Frequency Sweep Ultrasonic Cell Disruptor 300-2000 W, 20 kHz Sonicator with Temperature Probe

Model
MSUSCG-300FSWISS,MSUSCG-550FSWISS,MSUSCG-650FSWISS,MSUSCG-950FSWISS,MSUSCG-1200FSWISS,MSUSCG-2000FSWISS
| Brand **Master Science**







The Master Science Frequency Sweep Ultrasonic Cell Disruptor is a probe ultrasonic processor that can crush, extract, disperse, homogenise and emulsify samples. At start-up it sweeps from 18 to 26 kHz to identify the best working point for each sample and load, then adjusts energy output automatically as the medium or viscosity changes.

KEY HIGHLIGHTS

- Self-tuning
- Adapts to the sample
- Temperature control
- Many methods on hand

AT A GLANCE

1-200°C setting
SAMPLE TEMPERATURE PROTECTION

Request a Quotation
Contact us for pricing, configuration options and delivery details.

support@themsci.com
www.themsci.com

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Overview

Six models deliver 300 W to 2000 W of net output and handle from 0.1 mL up to 3000 mL. A 7-inch colour touch screen, 99 stored user programs, a sample temperature sensor and switchable 110/220 V power make it suitable for many different laboratories.

> For a lower-cost keypad model, see our Probe Sonicator with Soundproof Box, an alternative to the Frequency Sweep Ultrasonic Cell Disruptor.

Key Benefits

Self-tuning
Automatic 18-26 kHz sweep matches each sample and load.

Adapts to the sample
Energy compensation adjusts output for different media and viscosities.

Temperature control
Built-in sample temperature sensor with 1-200°C protection limit.

Many methods on hand
Store up to 99 user programs.

Technical Specifications

GENERAL	
General	Specifications of the Frequency Sweep Ultrasonic Cell Disruptor series:
Brand	Master Science
Model Number	MSUSCG-300FSWISS,MSUSCG-550FSWISS,MSUSCG-650FSWISS,MSUSCG-950FSWISS,MSUSCG-1200FSWISS, MSUSCG-2000FSWISS
SKU	MSUSCG-300FSWISS,MSUSCG-550FSWISS,MSUSCG-650FSWISS,MSUSCG-950FSWISS,MSUSCG-1200FSWISS, MSUSCG-2000FSWISS
Timer	1 s to 99 h
Sample Temperature Protection	1-200°C setting
Pulse Interval	1 s to 60 min
Operating Modes	Pulse, timed, continuous
Standard Horn Diameter	3, 6, 8, 10, 13, 20 mm (by model)
Processing Capacity	**0.1-50 mL; 50-500 mL; 100-800 mL; 500-1200 mL; 500-1500 mL; 1000-3000 mL (by model)**
Horn Material	Titanium alloy TC4
Cable Length	150 cm

POWER	
Models and Net Power	300F: 300 W; 550F: 500 W; 650F: 700 W; 950F: 1000 W; 1200F: 1200 W; 2000F: 2000 W
Power Supply	110/220 V, 50-60 Hz (switchable)
Nominal Frequency	20 kHz ±10%
Frequency Sweep	18-26 kHz at start-up
Power Regulation	1-100% in 1% steps

DISPLAY & DATA	
Program Memory	99 groups
Display	Colour touch screen, 800 x 480, English interface

DIMENSIONS & WEIGHT	
Generator Size	440 x 248 x 251 mm
Soundproof Box Size	252 x 240 x 455 mm
Weight	12 kg

HOW IT IMPROVES ULTRASONIC PROCESSING	
Different samples need retuning	Automatic frequency sweep finds the working point.
Viscous samples reduce output	Energy compensation adjusts automatically.
Samples overheat	Temperature sensor with adjustable protection limit.
Lab has 110 V or 220 V supply	Built-in voltage selector.

Applications

The Frequency Sweep Ultrasonic Cell Disruptor is used for
Nanomaterial dispersion and composite preparation Cell disruption and extraction in life sciences Plant extraction in pharmaceutical work Extraction of soil organic matter COD degradation in wastewater studies Accelerated dissolution, synthesis and oil-water emulsification

Ultrasonic System

- 18-26 kHz frequency sweep detection at start-up
- Automatic energy compensation
- Two-dimensional exponential probe design
- Titanium alloy TC4 horns

Control

- 7-inch industrial colour touch screen
- 99 stored user programs
- Independent pulse interval switch
- Continuous, pulse and timed modes
- Display of temperature, frequency, power and running times

Protection

- Real-time sample temperature sensor
- Sample overload, overtemperature and fault alarms
- Built-in 110 V / 220 V selector

Standard Accessories Included

- Ultrasonic probe
- Lifting platform with anti-skid pad
- Temperature sensor
- Power cord
- Cable
- Fuses (3)

Optional Accessories

- Additional horns from 3 mm to 18 mm (by model)