SONOSYS® Ultrasonic / Megasonic System with Submersible Transducer in PVDF for 4" substrates

Function

Completely encapsulated Submersible Transducers made of PVDF to be positioned at the bottom or at the side wall of an existing tank. Besides the standard systems for 4", 6" and 8" substrates, custom specific solutions are offered. This flexible configuration allows a convenient retrofit with a Megasonic system in an existing process or experimental tank. All over the world, SONOSYS® stands for unique and future-secured solutions. The extremely uniform energy transmission ensures a hitherto-unachieved cleaning performance of particles down to the nano range, while at the same time providing the best protection to the microstructures.

Unique in the world: our transducer systems, with patented piezoceramics with Butterfly-Technique, achieve a **40% higher sound pressure** or an **up to 30% higher efficiency** than other systems.

Applications

Optic:	Cleaning of optical components before coating
Semiconductor & Photovoltaic:	Cleaning of wafer and masks, process support of the wet-chemical production of semiconductor products
Mikro-/Nano-Technology:	Cleaning of parts and microsystems, support of the development process in the LIGA ¯Technique
Medical:	Cleaning of implants

Technical data modular Ultrasonic / Megasonic Generator

Electrical Data

Frequency / Output power:	400 kHz / 500 Watt
	600 kHz / 500 Watt
	1 MHz / 500 Watt
	2 MHz / 300 Watt
Output power adjustment:	approx. 10 % - 100 %
Mains voltage:	230 VAC; 50 ¯ 60 Hz

Mechanical Data

Housing:	19" enclosure 3/4U
Dimensions:	28HP; approx. 165 x 185 x 329 mm (WxHxD)
Weight:	approx. 4,5 kg

Operational conditions

Ambient temperature:	+10°C to +40°C
Condensed moisture is to be prevented! Protected from humidity, dirt and aggressive vapours.	

Technical data Ultrasonic / Megasonic Submersible Transducer in PVDF

Material:	PVDF-housing with PFA coated Transducer plate
Transducer array:	special PZT-Piezoceramic (Butterfly-Technique)
Transduced area:	approx. 110 x 100 mm; **completely continuous active area**
HF-cable:	Coax-cable with N-plug; length 3m; thereof 1m in PTFE-corrugated tube
Cooling connection:	2x PTFE-corrugated tube, length 1m, straight outlet
Liquid temperature:	up to +60°C without cooling up to +80°C with Nitrogen cooling: • Nitrogen pressure: maximum 0.1 bar • Nitrogen flow: minimum 4 l/min. • Nitrogen temperature range: +20°C to +40°C
Storage- and Transport temperature:	not less than **-10°C**
Weight:	approx. 2,3 kg to 5,0 kg

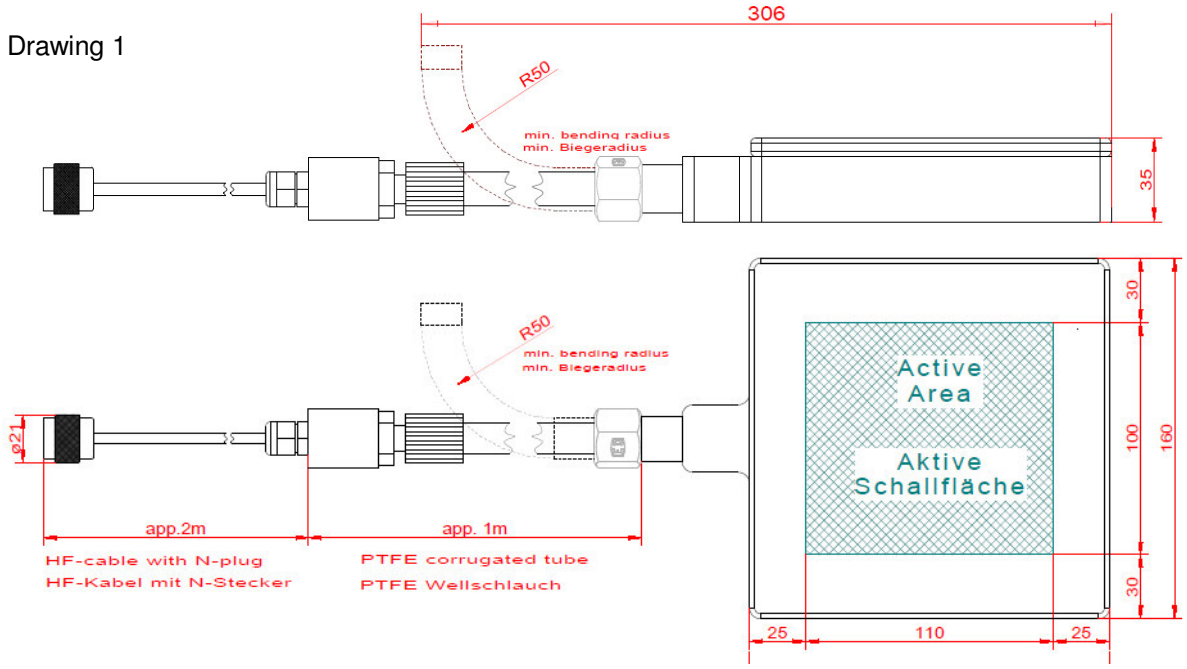
Order data Ultrasonic / Megasonic Submersible Transducer in PVDF

Order-No.	Frequency / Output power	Cable outlet / cooling	Dimensions	Drawing
13804-013	400 kHz / 500 Watt	Straight cable outlet without cooling	160 x 160 x 35 mm	1
13804-021	600 kHz / 500 Watt			
13800-212	1 MHz / 500 Watt			
13802-101	2 MHz / 300 Watt			
13804-018	400 kHz / 500 Watt	Straight cable outlet **with cooling**	160 x 160 x 35 mm	available on request
13804-023	600 kHz / 500 Watt			
13800-226	1 MHz / 500 Watt			
13802-102	2 MHz / 300 Watt			
13804-017	400 kHz / 500 Watt	Angled cable outlet without cooling	190 x 160 x 35 mm	3
13804-022	600 kHz / 500 Watt			
13800-214	1 MHz / 500 Watt			
13802-100	2 MHz / 300 Watt			

Order data Ultrasonic / Megasonic Generator

Frequency	Output power	Power adjustment	Order-No.
400 kHz	500 Watt	internal	13404-006
400 kHz	500 Watt	external	13404-007
600 kHz	500 Watt	internal	13404-009
600 kHz	500 Watt	external	13404-xxx
1 MHz	500 Watt	internal	13401-272
1 MHz	500 Watt	external	13401-281
2 MHz	300 Watt	internal	13405-201
2 MHz	300 Watt	external	13405-202

Drawing 1



Drawing 3