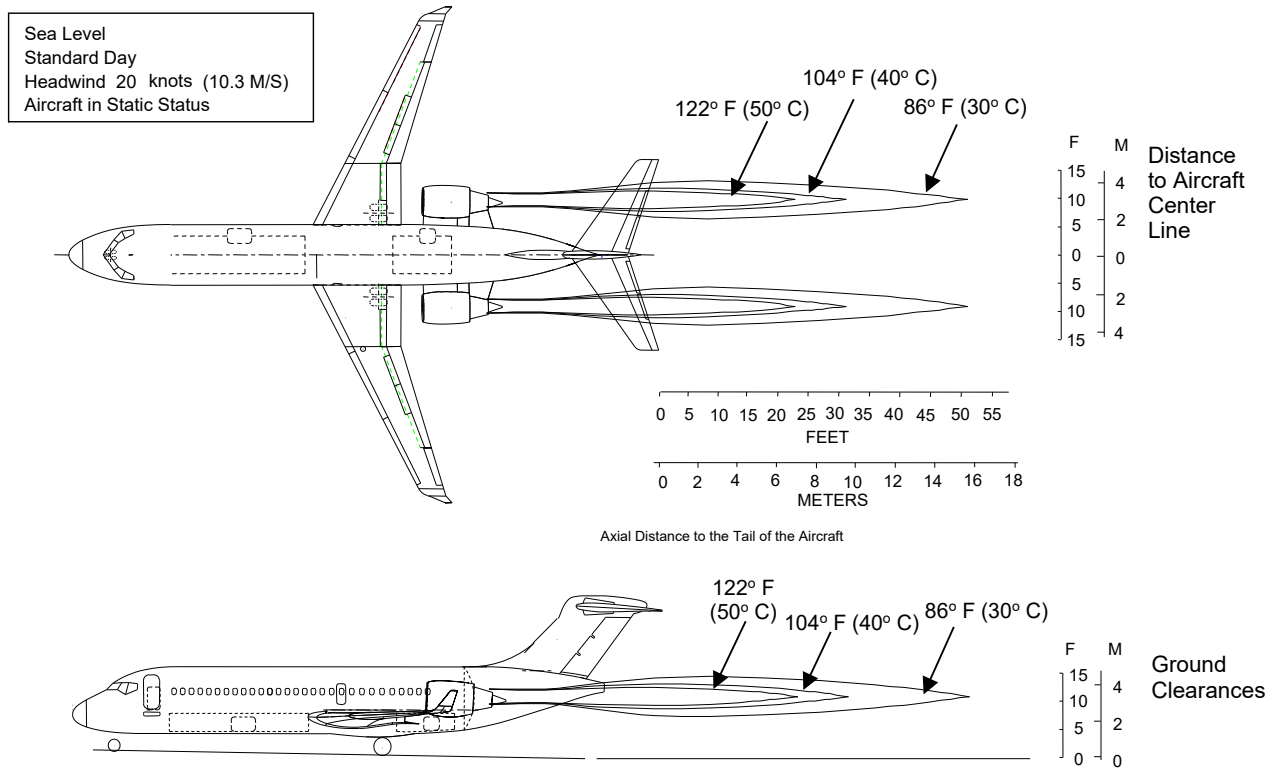


ICN-ARJ21-A-192006-A-SVV19-10795-A-003-01

Figure 3 CF34-10A Engine Exhaust Velocity Contour (Sea Level, Ground Idle Thrust 761 lbf) (- Sheet 1 of 1)

4. Engine Exhaust Temperature - Ground Idle Thrust

Applicable to：ALL

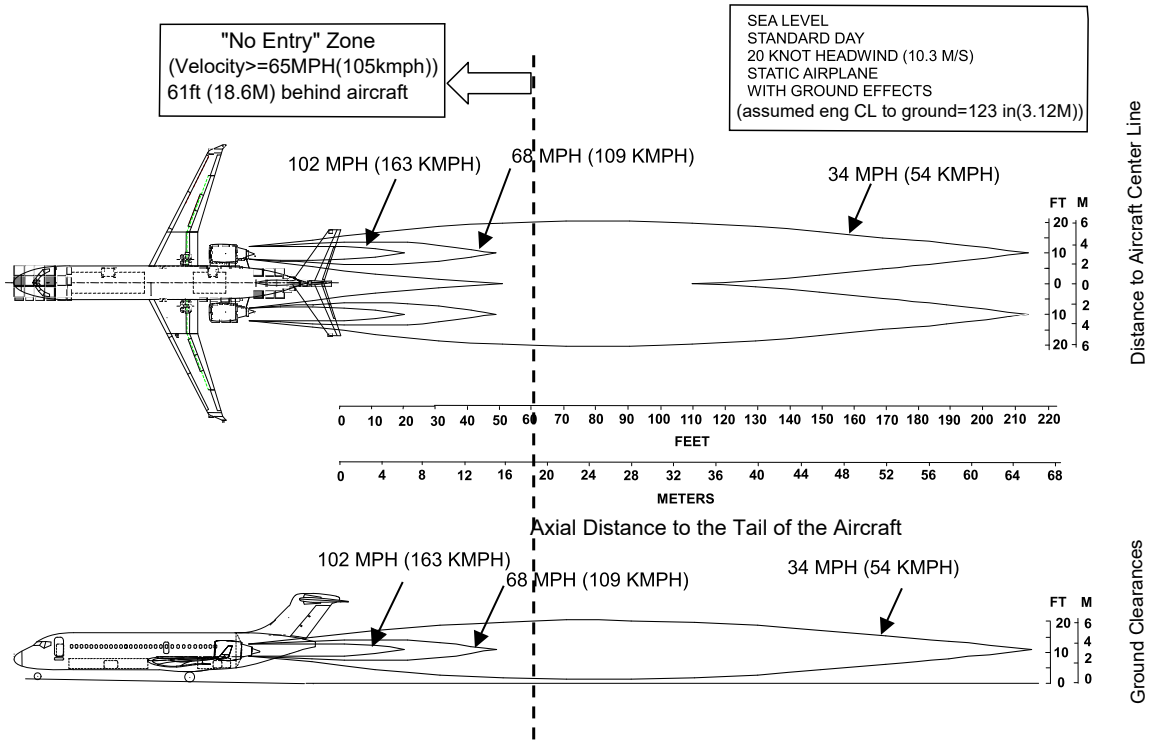


ICN-ARJ21-A-192006-A-SVV19-10796-A-002-01

Figure 4 CF34-10A Engine Exhaust Temperature Contour (Sea Level, Ground Idle Thrust 761 lbf) (Sheet 1 of 1)

5. Engine Exhaust Velocity - Initial Moving Thrust

Applicable to : ALL

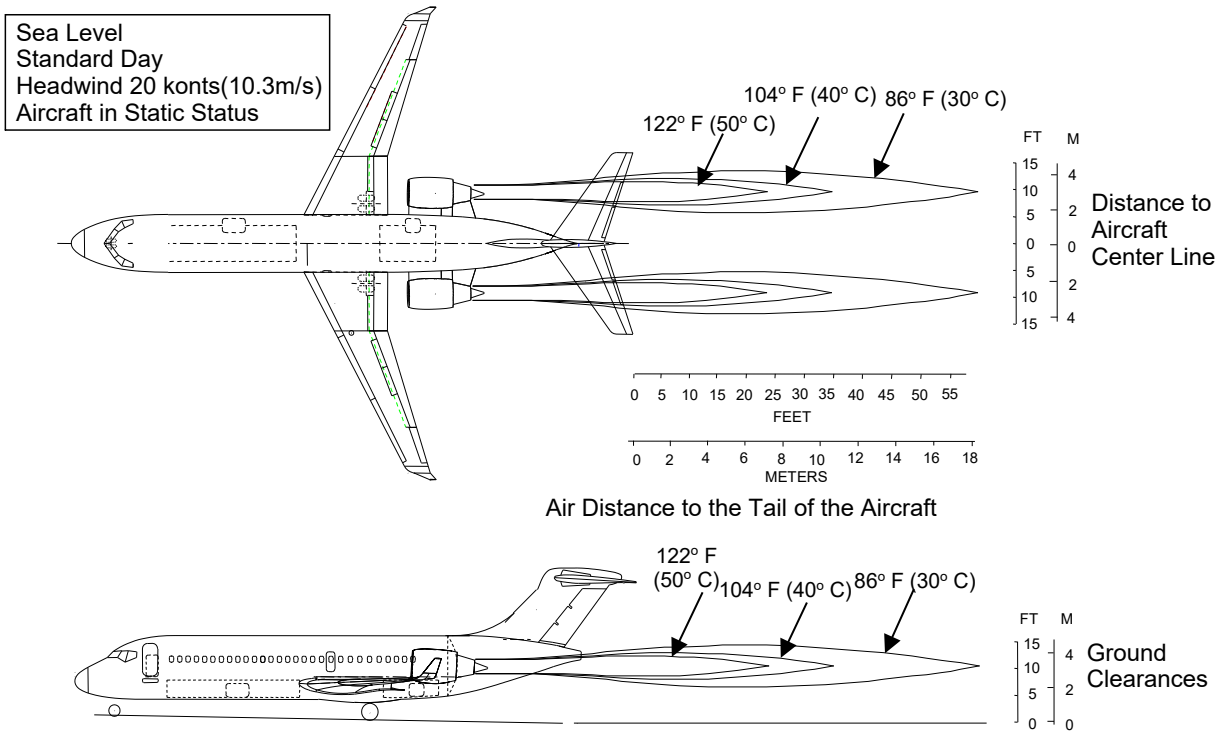


ICN-ARJ21-A-192006-A-SVV19-10797-A-001-01

Figure 5 CF34-10A Engine Exhaust Velocity Contour (Sea Level, Initial Moving Thrust 1678 lbf) (Sheet 1 of 1)

6. Engine Exhaust Temperature - Initial Moving Thrust

Applicable to：ALL



ICN-ARJ21-A-192006-A-SVV19-10798-A-001-01

Figure 6 CF34-10A Engine Exhaust Temperature Contour (Sea Level, Initial Moving Thrust 1678 lbf) (Sheet 1 of 1)

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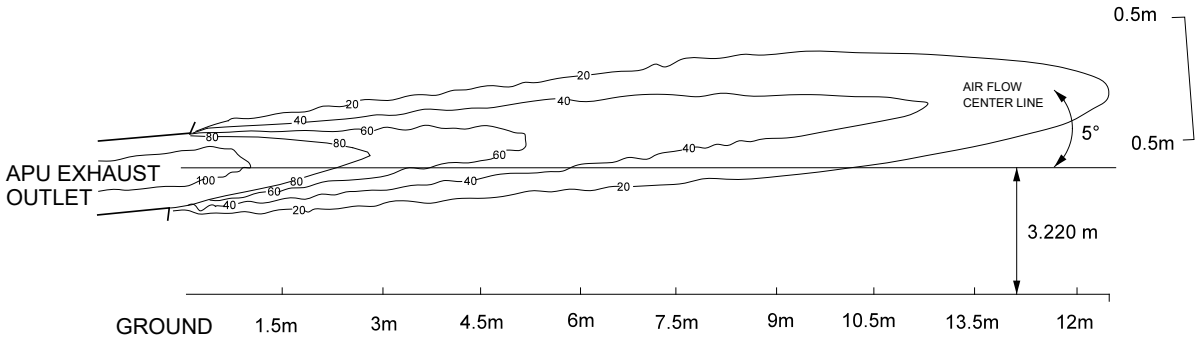
APU Exhaust Velocities and Temperatures

Applicable to : ALL

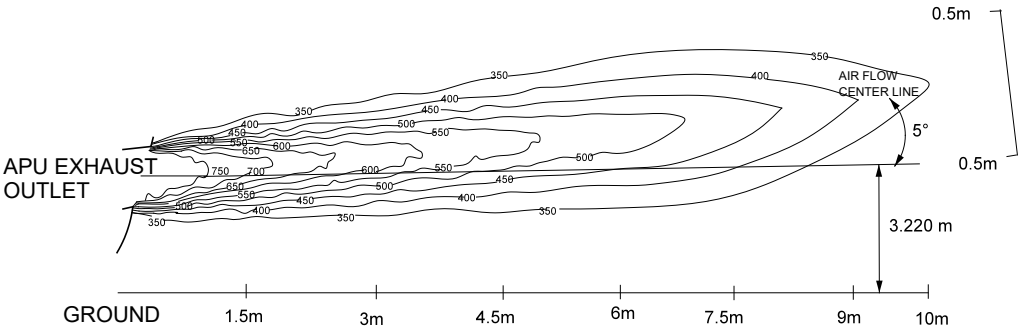


EXHAUST VELOCITY TRACE Velocity Unit: m/s

ICN-ARJ21-A-192006-A-SVV19-10799-A-001-01

Figure 1 APU Exhaust Velocity Contour (Sheet 1 of 1)

Applicable to：ALL



EXHAUST TEMPERATURE TRACE Temperature Unit:KELVIN
Unit Conversion:Kelvin Temperature Scale=Degree Centigrade+273.15

ICN-ARJ21-A-192006-A-SVV19-10800-A-001-01

Figure 2 APU Exhaust Temperature Contour (Sheet 1 of 1)

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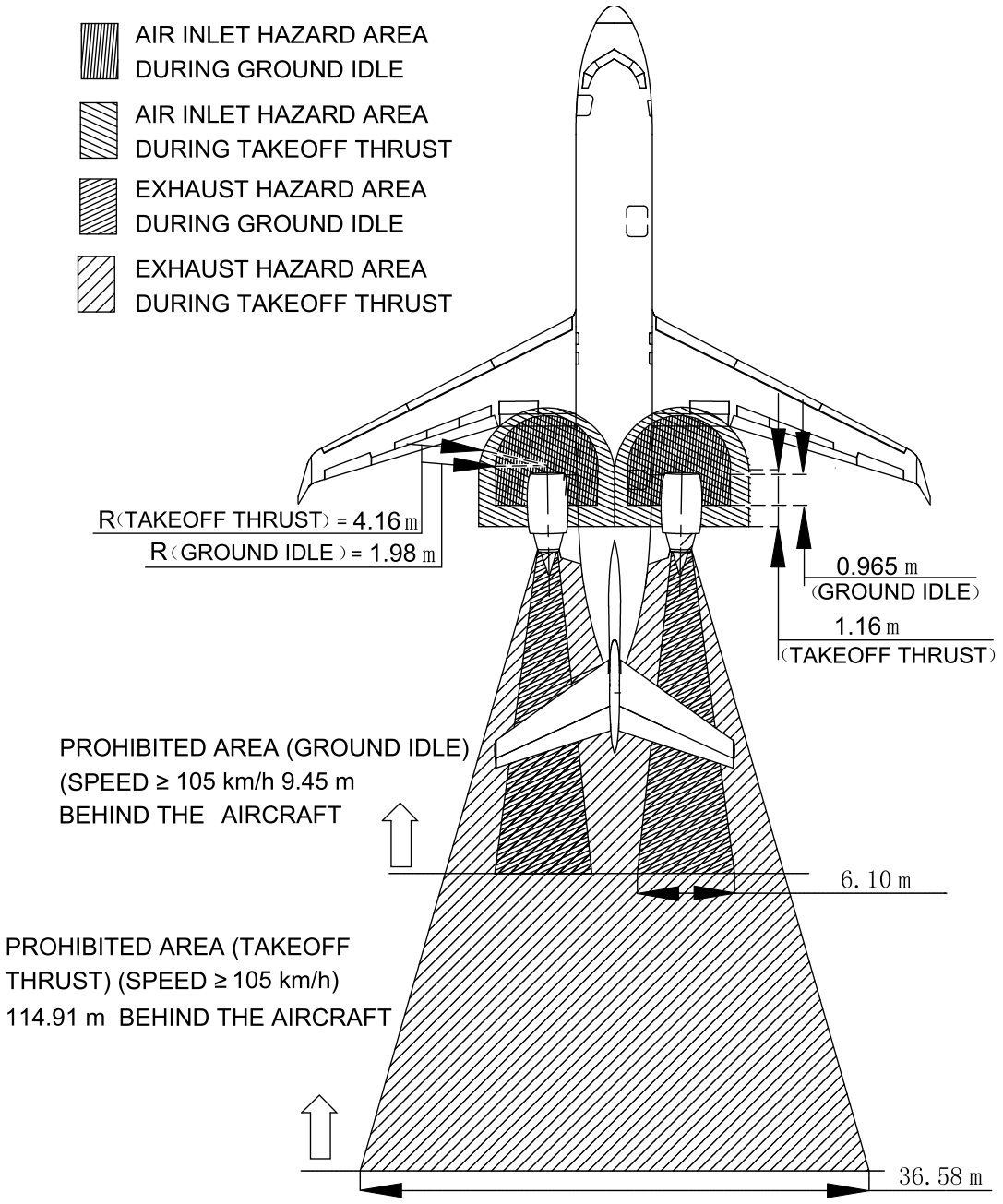
Danger Area of Engines

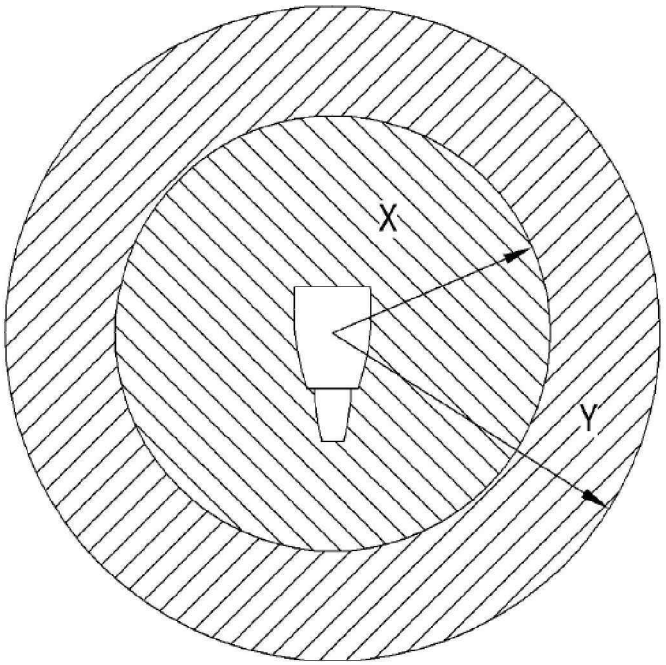
Applicable to : ALL



ICN-ARJ21-A-192006-A-SVV19-10801-A-005-01

Figure 1 Danger Area of Engines (Sheet 1 of 1)

Applicable to：ALL



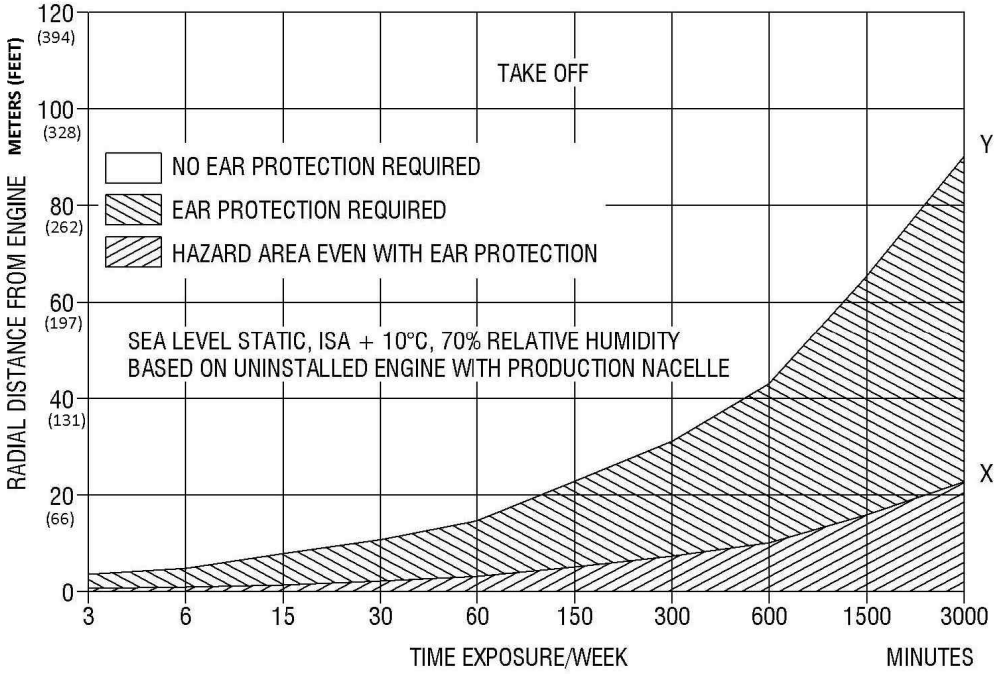
X. Indicates that working for a long time in this area may cause hearing impairment even with ear protection.

Y. Indicates that in this area, operators require ear protection and operate in accordance with the time and distance in Figure 3 and 4.

ICN-ARJ21-A-192006-A-SVV19-10803-A-002-01

Figure 2 Noise Hazard Areas of Engines (Sheet 1 of 1)

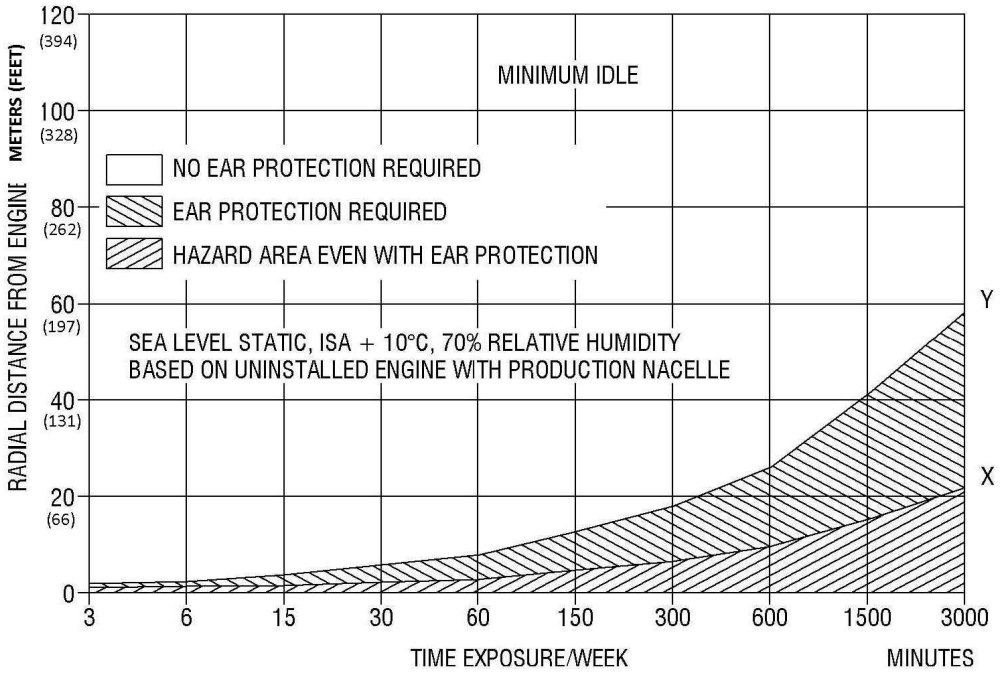
Applicable to：ALL



ICN-ARJ21-A-192006-A-SVV19-10804-A-003-01

Figure 3 Noise Hazard Areas of Engines (Takeoff Thrust) (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192006-A-SVV19-10805-A-003-01

Figure 4 Noise Hazard Areas of Engines (Idle Thrust) (Sheet 1 of 1)

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Chapter 7
Pavement Data

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General

A brief description of the pavement charts that follow will help in their use for airport planning. Each aircraft configuration is depicted with a minimum range of five loads imposed on the main landing gear to aid in interpolation between the discrete values shown. All curves for any single chart represent data based on rated loads and tire pressures, the data obtained at the maximum possible main gear load at maximum design taxi weight and AFT C.G.

Section 7.2 presents basic data on the landing gear footprint configuration, maximum design taxi loads, and tire sizes and pressures.

Maximum pavement loads for certain critical conditions at the tire-to-ground interface are shown in Section 7.3, with the tires having equal loads on the struts.

The charts in Section 7.4 are provided in order to determine these loads throughout the stability limits of the aircraft at rest on the pavement.

Section 7.5 describes the design curve of flexible pavement. The curve uses procedure in the S-77-1 note report "Development procedure for Flexible Road Design curve" issued in June 1977. The curve marked with 10000 coverage in the figure is used to calculate Aircraft Classification Number (ACN)

All Load Classification Number (LCN) curves (Sections 7.6 and 7.8) have been developed from a computer program based on data provided in International Civil Aviation Organization (ICAO) document 7920-AN/865/2, Aerodrome Design Manual, Part 2 ("Airport Physical Characteristics", Second Edition, 1965).

Section 7.7 describes the curve of rigid pavement design, which is based on Westergaard theory. This is consistent with the "procedures outlined in the Design of Concrete Airport Pavement" (1973 edition) and "Computer Program for Airport Pavement Design (" (1967 edition) published by the Portland Cement Association.

Section 7.9 provides Aircraft Classification Number (ACN) on flexible and rigid pavement. The evaluation method of ACN-PCN pavement bearing strength refers to ICAO Annex 14, airport (Volume 1) ACN-PCN method is a standard and international airport pavement evaluation and reporting method, which is used to replace various evaluation methods such as S, T, TT, LCN, AUW, ISWL, etc. ACN is the Aircraft Classification Number and PCN is the Pavement Classification Number. An aircraft having an ACN equal to or less than the PCN can operate on the pavement subject to no limitation on the tire pressure. Numerically, the ACN is two times the derived single-wheel loadexpressed in **1000 kg** (**2205 lb**). where the derived single wheel load is defined as the load on a single tire inflated to 181 psi (1.25 MPa) that would have the same pavement requirements as the aircraft. Computationally, the ACN/PCN system uses the PCA program PDILB for rigid pavements and S-77-1 for flexible pavements to calculate ACN values. The method of pavement evaluation is left up to the airport with the results of their evaluation presented as follows:

PCN			
PAVEMENT TYPE	**SUBGRADE CATEGORY**	**TIRE PRESSURE CATEGORY**	**EVALUATION METHOD**
R = Rigid	A = High	W = No Limit	T = Technical
F = Flexible	B = Medium	X - ≤1.5 MPa (217 psi)	U = Using Aircraft

PCN			
PAVEMENT TYPE	SUBGRADE CATEGORY	TIRE PRESSURE CATEGORY	EVALUATION METHOD
	C = Low	Y - ≤1 MPa (145 psi)	
	D = Ultra Low	Z - ≤0.5 MPa (73 psi)	

ACN values for flexible pavements are calculated for the following four subgrade categories:

High Strength - CBR 15

Medium Strength - CBR 10

Low Strength - CBR 6

Ultra Low Strength - CBR 3

ACN values for rigid pavements are calculated for the following four subgrade categories:

High Strength, k = 150 Mn/m^3 (550 pci)

Medium Strength, k = 80 Mn/m3^3 (300 pci)

Low Strength, k = 40 MN/m^3 (150 pci)

Ultra Low Strength, k = 20 MN/m^3 (75 pci)

Section 7.10 provides Aircraft Classification Rating (ACR) on flexible and rigid pavement. The ACR-PCR is based on the ACR/PCR method mentioned in the 3rd edition (2022) of Airport Design Manual released International Civil Aviation Organization. ACR is the Aircraft Classification Rating and PCR is the Pavement Classification Rating. ACR is the Aircraft Classification Rating and PCR is the corresponding Pavement Classification Rating. An aircraft having an ACR equal to or less than the PCR can operate on the pavement subject to no limitation on the tire pressure. Numerically, the ACN is two times of single wheel load (in hundred kilograms). The equivalent single wheel load is defined as the load of a single tire (tyre) inflated to 1.50MPa (218psi). In this case, the tire has the same pavement requirements as airplane. In calculation, ACR/PCR method uses Federal Aviation Administration (FAA) ICAO-ACR procedure to calculate ACR values on rigid pavement and flexible pavement. The airport authority must decide on the pavement analysis method. The PCR assessment results are List as follows:

PCR			
PAVEMENT TYPE	SUBGRADE CATEGORY	TIRE PRESSURE CATEGORY	EVALUATION METHOD
R = Rigid	A = High	W = No Limit	T = Technical
F = Flexible	B = Medium	X - ≤1.75 MPa (254 psi)	U = Experience Assessment
	C = Low	Y - 1.25 MPa (181 psi)	
	D = Ultra Low	Z - ≤0.5 MPa (73 psi)	

On any weight of rigid and flexible pavement, ACR calculation is carried out according to the following four base classes (E):

- A High Strength E= 200 MPa (29008 psi)

- B Medium Strength E= 120 MPa (17405 psi)
- C Low Strength E= 80 MPa (11603 psi)
- D Ultra Low Strength E= 50 MPa (7252 psi)

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Landing Gear Footprint

Model	ARJ21-700 STD	ARJ21-700 ER
Maximum Taxi Weight	40580 kg / 89464 lb	43580 kg / 96077 lb
NLG Tire Size	24×7.7	24×7.7
NLG Tire Pressure	0.66 MPa / 96 PSI	0.7 MPa / 101PSI
MLG Tire Size	H40×14 - 19	H40×14 - 19
MLG Tire Pressure	0.93 MPa / 135 PSI	0.99 MPa / 144 PSI

Applicable to : ALL

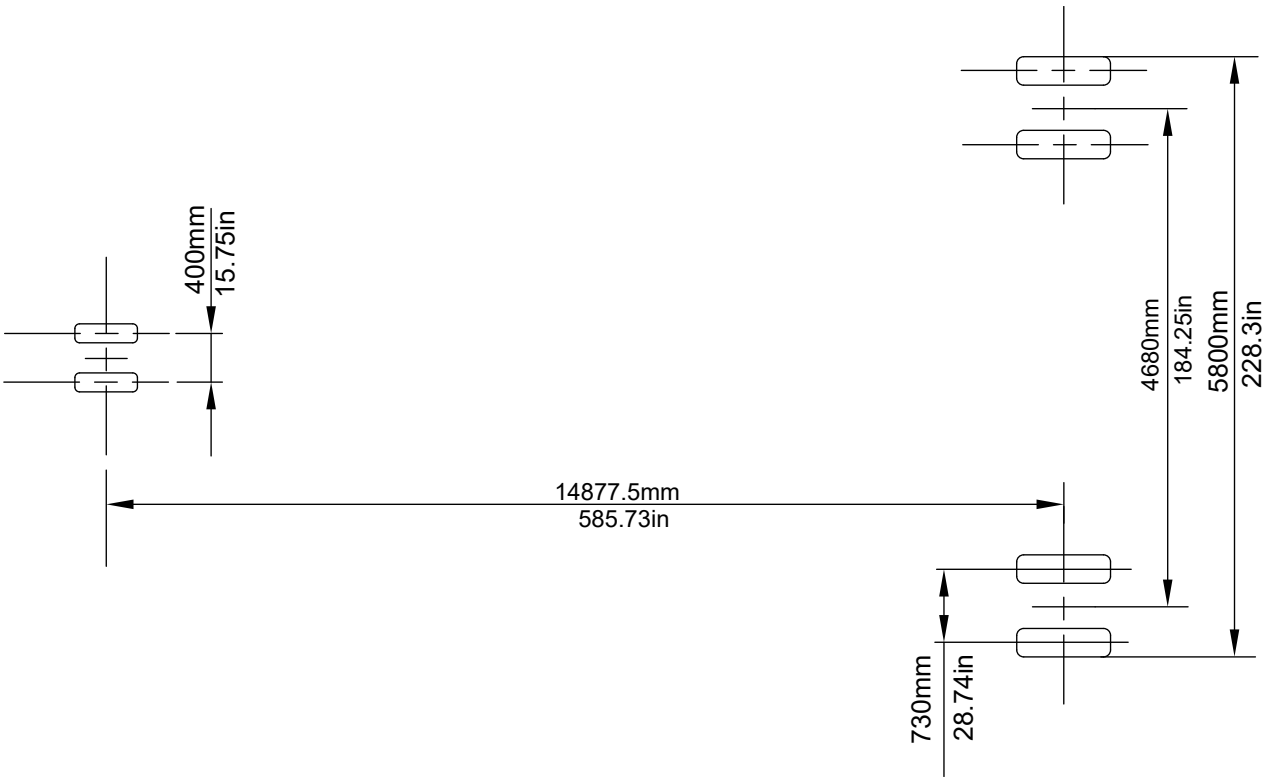

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Figure 1 Landing Gear Footprint (Sheet 1 of 1)

Maximum Pavement Load

V_{NG}: maximum vertical nose gear ground load at most forward center of gravity.

V_{MG}: maximum vertical main gear ground load at most aft center of gravity.

H : maximum horizontal ground load caused by braking.

NOTE: All loads calculated using aircraft maximum design taxi weight.

Applicable to : ALL

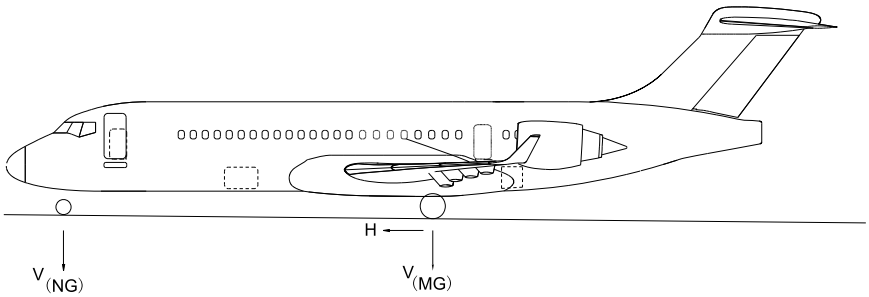

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Figure 1 Maximum Pavement Load (Sheet 1 of 1)

Model	Maximum Taxi Weight	V_{NG}		V_{MG} (Per Landing Gear)	H (Per Landing Gear)	
		Static At Most FWD C.G.	Steady Braking Acceleration: -3m/s²	Static At Most AFT C.G.	Steady Braking Acceleration: -3m/s²	Continuous Braking (μ= 0.8)
STD	40580 kg 89464 lb	4268 kg 9410 lb	5261 kg 11578 lb	19417 kg 42808 lb	6306 kg 13903 lb	15534 kg 34246 lb
ER	43580 kg 96077 lb	4423 kg 9752 lb	5489 kg 12101 lb	20692 kg 45618 lb	6773 kg 14931 lb	16554 kg 36494 lb
Business Jet	43580 kg 96077 lb	4423 kg 9752 lb	5489 kg 12101 lb	20692 kg 45618 lb	6773 kg 14931 lb	16554 kg 36494 lb

Landing Gear Loading on Pavement

Applicable to : ALL

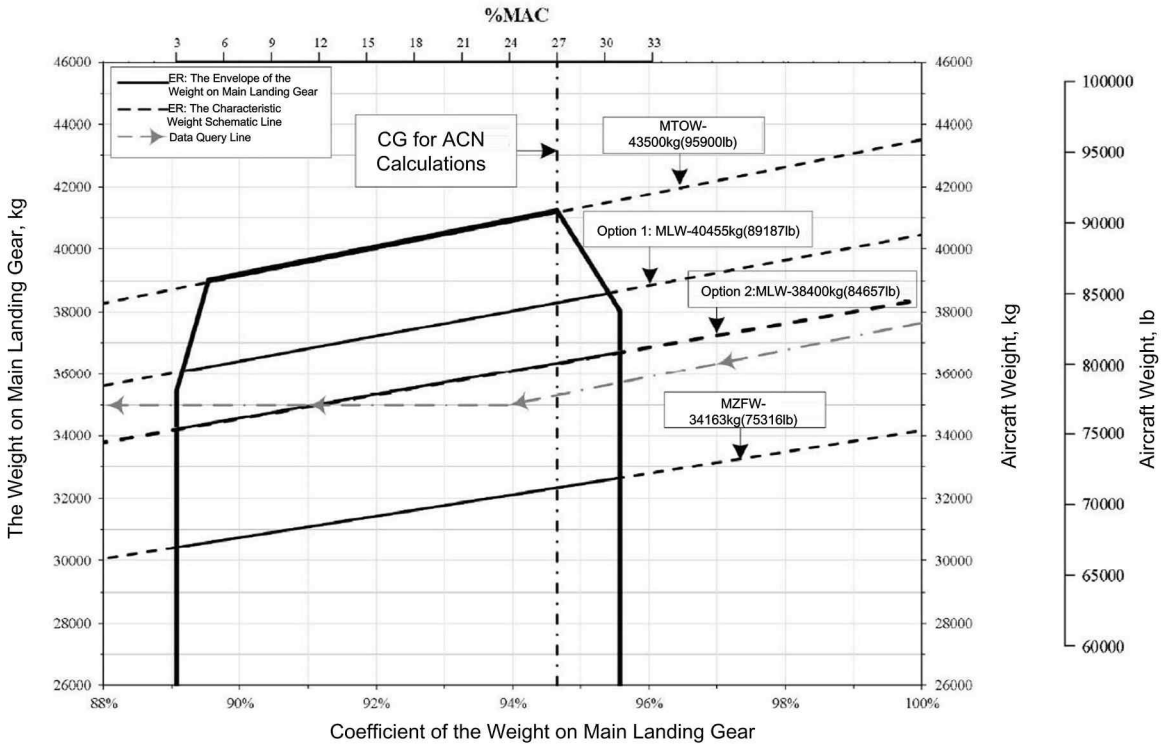

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Figure 1 Landing Gear Loading on Pavement (Sheet 1 of 1)

Flexible Pavement Requirements

To determine the flexible pavement thickness, the CBR, the annual departures and the main gear load must be known.

Example:

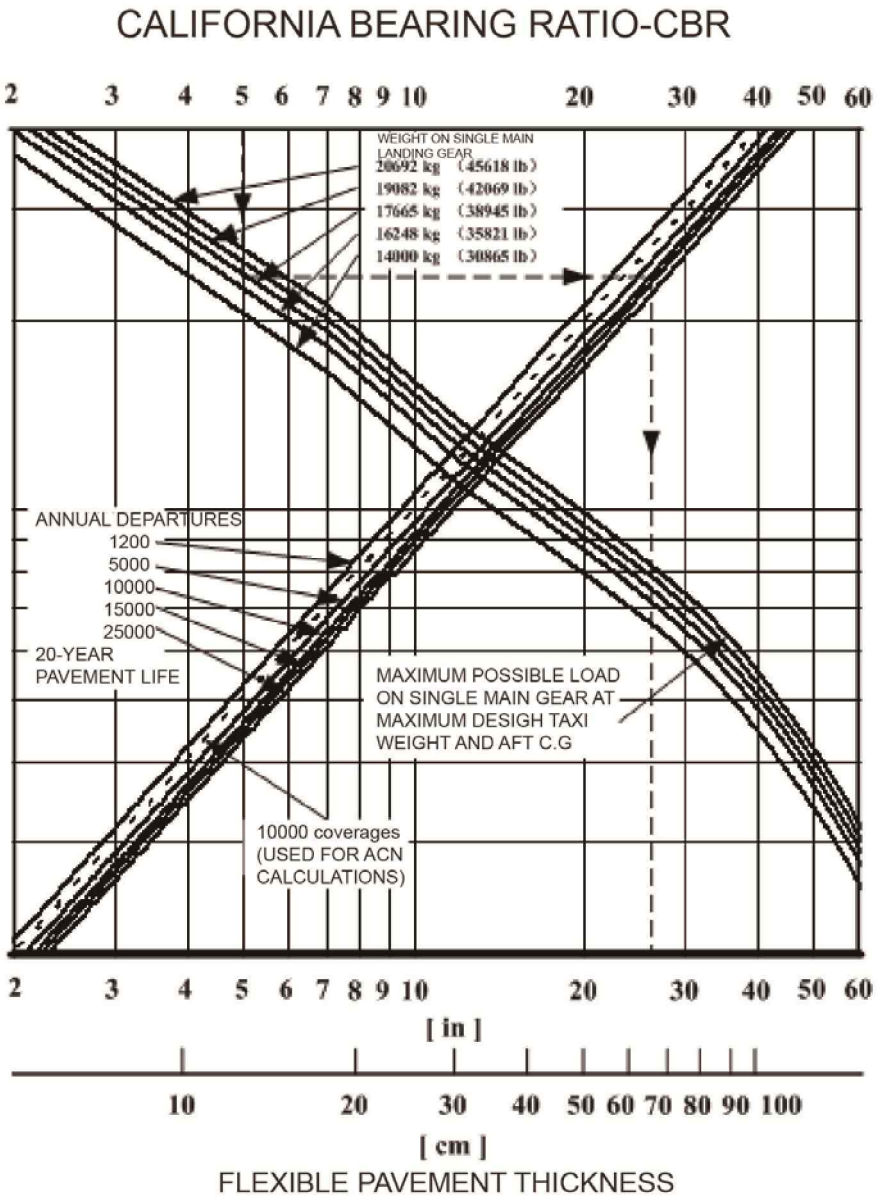
— CBR 5

— Annual Departures 10000

— Weight on Single Main Landing Gear 17665 kg (38945 lb)

For these conditions, flexible pavement thickness is at 66.4 cm (26.1 in).

Applicable to：ALL



ICN-ARJ21-A-192007-A-SVV19-10813-A-002-01

Figure 1 Main Landing Gear Tire size: H40×14.0-19 (Sheet 1 of 1)

NOTE: Main Landing Gear Tires Pressure Stays at 9.9 bar (144 psi).

Flexible Pavement LCN Conversion

To determine the aircraft weight that can be accommodated on a particular flexible pavement, both the Load Classification Number (LCN) of the pavement and the thickness must be known.

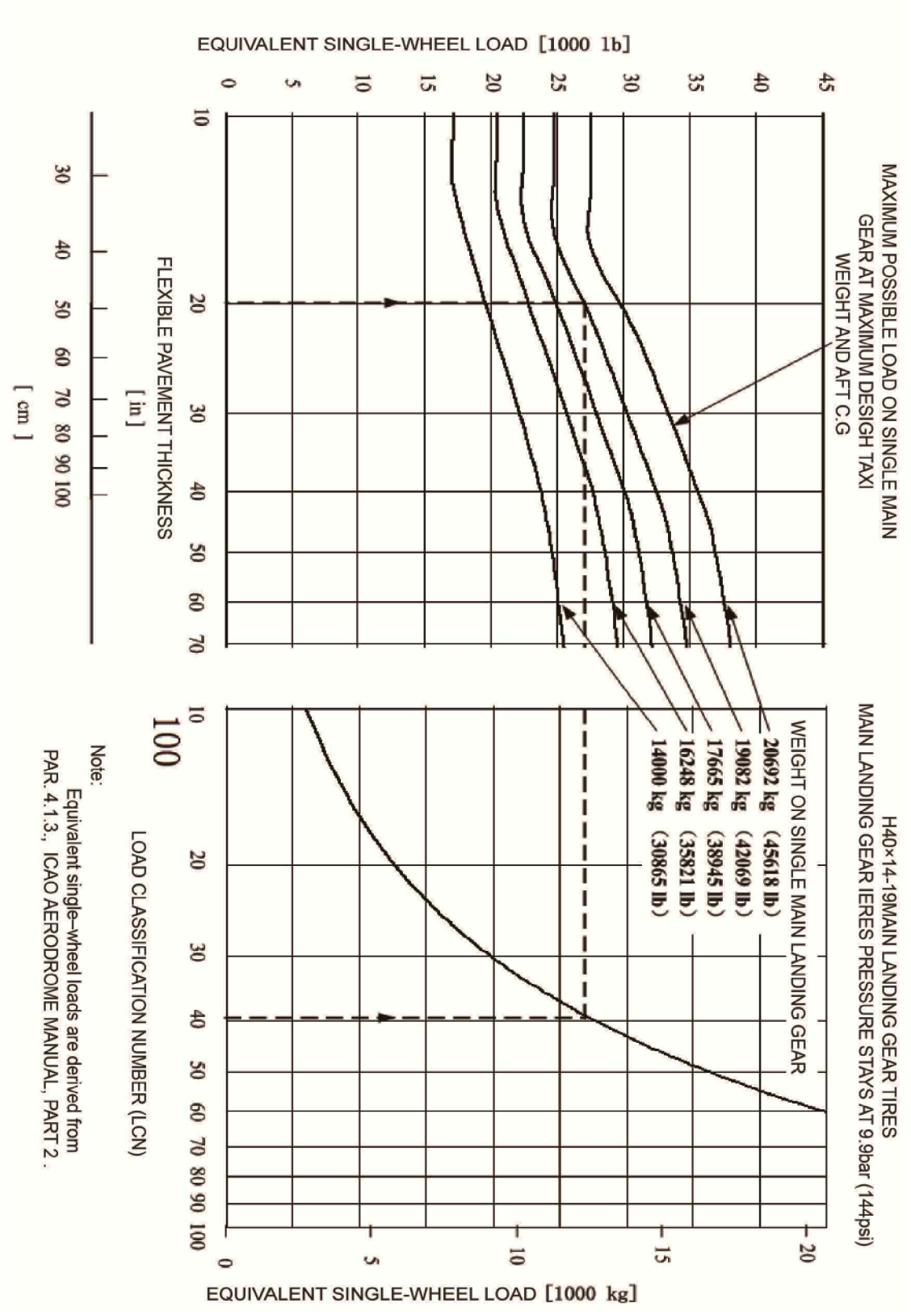
Example:

— Flexible Pavement Thickness 50.8 cm (20 in)

— LCN 39

For these conditions, the apparent maximum allowable weight permissible on the single main landing gear is 19082 kg (42069 lb).

Applicable to：ALL



Note:

Equivalent single-wheel loads are derived from PAR. 4.1.3., ICAO AERODROME MANUAL, PART 2.

Figure 1 Flexible Pavement LCN Conversion (Sheet 1 of 1)

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Rigid Pavement Requirements

To determine the rigid pavement thickness, the subgrade strength (k), the allowable working stress and single main gear load must be known.

Example:

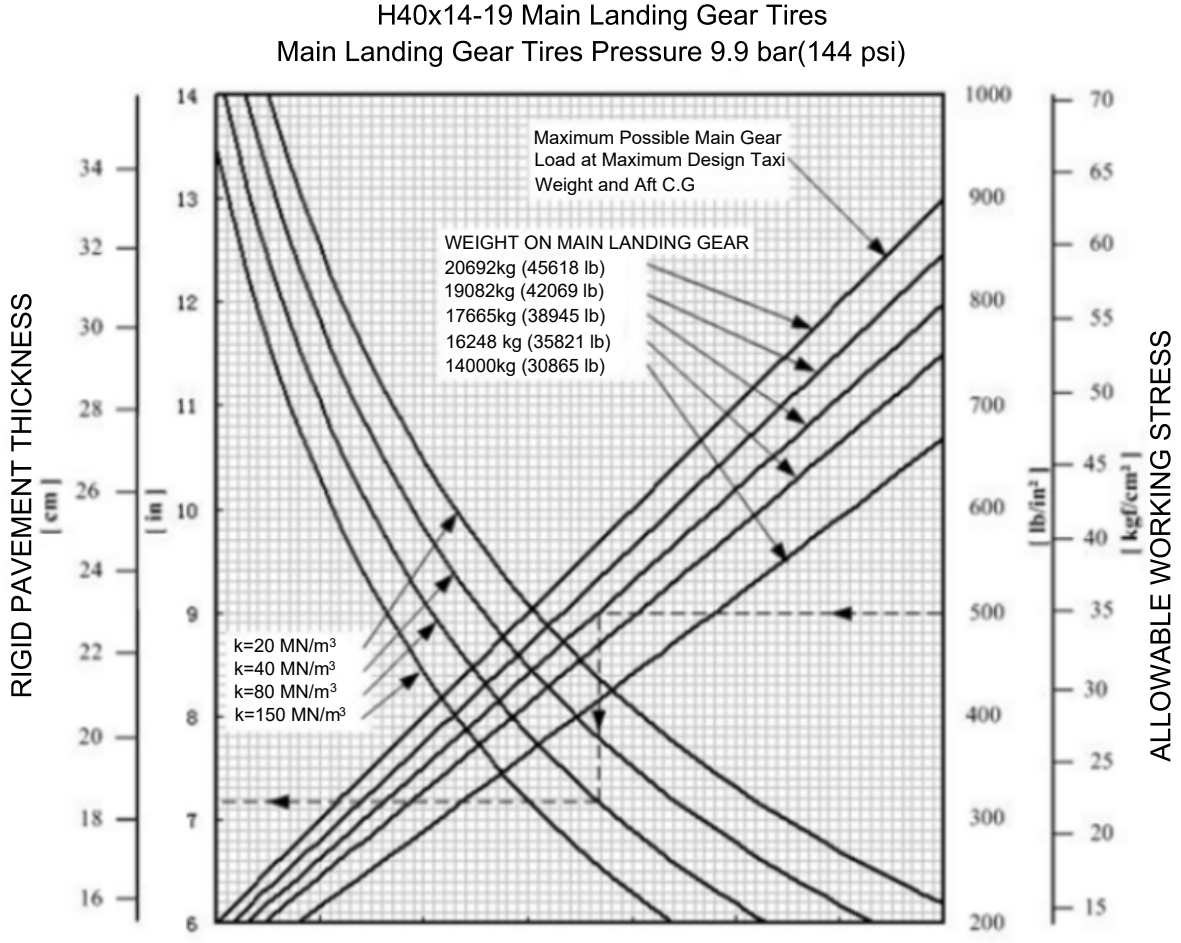
— Subgrade Strength k = 80 MN/m3 (300 lb/in3)

— Allowable Working Stress 35.2 kgf/cm2 (500 lbf/in2)

— Weight on Single Main Landing Gear 17665 Kg (38945 Lb)

For these conditions, the rigid pavement thickness is 18.3 cm (7.2 in).

Applicable to：ALL



ICN-ARJ21-A-192007-A-SVV19-10815-A-003-01

Figure 1 Rigid Pavement Requirements (Sheet 1 of 1)

NOTE: The rigid pavement thickness parameters of the four track subgrade strength (k values) corresponding to the maximum load-bearing reference line of a single master in the figure are accurate. The values obtained by using the maximum load reference line and any value of k are exact. For loads less that maximum.the curves are exact for k=80MN/m³ but deviate slightly for other values of k.

Rigid Pavement LCN Conversion

To determine the aircraft weight that can be accommodated on a particular rigid pavement, both the LCN of the pavement and the radius of relative stiffness (L) of the pavement must be known.

Example:

— LCN 43

— Radius of Relative Stiffness 90.9 cm (35.8 in)

For these conditions, the maximum allowable weight on a single main landing gear is 19082 kg(42069 lb).

Radius of Relative Stiffness (L)

Applicable to : ALL

VALUES IN INCHES

$$L = \sqrt[4]{\frac{Ed^3}{12(1-\mu^2)k}} = 24.1652\sqrt[4]{\frac{d^3}{k}}$$

NOTE: $E = 4 \times 10^6$ psi (YOUNG'S MODULUS)
k (SUBGRADE MODULUS, lbf/in^3)
d (RIGID PAVEMENT THICKNESS, in)
$\mu = 0.15$ (POISSON'S RATIO)

ICN-ARJ21-A-192007-A-SVV19-10817-A-002-01

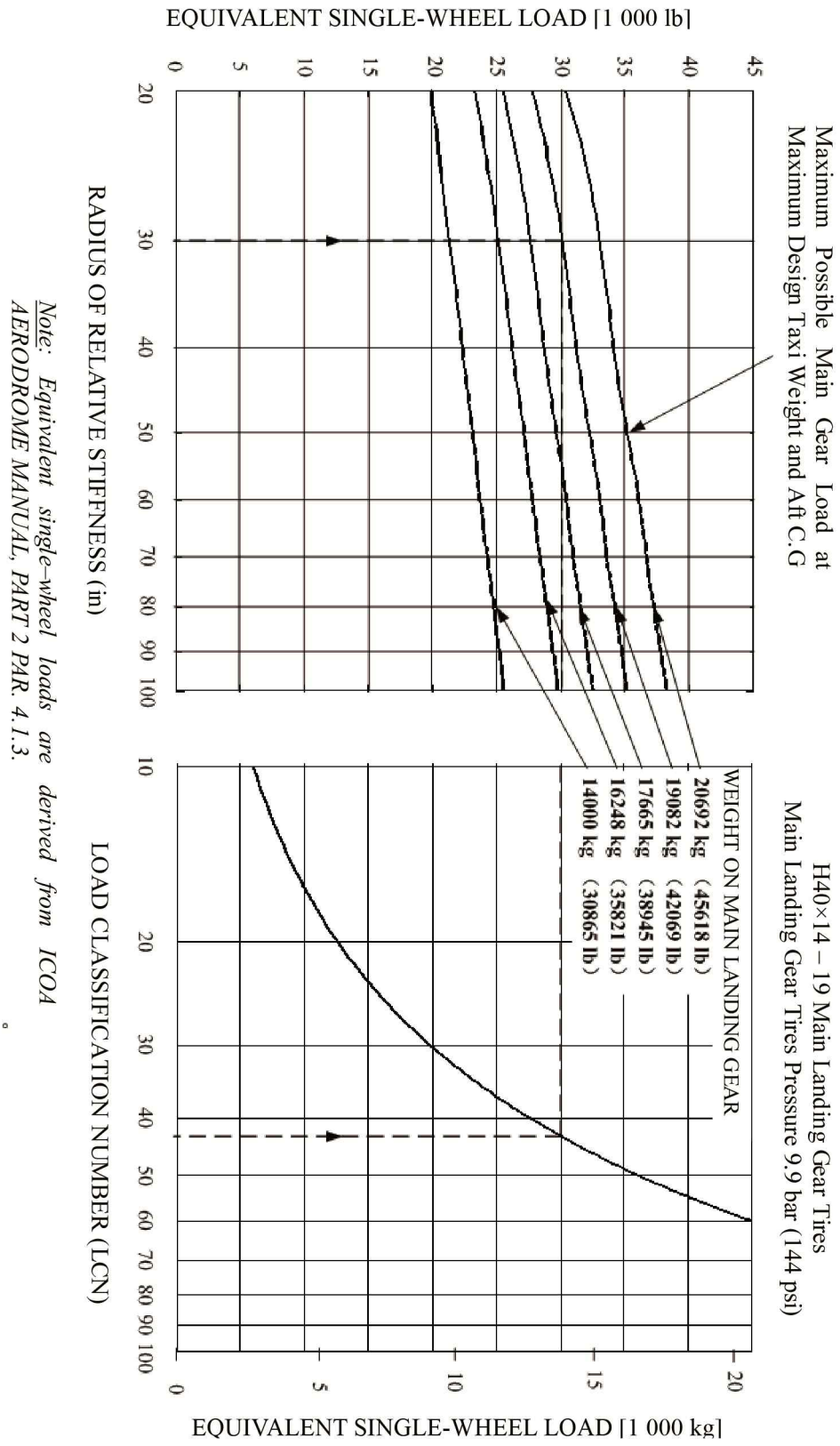
Figure 1 Radius of Relative Stiffness (Sheet 1 of 1)

d	k=75	k=100	k=150	k=200	k=250	k=300	k=350	k=400	k=500	k=550
6.00	31.48	29.30	26.47	24.63	23.30	22.26	21.42	20.72	19.59	19.13
6.50	33.43	31.11	28.11	26.16	24.74	23.64	22.74	22.00	20.80	20.31
7.00	35.34	32.89	29.72	27.65	26.15	24.99	24.04	23.25	21.99	21.47
7.50	37.22	34.63	31.29	29.12	27.54	26.32	25.32	24.49	23.16	22.61
8.00	39.06	36.35	32.85	30.57	28.91	27.62	26.58	25.70	24.31	23.74
8.50	40.88	38.04	34.37	31.99	30.25	28.91	27.81	26.90	25.44	24.84
9.00	42.67	39.71	35.88	33.39	31.58	30.17	29.03	28.08	26.55	25.93
9.50	44.43	41.35	37.36	34.77	32.89	31.42	30.23	29.24	27.65	27.00
10.00	46.18	42.97	38.83	36.14	34.17	32.65	31.42	30.39	28.74	28.06
10.50	47.90	44.57	40.28	37.48	35.45	33.87	32.59	31.52	29.81	29.11
11.00	49.60	46.16	41.71	38.81	36.71	35.07	33.75	32.64	30.87	30.14
11.50	51.28	47.72	43.12	40.13	37.95	36.26	34.89	33.74	31.91	31.16
12.00	52.94	49.27	44.52	41.43	39.18	37.44	36.02	34.84	32.95	32.17
12.50	54.59	50.80	45.90	42.72	40.40	38.60	37.14	35.92	33.97	33.17
13.00	56.22	52.32	47.27	43.99	41.61	39.75	38.25	36.99	34.99	34.16
13.50	57.83	53.82	48.63	45.26	42.80	40.89	39.35	38.06	35.99	35.14
14.00	59.43	55.31	49.98	46.51	43.98	42.02	40.44	39.11	36.99	36.12
14.50	61.02	56.78	51.31	47.75	45.16	43.15	41.51	40.15	37.97	37.08
15.00	62.59	58.25	52.63	48.98	46.32	44.26	42.58	41.19	38.95	38.03
15.50	64.15	59.70	53.94	50.20	47.47	45.36	43.64	42.21	39.92	38.98
16.00	65.69	61.13	55.24	51.41	48.62	46.45	44.70	43.23	40.88	39.92
16.50	67.23	62.56	56.53	52.61	49.75	47.54	45.74	44.24	41.84	40.85
17.00	68.75	63.98	57.81	53.80	50.88	48.61	46.77	45.24	42.78	41.78
17.50	70.26	65.38	59.08	54.98	52.00	49.68	47.80	46.23	43.72	42.70
18.00	71.76	66.78	60.34	56.15	53.11	50.74	48.82	47.22	44.66	43.61
19.00	74.73	69.54	62.84	58.48	55.31	52.84	50.84	49.17	46.51	45.41
20.00	77.66	72.27	65.30	60.77	57.47	54.91	52.84	51.10	48.33	47.19

d	k=75	k=100	k=150	k=200	k=250	k=300	k=350	k=400	k=500	k=550
21.00	80.55	74.96	67.74	63.04	59.62	56.96	54.81	53.01	50.13	48.95
22.00	83.41	77.63	70.14	65.28	61.73	58.98	56.75	54.89	51.91	50.69
23.00	86.24	80.26	72.52	67.49	63.83	60.98	58.68	56.75	53.67	52.41
24.00	89.04	82.86	74.87	69.68	65.90	62.96	60.58	58.59	55.41	54.11
25.00	91.81	85.44	77.20	71.84	67.95	64.92	62.46	60.41	57.14	55.79

Reference: Portland Cement Association.

Applicable to : ALL



Note: Equivalent single-wheel loads are derived from ICOA AERODROME MANUAL, PART 2 PAR. 4.1.3.

Figure 2 Rigid Pavement LCN Conversion (Sheet 1 of 1)

The above parts of this section 7.8 is about the radius of relative stiffness L calculated on this case of the Young' s modulus of elasticity E = 4×10^6psi, Poisson's ratio μ = 0.15. When the value of Young' s modulus of elasticity E or Poisson's ratio μ equals other value, the value of originally obtained radius of relative stiffness L shall be multiplied by a coefficient.

Example:

— E = 3×10^6 psi

In accordance with the query graph from Young's modulus of elasticity E to radius of relative stiffness L, it can determine coefficient of the Young' s modulus of elasticity E to equal 0.931.

Similarly, it can determine the coefficient of Poisson's ratio μ.

Applicable to：ALL

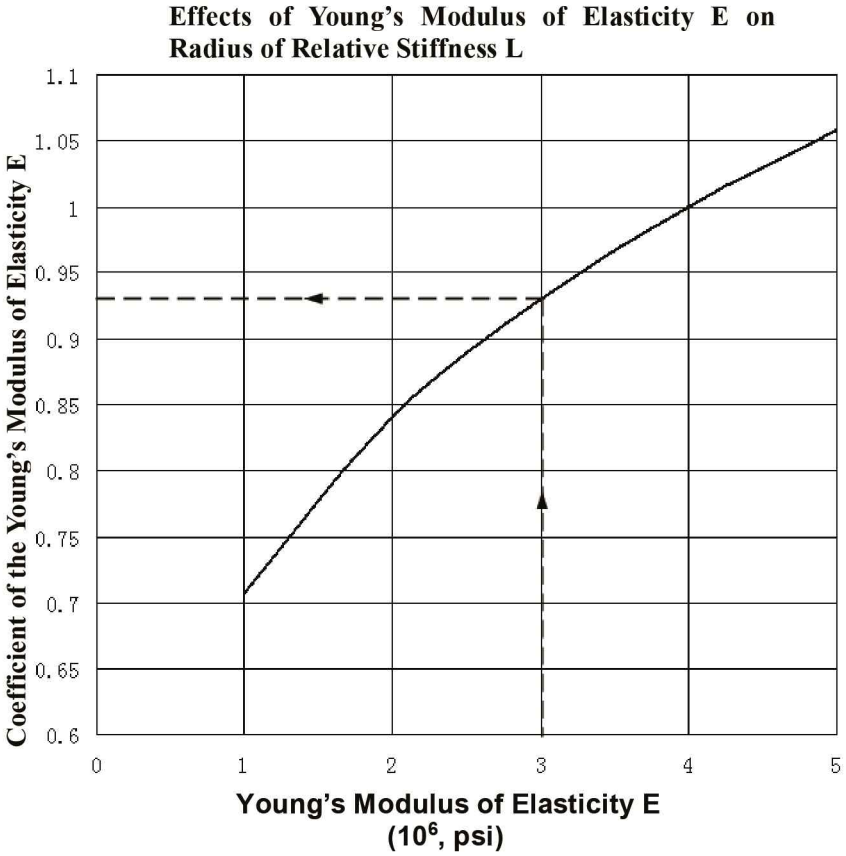


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Figure 3 Young's modulus (Sheet 1 of 1)

Applicable to：ALL

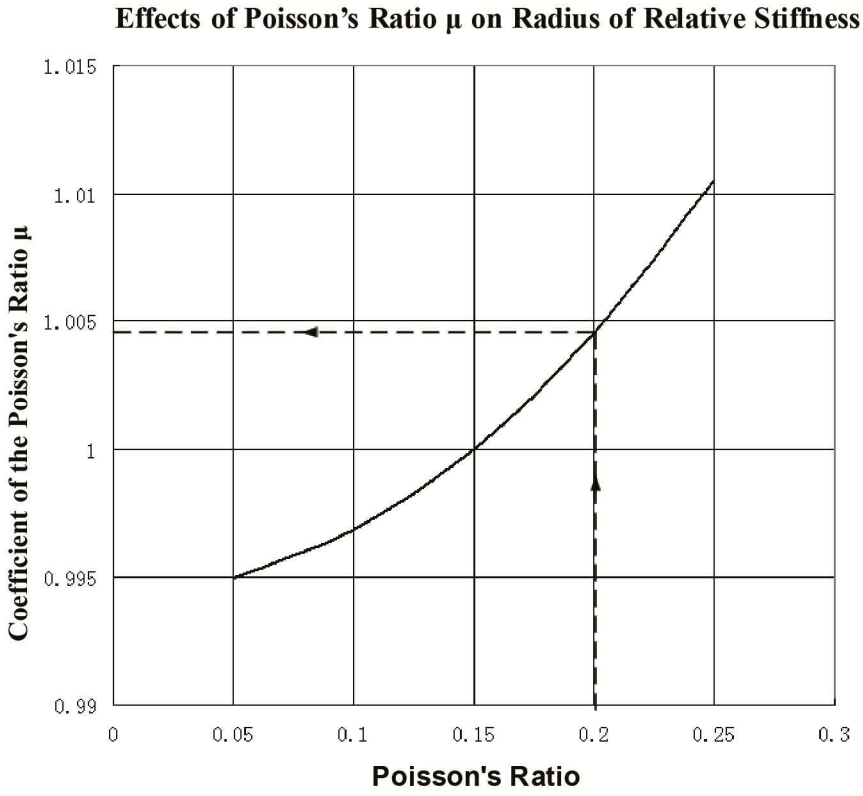

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Figure 4 Poisson's Ratio (Sheet 1 of 1)

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ACN/PCN Reporting System - Flexible and Rigid Pavements

To determine the ACN of an aircraft on flexible or rigid pavement, both the aircraft gross weight and the subgrade strength category must be known.

NOTE: An aircraft with an ACN equal to or less than the reported PCN can operate on that pavement, subject to any limitation on the tire pressure.

The table below provides ACN data of ARJ21-700 aircraft. If the ACN for an intermediate weight between Operating Empty Weight (OEW) and Maximum Taxi Weight (MTW) of the aircraft is required, Figures 1, 2, 3 and 4 should be consulted.

Model	MTW OEW kg/lb	Load on One MLG Leg %	Tire Pressure MPa/PSI	ACN for Rigid Pavement Subgrades – MN/m³				ACN for Flexible Pavement Subgrades - CBR			
				High 150	Medium 80	Low 40	Ultra Low 20	High 15	Medium 10	Low 6	Ultra Low 3
STD	40580/89464 24955/55016	94.65%	0.93/135	21.5 12.1	23.1 13	24.7 14	26 14.8	19.5 11.1	20.7 11.7	23.5 12.9	27.2 15.1
ER	43580/96077 24955/55016	94.65%	0.99/144	23.9 12.3	25.6 13.3	27.2 14.2	28.5 15	21.9 11.4	22.8 11.8	25.8 12.9	29.6 15.1

Applicable to : ALL

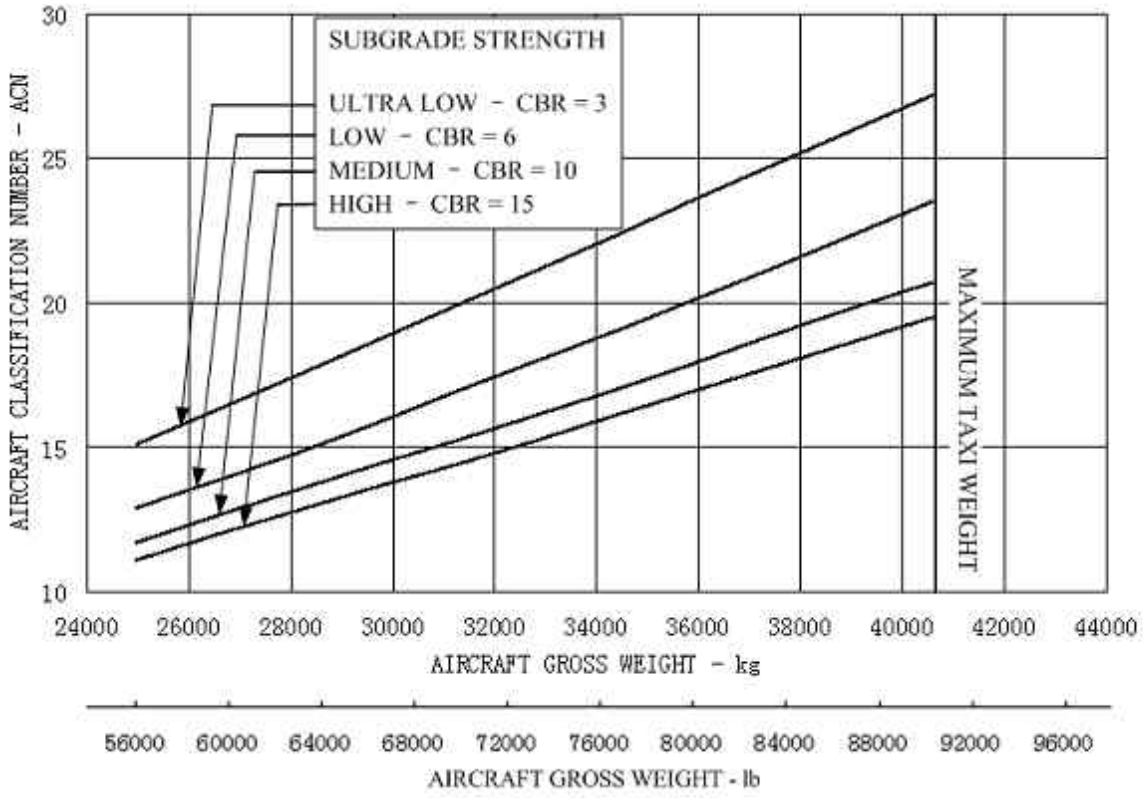

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Figure 1 ARJ21-700 STD ACN for Flexible Pavement (Sheet 1 of 1)

NOTE: Tire size: H40×14.0 - 19

Tire pressure: 135 PSI (0.93 MPa)

Applicable to：ALL

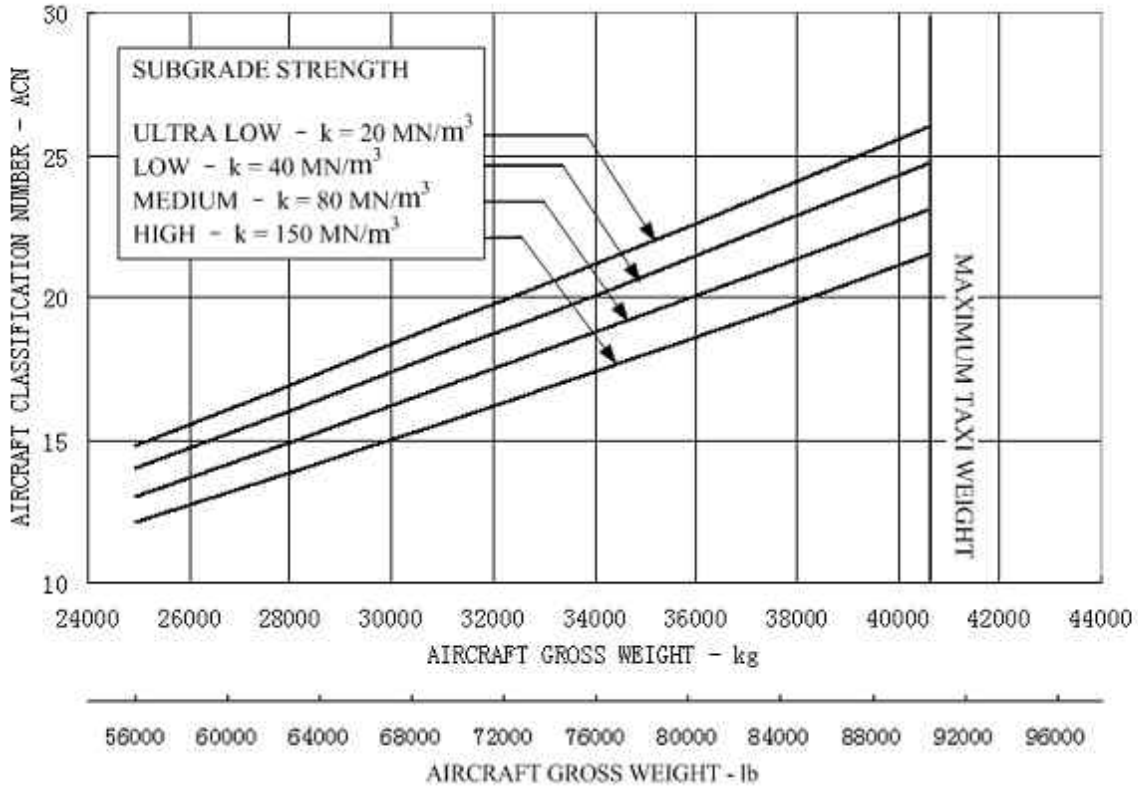

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Figure 2 ARJ21-700 STD ACN for Rigid Pavement (Sheet 1 of 1)

NOTE: Tire size: H40×14.0 - 19

Tire pressure: 135 PSI (0.93 MPa)

Applicable to : ALL

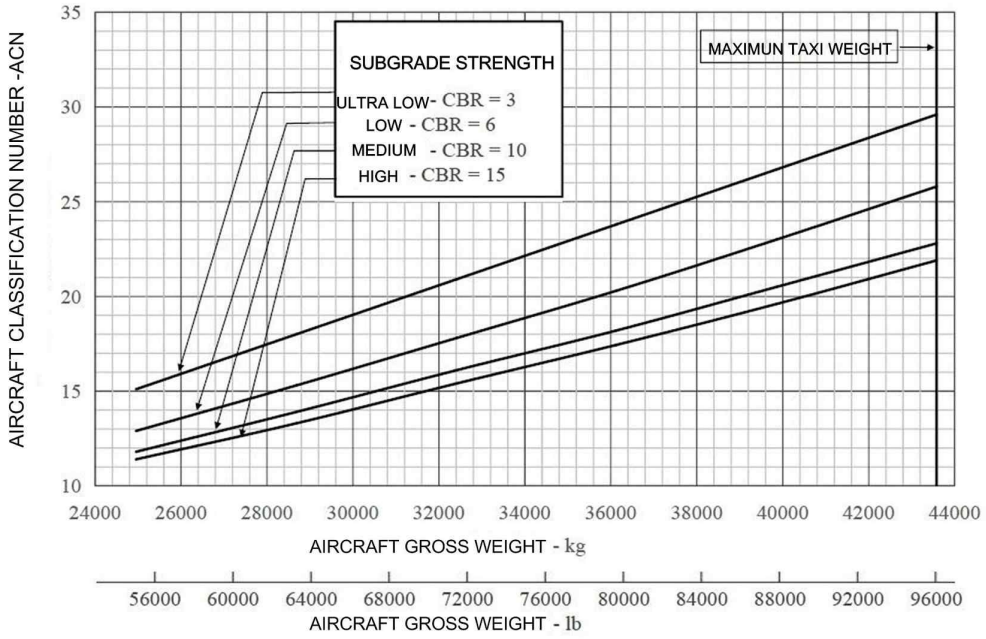

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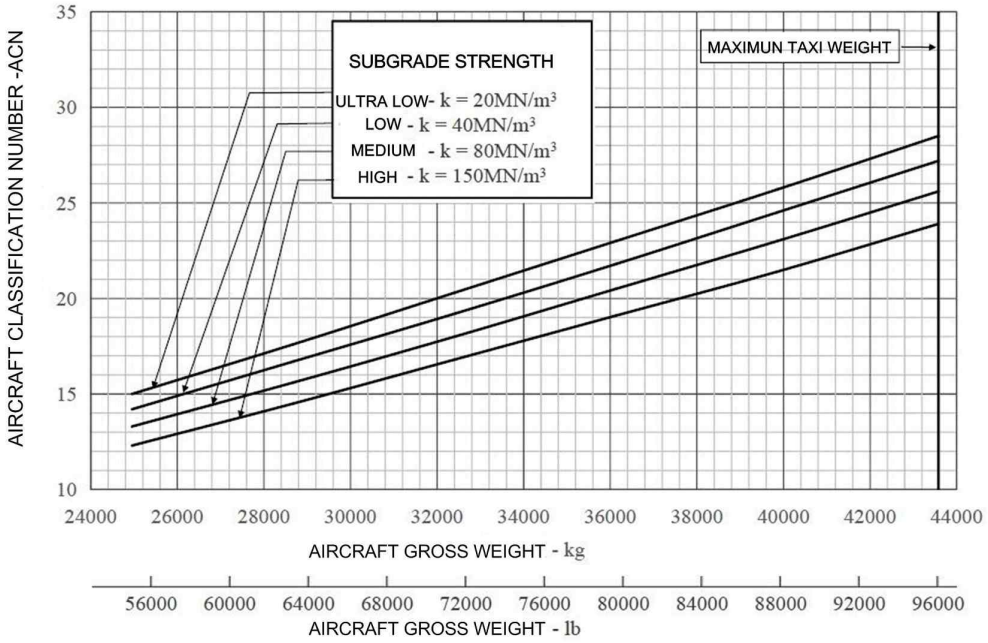
Figure 3 ARJ21-700 ER ACN for Flexible Pavement (Sheet 1 of 1)

NOTE: Tire size: H40×14.0 - 19

Tire pressure: 144 psi (0.99 MPa)

Applicable to：ALL



ICN-ARJ21-A-192007-A-SVV19-10823-A-003-01

Figure 4 ARJ21-700 ER ACN for Rigid Pavement (Sheet 1 of 1)

NOTE: Tire size: H40×14.0 - 19

Tire pressure: 144 psi (0.99 MPa)

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ACR Aircraft Classification Rating

This section gives the ACR values for Aircraft on rigid and flexible surfaces with different roadbed strengths, as shown in Figure 1-4.

To calculate the ACR value of airplane on rigid and flexible pavement, you must also know the weight and foundation strength of the airplane.

List 1 also gives the ACR value of the Aircraft in the form of List compartment.

Approximately, the following linear interpolation formula can be used to get the ACR of the Aircraft under the calculated weight, as follows :

Weight of ACR=ACR min +(ACR max-ACR min) × (Weight of Operations -25000kg)/(MTW -25000kg)

Approximately, linear interpolation can be used to get the allowable Operations weight of a Aircraft under a given pavement PCR, as follows:

Weight of operations=25000kg +(MTW -25000kg) × (PCR-ACR min)/(ACR max-ACR min)

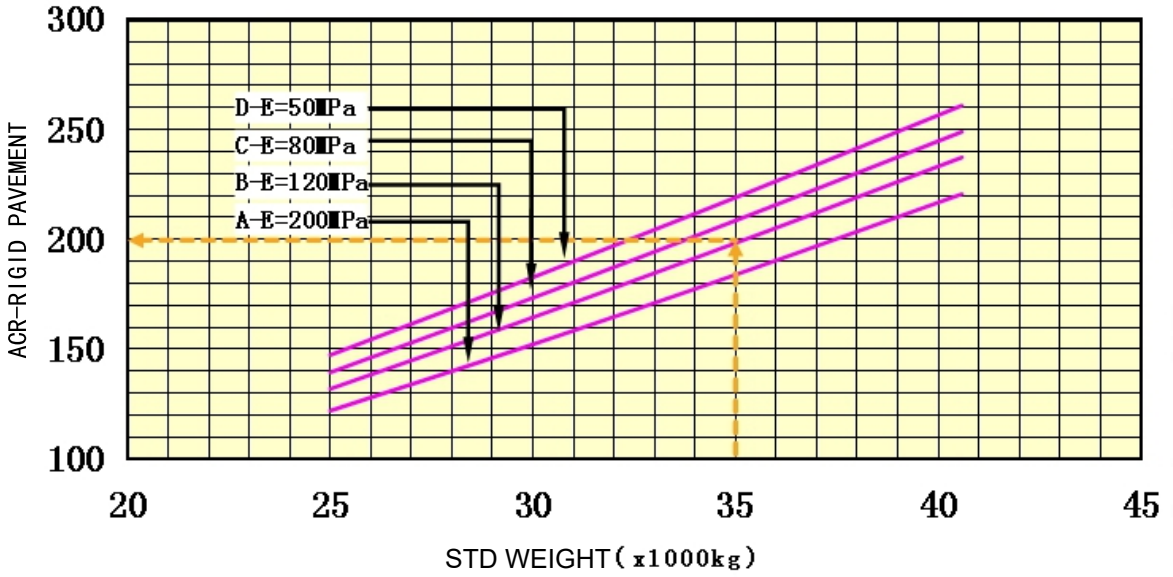
In the formula: The ACR max is the ACR value under the corresponding MTW. The ACR min is the ACR value at 25000kg.

NOTE: CG in the title of the figure is used for the calculation of ACR.

Table 1 ACR Value

Model	MTW/ Minimum Weight(kg)	Main landing gear on one side Bearing (%)	Main landing gear tire Pressure (MPa)	ACR under rigid pavement E-MPa				ACR under flexible runway E-MPa			
				High A 200	Middle B 120	Low C 80	Ultralow D 50	High A 200	Middle B 120	Low C 80	Ultralow D 50
AR J21-700 STD	40580	47.69	0.99	221	237	249	261	170	190	206	236
	25000	47.69	0.99	122	132	140	147	104	112	119	128
AR J21-700 ER	43580	47.33	0.99	239	256	269	281	182	204	223	257
	25000	47.33	0.99	121	131	138	146	103	111	118	127
note: The minimum weight is only used to generate ACR curve.											

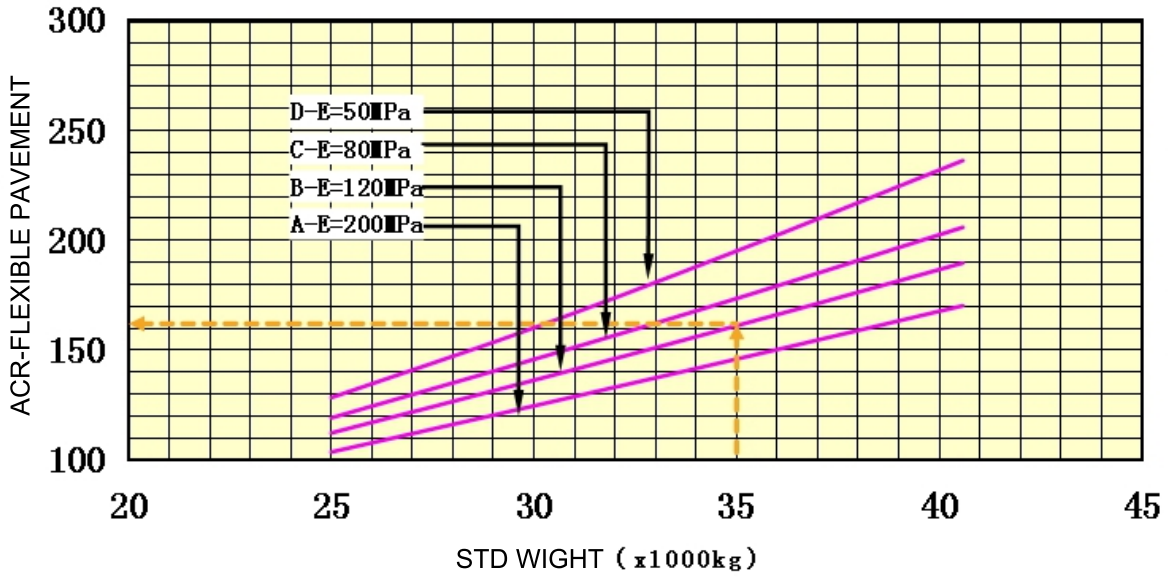
Applicable to：ALL



ICN-ARJ21-A-192007-A-SVV19-18038-A-003-01

Figure 1 Type ARJ21-700 STD, ACR Rigid Pavement (MTW 40580kg,CG 30.17%MAC) (Sheet 1 of 1)

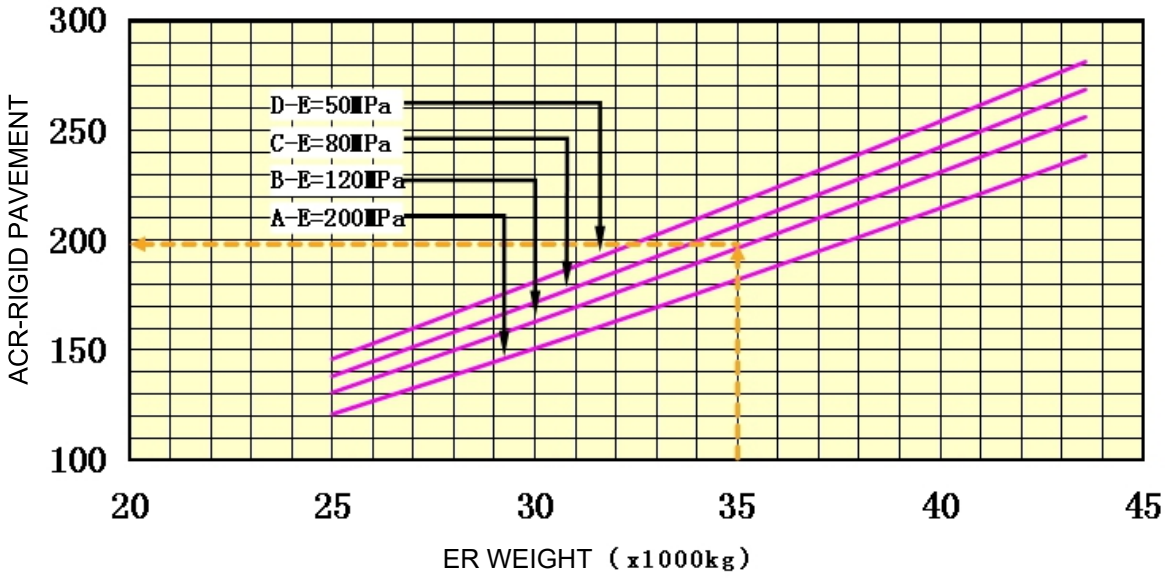
Applicable to：ALL



ICN-ARJ21-A-192007-A-SVV19-18039-A-003-01

Figure 2 Type ARJ21-700 STD, ACR Flexible Pavement (MTW 40580kg,CG 30.17%MAC) (Sheet 1 of 1)

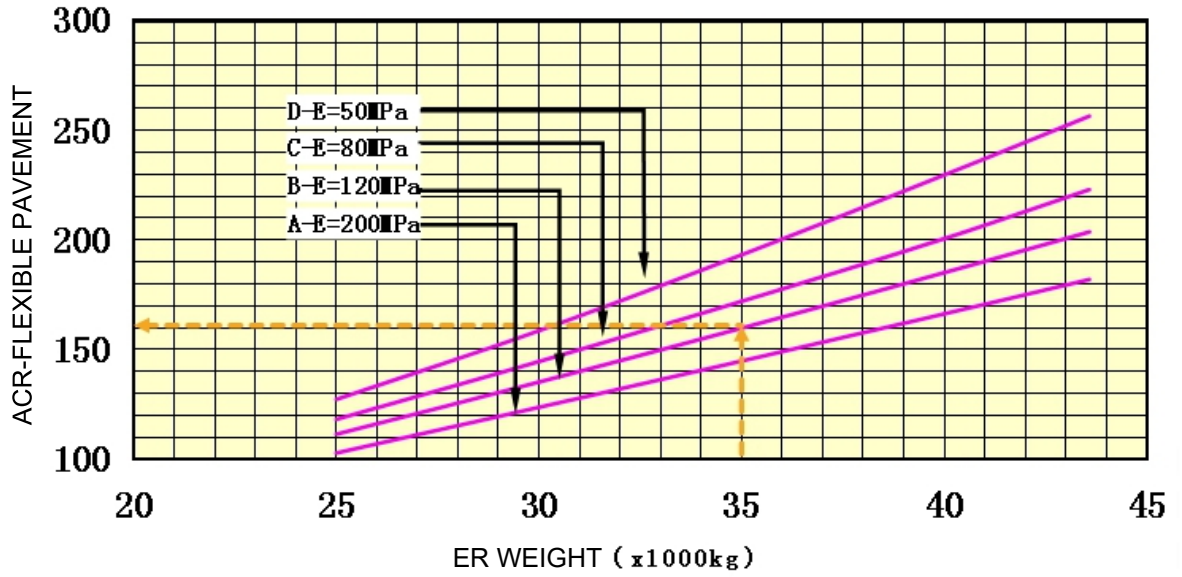
Applicable to：ALL



ICN-ARJ21-A-192007-A-SVV19-18040-A-003-01

Figure 3 Type ARJ21-700 ER, ACR Rigid Pavement (MTW 43580kg,CG 27%MAC) (Sheet 1 of 1)

Applicable to：ALL



ICN-ARJ21-A-192007-A-SVV19-18041-A-003-01

Figure 4 Type ARJ21-700 ER, ACR Flexible Pavement (MTW 43580kg,CG 27%MAC) (Sheet 1 of 1)

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