

# ULTRASONIC GENERATOR

## Ultrasonic Cleaning with Submersible Transducer

An ecologically friendly and effective cleaning method is offered by Martechnic® for direct on-board applications. Employing ultrasonic technology, the components of the engine system can be cleaned gently and safely without any risk of accidental scratches or adverse environmental effects that can occur when using traditional chemical or mechanical methods of cleaning. The ultrasonic cleaning process is achieved by means of the ULTRASONIC GENERATOR in connection with a SUBMERSIBLE TRANSDUCER that enables transformation of electrical energy into mechanical energy. The high-frequency sound waves create cavitation bubbles in the cleaning liquid that implode against the items surface. Thereby a mechanical energy is released in the cleaning liquid creating the so-called “push-pull” effect on the surface of the equipment to be cleaned.

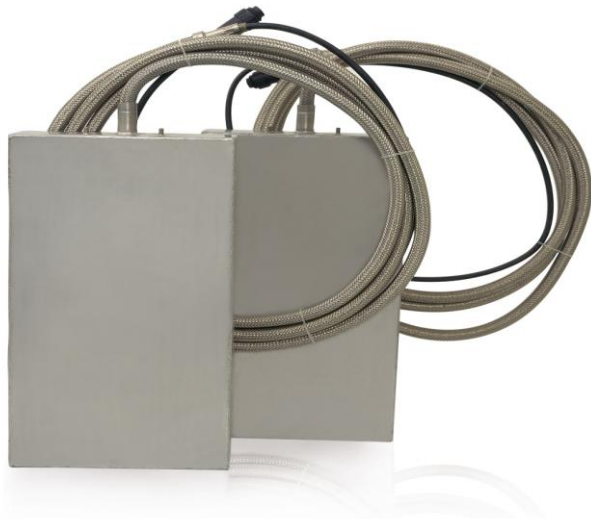


### Features:

- **Ultrasonic Generator**
  - Operating frequency: 30 kHz
  - Voltage: 50/60 Hz – 220 V
  - Outlet power: 3.0 kW
- **Submersible Transducer**
  - Material: stainless steel ASTM A420/ DIN 1.4571
  - PTZ-elements: 12 pieces
  - Cable length: 5 m

### Benefits:

- Efficient cleaning method of various engine components: cylinder cover, cooler, valves, lube and fuel oil filter, turbocharger impeller, charge air cooler
- Easy cleaning of hard-to-reach areas
- Operation with up to 4 Submersible Transducers
- Easy to handle and suitable for various on-site applications
- Low-noise performance



The ULTRASONIC GENERATOR with SUBMERSIBLE TRANSDUCERS are offered for different cleaning tanks that customers have at their disposal.

The ULTRASONIC GENERATOR can operate with up to 4 SUBMERSIBLE TRANSDUCERS. The required quantity of the TRANSDUCERS depends on the size of the engine parts to be cleaned as well as on the cleaning tank to be used for that purpose. Necessary energy for tank application is approximately 5 W/l depending on tank size. The TRANSDUCERS are installed vertically in a cleaning tank and connected with the ULTRASONIC GENERATOR. An important aspect to be noted is that throughout the cleaning process the TRANSDUCERS have to be completely covered with a cleaning liquid.

Once a cleaning tank is filled with an appropriate cleaning liquid (Martechnic® recommends ENVIROSONIC) and heated up to the optimal temperature of 60°C, the engine parts to be cleaned are then immersed into the tank.

The ultrasonic method is especially essential for deep and gentle cleaning of hard-to-reach areas of the engine parts with complex bores and holes without prior disassembling.

## Transducers and Generators

MODEL	DIMENSIONS (L x W x H mm)	EFFECTIVE HF POWER (W)
<b>TRANSDUCERS</b>		
U-Sonic TD 10	155 x 85x 455	500
U-Sonic TD 12	155 x 85 x 525	600
U-Sonic TD 15	245 x 85 x 460	750
<b>GENERATORS</b>		
U-Sonic G4-2	400 x 380 x 182	max 1500
U-Sonic G4-4	400 x 380 x 182	max 3000