

Firedamp proof Electric Condenser Discharge Blasting Machine Type 804



with hand-operated A.C. generator
I M2 X

$+5\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq +45\text{ }^{\circ}\text{C}$

BAM-approval ID: BAM-ZM-623

**EC-Type Examination Certificate Number:
IBExU12ATEX1163 X**



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 : 600 V
- Firing condenser : 8 μF
- Energy : 1,4 Ws
- Current flow: < 4 ms
- Dimensions : 120 x 80 x 158 mm
- Weight : 1,8 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 copper leg wires: 100 pieces in series
Limiting resistance: 260 Ohm

Insensitive electric U-detonator:

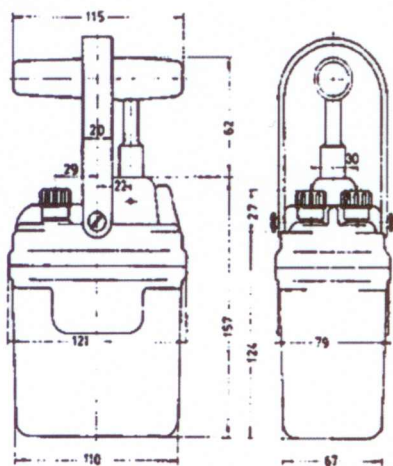
Firing impulse: 20 mJoule / Ohm
on 3 m copper leg wires: 20 pieces in series
Limiting resistance: 55 Ohm

Special instructions for use in underground parts of mines endangered by firedamp and/or combustible dust:

Blasting machine must be protected against mechanical stress.

Before every use the blasting machines must be checked on possible damages of the machine housing (hole or crack).

Blasting machines may be actuated (testing / charging / firing) in hazardous areas only if there are no explosive atmospheres on the site of operation (proved by measurements).



All electrical parts and the complete blasting machine are tested with a tension of 1500 V A.C.

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 804

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):

Hold the blasting machine with the left hand. Put the crank handle on the axle and turn clockwise by a sharp turn from the initial to the stop position. At the same time turn the blasting machine in the left hand by a sharp turn to the left side. The tension is applied automatically by help of the thyristor via terminals to the firing circuit.

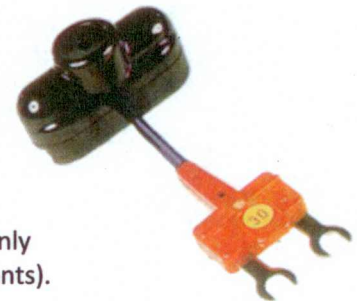
MECHANICAL TEST OF THE BLASTING MACHINE BEFORE USE

- 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.

Blasting machines may be tested by the appropriate Solus tester in hazardous areas only if there are no explosive atmospheres on the site of operation (proved by measurements).



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).