

An-32P is special fire fighting aircraft aimed for extinguishing forest fires due to 2 external tanks, which enable to drop 8 t of retardant, and capable to carry paratroopers-firemen and special cargoes.



The structure of landing gear and thrust-to-weight ratio allow operating the aircraft on the following aerodromes:

- with paved RWs (1-3 classes) and minimal RW with surface friction – 0,3;
- with grass RWs and minimal soil strength equal to 8 kg.f./cm² and minimal RW surface friction – 0,3;
- on the altitude of up to 4500 m above the sea level;
- under the temperature range of – 60°C to +55°C.

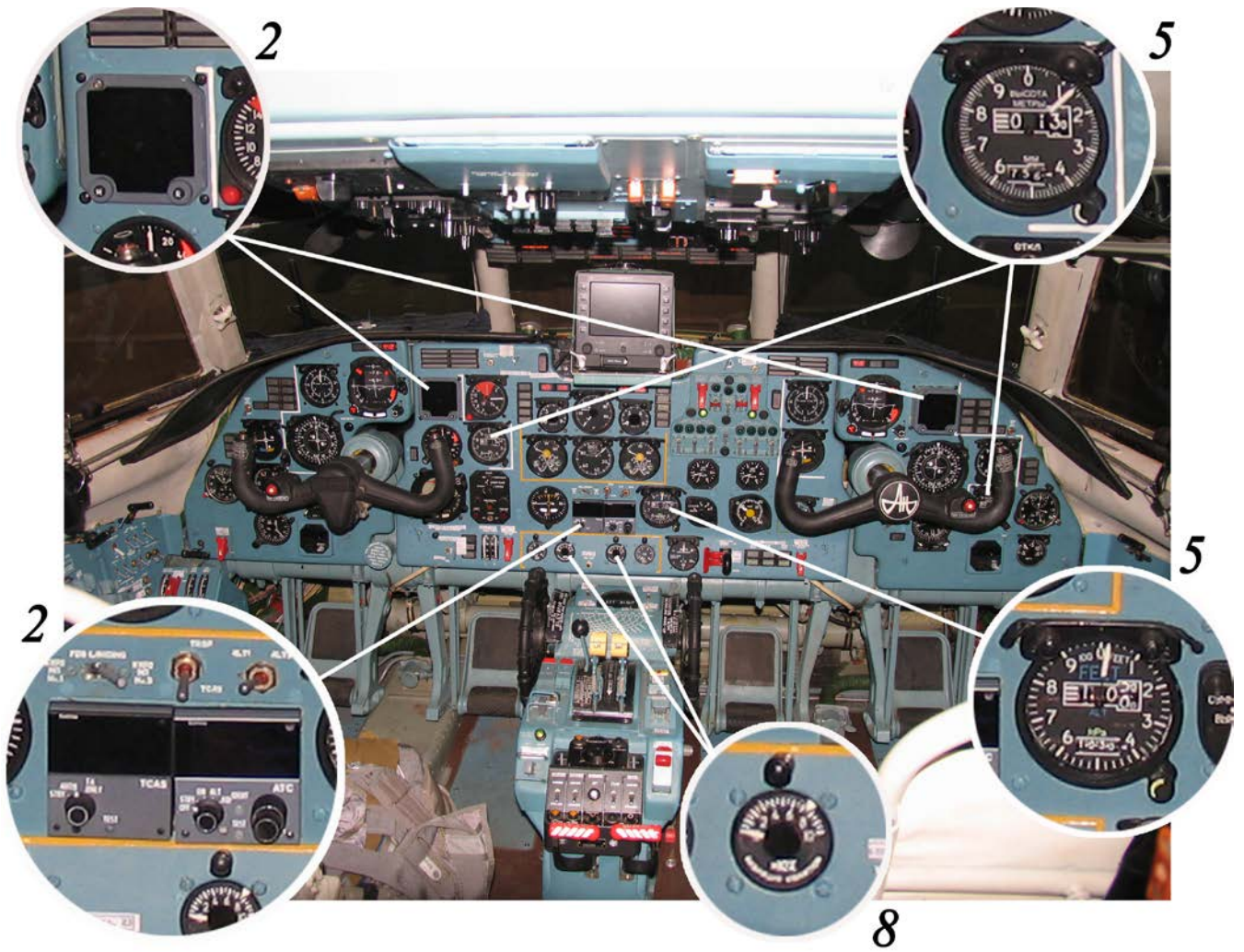


Airborne avionics and other equipment which meets the requirements of ICAO and EUROCONTROL are installed on the aircraft:

- Global positioning system GPS-155 XL
- Traffic alert and collision avoidance system TCAS-94
- Ground proximity warning system MARK-VIII
- HF radio station "Core-1H1"
- Altimeter YBK with MVP-1-1
- Data recording system BUR-4-1-08 with ADDIS-2-3
- Radio beacons ARTEX ELTC 406-1 and KANNAD 406 AS

- Vibration indicator IV-300
- Hydraulic distributor (instead of KE-5)
- Hydraulically controlled distributor valve 32.02.5627.000.000 (Hydraulic system)
- Oxygen equipment.
- Shoulder straps of crew with inertia reels





Pilots cockpit



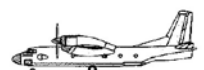
1. Global positioning system GPS-155XL



7. Radio beacon KANNAD 406AS



12. Oxygen equipment KV-20



Carrying out the functions of forest fire extinguishing aircraft An-32P is able to perform the following functions:

- Forest fires extinguishing by pouring out fire-extinguishing liquids;



- Delivery and aiming paradropping of paratroopers-firemen, special equipment and cargoes to locality of forest fires;



- Transfer of the fire-extinguishing means among the areas of fire.



Two outer pouring units (OPU) are installed on the aircraft for forest fires extinguishing via pouring out fire-extinguishing liquids. Each OPU has two autonomous tanks. Liquid pouring is made via opening the doors located in the lower part along the full length of units.



OPU liquid servicing is made on the ground within 10-15 min via four standard fire-throats ГМ-70 attached to ground refueling tanks and tank-trucks.



The navigator-operator controls the process of fire-extinguishing liquid pouring from his work place. The pilot-in-command has the opportunity to perform emergency pouring out of liquid.

Pouring is made on the speed of about 217-230 km/h.

Normal height of pouring is 40m above the forest. Volley (8t) and successive (4t) pouring are available. Poured out fire-extinguishing liquid covers burning area of almost 2000m². Aiming is performed by means of sight НКПБ-7.

Calculations for patrol operations show that one airplane An-32 is able to operate from 9 to 17.5 hectares of forest in light-day, while the distance from the patrol area to the base airfield can reach 50, 100 and even 150km.

Forest fires extinguishing is expedient to perform by a group of few airplanes (the optimal number is from 3 to 5 aircraft). Within no fires period and under airdrome conditions airplane can be converted to transport version for transportation of cargo.



Cargo transportation is provided due to:

- Big cargo door in the tail unit closing by ramp, which can go down to the ground and serve as loading ramp, or move forward under fuselage, what provides fast loading of aircraft on ground from moving platforms and comfort when paradropping cargoes and people;



- Upper cargo handling device with lifting capacity up to 3000 kg;



- Removable roller track equipment with locking beams, providing transportation of cargoes on pallets.



Dimensions of cargo compartment (66m²) and cargo door allow transportation of large-dimension cargoes, wheeled self-propelled and wheeled non-self-propelled vehicles with weight up to 6700kg.



Great advantage of the An-32P is airtightness not only of the cockpit but also of cargo compartment provided with air conditioning system. It allows using the airplane for people transportation (delivery of paratroopers-firemen to the locality of forest fires, evacuation of wounded etc.).

Aircraft can be used for paratrooping paratroopers-firemen (27 people) in fire area, also dropping up to 10 packages of fire fighting equipment – each for 100 kg. Paratrooping is made through back cargo door with static parachute deployment by means of special system.



Aircraft can deliver mobile servicing stations to base airfield in forest fires area. Cargo handling devices allow to carry rolling out of transport devices in cargo compartment through the deflected loading ramp or load at rolled under fuselage ramp wheelless vehicles, other cargo with total weight up to 6700kg. Aircraft can carry out patrol flights between territorial bases of forest patrol.

An-32P has the following main peculiarities:

- High level of airframe and systems reliability, safety of operation, checked during long service life of aircraft;
- Possibility of operation on unpaved airfields due to structure of landing gear equipped with low-pressure tires, and high engine location which excludes foreign objects hitting in air inlet;



- The highest comparing with world analogues installed power per employee. This peculiarity permits to perform curved trajectory flights that have particular value for flights in mountain regions and for extinguishing conflagrations. In such case the aircraft is able to leave high-turbulence zone typical for forest fires area in the shortest possible time. Besides, in the case of one engine failure, margin of power of the other engine permits the aircraft to ensure secure return to the base;

- Autonomy of operation with ability to start 2 engines AI-20Д series 5Э from APU- ТГ-16М;



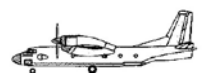
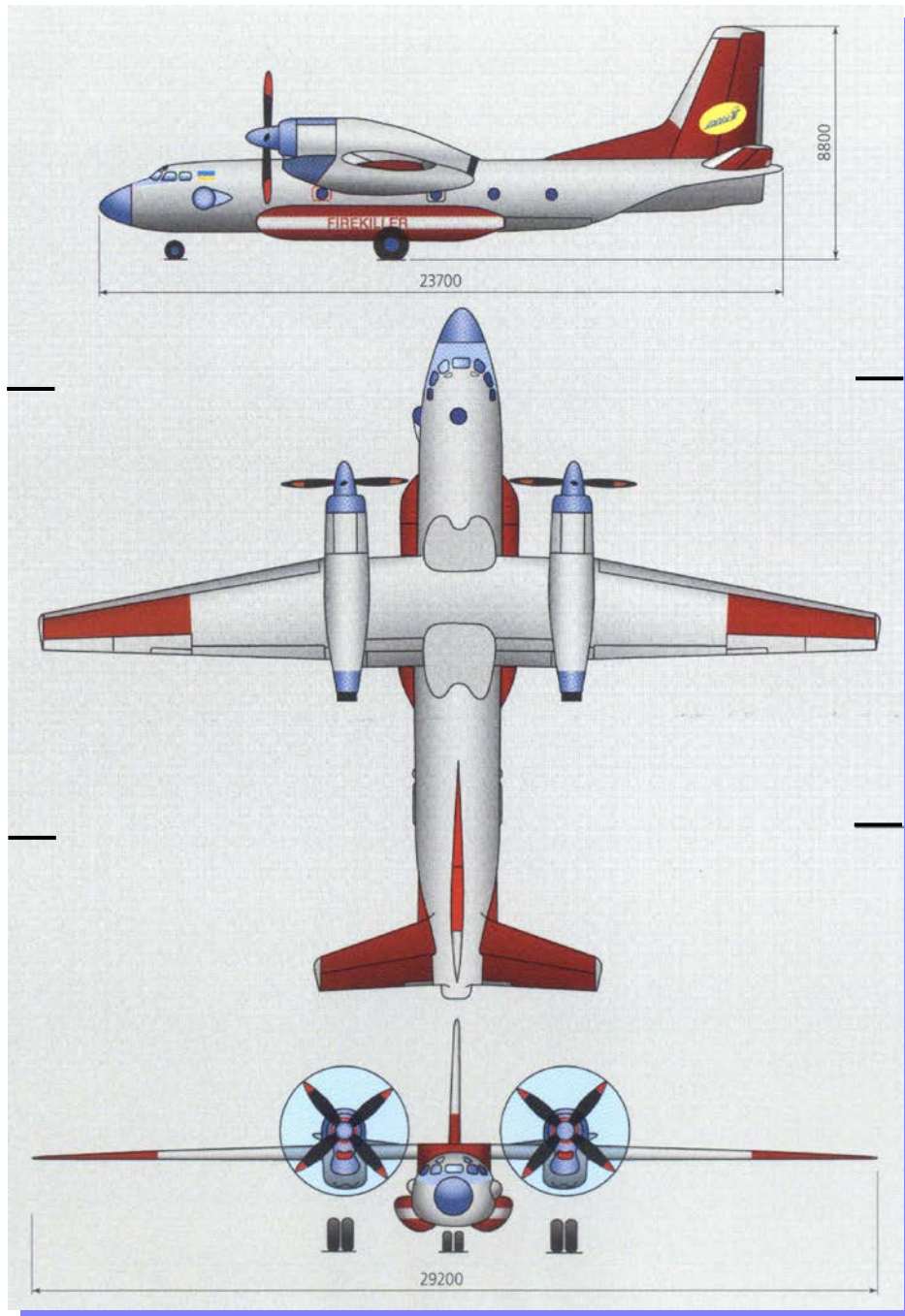
- Ability to make flights in IMC all over the world under the ambient air temperature up to + 55°C and airfield height up to 4500m above the sea level.

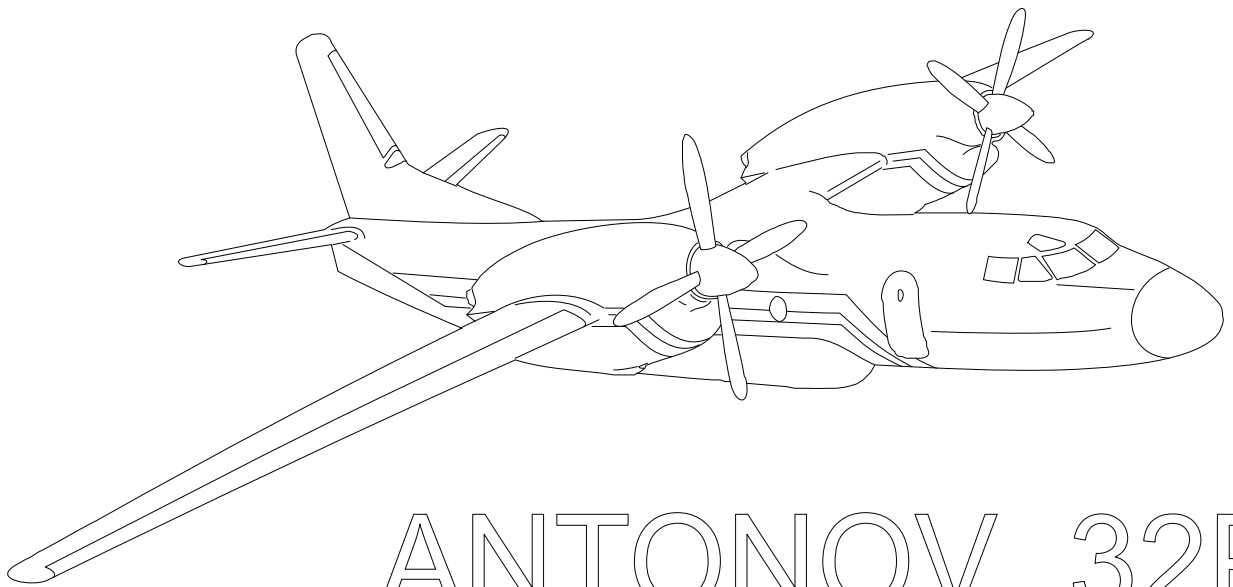
Aircraft An-32P, owing to its high flight performances, is successfully used in conditions of hot tropic climate, in high mountains, hard-accessed areas, performing landing and take off on unpaved, pebble-paved and covered with snow aerodromes.

Main An-32P aircraft performances are listed in the following table:

Parameter	Units of measurement	Value
Maximum takeoff weight	kg	29700
Maximum weight of fire-extinguishing liquid	kg	8000
Radius of action with full liquid servicing and fuel reserve for 30 min (700kg)	km	150
Cruising speed	km/h	420-500
Minimal speed of flight at pouring out fire-extinguishing liquid	km/h	217-230
Ferry range	km	1700
Take-off run	m	1000
Landing run	m	560
Total volume of poured fire-extinguishing liquid per 1 hour of work on radius of action: - 15 km - 30 km - 45 km - 75 km - 150 km	kg	32000 28000 24000 16000 8000
Total volume of poured fire-extinguishing liquid per 1,5 hour of work on radius of action: - 350 km	kg	7000
Quantity of paratroopers-firemen with special equipment	men	27
Stretchers for wounded (ambulance variant)	ea.	24







ANTONOV 32P
FIRE-KILLER