

## General information

The most powerful serial helicopter Mi-26 with its technical-economic indicators is unmatched. Helicopters of this type are unique in their transportation capacity and are used for transferring airborne mobile units, including large-size equipment. Mi-26 is designed to perform a variety of tasks — transportation, evacuation, fire fighting, etc.. Mi-26 can carry up to 82 paratroopers with a full complement of weapons, or up to 20 tons of cargo inside the fuselage or on external sling. Much attention was paid to the choice of optimal parameters of the rotor: 8-bladed rotor diameter of 28m allows a much greater traction than the five-blade main rotor diameter of 35 m of the helicopter Mi-6, and held in conjunction with TsAGI studies on optimization of aerodynamic configuration of blades secured a significant increase in efficiency rotor. The design of the rotor used in a number of technical innovations: the design sleeve is made of titanium alloy that ensures high fatigue strength. As a result the main rotor of the helicopter Mi-26, with 40% less weight, developed 30% more thrust. The layout of Mi-26 is selected is the same as that of Mi-6, but its size is smaller than the Mi-6. The fuselage with the same dimensions and weight as that of MI-6, has a cargo cabin volume twice more than Mi-6, and is designed to carry twice much cargo and is equipped with devices to facilitate loading and unloading.

In the development of the helicopter, much attention was paid to the improvement of its aerodynamic contours, thus significantly reducing parasitic drag and contributed to significant reduction kilometer fuel consumption.

The first flight of the first prototype of Mi-26 was made in December 14, 1977 (test pilot G.R.Karapetyan). The development of the helicopter was led by chief designer M.N. Tishchenko. The flight of the helicopter Mi-26 was significantly superior local and foreign helicopters, as evidenced installed on it 14 international records, including records of lifting 25t at the height of 4100m, 20 tons to a height of 4600m, 5600m and 15t to 10t in the 6400m, and and reaching a height of 2000m with a flight weight 56768kg set 2-4 in February 1982. Mi-26's were shown repeatedly on international aerospace exhibition, starting with the 34th Air Show in Paris in 1981, demonstrating the capacity, inaccessible to foreign helicopters.

### Modifications

Mi-26TC is a version of Mi-26T used in China. Mi-26T2 is an upgraded version of Mi-26T. It has a new onboard avionics BREO-26 and «glass cockpit» with five multifunctional LCD display as well as a new digital autopilot and navigation system supporting NAVSTAR / GLONASS. Onboard equipment of Mi-26T2 provides the helicopter anywhere in the world and allows you to fly IFR in accordance with international rules. The application of modern avionics allows to reduce the number of helicopter crew from 5 to 2 people, which when working with external load joins a flight operators.

Description of construction The helicopter is built on a single-rotor scheme with a five-blade main and 8-bladed tail rotor with two engines of 11,400 hp each and fixed landing gear. The all-metal fuselage of semi-monocoque structure has a variable cross-section. It has a closing bow radar antenna radome, cockpit crew, cabin for accompanying passengers and cargo compartments for equipment. The central part of the fuselage includes a cargo compartment size 12,00 × 3,25 × (2,95-3,57) m, and the rear compartment, rolling into the end beam. The troop-variant helicopter can accommodate 82

paratroopers with weapons. In the ambulance version the helicopter can accommodate up to 60 stretchers with the wounded. For loading of bulky cargo in the cargo cabin is electric winch with a pulling force of up to 500 kg installed. Also, the helicopter is capable of carrying loads on external sling with capacity of 20 tones payload. The helicopter can be used for tasks both military and civil, as well as for search and rescue operations. Today, Mi-26 is the largest serial transport helicopter in the world (in the US firm Sikorsky performed similar tasks at one and a half times lower than Mi-26 duty, CH-53E Super Stallion).

Serial production of Mi-26 began in 1984 at the Rostov Helicopter Plant. There are more than 300 helicopters built for civil and military applications, 40 of which exported to various countries, including 12 in Canada and 10 in India. Developed following modification of the Mi-26:

Mi-26 — military transport helicopter.

Mi-26A — version with combined control and navigation systems for automatic approach and reduces the specified location. Mi-26T — civilian transport helicopter, similar to military transport helicopters.

Fire-fighting version is equipped with a tank with capacity of 7500l for fire extinguishing fluid that is spaying directed to the fire site through one or two nozzles. Mi-26P — passenger helicopter with cabin of 70 seats, five in a row (3 + 2) with a single pass, with luggage and domestic compartments. To ensure the comfort the thermal insulation finish and air conditioning system are applied. Mi-26TM — helicopter-flying crane with the cabin for the operator under the fuselage behind the front landing gear or rear cargo ramp. On the external sling can carry a load of 20t.

Mi-26TZ – helicopter-refueler with additional fuel tanks with a capacity 14040l and lubricants — capacity 1040l; outfitted for simultaneous refueling of four vehicles and 10 aircraft. Mi-26M — an improved version of the new helicopter with rotor blades with improved aerodynamics, the new GTE D-127 Design Office «Progress» with a capacity of 10440kVt, and advanced equipment. The helicopter has improved performance when operating in conditions of high air temperatures and high based runway and one engine inoperative. Maximum load is 25t. In 1992, the preliminary design was developed, built of an experienced helicopter serial production is planned after 1996. In 1993, on the 40th Aerospace Exhibition in Paris a model of the helicopter was exhibited.

Specifications Mi-26T Crew: 4 passengers: 70

### **Mi-26 modifications:**

Mi-26 is the first serial modification

Mi-26A modification with the combined system control and navigation for automatic landing and reduce in the specified location.

Mi-26K designed heavy lift helicopter-crane with maximum payload, increased to 25 tons (see separate description).

Mi-L flying laboratory.

Mi-26M improved version of the helicopter with the new rotor with improved aerodynamics of the blades, the new GTD D-127 ZMKB «Progress» power 10440 kW, and improved equipment. The helicopter has improved characteristics when operating in conditions of high air temperatures and high runway and when the failure of one engine. The maximum carried load is increased up to 25 tons In

1992, was developed by the project, built a prototype helicopter, serial production is planned after 1996 In 1993 at the 40th aerospace exhibition in Paris was shown the model of the helicopter. Mi-NE-M ASW. In 1990, converted 1 serial Mi-26.

Mi-P passenger helicopter with beauty 70 seats five in a row (3+2) with a single pass, with the baggage and household compartments. To ensure comfort applied insulation finishing and air conditioning system.

Mi-P Director active interference. Developed in 1988. Made in one instance.

Mi-26S helicopter for decontamination activities. Differed a tank for decontamination liquid spraying system under the fuselage. Developed in 1986. Applied in liquidation of consequences of the accident at the Chernobyl nuclear power plant.

Mi-26T civil transport helicopter, similar to the military-transport helicopter. Fire variant is equipped with a tank capacity of 7500 l for pojalovatsa fluid, which is directed at the fire through one or two nozzles.

Mi-TM option outboard cockpit to pilot when operating with a suspended load.

Mi-TS helicopter-bowser with additional tanks for fuel capacity 14040 l and lubricants — capacity 1040 l; equipped for simultaneous refueling of the four planes or 10 cars.

Mi-TP fire helicopter

Mi-TS certified by numbers airworthiness CIS (on the basis of the FAE.29) variant of the Mi-26 helicopter

Mi-27 flying command post.

### Mi-26

Notation	Mi-26
The diameter of the main rotor, m	32.00
The diameter of the tail rotor, m	7.61
Length, m	33.73
Height, m	8.15
Weight, Kg	
empty	28200
normal takeoff	49600
maximum takeoff	56000
Fuel tank, Lt	12000
Engine type	2 ГТД ЗМКБ Прогресс Д-136
Power, kW	2 x 8380

Maximum speed, km/h	295
Cruising speed, km/h	255
The practical range, km	2000
Service ceiling, m	800
Static ceiling, m	6500
Static ceiling, m	1800
The crew, pers	5
Useful load:	85 soldiers or 60 wounded on stretchers with 3 accompanying or 20,000kg of cargo inside the cabin or 18500 kg suspended

