

WBM

Weight and Balance Manual



The content of this document is the property of AVIONS DE TRANSPORT REGIONAL. It is supplied in confidence and commercial security on its content must be maintained. It must not be used for any purpose other than that for which it is supplied, nor may information contained in it be disclosed to unauthorized persons. It must not be reproduced in whole or in part without permission in writing from the owners of the copyright. ©2020. All rights reserved

<i>ATR</i> PK / 75 WBM	WBM TOC Table of Content	. Page n°02
---	---	-----------------------------------

PAGE

INTENTIONALLY

LEFT BLANK

<i>ATR</i> PK / 75 WBM	WBM LTR List of Temporary Revisions	 Page n°01
---	--	------------------------------

No Temporary Revision

ATR

PK / 75

WBM

WBM

LTR

List of Temporary Revisions

Page n°02

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	WBM LNR List of Normal Revision	 Page n°01
---	--	-----------------------

N° Rev	Edition Date
3	OCT 17
4	APR 18
5	OCT 18
6	JUN 19
7	JUN 20

ATR

PK / 75

WBM

WBM

LNR

List of Normal Revision

Page n°02

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	WBM RNR Reason of Normal Revision	Page n°01
---	--	-----------

N° Rev	Revision Date	Reason For Issue	Impacted DM
4.0	APR 18	- Create DM - DM updated - DM updated - DM updated - Wording correction - DM updated - DM updated - Typo correction - Wording correction - Configuration management - Wording correction	WBM.GEN.2 Glossary of Standard Nomenclature ALL WBM.GEN.3 Glossary of Standard Nomenclature ALL WBM.LIM.2.1.1 Introduction ALL WBM.DSC.1.1 Basic Data for CG Determination ALL WBM.DSC.1.5 Aircraft Stability on Ground ALL WBM.DSC.2.3 Unusable Fuel ALL WBM.DSC.2.4 Fuel Vector ALL WBM.DSC.2.5 Fuel H-arm According to Fuel Quantity ALL WBM.DSC.4.3 Flight Compartment Stowages ALL WBM.DSC.4.5 Cabin Stowage Compartment ALL WBM.DSC.4.8 Galley ALL
5.0	OCT 18	- Wording correction	WBM.LIM.1.1 Operational Weight Variants ALL

N° Rev	Revision Date	Reason For Issue	Impacted DM
6.0	JUN 19	- Content modify to separate Lb/Kg units for Center of Gravity Envelope - Create DM in SI : No Criteria 72-101, 72-102, 72-201, 72-202, 72-211, 72-212, 72-212A - Wording correction, "with a damaged or suspected damaged net or net fitting" replaces "to a damaged or suspected damaged net" - DM Updated : Wording correction. - DM updated - Title change - Title change - Create DM to separate Kg/Lb units for Center of Gravity Envelope. Wording modification: Warning added. - Create DM - DM updated. - Wording correction, "with a damaged or suspected damaged net or net fitting" replaces "to a damaged or suspected damaged net"	WBM.LIM.1.3 Certified Center of Gravity Envelope ALL WBM.LIM.2.1.1 Introduction ALL WBM.LIM.2.5.1 Nets Malfunction Limitation ALL WBM.DSC.1.1 Basic Data for CG Determination ALL WBM.GEN.2 Glossary of Standard Nomenclature ALL WBM.LIM.1.1 Introduction ALL WBM.LIM.1.2 Certified Weight Limits ALL WBM.LIM.1.3 Certified Center of Gravity Envelope ALL WBM.LIM.1.4 Operational Center of Gravity Envelope ALL WBM.LIM.2.2.1.2 Panels ALL WBM.LIM.2.5.1 Nets Malfunction Limitation ALL

 PK / 75 WBM	WBM RNR Reason of Normal Revision	Page n°03
---	--	-----------

N° Rev	Revision Date	Reason For Issue	Impacted DM
		- DM Updated : Wording correction. - No content change, configuration management updated - Configuration management update : Mod 5722 added. - Create DM	WBM.DSC.1.1 Basic Data for CG Determination ALL WBM.DSC.4.7 Cabin Hatrack ALL WBM.DSC.5.2.2 Aft Cargo Compartment ALL WBM.DSC.5.3.2 Nets ALL
7.0	JUN 20	- DM updated - No content change, Retrofit Configuration Management - No content change, Retrofit Configuration Management - typo correction - Typo correction - Typo correction - Corrections of Aft passenger door dimensions - DM updated : configuration management - Create DM	WBM.GEN.2 Glossary of Standard Nomenclature ALL WBM.LIM.1.2 Certified Weight Limits ALL WBM.LIM.1.3 Certified Center of Gravity Envelope ALL WBM.DSC.5.3.2 Cargo Door ALL WBM.DSC.5.3.3 Plug Type Emergency Exit ALL WBM.DSC.5.3.4 Aft Service Door ALL WBM.DSC.5.3.5 Aft Passenger Door ALL WBM.DSC.5.4.2 Aft Cargo Compartment ALL WBM.DSC.5.5.1 Cargo Location ALL

 PK / 75 WBM	WBM RNR Reason of Normal Revision	Page n°04
---	---	-----------

N° Rev	Revision Date	Reason For Issue	Impacted DM
		- DM updated : APQ-2890	WBM.SUP.WR.1 WEIGHING REPORT ALL

 PK / 75 WBM	WBM LED M List of Effective Data Modules	Page n°01
---	---	-----------

Status	Data Module	Revision Number	Configuration
	WBM.GEN.1	1.2	ALL
	WBM.GEN.2	1.1	ALL
	WBM.LIM.1.1	2.1	ALL
R	WBM.LIM.1.2	2.0	ALL
R	WBM.LIM.1.3	6.0	ALL
	WBM.LIM.1.4	0.1	ALL
	WBM.LIM.2.1.1	4.2	ALL
	WBM.LIM.2.1.2	2.1	ALL
	WBM.LIM.2.2.1.1	0.1	ALL
	WBM.LIM.2.2.1.2	1.1	ALL
	WBM.LIM.2.2.2.1	0.1	ALL
	WBM.LIM.2.5.1	3.0	ALL
	WBM.DSC.1.1	4.2	ALL
	WBM.DSC.1.2	0.1	ALL
	WBM.DSC.1.3	0.1	ALL
	WBM.DSC.1.4	0.1	ALL
	WBM.DSC.1.5	1.1	ALL
	WBM.DSC.2.1	0.1	ALL
	WBM.DSC.2.2	2.2	ALL
	WBM.DSC.2.3	2.1	ALL
	WBM.DSC.2.4	1.1	ALL
	WBM.DSC.2.5	1.1	ALL
	WBM.DSC.3.1	0.1	ALL
	WBM.DSC.3.2	0.1	ALL
	WBM.DSC.3.3	1.2	ALL
	WBM.DSC.3.4	1.1	ALL
	WBM.DSC.3.5	0.1	ALL
	WBM.DSC.4.1	0.1	ALL
	WBM.DSC.4.2	0.1	ALL
	WBM.DSC.4.3	2.1	ALL

Status	Data Module	Revision Number	Configuration
	WBM.DSC.4.4	1.1	ALL
	WBM.DSC.4.5	2.0	ALL
	WBM.DSC.4.6	0.1	ALL
	WBM.DSC.4.7	3.0	ALL
	WBM.DSC.4.8	1.2	ALL
	WBM.DSC.4.9	0.1	ALL
	WBM.DSC.4.10	0.1	ALL
	WBM.DSC.5.3.1	0.1	ALL
R	WBM.DSC.5.3.2	1.2	ALL
R	WBM.DSC.5.3.3	1.2	ALL
R	WBM.DSC.5.3.4	1.4	ALL
R	WBM.DSC.5.3.5	1.2	ALL
	WBM.DSC.5.3.6	0.1	ALL
	WBM.DSC.5.4.1	2.0	ALL
R	WBM.DSC.5.4.2	4.0	ALL
R	WBM.DSC.5.5.1	1.0	ALL
	WBM.DSC.5.5.2	0.3	ALL
R	WBM.SUP.WR.1	1.1	ALL

 PK / 75 WBM	WBM LOM List of MOD	Page n°01
---	--	-----------

Modification Number	Title	Validity
00639	PRESSURE DOME DISPLACEMENT.	0994 / 1000 / 1029 / 1036 / 1037
01931	WINGS - REINFORCE CENTER WING BOX(PRODUCTION SCHEME)	0994 / 1000 / 1029 / 1036 / 1037
05555	GENERAL - INCREASE MZFW AND MTOW BY 300 KGS ON 72-212A MODEL	0994 / 1000 / 1029 / 1036 / 1037
05831	EQUIPMENT / FURNISHINGS - INSTALL REAR CARGO COMPARTMENT GALLEY STOWAGE UNIT	0994 / 1000 / 1029 / 1036 / 1037
A5084	Cabin Configuration 70 PAX at 29,30 in - root harm: 8.4944m - A5084	0994 / 1000 / 1029 / 1036 / 1037
A5161	Cargo configuration - A5161	0994 / 1000 / 1029 / 1036 / 1037
A5392	Galley configuration - A5392	0994 / 1000 / 1029 / 1036 / 1037
A5483	Hatrack configuration - A5483	0994 / 1000 / 1029 / 1036 / 1037
A5543	Stowage configuration - A5543	0994 / 1000 / 1029 / 1036 / 1037
A5637	Cargo CONF12	0994 / 1000 / 1029 / 1036 / 1037

ATR

PK / 75

WBM

WBM

LOM

List of MOD

Page n°02

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	WBM CRT Cross Reference Table	Page n°01
---	--	-----------

FSN	MSN	Registration Number	Model
0051	0994	AP-BKY	72-212A
0052	1029	AP-BKZ	72-212A
0053	1000	AP-BKV	72-212A
0054	1036	AP-BKW	72-212A
0055	1037	AP-BKX	72-212A

ATR

PK / 75

WBM

WBM

CRT

Cross Reference Table

Page n°02

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	GENERAL INFORMATION	GEN. Page n°03
---	----------------------------	---------------------------

1 Introduction

98a25545-ccd1-451a-a480-516b26a5ba34

1.2

ALL

1) Organization of the Manual

The Weight & Balance Manual (WBM) provides operating crew members and flight operations engineers with information on the aircraft technical description and limitations.

It contains all the necessary information to enable the operator to analyze and establish weight and balance procedures and customized load and trim sheets as well.

The content is provided according to the structural and center of gravity limitations determined during the certification process.

The WBM is composed of two main sections providing essential data relative to:

- Limitations
- Description

Each of these two main sections is split into several sub-sections according to the technical content it refers to.

2) Contact

Shall you have any question, comment or suggestion regarding this manual, or technical documentation, please contact us at ops.support@atr-aircraft.com

2 Glossary of Standard Nomenclature

13b5ea08-ff00-49aa-b4a3-3089a38b2f6b

1.1

ALL

A

A/C..... Aircraft

ALW.....Actual Landing Weight

ATA..... Air Transport Association of America

AZWF..... Actual Zero Fuel Weight

C

CG.....Center of Gravity

CL.....Center Line

COS.....Cosine

cont'd... >>>

 PK / 75 WBM	GENERAL INFORMATION	GEN. Page n°04
---	----------------------------	----------------------------------

cont'd... >>>

D

DM.....Data Module
DOC..... Document
DOW..... Dry Operating Weight
DSC..... Description

F

FAR.....Federal Aviation Regulations
FR..... Frame
FSN..... Fleet Serial Number
FWD.....Forward

H

H-arm..... Horizontal arm

L

LAV..... Lavatory
LEMAC.....Leading Edge Mean Aerodynamic Chord
L/G..... Landing Gear
LH..... Left Hand
LIM.....Limitation

M

MAC..... Mean Aerodynamic Chord
MAX.....Maximum
MEW..... Manufacturer Empty Weight
MIN.....Minimum
MISC..... Miscellaneous

cont'd... >>>

 PK / 75 WBM	GENERAL INFORMATION	GEN. Page n°05
---	----------------------------	------------------------------

cont'd... >>>

MLG..... Main Landing Gear
MLW..... Maximum Landing Weight
MRW..... Maximum Ramp Weight
MSN..... Manufacturer Serial Number
MTOW..... Maximum Takeoff Weight
MTW..... Maximum Taxi Weight
MZFW..... Maximum Zero Fuel Weight

N

NLG..... Nose Landing Gear
NO..... Number

O

OECG..... Operational Empty Center of Gravity
OEW..... Operational Empty Weight
OLW..... Operational Landing Weight
OTOW..... Operational Takeoff Weight

P

PAX..... Passenger
P/L..... Payload

R

RH..... Right Hand

S

SIN..... Sine

cont'd... >>>

 PK / 75 WBM	GENERAL INFORMATION	GEN. Page n°06
---	----------------------------	----------------------------------

cont'd... >>>

T

TO..... Takeoff

TOW..... Takeoff weight

U

US..... United States

W

WBM..... Weight and Balance Manual

X

X-arm..... Horizontal arm

Y

Y-arm..... Lateral arm

Z

Z-arm..... Vertical arm

ZFCG..... Zero Fuel Center of Gravity

ZFW..... Zero Fuel Weight

 PK / 75 WBM	WBM TOC Table of Content	LIM. Page n°01
---	------------------------------------	-----------------------

LIMITATIONS

WEIGHT AND BALANCE LIMITATIONS **LIM.1**

GENERAL CARGO LIMITATIONS **LIM.2**

<i>ATR</i> PK / 75 WBM	WBM TOC Table of Content	LIM. Page n°02
---	---	--------------------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	WBM TOC Table of Content	LIM.1 Page n°01
---	---	-----------------------------------

1 - WEIGHT AND BALANCE LIMITATIONS

WEIGHT AND BALANCE LIMITATIONS	LIM.1
---------------------------------------	--------------

.	Introduction.....	page 03
.	Certified Weight Limits.....	page 03
.	Certified Center of Gravity Envelope.....	page 03
.	Operational Center of Gravity Envelope.....	page 04

 PK / 75 WBM	WBM TOC Table of Content	LIM.1 Page n°02
---	--	--------------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	LIMITATIONS WEIGHT AND BALANCE LIMITATIONS	LIM.1 Page n°03
---	---	-------------------------------

1 Introduction

0126f7e9-7838-446e-b9a0-8b81467a532a

2.1

ALL

The following DMs give to operational weight and balance graph for each available weight variant.

2 Certified Weight Limits

d5e1a120-8261-470d-a2e9-26b461140a7d

REV

2.0

ALL

MAXIMUM WEIGHT	kg
TAXI	22 970
TAKEOFF	22 800
LANDING	22 350
ZERO FUEL	20 800

3 Certified Center of Gravity Envelope

9d8f0447-10dd-4d19-bf3b-df20bf22ef35

REV

6.0

ALL

The limits of the center of gravity are given in percentage of the Mean Aerodynamic Chord (MAC), landing gear extended.

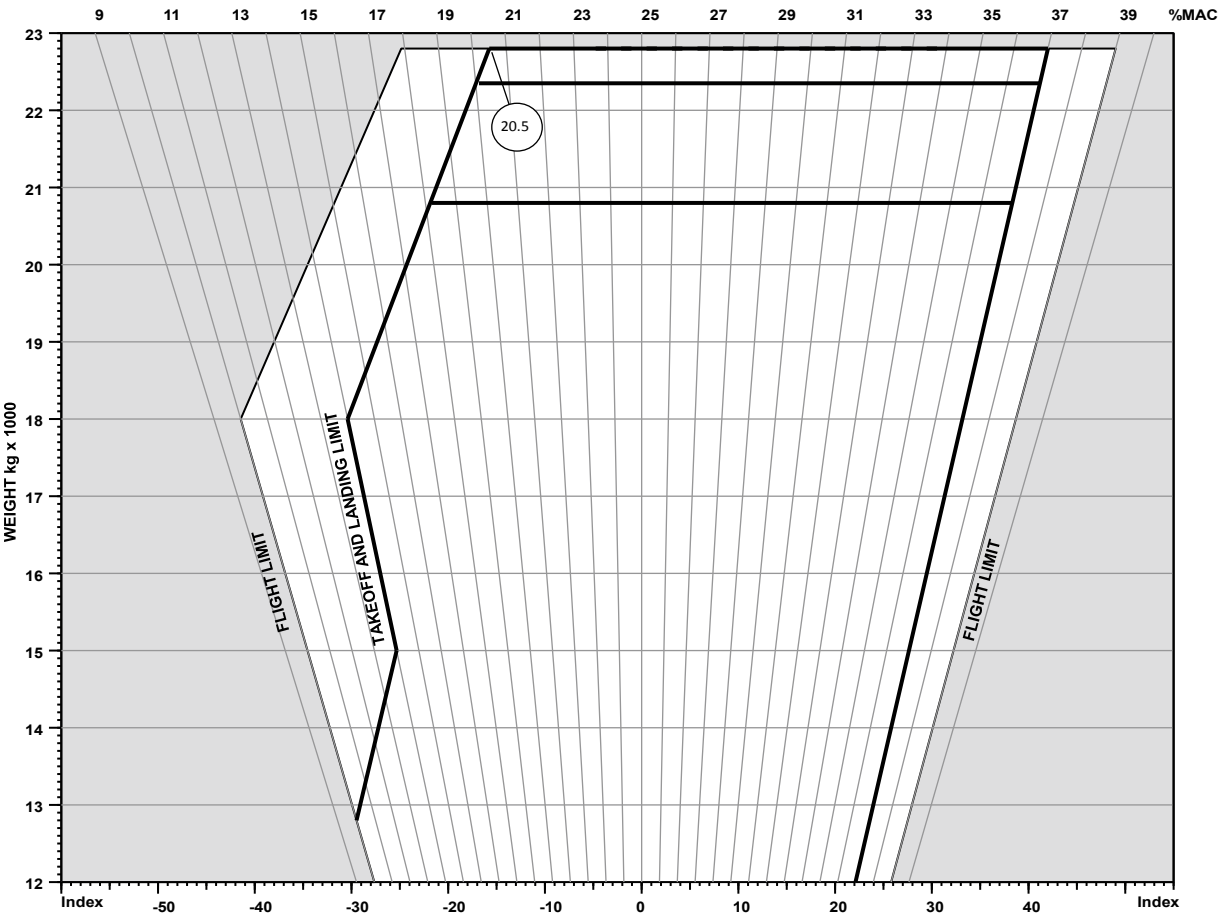
The MAC is 2.303 m long.

Station 0 is 2.362 m forward of the fuselage nose.

The distance from station 0 to reference chord leading edge is 13.604 m.

cont'd... >>>

cont'd... >>>



ICN-4X-Y-000000-T-FB429-00250-P-01-N

MTOW : 22 800 kg
MLW : 22 350 kg
MZFW : 20 800 kg

WARNING

CERTIFIED CENTER OF GRAVITY ENVELOPE MUST NOT BE USED FOR OPERATIONAL PURPOSE. PROPER OPERATIONAL CENTER OF GRAVITY ENVELOPE MUST BE DEFINED. [REFER TO WBM LIM.1.16: OPERATIONAL CENTER OF GRAVITY ENVELOPE](#) FOR FURTHER DETAILS.

4 Operational Center of Gravity Envelope

390725e9-93a0-4388-98f2-c66b1088b5ad		0.1
		ALL

Operational Center of Gravity envelope ensures that aircraft CG remains within its CG limits during all ground and flight phases. Operational CG envelope is derived by applying

cont'd... >>>

 PK / 75 WBM	LIMITATIONS WEIGHT AND BALANCE LIMITATIONS	LIM.1 Page n°05
---	---	-------------------------------

cont'd... >>>

curtailments to the certified CG limits to take into account moving items and possible CG inaccuracies such as:

- Landing gear and flaps movements
- Passengers, crew and trolley in-flight movements
- Cargo location inaccuracy
- Passenger distribution inaccuracy
- OEW/OECG inaccuracy
- Passenger weight inaccuracy
- Fuel density and weight inaccuracies

<i>ATR</i> PK / 75 WBM	LIMITATIONS WEIGHT AND BALANCE LIMITATIONS	LIM.1 Page n°06
---	--	---------------------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	WBM TOC Table of Content	LIM.2 Page n°01
---	---	---------------------------------------

2 - GENERAL CARGO LIMITATIONS

GENERAL CARGO LIMITATIONS

LIM.2

1.	CARGO COMPARTMENT LOADING.....	page 01
2.	FLOOR LOAD LIMITS.....	page 01
5.	NETS MALFUNCTION LIMITATION.....	page 01

<i>ATR</i> PK / 75 WBM	WBM TOC Table of Content	LIM.2 Page n°02
---	---	---------------------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	LIMITATIONS GENERAL CARGO LIMITATIONS CARGO COMPARTMENT LOADING	LIM.2 Page n°01
---	--	-------------------------------

1 CARGO COMPARTMENT LOADING

1.1 Introduction

a34b14ef-407b-49d2-9576-f4f935442d2e		4.2
		ALL

CAUTION

During loading or unloading operation, it is recommended:

- To maintain the forward cargo load at least equal or higher than the aft cargo load.
- To allow less than 10 persons to stand in the rear aisle or in the rear pax entrance area if the rear cargo load is of 200 kg in excess of forward cargo load.
- To invite passenger to seat or remain seated in the forward part of the cabin.

In addition to the above recommendations, the tail prop, anti tip-up device must be used.

CAUTION

- It is prohibited to carry loose freight or baggage out of the design area.
- It is prohibited to load freight or baggage above the maximum loading height indication.
- It is prohibited to load any freight or baggage which can damage or pass through the net, without to interpose between it and another freight or baggage to prevent this risk.

For each compartment, the restraint system is provided by masts, nets and tie-down points. In case of damaged part of the restraint system, the loading restrictions must be applied.

1.2 Cargo Compartments

Cargo Load Limitations

f484f12d-eada-4f2c-a130-2057c7790588		2.1
		ALL

The tables below list the cargo load limitations for each cargo compartment:

1) Cargo load configuration

LOCATION	HARM (m)	VOLUME (m3)	MAX LOAD (kg)
RIGHT FWD COMPT	6.697	3	480
LEFT FWD COMPT	6.697	2.8	448
FWD RIGHT REAR COMPT	23.246	1.23	254
AFT RIGHT REAR COMPT	24.31	2.9	466

 PK / 75 WBM	LIMITATIONS GENERAL CARGO LIMITATIONS CARGO COMPARTMENT LOADING	LIM.2 Page n°02
---	--	------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	LIMITATIONS GENERAL CARGO LIMITATIONS FLOOR LOAD LIMITS	LIM.2 Page n°01
---	--	---

2 FLOOR LOAD LIMITS

2.1 CABIN FLOOR

2.1.1 Structure

3edad786-9298-4d5e-a1e4-dc277ca1bd90		0.1
		ALL

The floor structure is designed to support seats, loaded with 91 kg assuming four seats per row separated by a minimum pitch of 0.762 m between rows.

2.1.2 Panels

_d16aa910-be49-4f39-95d5-f32291daf59f		1.1
		ALL

1) Aisle Floor

Each aisle floor is designed to support a load of distribution of 400 kg/m² with no deformation, and a local indentation load of 0.921 kg/mm² without any panel core crushing. It is resistant to the impact of spike heeled shoes and maximum expected foot traffic, when covered with carpet or floor covering.

2) Under Seat Floor

Each under seat floor panel is designed to carry a surface distributed load of 200 kg/m² , moreover it can sustain a local indentation load of 0.274 kg/mm² .

3) Entry Area Floor

Panels are capable of carrying surface distributed load of 450 kg/m² , moreover they can sustain a local indentation load of 0.921 kg/mm² .

2.2 CARGO COMPARTMENT FLOOR

2.2.1 Structure and Panels

888a4bcf-86c4-4e3f-933a-9b3850bc5f22		0.1
		ALL

1) Structure

The FWD and AFT cargo compartment floor structure is designed to support a load distribution of 510 kg/m² .

2) Panels

Each floor is designed to support a load distribution of 400 kg/m² with no deformation, moreover it can bear a local indentation load of 0.921 kg/mm² without any panel crushing.

 PK / 75 WBM	LIMITATIONS GENERAL CARGO LIMITATIONS FLOOR LOAD LIMITS	LIM.2 Page n°02
---	--	------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	LIMITATIONS GENERAL CARGO LIMITATIONS NETS MALFUNCTION LIMITATION	LIM.2 Page n°01
---	--	---

5 **NETS MALFUNCTION LIMITATION**

5.1 **Nets Malfunction Limitation**

2949ca4a-f3f0-4a04-b8f2-f0ce2459fa25		3.0
ALL		

Note

If any damage is suspected on net, mast or mast foot fitting, do not use them for cargo holding.

A cargo compartment associated with a damaged or suspected damaged net or net fitting, mast or mast foot fitting must not be loaded.

Refer to relevant furnisher Component Maintenance Manual Vendor for more information.

 PK / 75 WBM	LIMITATIONS GENERAL CARGO LIMITATIONS NETS MALFUNCTION LIMITATION	LIM.2 Page n°02
---	---	------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	WBM TOC Table of Content	DSC. Page n°01
---	---	---------------------------

DESCRIPTION

AIRCRAFT GENERAL	DSC.1
FUEL	DSC.2
FLUIDS	DSC.3
FLIGHT COMPARTMENT ARRANGEMENT	DSC.4
CARGO AND DOORS	DSC.5

 PK / 75 WBM	WBM TOC Table of Content	DSC. Page n°02
---	--	-------------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	WBM TOC Table of Content	DSC.1 Page n°01
---	---	----------------------------

1 - AIRCRAFT GENERAL

AIRCRAFT GENERAL

DSC.1

.	Basic Data for CG Determination.....	page 03
.	Weight Definitions.....	page 05
.	Stabilizer Tab Graph.....	page 07
.	Effect of Moving Components Operations on Aircraft CG.....	page 08
.	Aircraft Stability on Ground.....	page 08

 PK / 75 WBM	WBM TOC Table of Content	DSC.1 Page n°02
---	--	--------------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	DESCRIPTION AIRCRAFT GENERAL	DSC.1 Page n°03
---	---	------------------------

1 Basic Data for CG Determination

c6cf26ef-a973-4e7d-862e-989b7fdd5d5f

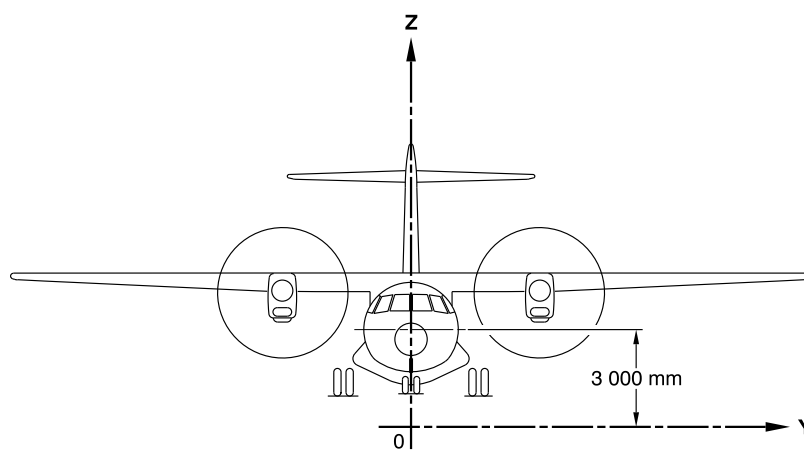
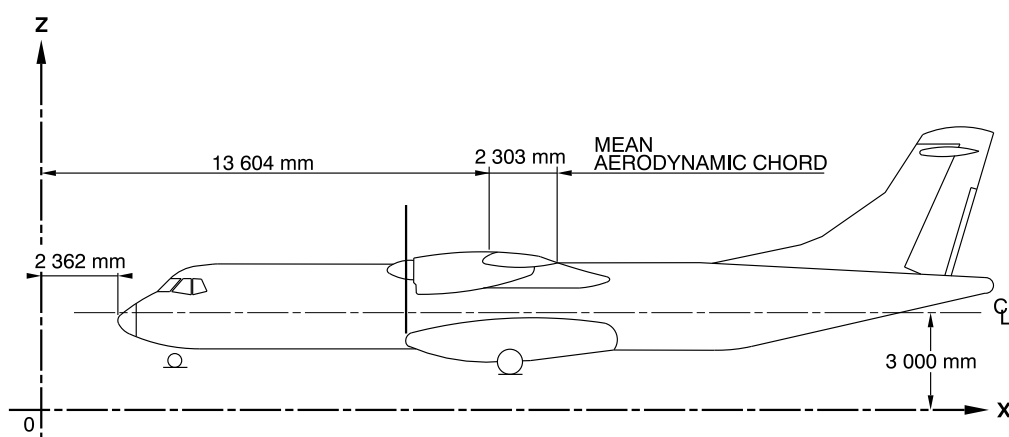
4.2

ALL

1) Referential

The referential is located further forward and below the aircraft. It is defined by the following plans:

- Horizontal plan – XOY – located 3 m below the fuselage Center Line.
- Forward plan H-arm 0 – YOZ – located 2.362 m forward the aircraft nose.
- Vertical plan – ZOY – being the aircraft plan of symmetry.



 PK / 75 WBM	DESCRIPTION AIRCRAFT GENERAL	DSC.1 Page n°04
---	---	------------------------

cont'd... >>>

2) Mean Aerodynamic Chord (MAC)/Leading Edge MAC

- The length of the Mean Aerodynamic Chord is 2.303 m .
- The length of the LEMAC is 13.604 m .

3) Origin of Moments

The moments are calculated from the origin of the referential.

- Distance forward of the origin of moments is assigned a negative sign – pitch down moments are negative.
- Distance aft of the origin of moments is assigned a positive sign – pitch up moments are positive.

4) Aircraft/Center of Gravity Position and Index

The Center of Gravity (CG) location of the aircraft can be expressed in % MAC such that:

$$\%MAC = \frac{H-ARM - LEMAC}{MAC} \times 100 = \frac{H-ARM - 13.604 (m)}{2.303 (m)} \times 100$$

$$H-ARM = \%MAC \times \frac{MAC}{100} + LEMAC = \%MAC \times \frac{2.303 (m)}{100} + 13.604 (m)$$

ICN-XX-Y-000000-T-FB429-00005-A-01-N

The calculation of the CG location is based on the determination of an index. It is a dimensionless value originated from the moment and introduced to facilitate the CG calculation:

$$INDEX = \frac{MOMENT}{C} + K = \frac{WEIGHT \times (H-ARM - H-ARM_{ref})}{C} + K$$

ICN-XX-Y-000000-T-FB429-00004-A-04-N

ATR standard values for the index calculation are the following:

cont'd... >>>

 PK / 75 WBM	DESCRIPTION AIRCRAFT GENERAL	DSC.1 Page n°05
---	---	----------------------------

cont'd... >>>

$H-ARM_{ref} = 14.180 \text{ (m)}$ (corresponding to 25% of MAC)

$C = 150 \text{ (kg.m)}$

$K = 0$

ICN-XX-Y-000000-T-FB429-0000 7-C-01-N

2 Weight Definitions

Weight Definition

_9e9ff3cb-3950-4ad1-b5f1-3497af973cf3

0.1

ALL

MANUFACTURER'S EMPTY WEIGHT – MEW

Weight of the structure, power plant, systems, furnishing and other items of equipment that are integral part of a particular aircraft configuration, including the fluids contained in closed systems.

OPERATOR'S ITEMS

These items include the following:

- Unusable fuel
- Oil for engines
- Galley structure and fitting
- Toilet fluid
- Safety equipment including: evacuation aids, portable oxygen bottles and masks, extinguishers, flash lights, first aid kits, beacons, fire-fighting gloves and smoke goggles.
- Potable water
- Tools and spares
- Crew and cabin attendant
- Documentation/ EFB (Electronic Flight Bag)
- Crew baggage

OPERATIONAL EMPTY WEIGHT – OEW

Sum of the manufacturer's empty weight and the operator's items weight.

PAYLOAD – P/L

Sum of passenger, cargo and baggage.

ACTUAL ZERO FUEL WEIGHT – AZFW

Sum of operational empty weight and payload. The AZFW must never exceed the maximum design zero fuel weight MZFW .

cont'd... >>>

 PK / 75 WBM	DESCRIPTION AIRCRAFT GENERAL	DSC.1 Page n°06
---	---	------------------------

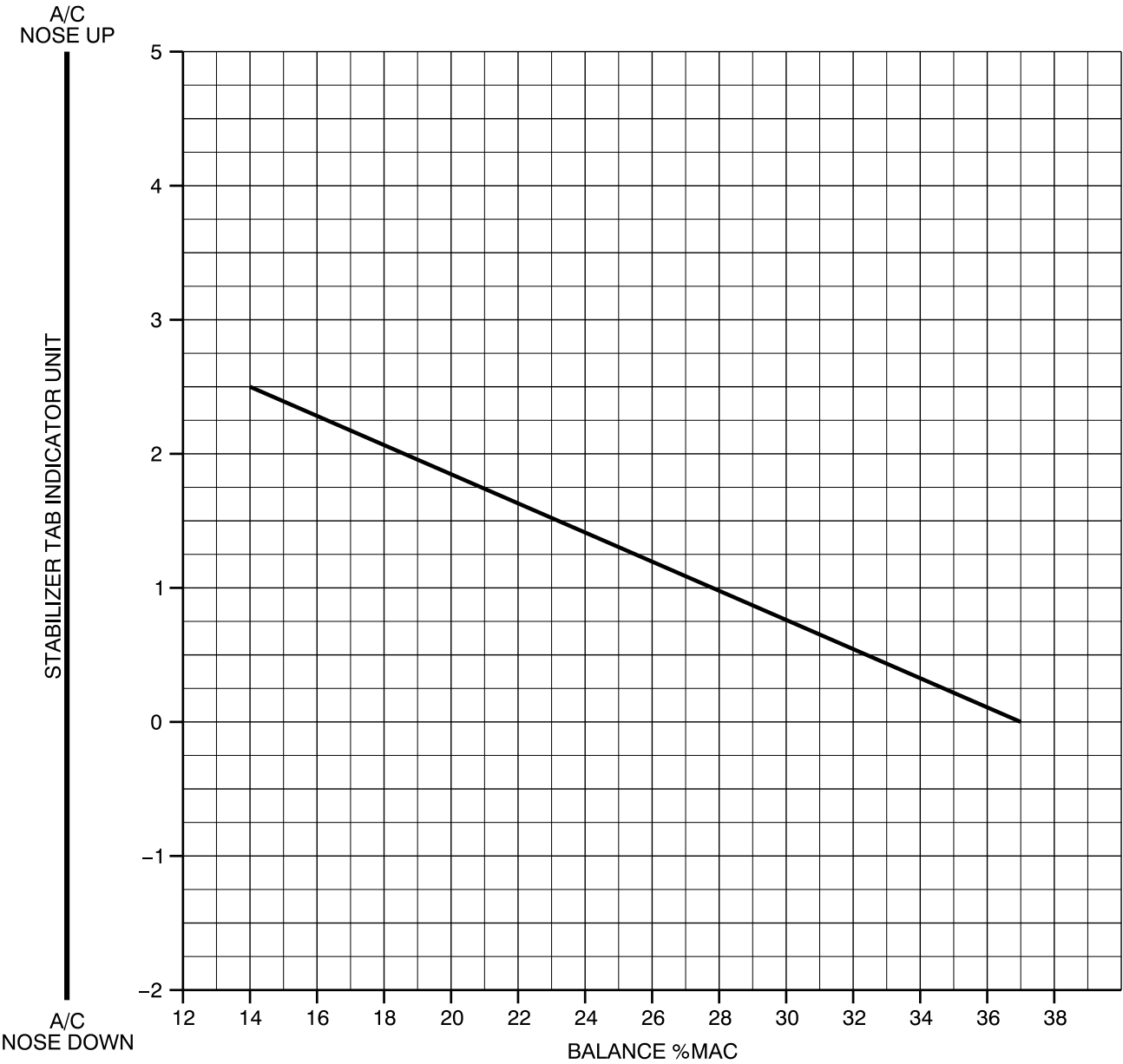
cont'd... >>>

OPERATIONAL TAKE-OFF WEIGHT – OTOW	Maximum weight permitted at brake release for a given flight operation. This is a function of airport and operation restrictions. The OTOW must never exceed the maximum design take-off weight MTOW .
OPERATIONAL LANDING WEIGHT–OLW	Maximum weight permitted at touchdown for flight operation. This is a function of airport and operation restrictions. The OLW must never exceed the maximum design landing weight MLW .
MAXIMUM PAYLOAD	Difference between the maximum design zero fuel weight MZFW and operational empty weight OEW .
MAXIMUM USEFUL LOAD	Difference between the maximum design take-off weight MTOW and operational empty weight OEW . Useful load is the sum of payload and usable fuel.
MAXIMUM DESIGN RAMP WEIGHT – MRW	Maximum weight for ground maneuver, including the weight of the run-up and taxi fuel.
MAXIMUM DESIGN TAKE-OFF WEIGHT - MTOW	Maximum weight at the start of take-off run.
MAXIMUM DESIGN LANDING WEIGHT - MLW	Maximum weight at which the aircraft may land.
MAXIMUM DESIGN ZERO FUEL WEIGHT – MZFW	Total maximum of operational empty weight OEW and payload. It is also the maximum operational weight without usable fuel.

 PK / 75 WBM	DESCRIPTION AIRCRAFT GENERAL	DSC.1 Page n°07
---	-------------------------------------	------------------------

3 Stabilizer Tab Graph

ef3ea392-1fb0-447a-8fbe-40b26bfd4c21		0.1
		ALL



- Fig. 1 : Horizontal Stabilizer — Takeoff Tab Setting -

 PK / 75 WBM	DESCRIPTION AIRCRAFT GENERAL	DSC.1 Page n°08
---	---	------------------------

4 Effect of Moving Components Operations on Aircraft CG

Effect of Moving Components on Aircraft CG c37eabd0-4edb-4089-9030-ffaa0c58cc5a		0.1 ALL
---	--	------------

Extension and retraction of the flaps and landing gears have an impact on the pitch balance as mentioned below.

DESIGNATION	DELTA MOMENT (kg.m)
Flaps extension to 15 °	+ 16
Flaps extension to 30 °	+ 28
Main landing gear retraction	- 139
Nose landing gear retraction	- 26

Note	<i>The aircraft is weighed flaps retracted and gears down.</i>
-------------	--

5 Aircraft Stability on Ground

e383208c-2fa7-4494-aab2-c0098d1baab3		1.1 ALL
--------------------------------------	--	------------

If the aircraft is misbalanced, tip up on ground can occur.

The tip up CG position is located at 54 % of the MAC equivalent to an H-arm of 14.848 m .

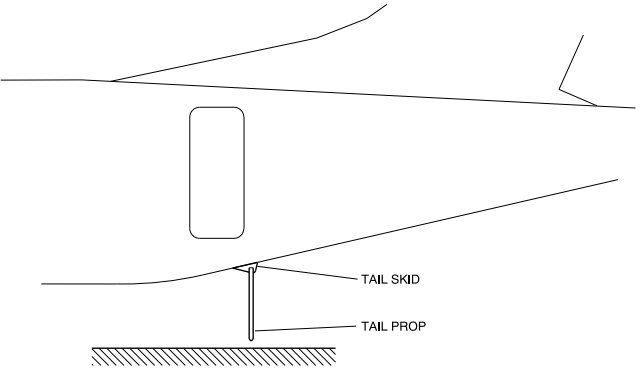
Use tail prop, anti tip-up device, installed on the tail skid, as shown on [See figure below](#)

When not used, the tail prop can be stored either in the aft unpressurized area of the aircraft or next to the aft cabin crew seat

[Refer to LIM 2.1.1 for loading recommendations](#)

ATR PK / 75 WBM	DESCRIPTION AIRCRAFT GENERAL	DSC.1 Page n°09
----------------------------------	--	------------------------

cont'd... >>>



 PK / 75 WBM	DESCRIPTION AIRCRAFT GENERAL	DSC.1 Page n°10
---	-------------------------------------	----------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	WBM TOC Table of Content	DSC.2 Page n°01
---	---	----------------------------

2 - FUEL

FUEL	DSC.2
-------------	--------------

.	General Description.....	page 03
.	Usable Fuel.....	page 04
.	Unusable Fuel.....	page 04
.	Fuel Vector.....	page 06
.	Fuel H-arm According to Fuel Quantity.....	page 07

 PK / 75 WBM	WBM TOC Table of Content	DSC.2 Page n°02
---	------------------------------------	----------------------------

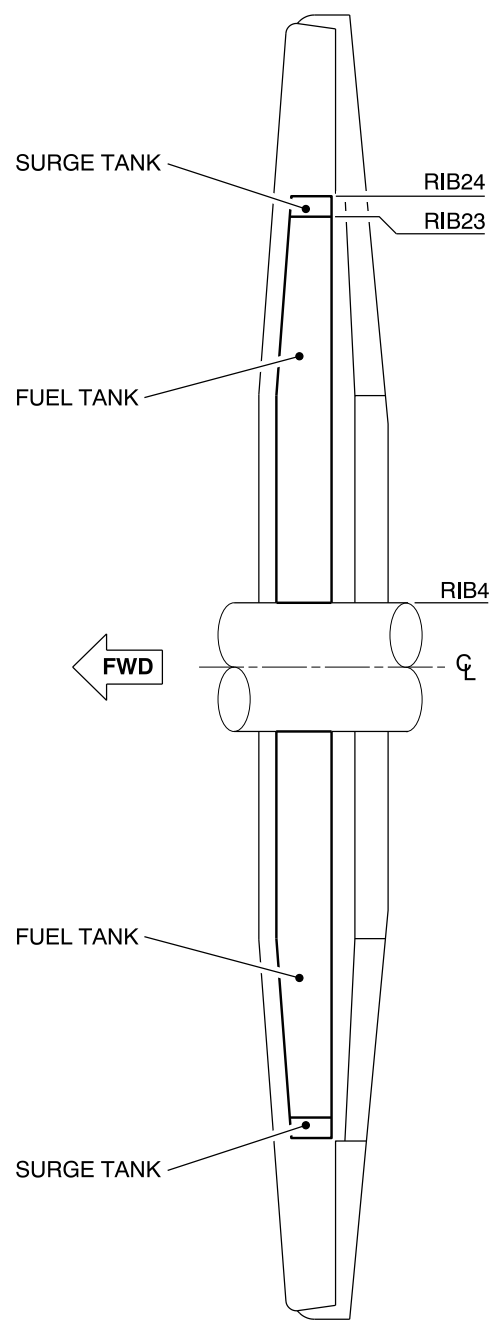
PAGE
INTENTIONALLY
LEFT BLANK

ATR PK / 75 WBM	DESCRIPTION FUEL	DSC.2 Page n°03
----------------------------------	--------------------------------	------------------------

1 General Description

cbf18cef-f7b7-44dd-92c9-0b0003a2d964		0.1
		ALL

The fuel is stored in two tanks: one in each cantilever wing box represented as below.



 PK / 75 WBM	DESCRIPTION FUEL	DSC.2 Page n°04
---	---------------------------------------	------------------------

2 Usable Fuel

3b3c0fcf-9402-4491-afb3-cc3ca3f75594		2.2
		ALL

The table below gives for each tank the usable fuel.

LOCATION	VOLUME (l)	WEIGHT (kg)	HARM (m)	MOMENT (kg.m)
RH side	3 185	2 500	14.43	+ 36 078
LH side	3 185	2 500	14.43	+ 36 078
TOTAL	6 370	5 000	14.43	+ 72 156

In addition, the table below gives the usable fuel contained in lines

LOCATION	VOLUME (l)	WEIGHT (kg)	HARM (m)	MOMENT (kg.m)
Lines	5.16	4.051	14.36	+58

The fuel density is assumed to be 0.785 kg/l .

3 Unusable Fuel

a5ec990d-d38e-4923-8f2a-47081613d7d0		2.1
		ALL

Unusable fuel is the amount of fuel remaining in the tanks and lines after a fuel run out test.

It can be divided into two parts:

- Drainable fuel
- Undrainable fuel

Details about unusable fuel are given in the table below.

 PK / 75 WBM	DESCRIPTION FUEL	DSC.2 Page n°05
---	---------------------------------------	------------------------

cont'd... >>>

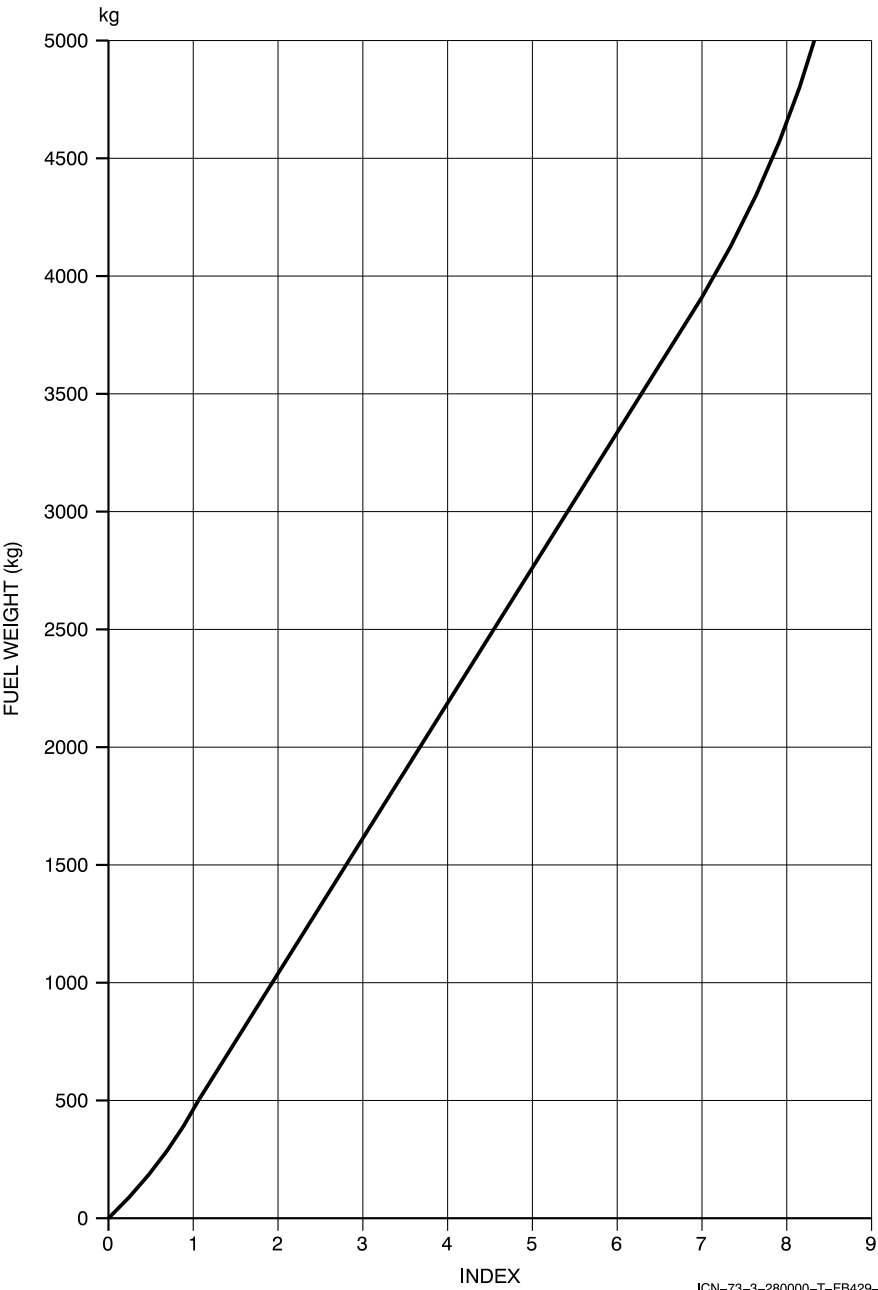
DESIGNATION	LOCATION	VOLUME (l)	WEIGHT (kg)	HARM (m)	MOMENT (kg.m)
Drainable fuel	LH tank	8.9	6.99	14.62	+ 102
	RH tank	8.9	6.99	14.62	+ 102
	LH surge tank	0.3	0.24	14.59	+ 3
	RH surge tank	0.3	0.24	14.59	+ 3
Undrainable fuel	LH tank	9.6	7.54	14.62	+ 110
	RH tank	9.6	7.54	14.62	+ 110
	LH surge tank	0.4	0.31	14.59	+ 5
	RH surge tank	0.4	0.31	14.59	+ 5
Total unusable fuel		38.4	30.14	14.619	+ 441

The fuel density is assumed to be 0.785 kg/l

ATR PK / 75 WBM	DESCRIPTION FUEL	DSC.2 Page n°06
---	--	---------------------------------------

4 Fuel Vector

0fdfce17-3c81-4d8c-ab01-e8ec3bdb1e97		1.1
		ALL



ICN-73-3-280000-T-FB429-00001-A-01-N

The fuel density is assumed to be 0.785 kg/l

 PK / 75 WBM	DESCRIPTION FUEL	DSC.2 Page n°07
---	---------------------------------------	------------------------

5 Fuel H-arm According to Fuel Quantity

7f969499-528d-4312-b259-f304cc8ea6a1		1.1
ALL		

Quantity (l)	H-arm (m)	Y-arm (m)
100	14.59	3.09
200	14.535	3.225
300	14.505	3.325
400	14.488	3.42
500	14.477	3.511
600	14.47	3.59
700	14.466	3.67
800	14.463	3.75
900	14.46	3.827
1 000	14.458	3.9
1 100	14.457	3.968
1 200	14.456	4.035
1 300	14.455	4.1
1 400	14.455	4.16
1 500	14.455	4.225
1 600	14.454	4.28
1 700	14.453	4.33
1 800	14.452	4.375
1 900	14.452	4.41
2 000	14.452	4.45
2 100	14.452	4.48
2 200	14.451	4.51
2 300	14.451	4.535
2 400	14.45	4.56
2 500	14.45	4.585
2 600	14.448	4.61
2 700	14.446	4.635

cont'd... >>>

 PK / 75 WBM	DESCRIPTION FUEL	DSC.2 Page n°08
---	-------------------------	------------------------

cont'd... >>>

Quantity (l)	H-arm (m)	Y-arm (m)
2 800	14.444	4.668
2 900	14.441	4.69
3 000	14.438	4.725
3 100	14.434	4.765
3 185	14.43	4.808

Note

Intermediate values can be obtained by linear interpolation.

 PK / 75 WBM	WBM TOC Table of Content	DSC.3 Page n°01
---	---	------------------------------------

3 - FLUIDS

FLUIDS	DSC.3
---------------	--------------

.	General Information.....	page 03
.	Engine Oil.....	page 03
.	Hydraulic System Fluid.....	page 03
.	Potable Water.....	page 03
.	Toilet Fluid.....	page 04

 PK / 75 WBM	 WBM TOC Table of Content	DSC.3 Page n°02
---	--	------------------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	DESCRIPTION FLUIDS	DSC.3 Page n°03
---	---	------------------------

1 General Information

27b29530-a8ae-4a47-9a62-0c514090f067		0.1
		ALL

This section contains information on:

- Engine Oil
- Hydraulic system fluid
- Potable water
- Toilet fluid

2 Engine Oil

de28c9c7-60c2-4aa8-95ef-d63ad5e0db21		0.1
		ALL

LOCATION	VOLUME (l)	WEIGHT (kg)	H-ARM (m)	MOMENT (kg.m)
Engine RH	23.703	23.11	12.19	+ 281
Engine LH	23.703	23.11	12.19	+ 281
Total A/C	47.406	46.22	12.19	+ 563

The weights are based on an oil density of 0.975 kg/l .

3 Hydraulic System Fluid

d59a5881-da0a-4be1-bddc-8a9e038d4b05		1.2
		ALL

LOCATION	VOLUME (l)	WEIGHT (kg)	H-ARM (m)	MOMENT (kg.m)
Tank (refill level)	8.5	8.492	15.416	+ 131
Tank (full level)	9.35	9.341	15.416	+ 144
Tank (top full level)	9.6	9.59	15.416	+ 148
System	4.304	4.3	11.663	+ 50
Total A/C (Tank + System) assuming a full fluid level in tank	13.654	13.64	14.233	+ 194

The weights are based on an hydraulic fluid density of 0.999 kg/l .

Hydraulic fluid quantity is assumed to be visually checked on the sight glass of the hydraulic tank located in the hydraulic bay.

4 Potable Water

8bcb9144-3e67-47ab-815a-f9b7b363f38e		1.1
		ALL

The aircraft is equipped with a gravity system of potable water.

cont'd... >>>

 PK / 75 WBM	DESCRIPTION FLUIDS	DSC.3 Page n°04
---	---	------------------------

cont'd... >>>

The potable water for toilet is stored in a tank which is installed in the pressurized area of the rear fuselage.

LOCATION	VOLUME (l)	WEIGHT (kg)	H-ARM (m)	MOMENT (kg.m)
Tank	15	15	23.816	+ 357

5 Toilet Fluid

91900f1d-d63a-4ae5-9984-fc391cd49805		0.1
		ALL

The aircraft is equipped with one toilet installed at the rear of the cabin

LOCATION	VOLUME (l)	WEIGHT (kg)	H-ARM (m)	MOMENT (kg.m)
Rear cabin	8	8	23.39	+ 187

<i>ATR</i>	WBM	DSC.4
PK / 75	TOC	
WBM	Table of Content	Page n°01

4 - FLIGHT COMPARTMENT ARRANGEMENT

FLIGHT COMPARTMENT ARRANGEMENT

DSC.4

.	Introduction.....	page 03
.	Flight Crew Members.....	page 03
.	Flight Compartment Stowages.....	page 04
.	Cabin Crew Members.....	page 05
.	Cabin Stowage Compartment.....	page 06
.	Cabin Seat Layout.....	page 06
.	Cabin Hatrack.....	page 07
.	Galley.....	page 07
.	Toilet.....	page 07
.	General Cabin Layout.....	page 07

<i>ATR</i> PK / 75 WBM	WBM TOC Table of Content	DSC.4 Page n°02
---	---	---------------------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	DESCRIPTION FLIGHT COMPARTMENT ARRANGEMENT	DSC.4 Page n°03
---	---	------------------------

1 Introduction

354141f9-1c3e-4b45-8c0c-05a8d84ebe31

0.1

ALL

This section deals with:

- Flight crew member seats location
- Flight compartment stowage capacities and location
- Cabin crew members seats location
- Cabin compartment stowage capacities and location
- Cabin Layout
- Cabin hatracks capacities and locations
- Galleys capacities and locations
- Toilet

2 Flight Crew Members

05dc399b-e7a9-494a-b135-127013e582a8

0.1

ALL

The flight compartment accommodates three occupants:

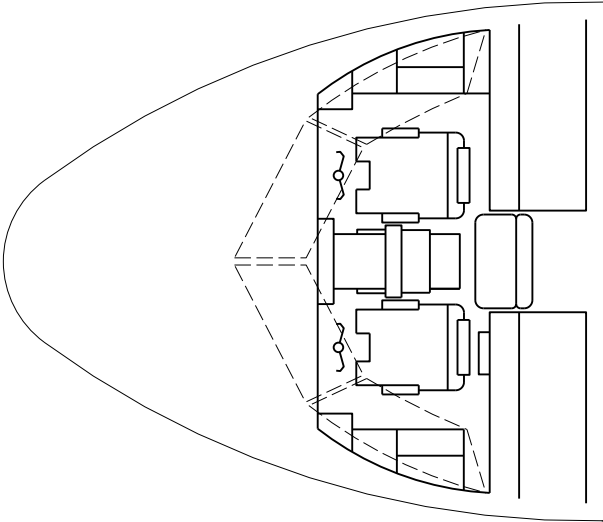
- Captain
- First officer
- Third member (located behind the pedestal)

The flight crew seats H-arm positions are shown on the table below.

FLIGHT CREW	H-arm (m)
Captain	4.54
First officer	4.54
Third member	5.5

ATR PK / 75 WBM	DESCRIPTION FLIGHT COMPARTMENT ARRANGEMENT	DSC.4 Page n°04
--	---	------------------------

cont'd... >>>



ICN-XX-Y-251100-T-FB429-00001-A-01-N

3 Flight Compartment Stowages

dbd6b260-f75d-45a4-a487-b823926810a1	2.1
	ALL

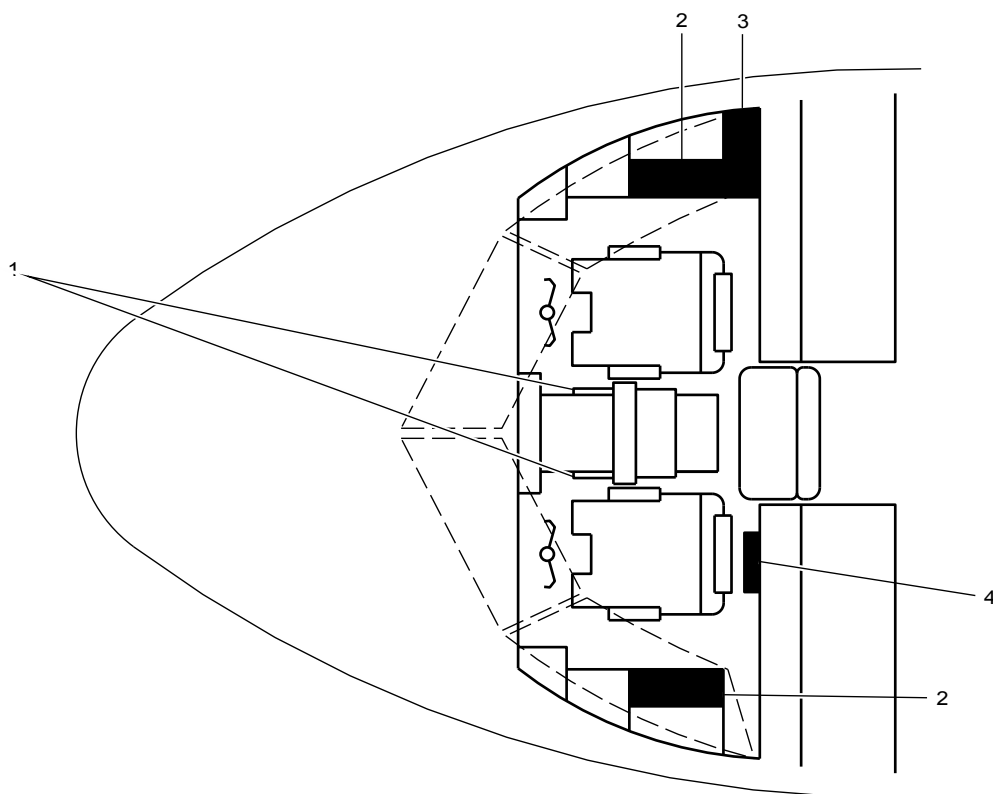
The table below gives the document stowage location in flight compartment.

REP	Location	H-arm (m)	Max Weight (kg)	Length x Width x Height (m)
1	Captain/First officer	4.354	4	0.29 x 0.07 x 0.23
2	Pilot case	4.54	10	0.5 x 0.18 x 0.47
3	AFT compartment right side	5.067	8	0.29 x 0.18 x 0.3
4	AFT compartment left side	5.1	3	0.45 x 0.06 x 0.2

cont'd... >>>

ATR PK / 75 WBM	DESCRIPTION FLIGHT COMPARTMENT ARRANGEMENT	DSC.4 Page n°05
--	---	------------------------

cont'd... >>>



ICN-XX-Y-251100-T-FB429-00002-A-01-N

4 Cabin Crew Members

25977fb1-af19-4d59-99e6-e31d4b8bdc74

1.1

ALL

The passenger compartment is provided with two attendant stations installed forward and rear of the passenger cabin.

The cabin attendant seat positions are shown on the table below.

CREW	H-arm (m)
Attendant AFT	22.341
Attendant FWD	7.745

 PK / 75 WBM	DESCRIPTION FLIGHT COMPARTMENT ARRANGEMENT	DSC.4 Page n°06
---	---	------------------------

5 Cabin Stowage Compartment

Stowage e802eced-3459-45e8-926b-5ce4e92cc2af		2.0 ALL
--	--	------------

The table below shows the stowage locations and limitations.

1) Stowage configuration

Not applicable

6 Cabin Seat Layout

84a75ed8-140c-433f-96c7-4faf7d131db1		0.1 ALL
--------------------------------------	--	------------

The tables below list the available seat layout configuration(s):

1) Seat layout configuration 70 PAX at 29,30 in

ROW	HARM (m)	LH	RH
1	8.494	2	2
2	9.256	2	2
3	10.018	2	2
4	10.78	2	2
5	11.542	2	2
6	12.304	2	2
7	13.066	2	2
8	13.828	2	2
9	14.59	2	2
10	15.352	2	2
11	16.114	2	2
12	16.876	2	2
13	17.638	2	2
14	18.4	2	2
15	19.162	2	2
16	19.924	2	2
17	20.661	0	2
18	20.686	2	0
19	21.423	2	0

 PK / 75 WBM	DESCRIPTION FLIGHT COMPARTMENT ARRANGEMENT	DSC.4 Page n°07
---	---	------------------------

7 Cabin Hatrack

Hatrack

1680c8cc-1f51-4ea7-97b3-9f7f9136eec9		3.0
		ALL

Two rows of overhead compartments for coats and baggage are installed on each side of the passenger compartment above the passenger seats.

The table below gives the hatrack definition boxes number and characteristics.

1) Hatrack configuration

LENGTH (m)	HEIGHT (m)	VOLUME (m3)	MAX LOAD (kg)	LH	RH
0.985	0.24	0.115	40	10	10
0.745	0.24	0.087	30	5	4

8 Galley

7bb1a4b4-d23c-42b4-83b9-85da8ebe335f		1.2
		ALL

Galleys are installed in rear cabin, the table below gives their h-arm and the maximum load :

1) Galley configuration

LOCATION	HARM (m)	MAX LOAD (kg)
RIGHT REAR	21.5	401.5
REAR CARGO	23.095	167

9 Toilet

c83f8060-fd23-4ca6-b309-be40dc57692e		0.1
		ALL

The aircraft is equipped with one toilet in rear passenger cabin.

The average H-arm is: 23.353 m.

10 General Cabin Layout

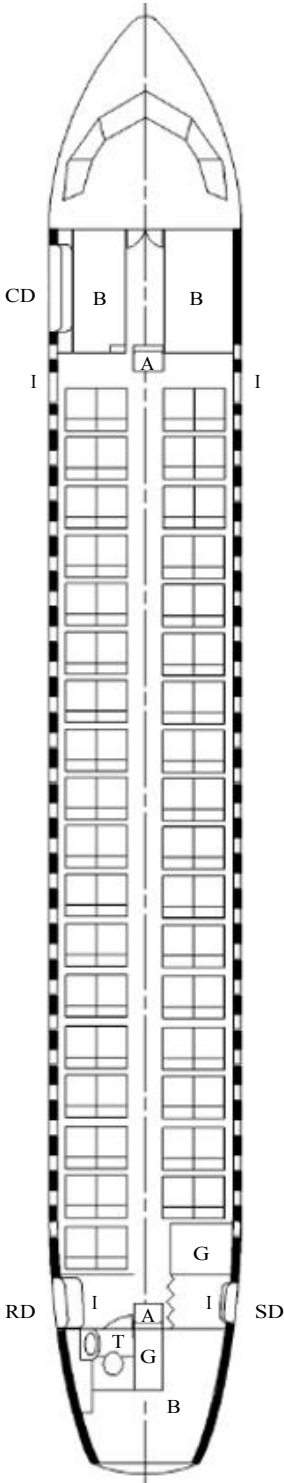
5146ef80-984f-488b-b0b7-b2fff68bf8bd		0.1
		ALL

1) Cabin layout 70 PAX at 29,30 in

The figure below show the general cabin layout.

ATR PK / 75 WBM	DESCRIPTION FLIGHT COMPARTMENT ARRANGEMENT	DSC.4 Page n°08
---	--	---------------------------------------

cont'd... >>>



ICN-75-3-250000-T-FB429-00351-A-01-N

- Fig. 1 : General Cabin Layout 70 PAX at 29,30 in -

 PK / 75 WBM	WBM TOC Table of Content	DSC.5 Page n°01
---	---	----------------------------

5 - CARGO AND DOORS

CARGO AND DOORS

DSC.5

3.	DOORS OPENING SIZE.....	page 03
4.	PACKAGE SIZE DIMENSIONS.....	page 09
5.	CARGO COMPARTMENT.....	page 13

<i>ATR</i> PK / 75 WBM	WBM TOC Table of Content	DSC.5 Page n°02
---	---	---------------------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	DESCRIPTION CARGO AND DOORS DOORS OPENING SIZE	DSC.5 Page n°03
---	---	--------------------------------

3 DOORS OPENING SIZE

3.1 Introduction

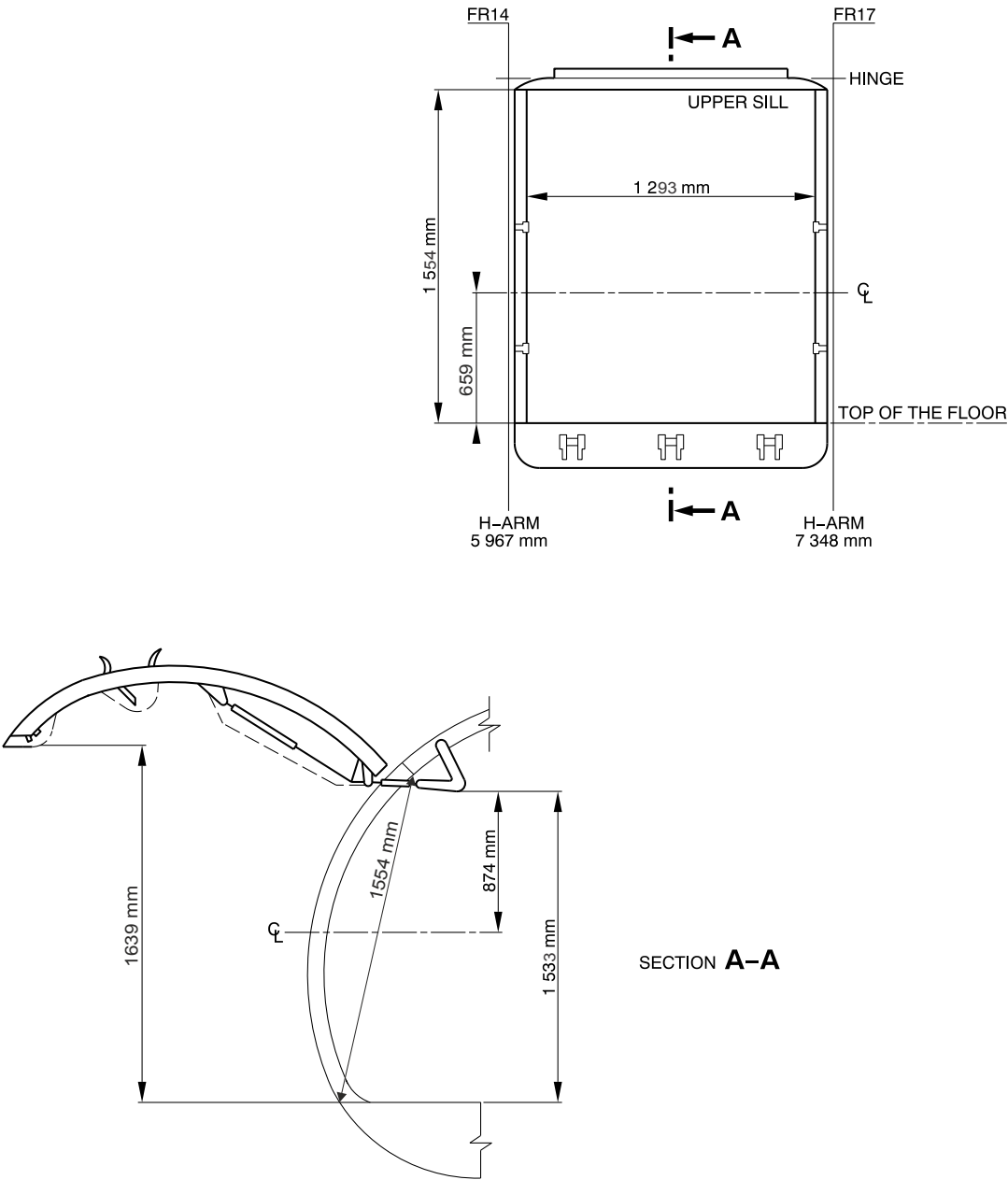
_199a20a3-d85d-4d24-ac01-1750428ae558		0.1
ALL		

The rear compartment can be loaded through the service door located right side in rear fuselage. This door is manually operated.

ATR PK / 75 WBM	DESCRIPTION CARGO AND DOORS DOORS OPENING SIZE	DSC.5 Page n°04
---	---	---------------------------------------

3.2 Cargo Door

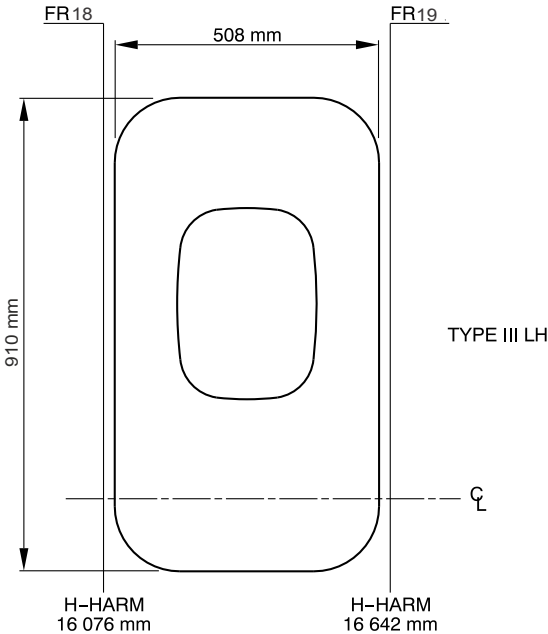
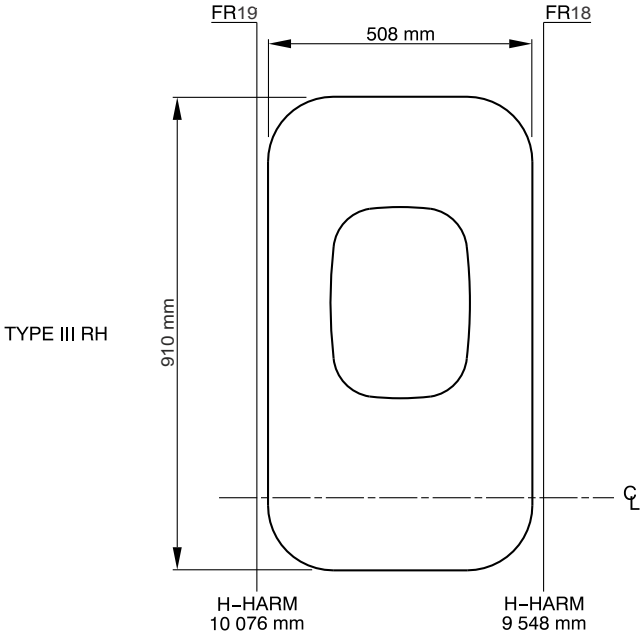
52126971-f907-46a0-82f9-640ed530ef18	REV	1.2
		ALL



 PK / 75 WBM	DESCRIPTION CARGO AND DOORS DOORS OPENING SIZE	DSC.5 Page n°05
---	---	------------------------

3.3 Plug Type Emergency Exit

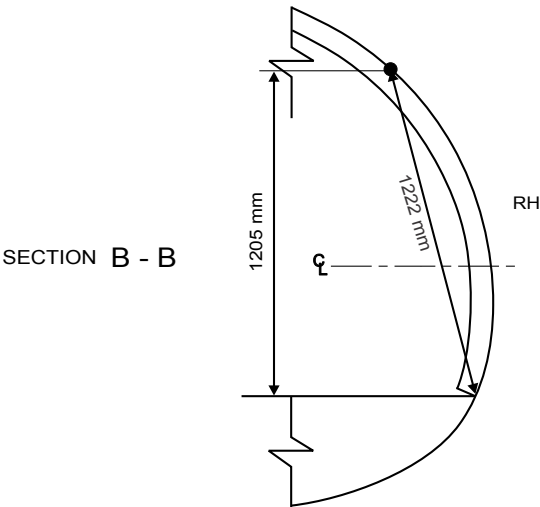
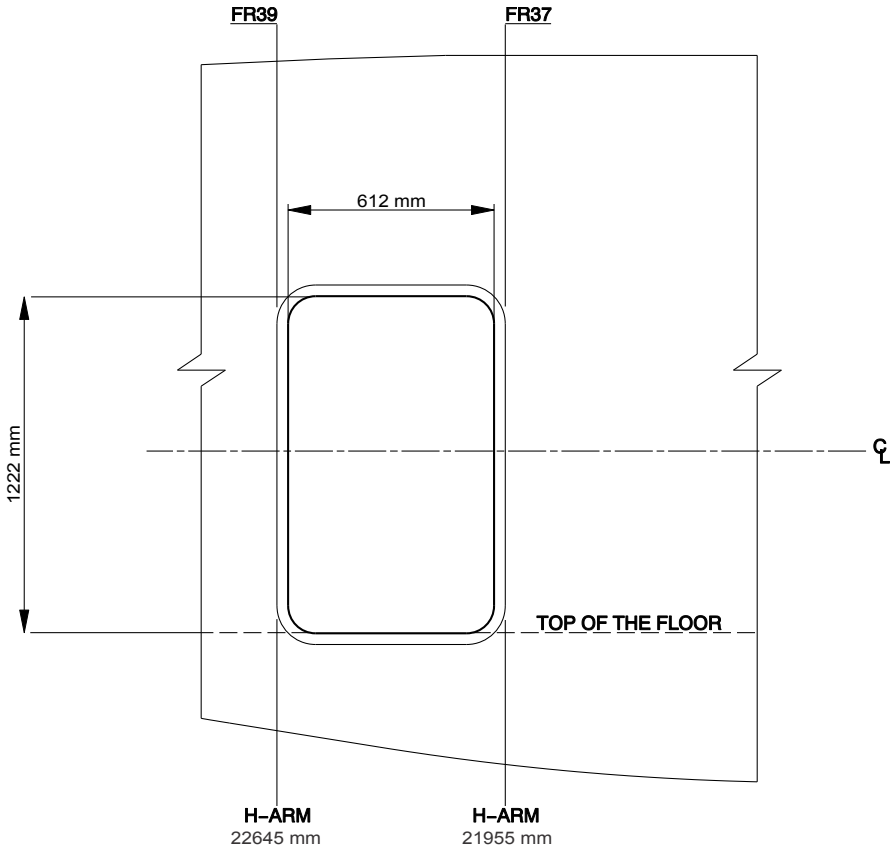
4b7b4ddc-6402-4ebf-b39c-c04c72ec17d4	REV	1.2
		ALL



ATR PK / 75 WBM	DESCRIPTION CARGO AND DOORS DOORS OPENING SIZE	DSC.5 Page n°06
--	---	---------------------------------------

3.4 Aft Service Door

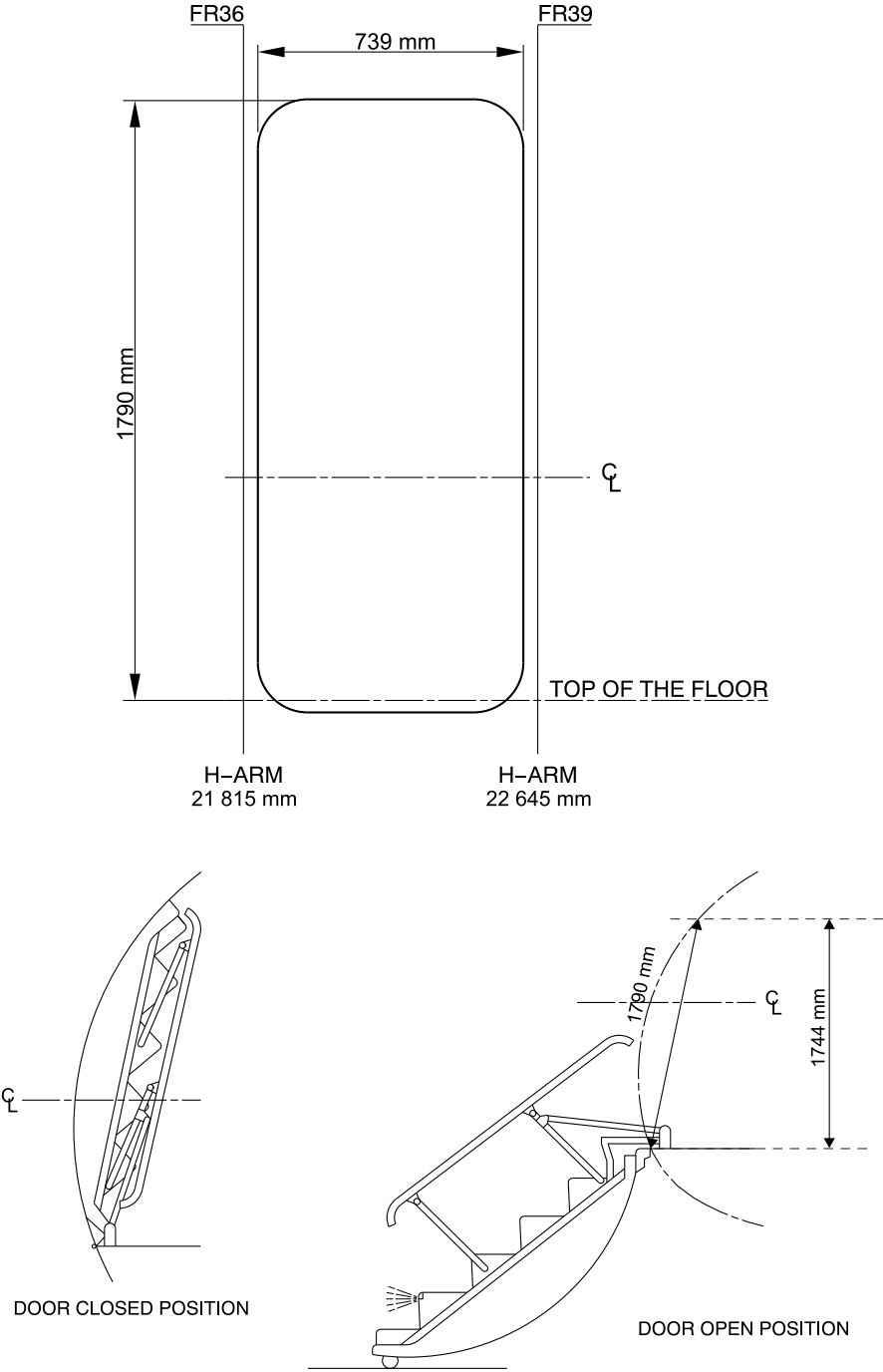
12a2256f-9e77-4afd-8ecb-cbcafad90fa3	REV	1.4
		ALL



 PK / 75 WBM	DESCRIPTION CARGO AND DOORS DOORS OPENING SIZE	DSC.5 Page n°07
---	---	---

3.5 Aft Passenger Door

Aft Passenger Door f84f8902-342e-4bf8-a5db-66cfa1144f9e	REV 1.2 ALL
--	--



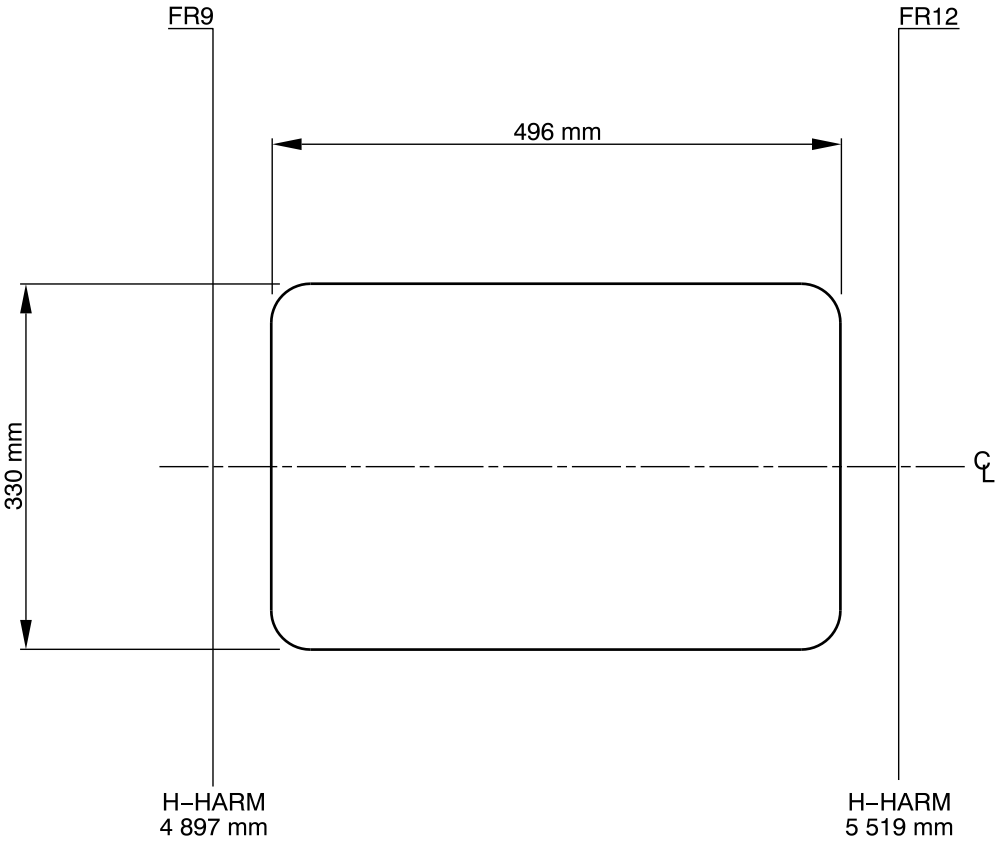
- Fig. 1 : Aft Passenger Door Opening Size -

ICN-75-3-521100-T-FB429-00006-A-02-N

ATR PK / 75 WBM	DESCRIPTION CARGO AND DOORS DOORS OPENING SIZE	DSC.5 Page n°08
---	---	---------------------------------------

3.6 Pilot Emergency Hatch

af849f73-b96e-494d-8af0-e57f38f98188		0.1
ALL		



- Fig. 1 : Pilot Emergency Hatch -

ATR PK / 75 WBM	DESCRIPTION CARGO AND DOORS PACKAGE SIZE DIMENSIONS	DSC.5 Page n°09
--	--	------------------------

4 PACKAGE SIZE DIMENSIONS

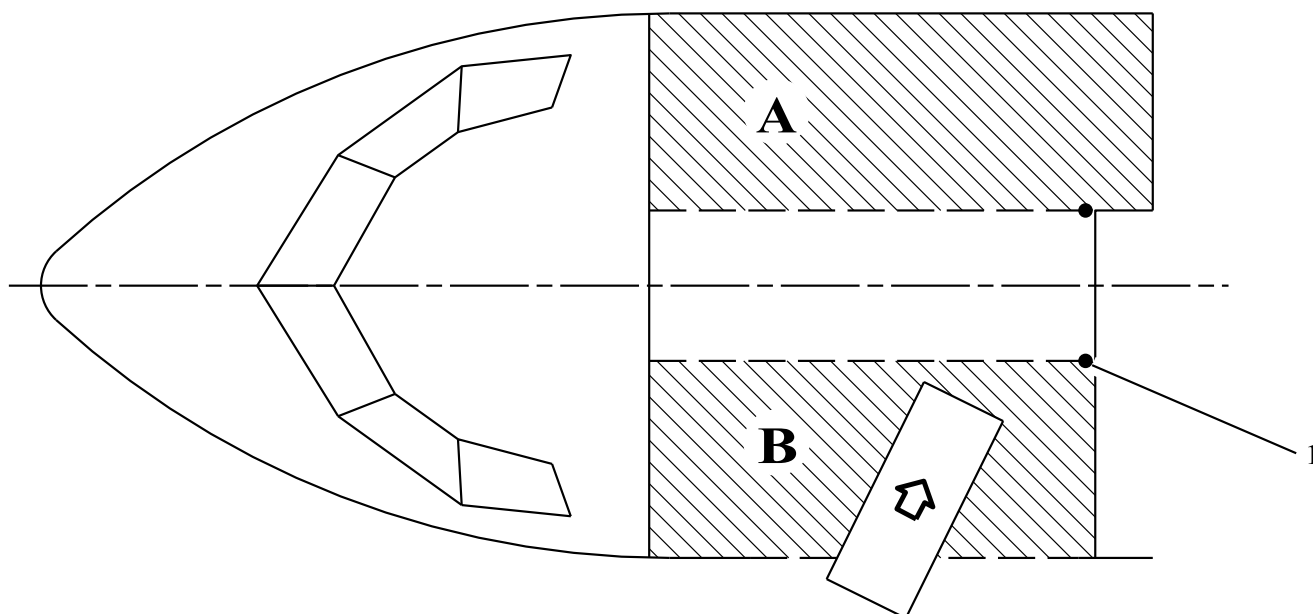
4.1 Forward Cargo Compartment

416ddab6-f1ef-4959-bac5-4636c1aa0f38

2.0

ALL

The maximum dimensions of the package which can be loaded in each cargo compartment are given in following tables.



ICN-XX-Y-142000-T-FB429-00028-A-01-N

- Fig. 1 : Forward Cargo Compartment -

 PK / 75 WBM	DESCRIPTION CARGO AND DOORS PACKAGE SIZE DIMENSIONS	DSC.5 Page n°10
---	--	----------------------------

cont'd... >>>

1) Right Forward Compartment A

Height (cm)	5 to 143	150	155	165
Width (cm)	Length (cm)			
5	190	185	185	180
10 to 20	185	185	185	180
25 to 35	180	180	180	
40	180			
45 to 70	170			

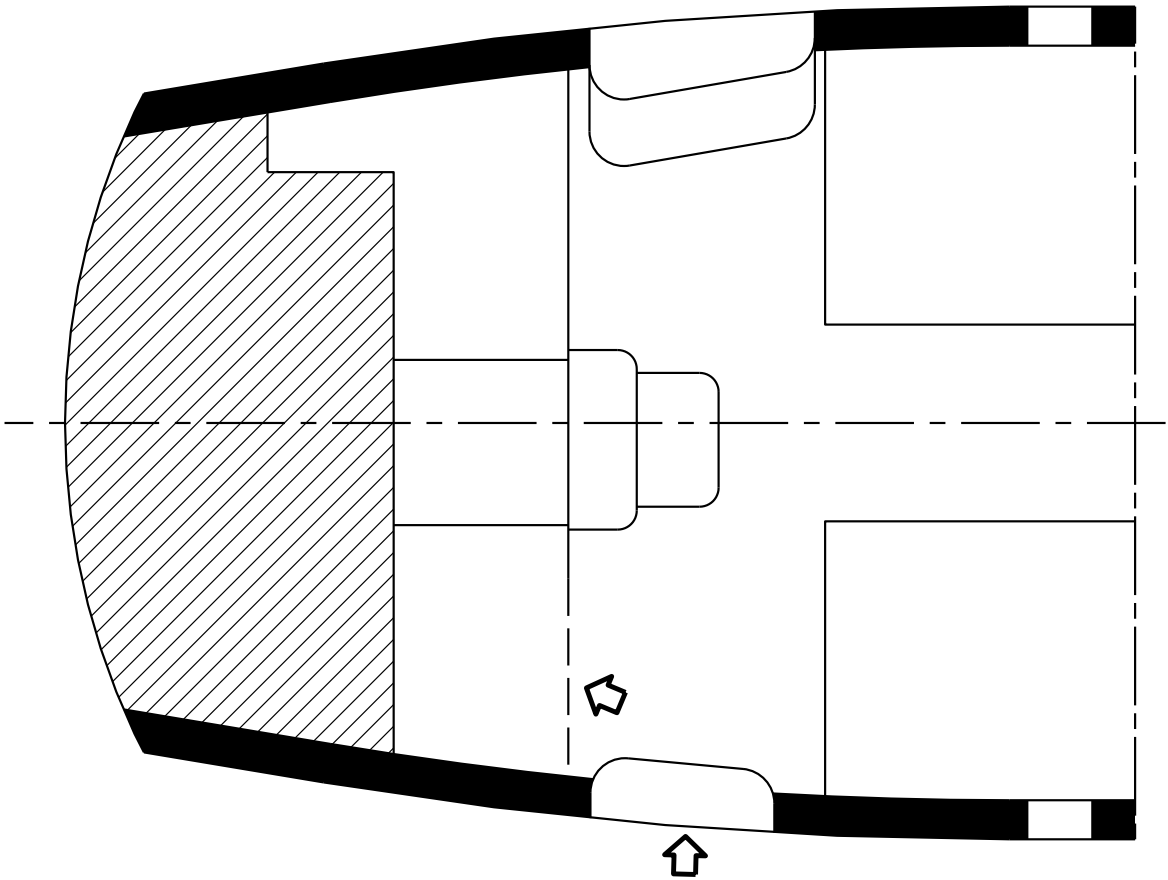
2) Left Forward Compartment B

Height (cm)	5 to 143
Width (cm)	Length (cm)
5 to 35	160
40 to 50	150
Removing the mast ①	
40 to 50	160

 PK / 75 WBM	DESCRIPTION CARGO AND DOORS PACKAGE SIZE DIMENSIONS	DSC.5 Page n°11
---	--	------------------------

4.2 Aft Cargo Compartment

0c589215-e4f1-4b6b-ac5f-b552c2e0c8ea	REV	4.0
	ALL	



ICN-XX-Y-142000-T-FB429-00022-A-01-N

- Fig. 1 : Aft Cargo Compartment -

 PK / 75 WBM	DESCRIPTION CARGO AND DOORS PACKAGE SIZE DIMENSIONS	DSC.5 Page n°12
---	--	----------------------------

cont'd... >>>

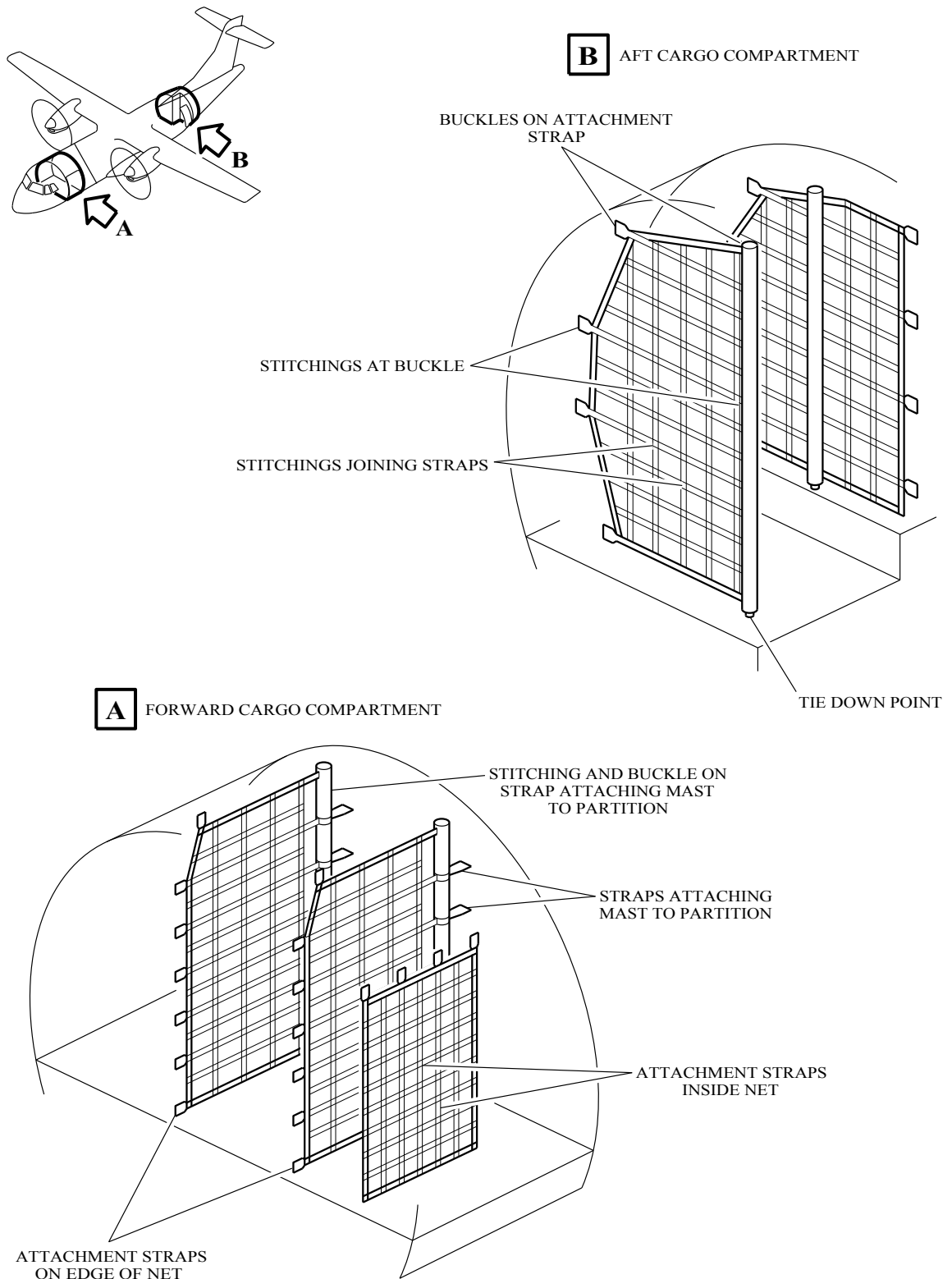
Height (cm)	5 to 50	50 to 80	80 to 100	100 to 110
Width (cm)	Length (cm)			
5 to 30	150	130	80	80
35	150	130	80	80
40	150	130	80	80
45	130	130	80	80
50	60	60	60	50

 PK / 75 WBM	DESCRIPTION CARGO AND DOORS CARGO COMPARTMENT	DSC.5 Page n°13
---	--	---------------------------------------

5 CARGO COMPARTMENT

5.1 Cargo Location

1caecc80-2d83-4d5b-b35f-b2db456f7f53	REV 1.0 ALL
--------------------------------------	-------------



- Fig. 1 : Cargo Location -

 PK / 75 WBM	DESCRIPTION CARGO AND DOORS CARGO COMPARTMENT	DSC.5 Page n°14
---	--	---------------------------------------

5.2 Nets

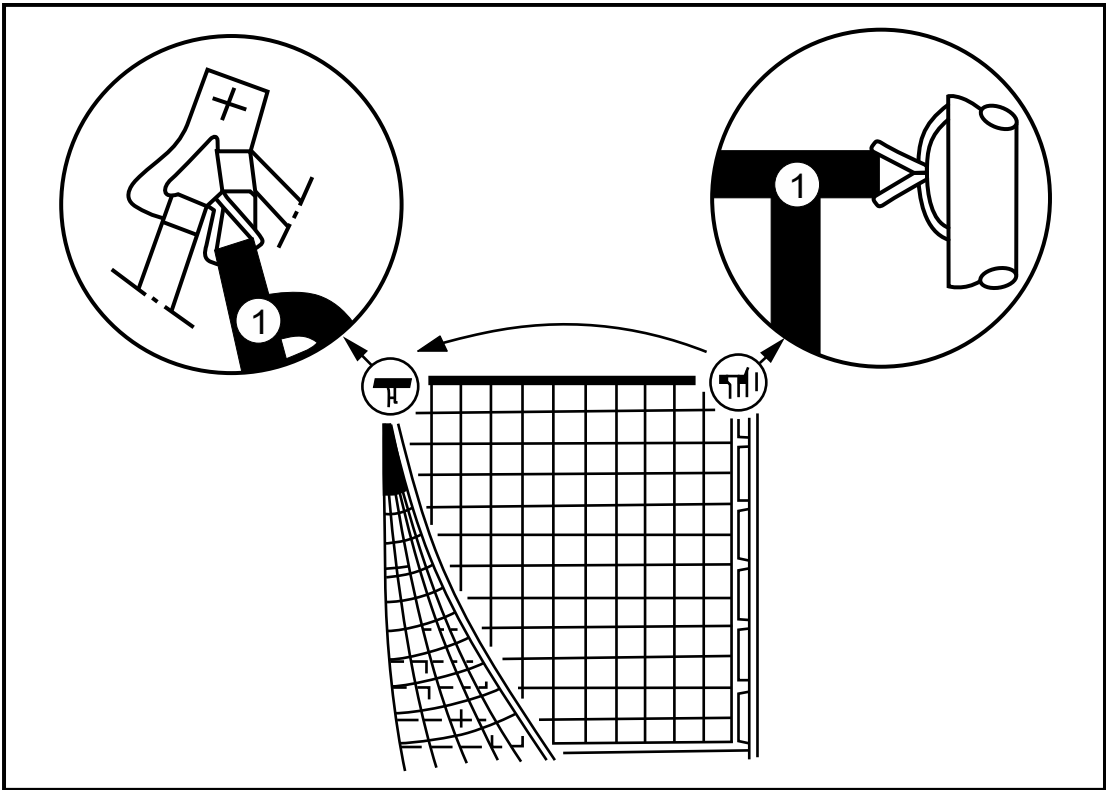
Nets installation

8db1cb5d-eec0-4ab8-8451-c3d3269e257b		0.3
		ALL

Refer to fig. 1 for nets installation description.

CAUTION

It is recommended to secure each forward compartment net by fastening the upper net hook to its mast buckle.



 PK / 75 WBM	WBM TOC Table of Content	SUP. Page n°01
---	---	--------------------------------------

SUPPLEMENTS

WEIGHING REPORT

SUP.WR

<i>ATR</i> PK / 75 WBM	WBM TOC Table of Content	SUP. Page n°02
---	---	--------------------------------------

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	WBM TOC Table of Content	SUP.WR Page n°01
---	------------------------------------	-------------------------

WR - WEIGHING REPORT

WEIGHING REPORT

SUP.WR

. **WEIGHING REPORT.....** [page 03](#)

<i>ATR</i> PK / 75 WBM	WBM TOC Table of Content	SUP.WR Page n°02
---	---	--

PAGE
INTENTIONALLY
LEFT BLANK

 PK / 75 WBM	SUPPLEMENTS WEIGHING REPORT	SUP.WR Page n°03
---	--	---------------------------------

1 WEIGHING REPORT

52e3b50c-9773-40f3-ba1a-b9b860678e41	REV	1.1
		ALL

Has to be integrated by the operator

<i>ATR</i> PK / 75 WBM	SUPPLEMENTS WEIGHING REPORT	SUP.WR Page n°04
---	---	--

PAGE
INTENTIONALLY
LEFT BLANK