

# Electric Condenser Discharge Blasting Machine Type 888/2500/2

*one of the world's biggest blasting machines*

*Not approved for use in permitted areas!*



*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: 2500 V

Firing condenser: 480  $\mu$ F

Energy: 1500 Ws

Weight: 60 kg

#### **Dimensions:**

Length: 500 mm

Height: 400 mm

Width: 350 mm

## **OPERATING INSTRUCTIONS FOR TYPE 888/2500/2**

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 bare ends of the firing leads to the terminals.
3. Operate the generator with the crank until pilot lamp glows, and turn crank about 3 additional times. The blasting machine remains ready to fire only for 25 seconds. The pilot lamp glows after 70 turns. 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 "FIRE". When firing lines are not connected the condenser will be discharged over built-in resistors.

## **ATTENTION**

For single shots the total resistance of the firing circuit must have at least 20 Ohm!

## **HINTS FOR SINGLE SHOTS**

- a) Connect protecting resistance Type R 20 in series or
- b) Make up a resistance to 20 Ohm by switching in approx. 50 m iron connecting wire 0,6 mm  $\varnothing$  with PVC-insulation or
- c) Use a blasting machine with a lower capacity, for instance type 861, 922, 932/3000.

## **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).

# 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 kneel 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



	Standard sensitive electric detonators A (not approved anymore, only igniters A). 5 Ω			Insensitive electric U-detonators 3,5 Ω			Highly insensitive electric HU-detonators 0,5 Ω		
Connection	in series			in series			in series		
Leading line	10 Ω			20 Ω			5 Ω		
No. of shots	450			320			140		
Max. resistance	2260 Ω			1140 Ω			75 Ω		
Connection	Series in parallel			series in parallel			series in parallel		
Leading line	10 Ω			10 Ω			2 Ω		
	$n_p$	$n_s$	$n$	$n_p$	$n_s$	$n$	$n_p$	$n_s$	$n$
	2	340	680	2	320	640	2	130	260
	3	340	1020	3	310	930	3	120	360
	5	330	1650	4	300	1200	4	110	440
	10	300	3000	5	290	1450	5	100	500
	20	275	5500	10	260	2600	6	90	540
	30	235	7050	20	190	3800	7	80	560
	40	200	8000	30	125	3750	8	70	560
	60	130	7800	40	70	2800			
	70	100	7000	50	20	1000			
Leading line	5 Ω			5 Ω					
	$n_p$	$n_s$	$n$	$n_p$	$n_s$	$n$			
	2	340	680	2	320	640			
	4	340	1360	3	310	930			
	5	330	1650	4	300	1200			
	10	310	3100	5	290	1450			
	20	290	5800	10	270	2700			
	30	260	7800	20	210	4200			
	40	230	9200	30	170	5100			
	60	180	10800	40	130	5200			
	80	140	11200	50	90	4500			
Leading line	2 Ω			2 Ω					
	$n_p$	$n_s$	$n$	$n_p$	$n_s$	$n$			
	2	340	680	2	320	640			
	5	330	1650	3	310	930			
	10	320	3200	4	300	1200			
	20	300	6000	5	300	1500			
	30	280	8400	10	280	2800			
	40	260	10400	20	235	4700			
	50	240	12000	30	190	5700			
	70	200	14000	40	160	6400			
	100	160	16000	50	130	6500			

$n$ : total no. of shots

$n_p$ : parallel series

$n_s$ : detonators each series

$n$  and  $n_s$  are maximum values

Resistance of series equally balanced within the limits of  $\pm 5\%$ .

For A and U-detonators with copper leg wires, the number of shots can be doubled.

## 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.



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