

## METHOD TO DETERMINE THE GRENADE MOTION LAW IN THE BAREL OF GUN

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**Abstract:** Automatic grenade launchers renew the interest for the interior ballistic principle of high/low pressure chambers which is applied in them. For the sake of principle optimisation in the specific automatic grenade launcher the theoretical and experimental investigations are carried out. In theoretical modeling special attention is paid to flow of two-phase mixture of propellant gases and unburned propellant from the high-pressure chamber to the low-pressure chamber, and to continuation of propellant combustion in the low-pressure chamber and the launcher barrel. Through experimental investigations the influence of propellant type, relation of chamber volumes, number, dimensions, and position of holes in wall separating chambers, and type of liner across the holes are studied. All these influences the code based on theoretical considerations simulates correctly.

**Key words:** grenade, translation, rotation, barrel, forces.