Hielscher Ultrasonics is your top supplier worldwide for innovative ultrasonic devices from lab homogenizers and bench top mixers to industrial processing reactors. Typical applications include, mixing and homogenizing, disintegration and sonochemistry.

Ultrasonic devices made by Hielscher cover the full range from sample homogenizing in the lab to the ultrasonication of large volumes in industrial production. Whether you need to sonicate 1.5mL in a test tube or 20 tons per hour, Hielscher offers you the perfect solution for it.

Hielscher Ultrasonics specializes in equipment for the ultrasonication of liquids. This includes homogenizing, disintegration, emulsification, dispersing or particle size reduction (milling). Another interesting field of application is sonochemistry, e.g. to enhance the mass-transfer in the production of biodiesel. Discover the potential of ultrasonics for your industry or process.

Lab sonicators: Hielscher ultrasonic laboratory devices are compact, easy-to-use and extremely versatile. They can be used for the processing of a variety of organic and inorganic materials in a wide range of volumes. Typical applications of ultrasonic homogenizers include sample preparation, disintegrating and cell lysis, homogenizing, dispersing and disaggregation, particle size reduction and the acceleration of chemical reactions (sonochemistry). Hielscher offers a wide range of ultrasonic homogenizers to be used for these applications in a wide range of volumes from approx. 50µL to 2000mL. The selection of the ultrasonic processor depends on the sample volume to be sonicated. Hielscher laboratory devices include handheld homogenizers, like the UP100H (100 watts). Stand-mounted devices, such as the UP400S (400 watts) are typically used for the sonication of larger sample beakers.

Industrial sonicators: Hielscher industrial ultrasonic devices are powerful, efficient and reliable. They are built to operate continuously at high load in industrial environments. With up to 16kW per device, Hielscher is the leading ultrasonics supplier for industrial liquid processes. Ultrasonic liquid processing at industrial level requires industrial ultrasonic equipment, because the power requirement rises with the volume or flow to be processed. Laboratory devices - although capable of handling up to one ton per day - are not sufficient for production processes. Hielscher is the leading ultrasonics supplier for industrial liquid processing applications, such as, the dispersing & milling of

pigments in paints or inks, formulation of high performance coatings with nanomaterials, manufacturing of biodiesel or the pasteurization of food or beverage. The UIP1000hd (1kW) is the perfect industrial ultrasonic device for the development and optimization of new applications. Larger industrial ultrasound devices, such as the UIP10000 (10kW) and UIP16000 (16kW) are installed in production processes throughout the world for the inline sonication of high volume flows, e.g. for industrial mixing processes.

While lab devices are typically used for the sonication of test tubes and sample beakers (batch mode), industrial devices are commonly used in combination with reactor vessels (flow mode).

We at Hielscher are glad to assist you. Call us today or contact us by email. We will advice you and recommend the most suitable ultrasonic device configuration meeting your requirements.

Overview over our ultrasonic processors:

VialTweeter: Sonication is a very effective method for the mixing, homogenizing, emulsifying, dispersing, disintegration, and degassing of liquids by means of ultrasonic cavitation. The VialTweeter applies this technology to vials, such as autosampler vials, storage vials and reagent vials without the need to open the cap or any water bath.

VialTweeter

SonoStep: The SonoStep (100W, 30kHz) combines ultrasonication, stirring and pumping of samples in a compact design. It is easy to operate and can be used to deliver sonicated samples to analytic devices, e.g. for particle size measurement.

SonoStep

UIP50H: The ultrasonic processor UP50H (50W, 30kHz) is typically used for the sonication of small lab samples. This homogenizer allows for the handheld or stand-mounted emulsification, dispersing, dissolving or cell disruption.

UIP50H

UP100H: The ultrasonic processor UP100H (100W, 30kHz) is the perfect device for the

sonication of small and medium size lab samples. This compact, yet powerful, lab homogenizer is commonly used for sample preparation, such as emulsifying, dispersing, dissolving and cell disruption.

UP200H: The ultrasonic processor UP200H (200 watts, 24kHz) is the most powerful handheld device, but it can be mounted to a stand, too. The exceptionally progressive design was rewarded with well known "International Designer Award" by the iF (Industry Forum Design Hannover). Since then this device is the flagship of our compact laboratory devices.

UP200S: The ultrasonic processor UP200S (200 watts, 24kHz) differs from the UP200H only in its shape and can be used at a stand or in the sound protection box, only. It is the first choice for your laboratory, when no handheld operation is needed. The performance and parameters are identical to that to the UP200H.

UP400S: 400 Watts ultrasonic power - The UP400S (400W, 24kHz) is a powerful and reliable ultrasonic device for the sonication of larger samples in the lab. Typical application include: Homogenization, deagglomeration, lysis and cell disintegration, protein extraction and the emulsification of liquids.

UP200S

UIP500hd: The ultrasonic processor UIP500hd (20kHz, 500W) is an industrial grade device for the application in the small scale processing of liquids. It can be used for the process development in bench-top scale before scale-up, too.

UIP1000hd: The UIP1000hd (20kHz, 1000W) is a powerful and adaptable ultrasonic device for lab testing and industrial processing of liquids. It is used for applications, such as emulsifying, dispersing & particle fine milling, lysis & extraction or homogenizing.

UP400S

UIP1500hd: The ultrasonic processor UIP1500hd (20kHz, 1500W) combines high processing power with flexibility. Is is suitable for process development, optimization and for production processes. This includes emulsifying, dispersing & sonochemistry, lysis & extraction or homogenizing.

UIP2000hd: The ultrasonic processor UIP2000 (20kHz, 2000W) is a powerful and adaptable ultrasonic device for the industrial processing of liquids. It is used for applications, such as emulsification, dispersing & particle fine milling, lysis & extraction or homogenizing.

UIP1000hd

UIP4000: The UIP4000 (4,000 watts, 20kHz) is used mainly for the industrial processing of liquids such as homogenizing, dispersing, disintegrating or deagglomerating.

UIP10000: With its 10,000 watts, the UIP10000 is the second largest ultrasonic processor. It is designed to work in clusters of four or more units, for large volume processing, such as homogenizing, dispersing and deagglomeration.

UIP16000: 16,000 watts of ultrasonic power make the UIP16000 the most powerful ultrasonic processor in the world. It is designed to work in clusters of three or more units, for large volume processing, such as to homogenize, disperse or deagglomerate.

UIP16000

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