

Dig Instrument By Blasting

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Abstract

The dig instrument by blasting is a new product we developed (See Fig. 1) It is an apparatus to dig hole at the ground. It is composed of combustor A, combustor B, charge pipe and shock head. Work characteristics of Combustor A are that combustion time is 1.5 seconds, driving force is 725kg. Work characteristics of combustor B are that the combustion time is 1.3 seconds, driving force is 460kg. After the combustor is ignited, the charge pipe is driven into ground immediately. Then, whole dig instrument is thrown out automatically, but explosive in charge pipe is left in ground and blast in the twinkling. The diameter of vertical hole formed by blasting is 3cm to 60cm which is controlled according to engineering requirement. The maximum depth of the hole digged by using the dig instrument is 2M. It applies to blindage of single soldier in military affairs, and hole planting pole as well as sewer in civil use and so on. The two shots are charged in combustors to dig a hole. The maximum weight of shot is 490g, minimum is 130g. The whole process digging hole is completed automatically in about ten seconds.

The dig instrument is small and light (only 11.5kg). It is easy to carry by single person, and can be applied at field everywhere, and does not restricted by environment and power conditions.