TOPAS®
Technologie-orientierte Partikel-, Analysen- und Sensortechnik

Ultrasonic Desintegrator

UDS 751 | UP 200S

Ultrasonic disintegrator series UDS 751/UP 200S with mounting tripod

Principle

The Ultra Sonic Disintegrator UDS 751/UP 200S consists of a high-frequency generator, a sonic transformer and the sonotrode, which is mounted at the sonic transformer.
The high-frequency generator transforms the 50Hz-power supply frequency into a 24kHz high frequency. The electrical energy is changed by the sonic transformer to mechanical vertical oscillations of same frequency.
The sonotrodes can be screwed on the sonic transformer and are designed as a $\lambda/2$ vibrator manufactured in a high-elastic titanium alloy. They intensify the vertical oscillations and transfer the ultrasonic energy with extremely high power densities via their frontal areas into the fluid.

The thereby arising cavitation enables the solution of a big variety of application tasks in such fields as biology, medicine, chemistry, engineering, and other ranges.

Special Advantages

- Electronic unit with efficiencies of >90% allows a very compact design.
- Easy-to-use operating controls
- The technical concept guarantees highest reliability, no-load and short-circuit safety
- The used sonotrodes material ensure a long service life
- New kind of frequency scanning allows a perfect start of sonotrode oscillation

Applications

The UDS 751 enables a high powered ultra sonic admission into liquids. The power density can be until 600W/cm^2.
By this instrument specification the UDS 751 can be used for a great number of applications in laboratories and shops like:

- Dispersing of suspensions
- Membrane destroying of cells in the biological research or medicine
- Intensify Chemical processes
- Generating of suspensions
- Influencing of lattice structures
- Homogenisation of mixtures
- Intensify the micro-sieving process
- Cleaning fine-structured textures or small holes of technical constructions

Specifications

Details

The innovative 24-KHz-oscillation system considers in comparison to other 20-KHz-systems the current occupational medial cognitions that are supported by export opinion of Technical Inspection Agency. It is well below the human hearing threshold level and avoids that hear-sensitive persons get affected by ultrasonic waves.

The device is designed for use in laboratories of rooms with laboratory-like conditions. It may not be used in hazardous areas.

Operation instructions

1. Place the tripod on a planar place.
2. Connect the device to the mains.
3. Adjust the turning knob „Intensity“ into left position.
4. Immerse the sonotrode into the liquid, which has to be exposed to ultrasonic waves. (The maximum immersion depth depends on the type of the sonotrode.)
5. Switch on the device.
6. Choosing the desired amplitude by turning the knob „Intensity”.
7. Do not touch the sonotrode during operation.
8. The device can also be used without immersed sonotrode.

Technical Data

Power supply	230 V AC 48-63 Hz 115 V AC 48-63 Hz (optional)
Max. acoustic power	600 W/cm²
Efficiency	>90 %
Operating frequency	24 kHz
Range of frequency control	±1 kHz
Amplitude adjustment	20 %-100 %
Accuracy of the amplitude adjustment	±10 %
Sonotrods:	∅ 1, 2, 3, 5, 14, 40 mm titanium
Noise suppression:	Limit values of the DIN VDE 0875 part II class B are met
Dimensions	300 x 210 x 100 mm³
Weight	<2.35 kg

Sonotrodes for the UDS 751 | UP 200S

QMS certified to DIN EN ISO 9001.

12 100 11908 TMS

For more information please visit our website at www.topas-gmbh.de

Specifications are subject to change without notice.

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