

Electric Condenser Discharge Blasting Machine Type 922/3000

with hand-operated A.C. generator

Not approved for use in permitted areas!

BAM-approval ID: BAM-ZM-459



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.

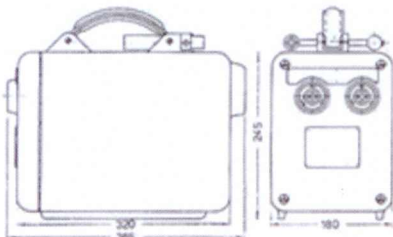
Technical data:

- Voltage : 3000 V
- Firing condenser : 40 µF
- Energy : 180 Ws
- Dimensions : 370 x 180 x 270 mm
- Weight : 16 kg

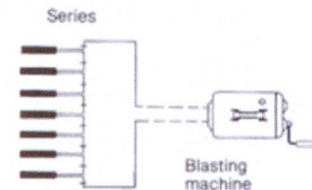
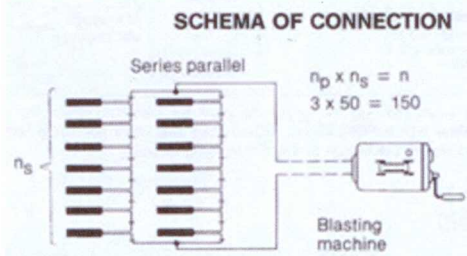
Standard sensitive electric detonators A (not approved anymore, only igniters A) with 3 m copper leg wires at 2,5 Ω leading line resistance 10 Ω Firing impulse of the blasting machine $K \geq 4$ mWs/ Ω	connected in series	No. of shots	800
		Maximum resistance	2010 Ω
	in parallel series	No. of shots	20 x 220 = 4400
Insensitive electric detonators U with 3 m copper leg wires at 1,75 Ω leading line resistance 10 Ω Firing impulse of the blasting machine $K \geq 20$ mWs/ Ω	connected in series	No. of shots	600
		Maximum resistance	1070 Ω
	in parallel series	No. of shots	10 x 200 = 2000
Highly insensitive electric detonators HU with 3 m copper leg wires at 0,5 Ω leading line resistance 5 Ω Firing impulse of the blasting machine $K \geq 3300$ mWs/ Ω	connected in series	No. of shots	90
		Maximum resistance	50 Ω

With iron leg wires the no. of shots must be halved.

Type 922/3000 is designed particularly for firing the highly insensitive HU detonators. When it is used for firing series of standard or U-detonators special attention must be paid to perfecting the insulation of the whole firing circuit.



Dimensions 922



All electrical parts and the complete blasting machine are tested with a tension of 6000 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 922/3000

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. Set the switch to position "CHARGING" with the aid of the crank-handle-key. Otherwise the charging circuit will remain open and generator will idle when it is being operated.
2. Connect the firing leads with the plugs to the plug sockets.
3. Operate the generator with the crank until pilot lamp glows, and turn crank about 5 additional times. The blasting machine remains ready to fire only for 15 seconds. The pilot lamp glows after 15 turns within about 10 seconds. After the pilot lamp has extinguished, the switch is locked again. To make the blasting machine ready to fire again, follow instruction point 1 to 3.
4. Fire by setting the switch to position "IGNITING". When firing lines are not connected the condenser will be discharged over built-in resistors.

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).