

MSG.150.OF – Instructions - Warnings

Generators are 100% tested and there is no chance for fast failing if ultrasonic cleaning tank is properly made and if you strictly follow the instructions from the manual.

This is not the plug and play generator. It is not short-circuit protected.

Please see the attached manual with all instructions regarding the ultrasonic generator.

Possible mistakes and problematic situations are:

1. If you make short circuit on the load side,
2. If you replace ground and high voltage terminals,
3. If you do not make certain (optimal) air gap in the ferrite core of inductive compensation
4. If your cleaning tank has some other wiring problems, or if ultrasonic cleaning transducers are not properly bonded (air gaps between transducers and cleaning tank, inside of adhesive layer).
5. Using such generator you can not drive more than 3 pcs. of 40 kHz cleaning transducers (total load capacitance should be not higher than 12 nF).

You need to find MAX. load current varying the frequency potentiometer – close to 40kHz.

Then the compensating inductivity should be increased (by decreasing the air gap) up to the current corresponding to 100 - 150 W power. You also need to fix the air gap by placing little bit of soft silicone rubber inside of the air gap and strongly screwing the bolt on the top of the generator (because in operation ferrite cores could start reducing the air gap, because of vibrations, thermal changes etc.).

After the generator is adjusted (the steps described above), the power potentiometer is used to move the frequency within the interval of +/- 1 to 2 kHz for correcting the output power.

If your acoustic load differs from the supplier's acoustic load adjustments, some final tunings must be made. For the

purpose MSG 150 OF ultrasonic generators are equipped with two potentiometers for precise tuning of resonant frequency (Freq) and US Power (Power).

-For tuning of resonant frequency turn potentiometer Freq. on fig.11 to the right or left. You can assure the correct frequency is adjusted by the sound of the acoustic load or by setting the input AC current (from main supply, 230 VAC) to its relevant value:

- for 100W – I ~ 430 mA
- for 150W – I ~ 650 mA

-For increasing or reducing the US Power use the potentiometer Power. If the inductive compensation does not correspond to the acoustic load, make fine adjustments of the acoustic load by the adjustment screw on fig.11. Lightly unscrew the screw, move and hold it forwards or backwards, to adjust the most suitable value of Inductive compensation for your acoustic load.

This is simple generator and once when adjusted correctly, it will operate well.