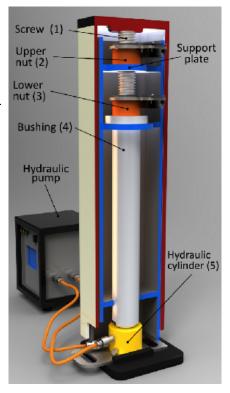


## PRINCIPLES OF HYDRAULIC JACK MULTIPLICATION TECHNOLOGY

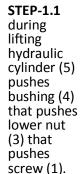
HYDRAULIC JACK MULTIPLICATION is a technology that combines advantages of hydraulic jack high load lifting capacity and screw jack low price. The principles of work of the stroke multiplicator are shown on the example of high load big stroke jack shown on the left. The idea is explained on adjacent pictures.

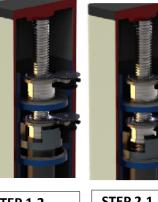
Main advantage is that the multiplicator supports load at all time so the hydraulic cylinder could be removed from it and placed in other multiplicator.

The hydraulic iack multiplicator consist of a screw (1) with two nuts on it the upper (2) and the lower (3). These nuts are in fact lock nuts with gears meshed with motors that turn them. The screw (1) goes into the bushing (4). Onto the base of the stroke multiplicator small stroke hydraulic cylinder (5) is installed.









**STEP 2.1 STEP 1.2.** begins During hydraulic when hydraulic cylinder (5) extraction cylinder (5) the upper start to collapse nut (2) is not after under load reaching so it could full stroke. be easily turned down



step 2.2 the upper nut (2) supports load so lower nut (3) might be easily turned down.

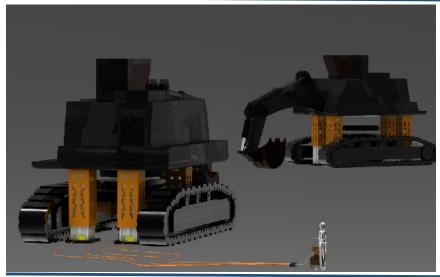
These steps are repeated until the load will be lifted to the required height



WATCH ANIMATION







HYDRAULIC JACK MULTIPLICATION technology has very vast number of potential applications. It might be used to lift big loads to a big height. Here on this picture we show one example – a heavy excavator is being lifted with 4 multiplicators. Each has a 500 tons lifting capacity and 2 m stroke. Inside each multiplicator there is a 10mm stroke 500 t hydraulic jack. The same hydraulic jacks yesterday lifted another excavator that stands currently in the background (picture). When the excavator body will be lifted the jack will be removed from multiplicators and could be used to lift or lower other excavator or to lift, push or pull other heavy machines, parts and elements. This example shows a huge VERSATILITY of our system.

