

Press release: Nebulizing of disinfectant

24.03.2020, Neuenburg (Germany): In times of omni-present COVID-19 crisis, we at SONOSYS® thought of anything we may can contribute in making progress in the fight against the virus. We then recognized that our nebulizers have been used long before Corona virus crisis to nebulize and distribute disinfectant solutions. In contrast to standard compressed air nozzles our nebulizers make use of ultrasound nozzles to build a very fine mist of droplets. Especially when it comes to the coating of larger areas with the disinfectant solution with a homogeneous, but fine droplet layer, the ultrasonic nebulizers play out their strengths with flow rates up to 20 liters per hour. Four models with different flow rates and most frequent droplet sizes are available, as illustrated in the following table:

	<i>US1</i>	<i>US2</i>	<i>US10</i>	<i>US20</i>
Flow rate [l/h]	0,1 - 1	0,2 - 2	1 - 10	2 - 20
Frequency [kHz]	100	58	45	45
Droplet size, most-frequent [µm]	∅ 20	∅ 30	∅ 35	∅ 38

Further, there is a megasonic-based atomizer for even smaller droplets (most frequent droplet size around 3 µm). This even finer mist of droplets may be used in quality control (QC) of face masks [1,2]. Even though the Corona virus itself is smaller (around 120 to 160 nm according to Spektrum.de [3]), the test bacteria or virus are usually atomized in liquid droplets around 3 µm, depending on the applied test procedure [2].

Therefore, both nebulizer and atomizer can be used in distributing disinfectant, humidification of respiratory air and in the QC-tests of face masks and hence are a small contribution in the fight of the virus crisis.



Pic. 1: Nebulizer US1



Pic. 2: Nebulizer US1 with corresponding generator

Any questions? – We are happy to assist at info@sonosys.de. Further general information at www.sonosys.de

Sources and links:

[1] *in German:* Prüfung und Zertifizierung von Atemschutzmasken

<https://de.testxchange.com/blog/pr%C3%BCfung-und-zertifizierung-von-atemschutzmasken>

[2] Medical face masks – Requirements and test methods; German version, DIN EN 14683:2019

<https://www.beuth.de/en/standard/din-en-14683/311258244>

[3] *in German:* Coronaviren

<https://www.spektrum.de/lexikon/biologie/coronaviren/15358>