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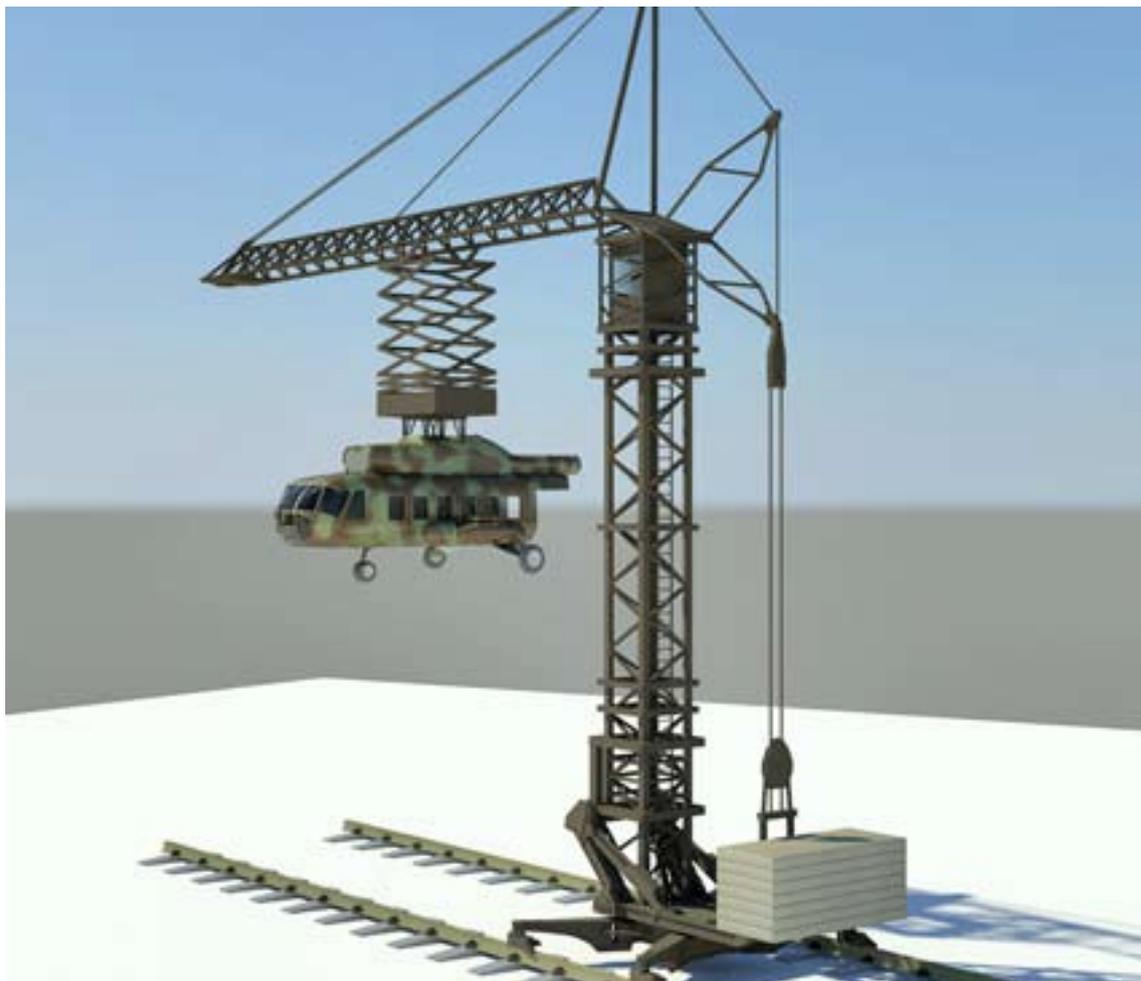


**uni system
JAKUB**

Development and realization program of
special method, devices and equipments
for training, rehabilitation, prevention,
recreation, sport and free time

HELICOPTER FLIGHT SIMULATOR
VERSION FOR LAW ENFORCEMENTS

JAKUB KOLOSEUM SUPERB



Slovak Republic 2011

Helicopter flight simulator JAKUB KOLOSEUM SUPERB

Helicopter flight simulator is an advanced and low cost training facility for simulated training of individual actions and complex activities of army, police, rescuers and fire-brigades related to helicopters deployed to their combat and rescue missions of aerial and ground combat and rescue emergency operations.

The new SUPERB Helicopter flight simulator has a greater carrying capacity (14 against 12 crew) and bearing module is at the height of 18 m against 15 m in basic version of the simulator Koloseum.

The Law Enforcements version of helicopter flight simulator is designed and equipped allows to train the following activities:

- a) Basic and special descent techniques, for example:
 - descent by rappelling –
 - using thin (rock-climbing) rope;
 - using thick rope (FAST ROPE).
 - descent with landing;
 - low passage-flight landing;
 - boarding the helicopter;
 - hoisting and lowering warriors and equipment;
 - transporting hung warriors and equipment;
 - single rope techniques of roping down and up to the chopper.
- b) Complex of various aerial and ground combat, anti-terrorist and rescue operations of special troops, for example these combat activities:
 - suppression of an attacker and occupation of areas;
 - suppression of defence and occupation of structures (buildings, bridges, roads);
 - supplying special forces with ammunition, material, food, water, etc.
 - combat firing from helicopter on various ground targets;
 - simulation of firing from ground position on flight helicopter;
 - rescuing and transporting of injured warriors from the battle sites to field first aid place
 - rescuing and transporting of warriors from sinking ships or boats;
 - descents to boats and on boards of ships, etc.
- c) Methods of planning, organizing, and cooperating operations, including command and communication during the helicopters' deployment.

The high degree of effectiveness, intensity, attractiveness, activity sequences, repeatability and individually controlled training pace are the features of valuable didactic background of the simulator training, which is not possible to secure in real training courses with helicopters. The helicopter flight simulator is designed with the objective to provide optimal degree of technical compatibility of the training sections with real helicopters as well as a high degree of functional compatibility of simulated training with real airborne and ground activities of law enforcements.

The rescue helicopter flight simulator consists of the following sections:

- Section A. - bearing and driving unit;
- Section B. - helicopter module;
- Section C. - crane track;
- Section D. - ground training facilities.

SECTION A: Bearing and driving unit of the simulator - complies with standards applicable to lifting devices able to transport materials and people. The unit enables all motions of the helicopter unit:

- the whole simulator assembly travel along the track at speed 32 m/min,
- the chopper module's spin movements at the speed of 89 m/min
- the chopper module's horizontal movements at the speed 60 m/min
- the chopper module's vertical movements at the speed of 30 m/min.

With regard to descent/lifting and ground training, the simulator's great mobility secures perfect movements of the helicopter module in all directions and enables an adequate training area for ground activities and also a sufficient "flight zone" for airborne practices.



SECTION B: The helicopter module is a copy of a real chopper fuselage. The flight cabin is identical with the chosen type of helicopters. There are all important items necessary for functions and for creating a real environment for the crew making authentic optical and tangible impact on the crew's psyche.

The helicopter module consists of :

- a) a disburdened fuselage with a complete undercarriage and shock-absorbers, lights, search spotlight and simulated airstream duct;
- b) a flight deck adapted for operating the simulator from two seats, control panel with all necessary controls for training operations, ventilator, lighting;
- c) a transport deck with seats equipped with safety belts for transported people, functional side sliding door and back wing door, rescue manhole in the floor for training hoisting and lowering operations, anchors for fixing the climbing ropes and instructor's securing, longitudinal cable for protecting the trainees, side and back console for fixing the rappelling ropes, and lighting of the deck.
- d) optional can be fitted to mount of machine guns and other combat equipment

The helicopter module allows the descent altitude of 18 metres above ground at the maximum payload of 1400 kg

- max. number of transported people: 14
- training task force with equipment: 12
- instructor 1
- operator 1

SECTION C: Crane track is built on concrete strips allowing the simulator to travel 80 to 100 metres alongside rails fixed on the concrete foundations. The length of the crane track depends on the customer's needs and space available. In basic price are 80 m crane track.

SECTION D: Ground training facilities

This area includes various elements and structures modelling variable training goals, requirements and situations for performing the training descents and hoisting.

There can be:

- rappelling and combat facility "kill house";
- climbing training facility;
- models of various types of combat situations.
- firing fields for simulated and combat firing from helicopters at ground targets
- variable terrain surfaces, e.g. sandy, gravelly, grassy, muddy;
- roping cassettes;

Accessories for the simulator:

- Helicopter's noise simulator;
- Airflow simulator;
- Meteorological station;
- Radio station.



Standard version of Jakub Koloseum with ground training facilities, Kill house shooting range and training water reservoir

Jakub Building Gun facilities and Jakub Koloseum
Training of military police and rescue teams cooperation
the Slovak Army training base Lest





Jakub Koloseum, Jakub Climbing and Jakub Desant at the base of the Egyptian Army, Cairo





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