

UP200Ht - Handheld Ultrasonic Homogenizer

The UP200Ht (200W, 26kHz) is part of the new series of Hielscher's 200 watt ultrasonic homogenizers which come with broad range of new accessories.

New features : digital control and touch screen, automatic data recording, intuitive operation and ergonomic and shapely design for the most user-friendly use and working comfort.

Typical applications for this powerful ultrasonic device are **homogenization, dispersing, emulsification, disintegration, cell disruption, degassing or sonochemistry**. Hielscher designed this new 200W homogenizer to give the user a high flexibility, ease of use and a new level of accuracy and control.

In comparison with its predecessors **UP200H** and **UP200S**, the new ultrasonic device UP200Ht features many additional functions and very smart user friendliness. With its 200 watts power the UP200Ht offers the same performance and reliability as **UP200H** and **UP200S**, but it differs by its completely new design that is more comfortable for the handheld and stand-mounted use. Due to the broad coverage of parameter configurations (by variation of amplitude, pressure, temperature, flow cell, glass sonotrode,...), the UP200Ht covers the full range of applications, such as homogenization, emulsification, dispersion, disintegration, cell disruption & extraction, degassing as well as sono-chemical and sono-catalytical processes – for small and medium size volumes **from 2 ml to up 1000 ml** and with a **flowcell** for flow from 20 to 200 ml/min.



User-friendly use and working comfort.



UP200HT with

S26d14

Generally, the UP200Ht is used for the sonication of sample volumes from 0.1 to 2000mL.

Hielscher offers various sonotrodes from 2 to 40mm tip diameter. Whilst the 40mm sonotrode transmits the ultrasound smoothly across a relatively large surface, the sonotrodes with smaller tip diameter operate at higher amplitudes and at higher intensities, e.g. for destructive applications. The UP200Ht can be also used for the production of smaller quantities, mostly in **continuous flow with the use of flow cells** and the appropriate sonotrodes. In combination with the flow cell FC7K, the material can be sonicated in a continuous flow-through mode, e.g. at a flow rate of 20 to 200mL per minute. The stainless steel flow cell is pressurizable up to 5 barg. By this, continuous sonication processes can be simulated in smallest scale. Due to its reliability and IP41 grade, the UP200Ht can be operated 24 hours per day (24h/7d), allowing for the processing of up to 180L per day (depending on the application).

The versatility of the ultrasonic lab device is not only performed by the suitability for various applications but also by the flexible use. The user decides according to the application, the processing environment and the duration of sonication, whether the device is used as a handheld or stand-mounted ultrasonic lab device.

Colored touch-screen

A great enhancement from the operational view is the. This touch- and stylus-sensitive screen allows for easy handling, accurate setting of operating parameter and the display of the ultrasound power setting are guaranteed and combined with highest comfort for the operator. The digital control menu is intuitive to use as reduced to the main settings. The amplitude/ power setting and the pulse mode can be adjusted by a colored touch-slider (with 1%, 5% or 10% snap). The user decides, if he prefers the display of amplitude and power as colored bargraph or numerical. The displayed data content is reduced to the important essentials in BIG NUMBER display mode that uses higher contrast and bigger fonts for improved visibility.



Remote control

The UP200Ht can be controlled using any common browser, such as Internet Explorer, Safari, Firefox, Mozilla, mobile IE/Safari using the new LAN web interface. The LAN connection is a very simple plug-n-play setup and requires no software installation. The ultrasonic device acts as DHCP server/client and requests or assigns an IP automatically. The device can be operated directly from the PC/MAC or using a switch or router. Using an optional pre-configured wireless router, the device can be controlled from most smartphones or tablet computers, e.g. the Apple iPad. Using the port-forwarding of a connected router, you could control your UP200Ht via internet from any place in the world – your smart-phone being the remote control.

Built-In Network

Another smart feature of the UP200Ht is the operation and control via LAN (local area network, see right box) which facilitates the operation and allows for high processing flexibility. All information of the sonication process is recorded on SD/USB data card, automatically. An integrated sensor measures the temperature permanently whereas two bright LED lights illuminate the sonicated sample

Automatic Frequency Tuning

Like all Hielscher ultrasonic devices, the UP200Ht comes with an intelligent automatic frequency tuning. When the device is switched on, the generator will sense the optimal operational frequency. It will then drive the device at this frequency. That improves the overall energy efficiency and reliability of our ultrasonic devices. All you need to do, is to switch the system on. The generator will perform the frequency tuning automatically in a fraction of a second



UP200Ht with Sound Protection Box



UP200St-T et UP200St-G with Sound Protection Box



Control display






Sonotrodes





VialTweeter



Flow Cell FC7K

Reference	Description
<p data-bbox="209 282 312 309">UP200Ht</p> 	<p data-bbox="403 282 1187 338">Digital ultrasonic processor, power 200 watts, frequency 26kHz with new digital technology.</p> <p data-bbox="403 338 995 365">Sonication for laboratory samples from 2 ml to 1000 ml</p> <ul data-bbox="403 367 1158 566" style="list-style-type: none"> • for handheld and stand-mounted use • homogenization, dispersing, emulsification, disintegration, cell disruption, degassing or sonochemistry • for laboratories in chemistry, biotechnology, medicine • Generator and transmitter combined in one frame • Volume samples from 2 ml to 1000 ml with sonotrodes with diameter from 2 mm to 40 mm for batch work, or flow cell <p data-bbox="403 595 683 622">Technical specifications</p> <ul data-bbox="403 624 1171 797" style="list-style-type: none"> • automatic frequency tuning • amplitude adjustable from 20 to 100% • pulse adjustable from 10 to 100%, • titanium horn Ø 10mm, amplitude at horn 70µm • IP41 grade, dry running protected • power supply unit: 100-240VAC with power supply: 24VDC, 9A <p data-bbox="403 826 655 853">Control and functions</p> <ul data-bbox="403 855 1182 1167" style="list-style-type: none"> • digital and bar control with colored touch-screen • integrated count-down timer (0.1sec to 99 days) • shutdown when final energy input reached: Ws, Wh, kWh • automatic calibration when needed • Digital display (or with bar) of amplitude, effective energy input, power, time, temperature • data recording on internal SD/USB ComboCard (2GB) • display and remote control via browser on PC or MAC without software installation • temperature sensor in option (-50°C bis 200°C) with alarm • LEDs for sample illumination
<p data-bbox="204 1173 317 1200">UP200St-G</p> 	<p data-bbox="403 1173 1177 1229">Digital ultrasonic generator, power 200 watts, frequency 26kHz with new digital technology.</p> <p data-bbox="403 1229 995 1256">Sonication for laboratory samples from 2 ml to 1000 ml</p> <ul data-bbox="403 1258 1182 1458" style="list-style-type: none"> • Remote control separated • homogenization, dispersing, emulsification, disintegration, cell disruption, degassing or sonochemistry • for Research-laboratories in chemistry, biotechnology, medicine • Generator and transmitter are separated • Volume samples from 2 ml to 1000 ml with sonotrodes with diameter from 2 mm to 40 mm for batch work, or flow cell <p data-bbox="403 1460 660 1487">Technical specifications</p> <ul data-bbox="403 1489 1171 1662" style="list-style-type: none"> • automatic frequency tuning • amplitude adjustable from 20 to 100% • pulse adjustable from 10 to 100%, • titanium horn Ø 10mm, amplitude at horn 70µm • IP41 grade, dry running protected • power supply unit: 100-240VAC with power supply: 24VDC, 9A <p data-bbox="403 1664 635 1691">Control and functions</p> <ul data-bbox="403 1693 1043 1794" style="list-style-type: none"> • digital and bar control with colored touch-screen • integrated count-down timer (0.1sec to 99 days) • shutdown when final energy input reached: Ws, Wh, kWh • automatic calibration when needed
<p data-bbox="209 1800 312 1827">UP200St-T</p> 	<p data-bbox="403 1800 1187 1865">ultrasonic transducer for sonotrodes fixation, Ø45mm, approx. length 230mm, titanium horn Ø14mm, amplitude horn 70µm, touch screen, start/stop button, LEDs for sample illumination, with mounting tools.</p> <p data-bbox="403 1868 1027 1895">To be purchased in combination of the UP200St-G generator!</p>

Reference	Description
S26d2	sonotrode, made of titanium, Ø2mm (3mm ²), approx. length 120mm, male thread M6x0.75, for samples from 2ml up to 50ml, amplitude ratio approx. 1:3, autoclavable
S26d7	sonotrode, made of titanium, Ø7mm (39mm ²), approx. length 95mm, male thread M6x0.75, for samples from 20ml up to 500ml, amplitude ratio approx. 1:2.5, autoclavable
S26d14	sonotrode, made of titanium, Ø14mm , (154mm ²), approx. length 80mm, male thread M6x0.75, for samples from 50ml up to 1000ml, amplitude ratio approx. 1:1.2, autoclavable
S26d26	sonotrode, made of titanium, Ø26mm , (530mm ²), approx. length 80mm, male thread M6x0.75, for samples from 100ml up to 1000ml, amplitude ratio approx. 1:0.3, autoclavable
S26d40	sonotrode, made of titanium, Ø40mm (1257mm ²), approx. length 80mm, male thread M6x0.75, for samples from 100ml up to 1000ml, amplitude ratio approx. 1:0.12, autoclavable
S26d10x10VialT 	Vial-Tweeter-Sonotrode, made of titanium, for ultrasonic processor UP200St or UP200Ht, with 10 bores ø11mm and clamping fixture, for the excitation of up to 10 Eppendorf tubes 1.5ml, and/or a vessel with a diameter of approx. up to 40mm
VialPress 	Clamping device as accessory for VialTweeter-Sonotrode S26d11x10, stainless steel, for the excitation of up to 5 vessels with Ø of up to 20mm

Reference	Description
ST1-16	Stand made of stainless steel, diameter 16mm, base length 300mm, width 150mm, height 600mm
ST1-Clamp	stand holding clamp for UP200St, with cross clamp and lab clamp (for 12mm stand)
LabLift	for the easy positioning of samples under the ultrasonic probes to control immersion depth, stainless steel, footprint 100x100mm, adjustable height: 50 to 125mm
SPB-L	sound protection box, acryl glass, with divisible rod Ø12mm, vertically adjustable table, anti-slip mat, dimensions (LxWxH): 29x20x35cm, weight: 13kg, sound insulation: 22dB (A) open air measurement
Special sonotrodes for flow cell operations	
S26d2D	sonotrode for use with flow cell, with seal for closed systems, made of titanium, Ø2mm (3mm ²), approx. length 120mm, male thread M6x0.75, for samples from 2ml up to 50ml, amplitude ratio approx. 1:3, autoclavable
S26d7D	sonotrode for use with flow cell, with seal for closed systems, made of titanium, Ø7mm (39mm ²), approx. length 95mm, male thread M6x0.75, for samples from 20ml up to 500ml, amplitude ratio approx. 1:2.5, autoclavable
FC7KG	Flow Cell Reactor , glass flow cell with cooling jacket, for sonotrodes S26d2D or S26d7D, with NBR O-rings, hose fittings, clamps, hose (2m), and 4xGL14 plastic screw cap with plastic hose connection for hose ID: 7-8mm
FC7K	Flow Cell Reactor , stainless steel flow cell reactor with cooling jacket, for sonotrodes S26d2D or S26d7D, with NBR O-rings (19x3,2mm), hose connection, plastic clamps, and hose (2m), autoclavable
Particular applications	
S26d26G	sonotrode, made of glass (DURAN) and titanium, Ø26mm (530mm ²), approx. total length 200mm, approx. length of glass part 100mm, male thread M6x0.75, for samples from 50ml up to 1000ml, amplitude ratio approx. 1:0.28
S26d18S	sonotrode, made of titanium, Ø18mm (250mm ²), approx. length 96 mm, male thread M6x0.75, for atomization/ spray drying, for samples up to 114ml/min (water) or up to 10.5 ml/min (vegetable, oil), amplitude ration 1 :0.3

Prices are exclusive VAT, Warranty : two years on equipment, not sonotrodes