

# UTVA-75



**Utva**

SOUR-METALNE INDUSTRIJE  
RO FABRIKA AVIONA „UTVA”

AIRCRAFT FACTORY  
PANČEVO-YUGOSLAVIA

20 000 Pančevo, Utva Zlatokrnle 9.  
Telefon: (013) 44-755/ Telex: 13116.

FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE



*D* **IPLOME D'** *H* **ONNEUR**

La Fabrique d'Avions Ulva de Pančevo  
(Département Fabrication)

Pour la réussite de son travail pendant 35 ans, orienté vers la construction et la production d'avions sportifs destinés à l'entraînement des pilotes, ainsi que pour la conception originale de l'avion Ulva - 75 de Construction Amateur.

*Le directeur général de la F. A. I.*

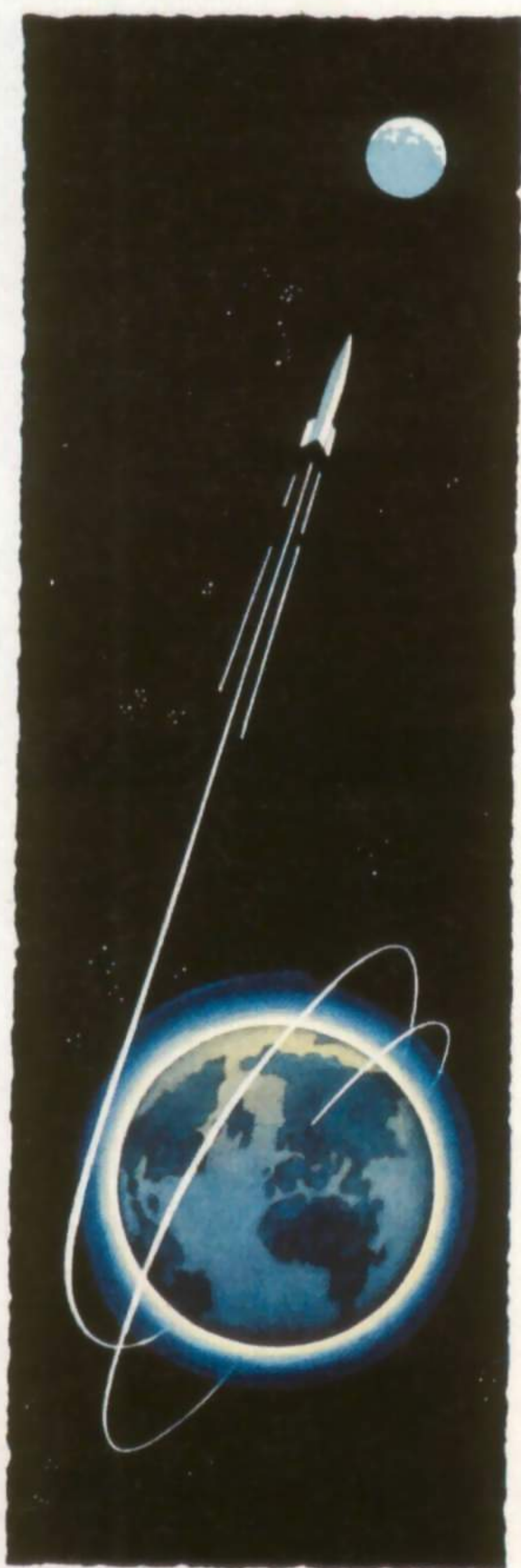
*Le président de la F. A. I.*

*Rafail Lortchev*



*P. J. J. J.*

PARIS, LE 13 septembre 1982



# UTVA-75



## EC/HC PRECISION FLYING CHAMPIONSHIPS

**ÖSTERSUND  
JULY**



**SWEDEN  
1982**

Avion „Utva 75“ čiji je prvi prototip poleteo 19. maja 1976. godine ima za sobom niz uspeha na domaćim i međunarodnim vazduhoplovnim takmičenjima. Ekipe konstruktora i Fabrika aviona „Utva“ nosioci su posebnog priznanja Međunarodne vazduhoplovne Federacije FAI.

The first flight took place on May 19, 1976. Due to the incredible performances of the airplane, it won the prize at Precision Flying Championship in Sweden in 1982. The team of UTVA's experts and designers won the FAI prize.

# UTVA-75



## OPIS AVIONA

„Utva 75“, najnoviji iz porodice „Utvine“ lake avijacije, je jednomotorni niskokrilac višestruke namene sa dva sedišta jedno pored drugog, smeštena u prostranoj kabini uz izvanrednu preglednost.

Projektovan je prema propisima FAR 23 („UTILITY“ kategorija) sa graničnim preopterećenjem +6g i -3g.

Projekat su izradili konstruktori Fabrike aviona „Utva“ Pančevo u saradnji sa stručnjacima Instituta Mašinskog fakulteta u Beogradu, Vazduhoplovnotehničkog instituta „Žarkovo“ i „Prve Petoljetke“ iz Trstenika.

Konstrukcija odražava jedinstvo kriterijuma jednostavnosti, pouzdanosti, ekonomičnosti kao i dobrih manevarskih sposobnosti. Zahvaljujući svojim izvanrednim karakteristikama: maloj potrošnji goriva, kratkim PSS, jednostavnom održavanju i servisiranju, čvrstoći i pouzdanosti, „Utva 75“ je osposobljen za:

- obuku pilota
- osnovnu obuku u noćnom letenju
- obuku u instrumentalnom letenju
- osnovne akrobacije
- vuču jedrilica i reklama
- trenazu i izvršavanju zadataka u okviru ONO.

U aero-klubovima i letačkim centrima Vazduhoplovnog Saveza Jugoslavije, od 1978. god. „Utva 75“ predstavlja osnovni avion za obuku, na kome je uspešno obučeno više generacija pilota.



## DESCRIPTION

The „UTVA-75“ is a modern low-winged, propeller driven, single engined utility airplane with two side-by-side seats in a spacious cabin with excellent visibility. It is designed to comply specially with the criteria of simplicity, safety, manoeuvrability and economy.

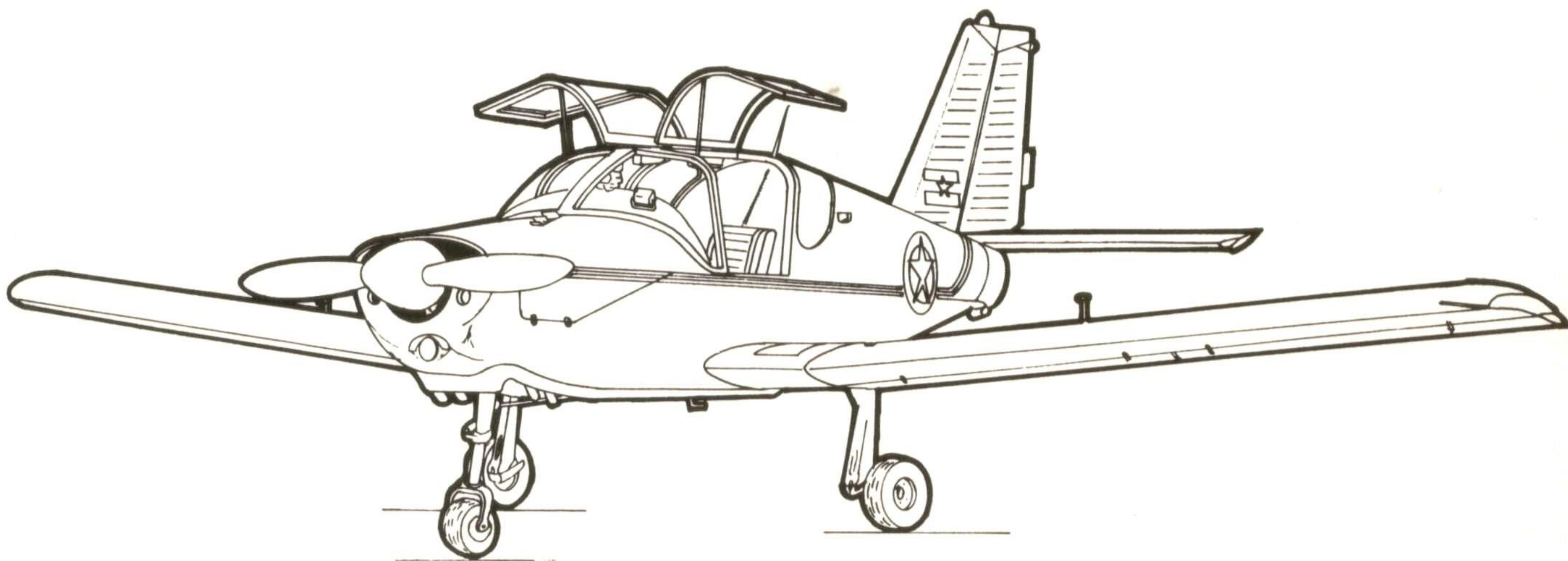
Thanks to the incomparable qualities built into „UTVA-75“: low fuel consumption, short take off and landing, easy maintenance and servicing, strength and safety the „UTVA-75“ is:

- an TRAINING AIRPLANE, allowing the pilots to master the basics of flight with confidence
- basic TRAINER for visual night flight
- an airplane for primary instrumental flights
- an airplane that finds its utilization in primary AEROBATICS
- a safe, strong airplane for TOWING gliders and advertising banners
- an ideal airplane for carrying out tasks of national defence

The airplane meets the requirements of FAR Part 23 (utility category) with +6g/-3g limit loads. The design was produced in partnership with Belgrade Institute for Mechanical Engineering, Aeronautics Institute „Žarkovo“ and „Prva Petoletka“ from Trstenik.

From 1978 year „UTVA-75“ found its use in almost all Aircraft Association Organizations of Yugoslavia.

# UTVA-75

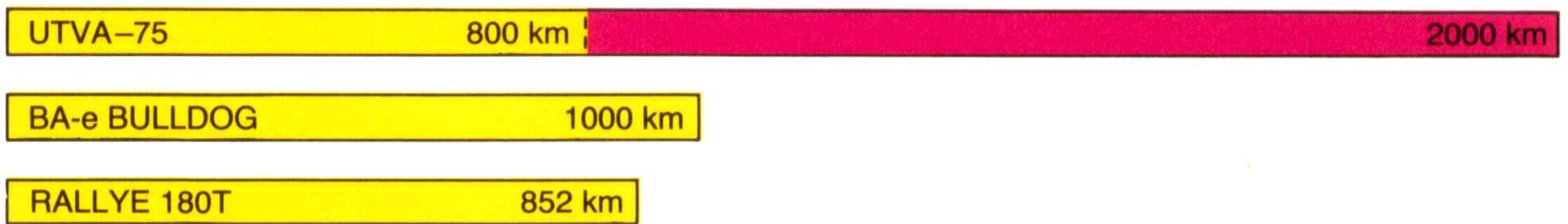


# UTVA-75

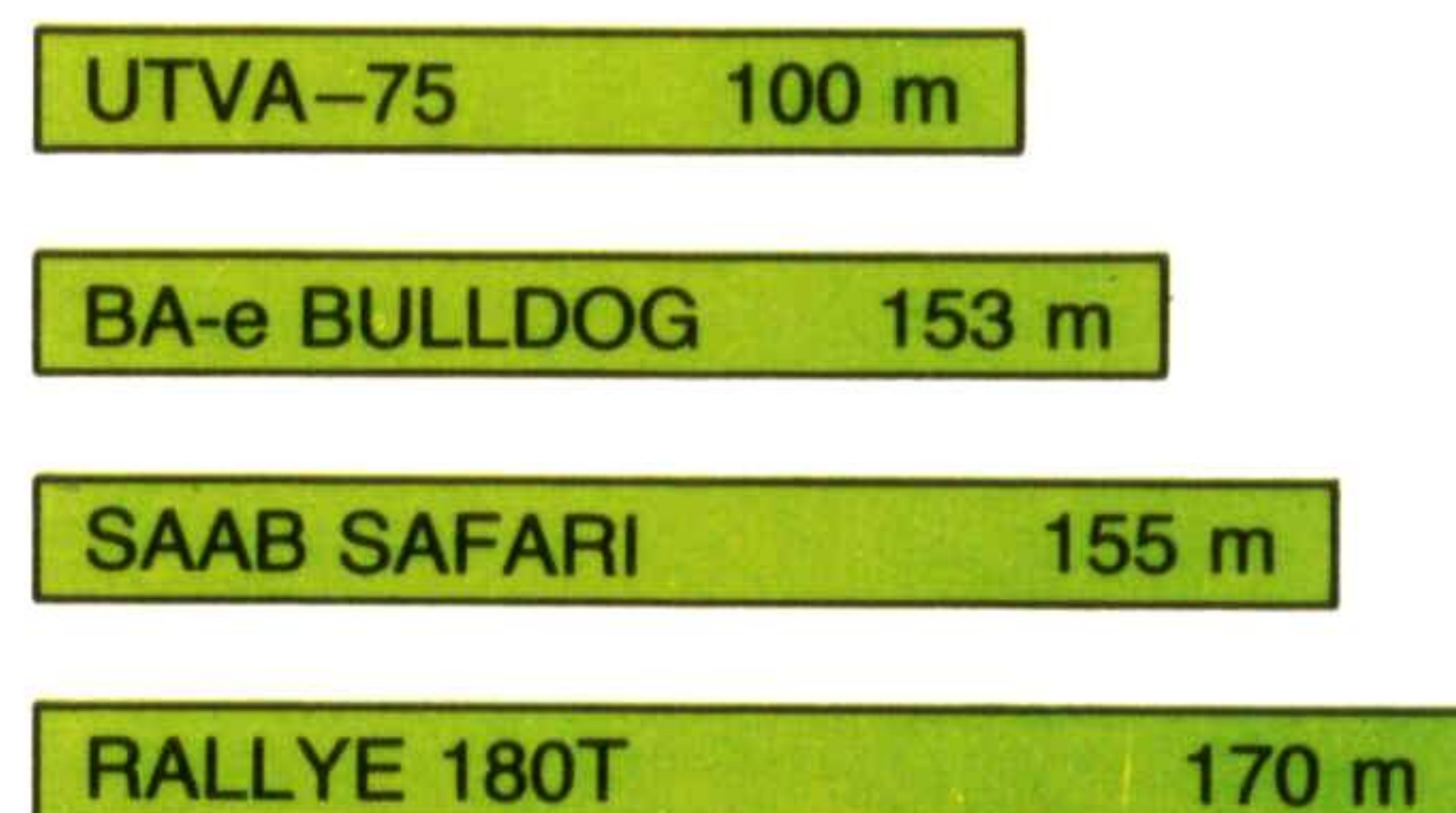
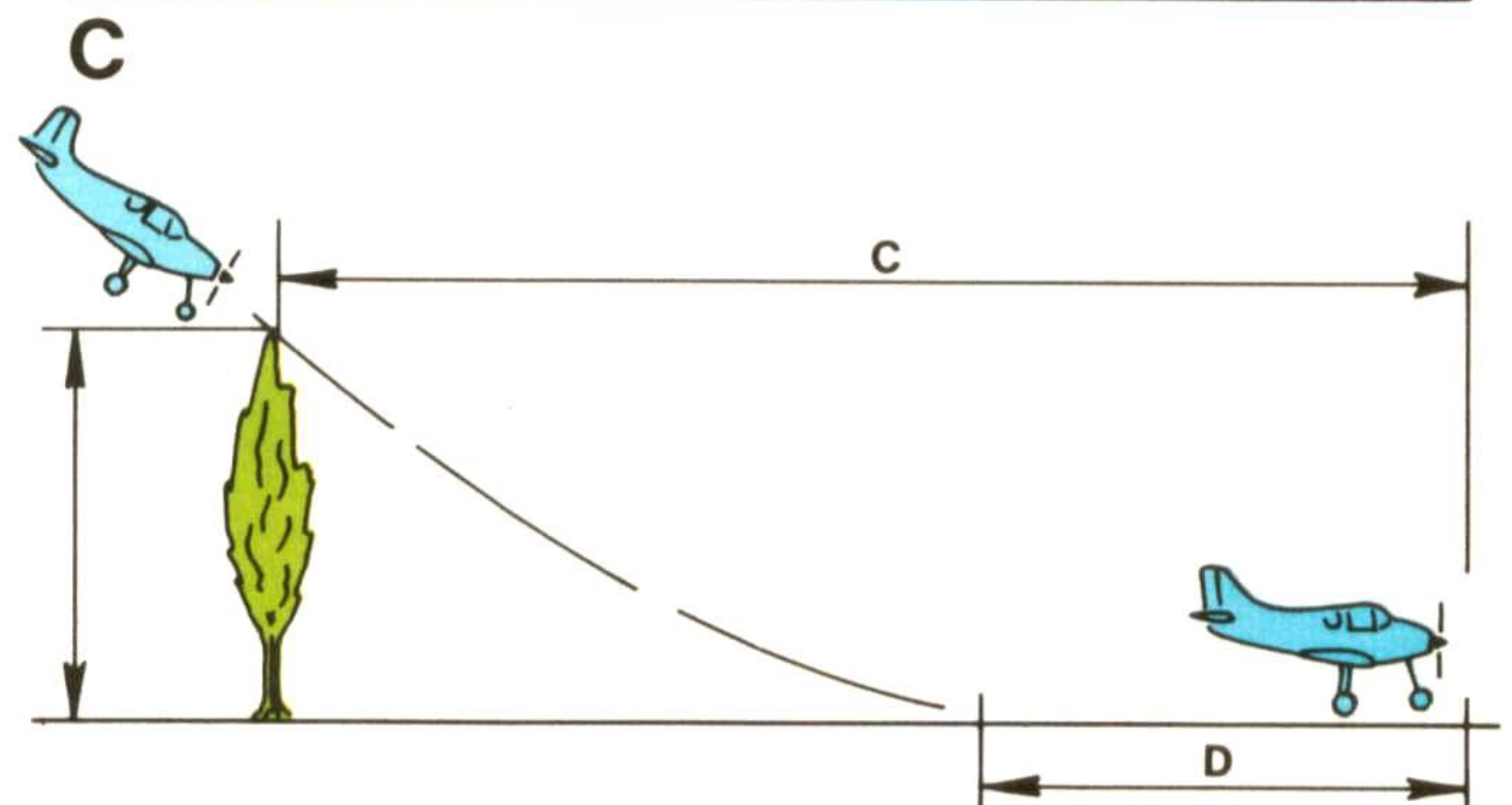
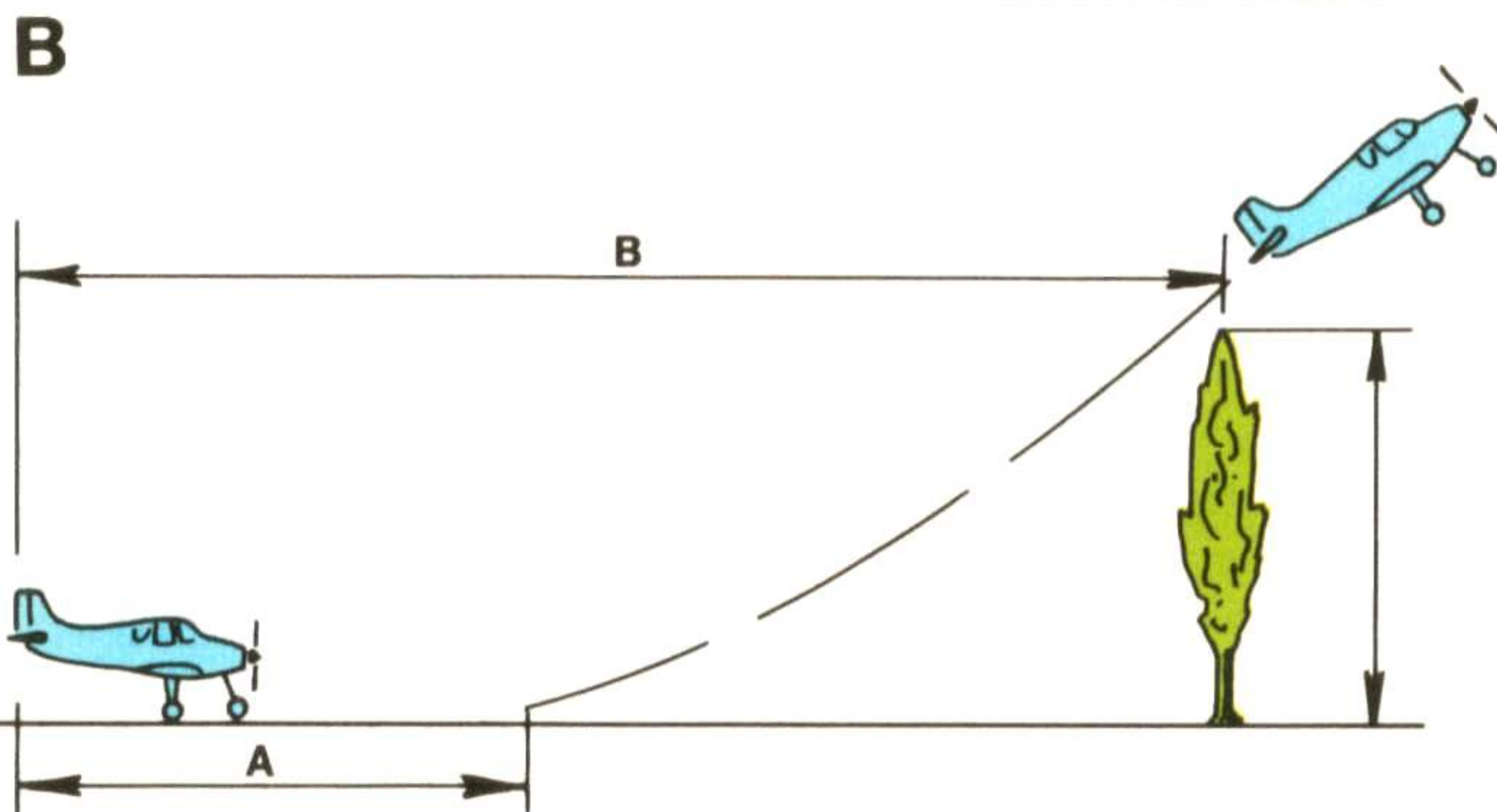
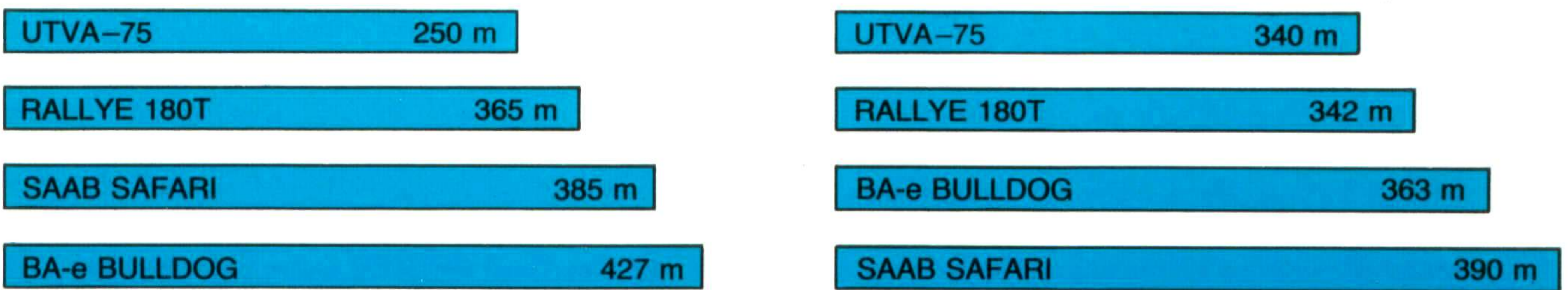


# UTVA-75

## DOLET (RANGE)



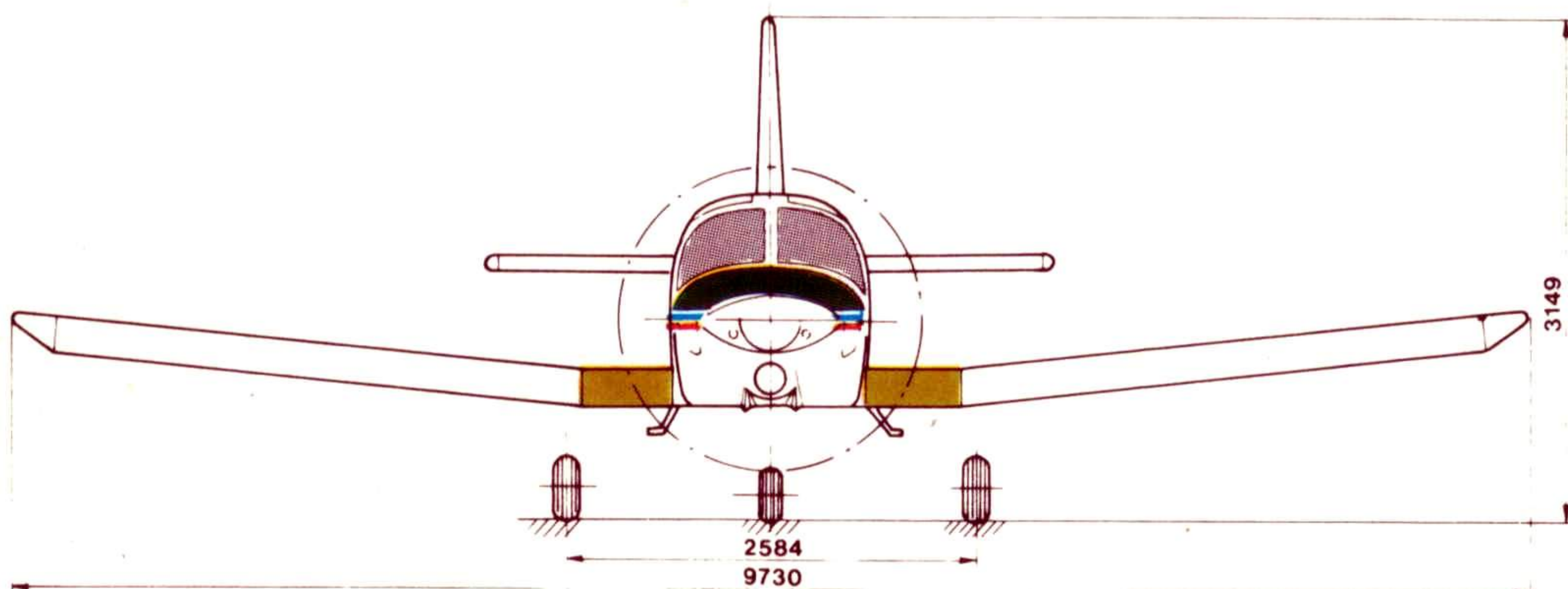
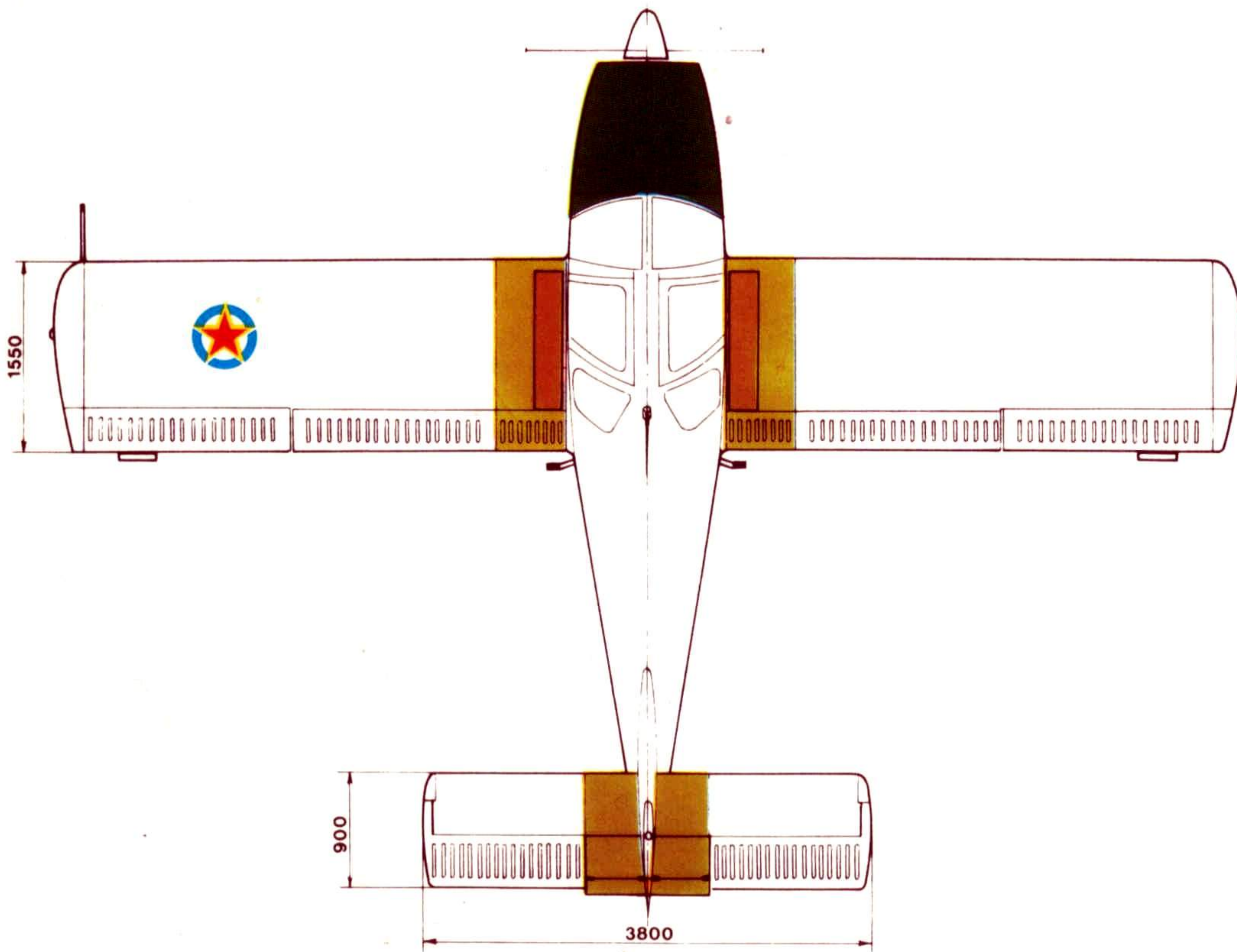
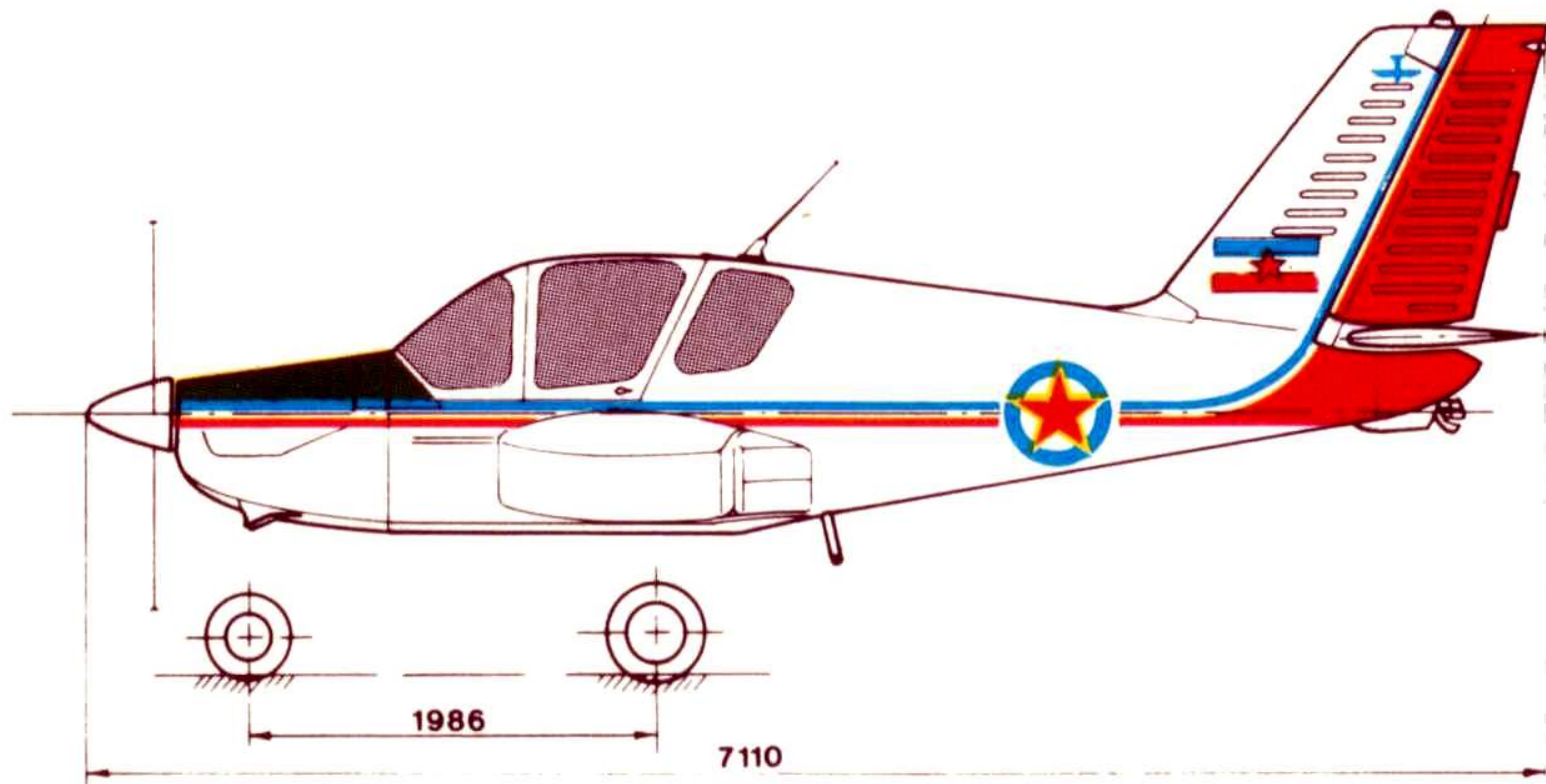
## POLETNO-SLETNE STAZE (RUNWAY)



**A**

**D**

# UTVA-75



## TEHNIČKI PODACI

### Dimenzije, površine:

– razmah krila	9,73 m
– dužina aviona	7,11 m
– visina aviona	3,149 m
– razmah točkova	2,584 m
– površina krila	14,63 m <sup>2</sup>

### Težine:

– maksimalna težina u poletanju	960 kg
– težina praznog aviona	685 kg
– posada (2 osobe)	2×85 kg
– prtljag	40 kg

### Zapremina goriva:

– sa standardnim gorivom	150 l
– sa odbacivim rezervoarima	2×100 l

### Performanse:

– maksimalna brzina	215 km/h
– brzina krstarenja (75%)	185 km/h
– minimalna brzina	82 km/h
– brzina penjanja	4,6 m/s
– maksimalna visina leta	4000 m
– dužina staze zaleta	125 m
– dužina zaleta do 15 m	250 m
– sletanje sa 15 m	340 m
– protrčavanje	100 m
– Dolet: sa standardnim gorivom	800 km
sa dopunskim rezervoarima	2000 km

## TECHNICAL DATA

### Dimensions and areas:

– wing span	9,73 m
– length overall	7,11 m
– height	3,149 m
– wheel track	2,584 m
– wings area	14,63 m <sup>2</sup>

### Weights:

– max T-O weight	960 kg
– weight empty, equipped	685 kg
– crew (2 persons)	2×85 kg
– luggage	40 kg

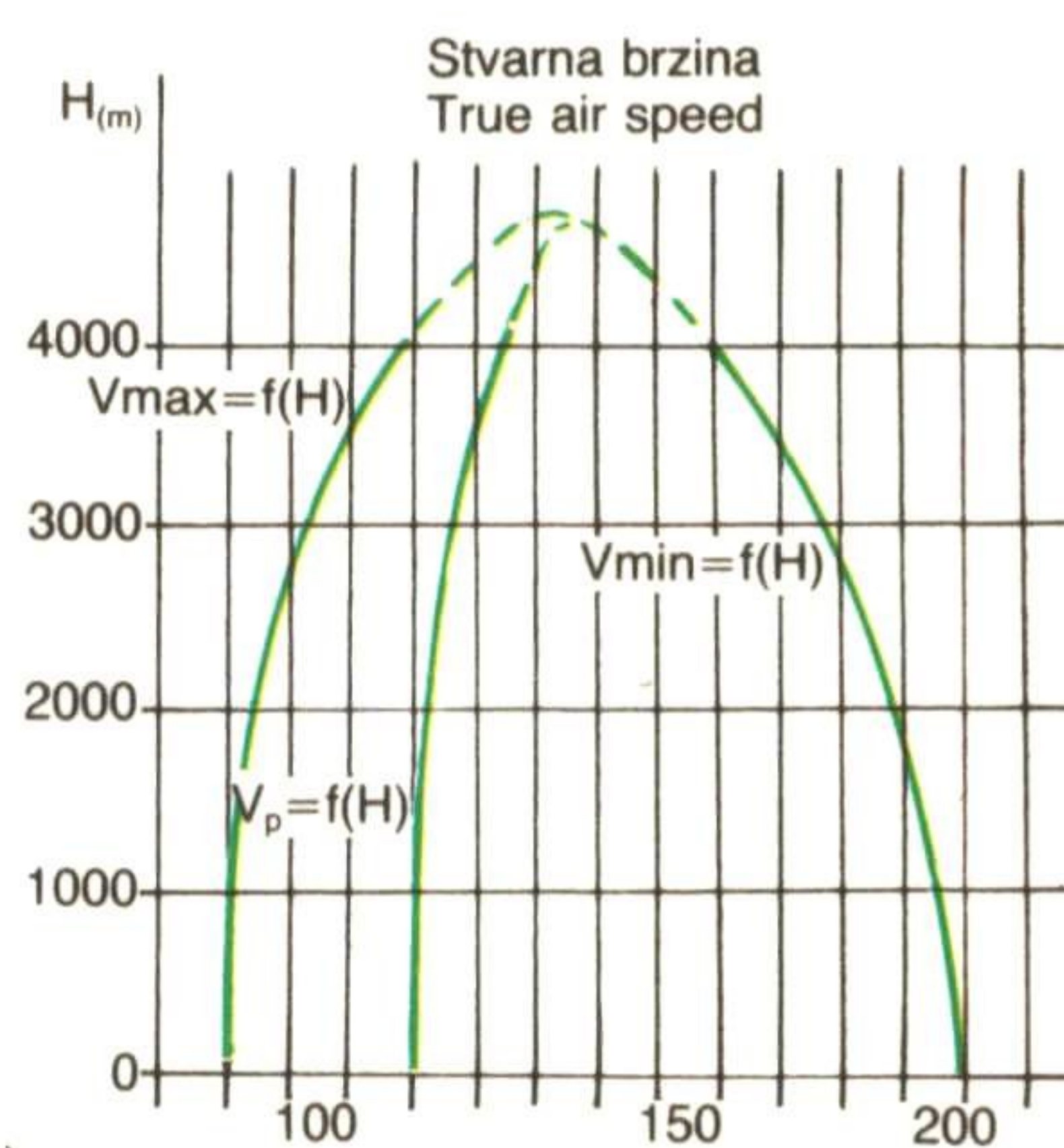
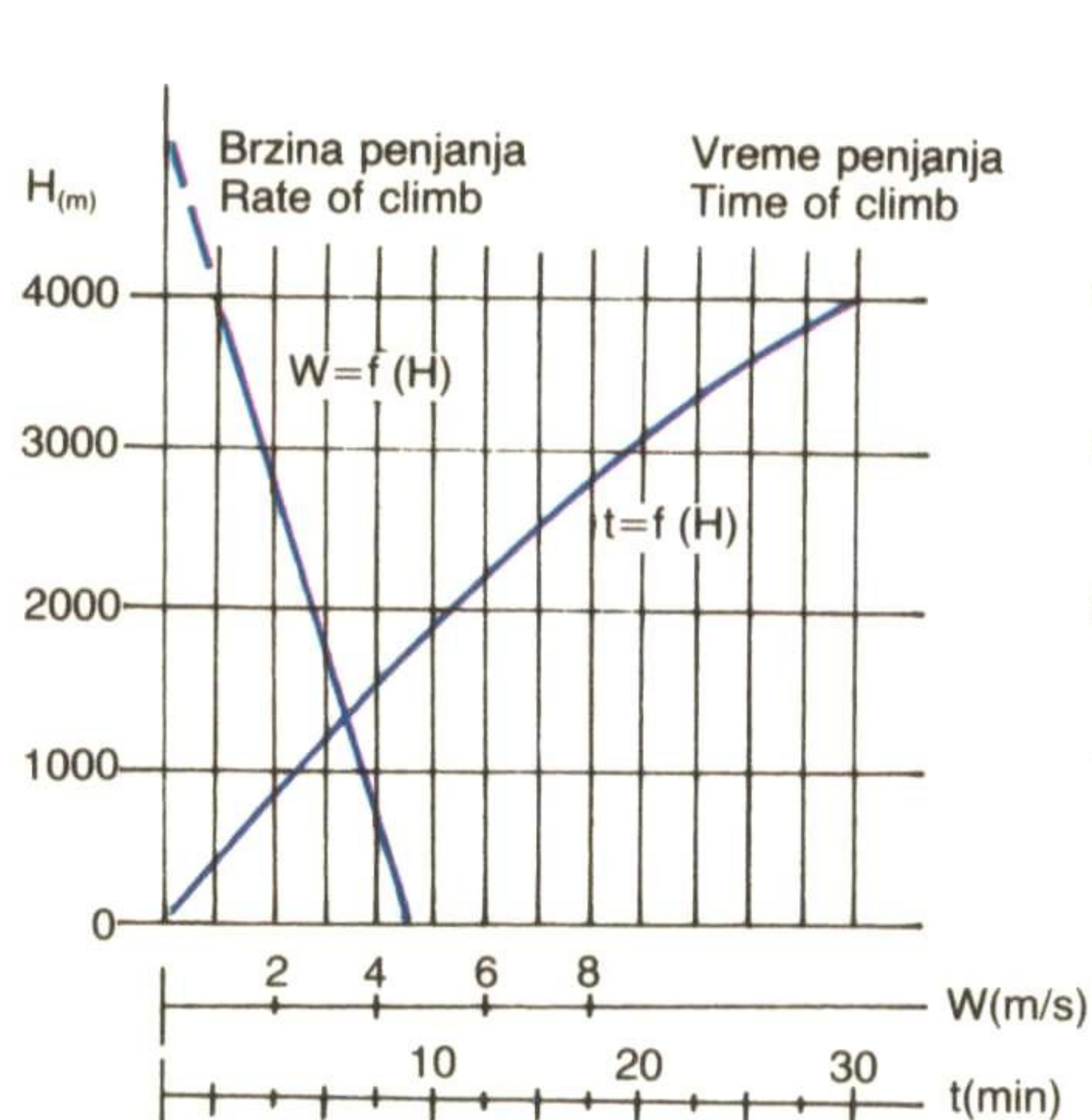
### Fuel capacity:

– standard	150 l
– with drop-tanks	2×100 l

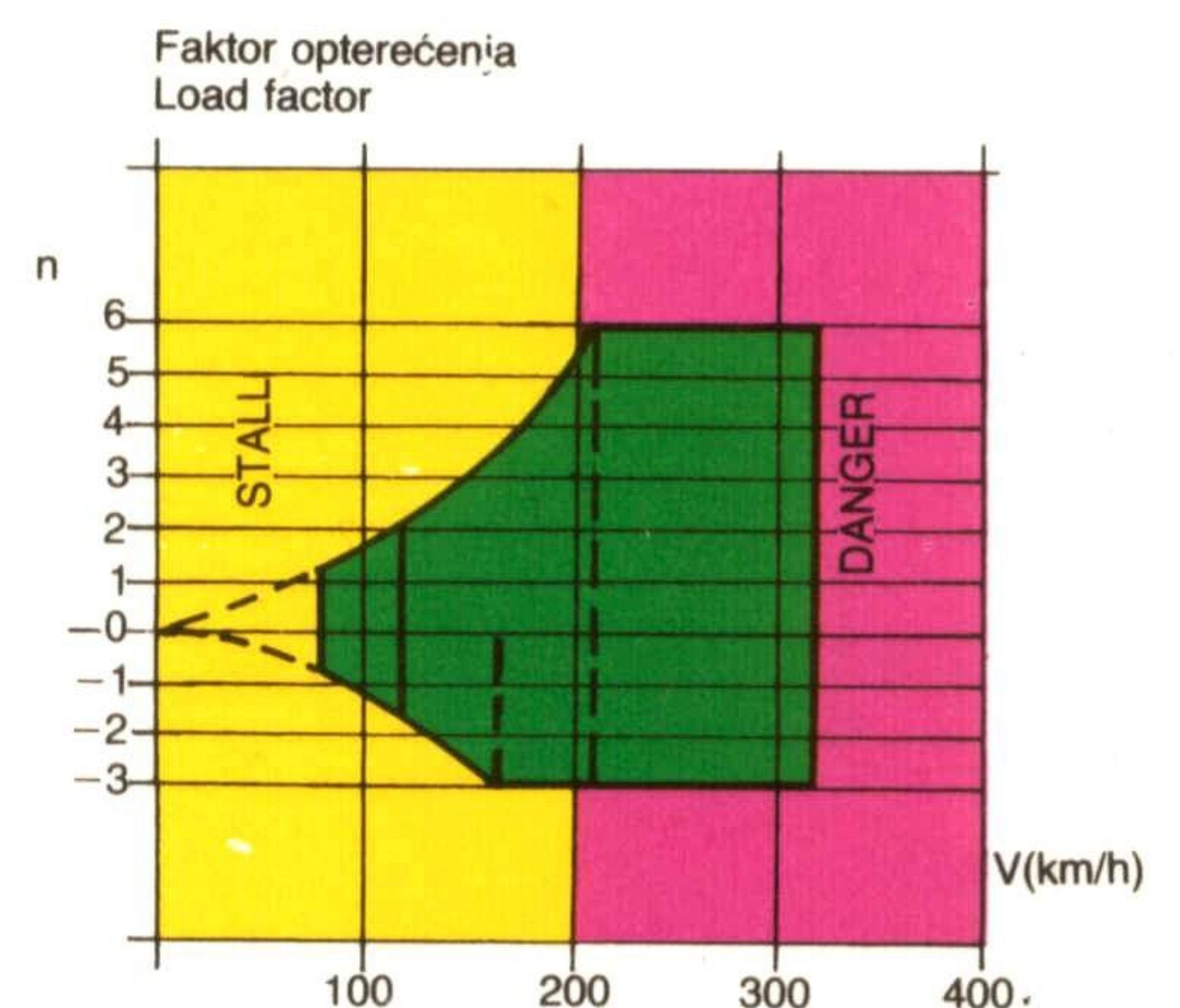
### Performance:

– max level speed	215 km/h
– cruising speed	185 km/h
– stalling speed	82 km/h
– rate of climb	4,6 m/s
– service ceiling	4000 m
– T-O run	125 m
– T-O to 15 m	250 m
– landing from 15 m	340 m
– landing run	100 m
– range: with standard fuel	800 km
with drop-tanks	2000 km

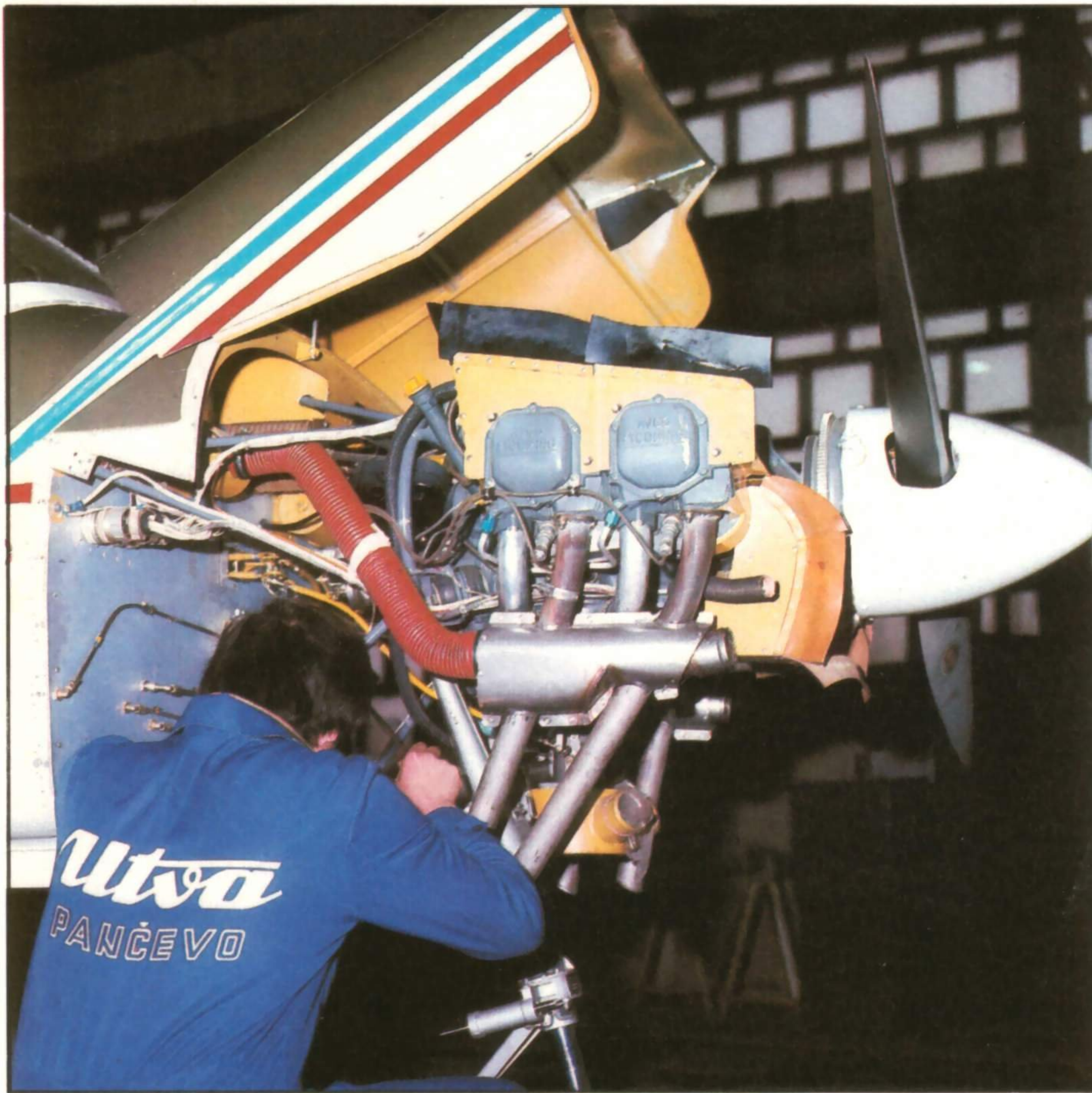
## PERFORMANSE LETA – FLIGHT PERFORMANCE



## ANELOPA LETA – FLIGHT ENVELOPE



# UTVA-15



## POGONSKA GRUPA

### Pogonsku grupu čine:

1. Vazduhom hlađeni, četvorocilindrični „bokser“ motor, AVCO LYCOMING IO-360-B1F, od 134 KW (180 Hp) i 2700<sup>-1</sup>, bez reduktora, sa injektorskim ubrizgavanjem goriva (injektor „Bendix“ RSA 5 AD 1).

2. Dvokraka metalna elisa promenljivog koraka HARTZELL HC - C2YK - 1 BF/F 7666A, sa WOODWARD B 210681 regulatorom broja obrtaja.

### POWER PLANT:

- One 134 kw (180 Hp), 2700<sup>-1</sup> AVCO LYCOMING IO-360B 1F flat - four, direct drive, horizontally opposed, air cooled engine equipped with a BENDIX RSA 5AD1 fuel injector.

- two - blade metal variable - pitch propeller HARTZELL HC-C2YK - 1 BF/F 7666 A with Woodward B 210681 propeller governor.



# UTVA-75



## STRUKTURA AVIONA

„Utva 75“ je jak avion, metalne konstrukcije sa potpunom antikorozijskom zaštitom.

## KRILO

Pravougaono, slobodno noseće, sa glavnom i pomoćnom ramenjačom, uglom diedra  $6^\circ$  i aeroprofilom NACA  $65_2 - 415$  konstantnim duž razmaha.

Krilca i zakrilca su identična konstruktivno izvedena i zamenljiva. Struktura između prednje (pomoćne) i glavne ramenjače je iskorišćena kao prostor za rezervoare goriva-integralni rezervoari. Na sredini krila, na donjaci, postavljene su veze za naoružanje i odbacive, dopunske rezervoare. Na krilcima su ugrađeni fletneri.

## TRUP

Konstrukcije tipa noseće kore za 11 okvira, jednim poluokvirom i više uzdužnika.

## REPNE POVRŠINE

Klasične metalne konstrukcije, sa ugrađenim trimerom na krmilu visine i kompenzacionim limom na kormilu pravca.

## STAJNI ORGANI

Tipa tricikl sa uljno-pneumatskim amortizerima, koji će prigušiti i najgrublje sletanje na nepripremljene travnate staze.

## AIRPLANE STRUCTURE:

“UTVA-75” is STRONG, the all-metal construction and completely corrosion-proofed.

**The WINGS:** cantilever, rectangular, with main and aux. wing spar and the integral fuel cells located between them. Dihedral:  $6^\circ$ , NACA  $65_2 415$  wing section.

**AILERONS AND FLAPS:** the trailing-edges carry ailerons and flaps which are interchangeable because of the same construction. There is one underwing hardpoint on each wing for drop tanks carriage or additional weapon stores. Flettner trim tab on each aileron.

**The FUSELAGE:** conventional all metal semi monocoque structure, 11 frames, 1 partial bulkhead and several stringers.

**The TAIL:** cantilever, all metal structure with swept back vertical surfaces. Fluted skin on fin and rudder. Elevator horn-balanced.

**The LANDING GEAR:** non-retractable tricycle type with oleo-pneumatic shock-absorbers that will smooth out the roughest landing, even on small unprepared fields.

# UTVA-15



# UTVA-75



## KABINA

Kabina omogućava udoban smeštaj dva pilota koja sede jedan pored drugog. Vetrobransko staklo i bočne staklene površine kao i sama dispozicija aviona (niskokrilac) pružaju dobru preglednost.

Dvoja vrata koja se otvaraju na gore, mogu se odbaciti u slučaju potrebe.

Instrument-tabla je opremljena standardnom pilotažnom i navigacijskom opremom.

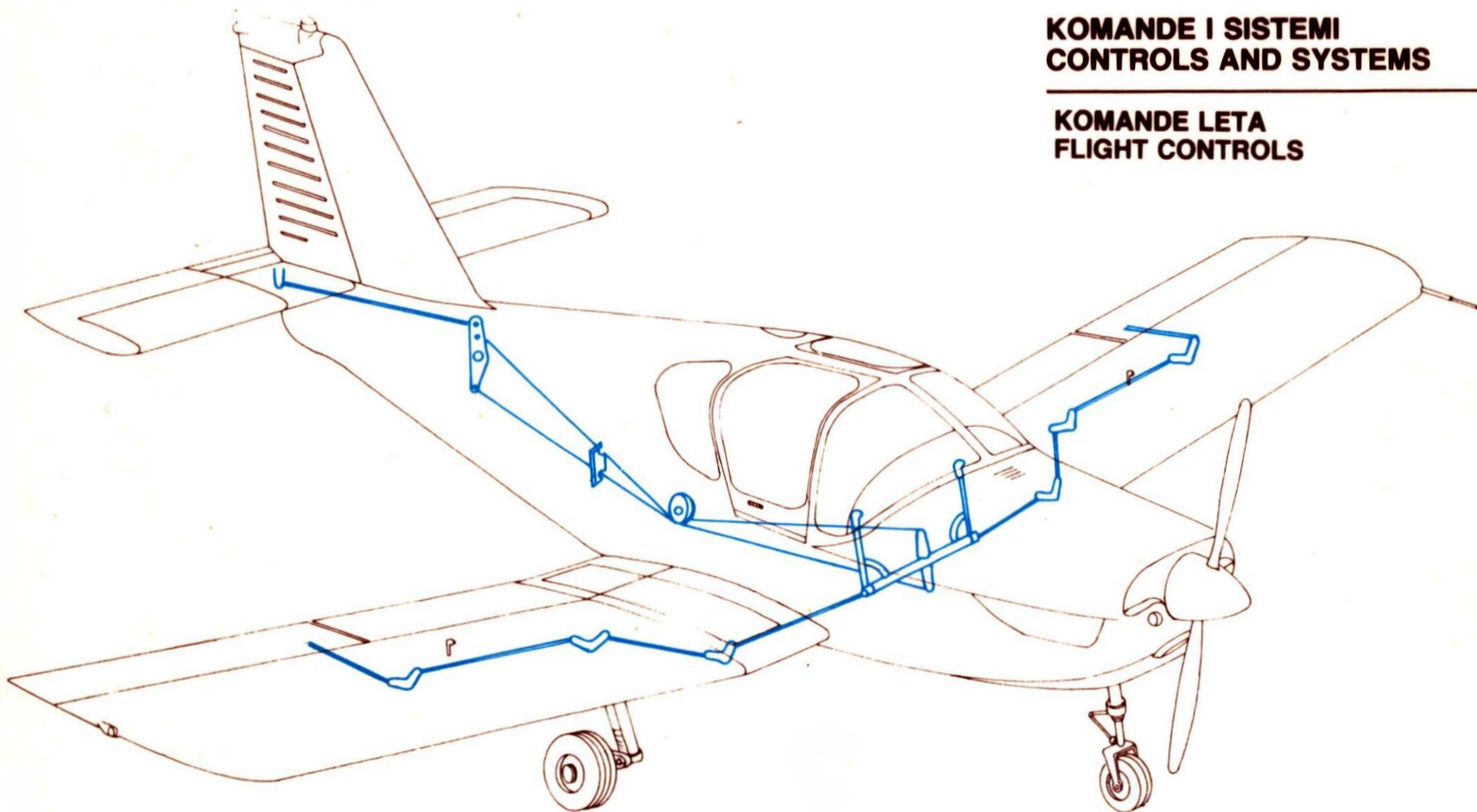
**The COCKPIT:** the two-seater cockpit is designed to provide a comfortable flight in the cabin. The windscreen, the side top opening entrance doors (emergency released, if necessary) and the low wing design give the pilot almost unlimited visibility. The instrument panel is equipped with the standard gauges and well-harmonized controls logically arranged.



# UTVA-15

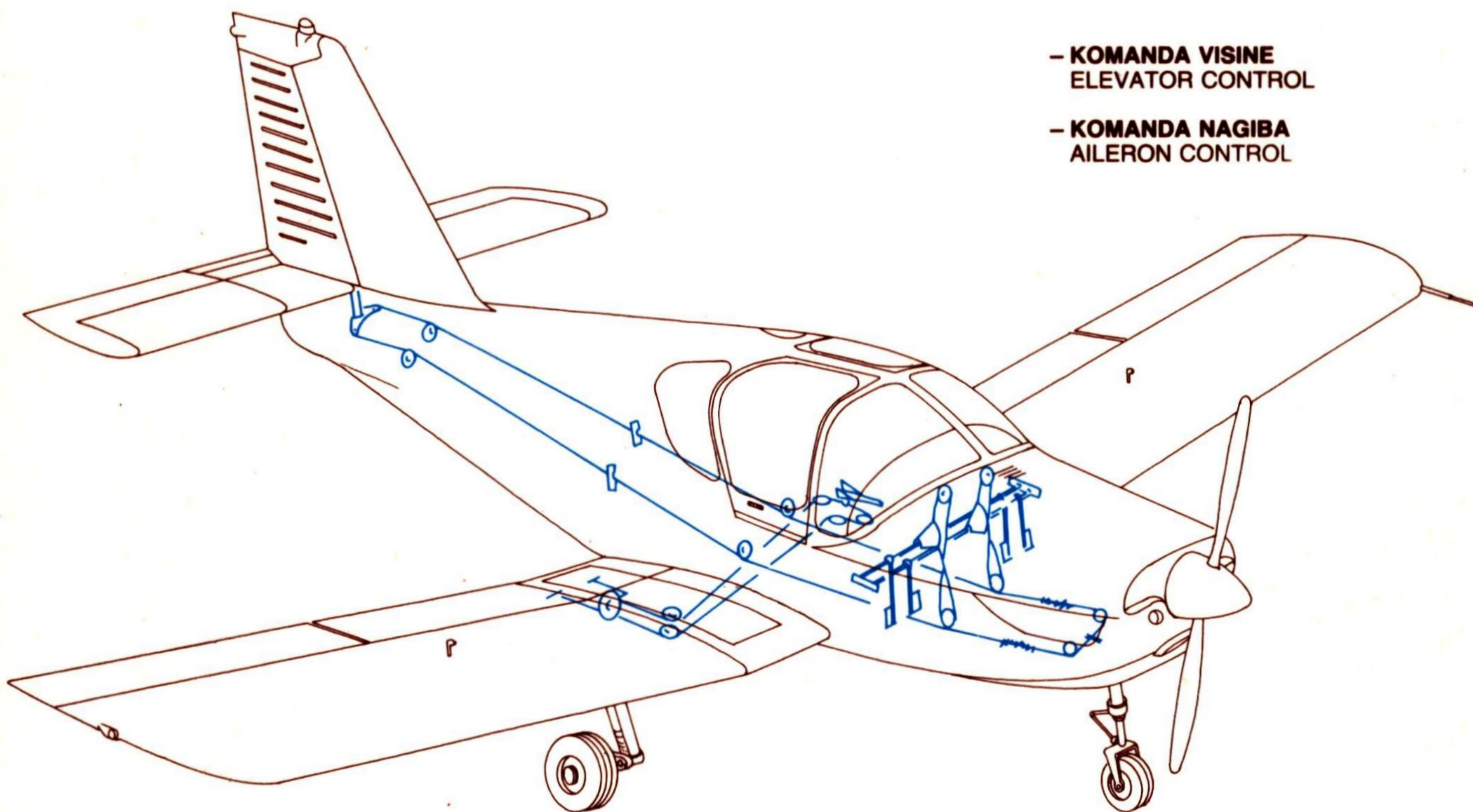
## KOMANDE I SISTEMI CONTROLS AND SYSTEMS

### KOMANDE LETA FLIGHT CONTROLS



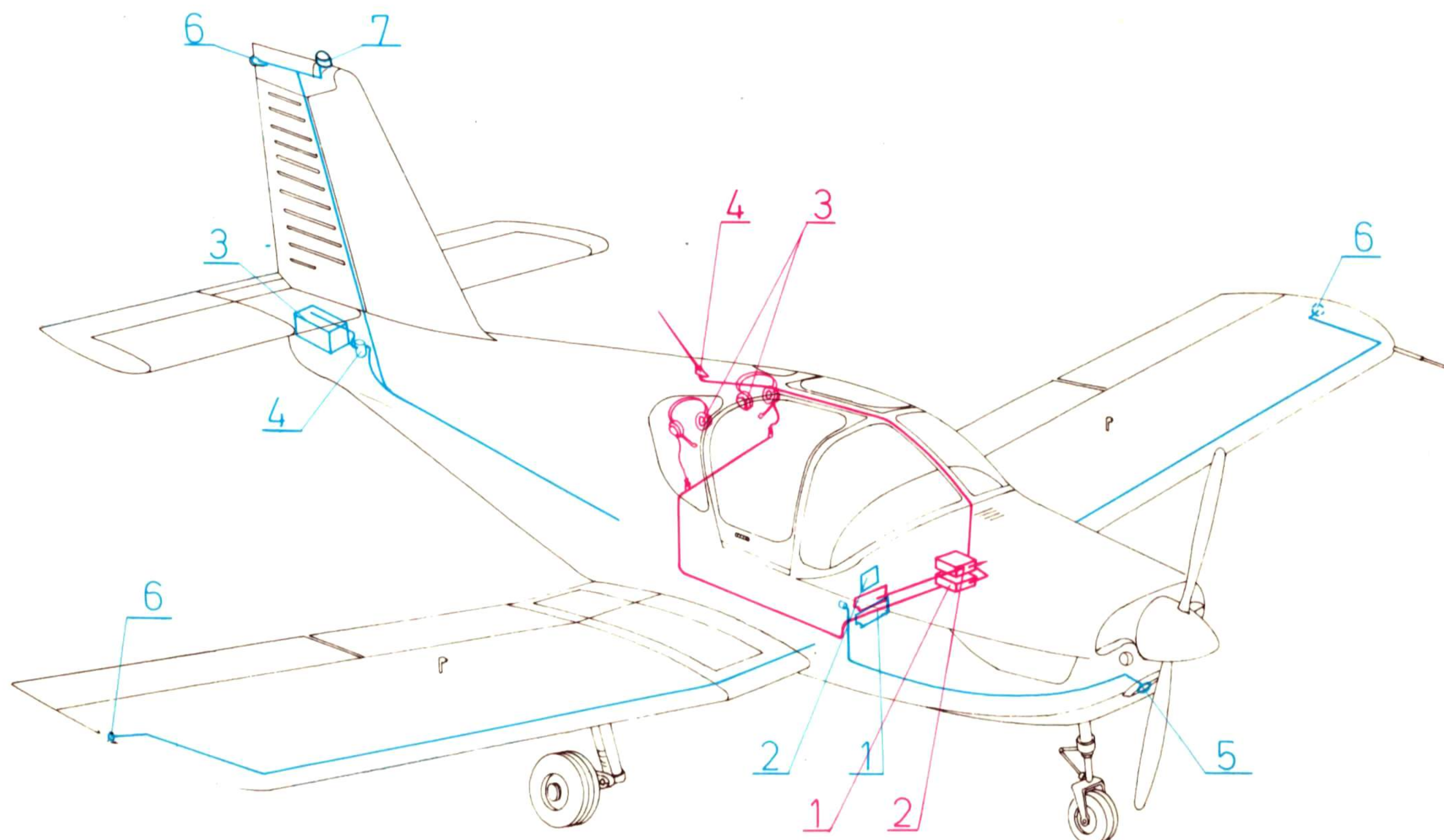
- KOMANDA VISINE  
ELEVATOR CONTROL

- KOMANDA NAGIBA  
AILERON CONTROL



## KOMANDE I SISTEMI CONTROLS AND SYSTEMS

### KOMANDE LETA FLIGHT CONTROLS



**ELEKTRIČNI SISTEM NAPAJANJA 14 VDC**  
THE MAIN ELECTRICAL SYSTEM IS A 14VDC NEGATIVE GROUNDRETURN TYPE.



#### I INSTALACIJA ELEKTRIČNOG SISTEMA

1. Osigurači
2. – Regulator napona  
– Prenaponsko rele  
– Rele startera  
– Rele spoljašnjeg izvora
3. Akumulator
4. Rele akumulator
5. – Taxi svetlo  
– Reflektor
6. Poziciona svetla
7. Protivsudarno svetlo

#### II INSTALACIJA ELEKTRONSKE OPREME

1. VHF COMM sistem
2. Radio-kompas
3. Mikrotelefonska kombinacija, udvojena
4. Antena

#### I ELECTRICAL SYSTEM INSTALLATION

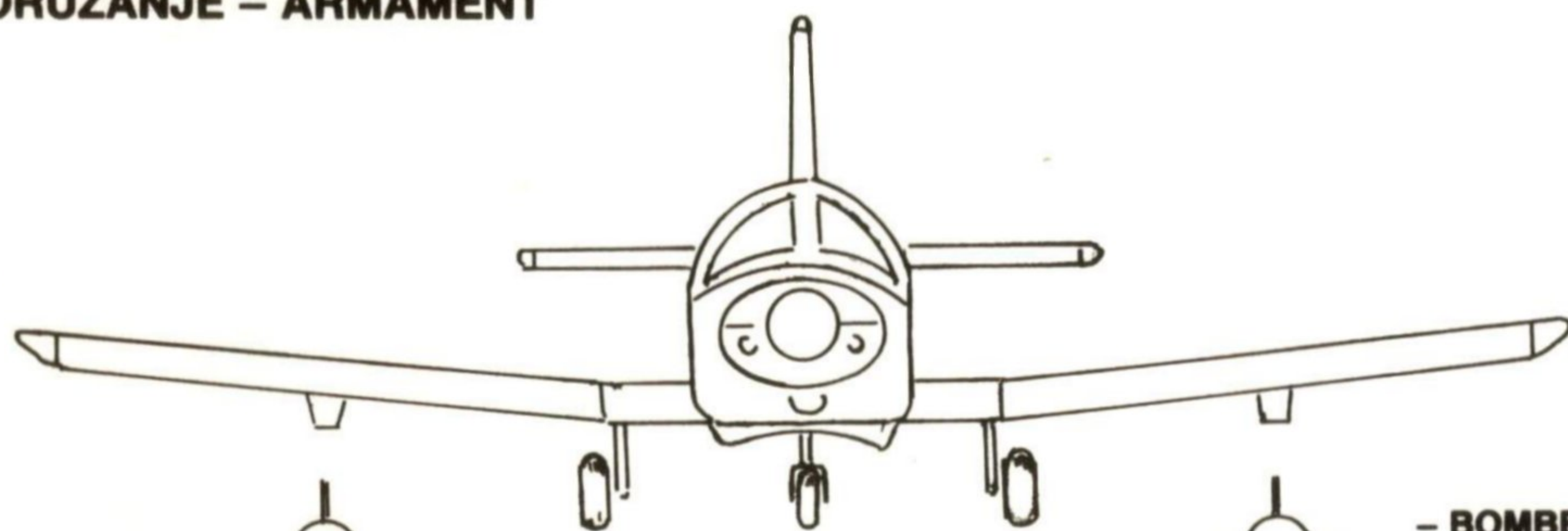
1. FUSES
2. – VOLTAGE REGULATOR  
– OVERVOLTAGE RELAY  
– STARTED RELAY  
– GROUND SUPPLY RELAY
3. BATTERY
4. BATTERY RELAY
5. – TAXYING LIGHT  
– LANDING REFLECTOR
6. POSITION LIGHTS
7. ANTI-COLLISION LIGHT

#### II ELECTRONIC EQUIPMENT INSTALLATION

1. VHF COMM TRANSCEIVER
2. ADF RECEIVER
3. DUAL HEADSET
4. ANTENNA

# UTVA-75

## NAORUŽANJE – ARMAMENT



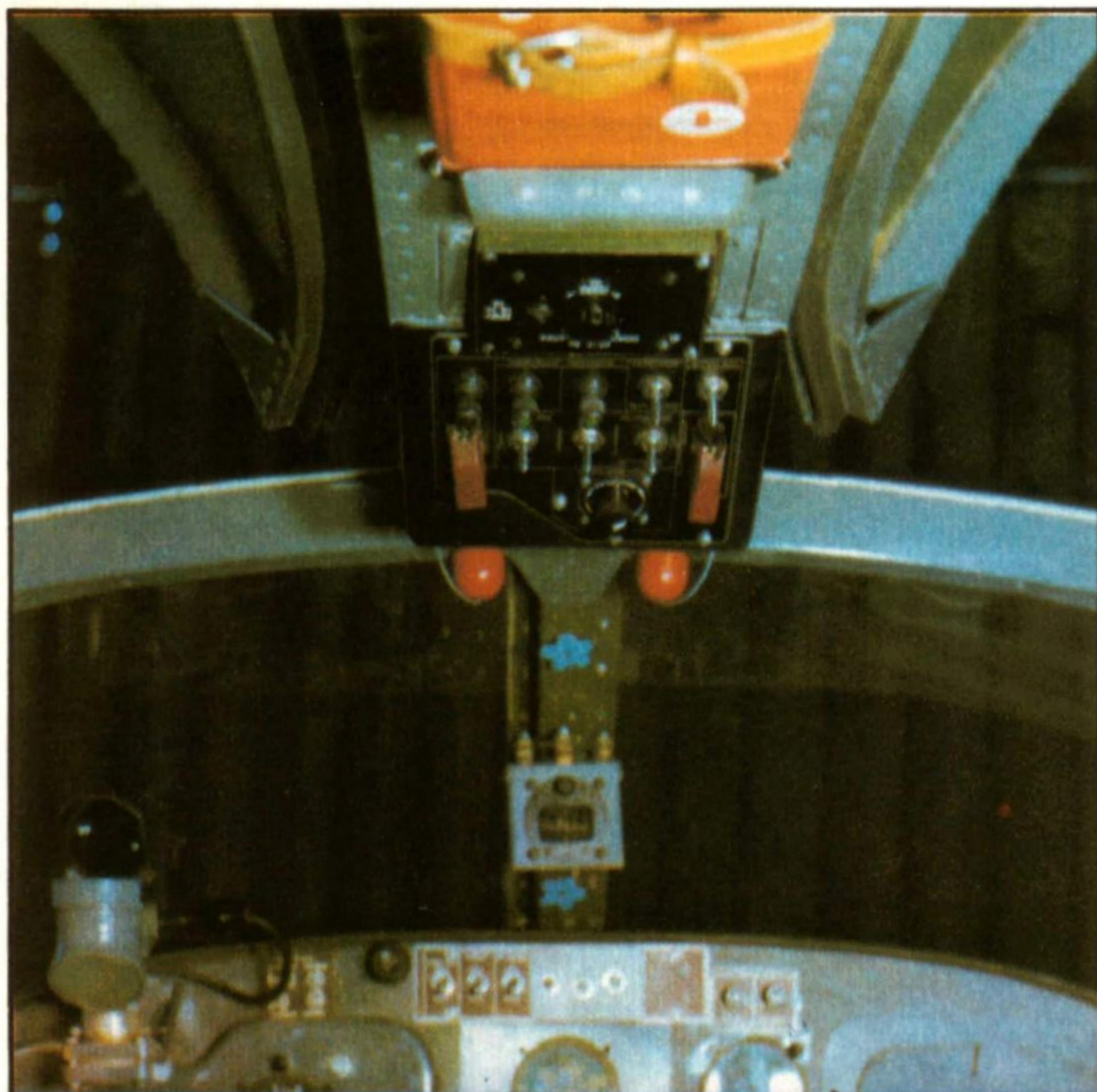
- BOMBE  
- BOMBS

- KONTEJNER TERETA ZA ODBACIVANJE  
- CARGO DROP CONTAINER (2×100 kg)

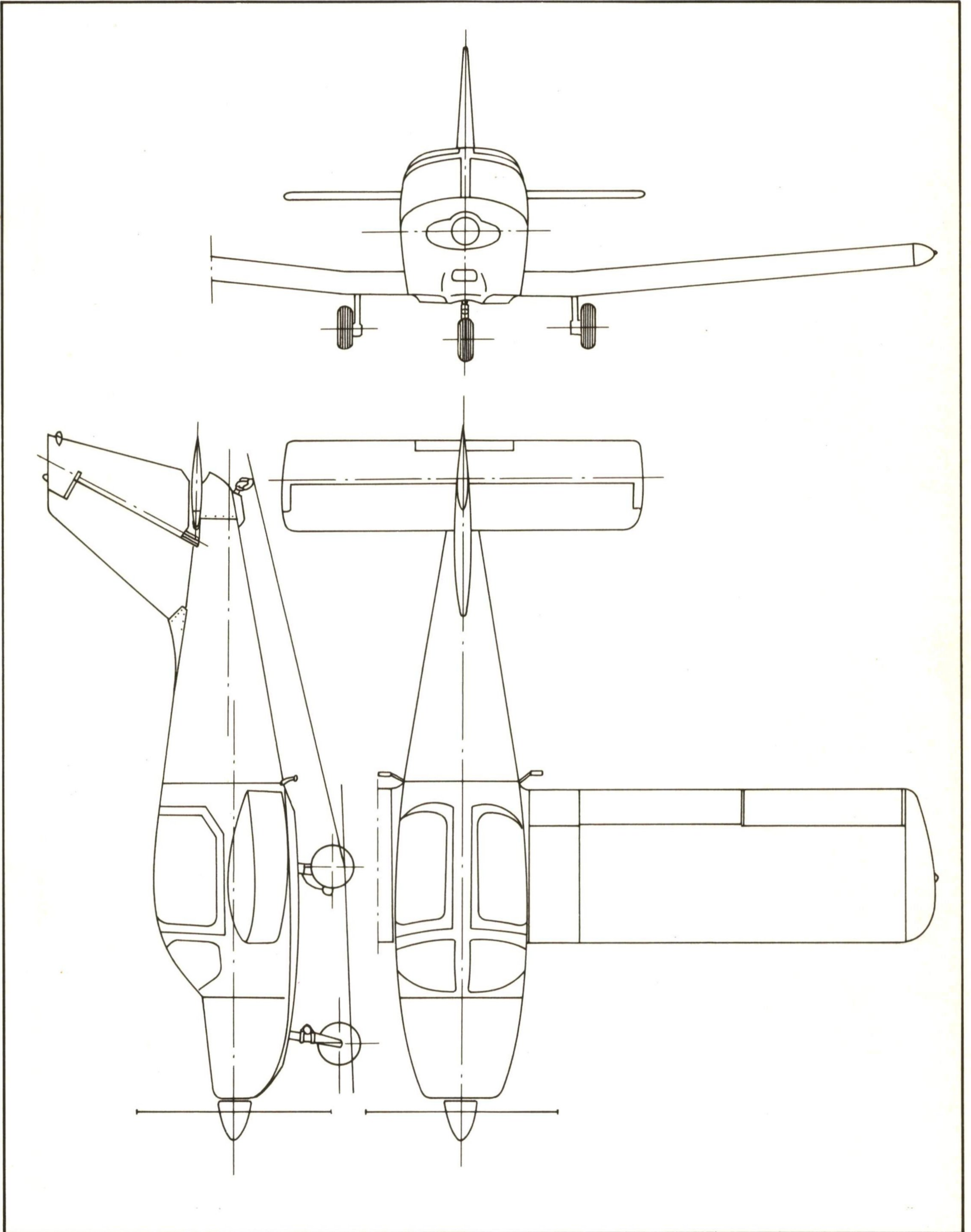
- LANSER  
- LAUNCHER

- MITRALJEZ  
- MACHINE GUN

- DOPUNSKI ODBACIVI REZERVOARI  
- DROP TANKS



# UTVA-15A



# UTVA-75A

Na bazi osnovnog aviona „Utva 75“ razvijen je novi model „Utva 75 A“. To je niskokrilac, četvorosjed, opremljen u svojoj maksimalnoj verziji najsavremenijom navigacionom opremom za potpunu IFR obuku pilota:

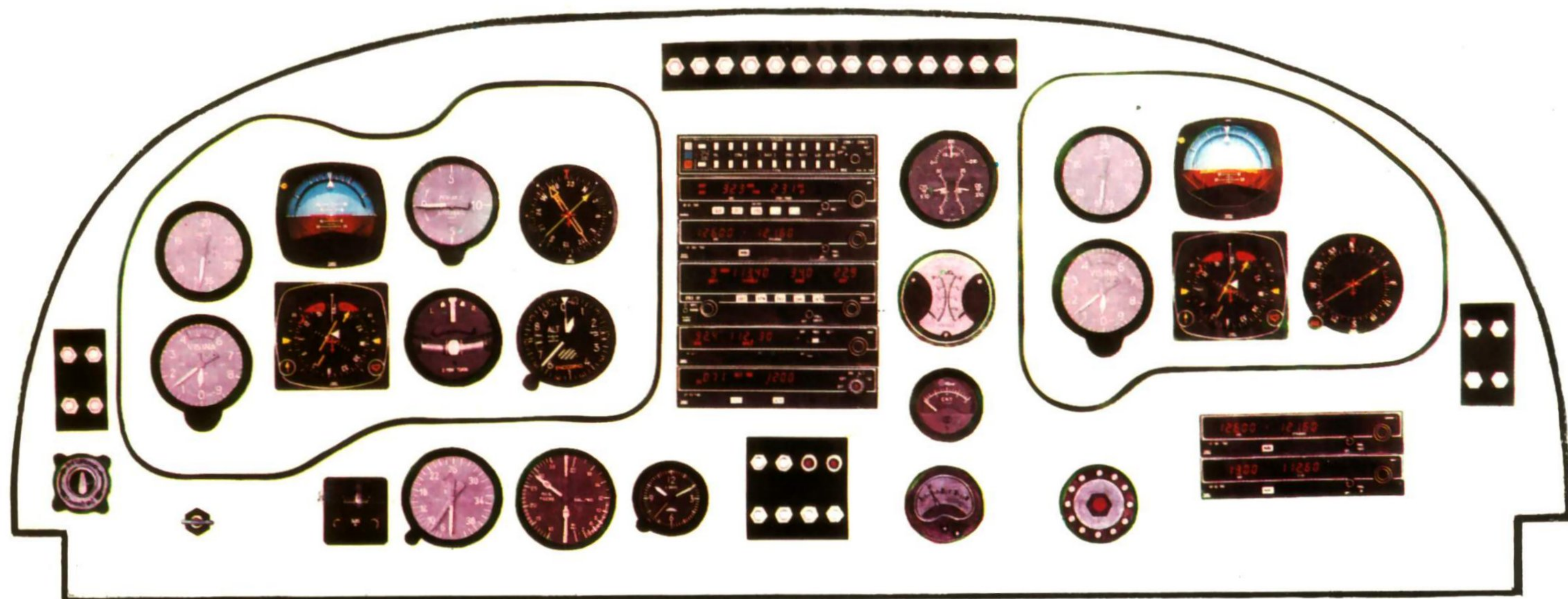
- digitalni radio kompas – KING KR 87, sa indikatorom,
- 720 – kanalni VHF COMM sistem – KING KY 197 – udvojen,
- prostorni navigacijski sistem (RNAV) koji u sebi objedinjuje 200-kanalni NAV prijemnik, 40-kanalni GLIDESLOPE prijemnik i digitalni RNAV računar sa mogućnošću pamćenja 9-fantom tačaka-KING KNS 81, sa indikatorom navigacijskih elemenata (PNI)-KING KI 525 i radio magnetnim indikatorom (RMI)-KING KI 229,
- 200-kanalni VHF NAV prijemnik sa ugrađenim 40-kanalnim GLIDESLOPE prijemnikom-KING KN 53, sa indikatorom PNI-KING KI 525 A.
- 200-kanalni DME sistem – KING KN 62A,
- ATC TRANSPONDER-KING KT 79, sa ALTITUDE REPORTING-om-KING KEA 129,
- audio kontrolni sistem sa ugrađenim prijemnikom MARKERA-KING KMA 24.

Električni sistem napajanja isti je kao na „Utvi 75“.

Following the design of “Utva 75”, we developed a new model of airplane, “Utva 75 A”, the low – winged, four – seater equipped in max. version for a full IFR training of pilots:

- digitally tuned ADF with built-in electronic flight timer and pushbutton elapsed timer-KING KR 87, with indicator
- dual 720-channel VHF comm transceiver-KING KY 197 panel-mounted area navigation system to combine a 200-channel NAV, 40-channel glideslope and 9-waypoint digital RNAV computer KING KNS 81, with pictorial navigation indicator (it combines the information you would normally receive from a directional gyro and a VOR/LOC/GS deviation indicator) KING KI 525A, and RMI KING KI 229
- 200-channel VHF NAV with built-in 40-channel glideslope receiver KING KN 53, with indicator PNI KING KI 525A
- 200-channel DME with digital distance, ground speed and time-to-station KING KN 62A
- all solid-state digital transponder featuring “cross-check” readout of encoded altitude and automatic VFR code selection KING KT 79
- audio control console with fingertip transmitter and receiver selection and built-in marker beacon receiver with automatically dimmed lights KING KMA 24.

Power supply equal to “Utva 75”.







We have designed a light plane UTVA-75  
**EASY TO FLY AND EXCEPTIONALLY SAFE**

Take a good look at UTVA-75:  
many special features make it a leader in safety.