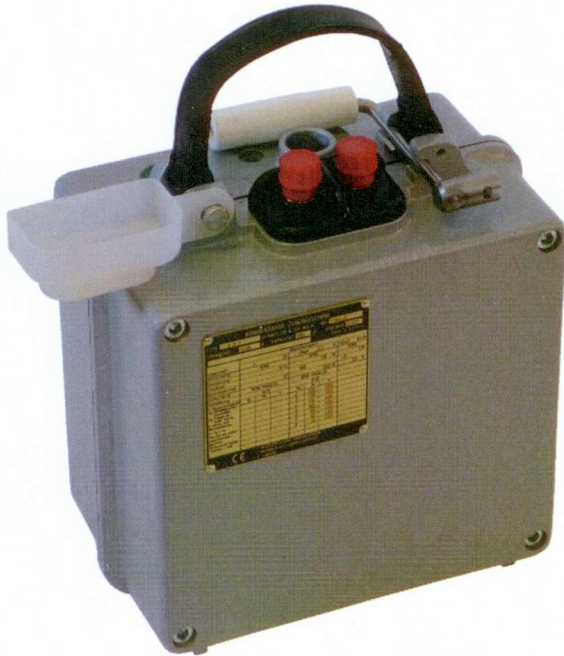


Electric Condenser Discharge Blasting Machine Type 861

with hand-operated A.C. generator

Not approved for use in permitted areas!



BAM-approval ID: BAM-ZM-453

This Condenser Discharge Blasting Machine is manufactured and distributed by Messrs. VSV-Engineering Produktions- u. Handels GmbH at the same high technical level and safety standards as the other well known SCHAFFLER-blasting machines, testing instruments and other blasting accessories. All products are manufactured at the highest technical level and fulfil all safety standards.

Technical data:

- Voltage : 1420 V
- Firing condenser : 100 μ F
- Energy : 100 Ws
- Dimensions : 240 x 145 x 257 mm
- Weight : 9 kg

The blasting machine type is approved for the following detonator types:

Maximal number of shots:

Standard sensitive electric detonator A:

(according to the EC-regulation these detonators are not approved any more, only igniters of this type)

Firing impulse: 4 mJoule / Ohm	
on 3 m iron leg wires	250 pieces in series
on 3 m copper leg wires:	500 pieces in series
Limiting resistance:	1260 Ohm
in parallel series with Cu-leg wires	10 series x 240 = 2400 dets

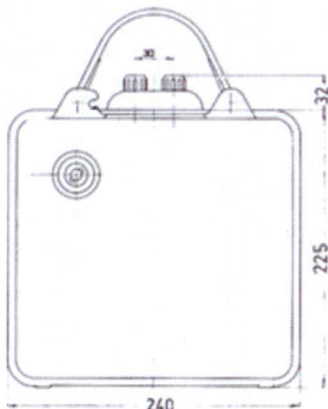
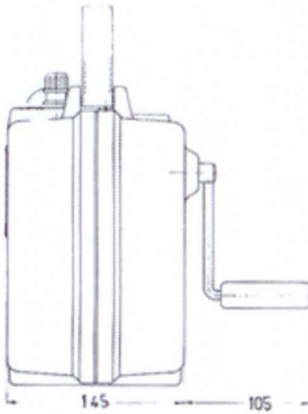
Insensitive electric U-detonator:

Firing impulse: 20 mJoule / Ohm	
on 3 m iron leg wires	160 pieces in series
on 3 m copper leg wires:	320 pieces in series
Limiting resistance:	580 Ohm
in parallel series with Cu-leg wires	5 series x 200 = 1000 dets

Highly insensitive electric HU-detonator:

Firing impulse: 3300 mJoule / Ohm	
on 3 m copper leg wires:	40 pieces
Limiting resistance:	25 Ohm

All electrical parts and the complete blasting machine are tested with a tension of 3000 V A.C.



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SAFETY FIRST

Handle the blasting machine with care and keep it clean.

Never activate the blasting machine with short-circuited terminals or plug sockets. Do not store the blasting machine for long periods in damp quarters underground and expose it as little as possible to wide fluctuations of temperature, in order to avoid condensation inside the machine.

Wear insulating clothing and shoes and take care that you do not knee on wet floor while activating the blasting machine.

Do not use damaged or defective machines and return them for repair to the manufacturer. Repairs which necessitate the opening of the machine should in no case be attempted, because special tools and "know-how" are required.

ANNUAL CHECKING IS RECOMMENDED.

SAFETY FIRST



OPERATING INSTRUCTIONS FOR TYPE 861

PLEASE NOTE: The resistance of the firing circuit must not exceed the maximum resistance indicated on the identification plate of the blasting machine.

After the firing circuit is set up as usual (connection of detonators, resistance measurement, insulation test):

1. Connect leading line to terminals.
2. Put the crank handle on the axle.
3. Operate generator with the crank clockwise until the pilot lamp glows (approx. 7 turns).
4. Press down push-button.

After the lamp has extinguished, the switch is locked again. To make the blasting machine ready to fire again, follow instruction steps 3 to 4.

MECHANICAL TEST OF THE BLASTING MACHINE BEFORE USE

- The connecting terminals must be able to be turned easily; their threads must be in good order, so that the leading lines can be connected firmly.
- The connections must be clean and dry.
- The drive of the winding and firing mechanism must be operated easily.
- Machines with direct manual drive need a properly working free-wheel device.
- The housing must be free of major damages; this is of great importance with firedamp proof blasting machines.
- When shaking the blasting machine no noise from inside may occur.

BLASTING MACHINE TESTER TYPE SOLUS

The electrical efficiency of the blasting machines have to be tested by the appropriate type of SOLUS tester. According to the EC-regulations the blasting machines have to be tested at least once a month. If the blasting machine has not been used during the last month, it has to be tested before being operated.



SAFETY INSTRUCTIONS

If the blasting machine is not used according to the regulations and safety instructions or when the terminals (or the connecting wires) are touched this may result in severe injuries. The energy of a discharging blasting machine can be compared with a small flash. The electric shock can cause high grade burns (blisters to the skin) and may occur danger of life (e.g. cardiac arrest).