

# DynoStart™ DS2

Technical  
Information



## Description

DynoStart is a battery powered electronic blasting machine for initiation of NONEL® tube.

Electrical energy is converted into a strong shock wave of high temperature that, when applied inside a NONEL tube by the means of an electrode, initiates the tube. DynoStart uses a common 9V battery and a durable electrode. Both battery and electrode are easy to change. The electrode can be removed from the blasting machine at any time to prevent unauthorised usage. DynoStart is designed to require the use of both hands when initiating the blast. This is to avoid unintentional firing of a blast.

No part of the device is explosive in nature. It is not approved for use in confined areas which may contain flammable gas e.g. underground coal.

## Technical Description

The DynoStart blasting machine consists of an energy source, a voltage converter, a capacitor for energy storage, a voltage supervision circuit, an electrode and switches for control.

Electronic energy is converted into a strong shock wave of high temperature which is applied inside the NONEL tube, by means of the electrode, giving reliable initiation.

## Instructions for Use

To be used for the initiation of NONEL lead-in lines, either NONEL Starter or NONEL Lead Line. After the pattern has been prepared for blasting in accordance with local regulations and is ready for firing, use DynoStart in the following way.

## Preparation

Cut the end of the NONEL lead-in line with a knife or approved cutting device and discard the end seal. Insert the cut of the NONEL tube into the chuck on the DynoStart, ensuring that the tube end is inserted to the bottom of the chuck.

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## Function

When the charging switch is depressed, then the circuit to the voltage converter is closed and this charges the capacitor for energy storage. Charging is indicated by the flashing green light. When the capacitor is fully charged this is indicated by a continuous green light and firing may proceed when all other safety issues have been covered.

To fire, keep the charging switch depressed, then press the firing switch. The charged capacitor is now connected to the electrode. A flash over will then occur and stored energy is released as a sharp rise in temperature and pressure.

If the charging switch is released before the firing switch is pressed, then charging is stopped and the capacitor is discharged through an internal circuit closed by the charging switch in neutral position. With both switches in neutral position the capacitor is short-circuited and the electrode is disconnected.

The battery condition will determine the time interval to full charge. If this time exceeds five seconds, then the battery is weak and should be replaced.

## Maintenance

To change the battery, unscrew the top cover plate. Lift, disconnect and replace the old battery with a new 9V alkaline battery. Be careful not to touch any electronic circuitry as this may cause unintentional discharge of high voltage.

To change the electrode, unscrew the chuck that protects it. Remove and replace the electrode with a new one of the same type. Electrode life has been up to 500 shots. New electrodes are available through Dyno Nobel. It is advisable to keep spare batteries and electrodes in stock.

## Safe handling, transportation and storage

**First Aid** – This product is manufactured from inert material.

**Safety** – The device itself is non-explosive, however, it is designed for use with explosives which are classified as dangerous goods and these can cause personal injury and damage to property if used incorrectly.

**Transportation and Storage** – There are no specific storage requirements or constraints other than those associated with any electronic device.

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