

Using the SD Heavy-rake

Rakes have been used in demining for many years and can provide a cheap, effective and safe method of sifting the ground when used with well designed SOPs. The Heavy rake is used when the ground is hard, and after it has broken the ground, a "Light rake" (or Leaf-rake) is used to move the loosened soil back to the base-line. Progress can be slow in hard ground, but is thorough.

SD Order No. SKU3028

Area excavation with rakes can be especially useful when there is ground contamination with metal or minerals, and when there is a need for low-cost sustainable equipment and methods to be used.

The saving on metal-detectors, batteries, servicing and training can make the use of a rake-excavaion system very attractive.

The SD Heavy rake design uses blast-resistant materials and includes a 1.75 metre long tubular stainless steel handle (sealed at both ends). The distance between the tines can be varied according to your needs.

The two tines of the SD Heavy rakes are made using 10mm stainless steel round bar with "plough-share" feet that are designed so that the tines do not enter the ground if the rake-head is banged down onto the surface. The accident record shows that "hacking" at the ground to make the tones stick in is when most accidents occur,

Our rake head should be placed onto the surface gently (for safety) and then pulled back towards the user. The shaped feet dig into the ground automatically, ploughing as they are pulled forward.

We can make the rake head with tines spaced to the customer's specification, but recommend that narrowly spaced tines work best in a wide range of soils and are known to have lifted most small mines to the surface safely.



Users have expressed amazement at the ease of use and the low weight of the SD Heavy-rake. The tubular stainless steel handles are lighter than many wooden handles. The picture on the left shows a deminer raking in an area with heavy vegetation and hard, rocky ground.

CAUTION!

Always hold the rake handle towards the end away from the tines and wear eye protection.

SD blast-resistant hand-tools for Humanitarian Demining are made using design rules developed during research funded by US Army CECOM NVESD by Andy Smith. See the design rules at <http://www.nolandmines.com/hand-tooldesigncriteria.htm>