

CENTRAL INTELLIGENCE AGENCY
INFORMATION REPORT

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COUNTRY	Czechoslovakia	REPORT		25X1
SUBJECT	80-Millimeter Mortar of Czech Manufacture	DATE DISTR.	1 July 1955	
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1. An 80-millimeter mortar was designed by Eng. Sroubek (fnu) who has been employed in the gun production section of the V.I. Lenin Works at Pilsen since 1938; he also teaches technical mechanics at the College of Mechanical Engineering in Pilsen. The mortar went into production in 1949.
2. The base plate of the mortar is 800 x 1,200 millimeters large and 14 millimeters thick. The base plate was constructed with a view to correcting the shortcomings of other base plates of a similar type, which after some firing used to bend and split from the shock of recoil. That defect was removed by subjecting the spot on the base plate which suffered most from the shock of recoil to similar shock in the testing rooms, namely by employing hammers driven with the same force as that of the recoil. This process was carried out on base plates which had not yet been tempered, so that the plates were dented after a few blows. After a certain number of blows, the dent did not change its shape any more; then, the base plate with the dent in it was tempered and was successfully tested mounted on a mortar. Then it was adapted to other types of mortars as well. The weight of the base plate with supports is about 80 kilograms.
3. The mortar is equipped with telescoping supports for the barrel. The supports consist of a cylinder, a piston, and a strong spiral spring; the cylinders are firmly mounted on the base plate; the pistons are connected to the carrying sleeve for the barrel. On both ends of the supports are pivots. Both cylinders are joined with the elevation gear on the sights by heavily plated metal tube. The tube and the cylinders are filled with oil whose pressure is regulated by the position of the sights.
4. The barrel is of 80-millimeter caliber and is about 1,500 millimeters long. It is fixed on in such a way that the pins in the pivot of the carrying sleeve can easily be adjusted to the traversing bracket and its supporting bracket, which are firmly mounted on the base plate. The support for the traversing bracket is riveted to the dented spot in the base plate and is about 400 millimeters high. The brackets are so constructed that the shock of the recoil is transferred to them at any elevation of the barrel; this was achieved by constructing the firing chamber longer than in the standard type of mortars, which means that the grenade is placed rather higher

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(NOTE: Working distribution indicated by "X"; Field distribution by "#".)

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up the barrel than the center, where the bracket is fixed on. Since the bracket rotates to a certain angle, the recoil force is always projected on to the end of the bracket which is mounted on the dented part of the base plate. The barrel weighs about 30 kilograms and is fixed to the traversing bracket by square pegs. The pegs are set in a sleeve which is fixed to the barrel under heat. Loading is done through the muzzle.

5. Sights are on the left-hand side. Cross-leveling is done by means of a worm wheel in a casing mounted on the superstructure for the barrel. The rotating mechanism is on the right side of the traversing bracket and its gearing is directly attached to it. Rotating and elevating is done by a wheel, and the maximum traverse is 180°. There is a metal indicator on the worm wheel showing the degree of inclination of the barrel.
6. The mortar may be easily separated into two parts: the base plate and the barrel. The mortar is especially suitable for use in mountainous terrain, where it is difficult to transport other heavy weapons.

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