



# Aircraft Checklist

MFU - Pilotenclub - LOAV



3fly.at

## OE-KAS

**Diamond DA40-180**

MTOM = 1150 kg / 2.535 lb

A/C-Size: W: 11.9 m H: 2.0 m L: 8.0 m

**OPERATOR**

### MFU Flugbetrieb GmbH

A-2542 Kottingbrunn

Flugplatz 1, Top 1

UID ATU37004807

+43 2252 77340

### FPL (EXAMPLE)

7	A/C ID	OE-KAS
8	Flight Rules	V,I,Y,Z
	Type of Flight	G
9	Type of A/C	DA40
	Wake Turbul. Cat.	L
10	Equipment	BDFGLORY/S
13	Departure A/D	LOAV
	Departure Time	0830
15	Speed	N0125
	Flight Level	080
	Route	SNU GRZ
16	Destination A/D	LJMB
	Total EET	0045
	Alternate A/D	LOWG
18	Other Info	EET/GOLVA0045
	PBN/B2C2D2O2S2	NAV/SBAS
19	Endurance	04:00
	Persons on Bord	2
	Emerg. Equipm.	ELT
	A/C Colour	WHITE
	Name PIC	NAME

**CONTACT**

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AIS +43 51703 3211

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**FUEL**

Fuel AVGAS 100LL

Maximum Fuel 156 L / 41.2 gal

Unusable Fuel 3.8 L / 1 gal

**OIL**

Shell Aero  15 W 50

Minimum 4 quarts

Minimum IFR 6 quarts

**TIRE**

Front Tire 29 psi / 2.0 bar

Main Tires 36 psi / 2.5 bar

**SPEED**

V<sub>S0</sub> (Stall- Flaps max) 49 KIAS







V<sub>0</sub> (Stall- Flaps up) 52 KIAS

V<sub>G</sub> (Flaps up) 60-73 KIAS\*

Max. Demo. X-Wind 20 knots

\*) A/C - Mass 850Kg - 1150Kg

**COM FAIL**

	Clear to Land	
	Return to Landing	
	Continue Circling	
	A/D unsafe, don't Land	
	Land at this A/D and proceed to Apron - wait for Clearance	

 Consult POH/AFM for "Warnings, Cautions and additional Information"

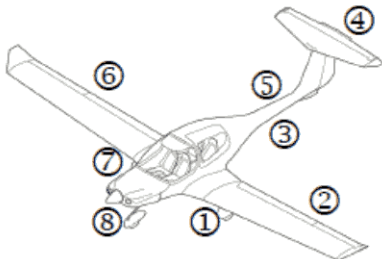
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**PREFLIGHT**

1 Wing Tanks & Gascolator	DRAIN
2 A/C Doc, Mass&Bal	CHECK

**CABIN CHECK**

3 Ignition Key	REMOVE	
4 Canopy, Rear Door	CHECK	
5 Electr. Equipment	OFF	
6 Circ. Breaker	ALL-IN	
7 Control Levers	Check Free	
8 Prop	FULL FWD	
9 Throttle	IDLE	
10 Mixture	LEAN	
<b>BATTERY</b>	Master – BAT	ON
	Annunc. Panel	CHECK
	Fuel Quantity	CHECK
	Pos. Light, ACL	CHECK
	Ldg./ Taxi - Light	CHECK
	Master – BAT	OFF
17 Loose Items	CHECK	
18 Flight Control	CORRECT	
19 Trim Tab	MOVABLE	
20 Baggage	SECURED	

**EXTERIOR CHECK****1. Left Main Gear**

21 Gear Strut	VIS. INSP.
22 Strut Fairing	VIS. INSP.
23 Wheel Fairing	VIS. INSP.
24 Tire 36psi / 2,5 bar	CHECK
25 Tire Wear, Tread	CHECK
26 Wheel Brake	VIS. INSP.
27 Break Line Leaks	CHECK
28 Slip Marks	VIS. INSP.
29 Chocks	REMOVE

**2. Left Wing**

30 Wing Surfaces	VIS. INSP.
31 Step	VIS. INSP.
32 Air Intake Lower	VIS. INSP.
33 Openings Lower	CHECK
34 Tank Drain	CHECK
35 Stall Warning	CHECK
36 Tank Filler	VIS. INSP.
37 Tank Air Outlet	VIS. INSP.
38 2x Stall Strips	VIS. INSP.
39 Pitot Probe	CLEAN
40 Ldg / Taxi Lights	VIS. INSP.
41 Wing Tip	VIS. INSP.
42 Pos.Light & AC	VIS. INSP.
43 Tiedown	CHECK, CLEAR
44 Aileron & Linkage	VIS. INSP.
45 Aileron Hinges & Pin	Aileron & Linkage
46 Foreign.Obj.AileronPad	VIS. INSP.
47 Flap & Linkages	VIS. INSP.
48 Flap Hinges & Pin	VIS. INSP.



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### 3. Fuselage (Left)

49 Canopy Left side	VIS. INSP.
50 Rear Door, Window	VIS. INSP.
51 Fuselage Skin	VIS. INSP.
52 Antennas	VIS. INSP.



### 4. Empennage

53 Stabilizer Contr. Surf.	VIS. INSP.
54 Hinges	VIS. INSP.
55 Elev. Trim, Wire	VIS. INSP.
56 Rudder Trim Tab	VIS. INSP.
57 Fin Tiedown	CHECK, CLEAR
58 Tail Skid & Lower Fin	VIS. INSP.



### 5. Fuselage (Right)

59 Fuselage Skin	VIS. INSP.
60 Window	VIS. INSP.
61 Canopy Right Side	VIS. INSP.



### 6. Right Wing

62 Flap & Linkages	VIS. INSP.
63 Flap Hinges & Pin	VIS. INSP.
64 Aileron & Linkage	VIS. INSP.
65 Aileron Hinges & Pin	VIS. INSP.
66 Foreign.Obj.AileronPad	VIS- INSP.
67 Wing Tip	VIS. INSP.
68 Pos.Light & AC	VIS. INSP.
69 Tiedown	CHECK, CLEAR
70 Wing Surfaces	VIS. INSP.
71 2x Stall Strips	VIS. INSP.
72 Tank Air Outlet	VIS. INSP.

73 Tank Filler	VIS. INSP.
74 Openings Lower	CHECK
75 Tank Drain	CHECK
76 Step	VIS. INSP.




### 7. Right Main Gear

77 Gear Strut	VIS. INSP.
78 Strut Fairing	VIS. INSP.
79 Wheel Fairing	VIS. INSP.
80 Tire 36psi / 2,5 bar	CHECK
81 Tire Wear, Tread	CHECK
82 Wheel Brake	VIS. INSP.
83 Break Line Leaks	CHECK
84 Slip Marks	VIS. INSP.
85 Chocks	REMOVE



### 8. Front Fuselage

86 Oil Level 6-8 Qts	CHECK
87 Cowling	VIS. INSP.
88 3 Air Intakes	CLEAR
89 Propeller 	VIS. INSP.
90 Spinner & Screws	VIS. INSP.
91 Nose Landing Gear	VIS. INSP.
92 Tire and Wheel	VIS. INSP.
93 Slip Marks	VIS. INSP.
94 Strut Fairing	VIS. INSP.
95 Tire Wear, Tread	CHECK
96 Wheel Fairing	VIS. INSP.
97 Tow Bar	REMOVE
98 Tire 29psi / 2,0bar	CHECK
99 Chocks	REMOVE

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100	Exhaust	VIS. INSP.
101	Forw. Cabin Inlets	CLEAR
102	Antennas	VIS. INSP.
103	Gascolator	DRAIN
104	Venting Pipes	CHECK
105	Fuselage Underside	CLEAN


### BEF. ENGINE START


1	Preflight Check	COMPL
2	Rudder Pedals	ADJUST
3	Passenger Briefing	COMPL
4	Seat Belts / Harness	FASTEN
5	Baggage	SECURE
6	Rear Door	LOCKED
7	Front Canopy	POS. 1 or 2
8	Parking Brake	SET
9	Flight Controls	FREE
10	Trim Wheel	SET T/O
11	Throttle	IDLE
12	Prop	FULL FWD
13	Mixture	LEAN
14	Friction Device	ADJUST
15	Alternate Air	CLOSED
16	Alternate Static	CLOSED
17	Avionics Master	OFF
18	Essential Bus	OFF
19	Master - BAT	ON
20	Annunciator Panel	Test 5secs.
21	Fuel Tank Selector	FULLER TANK

### ENGINE START

1	Bef. Engine Start CL	COMPL
2	Strobe Light / ACL	ON
3	Fuel Pump	ON
4	Throttle	3 cm OPEN
COLD	Mixture	3-5 SEC RICH
	Mixture	LEAN
	Throttle	1 cm OPEN
HOT	Mixture	1 SEC RICH
	Mixture	LEAN
10	Fuel Pump	OFF
11	Prop Area	CLEAR
12	Ignition	START
13	Mixture when fires	RICH
14	Oil Press. < 15 sec	IN RANGE 
15	Master -ALT	ON
16	Ammeter	Check
17	Fuel Press. 14-35 psi	CHECK
18	Annunciator Panel	CHECK 5 SECS.

### FLOODED ENGINE START



1	Strobe Light / ACL	ON
2	Fuel Pump	OFF
3	Mixture	LEAN
4	Throttle	MID POS
5	Prop Area	CLEAR
6	Ignition	START
7	Throttle When Fires	PULL BACK
8	Mixture	RAPIDLY RICH
9	Oil Press. < 15 sec	IN RANGE 

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10	Master - ALT	ON
11	Ammeter	CHECK
12	Fuel Press. 14-35 psi	CHECK
13	Annunciator Panel	CHECK 5 SECS.

### BEFORE TAXI

1	Avionic Master	ON
2	Electr. Equipment	ON
3	Flaps all Positions	CHECK
4	Eng-/Flight Instr.	CHECK / SET
5	Instr.-/Flood light	AS REQ.
6	GTN750 NAV Data	CHECK
7	GPS Selftest	CHECK
8	Fuel Selector 	LEFT/RIGHT
9	Pitot On → Ammeter	CHECK
10	Pitot	OFF
11	Taxi/Posn. Lights	AS REQ.
12	Engine Warm UP 	max 1100rpm
13	Transponder	CHECK
14	Parking Barake	RELEASE
TAXI	Brakes	CHECK
	Flight Instruments	CHECK
	Gyro Instruments	CHECK



### BEFORE TAKEOFF

1	Parking Brake	SET
2	Seat Belts/Harness	FASTEN
3	Rear Door	CLOSE LOCK
4	Front Canopy	CLOSE LOCK
5	Door Warning Light	CHECK OFF
6	Fuel Selector	FULLER TANK
7	Engine Instruments	IN GREEN
8	Circuit Breakers	CHECK IN
9	Fuel Pressuere	14-35 psi
10	Autopilot	ON
11	Flight Controls	OVERRIDE
12	A/P DISC+Horn	PRESS & VFY
13	Fuel Pump	ON
14	Mixture	FULL FWD
15	Flaps	T/O
16	<b>Trim</b>	<b>T/O</b>
17	Flight Controls	FREE&CORR
18	Throttle	2000 rpm
MAGNETOS	Prop 3x Pull-Drop	250-500rpm
	Ignition R-B-L-B	Switch
	Drop max. 175rpm	Check
	Diff. L/R max. 50rpm	Check
	Ignition Switch Both	CONFIRM
24	Circuit Breakers	CHECK IN
25	Voltmeter	IN GREEN
26	Throttle Idle 600-800rpm	CHECK
27	Alternate Air	Closed
28	Landing Light	ON
29	Ptitot Heat	AS REQ.
30	Departure Briefing	COMPLETE
31	Parking Brake	Release

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**LINE UP / TAKEOFF**

1	Before T/O Check	COMPL
2	Approach Sector	CLEAR
3	Runway Heading	CONFIRM
4	Transponder	ON/ALT
5	Prop	FULL FWD
6	Throttle 	FULL FWD
7	Full Takeoff Power 	CONFIRM
8	Elevator	NEUTRAL
9	Rudder	DIRECTION
10	Rotate ( $V_R$ )	<b>59 KIAS</b>
11	Climb Speed ( $V_Y$ )	<b>60-66 KIAS*</b>


\*) A/C - Mass 1000Kg - 1150Kg

**CLIMB**

1	Throttle	FULL FWD
2	Mixture	RICH
3	Prop 2400 rpm	REDUCE
4	Engine Instruments	IN GREEN
5	Climb Speed ( $V_Y$ )	<b>60-66 KIAS*</b>
6	400ft AGL Safe Alt	CHECK
7	Flaps	UP
8	Trim	AS REQ
9	Landing Light	OFF
10	Fuel Pump	OFF
11	Fuel Press.	CHECK
12	Mixture >5000ft	SET EGT



\*) A/C - Mass 1000Kg - 1150Kg

**CRUISE - CLIMB**

1	Flaps	UP
2	Airspeed	<b>68-73 KIAS*</b>
3	Prop 2400	SET
4	Throttle	FULL FWD
5	Mixture >5000ft	SET EGT
6	Engine Instruments	IN GREEN
7	Trim	AS REQ
8	Fuel Pump (high Alt.)	ON 

\*) A/C - Mass 1000Kg - 1150Kg



**CRUISE**


1	Flaps	CHECK UP
2	Throttle (Page 7)	SET
3	Prop 1800 - 2400 rpm	SET
4	Mixture	SET
5	Trim	AS REQ
6	Fuel Selector	AS REQ
7	Fuel Pump (high Alt.)	ON 
8	Manover Spd $V_A$	<b>94/108 KIAS*</b>
9	Turbulent Air Spd $V_{no}$	<b>129 KIAS</b>
10	Fuel Pump (high Alt)	ON 

\*) A/C - Mass 780Kg - 980Kg 94 KIAS

\*) A/C - Mass 981Kg - 1150Kg 108 KIAS

**DESCENT**

1	Mixture 	AS REQ
2	Prop 1800 - 2400 rpm	AS REQ
3	Throttle	AS REQ
4	Fuel Pump (high Alt.)	ON 
5	Descent Planning	COMPLETE

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**LANDING APPROACH**

1 Fuel Pump	ON
2 Fuel Selector	FULLER TANK
3 Safety Harness	FASTEN
4 Airspeed Reduce MAX	<b>108 KIAS</b>
5 Flaps	T/O
6 Trim	AS REQ
7 Landing Light	AS REQ

**AFTER LANDING**

1 Throttle	IDLE
2 Brakes	AS REQ
3 Fuel Pump	OFF
4 Transponder	GND/STBY
5 Pitot Heat	OFF
6 Avionics	AS REQ
7 Landing Light	OFF
8 Taxi Light	ON
9 Flaps	UP

**BEFORE LANDING**


1 Mixture	FULL FWD
2 Throttle	AS REQ
3 Airspeed Reduce	<b>91 KIAS</b>
4 Prop	FULL FWD
5 Flaps	LANDING
6 Final Approach Spd 	<b>63-71 KIAS*</b>

<b>GO AROUND</b>	Prop	FULL FWD
	Throttle	FULL FWD
	Airspeed	<b>60-66 KIAS*</b>
	Flaps	T/O
	400ft AGL Safe Alt	CHECK
	Prop	2400
	Airspeed	<b>68-73 KIAS*</b>
	Flaps	UP
Fuel Pump	OFF	

**SHUT DOWN**

1 Parking Brake	SET
2 Engine Instruments	CHECK
3 ELT (121,5 MHz)	CHECK
4 Flight Plan	CLOSE
5 Avionic Master	OFF
6 Throttle	1000 rpm
7 Taxi Light	OFF
8 Position Lights	OFF
9 Mixture	CUTOFF
10 Ignition	OFF
11 Strobes	OFF
12 Master ALT - BAT	OFF
13 Flight Logger	SLIDE CARD
14 Map Light	CHECK OFF
15 Parking Brake	AS REQ
16 Tiedown	AS REQ

\*) A/C - Mass 1000Kg - 1150Kg

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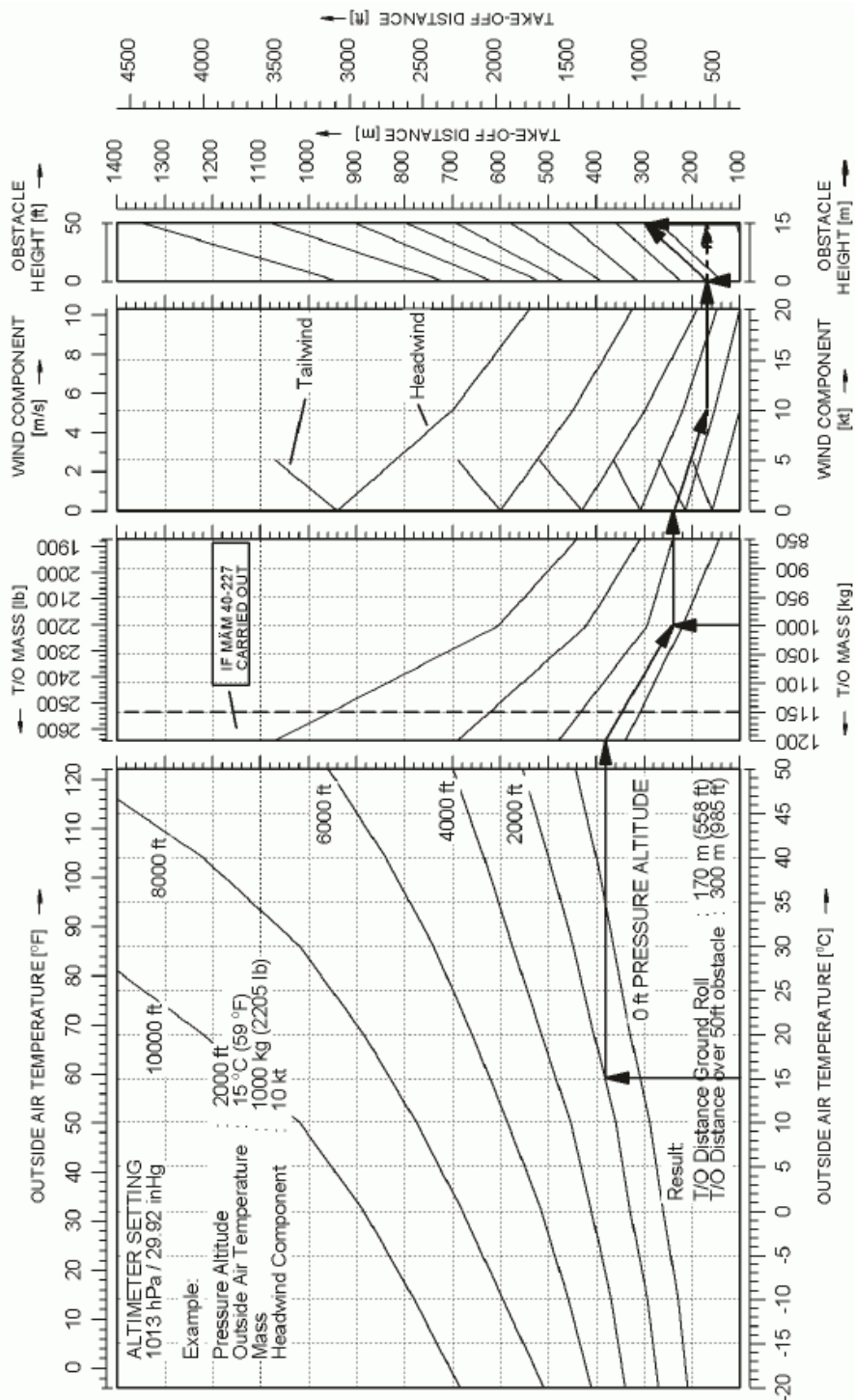
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Fuel Flow [US gal/h]	Drehzahl	Motorleistung in % der maximalen Startleistung										Motorleistung in % der maximalen Startleistung						
		45 %					55 %					65 %			75 %			
		1800	2000	2200	2400	2400	2000	2200	2400	2400	2400	2000	2200	2400	2000	2200	2400	
ISA	[°C]	[°F]	Ansaugdruck (MP) [inHg]										Ansaugdruck (MP) [inHg]					
MSL	15	59	22,7	21,3	20,2	19	23,9	22,4	21,2	21,2	26,8	24,9	23,4	27,3	25,8			
1000	13	55	22,4	21,0	19,9	18,7	23,6	22,2	21,0	21,0	26,4	24,5	23,2	26,8	25,5			
2000	11	52	22,1	20,7	19,6	18,4	23,3	21,9	20,7	20,7	26,0	24,2	22,9	26,5	25,2			
3000	9	48	21,8	20,4	19,3	18,2	23,0	21,6	20,4	20,4	25,7	23,8	22,6	26,1	24,8			
4000	7	45	21,5	20,2	19,0	17,9	22,7	21,2	20,1	20,1	25,4	23,5	22,3	-	24,5			
5000	5	41	21,2	19,9	18,7	17,6	22,3	20,9	19,8	19,8	-	23,1	22,0	-	24,1			
6000	3	38	20,9	19,6	18,4	17,4	22,0	20,6	19,5	19,5	-	22,8	21,7	-	-			
7000	1	34	20,5	19,3	18,2	17,1	21,7	20,3	19,3	19,3	-	22,4	21,4	-	-			
8000	-1	31	20,2	19,0	17,9	16,9	21,3	20,0	19,0	19,0	-	-	21,0	-	-			
9000	-3	27	19,9	18,7	17,6	16,6	21,1	19,7	18,7	18,7	-	-	20,7	-	-			
10000	-5	23	19,6	18,4	17,3	16,3	-	19,4	18,4	18,4	-	-	-	-	-			
11000	-7	19	19,3	18,2	17,0	16,1	19,1	18,1	17,6	17,6	-	-	-	-	-			
12000	-9	16	-	17,9	16,7	15,8	-	-	17,8	17,8	-	-	-	-	-			
13000	-11	12	-	17,6	16,4	15,5	-	-	17,6	17,6	-	-	-	-	-			
14000	-13	9	-	-	16,1	15,3	-	-	-	-	-	-	-	-	-			
15000	-15	6	-	-	15,8	15,0	-	-	-	-	-	-	-	-	-			
16000	-17	2	-	-	15,5	14,7	-	-	-	-	-	-	-	-	-			
17000	-19	-2	-	-	-	14,5	-	-	-	-	-	-	-	-	-			

**Shaded Areas are the  
recommended power settings**



## DA 40 - TAKE-OFF DISTANCES



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## Airspeeds for Normal Operations

### TAKEOFF

A/C Mass	850 - 1150 kg
$V_Y$ Flaps T/O	54 - 66 KIAS
Cruise Climb Flaps UP	60 - 73 KIAS

### LANDING

Final APP Flaps LDG	58 - 71 KIAS
Balked Ldg Flaps T/O	54 - 66 KIAS
Max. demo X Wind	20 knots
$V_{FE}$ max, Flaps LDG	91 KIAS

### CRUISE

$V_A$ Maneuvering	94 - 108 KIAS*
$V_{NO}$ Max turbul. Air	129 KIAS
$V_{NE}$ Max Airspeed	178 KIAS

## Airspeeds for Emergency Operations

$V_A$ Maneuvering	94 - 108 KIAS*
Engine Off - Best Glide / Flaps Up	60 - 73 KIAS
Engine Off - Best Glide / Flaps T/O	59 - 72 KIAS
Engine Off - Best Glide / Flaps LDG	59 - 71 KIAS
Engine Failure after T/O Flaps T/O	59 - 72 KIAS
Engine Failure after T/O / Flaps Up	60 - 73 KIAS

\*) A/C - Mass 780Kg - 980Kg 94 KIAS

\*) A/C - Mass 981Kg - 1150Kg 108 KIAS