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Important information

SARS-CoV-2 virus and KLS Martin smoke evacuation system

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COVID-19 patients and the use of smoke evacuation

First of all we want to say thanks to all the medical staff for assuring the medical care in this extraordinary situation! The coronavirus has kept us in suspense since it broke out and determines our daily life. The priority is people's health. OR personnel and patients have to trust the medical products – more than ever.

Different societies such as the European Society of Gynaecologic Endoscopy (ESGE) and the Association of periOperative Registered Nurses (AORN) have published meanwhile recommendations on how to treat COVID-19 patients during a surgical procedure. The societies strongly recommend, in addition to own personal protective equipment, the use of smoke evacuation in open and laparoscopic cases.

Available information on the SARS-CoV-2 virus

The particle size of the SARS-CoV-2 virus is between 60 and 140 nm. ¹

At the moment there is no clinical study available on the transmission of SARS-CoV-2 viruses through surgical smoke.

Besides other measures there are certain protection recommendations regarding the use of smoke evacuation systems. ^{2, 3}

Sources

1. Na Zhu, Ph.D., Dingyu Zhang, M.D., Wenling Wang et al.; A Novel Coronavirus from Patients with Pneumonia in China, 2019; <https://www.nejm.org/doi/full/10.1056/NEJMoa2001017>; retrieved: 15.04.2020
2. COVID-19 FAQs.: Association of periOperative Registered Nurses (AORN) Website. <https://www.aorn.org/guidelines/aorn-support/covid19-faqs>; retrieved 15.04.2020
3. Zheng M, Boni L, Fingerhut A. Minimally invasive surgery and the novel coronavirus outbreak: lessons learned in China and Italy, Annals of Surgery. 2020.9.; <https://journals.lww.com/annalsofsurgery/Documents/Minimally%20invasive%20surgery%20and%20the%20novel%20coronavirus%20outbreak%20-%20lessons%20learned%20in%20China%20and%20Italy.pdf>; retrieved 15.04.2020

How can KLS Martin contribute to protect the OR personnel from SARS-CoV-2 viruses?

The main filter of the KLS Martin smoke evacuation devices marVac® and maxium® smart Vac corresponds to the ULPA filtration standard (U15) that removes 99,9995% of all particles from 0,1 µm (=100 nm).

Taken into consideration the technical facts of the KLS Martin main filter and the particle size of the SARS-CoV-2 virus we strongly assume that our smoke evacuation systems marVac® and maxium® smart Vac effectively filter SARS-CoV-2 viruses.

The above mentioned statement is underlined by the fact that the particle size of these suspended matters is above the efficiency minimum / MPPS (Most Penetrating Particle Size).

In addition the KLS Martin smoke evacuation devices can be attached to a central OR-suction system which is in certain countries recommended or even obligatory.

Further personal protection measures, such as FFP-3 masks, additionally increase the safety of the operating personnel.

Change of main filter

The KLS Martin main filter has a total capacity of 40 hours.

To avoid any risk it could be recommendable to change the main filter after treating a COVID-19 patient. Please make sure that you wear appropriate protective clothing and dispose the main filter as in case of potential contamination with other viruses according to your local guidelines.

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