



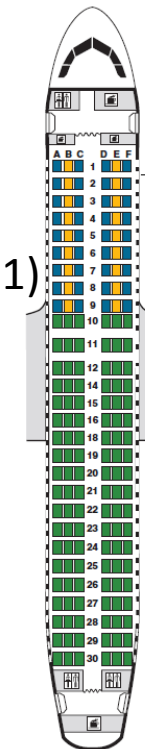
LEONARDO
Passengers Service System

Leonardo WEIGHT AND BALANCE

- Aircraft Data Base in accordance with IATA AHM recommendations
- All necessary weight and balance calculations
- Optimum Load distribution based on ideal line/area data
- All necessary printouts for a flight (LIR, Loadsheet, NOTOC)
- Standard IATA format messages processing
- Statistics information collection

- Data Base Module
- Calculation Module
- Reporting Module
- Message processing Module
- Administration Module

- Based on IATA Airport Handling Manual recommendations
- Contains: airlines schedule, aircraft types, business rules, teletype addresses, etc.
- Functions of data entry, edit and copy
- Allows manual or semi-automatic data base update (IATA AHM562)
- Prepares report for carriers approval procedure (IATA AHM561)
- Shaping and issuance of documentation for aircraft (IATA AHM565)
- Support of templates for accompanying documentation





C/M Business/Economy Class
168 Sitze/Seats

In der Business Class bietet der freibleibende Mittelsitz zusätzliche Bewegungsfreiheit.
In Business Class the middle seat will not be occupied, offering additional space.

Trennung Business/Economy Class entsprechend der Nachfrage.
Partition between Business and Economy Class according to demand.

Technische Daten/Technical specifications

Flügelspannweite:	34,10 m
Wing span:	111 ft 9 in
Länge/Length:	37,57 m / 122 ft 7 in
Höhe/Height:	12 m / 39 ft 5 in
Max. Abfluggewicht:	73.500 kg
Max. take-off weight:	162.000 lb
Max. Reisegeschwindigkeit:	840 km/h
Max. cruising speed:	520 mph
Max. Flughöhe:	11.900 m
Max. cruising altitude:	39.000 ft
Reichweite/Range:	3.200 km/1.984 miles
Triebwerke/Engines:	2 x CFM International CFM56-5

 **Bordküche/Galley**
 **Toiletten/Lavatory**

File View LoadControl Tools Help

- Airline 1**
 - Airline Information**
 - General Airline Information
 - Airline Standards
 - Airline Business Rules
 - Airline Fleet**
 - Aircraft Type 1
 - Aircraft Information
 - Aircraft Registrations
 - Centre of Gravity Charts
 - Fuel
 - Holds
 - Seating Layout
 - Cabin and Equipment
 - Stabilizer Trim
 - Structural Limitations
 - Aircraft Business Rules
 - Aircraft Type 2
 - Aircraft Type 3
 - Airline Schedule**

Airline Information Airports Documents And Messages Miscellaneous

Airline Details

Airline Name Airline IATA Code

Country Airline ICAO Code

City Airline Other Code

Remarks

Airline Logo

Contact Details

Headquarters Address

Contact Person

E-mail Address

Teletype Address

Phone Number

Fax Number

Remarks

Airport Representative

E-mail Address

Teletype Address

Phone Number

Fax Number

Remarks

Loadsheet Output

Balance Output

Item	Acronym	Prelim		Final		Remarks
		EDP	ACARS	EDP	ACARS	
Basic Index	BI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dry Operating Index	DOI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Deadload Index	DLI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Deadload MAC	MACDLW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Loaded Index at zero fuel weight	LIZFW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Loaded Index at take-off weight	LITOW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Loaded Index at landing weight	LILAW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MAC — at zero fuel weight	MACZFW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MAC — at take-off weight	MACTOW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MAC — at landing weight	MACLAW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stabilizer trim setting at take-off	STABTO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stabilizer trim setting at landing	STABLA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Supplementary Information

Item	Prelim		Final		Remarks
	EDP	ACARS	EDP	ACARS	
Ballast Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Index	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Centre of Gravity Limits - LAW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Centre of Gravity Limits - TOW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Centre of Gravity Limits - ZFW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Crew Code	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Crew Index	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Deadload Breakdown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fuel Density	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LDM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pantry Code	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pantry Index	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Service Weight Adjustments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transit Zero Fuel Centre of Gravity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transit Zero Fuel Weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Trapped Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Alternate Weight Units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTOC "YES" or "NO"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
No connection to Check-In	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Cancel Reset Save

Last Update: 01/31/2015 12:30:15

- Based on airline schedule
- Allows to insert and update (manual or automatic) traffic load information by categories
- Real time calculation of allowed traffic load and actual load
- Dynamic calculation of aircraft centre of gravity
- Graphical user interface for easy handling
- Able to search for ideal balance conditions

- All aircraft structural limitations
- Aircraft balance limitations checks
- Dangerous and special goods checks for location, proximity and compatibility
- Flights can be handled completely automatically based on time thresholds
- The system contains warnings and alerts to help load agents to complete all necessary inputs and actions
- Detailed allocation of passenger weight for complete confidence



Load Control

Actual Loading
ALL WEIGHTS IN KILOS LAST UPDATE 11:30

	WEIGHT	DISTRIBUTION
LOAD IN COMPARTMENTS	200	1/0 3/200 4/0 5/0
PASSENGER/CABIN BAG	3525	47/0/0 TTL47 CAB0
		PAX 5/42
TOTAL TRAFFIC LOAD	3725	
DRY OPERATING WEIGHT	41680	
ZERO FUEL WEIGHT ACTUAL	45405	MAX 57000

TAKE OFF FUEL	7800	
TAKE OF WEIGHT ACTUAL	53205	MAX 70000

TRIP FUEL	2700	
LANDING WEIGHT ACTUAL	50505	MAX 61000

BALANCE AND SEATING CONDITIONS
DOI 45,0
LIZFW 52,30 MACZFW 27,42
LITOW 49,70 MACTOW 25,70
LILAW 51,43 MACLAW 26,18

STAB TO 0,6 UP

SEATING
0A/05 0B/20 0C/20 0D/02

UNDERLOAD 9500

Fuel Distribution

Fuel Density 0,81 KGL

Fuel Distribution

Block Fuel KG Max Fuel KG

Taxi Fuel KG Min Fuel KG

Trip Fuel KG

Landing Fuel KG

Additional Fuel KG

Validate Fuel

Aircraft Weight Adjustments

	KG	I.U.
Basic Weight/Index		
Flight Crew	<input type="text"/>	<input type="text"/>
Cabin Crew	<input type="text"/>	<input type="text"/>
Other Crew	<input type="text"/>	<input type="text"/>
Pantry	<input type="text"/>	<input type="text"/>
Potable Water	<input type="text"/>	<input type="text"/>
Other Equipment	<input type="text"/>	<input type="text"/>
Dry Operating Weight/Index	<input type="text"/>	<input type="text"/>

Validate Weight Adjustments

Centre Of Gravity

File View LoadControl Tools Help

Flight Quick Access

Flight	Status
Ab417	R
Ab380	R
Ab235	R
Ab521	R
Ab318	R
Ab443	R
Ab211	C
Ab715	C
Ab102	O
Ab515	C
Ab344	C
Ab715	C
Ab265	O
Ab117	O
Ab367	O
Ab454	O
Ab820	O
Ab770	O
Ab468	O
Ab110	O
Ab245	O
Ab123	O
Ab329	O
Ab740	O
Ab020	O
Ab140	O
Ab458	O
Ab022	O
Ab845	O
Ab267	O
Ab661	O
Ab181	O
Ab205	O

Flight Information

AB117 LED-VKO A320-214 C12Y144
ETD 12:00 VQ-ABC

Crew Code S 2/5/0
Pantry Code D
Water Code D
Other D

Loading Summary

Estimated ZFW	46480 kg
Maximum ZFW	57000 kg
Maximum Payload	14220 kg
Actual Payload	3725 kg

Status OK

Flight Stage

06:00	08:00	08:20	08:25	11:30	11:40	12:00	12:05
Open FT	Send EZFW	Print LIR	Send LIR	Check DL	Print LS	ETD	Send LDM

Load Planning Load Control Passengers Deadload

Traffic Load

Business Rule	Weights	Validate
Passengers	Booked 50 3750 kg	
Baggage	Statistical 350 kg	
Cargo	Manual 570 kg	<input checked="" type="checkbox"/>
Mail	Manual 130 kg	<input checked="" type="checkbox"/>
Transit Passengers	Manual 0 kg	<input checked="" type="checkbox"/>
Transit Deadload	Manual 0 kg	<input checked="" type="checkbox"/>
Estimated Traffic Load	4800 kg	

Aircraft Weight Adjustments

Basic Weight	40400 kg
Flight Crew	180 kg
Cabin Crew	375 kg
Other Crew	0 kg
Pantry	420 kg
Potable Water	180 kg
Other Equipment	125 kg
DOW	41680 kg
Estimated ZFW	46480 kg

Fuel And Allowed TO Weight

Block Fuel	History 8000 kg
Taxi Fuel	Standard 200 kg
Trip Fuel	History 2700 kg
MTOW	Standard 70000 kg
MLAW	Standard 61000 kg
Estimated MaxPLD	14220 kg
Estimated Underload	9420 kg

Auto Trim

Ideal Trim Line 32,5 %MAC at ZFW

Passenger Seating

Baggage Distribution

Cargo Distribution

Mail Distribution

Fuel Distribution

Load Options

Messages And Alerts

- Loading Instruction/Report, Loadsheets and NOTOC are issued in accordance with IATA AHM (AHM514, AHM517, AHM381)
- Prevents LIR and Loadsheets issue if any checks are violated
- Provides statistics reports

Q400 Preliminary Allowed Traffic Load Calculation DASH-8 Q400

DOW (stand crew)	18368	Maximum Structural Weights	Zero Fuel	Take-off	Landing
Extra Crew		Performance Limited Weight	26308	29574	28123
DOW (w/extra crew)		Allowed Take-off Weight	29217	29500	28100
Take-off Fuel (Planned)	2909	Operating Weight	21277	0	1754
		Allowed Traffic Load	7940	0	0
		Trip Fuel		0	0

LOADSHEET

Flight: ABC1234 → AB-CDE | A/C Reg: | Crew: | DATE: 15/10/12 | ALTN 1: ABCD, ALTN 2: EFGH, EET: 1:45

Passengers				Deadload			
FAX Position	LMC	Passengers	Weight	Weight	FWD Compartment	AFT Compartment	Weight
FWD(A)	3	Adults	50	4200	Baggage		458
FWD(B)	4	Children	5	175	Cargo	54	100
FWD(C)	10	Infants	3		Mail	12	34
FWD(D)	10	TOTAL	58	4375	TOTAL	66	592
AFT(F)	10						
AFT(G)	10						
AFT(H)	3						

Weights Calculation		
TOTAL Passengers	+	4375
TOTAL Deadload	+	770
Cabin Baggage	+	0
TOTAL Traffic Load	=	5145
Dry Operating Weight	+	18368
ZERO FUEL WEIGHT	=	23513
Take-off Fuel (planned)	+	2909
TAKE-OFF WEIGHT	=	26422
MAX -	-	29217
Trip Fuel	+	1754
LANDING WEIGHT	=	24668

Index Calculation Table		
Balance Sheet	+	-
DCI	23.23	
Extra Crew		
C1	-3	
C3	20	
C4	4	
FWD (A)	-8	
FWD (B)	-8	
FWD (C)	-12	
FWD (D)	-5	
AFT (E)	3	
AFT (F)	10	
AFT (G)	5	
SUM	-36	65.23
LIZFW	29.23	

Prepared by: JOHN DOE
Approved by: _____
[CALCULATE] [RESET]



- All functions and actions protected by access authorization rules
- Data management
- Flight journal function
- Reporting



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