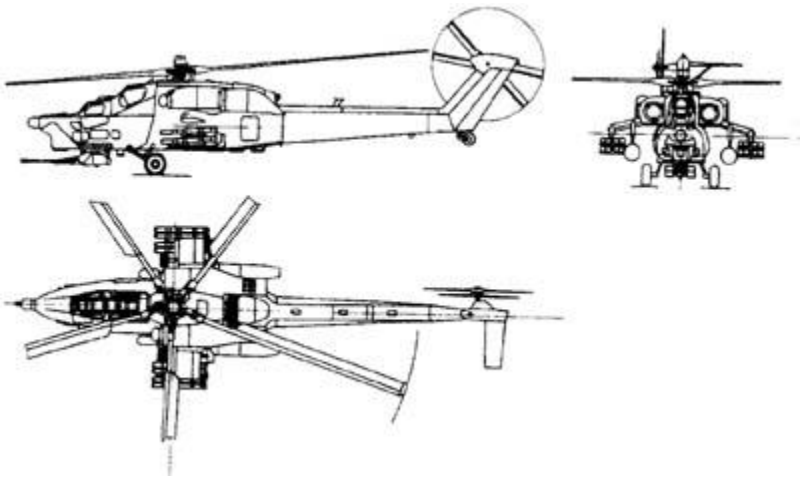
Attack Helicopter

MI-28 Havoc



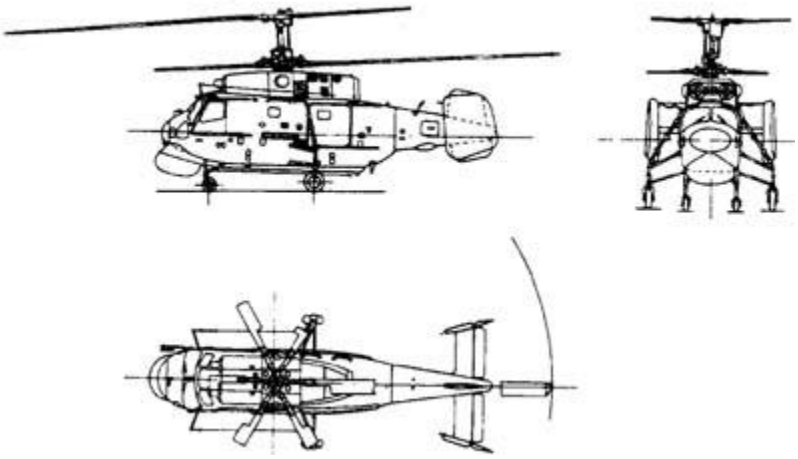
Dimesions (mm):	17,0props/21,0 x ?
Maximum speed (km/h):	300
Alt.:	5800
Weight (kg):	10400

Engine:	2 GTD, TV3-117VMA , 2 x 1'619 kwt APU for self -contained operation
Range (km):	460
Armament:	16/AT Shturm (r: 8 km) or Ataka (target hit= 0.96, 3-6 km) AA fire-and-forget missiles 80 NURS (80 mm unguided missiles) or 20 (120 mm) grenade launchers (altern.:23 mm guns (12,7+ 7,62 MG)) bombs 30mm DP 2A42 (m.vel. 1000 m/sec)
Fire Control System:	2 optical channels: w/n fields of view optic. television channel (move synchroniz ated with gun fire control sys 110 degr. azimuth, +13 -40 elev) built-in laser range finder airborn digital computer helmet mounted target destingator
Crew:	2

Mi-28 initially reflected and was developed as the two-place battle helicopter. The founders of this machine are convinced - above a field of fight of the visible future of advantage will save two-place helicopters. The reachings of developers are reputable, the idea of the monadic helicopter is extremely tempting, but to sell it without damage to battleefficiency it will be possible only for want of qualitatively new level of automation of flight. The first flight Mi-28 has executed in December, 1982. The new machine at once has shown itself as a high-power battle means of the ladies of search and erasure of various battle engineering. And first of all of tanks, BMP. The experts consider, that on battle efficiency Gc-28 exceeds foreign battle helicopters, including is wide knownAmerican Ak-64 "Apache". The helicopter is armed E0-mm with a gun similar by that is installed on battle machines of infantry. It has two rates of shooting - 800 and 300 shells one minute. And the shells are unified with overland. Except for a gun, in an arsenal MI-28 a controlled rocket "Sturm" or "Attack" of a class "air - surface" and four blocks of unguided jet shells of calibre 80 and 130 mm. On four points of the suspension the containers with bazookas, guns of calibre of 23 mm, and also bomb of calibre up to 500 kgs and other ammunition can fasten. The helicopter is equipped with the adaptation for statement a min. Search, recognition of the purpose and induction of the weapon are carried out

with the help of of combined optical-aim station. It has two optical and one optics - television channel (according to three, thirteen and by 20x magnification). It is important to notice, that a sight and gun work synchronously. Their mobility on an azimuth 110deg, on an angle of a place + 13d - 40d. Applies the controlled weapon the navigation officer - operator, which places in a forward cabin. The commander of crew ensures a piloting of the machine at extreme small height (mainly 5-15 meters) and conducts a light from the unguided weapon. If necessary pilot also can control a sight and gun. For this purpose there is special helmet system of target destination, which ensures a turn of a gun in that party, where the pilot looks. The important dignity Mi-28 - it high battle survival. On this parameter about a Nim any helicopter of the world can not compete. It is the unique helicopter have completely armoured pilot cabin, armoured glas of a cabin the direct hit of bullets of calibre up to 12,7 mm, and also splinters of shells maintains. On Mi-28 shielding the vital elements less vital is widely applied.
The drives, for example, are carried so, that between them the main reduction gearbox has gone in. The blades of bearing and tail screws are executed completely from composite materials distinguished by high residual strength for want of damages, many aggregates and systems of the helicopter are duplicated. On the machine the original and reliable system of a passive guard of crew ensuring a survival to the pilots for want of origin of an emergency on small and extreme small heights, for want of impact about ground with a vertical velocity up to 12 m/s is applied. It a basis is made not removed in flight with the chassis with two-chamber amortisation proof. If the emergency has arisen at large height, the pilots can abandon the machine with the parachute. That on Mi-28 there is a special technical compartment, in which two persons are easily placed, it can be used for an evacuation from a field of fight of shot crew of the helicopter.

Attack Helicopter Ka-25 Harmone



W. (tons):	4,1- 7,1
Speed (km/h):	220
Dimensions (m):	15,7props/? x ?
Alt. (m):	3'500
Range (km):	650
M./Engine:	2 TVD, TTD-3F, 2 x 664 kwt
Man./Crew:	3
Armament:	
Missiles:	no
Artillery:	30mm DP

Other:	torpedoes mines

The naval helicopter Ka-25 of the coaxial circuit(scheme) is created by the order of Navy for arms of the ships of various classes. The two-screw coaxial circuit(scheme) has supplied(ensured) to the helicopter small dimensions in a combination to a high maneuverability especially necessary for ship basing. To creation of this helicopter has proceded the helicopter - prototype Ka-20, which was developed in a 1960. This helicopter - first among machines by N. Kamov, on which were applied nóšiiaaeükuå drives for rotation of bearing screws. The first test flight is carried out by May 21, 1961. The construction of a fuselage provided accommodation retrieval and of the ASW equipment. The helicopter Ka-20 was started in a series in 1965 with a label Ka-25. The serial sample had minor differences from the prototype. First of Ka-25 were equipped by two drives by Glushenkov GTD-EF, placed in a top of a fuselage. The carrier system differed by availability antiice equipment and electromechanical system of an addition of blades above a tail beam for want of storage on the ships(spacecrafts). The pilot and navigation officer are placed by a number. The navigation officer on a mobile seat can move in a compartment(bay) of special equipment and to execute functions of an operator. The arms, switching on lšincaieiäi÷kuå of a torpedo and depth bombs, was placed in iigiiežzå between racks the chassis. Retrieval locator is placed at the forward bottom of a fuselage, and the lowered(omitted) hydroacoustic station is located at the back bottom of a fuselage. The back

part of a fuselage represented a short tail beam finished nšåõzceåaug tail. Two external Kiel played a role of control surfaces of a direction. On aircraft up to twenty helicopters Ka-25 were placed which were intended for search and erasure of submarines of the opponent, and also for adjustment of an aiming of ship rockets of a large radius of an operation. Besides the helicopters Ka-25 executed problems on search and saving of crews undergoing disaster in the sea, and also for transportation of the large-sized consignments on the external suspension. Production of helicopters Ka-25 proceeded till a 1975. For want of it was manufactured(issued) about 460 helicopters of the given type, which small amount was exported in India, Syria, Yugoslavia. In a 1967 on basis(!on the basis of) of the helicopter Ka-25 the transport helicopter Ka-25K was created. It(he) was intended for carriage of the passengers and consignments, for use as the crane(valve), for sanitarian carriages and fulfilment of saving work&. The maximum velocity of flight of this helicopter of 220 kms / h, and maximum distance of flight made 650 kms for want of to take-off mass. 7300 kgs.

In a cargo cabin of the helicopter up to 12 passengers were placed. For want of use of the helicopter Ka-25K as the crane(valve) on the external suspension the consignment by a mass up to 2000 kgs was transported. In a nose of a fuselage the installation(aim) of a removable cabin of an operator for direct observation behind the consignment and management of the helicopter for want of realizations of installation works was provided. The helicopter Ka-25K as demonstrated on 27-th International showroom of aircraft and astronautics in Paris in a 1967. For want of it the helicopter has made long-distance flight Moscow - Paris and Paris - Moscow. The helicopter Ka-25K serially did not issue. The new engineering solutions, tested on it(him), were embodied on Ka-32 later.